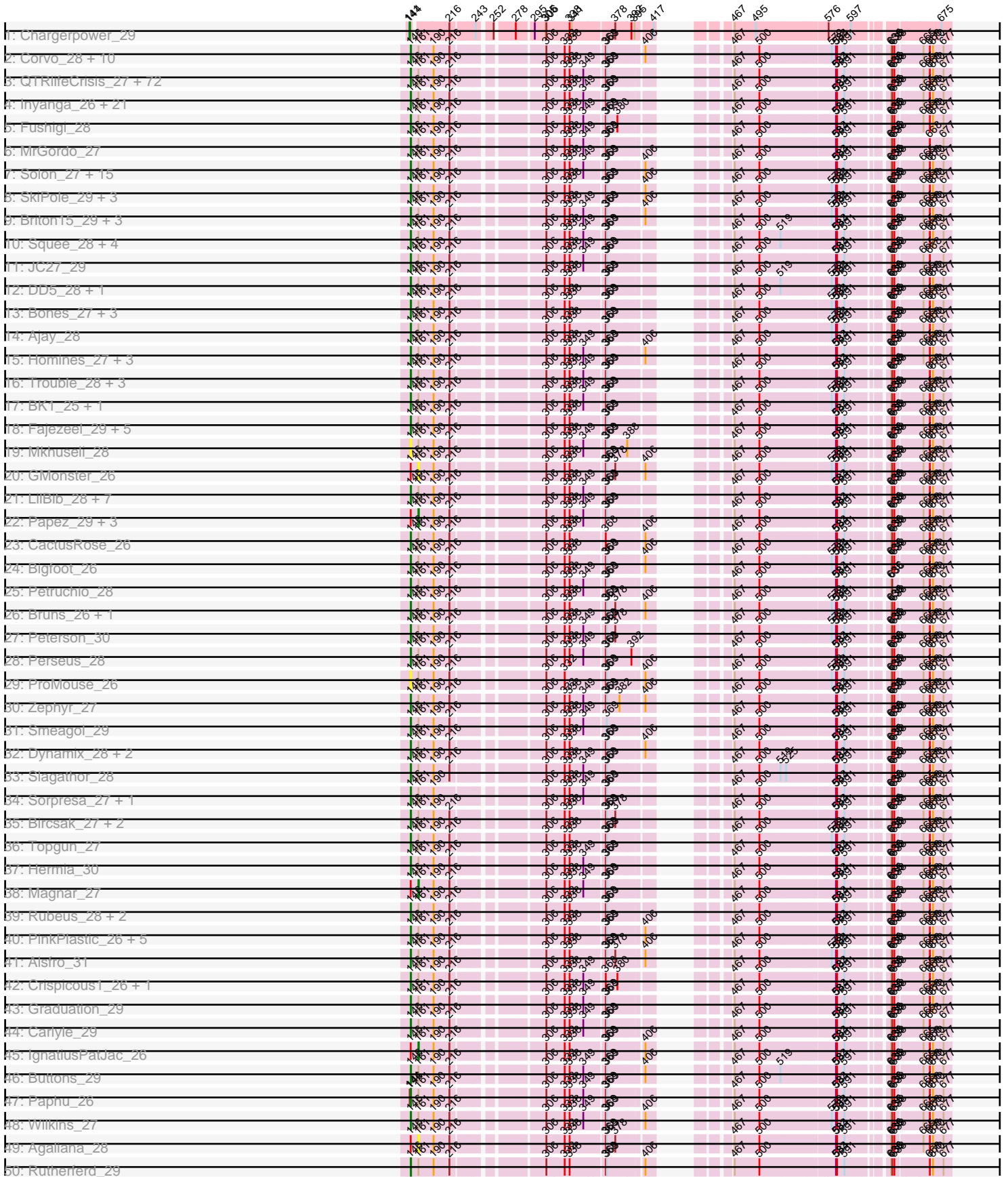


# Zoomed Pham 195289



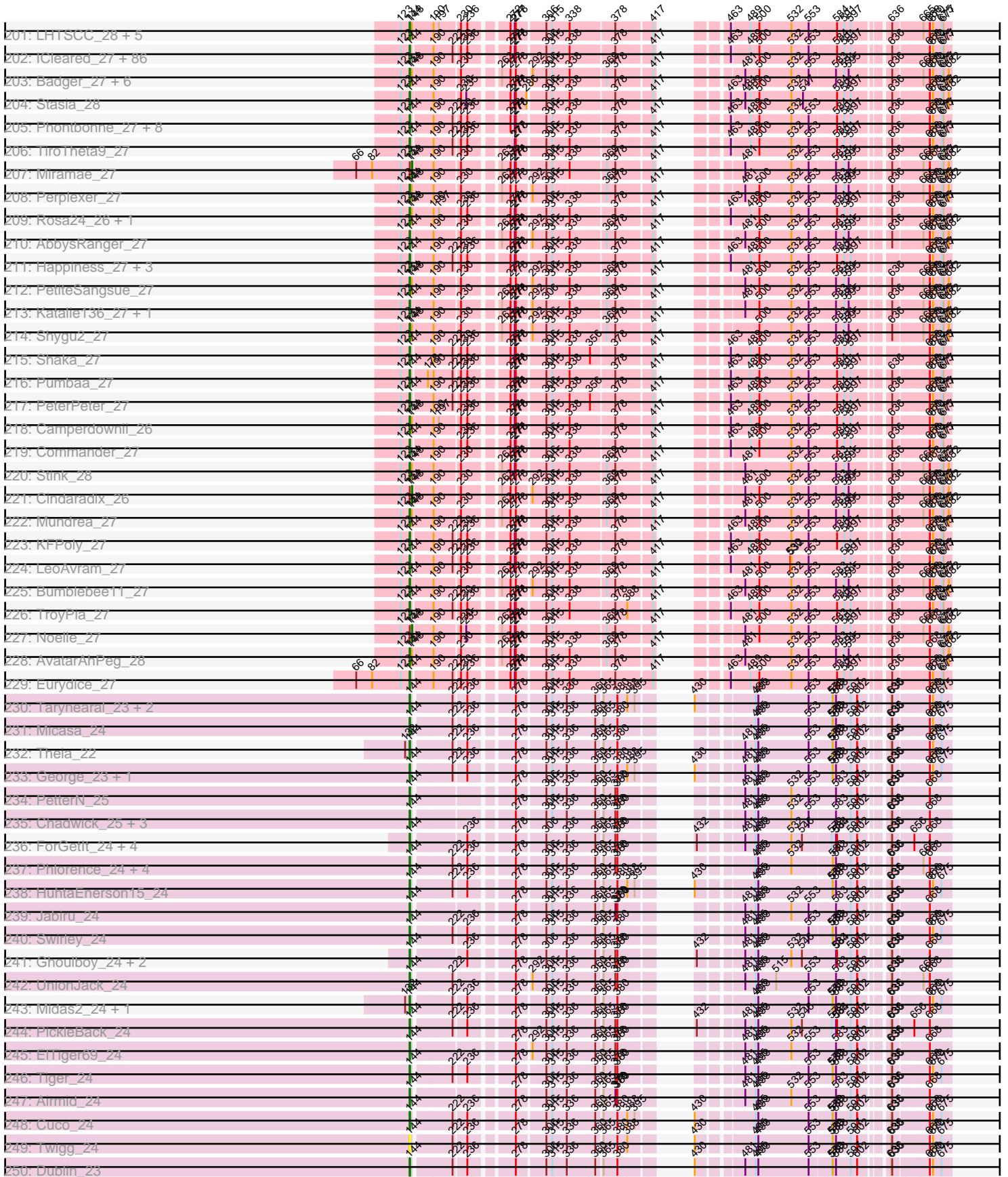


# Zoomed Pham 195289

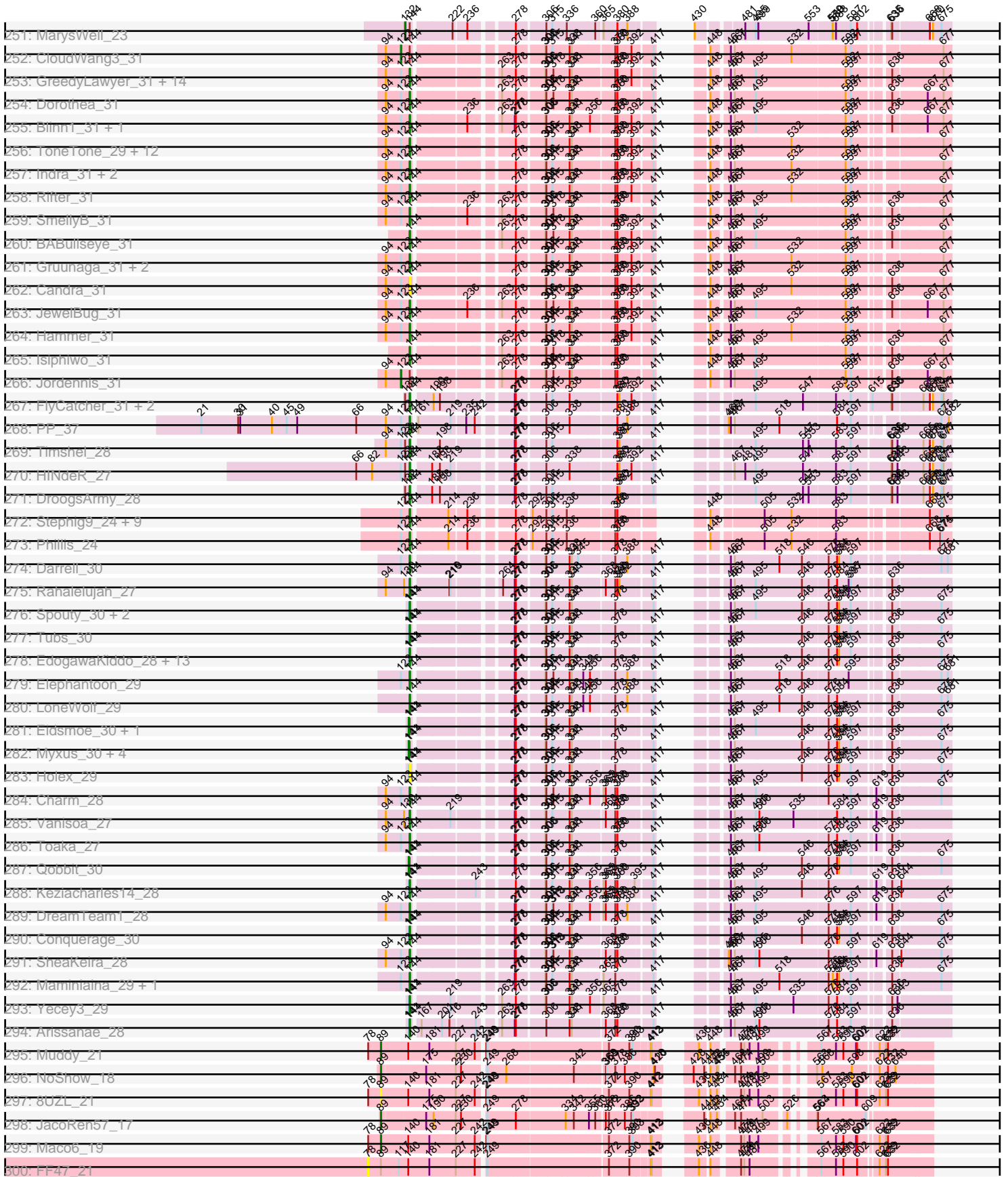
r01: Bradman_27 + 2	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r02: Tomathan_31 + 1	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r03: DBQu4n_31 + 1	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r04: Agape74_30	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r05: BobSwage_31	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r06: ZUES_28	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r07: Crucio_28	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r08: LadyBird_28	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r09: LITurb_30 + 6	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r10: BabyBack_30	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r11: EZMoney23_32	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r12: SwinSquare_30	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r13: Miko_31	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r14: Chef2_30	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r15: Kaipine_31	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r16: Colin_32	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r17: Caraxes_27 + 1	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r18: RedRock_31	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r19: Changing_30	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r20: AnnaL29_31	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r21: Loser_31	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r22: BenVoilo_28 + 1	94	1234		231	263	306	385	392	417		495	546	583	619	636	675
r23: Leoganita_30	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r24: ArcherNIM_30	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r25: StarStuff_31 + 2	94	1234	194	242	263	306	385	392	417		495	546	583	619	636	675
r26: Koduck_28 + 1	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r27: Serenity_27	94	1234		231	263	306	385	392	417		495	546	583	619	636	675
r28: FarsusIV_28	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r29: Drake55_30	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r30: Fameo_28 + 2	94	1234	194	218	251	306	385	392	417		495	546	583	619	636	675
r31: Leviathan_30	94	1234		218	251	306	385	392	417		495	546	583	619	636	675
r32: FiringLine_28 + 1	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r33: Jsquared_27	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r34: TipsytheTRex_27	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r35: Larenn_29 + 1	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r36: IronMan_30	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r37: WeiHuaDA_34	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r38: Retro23_28	94	1234		242	278	306	385	392	417		495	546	583	619	636	675
r39: Trooper_28	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r40: Dalmatian_28	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r41: XianYue_28	94	1234		231	263	278	306	385	417		495	546	583	619	636	675
r42: Pukovnik_30	94	1234	194	231	263	278	306	385	417		495	546	583	619	636	675
r43: Herbertwm_25	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r44: Anseim_28	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r45: Trixie_31	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r46: Acolyte_28	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r47: Smeagan_30	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r48: MiculUcigas_28 + 1	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r49: Power_28 + 2	94	1234		218	242	278	306	385	417		495	546	583	619	636	675
r50: BengiVuitton_29 + 1	94	1234		218	242	278	306	385	417		495	546	583	619	636	675



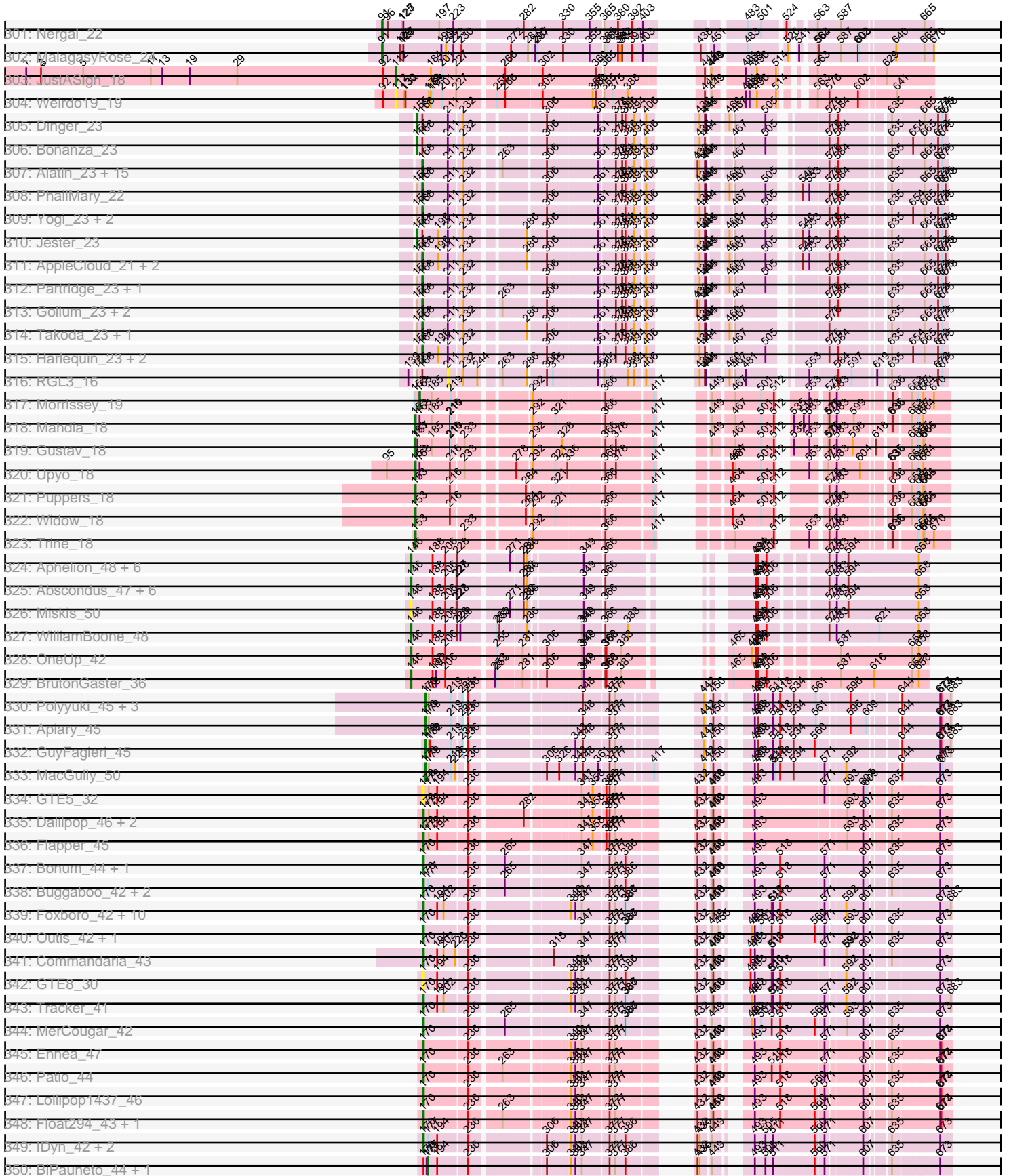
# Zoomed Pham 195289



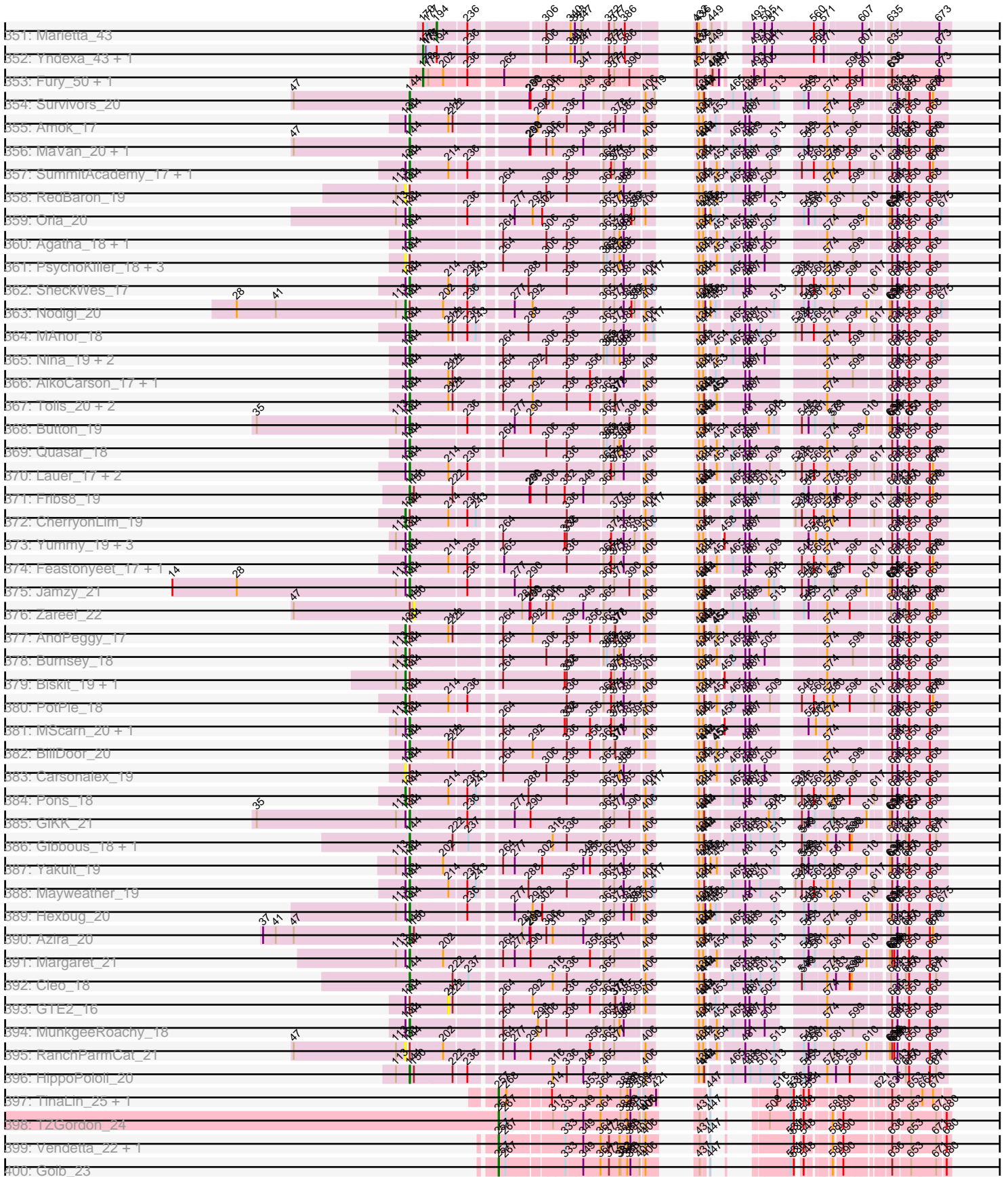
# Zoomed Pham 195289



# Zoomed Pham 195289

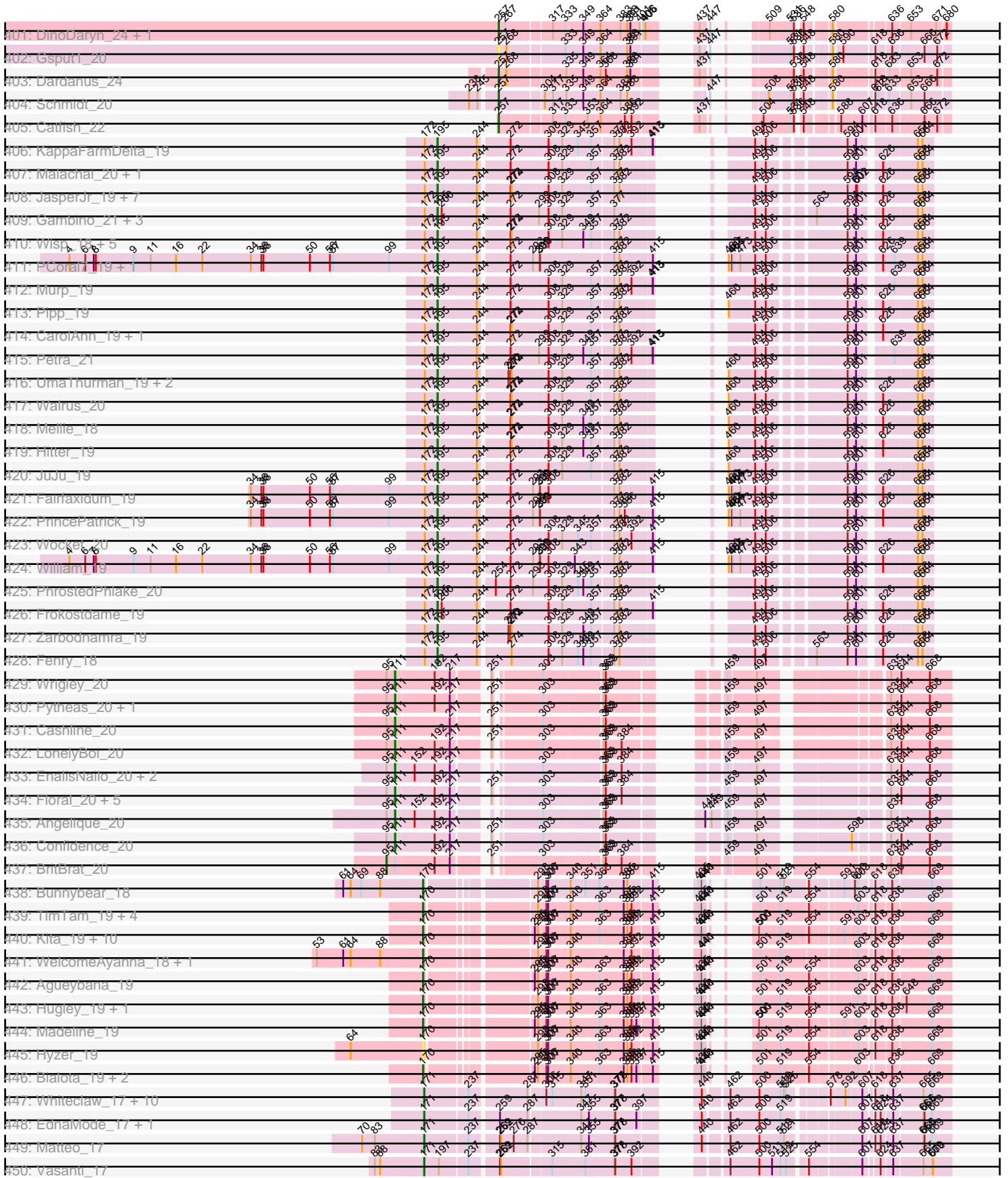


# Zoomed Pham 195289

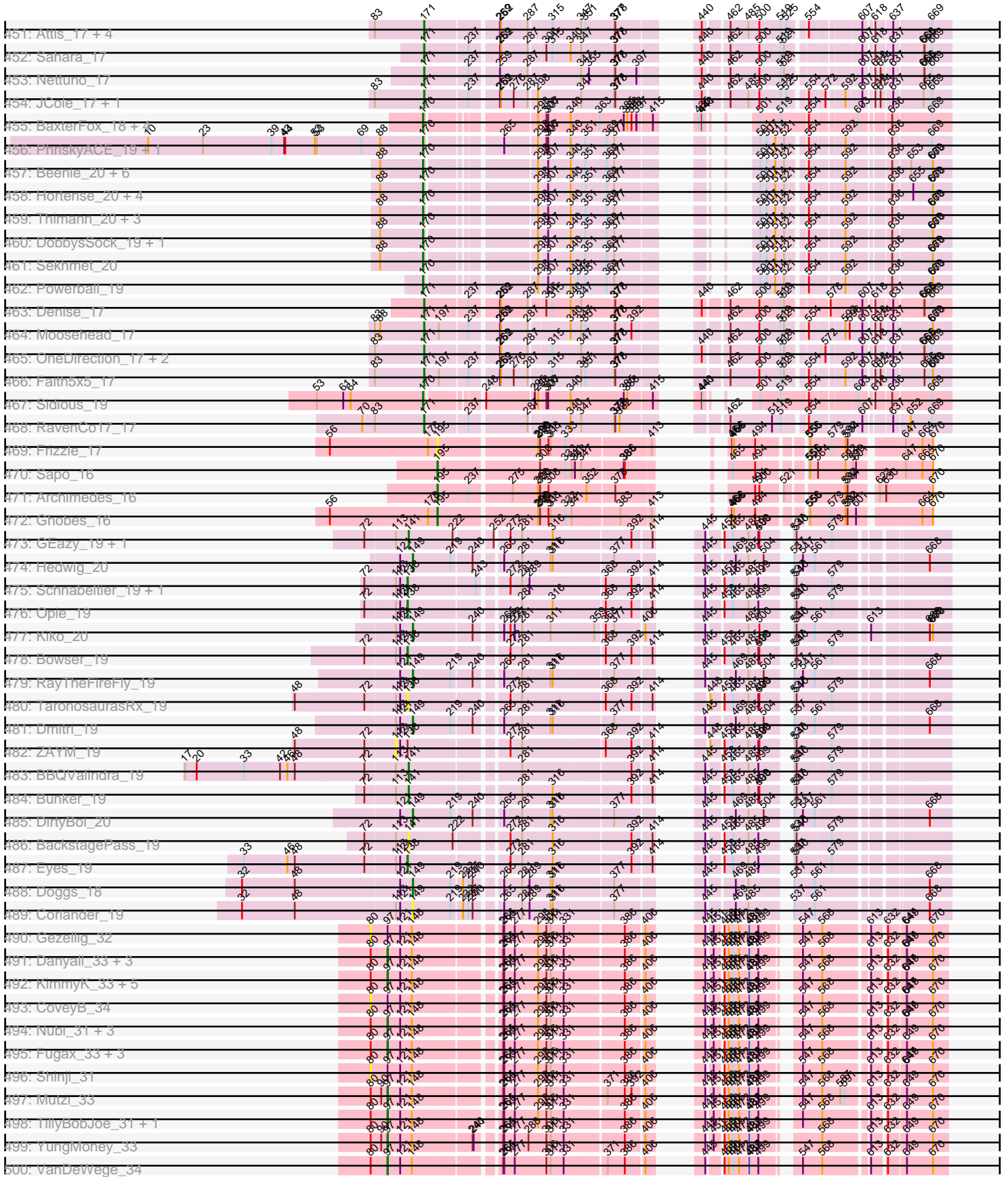




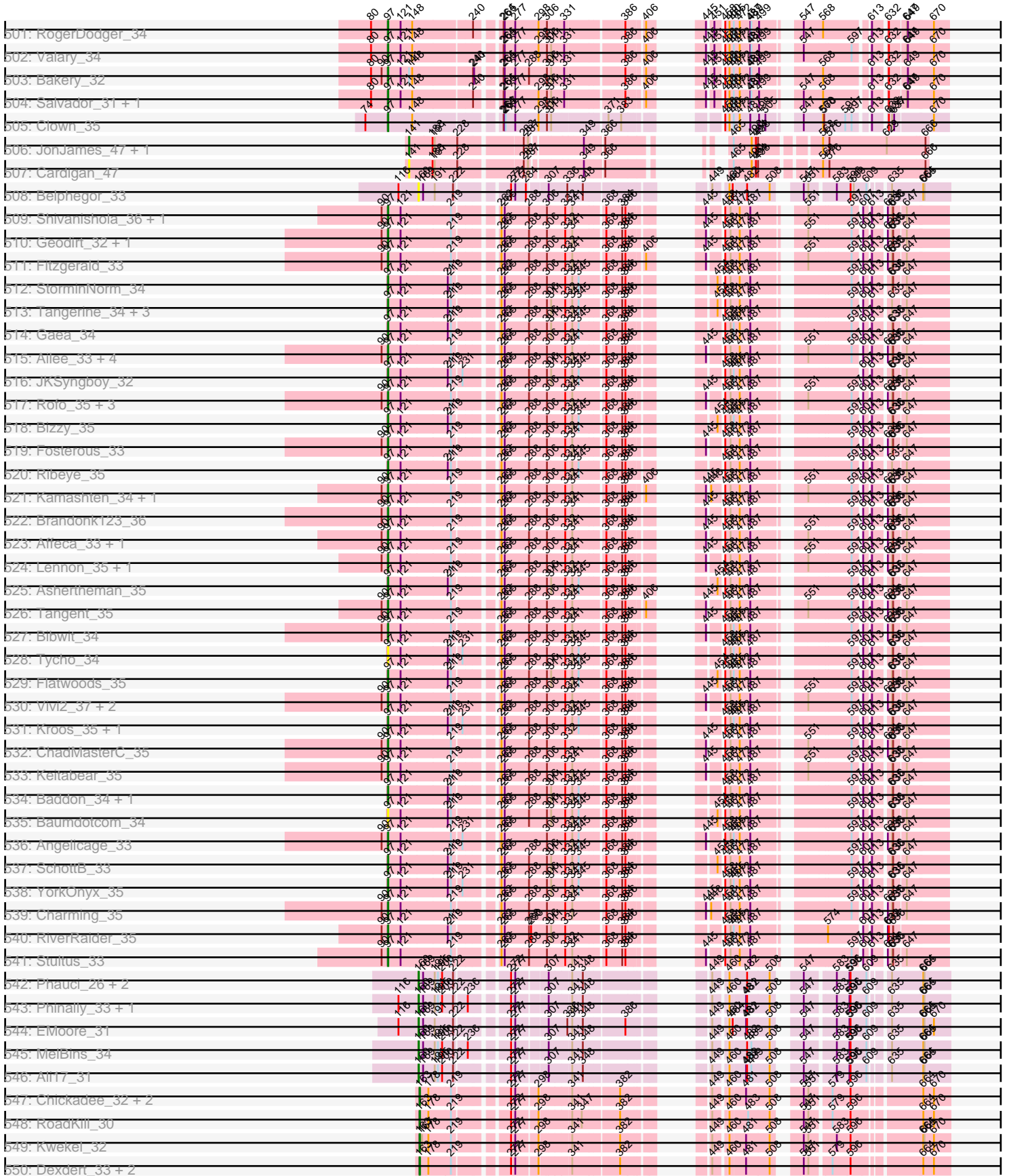
# Zoomed Pham 195289



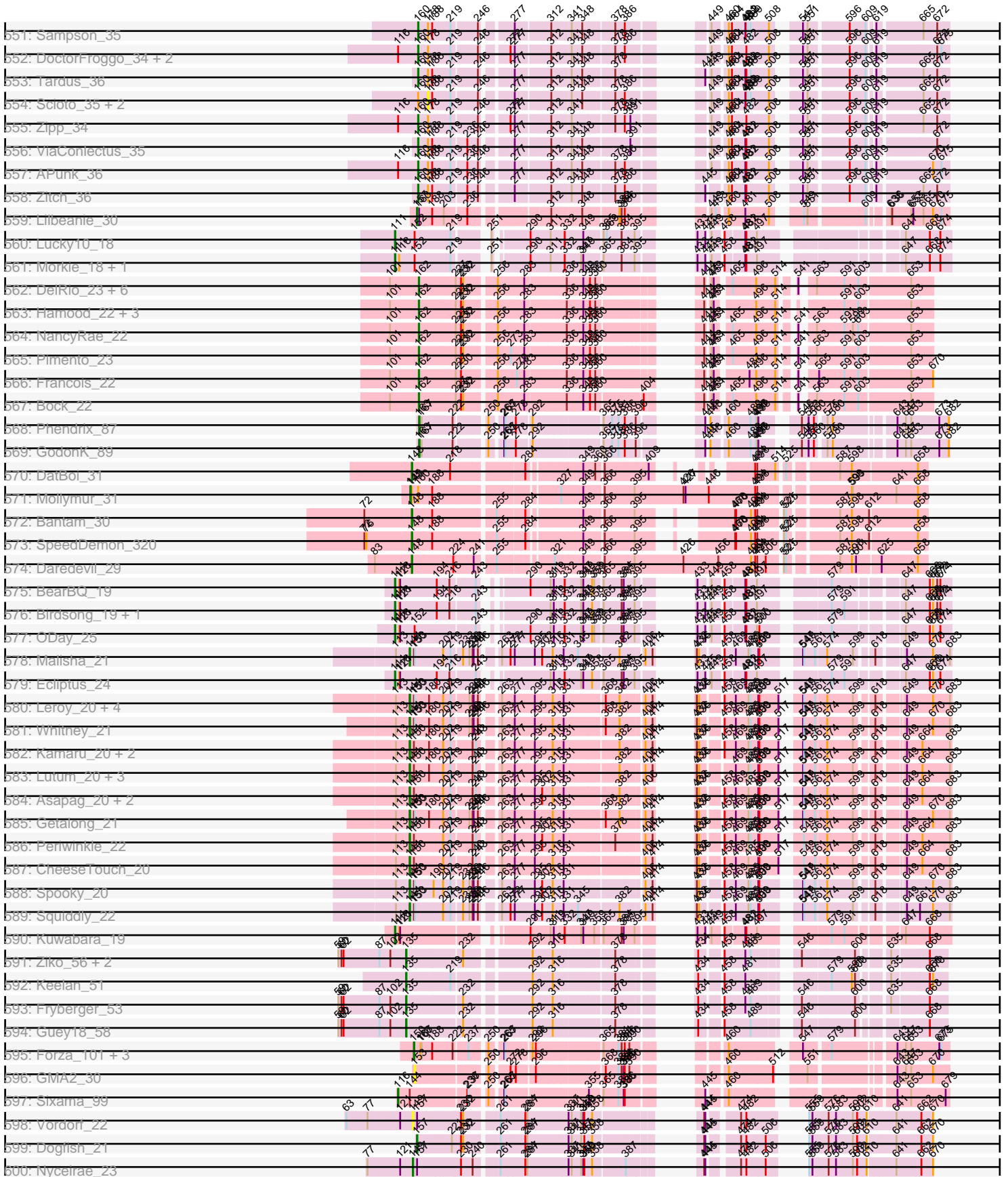
# Zoomed Pham 195289



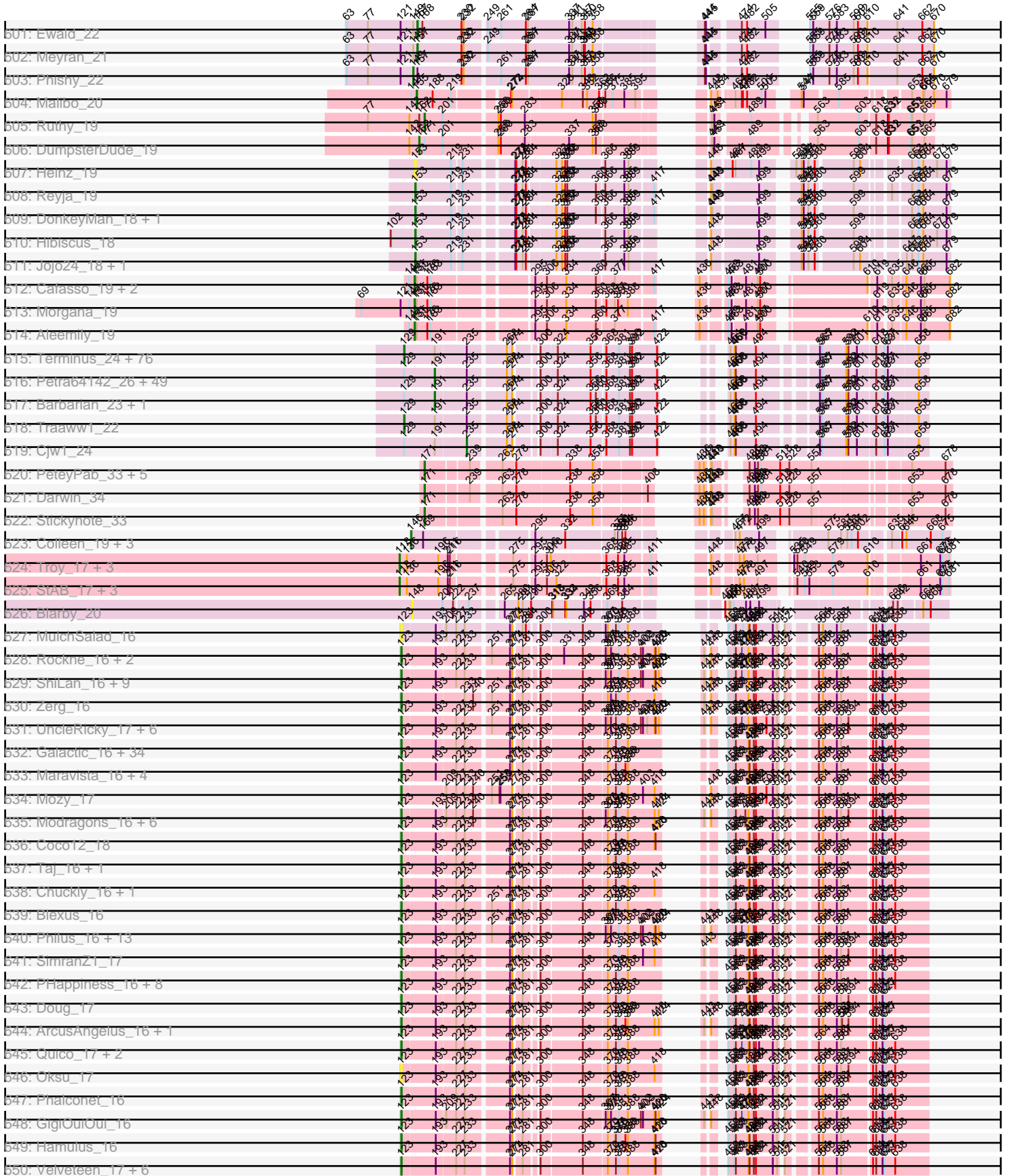
# Zoomed Pham 195289



# Zoomed Pham 195289

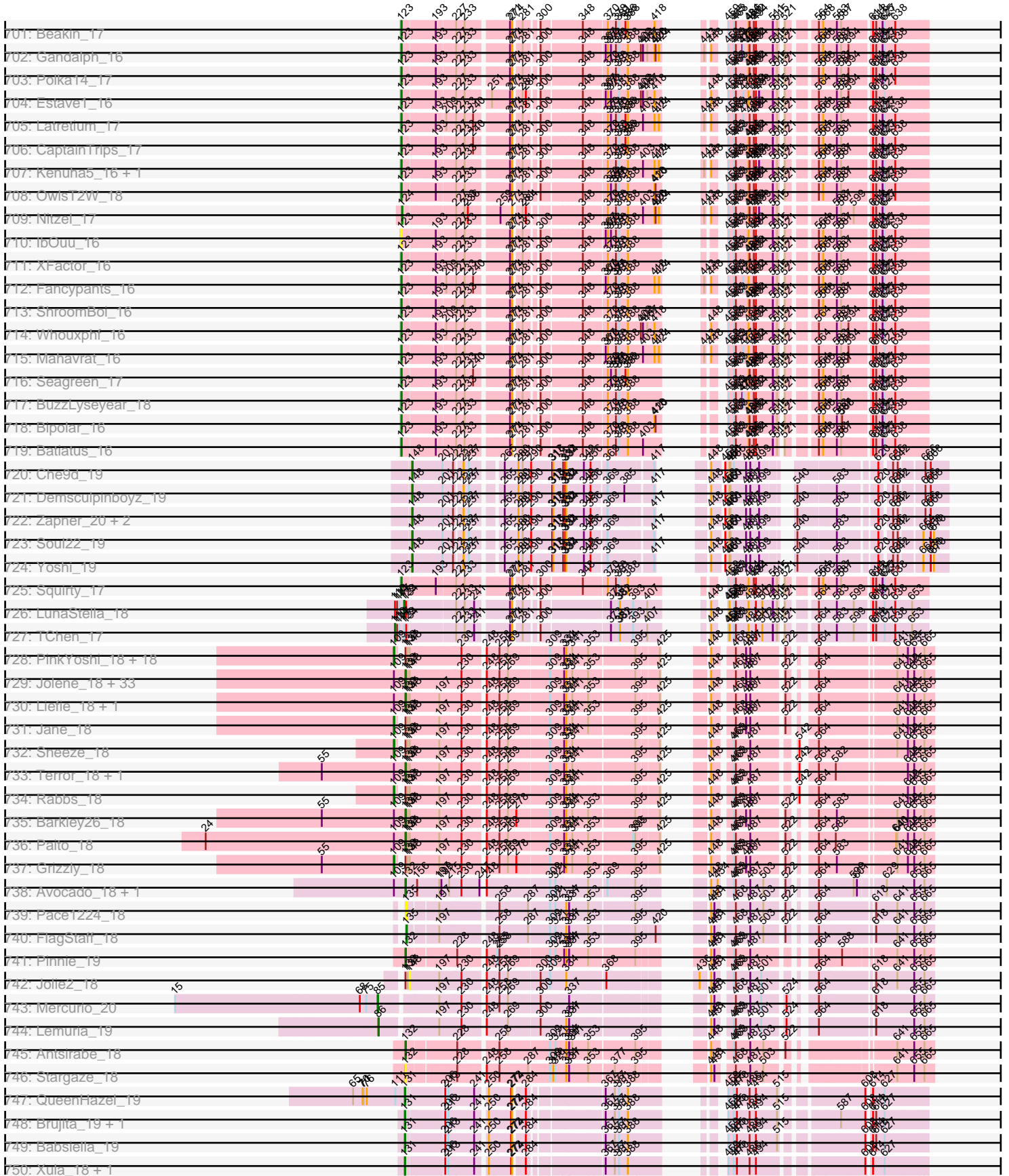


Zoomed Pham 195289





Zoomed Pham 195289

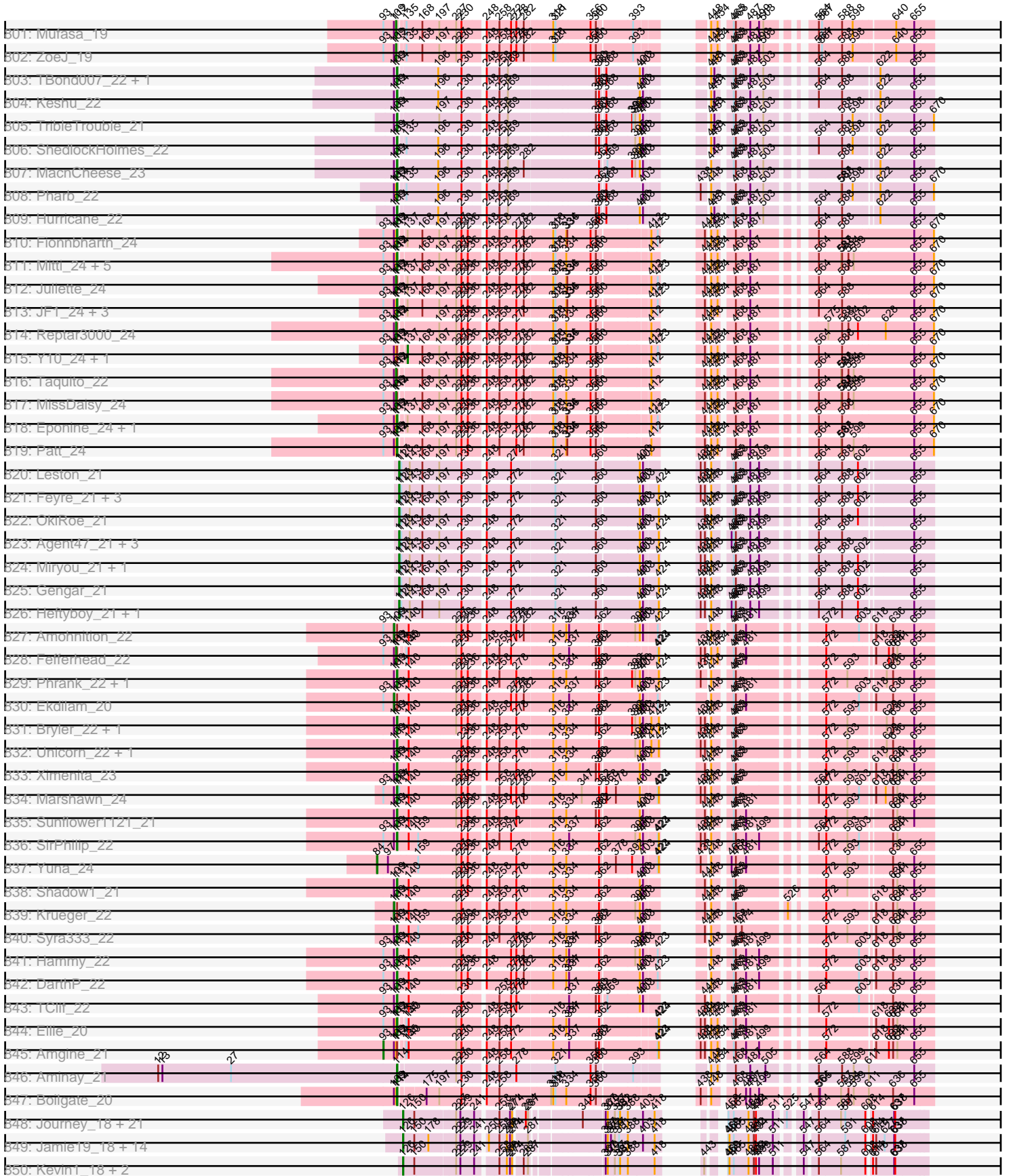


# Zoomed Pham 195289

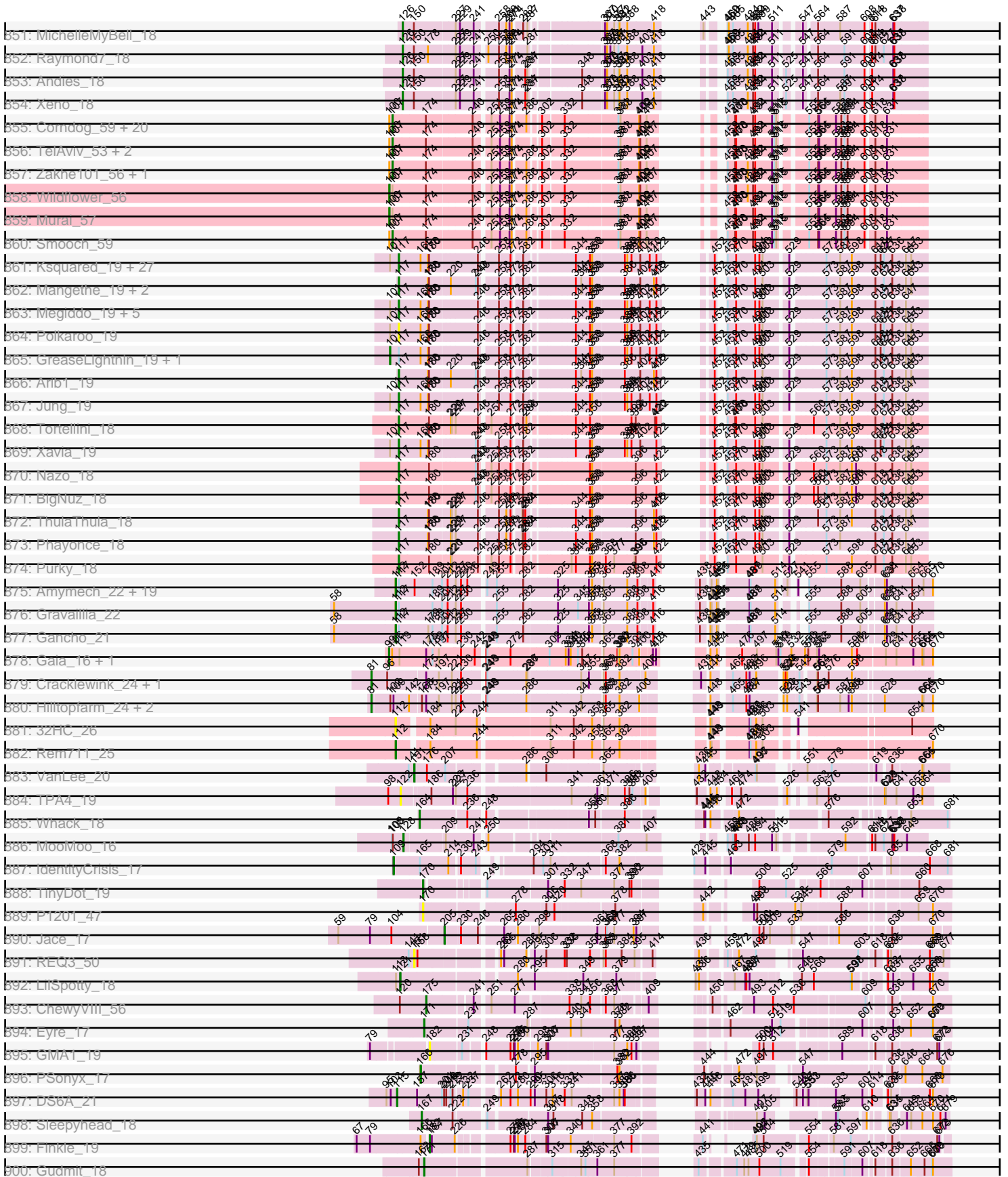
ID	Name	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
751:	Kalan2_37	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
752:	ThreeRngTarjay_35	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
753:	Bombitas_33 + 4	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
754:	BARA_34 + 2	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
755:	Squint_33 + 4	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
756:	Omega_36	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
757:	Bobby_38 + 3	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
758:	Minerva_37 + 1	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
759:	Gonephishing_32	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
760:	Hannaconda_31 + 2	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
761:	Superphikiman_34	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
762:	Lucky2013_34	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
763:	Constella_31	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
764:	Optimus_35	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
765:	Thibault_33	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
766:	Zelink_38	124	191	227	253	282	301	346	359	388	398	448	494	500	525	553
767:	Durfee_23 + 41	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
768:	MarkPnew_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
769:	Mylix_23 + 1	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
770:	Anaya_24	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
771:	Illumine_23 + 2	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
772:	Nikao_19 + 8	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
773:	TimBug_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
774:	Rapunzel97_23 + 10	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
775:	Leivond_22 + 1	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
776:	TingHuaYa_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
777:	Bella96_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
778:	Geraldini_23 + 4	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
779:	Etra2_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
780:	Vairidus_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
781:	LaterM_23 + 1	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
782:	Shaobing_23 + 1	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
783:	Dartlin_23 + 3	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
784:	Chris_22	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
785:	Niob_22	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
786:	Guanica15_23 + 1	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
787:	Prithvi_23 + 5	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
788:	DtHayes_23 + 2	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
789:	LastHope_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
790:	Murucutumou_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
791:	KTSI_22	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
792:	Oscar_22	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
793:	Pokerus_22	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
794:	Curiosium_24	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
795:	Ageoldapage_23	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
796:	Findley_19 + 1	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
797:	BoostSeason_19	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
798:	DismalStressor_19 + 2	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
799:	TW4_19	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204
800:	Milly_19	93	100	108	116	124	132	140	148	156	164	172	180	188	196	204



# Zoomed Pham 195289



# Zoomed Pham 195289



# Zoomed Pham 195289



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 195289 Report

This analysis was run 12/09/24 on database version 580.

Pham number 195289 has 2251 members, 173 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_29
- Track 2 : Corvo\_28, Rajelicia\_27, Bethlehem\_27, HermioneGrange\_27, MaryBeth\_27, Rufus\_28, MetalQZJ\_27, Arcanine\_28, HanShotFirst\_27, STLscum\_28, Alvin\_28
- Track 3 : QTRlifeCrisis\_27, Jerm2\_28, KSSJEB\_27, Bob3\_26, Espresso\_27, Gwendoluna\_29, TheloniousMonk\_29, Mule\_27, Lopton\_28, Paraselene\_26, Teodoridan\_25, Adahisdi\_28, Abbyshoes\_28, PSullivan\_29, Big3\_27, Tote\_29, JuliaChild\_29, PhrostyMug\_27, Jorgensen\_27, Norz\_29, Molly\_28, Jasper\_28, Rohr\_28, Ichabod\_28, Ashballer\_27, Tripl3t\_28, BeesKnees\_28, Sagefire\_28, Target\_30, Seabiscuit\_29, Dulcie\_26, Beatrix\_27, Nerujay\_28, Pepe\_28, Aeneas\_29, PattyP\_29, Gyzlar\_29, Payneful\_27, JackSparrow\_28, BaconJack\_29, BigMau\_29, Pippin\_29, Applejack\_27, KyMonks1A\_29, GrecoEtereo\_29, Kanely\_28, Eyeball\_27, TwoPeat\_28, Kenmech\_30, Petp2012\_29, Mryolo\_26, Ruotula\_26, ILeeKay\_29, Abrogate\_280, Maroc7\_26, Kugel\_28, Sibs6\_29, Bxb1\_25, Gandalf20\_28, Michley\_27, Rhynn\_27, Ciao\_27, MPlant7149\_26, Ohno789\_27, Pita2\_29, Acme\_29, Makemake\_27, Dussy\_28, Fascinus\_26, Lesedi\_26, Marchy\_26, Swole\_29, Zeeculate\_27
- Track 4 : Inyanga\_26, Atkinbua\_29, Licorice\_29, Ringer\_27, Doom\_28, Switzer\_28, Watermelon\_29, AFIS\_27, Sunshine924\_26, Marcell\_27, Traft412\_29, Snazzy\_26, DreamCatcher\_30, GageAP\_29, DrFeelGood\_26, PherrisBueller\_28, Manatee\_28, Kykar\_25, Oogway\_26, Violet\_26, RidgeCB\_27, BigPaolini\_28
- Track 5 : Fushigi\_28
- Track 6 : MrGordo\_27
- Track 7 : Solon\_27, Marsha\_27, Scowl\_28, Arlo\_26, Edtherson\_28, Museum\_29, Altman\_29, PascalRango\_26, ConceptII\_29, Burton\_28, Treddle\_29, Froghopper\_28, BPBiabs31\_28, Monet\_29, Chanagan\_26, HarryOW\_28
- Track 8 : SkiPole\_29, SarFire\_27, Pari\_28, Thor\_27
- Track 9 : Briton15\_29, Hope4ever\_27, Lamina13\_27, Tasp14\_28
- Track 10 : Squee\_28, Fenn\_28, Naira\_28, Barriga\_27, Niza\_29
- Track 11 : JC27\_29
- Track 12 : DD5\_28, Lockley\_27
- Track 13 : Bones\_27, Smairt\_28, PacerPaul\_27, KBG\_28
- Track 14 : Ajay\_28
- Track 15 : Homines\_27, Marge\_28, Nhonho\_27, Wheeler\_27
- Track 16 : Trouble\_28, Magnito\_26, Turj99\_26, Hami1\_29
- Track 17 : BK1\_25, A6\_25

- Track 18 : Fajezeel\_29, SpikeBT\_29, Greg\_29, Pinto\_30, Sumter\_26, Dreamboat\_28
- Track 19 : Mkhuseli\_28
- Track 20 : GMonster\_26
- Track 21 : LilBib\_28, Seanderson\_28, StrongArm\_26, Forsytheast\_26, Moose\_26, Bexan\_26, SwissCheese\_28, Pelly\_28
- Track 22 : Papez\_29, StewieG\_26, ShortQueendom\_26, Zeuska\_28
- Track 23 : CactusRose\_26
- Track 24 : Bigfoot\_26
- Track 25 : Petruccio\_28
- Track 26 : Bruns\_26, Parliament\_26
- Track 27 : Peterson\_30
- Track 28 : Perseus\_28
- Track 29 : ProMouse\_26
- Track 30 : Zephyr\_27
- Track 31 : Smeagol\_29
- Track 32 : Dynamix\_28, Anglerfish\_28, McGuire\_28
- Track 33 : Slagathor\_28
- Track 34 : Sorpresa\_27, Sandaddy\_26
- Track 35 : Bircsak\_27, Gompeii16\_27, Francis47\_27
- Track 36 : Topgun\_27
- Track 37 : Hermia\_30
- Track 38 : Magnar\_27
- Track 39 : Rubeus\_28, Euphoria\_27, Killigrew\_25
- Track 40 : PinkPlastic\_26, U2\_27, Sanya\_26, NEHalo\_27, Blue\_27, BluSpix\_27
- Track 41 : Alsfro\_31
- Track 42 : Crispicious1\_26, BillKnuckles\_28
- Track 43 : Graduation\_29
- Track 44 : Carlyle\_29
- Track 45 : IgnatiusPatJac\_26
- Track 46 : Buttons\_29
- Track 47 : Paphu\_26
- Track 48 : Wilkins\_27
- Track 49 : Agaliana\_28
- Track 50 : Rutherferd\_29
- Track 51 : Dexes\_28
- Track 52 : Cueylyss\_27
- Track 53 : Kristoff\_28
- Track 54 : Rowdy\_31, DustyMartin\_31, Shapes\_31
- Track 55 : RhynO\_28
- Track 56 : Chupacabra\_27, OKCentral2016\_27, Goose\_27
- Track 57 : Topanga\_27
- Track 58 : PeaceMeal1\_26, KittenMittens\_26, Drake94\_26, Trike\_25, Severus\_26
- Track 59 : DontArgue\_26
- Track 60 : Eaglepride\_28
- Track 61 : Edison31\_27, WalterMcMickey\_27, Twister\_27
- Track 62 : Poompha\_26
- Track 63 : Rebeuca\_28
- Track 64 : Aneem\_28, Et2Brutus\_27, Orange\_28, Hutc2\_28, Lucivia\_28, Joselito\_28, Jabith\_28, Bud\_28, Mulciber\_28, Munch\_28, Petersenfast\_27, Salz\_28, Ebony\_28, Sham4\_28, Insomnia\_28, Snape\_28
- Track 65 : Bachome\_28
- Track 66 : Gilberta\_28

- Track 67 : Bowtie\_28
- Track 68 : Mabel\_28
- Track 69 : MaCh\_28
- Track 70 : TinyTimmy\_28
- Track 71 : Flaverint\_28, Fibonacci\_28, Timothy\_28
- Track 72 : Zimmer\_30
- Track 73 : Steamy\_29
- Track 74 : DarthPhader\_29
- Track 75 : Refuge\_31
- Track 76 : Pharaoh\_28
- Track 77 : Phlei\_23
- Track 78 : Gail\_28
- Track 79 : SororFago\_28
- Track 80 : Luchador\_30
- Track 81 : Jeeves\_28
- Track 82 : Sunhee\_27
- Track 83 : Anon\_28
- Track 84 : ReMo\_30, Battleship\_31, ShayRa\_31, KatherineG\_30, Anaysia\_30, Boohoo\_30, Oofda\_31, Strosahl\_30, MinecraftSteve\_31, JSwag\_30, Epsocamisio\_30, Waits\_30, Nebulosus\_30, Looper\_31, Remus\_30, Rosalind\_30, LastResort\_30, Soups\_30, Switzerland\_30
- Track 85 : DekHockey33\_30
- Track 86 : Nedarya\_29
- Track 87 : EagleEye\_30
- Track 88 : PainterBoy\_29
- Track 89 : Lucyedi\_29
- Track 90 : 40AC\_31
- Track 91 : MyraDee\_25
- Track 92 : Kimona\_24
- Track 93 : Equemioh13\_30, Centaur\_30, WideWale\_30, Updawg\_30
- Track 94 : Jaan\_31, Landor\_29
- Track 95 : JoshKayV\_30, ChipMunk\_30
- Track 96 : Adzzy\_29, Ph8s\_29
- Track 97 : D32\_31, Naji\_31, D29\_28
- Track 98 : Piro94\_29, NaSiaTalie\_28
- Track 99 : NothingSpecial\_30
- Track 100 : ANI8\_31, VC3\_31, AN3\_28, C3\_26, AN9\_31, VA6\_28
- Track 101 : Bradman\_27, MajorMajor\_27, Quokka\_26
- Track 102 : Tomathan\_31, Travvers\_31
- Track 103 : DBQu4n\_31, Duplo\_31
- Track 104 : Agape74\_30
- Track 105 : BobSwaget\_31
- Track 106 : 20ES\_28
- Track 107 : Crucio\_28
- Track 108 : LadyBird\_28
- Track 109 : LilTurb\_30, Buggy\_30, Whabigail7\_30, Dignity\_30, Jerm\_30, AbbyPaige\_30, Turbido\_30
- Track 110 : BabyBack\_30
- Track 111 : EZMoney23\_32
- Track 112 : SwirlSquare\_30
- Track 113 : Miko\_31
- Track 114 : Che12\_30
- Track 115 : Kalpine\_31

- Track 116 : Colin\_32
- Track 117 : Caraxes\_27, Superchunk\_27
- Track 118 : RedRock\_31
- Track 119 : Changeling\_30
- Track 120 : AnnaL29\_31
- Track 121 : Loser\_31
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- Track 123 : Leogania\_30
- Track 124 : ArcherNM\_30
- Track 125 : StarStuff\_31, Kerberos\_31, Pomar16\_31
- Track 126 : Koduck\_28, L5\_28
- Track 127 : Serenity\_27
- Track 128 : TarsusIV\_28
- Track 129 : Drake55\_30
- Track 130 : Fameo\_28, QueenB2\_28, Heffalump\_30
- Track 131 : Leviathan\_30
- Track 132 : FiringLine\_28, QueenBeesly\_28
- Track 133 : Jsquared\_27
- Track 134 : TopsytheTRex\_27
- Track 135 : Larenn\_29, Malec\_29
- Track 136 : IronMan\_30
- Track 137 : WeiHuaDA\_34
- Track 138 : Retro23\_28
- Track 139 : Trooper\_28
- Track 140 : Dalmatian\_28
- Track 141 : XianYue\_28
- Track 142 : Pukovnik\_30
- Track 143 : Herbertwm\_25
- Track 144 : Anselm\_28
- Track 145 : Trixie\_31
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- Track 148 : MiculUcigas\_28, Flare16\_28
- Track 149 : Power\_28, SweetiePie\_28, Georgie2\_29
- Track 150 : BengiVuitton\_29, Deloris\_29
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- Track 152 : Odin\_27
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- Track 154 : Baehexic\_29
- Track 155 : KingCyrus\_30
- Track 156 : NicoleTera\_32
- Track 157 : Lokk\_31
- Track 158 : MissWhite\_28
- Track 159 : HarryHoudini\_30
- Track 160 : CRB1\_28
- Track 161 : Phaded\_31
- Track 162 : SnapTap\_28
- Track 163 : DudeLittle\_28
- Track 164 : Iwokeuplikedis\_29
- Track 165 : Bactobuster\_29
- Track 166 : GaugeLDP\_30
- Track 167 : Journey13\_26
- Track 168 : EvilGenius\_30

- Track 169 : Rachaly\_31
- Track 170 : First\_0028
- Track 171 : Anthony\_27
- Track 172 : Kinmap\_29
- Track 173 : HelDan\_27, Heathen\_27, Fred313\_27, Scout\_27, Marchesa\_27, Kachowdy\_27, DropBear\_27
- Track 174 : ACFishhook\_29, HaveUMetTed\_30, Kalnoky\_30, JeppNRM\_30
- Track 175 : Mainiac\_29, Grif\_29, Stagni\_29, Sabia\_29, BreSam8\_29, P28Green\_29, MadMarie\_29
- Track 176 : Cullens\_29, LugYA\_31, Phoebe\_29, MarQuardt\_29, MuchMore\_31, LarryKay\_29, Daishi\_28, Taurus\_29, LBerry\_29, KADY\_30, Wooldri\_31, Beauxregard13\_29, Louie6\_29, Bxz2\_28, Farber\_29, Tiffany\_29, GingkoMaracino\_29, Colbster\_29, GtownJaz\_29, MoneyMay\_29, Phoxy\_29, PotatoSplit\_30, Methuselah\_28, Penny1\_29, EpicPhail\_29, Spike509\_29, Aglet\_29, Microwolf\_29, Pembroke\_29, Fernando\_29, BuzzBuzz\_28, Sabinator\_29, AugsMagnumOpus\_31, Watson\_29, Ollie\_29, Lilith\_29, AgronaGT15\_29, Vix\_29, Malinsilva\_31, Anubis\_31, SoYo\_29, Grub\_29, Marie\_29, Soshari\_31, PGHhamlin\_31, Misomonster\_31, DaHudson\_29, Rummer\_29
- Track 177 : BlueBird\_28, Giroux\_27, Idleandcovert\_27, SaturnRing\_27, Bugatti\_27, Pistachio\_28
- Track 178 : Norbert\_27, Caviar\_28, Panamaxus\_27, Texage\_27, Margo\_28, Veracruz\_27, Pocahontas\_28, ResDef\_28, Popcicle\_28, Hookmount\_28, QuinnKiro\_27, Todacoro\_28, Lambert1\_28, Noella\_28
- Track 179 : MK4\_27
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- Track 181 : Isca\_27, Rockstar\_27
- Track 182 : StepMih\_29
- Track 183 : Jobu08\_29, SoilDragon\_29, Zetzy\_28
- Track 184 : MA5\_27
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- Track 186 : Grum1\_29
- Track 187 : JF2\_27, JF4\_27, B1\_25
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- Track 202 : ICleared\_27, Holli\_27, Skipitt\_27, Kingmustik0402\_27, Romney\_27, Burger\_26, Palestino\_26, Wilbur\_27, Albee\_27, Sabertooth\_27, Mazhar510\_27, Polymorphads\_27, Clarenza\_27, Cocoaberry\_27, Ruin\_27, Koreni\_26, Annyong\_27, Florean\_27, Nemo27\_27, Dhanush\_27, Citius\_27, MeeZee\_27, Eros\_27, YoSam321\_27, Scamp\_27, Bartimeaus\_27, Flux\_27, Maverick\_27, Phacado\_27,



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- Track 203 : Badger\_27, Wile\_27, Xena\_27, Datway\_27, Cici\_27, Backyardigan\_27, Achebe\_26
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- Track 276 : Spouty\_30, Priya\_30, EmyBug\_30
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- Track 307 : Alatin\_23, Phrankenstein\_23, Bradshaw\_23, Rhodalysa\_23, TWAMP\_23, Lillie\_23, Erik\_23, Espica\_23, Naiad\_23, Swann\_23, Nancinator\_23, CosmicSans\_23, StCroix\_23, Belenaria\_23, UhSalsa\_23, Natosaleda\_23
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- Track 313 : Gollum\_23, RexFury\_23, RER2\_16
- Track 314 : Takoda\_23, AngryOrchard\_22
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- Track 316 : RGL3\_16
- Track 317 : Morrissey\_19
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- Track 339 : Foxboro\_42, NovumRegina\_41, GrootJr\_43, Kurt\_41, Phomeo\_40, Jifall16\_40, Emianna\_41, Arti\_41, NatB6\_41, KidneyBean\_41, Wheezy\_41
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- Track 577 : ODay\_25
- Track 578 : Malisha\_21
- Track 579 : Ecliptus\_24
- Track 580 : Leroy\_20, Crater\_18, Horus\_20, Phistory\_21, Apricot\_19
- Track 581 : Whitney\_21
- Track 582 : Kamaru\_20, Holliday\_20, Budski\_20
- Track 583 : Lutum\_20, LitninMcQueen\_20, Phabuloso\_20, Kenna\_19
- Track 584 : Asapag\_20, Frickyeah\_20, BENtherdunthat\_20
- Track 585 : Getalong\_21
- Track 586 : Periwinkle\_22
- Track 587 : CheeseTouch\_20
- Track 588 : Spooky\_20
- Track 589 : Squiddly\_22
- Track 590 : Kuwabara\_19
- Track 591 : Ziko\_56, Ronaldo\_56, Volt\_55
- Track 592 : Keelan\_51



- Track 593 : Fryberger\_53
- Track 594 : Guey18\_58
- Track 595 : Forza\_101, BlueNGold\_100, Mareelih\_99, Boopy\_101
- Track 596 : GMA2\_30
- Track 597 : Sixama\_99
- Track 598 : Vordorf\_22
- Track 599 : Dogfish\_21
- Track 600 : Nyceirae\_23
- Track 601 : Ewald\_22
- Track 602 : Meyran\_21
- Track 603 : Phishy\_22
- Track 604 : Malibo\_20
- Track 605 : Ruthy\_19
- Track 606 : DumpsterDude\_19
- Track 607 : Heinz\_19
- Track 608 : Reyja\_19
- Track 609 : DonkeyMan\_18, Tarzan\_18
- Track 610 : Hibiscus\_18
- Track 611 : Jojo24\_18, Santhid\_18
- Track 612 : Cafasso\_19, ModicumRichard\_19, ObLaDi\_19
- Track 613 : Morgana\_19
- Track 614 : Aleemily\_19
- Track 615 : Terminus\_24, Goldilocks\_25, Command613\_25, Myrale\_24, ABCat\_23, Miniwave\_24, BadStone\_23, Thresher\_25, ChosenOne\_23, Simpliphy\_25, MISSy\_23, NoSleep\_25, Elph10\_25, TeardropMSU\_23, SirDuracell\_23, 244\_26, Holt\_25, Lilizi\_26, Cookies\_24, Pharsalus\_25, PhatBacter\_24, AmericanBeauty\_26, Elite2014\_23, Lilac\_26, Nimrod\_24, Manda\_25, Ukulele\_24, OrionPax\_25, GooberAzure\_26, Kimchi\_26, ShereKhan\_26, StolenFromERC\_26, Kanye\_26, Gator\_22, Wiggin\_27, Adnama\_27, Tarkin\_26, Filch\_25, Contagion\_23, Sotrice96\_24, StellaBean\_24, Tomaszewski\_23, BigBubba\_25, Kostya\_24, Misfit\_24, DrDrey\_25, Paperbeatsrock\_26, Lilpickle\_23, SophKB\_24, Cactus\_25, Dusk\_23, Saints25\_25, Quallification\_25, Eureka\_24, HanKaySha\_25, Phrux\_24, Pat3\_23, Teaspoon\_25, Buck\_23, MPhalcon\_23, BaboJay\_23, Gemini\_27, Stark\_25, Moldemort\_25, Phaux\_23, Czyszczonek\_25, CrystalP\_24, Goku\_24, Argent26\_26, ShamWow\_24, MadamMonkfish\_24, Balomoji\_23, Tuco\_25, Rimmer\_23, Highbury\_25, Hoonter\_26, GoldenSpark\_26
- Track 616 : Petra64142\_26, YassJohnny\_25, Marshmallow\_24, Palpatine\_24, HufflyPuff\_23, Flypotenuse\_22, FireRed\_24, RiverMonster\_24, Glexan\_22, ChotaBhai\_24, Daikon\_22, BilboSwaggins\_24, Easy2Say\_26, Gage\_26, BugsBunny\_22, Phaja\_24, Murica\_23, Mosby\_23, Icee\_23, Henry\_24, Policronamos\_24, Maxxinista\_25, Hopey\_26, Sassay\_23, Rakim\_25, IHOP\_24, Porky\_24, Bask21\_24, Harella\_23, Bench\_26, Nala\_24, Pumpkin\_26, Toto\_24, Amao\_24, JeTaime\_26, Murphy\_25, Xandras\_26, Youngblood\_24, FairyPath\_24, Inca\_23, Emmina\_25, NelitzaMV\_24, TBrady12\_26, DoctorDiddles\_24, Bruin\_24, Willez\_23, xkcd\_25, Dumbo\_24, Stank\_27, Mindy\_24
- Track 617 : Barbarian\_23, Asriel\_23
- Track 618 : Traaww1\_22
- Track 619 : Cjw1\_24
- Track 620 : PeteyPab\_33, Kimchi1738\_31, Cruella\_31, PotatoChip\_34, Zion\_34, C3PO\_31
- Track 621 : Darwin\_34
- Track 622 : Stickynote\_33
- Track 623 : Colleen\_19, Arianna\_19, Poushou\_19, TouchMeNot\_19

- Track 624 : Troy\_17, SamW\_17, Dina\_17, Lederberg\_17
- Track 625 : StAB\_17, Stiles\_17, Bran\_17, Adelaide\_17
- Track 626 : Blarby\_20
- Track 627 : MulchSalad\_16
- Track 628 : Rockne\_16, PMC\_16, Llij\_16
- Track 629 : ShiLan\_16, Burwell21\_16, Martik\_16, Zizzle\_16, ShowerHandel\_16, Yorick\_16, Nivrat\_16, Lizziana\_16, Spikelee\_17, Jarcob\_16
- Track 630 : Zerg\_16
- Track 631 : UncleRicky\_17, Phatniss\_17, Drago\_17, SiSi\_16, Karhdo\_16, Enby\_17, Lorde\_17
- Track 632 : Galactic\_16, Wee\_17, DLane\_16, Hlubikazi\_16, Wachhund\_16, Ms6\_16, Emma\_16, Geralt\_16, Dante\_16, PhesterPhotato\_16, Bubbles123\_17, Ovechkin\_16, Krakatau\_17, MilleniumForce\_17, Brocalys\_16, JalFarm20\_18, Flathead\_17, LastJedi\_16, Strokeseat\_16, Moonbeam\_17, Royals2015\_16, KristaRAM\_17, Whatsapiecost\_16, Tweety\_16, Mandlovu\_16, Kingsley\_17, Clifton\_16, SG4\_16, Hades\_16, StAnnes\_16, MinionDave\_17, Bobi\_18, Hegedechwinu\_17, Pippy\_16, Koella\_16
- Track 633 : Maravista\_16, Melissauren88\_16, Fruitloop\_16, EleanorGeorge\_16, Leozinho\_17
- Track 634 : Mozy\_17
- Track 635 : Modragons\_16, Ochi17\_16, Jinglebell\_15, Llama\_16, OfUltron\_16, Seabastian\_16, AlpineSix\_16
- Track 636 : Coco12\_18
- Track 637 : Taj\_16, DeadP\_16
- Track 638 : Chuckly\_16, Mova\_17
- Track 639 : Blexus\_16
- Track 640 : Philus\_16, Sparkdehlily\_16, LilMoolah\_16, BobaPhett\_16, DaWorst\_18, Saal\_16, Mantra\_16, Mattes\_16, SwagPiggett\_16, DRBy19\_16, TDanisky\_16, Sandalphon\_17, Eradicator\_16, James\_16
- Track 641 : SimranZ1\_17
- Track 642 : PHappiness\_16, JoeyJr\_16, DaddyRickover\_16, Empress\_17, Pacc40\_16, Daenerys\_16, BlueCrab\_16, Dorothy\_16, Nimbo\_16
- Track 643 : Doug\_17
- Track 644 : ArcusAngelus\_16, Chevrolet\_16
- Track 645 : Quico\_17, Girafales\_17, Florinda\_16
- Track 646 : Oksu\_17
- Track 647 : Phalconet\_16
- Track 648 : GigiOuiOui\_16
- Track 649 : Hamulus\_16
- Track 650 : Velveteen\_17, Ardmore\_16, BigPhil\_17, Crumble\_16, Cerasum\_17, Phanphagia\_16, Shauna1\_16
- Track 651 : OldBen\_16
- Track 652 : Spoonbill\_16, Priscilla\_16, OlympiaSaint\_16, Cabrinians\_16
- Track 653 : BodEinwohner17\_16, Inventum\_16, Sassafras\_16, Deb65\_16
- Track 654 : Gorge\_16
- Track 655 : Misha28\_17, TootsiePop\_17, Awesomesauce\_17
- Track 656 : Fastidio\_16
- Track 657 : IrishSherpFalk\_17, WillSterrel\_17
- Track 658 : Frankie\_17
- Track 659 : Akhila\_17, MilanaBonita\_17
- Track 660 : Filuzino\_16, IMpilo\_16
- Track 661 : Totinger\_17, Starcevich\_17
- Track 662 : ChickenDinner\_17, DocMcStuffins\_17

- Track 663 : Ibhubesi\_16, Harley\_16
- Track 664 : Boomer\_17
- Track 665 : DirtMcgirt\_17
- Track 666 : Rialto\_18, LittleShirley\_17
- Track 667 : NormanBulbieJr\_16
- Track 668 : Donkeykong\_16
- Track 669 : Mutaforma13\_16
- Track 670 : DosHalletts\_17
- Track 671 : Plumbus\_17
- Track 672 : Poenanya\_16, Stap\_17, Ramsey\_17, Doomphist\_16
- Track 673 : DotProduct\_16
- Track 674 : Girr\_16, Veteran\_16, GUmbie\_16, Phasih\_17, MisterCuddles\_16, Ruby\_16
- Track 675 : Leperchaun\_16, RitaG\_16
- Track 676 : Juice456\_18, Kimberlium\_18, QuickMath\_17, MulchExplorer\_19
- Track 677 : DillTech15\_16
- Track 678 : FreddyB\_16
- Track 679 : Piper2020\_17
- Track 680 : Sarma624\_17
- Track 681 : Marker\_17, Cornucopia\_17
- Track 682 : Rita\_16
- Track 683 : Aubs\_16
- Track 684 : Scottish\_17, KingMidas\_17
- Track 685 : ByChance\_16
- Track 686 : Madiba\_17
- Track 687 : VRedHorse\_16
- Track 688 : RedBird\_16
- Track 689 : Firehouse51\_17
- Track 690 : Radiance\_16, Tootsieroll\_17
- Track 691 : Job42\_19
- Track 692 : Alexphander\_18
- Track 693 : Minnie\_17
- Track 694 : Che8\_16
- Track 695 : PopTart\_16, SassyB\_16
- Track 696 : Byougenkin\_16
- Track 697 : Ogopogo\_19
- Track 698 : Eish\_16
- Track 699 : RockyHorror\_17
- Track 700 : Juniper1\_16
- Track 701 : Beakin\_17
- Track 702 : Gandalph\_16
- Track 703 : Polka14\_17
- Track 704 : Estave1\_16
- Track 705 : Latretium\_17
- Track 706 : CaptainTrips\_17
- Track 707 : Kenuha5\_16, SuperGrey\_17
- Track 708 : OwlsT2W\_18
- Track 709 : Nitzel\_17
- Track 710 : IbOuu\_16
- Track 711 : XFactor\_16
- Track 712 : Fancypants\_16
- Track 713 : ShroomBoi\_16
- Track 714 : Whouxphf\_16

- Track 715 : Mahavrat\_16
- Track 716 : Seagreen\_17
- Track 717 : BuzzLyseyear\_18
- Track 718 : Bipolar\_16
- Track 719 : Batiatus\_16
- Track 720 : Che9d\_19
- Track 721 : Demsculpinboyz\_19
- Track 722 : Zapner\_20, Avani\_19, Jabbawokkie\_21
- Track 723 : Soul22\_19
- Track 724 : Yoshi\_19
- Track 725 : Squirty\_17
- Track 726 : LunaStella\_18
- Track 727 : TChen\_17
- Track 728 : PinkYoshi\_18, AzulaCat\_18, Maliketh\_18, Cherrybomb426\_18, CLED96\_18, Wendigo\_18, Jonghyun\_18, Sizemore\_18, Hotshotbaby7\_18, BQuat\_18, Chance64\_18, Kasen3\_18, Frosty24\_18, Olga\_18, Camri\_18, DNAllI\_0018, Remy19\_18, Sweets\_18, Phish\_18
- Track 729 : Jolene\_18, Periodt\_18, Hope\_18, Plagueis\_18, Aroostook\_18, Angel\_18, Kareem\_18, Halo\_18, ECartman\_18, OctaviousRex\_18, Avrafan\_18, Cedasite\_18, ZoMa\_18, Coleslaw\_18, Darionha\_18, Crespo\_18, Annihilator\_18, Phreak\_18, GoldenAsh\_18, CassieYates\_18, TomBrady\_18, Schiebel\_18, Marmie\_18, Renaissance\_18, DMoney\_18, JorRay\_18, Mowgli\_18, BruceB\_18, Gideon\_18, BPs\_18, LouisV14\_18, Gomashi\_18, Zombie\_18, ShaboiShabazz\_18
- Track 730 : Liefie\_18, Peeb\_18
- Track 731 : Jane\_18
- Track 732 : Sneeze\_18
- Track 733 : Terror\_18, Taheera\_18
- Track 734 : Rabbs\_18
- Track 735 : Barkley26\_18
- Track 736 : Paito\_18
- Track 737 : Grizzly\_18
- Track 738 : Avocado\_18, Cambiare\_19
- Track 739 : Pace1224\_18
- Track 740 : FlagStaff\_18
- Track 741 : Pinnie\_19
- Track 742 : Jolie2\_18
- Track 743 : Mercurio\_20
- Track 744 : Lemuria\_19
- Track 745 : Antsirabe\_18
- Track 746 : Stargaze\_18
- Track 747 : QueenHazel\_19
- Track 748 : Brujita\_19, Island3\_19
- Track 749 : Babsiella\_19
- Track 750 : Xula\_18, HC\_19
- Track 751 : Kalah2\_37
- Track 752 : ThreeRngTarjay\_35
- Track 753 : Bombitas\_33, Schatzie\_34, Hughesyang\_35, Dove\_34, Odette\_36
- Track 754 : BAKA\_34, Phoebus\_36, Redno2\_35
- Track 755 : Squint\_33, Porcelain\_33, Ariel\_34, MiaZeal\_34, Courthouse\_34
- Track 756 : Omega\_36
- Track 757 : Bobby\_38, Ejimix\_37, Wanda\_37, DmpstrDiver\_35
- Track 758 : Minerva\_37, Klein\_37
- Track 759 : Gonephishing\_32

- Track 760 : Hannaconda\_31, LittleE\_37, KashFlow\_28
- Track 761 : Superphikiman\_34
- Track 762 : Lucky2013\_34
- Track 763 : Constella\_31
- Track 764 : Optimus\_35
- Track 765 : Thibault\_33
- Track 766 : Zelink\_38
- Track 767 : Durfee\_23, MeaningOfLife\_23, Boiiii\_23, Peel\_23, Twitch\_23, BaghaKamala\_23, Capricorn\_23, Hyperbowlee\_23, Jarvi\_23, Dalmuri\_23, Jeckyll\_23, CheetoDust\_23, Asayake\_23, AlishaPH\_23, CaseJules\_23, BarrelRoll\_23, Apocalypse\_23, Padpat\_23, Blizzard\_23, Rosmarinus\_23, Sulley\_23, YoureAdopted\_22, Belladonna\_23, Emerson\_23, JAWS\_23, BEEST\_23, Spock\_23, Lunahalos\_23, Piatt\_23, Joy99\_23, Inky\_23, BGIluviae\_23, Ramen\_23, Padfoot\_23, Angelica\_23, Deby\_23, Llorens\_23, Tiri\_23, Topper\_23, CREW\_23, Homura\_23, ShiaSurprise\_23
- Track 768 : MarkPhew\_23
- Track 769 : Mynx\_23, Zavala\_23
- Track 770 : Anaya\_24
- Track 771 : Illumine\_23, Dole\_23, Devera\_23
- Track 772 : Nikao\_19, Amelie\_19, Binglebops\_19, Torres\_19, Mdavu\_19, LilPharaoh\_19, Nutello\_19, SgtBeansprout\_19, Enkosi\_19
- Track 773 : TiniBug\_23
- Track 774 : Rapunzel97\_23, Adephagia\_23, Veliki\_23, Tachez\_23, Zabiza\_23, Atiba\_23, TruffulaTree\_23, HedwigODU\_23, ActinUp\_23, Jayhawk\_23, Slimphazie\_23
- Track 775 : LeMond\_22, Scarlett\_22
- Track 776 : TingHuaYa\_23
- Track 777 : Bella96\_23
- Track 778 : Geraldini\_23, QuincyRose\_22, Ganymede\_24, Beezoo\_23, Adonis\_23
- Track 779 : Efra2\_23
- Track 780 : Validus\_23
- Track 781 : LaterM\_23, Stinson\_23
- Track 782 : Shaobing\_23, Peanam\_23
- Track 783 : Dartin\_23, Richo\_23, Niklas\_23, McMater\_23
- Track 784 : Chris\_22
- Track 785 : Nibb\_22
- Track 786 : Guanica15\_23, Yunkel11\_23
- Track 787 : Prithvi\_23, Megsy\_23, TaiwanKao\_24, TreyKay\_23, LindNT\_23, CrimD\_23
- Track 788 : DrHayes\_23, SamuelLPlaqson\_23, Urkel\_23
- Track 789 : LastHope\_23
- Track 790 : Murucutumbu\_23
- Track 791 : KiSi\_22
- Track 792 : Oscar\_22
- Track 793 : Pokerus\_22
- Track 794 : Curiosium\_24
- Track 795 : Ageofdapage\_23
- Track 796 : Findley\_19, Strobilo\_19
- Track 797 : BoostSeason\_19
- Track 798 : DismalStressor\_19, DismalFunk\_19, Marcoliusprime\_19
- Track 799 : TM4\_19
- Track 800 : Milly\_19
- Track 801 : Mufasa\_19

- Track 802 : ZoeJ\_19
- Track 803 : TBond007\_22, Pixie\_22
- Track 804 : Keshu\_22
- Track 805 : TripleTrouble\_21
- Track 806 : ShedlockHolmes\_22
- Track 807 : MacnCheese\_23
- Track 808 : Pharb\_22
- Track 809 : Hurricane\_22
- Track 810 : Fionnbharth\_24
- Track 811 : Mitti\_24, OmniCritical\_24, SamScheppers\_22, Slarp\_24, Cheetobro\_24, Chancellor\_24
- Track 812 : Juliette\_24
- Track 813 : JF1\_24, Kraw\_25, Wintermute\_24, Malthus\_25
- Track 814 : Reptar3000\_24
- Track 815 : Y10\_24, Y2\_24
- Track 816 : Taquito\_22
- Track 817 : MissDaisy\_24
- Track 818 : Eponine\_24, Ruthiejr\_23
- Track 819 : Patt\_24
- Track 820 : Leston\_21
- Track 821 : Feyre\_21, Guillsminger\_21, Waterfoul\_21, Paola\_21
- Track 822 : OkiRoe\_21
- Track 823 : Agent47\_21, InvictusManeo\_21, Kratio\_20, Collard\_21
- Track 824 : Miryou\_21, Thyatira\_21
- Track 825 : Gengar\_21
- Track 826 : Heftyboy\_21, SoSeph\_21
- Track 827 : Amohnition\_22
- Track 828 : Fefferhead\_22
- Track 829 : Phrank\_22, Tierra\_22
- Track 830 : Ekdilam\_20
- Track 831 : Bryler\_22, Cain\_22
- Track 832 : Unicorn\_22, PhelpsODU\_22
- Track 833 : Ximenita\_23
- Track 834 : Marshawn\_24
- Track 835 : Sunflower1121\_21
- Track 836 : SirPhilip\_22
- Track 837 : Yuna\_24
- Track 838 : Shadow1\_21
- Track 839 : Krueger\_22
- Track 840 : Syra333\_22
- Track 841 : Hammy\_22
- Track 842 : DarthP\_22
- Track 843 : TClif\_22
- Track 844 : Ellie\_20
- Track 845 : Amgine\_21
- Track 846 : Aminay\_21
- Track 847 : Boilgate\_20
- Track 848 : Journey\_18, Gex\_18, Scitech\_18, Charlie\_18, Magsby\_18, Duplicity\_18, Philonius\_18, Schnauzer\_18, Chewbacca\_18, Tapioca\_18, Melville\_18, Silvy\_18, Xerxes\_18, Parmesanjohn\_18, Silvafighter\_18, Phloss\_18, Smurph\_18, Bosection6\_18, Fulbright\_18, Carcharodon\_18, Pipsqueaks\_18, Aggie\_18
- Track 849 : Jamie19\_18, Phrann\_18, ShrimpFriedEgg\_18, Snekmaggedon\_18, Shweta\_18, Nenae\_18, BabeRuth\_18, Redi\_18, Panchino\_18, Rebel\_18,

PhancyPhin\_18, Purgamenstris\_18, Hanako\_18, SkinnyPete\_18, SpongeBob\_18

- Track 850 : Kevin1\_18, Rubeelu\_18, Butters\_18
- Track 851 : MichelleMyBell\_18
- Track 852 : Raymond7\_18
- Track 853 : Andies\_18
- Track 854 : Xeno\_18
- Track 855 : Corndog\_59, Firecracker\_57, Ryadel\_60, JangDynasty\_56, Schuy\_57, MadKillah\_57, Winget\_57, Vagabond\_54, YungJamal\_61, NiebruSaylor\_55, Alkhayr\_54, Familton\_57, Bora\_54, Krili\_55, SchoolBus\_56, Vorrps\_56, Mori\_56, Shida\_56, Ashwin\_58, Blessica\_57, FoulBall\_56
- Track 856 : TelAviv\_53, Catdawg\_56, Idergollasper\_56
- Track 857 : Zakhe101\_56, Dylan\_56
- Track 858 : Wildflower\_56
- Track 859 : Murai\_57
- Track 860 : Smooch\_59
- Track 861 : Kssquared\_19, Atcoo\_19, Sonah\_19, Phineas\_19, Techage\_19, FirstPlacePfu\_19, Willsammy\_19, Juniormint\_19, StevieRay\_19, HUHilltop\_19, Pygmy\_18, Zilizebeth\_19, Necropolis\_19, Thespis\_19, Jebeks\_19, Bartholomew\_19, Kari\_19, Brusacoram\_19, Bunnies\_19, Shipwreck\_18, Langerak\_19, Fishburne\_19, Donovan\_19, Dynamo\_19, Venti\_19, Malithi\_19, Camster\_19, Vidya\_19
- Track 862 : Mangethe\_19, Phegasus\_19, Majeke\_19
- Track 863 : Megiddo\_19, CactusJack\_19, KilKor\_19, StressBall\_19, Phalm\_19, Glaske\_19
- Track 864 : Polkaroo\_19
- Track 865 : GreaseLightnin\_19, Bogie\_18
- Track 866 : Arib1\_19
- Track 867 : Jung\_19
- Track 868 : Tortellini\_18
- Track 869 : Xavia\_19
- Track 870 : Nazo\_18
- Track 871 : BigNuz\_18
- Track 872 : ThulaThula\_18
- Track 873 : Phayonce\_18
- Track 874 : Purky\_18
- Track 875 : Amymech\_22, Forge\_22, Luke\_22, Giles\_22, Evanesce\_22, HH92\_22, Dewey\_22, Ubuntu\_22, OBUpride\_22, Luna22\_22, Kinbote\_22, Hail\_22, DeepSoil15\_22, Webster2\_22, LilHazelNut\_22, Hadrien\_22, Wishmaker\_22, Ein37\_22, Daegal\_23, Amochick\_22
- Track 876 : Gravaillia\_22
- Track 877 : Gancho\_21
- Track 878 : Gaia\_16, Nebkiss\_17
- Track 879 : Cracklewink\_24, Bipper\_24
- Track 880 : Hilltopfarm\_24, Typha\_24, AuntGwenStacy\_24
- Track 881 : 32HC\_26
- Track 882 : Rem711\_25
- Track 883 : VanLee\_20
- Track 884 : TPA4\_19
- Track 885 : Whack\_18
- Track 886 : MooMoo\_16
- Track 887 : IdentityCrisis\_17
- Track 888 : TinyDot\_19
- Track 889 : P1201\_47
- Track 890 : Jace\_17

- Track 891 : REQ3\_50
- Track 892 : LilSpotty\_18
- Track 893 : ChewyVIII\_56
- Track 894 : Eyre\_17
- Track 895 : GMA1\_19
- Track 896 : PSonyx\_17
- Track 897 : DS6A\_21
- Track 898 : Sleepyhead\_18
- Track 899 : Finkle\_19
- Track 900 : Gudmit\_18
- Track 901 : REQ2\_20
- Track 902 : GAL1\_20
- Track 903 : GMA4\_18
- Track 904 : P3MA\_19
- Track 905 : Mbo4\_17
- Track 906 : Juicebox\_19

***Summary of Final Annotations (See graph section above for start numbers):***

The start number called the most often in the published annotations is 144, it was called in 603 of the 2078 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_28, 40AC\_31, ACFishhook\_29, AN3\_28, AN9\_31, ANI8\_31, AbbyPaige\_30, AbbysRanger\_27, Abdiel\_26, Achebe\_26, Acolyte\_28, Adzzy\_29, Agape74\_30, Agatha\_18, AgentM\_24, Aglet\_29, AgronaGT15\_29, AikoCarson\_17, Airmid\_24, Albee\_27, Alberto7\_28, Amok\_17, Anaysia\_30, Aneem\_28, AnnaL29\_31, Annyong\_27, Anon\_28, Anselm\_28, Anthony\_27, Anubis\_31, Apricot\_19, Aragog\_24, ArcherNM\_30, Archetta\_24, Arissanae\_28, Artemis2UCLA\_31, Arturo\_26, Asapag\_20, Astro\_24, AugsMagnumOpus\_31, AvatarAhPeg\_28, Avle17\_27, Axym\_18, Azira\_20, B1\_25, BABullseye\_31, BENtherdunthat\_20, Baby16\_27, BabyJohn\_26, BabyRay\_27, Bachome\_28, Backyardigan\_27, Bactobuster\_29, Badger\_27, Baehexic\_29, BangNhom\_27, Bartimeaus\_27, Battleship\_31, Beauxregard13\_29, Beemo\_30, BellusTerra\_27, Benedict\_24, BengiVuitton\_29, Benvolio\_28, BiancaTri92\_30, BigChungus\_17, BillDoor\_20, Blackmoor\_27, Blinn1\_31, Blue7\_31, BlueBird\_28, Bluefalcon\_23, BogosyJay\_29, Bombshell\_27, Bonamassa\_24, Boohoo\_30, Bowtie\_28, Bradman\_27, BreSam8\_29, Broseidon\_27, Bruiser\_26, BubbleTrouble\_27, Bud\_28, Budski\_20, Bugatti\_27, Buggy\_30, Bumblebee11\_27, Burger\_26, Button\_19, Buttrmlkdreams\_18, BuzzBuzz\_28, Bxz2\_28, C3\_26, CRB1\_28, Caelakin\_27, Calvinny\_30, Camperdownii\_26, Candra\_31, Caraxes\_27, Caviar\_28, Centaur\_30, CentreCat\_27, Cerulean\_28, Chadwick\_25, ChampagnePapi\_28, Changeling\_30, Chaph\_27, Chargerpower\_29, Charm\_28, Chartreuse\_31, Che12\_30, CheeseTouch\_20, ChipMunk\_30, Chiqui\_26, Chupacabra\_27, Cici\_27, Cintron\_27, Citius\_27, Clarenza\_27, Cleo\_18, Cocoaberry\_27, Colbster\_29, Commander\_27, Connomayer\_27, Conquerage\_30, Conspiracy\_24, Coog\_24, Cookiedough\_31, Cozz\_18, Crater\_18, Crucio\_28, Cuco\_24, Cullens\_29, D29\_28, D32\_31, DBQu4n\_31, DaHudson\_29, DaVinci\_31, Daishi\_28, Dalmatian\_28, Danforth\_23, Darrell\_30, DarthPhader\_29, Datway\_27, Deano\_27, Deloris\_29, Dhanush\_27, Dieselweasel\_29, Dignity\_30, DirtyDunning\_27, Discoknowium\_24, Dixon\_24, DontArgue\_26, Dorothea\_31, Drake55\_30,



Drake94\_26, Dre3\_18, DreamTeam1\_28, DroogsArmy\_28, DropBear\_27, Druantia\_27, Dublin\_23, DudeLittle\_28, Duplo\_31, DustyMartin\_31, EZMoney23\_32, EagleEye\_30, Eagle\_26, Eaglepride\_28, Eapen\_27, Ebony\_28, Echild\_28, Edison31\_27, EdogawaKiddo\_28, ElTiger69\_24, Elephantoon\_29, Elinal\_19, Emalyn\_17, EmyBug\_30, EpicPhail\_29, Epsocamisio\_30, Equemioh13\_30, EricB\_31, Eris\_26, Eros\_27, Et2Brutus\_27, Eurydice\_27, EvilGenius\_30, Expelliarmus\_23, ExplosioNervosa\_30, Fameo\_28, Farber\_29, Fayely\_30, Feastonyeet\_17, Fernando\_29, Fibonacci\_28, FiringLine\_28, First\_0028, Flare16\_28, Flaverint\_28, Florean\_27, Flux\_27, FlyCatcher\_31, ForGetIt\_24, Fred313\_27, Fribs8\_19, Frickyeah\_20, Funston\_27, Gadost\_27, Gail\_28, Garak\_32, GaugeLDP\_30, Gemma\_29, George\_23, Georgie2\_29, Getalong\_21, Ghoulboy\_24, GiKK\_21, Gibbous\_18, Gilberta\_28, GingkoMaracino\_29, Giroux\_27, Gladiator\_31, Goose\_27, GreedyLawyer\_31, Grif\_29, Groundhog\_23, Groupthink\_30, Grub\_29, Grum1\_29, Gruunaga\_31, GtownJaz\_29, HINdeR\_27, HamSlice\_26, Hammer\_31, Hanray\_29, Happiness\_27, HarryHoudini\_30, HashRod\_30, HaveUMetTed\_30, Heathen\_27, Heffalump\_30, HelDan\_27, Heliosoles\_29, Helmet\_32, Herbertwm\_25, Hercules11\_29, Hexamo\_31, Hexbug\_20, HippoPololi\_20, Holec\_29, Holli\_27, Holliday\_20, Hookmount\_28, Hoot\_31, Horseradish\_19, Horus\_20, Houdini22\_27, HuhtaEnerson15\_24, Hutc2\_28, Huxley\_27, ICleared\_27, Iceman\_28, Idleandcovert\_27, Indra\_31, Insomnia\_28, Iracema64\_28, IronMan\_30, Isca\_27, Isiphiwo\_31, Iwokeuplikedis\_29, JF2\_27, JF4\_27, JHC117\_29, JSwag\_30, Jaan\_31, Jabiru\_24, Jabith\_28, Jamzy\_21, Jaykayelowell\_27, Jeeves\_28, Jeffabunny\_31, JenCasNa\_29, JeppNRM\_30, Jerm\_30, JetBlade\_27, JewelBug\_31, Jiawan\_29, Jobu08\_29, JoongJeon\_27, Joselito\_28, JoshKayV\_30, Journey13\_26, Jovo\_24, Jsquared\_27, KADY\_30, KFPoly\_27, Kachowdy\_27, Kalb97\_30, Kalnok\_30, Kamaru\_20, Kamy\_27, Katalie136\_27, KatherineG\_30, KayGee\_18, Kazan\_31, Kenna\_19, Kerberos\_31, Keziacharles14\_28, Kimona\_24, KingCyrus\_30, Kingmustik0402\_27, Kinmap\_29, Kipper29\_31, KittenMittens\_26, Koduck\_28, Koko\_31, Koreni\_26, Kratak\_27, Kremtemulon\_27, Kristoff\_28, Kyee\_27, L5\_28, LBerry\_29, LHTSCC\_28, LadyBird\_28, Lambert1\_28, Landor\_29, LappelDuVide\_27, Larenn\_29, LarryKay\_29, LastResort\_30, Lauer\_17, Lemur\_27, LeoAvram\_27, Leogania\_30, Leroy\_20, Lev2\_24, Leviathan\_30, LiITurb\_30, Lilbunny\_31, Lilith\_29, Lilleskat\_28, LitninMcQueen\_20, LittleB\_27, LittleCherry\_24, LittleGuy\_27, LochMonster\_27, LoneWolf\_29, Looper\_31, Lorenzo\_27, Loser\_31, Louie6\_29, Luchador\_30, Lucivia\_28, Lucyedi\_29, LugYA\_31, Lunsford\_28, Lutum\_20, MA5\_27, MAnor\_18, MK4\_27, MScarn\_20, MaCh\_28, MaVan\_20, Mabel\_28, MadMarie\_29, Mainiac\_29, MajorMajor\_27, Malec\_29, Malinsilva\_31, Malisha\_21, Maminiaina\_29, Manu\_30, MarQuardt\_29, Marchesa\_27, Margaret\_21, Margo\_28, Marie\_29, Marius\_30, Maverick\_27, Maxo\_27, Mayweather\_19, Mazhar510\_27, McFly\_31, Medusa\_27, MeeZee\_27, Melvin\_27, Methuselah\_28, Micasa\_24, Microwolf\_29, MiculUcigas\_28, Midas2\_24, Miko\_31, Milcery\_24, Millski\_26, MinecraftSteve\_31, Misomonster\_31, MissWhite\_28, MoneyMay\_29, Morpher26\_27, Morrow\_27, MuchMore\_31, Mulciber\_28, Munch\_28, Mundrea\_27, MunkgeeRoachy\_18, NaSiaTalie\_28, Naca\_24, Naji\_31, NearlyHeadless\_24, Nebs\_27, Nebulosus\_30, Nedarya\_29, Neeharika16\_31, Nemo27\_27, Newrala\_31, Nibbles\_20, NicoleTera\_32, Nina\_19, Noella\_28, Norbert\_27, NorthStar\_27, NotAPhaseMom\_27, NothingSpecial\_30, Nyxis\_27, OKCentral2016\_27, OKaNui\_28, Obama12\_28, Odin\_27, Ohfah\_27, OlanP\_29, Ollie\_29, Onglai\_29, Oofda\_31, Orange\_28, Orla\_20, P28Green\_29, PGHhamlin\_31, PP\_37, PainterBoy\_29, Palestino\_26, Panamaxus\_27, Pawn\_30, PeaceMeal1\_26, Peaches\_27, Pembroke\_29, Penny1\_29, Periwinkle\_22, Perplexer\_27, PeterPeter\_27, Petersenfast\_27, PetiteSangsue\_27, PetterN\_25, Ph8s\_29, Phabuloso\_20, Phacado\_27, Phaded\_31, Phantastic\_27, Pharaoh\_28, Phelipe\_27, Phighter1804\_27, Phillis\_24,

PhishRPhriends\_28, Phistory\_21, Phlei\_23, Phlorence\_24, Phoebe\_29, Phonnegut\_30, Phontbonne\_27, Phoxy\_29, Phranny\_30, PickleBack\_24, Pioneer\_30, Pipcraft\_27, Piro94\_29, Pistachio\_28, Pmask\_31, Pocahontas\_28, Polymorphads\_27, Pomar16\_31, Poompha\_26, Popcicle\_28, PotatoSplit\_30, Power\_28, Priamo\_31, Priya\_30, Pukovnik\_30, Pumbaa\_27, Puppy\_28, PurpleHaze\_29, Quasar\_18, QueenB2\_28, QueenBeesly\_28, QuinnKiro\_27, Quokka\_26, Rachaly\_31, Rahalelujah\_27, ReMo\_30, Reba\_30, Rebeuca\_28, RedRock\_31, Refuge\_31, Relief\_27, Remus\_30, ResDef\_28, Retro23\_28, RhynO\_28, Rifter\_31, Roary\_24, Rockstar\_27, Roksolana\_31, Romney\_27, Roosevelt\_27, Rosa24\_26, Rosalind\_30, Rowdy\_31, Ruin\_27, Rummer\_29, RyeScarlet\_31, Sabertooth\_27, Sabia\_29, Sabinator\_29, Sachima\_28, Saintus\_24, Salz\_28, SaturnRing\_27, Scamp\_27, Scherzo\_30, Scorpia\_25, Scout\_27, SemperFi\_30, Serenity\_27, Severus\_26, Shaka\_27, Sham4\_28, Shapes\_31, ShayRa\_31, SheaKeira\_28, SheckWes\_17, Sheen\_29, SheldonCooper\_28, Shygu2\_27, Skipitt\_27, Smeadley\_24, Smeagan\_30, SmellyB\_31, SnapTap\_28, Snape\_28, Snickers\_29, SoYo\_29, SoilDragon\_29, SororFago\_28, Soshari\_31, Soups\_30, Sparxx\_27, Spike509\_29, Spino\_27, Spooky\_20, Spouty\_30, Squiddly\_22, Stagni\_29, StarStuff\_31, Stasia\_28, SteamedHams\_20, Steamy\_29, Stephig9\_24, Stink\_28, Strosahl\_30, SummitAcademy\_17, Sunhee\_27, SuperAwesome\_31, SuperCallie99\_31, Superchunk\_27, Survivors\_20, SweatNTears\_20, SweetiePie\_28, Swirley\_24, Switzerland\_30, SydNat\_24, TNguyen7\_27, Taquarus\_27, TarsusIV\_28, Tarynearal\_23, Taurus\_29, Texage\_27, Thanksgivukkah\_27, Theia\_22, Tiffany\_29, Tiger\_24, Timothy\_28, Timshel\_28, TinaFeyge\_27, TinyTimmy\_28, Tinybot\_26, TipsytheTRex\_27, TiroTheta9\_27, Toaka\_27, Todacoro\_28, Tolls\_20, Tomathan\_31, ToneTone\_29, Topanga\_27, Toro\_30, Travvers\_31, Trike\_25, Trixie\_31, Troje\_18, Trooper\_28, TroyPia\_27, Tubs\_30, Tucker\_31, Turbido\_30, Twigg\_24, Twister\_27, TygerBlood\_27, Typhonomachy\_19, Ugenie5\_27, Ulysses\_26, UnionJack\_24, Updawg\_30, VA6\_28, VC3\_31, Vanisoa\_27, Veracruz\_27, Vine\_19, Vix\_29, VohminGhazi\_31, Waits\_30, WalterMcMickey\_27, Wander\_27, Watson\_29, Whabigail7\_30, Whitney\_21, WideWale\_30, Wiks\_31, Wilbur\_27, Wile\_27, Wizard007\_27, Wooldri\_31, WunderPhul\_31, Xena\_27, Yakult\_19, Yarn\_17, Yecey3\_29, YoSam321\_27, Yokurt\_31, Yummy\_19, Zaka\_31, Zetzy\_28, Zimmer\_30, Zolita\_23, Zulu\_31,

Genes that have the "Most Annotated" start but do not call it:

- Aliter\_30, Alma\_30, AndPeggy\_17, BabyBack\_30, Biskit\_19, BobSwaget\_31, Burnsey\_18, Carsonalex\_19, CherryonLim\_19, Cindaradix\_26, CloudWang3\_31, Colin\_32, DekHockey33\_30, Eidsmoe\_30, Elliott\_18, GTE2\_16, GoldHunter\_19, HortumSL17\_30, Jordennis\_31, Kalpine\_31, Lokk\_31, MarysWell\_23, Miramae\_27, Myxus\_30, Nodigi\_20, Noelle\_27, PackMan\_30, Paphu\_26, Phaeder\_30, Pons\_18, PotPie\_18, PsychoKiller\_18, Qobbit\_30, RanchParmCat\_21, RedBaron\_19, Sixama\_99, SketchMex\_17, Sopespian\_18, StepMih\_29, SwirlSquare\_30, WeiHuaDA\_34, XianYue\_28, Zareef\_22,

Genes that do not have the "Most Annotated" start:

- 244\_26, 32HC\_26, 8UZL\_21, A6\_25, ABCat\_23, AFIS\_27, APunk\_36, Abblin\_35, Abbyshoes\_28, Abrogate\_280, Abscondus\_47, Acme\_29, ActinUp\_23, Adahisdi\_28, Adelaide\_17, Adephagia\_23, Adnama\_27, Adonis\_23, Adora\_20, Aeneas\_29, Affeca\_33, Agaliana\_28, Agent47\_21, Ageofdapage\_23, Aggie\_18, Agueybana\_19, Ailee\_33, Ajay\_28, Akhila\_17, Alatin\_23, Aleemily\_19, Alexphander\_18, Ali17\_31, AlishaPH\_23, Alkhayr\_54, Alpacados\_22, AlpineSix\_16, Alsfro\_31, Altman\_29, AlumE\_19, Alvin\_28, Amao\_24, Amelie\_19, AmericanBeauty\_26, Amgine\_21, Aminay\_21, Amochick\_22, Amohnition\_22, Amymech\_22, Anaya\_24, Andies\_18,

Angel\_18, Angelica\_23, Angelicage\_33, Angelique\_20, Anglerfish\_28, AngryOrchard\_22, Annalisa\_20, Annihilator\_18, Antonio\_19, Antsirabe\_18, Aphelion\_48, Apiary\_45, Apocalypse\_23, AppleCloud\_21, Applejack\_27, Arcanine\_28, Archimedes\_16, Archis\_20, ArcusAngelus\_16, Ardmore\_16, Argent26\_26, Arianna\_19, Arib1\_19, Ariel\_34, Arlo\_26, Aroostook\_18, Arri\_34, Arti\_41, Asayake\_23, Ashballe\_27, Ashertheman\_35, Ashwin\_58, Asriel\_23, Atcoo\_19, Atiba\_23, Atkinbua\_29, Attis\_17, Aubs\_16, AuntGwenStacy\_24, Avani\_19, Avocado\_18, Avrafan\_18, Awesomesauce\_17, Ayotoya\_22, AzulaCat\_18, Azula\_21, BAKA\_34, BBQValindra\_19, BEEST\_23, BGIlluviae\_23, BK1\_25, BPBiabs31\_28, BPs\_18, BQuat\_18, BabeRuth\_18, BaboJay\_23, Babsiella\_19, Bachita\_50, BackstagePass\_19, BaconJack\_29, BadStone\_23, Baddon\_34, BaghaKamala\_23, Bakery\_32, Balomoji\_23, Banquo\_26, Bantam\_30, Barb\_33, Barbarian\_23, Barco\_19, Barkley26\_18, BarrelRoll\_23, Barriga\_27, Barsten\_35, Bartholomew\_19, Bask21\_24, BatStarr\_19, Batiatus\_16, Baumdotcom\_34, BaxterFox\_18, Beakin\_17, BearBQ\_19, Beatrix\_27, BeeGee\_20, Beenie\_20, BeesKnees\_28, Beezoo\_23, Begonia\_20, Belenaria\_23, Bella96\_23, Belladonna\_23, Belphegor\_33, Bench\_26, Bethlehem\_27, BetterKatz\_22, Bexan\_26, BiPauneto\_44, Bialota\_19, Bibwit\_34, Big3\_27, BigBubba\_25, BigMau\_29, BigNuz\_18, BigPaolini\_28, BigPhil\_17, Bigfoot\_26, BigleBops\_19, BilboSwaggins\_24, BillKnuckles\_28, Bipolar\_16, Bipper\_24, Bircsak\_27, Birdsong\_19, Bizzy\_35, Bjanes7\_17, Blarby\_20, Blessica\_57, Blexus\_16, BlingBling\_19, Blino\_19, Blizzard\_23, BluSpix\_27, BlueCrab\_16, BlueNGold\_100, Blue\_27, Blueberry\_21, Bob3\_26, BobBob\_32, BobaPhett\_16, Bobby\_38, Bobi\_18, Bock\_22, BodEinwohner17\_16, Bogie\_18, Boiii\_23, Boilgate\_20, Bombitas\_33, Bonanza\_23, Bones\_27, Bonum\_44, Boomer\_17, Boopy\_101, BoostSeason\_19, Bora\_54, Bosection6\_18, Bosnia\_19, Bowser\_19, BoyNamedSue\_19, Bradissa\_20, Bradshaw\_23, Bran\_17, Brandonk123\_36, Braxoaddie\_45, BritBrat\_20, Briton15\_29, Brocalys\_16, BruceB\_18, Bruin\_24, Brujita\_19, Bruns\_26, Brusacoram\_19, BrutonGaster\_36, Bryce\_23, Bryler\_22, Brylie\_22, Bubbles123\_17, Buck\_23, Buggaboo\_42, BugsBunny\_22, Bunker\_19, Bunnies\_19, Bunnybear\_18, Burton\_28, Burwell21\_16, Butters\_18, Buttons\_29, BuzzLyseyear\_18, Bxb1\_25, ByChance\_16, Byougenkin\_16, C3PO\_31, CLED96\_18, CREW\_23, Cabrinians\_16, CactusJack\_19, CactusRose\_26, Cactus\_25, Cafasso\_19, Cain\_22, Cambiare\_19, Camri\_18, Camster\_19, Capricorn\_23, CaptainKirk2\_19, CaptainTrips\_17, Carcharodon\_18, Cardigan\_47, Carlyle\_29, CarolAnn\_19, CaseJules\_23, Cashline\_20, CassieYates\_18, Catdawg\_56, Catfish\_22, Cedasite\_18, Cerasum\_17, ChadMasterC\_35, Chanagan\_26, Chance64\_18, Chancellor\_24, Charlie\_18, Charming\_35, Che8\_16, Che9d\_19, CheetoDust\_23, Cheetobro\_24, Cherrybomb426\_18, Chevrolet\_16, Chewbacca\_18, ChewyVIII\_56, Chickadee\_32, ChickenDinner\_17, Chop\_22, ChosenOne\_23, ChotaBhai\_24, Chris\_22, Chuckly\_16, Ciao\_27, Cjw1\_24, ClamChowder\_33, Clap\_17, Clark\_20, Clifton\_16, Clown\_35, ClubL\_48, Coco12\_18, CoffeeBean\_45, Coleslaw\_18, Collard\_21, Colleen\_19, Command613\_25, Commandaria\_43, ConceptII\_29, Confidence\_20, Constella\_31, Contagion\_23, Cookies\_24, Coriander\_19, Corndog\_59, Cornucopia\_17, Corvo\_28, CosmicSans\_23, Courthouse\_34, CoveyB\_34, Cracklewink\_24, Crespo\_18, CrimD\_23, Crispicous1\_26, Cruella\_31, Crumble\_16, CrystalP\_24, Cucurbita\_50, Cueylyss\_27, Culver\_48, Curiosium\_24, Cynthia\_17, Czyszczon1\_25, DD5\_28, DLane\_16, DMoney\_18, DNAll\_0018, DRBy19\_16, DS6A\_21, DaWorst\_18, DaddyRickover\_16, Daegal\_23, Daenerys\_16, Daikon\_22, Dalilpop\_46, Dalmuri\_23, Dante\_16, Danyall\_33, Dardanus\_24, Daredevil\_29, Darionha\_18, DarthP\_22, Dartin\_23, Darwin\_34, DatBoi\_31, DeadP\_16, Deb65\_16, Deby\_23, DeepSoil15\_22, DelRio\_23, Delian\_19, Delrey21\_34, Demsculpinboyz\_19, Denise\_17, Derg\_32, Devera\_23, Dewey\_22, Dextert\_33, Dexes\_28, DillTech15\_16, Dina\_17, Dinger\_23,

DinoDaryn\_24, DirtMcgirt\_17, DirtyBoi\_20, DismalFunk\_19, DismalStressor\_19, Dmitri\_19, DmpstrDiver\_35, DobbysSock\_19, DocMcStuffins\_17, DoctorDiddles\_24, DoctorFroggo\_34, Dogfish\_21, Doggs\_18, Dole\_23, Dolores\_20, DonkeyMan\_18, Donkeykong\_16, Donovan\_19, Doom\_28, Doomphist\_16, Dorito\_19, Dorothy\_16, DosHalletts\_17, DotProduct\_16, Doug\_17, Dove\_34, DrDrey\_25, DrFeelGood\_26, DrHayes\_23, Drago\_17, DreamCatcher\_30, Dreamboat\_28, Dulcie\_26, Dumbo\_24, DumpsterDude\_19, Duplicity\_18, Durfee\_23, Dusk\_23, Dussy\_28, Dusty\_46, Dylan\_56, Dynamix\_28, Dynamo\_19, ECartman\_18, EMoore\_31, EMSquaredA\_20, Easley\_20, Easy2Say\_26, Ebert\_17, Ecliptus\_24, EdmundFerry\_31, EdnaMode\_17, Edtherson\_28, Efra2\_23, Ein37\_22, Eish\_16, Ejimix\_37, Ekdilam\_20, EleanorGeorge\_16, Elite2014\_23, Ellie\_20, Elph10\_25, Emerson\_23, Emianna\_41, Emma\_16, Emmina\_25, Empress\_17, EnalisNailo\_20, Enby\_17, Engineer\_49, Enkosi\_19, Ennea\_47, Eponine\_24, Eradicator\_16, Erik\_23, Espica\_23, Espresso\_27, Estave1\_16, Eudoria\_19, Euphoria\_27, Eureka\_24, Evamon\_31, Evanesce\_22, Eviarto\_19, Ewald\_22, Eyeball\_27, Eyes\_19, Eyre\_17, FF47\_21, Fairfaxidum\_19, FairyPath\_24, Faith5x5\_17, Fajezeel\_29, Familton\_57, Fancypants\_16, Fascinus\_26, Fastidio\_16, Fefferhead\_22, Fenn\_28, Fenry\_18, Feyre\_21, Filch\_25, Filuzino\_16, Findley\_19, Finkle\_19, Fionnbharth\_24, FireRed\_24, Fireball\_32, Firecracker\_57, Firehouse51\_17, FirstPlacePfu\_19, Fishburne\_19, Fitzgerald\_33, FlagStaff\_18, Flapper\_45, Flathead\_17, Flatwoods\_35, Float294\_43, Floral\_20, Florinda\_16, Flypotenuse\_22, Forge\_22, Forsytheast\_26, Forza\_101, Fosterous\_33, FoulBall\_56, Foxboro\_42, Francis47\_27, Francois\_22, Frankie\_17, FreddyB\_16, Frizzle\_17, Froghopper\_28, Frokostdame\_19, Frosty24\_18, Fruitloop\_16, Fryberger\_53, Fugax\_33, Fulbright\_18, Fury\_50, Fushigi\_28, GAL1\_20, GEazy\_19, GMA1\_19, GMA2\_30, GMA4\_18, GMonster\_26, GRU1\_31, GTE5\_32, GTE6\_32, GTE8\_30, GUmbe\_16, Gaea\_34, GageAP\_29, Gage\_26, Gaia\_16, Galactic\_16, Galadriel\_35, Gambino\_21, Gancho\_21, Gandalf20\_28, Gandolph\_16, Ganymede\_24, Gator\_22, Geeche\_47, GemG\_17, Gemini\_27, Gengar\_21, Geodirt\_32, Geraldini\_23, Geralt\_16, Gex\_18, Gezellig\_32, Ghobes\_16, Gideon\_18, GigiOuiOui\_16, Giles\_22, Girafales\_17, Girr\_16, Gizermo\_17, Glaske\_19, Glexan\_22, GodonK\_89, Goib\_23, Goku\_24, GoldenAsh\_18, GoldenSpark\_26, Goldilocks\_25, Gollum\_23, Gomashi\_18, Gompeii16\_27, Gonephishing\_32, GooberAzure\_26, Gorge\_16, Graduation\_29, GrandSlam\_22, Gravallia\_22, GreaseLightnin\_19, GrecoEtereo\_29, Greg\_29, Grizzly\_18, GrootJr\_43, Gsput1\_20, Guacamole\_19, Guanica15\_23, Gudmit\_18, Guey18\_58, Guillsminger\_21, Gustav\_18, Gustavo\_34, GuyFagieri\_45, Gwendoluna\_29, Gyzlar\_29, HC\_19, HH92\_22, HUHilltop\_19, Hades\_16, Hadrien\_22, Hail\_22, Haley23\_17, Halo3\_32, Halo\_18, Hami1\_29, Hammy\_22, Hamood\_22, Hamulus\_16, HanKaySha\_25, HanShotFirst\_27, Hanako\_18, Hannaconda\_31, HannahD\_19, Hans\_35, Harella\_23, Harlequin\_23, Harley\_16, HarryOW\_28, HedwigODU\_23, Hedwig\_20, Heftyboy\_21, Hegedechwinu\_17, Heinz\_19, Henry\_24, Hermia\_30, HermioneGrange\_27, Herod\_19, Hibiscus\_18, Highbury\_25, Hilltopfarm\_24, Hiro\_23, Hitter\_19, Hlubikazi\_16, Holt\_25, Homines\_27, Homura\_23, Hoonter\_26, Hope4ever\_27, Hope\_18, Hopey\_26, Hortense\_20, Hotshotbaby7\_18, Howe\_20, HubbaBubba\_40, HuffyPuff\_23, Huffy\_24, Hughesyang\_35, Hugley\_19, Hurricane\_22, Hyperbowlee\_23, Hyzer\_19, IDyn\_42, IHOP\_24, ILeeKay\_29, IMpilo\_16, IbOuu\_16, Ibhubes\_i\_16, Icee\_23, Ichabod\_28, IdentityCrisis\_17, Idergollasper\_56, IgnatiusPatJac\_26, Illumine\_23, Inca\_23, Inky\_23, Inspectinfecti\_34, Invention\_16, InvictusManeo\_21, Inyanga\_26, IrishSherpFalk\_17, Island3\_19, JAWS\_23, JC27\_29, JCole\_17, JF1\_24, JKSyngboy\_32, Jabbawokkie\_21, Jabberwocky\_33, Jablanski\_20, Jace\_17, JackSparrow\_28, JacoRen57\_17, JalFarm20\_18, Jalammah\_21, Jambalaya\_31, James\_16, Jamie19\_18, Jane\_18, JangDynasty\_56, Jarcob\_16, Jarvi\_23,

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 Trumpet\_19, Tuco\_25, TuertoX\_17, Turj99\_26, Turuncu\_45, Tweety\_16, Twinkle\_20,  
 Twister6\_33, Twitch\_23, TwoPeat\_28, Twonlo\_30, Tycho\_34, Typha\_24, U2\_27,  
 Ubuntu\_22, UhSalsa\_23, Ukulele\_24, UmaThurman\_19, UncleRicky\_17, Unicorn\_22,  
 Upyo\_18, Urkel\_23, Utz\_19, VRedHorse\_16, Vagabond\_54, Valary\_34, Validus\_23,  
 VanDeWege\_34, VanLee\_20, Vasanti\_17, Veliki\_23, Velveteen\_17, Vendetta\_22,  
 Venti\_19, Verity\_34, Veteran\_16, ViaConlectus\_35, Vidya\_19, Violet\_26, Vivi2\_37,  
 Volt\_55, Vordorf\_22, Vorrps\_56, Wachhund\_16, Walrus\_20, Wanda\_37,  
 Waterfoul\_21, Watermelon\_29, Webster2\_22, Wee\_17, Weirdo19\_19,  
 WelcomeAyanna\_18, Wendigo\_18, Whack\_18, Whatsapiecost\_16, WheatThin\_22,  
 Wheeler\_27, Wheezy\_41, Whiteclaw\_17, WhoseManz\_43, Whouxphf\_16,  
 Widow\_18, Wiggin\_27, Wildflower\_56, Wilkins\_27, WillSterrel\_17, Willez\_23,  
 WilliamBoone\_48, William\_19, Willsammy\_19, Winget\_57, WinkNick\_20,  
 Wintermute\_24, Wishmaker\_22, Wisp\_18, Wizard\_31, Wocket\_20, Wrigley\_20,  
 XFactor\_16, Xandras\_26, Xavia\_19, Xeno\_18, Xerxes\_18, Ximenita\_23, Xula\_18,  
 Y10\_24, Y2\_24, YassJohnny\_25, Yeet412\_17, Yeezy\_20, Yndexa\_43, Yogi\_23,  
 Yoncess\_23, Yorick\_16, YorkOnyx\_35, Yoshi\_19, Youngblood\_24,  
 YoureAdopted\_22, Yuna\_24, YungJamal\_61, YungMoney\_33, Yunkel11\_23,  
 Yvonnestic\_45, ZAYM\_19, Zabiza\_23, Zakhe101\_56, Zameen\_19, Zapner\_20,  
 Zarbodnamra\_19, Zavala\_23, Zeeculate\_27, Zelink\_38, Zephyr\_27, Zerg\_16,  
 Zeuska\_28, ZiggyZoo\_18, Ziko\_56, Zilizebeth\_19, Zion\_34, Zipp\_34, Zirinka\_19,  
 Zitch\_36, Zizzle\_16, ZoMa\_18, ZoeJ\_19, Zombie\_18, xkcd\_25,

### Summary by start number:

Start 78:

- Found in 4 of 2251 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: FF47\_21 (AB),

Start 80:

- Found in 31 of 2251 ( 1.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 9.7% of time when present
- Phage (with cluster) where this start called: CoveyB\_34 (DC1), Gezellig\_32 (DC1), Shinji\_31 (DC1),

Start 81:

- Found in 5 of 2251 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 4 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy\_24 (Y), Bipper\_24 (Y), Cracklewink\_24 (Y), Hilltopfarm\_24 (Y), Typha\_24 (Y),

Start 84:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yuna\_24 (K6),

Start 85:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mercurio\_20 (G4),

Start 86:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lemuria\_19 (G4),

Start 89:

- Found in 6 of 2251 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 4 of 2078
- Called 83.3% of time when present
- Phage (with cluster) where this start called: 8UZL\_21 (AB), JacoRen57\_17 (AB), Maco6\_19 (AB), Muddy\_21 (AB), NoShow\_18 (AB),

Start 91:

- Found in 2 of 2251 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MalagasyRose\_24 (AG), Nergal\_22 (AG),

Start 93:

- Found in 47 of 2251 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 2.1% of time when present
- Phage (with cluster) where this start called: Amgine\_21 (K6),



Start 95:

- Found in 19 of 2251 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 5.3% of time when present
- Phage (with cluster) where this start called: BritBrat\_20 (CY2),

Start 97:

- Found in 85 of 2251 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 73 of 2078
- Called 95.3% of time when present
- Phage (with cluster) where this start called: Affeca\_33 (DE1), Ailee\_33 (DE1), Angelicage\_33 (DE1), Arri\_34 (DC1), Ashertheman\_35 (DE1), Baddon\_34 (DE1), Bakery\_32 (DC1), Barb\_33 (DC1), Barsten\_35 (DE1), Baumdotcom\_34 (DE1), Bibwit\_34 (DE1), Bizzy\_35 (DE1), BobBob\_32 (DE1), Brandonk123\_36 (DE1), ChadMasterC\_35 (DE1), Charming\_35 (DE1), ClamChowder\_33 (DC1), Clown\_35 (DC2), Danyall\_33 (DC1), Derg\_32 (DE1), Evamon\_31 (DC1), Fireball\_32 (DC1), Fitzgerald\_33 (DE1), Flatwoods\_35 (DE1), Fosterous\_33 (DE1), Fugax\_33 (DC1), Gaea\_34 (DE1), Galadriel\_35 (DE1), Geodirt\_32 (DE1), Gustavo\_34 (DE1), Halo3\_32 (DC1), JKSyngboy\_32 (DE1), Jabberwocky\_33 (DE1), Jambalaya\_31 (DC1), Kamashten\_34 (DE1), Keitabear\_35 (DE1), Kewpiedoll\_34 (DE1), KimmyK\_33 (DC1), Kroos\_35 (DE1), Kwobi\_35 (DE1), Lennon\_35 (DE1), LilHam\_32 (DE1), Love\_38 (DE1), McKinley\_37 (DE1), MoontowerMania\_34 (DE1), Mutzi\_33 (DC1), Nordenberg\_29 (DE1), Nubi\_31 (DC1), Paries\_37 (DE1), Phlop\_31 (DC1), PinkCoffee\_33 (DC1), Portcullis\_31 (DC1), PullumCavea\_31 (DC1), Ribeye\_35 (DE1), RiverRaider\_35 (DE1), Rofo\_35 (DE1), RogerDodger\_34 (DC1), Salvador\_31 (DC1), Sanjuju\_33 (DE1), Saronaya\_34 (DE1), Savbucketdawg\_31 (DC1), SchottB\_33 (DE1), Sedona\_35 (DE1), Shivanishola\_36 (DE1), Sitar\_35 (DE1), SmokingBunny\_31 (DC1), StorminNorm\_34 (DE1), Stultus\_33 (DE1), Tangent\_35 (DE1), Tangerine\_34 (DE1), Thing3\_34 (DE1), TillyBobJoe\_31 (DC1), Togo\_31 (DC1), Twister6\_33 (DC1), Tycho\_34 (DE1), Valary\_34 (DC1), VanDeWege\_34 (DC1), Vivi2\_37 (DE1), Wizard\_31 (DC1), YorkOnyx\_35 (DE1), YungMoney\_33 (DC1),

Start 99:

- Found in 7 of 2251 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 2078
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Gaia\_16 (X), Nebkiss\_17 (X),

Start 100:

- Found in 29 of 2251 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 2078
- Called 6.9% of time when present
- Phage (with cluster) where this start called: Murai\_57 (O), Wildflower\_56 (O),

Start 101:

- Found in 54 of 2251 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 2 of 2078
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Bogie\_18 (P1), GreaseLightnin\_19 (P1),

Start 107:

- Found in 29 of 2251 ( 1.3% ) of genes in pham

- Manual Annotations of this start: 25 of 2078
- Called 93.1% of time when present
- Phage (with cluster) where this start called: Alkhayr\_54 (O), Ashwin\_58 (O), Blessica\_57 (O), Bora\_54 (O), Catdawg\_56 (O), Corndog\_59 (O), Dylan\_56 (O), Familton\_57 (O), Firecracker\_57 (O), FoulBall\_56 (O), Idergollasper\_56 (O), JangDynasty\_56 (O), Krili\_55 (O), MadKillah\_57 (O), Mori\_56 (O), NiebruSaylor\_55 (O), Ryadel\_60 (O), SchoolBus\_56 (O), Schuy\_57 (O), Shida\_56 (O), Smooch\_59 (O), TelAviv\_53 (O), Vagabond\_54 (O), Vorrrps\_56 (O), Winget\_57 (O), YungJamal\_61 (O), Zakhe101\_56 (O),

#### Start 109:

- Found in 142 of 2251 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 26 of 2078
- Called 20.4% of time when present
- Phage (with cluster) where this start called: Amohnition\_22 (K6), AzulaCat\_18 (G1), BQuat\_18 (G1), CLED96\_18 (G1), Camri\_18 (G1), Chance64\_18 (G1), Cherrybomb426\_18 (G1), DNAIII\_0018 (G1), Ekdilam\_20 (K6), Frosty24\_18 (G1), Grizzly\_18 (G1), Hotshotbaby7\_18 (G1), IdentityCrisis\_17 (singleton), Jane\_18 (G1), Jonghyun\_18 (G1), Kasen3\_18 (G1), Krueger\_22 (K6), LeMond\_22 (K1), Maliketh\_18 (G1), Olga\_18 (G1), Phish\_18 (G1), PinkYoshi\_18 (G1), Rabbs\_18 (G1), Remy19\_18 (G1), Scarlett\_22 (K1), Sizemore\_18 (G1), Sneeze\_18 (G1), Sweets\_18 (G1), Wendigo\_18 (G1),

#### Start 110:

- Found in 2 of 2251 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 50.0% of time when present
- Phage (with cluster) where this start called: TChen\_17 (F4),

#### Start 111:

- Found in 27 of 2251 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 24 of 2078
- Called 92.6% of time when present
- Phage (with cluster) where this start called: Angelique\_20 (CY1), BearBQ\_19 (DN), BeeGee\_20 (CY), Birdsong\_19 (DN), Bradissa\_20 (CY1), Cashline\_20 (CY), Confidence\_20 (CY1), EMsquaredA\_20 (CY1), Ecliptus\_24 (DN), EnalisNailo\_20 (CY1), Floral\_20 (CY1), Jablanski\_20 (CY), Kuwabara\_19 (DN4), Lilas\_20 (CY1), LonelyBoi\_20 (CY), Lucky10\_18 (DH), Marteena\_20 (CY1), Morkie\_18 (DH), MortyNRick\_19 (DN), ODay\_25 (DN), PhorbesPhlower\_18 (DH), Pollux\_20 (CY1), Posh\_20 (CY), Pytheas\_20 (CY), Wrigley\_20 (CY),

#### Start 112:

- Found in 65 of 2251 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 41 of 2078
- Called 66.2% of time when present
- Phage (with cluster) where this start called: 32HC\_26 (Z), Amochick\_22 (Q), Amymech\_22 (Q), BoostSeason\_19 (K2), Daegal\_23 (Q), DeepSoil15\_22 (Q), Dewey\_22 (Q), DismalFunk\_19 (K2), DismalStressor\_19 (K2), Ein37\_22 (Q), Evanesce\_22 (Q), Fefferhead\_22 (K6), Findley\_19 (K2), Forge\_22 (Q), Gancho\_21 (Q), Giles\_22 (Q), Gravallia\_22 (Q), HH92\_22 (Q), Hadrien\_22 (Q), Hail\_22 (Q), Juliette\_24 (K4), JustASigh\_18 (AH), KiSi\_22 (K1), Kinbote\_22 (Q), LilHazelNut\_22 (Q), Luke\_22 (Q), Luna22\_22 (Q), Marcoliusprime\_19 (K2), Milly\_19 (K2), MissDaisy\_24 (K4), Mufasa\_19 (K2), OBUpride\_22 (Q), Oscar\_22 (K1), Rem711\_25

(Z), Reptar3000\_24 (K4), Strobilo\_19 (K2), TM4\_19 (K2), Taquito\_22 (K4), Ubuntu\_22 (Q), Webster2\_22 (Q), Weirido19\_19 (AH), Wishmaker\_22 (Q), ZoeJ\_19 (K2),

#### Start 113:

- Found in 59 of 2251 ( 2.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.7% of time when present
- Phage (with cluster) where this start called: ZAYM\_19 (DB),

#### Start 114:

- Found in 159 of 2251 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 139 of 2078
- Called 91.8% of time when present
- Phage (with cluster) where this start called: ActinUp\_23 (K1), Adephagia\_23 (K1), Adonis\_23 (K1), Ageofdapage\_23 (K1), AlishaPH\_23 (K1), Amelie\_19 (K1), Aminay\_21 (K7), Anaya\_24 (K1), Angelica\_23 (K1), Apocalypse\_23 (K1), Asayake\_23 (K1), Atiba\_23 (K1), BEEST\_23 (K1), BGIlluviae\_23 (K1), BaghaKamala\_23 (K1), BarrelRoll\_23 (K1), Beezoo\_23 (K1), Bella96\_23 (K1), Belladonna\_23 (K1), Binglebops\_19 (K1), Blizzard\_23 (K1), Boiiii\_23 (K1), Boilgate\_20 (K8), Bryler\_22 (K6), CREW\_23 (K1), Cain\_22 (K6), Capricorn\_23 (K1), CaseJules\_23 (K1), Chancellor\_24 (K4), CheetoDust\_23 (K1), Cheetobro\_24 (K4), Chris\_22 (K1), CrimD\_23 (K1), Curiosium\_24 (K1), Dalmuri\_23 (K1), DARTH\_P\_22 (K6), Dartin\_23 (K1), Deby\_23 (K1), Devera\_23 (K1), Dole\_23 (K1), DrHayes\_23 (K1), Durfee\_23 (K1), Efra2\_23 (K1), Ellie\_20 (K6), Emerson\_23 (K1), Enkosi\_19 (K1), Eponine\_24 (K4), Fionnbharth\_24 (K4), Ganymede\_24 (K1), Geraldini\_23 (K1), Guanica15\_23 (K1), Hammy\_22 (K6), HedwigODU\_23 (K1), Homura\_23 (K1), Hurricane\_22 (K3), Hyperbowlee\_23 (K1), Illumine\_23 (K1), Inky\_23 (K1), JAWS\_23 (K1), JF1\_24 (K4), Jarvi\_23 (K1), Jayhawk\_23 (K1), Jeckyll\_23 (K1), Joy99\_23 (K1), Keshu\_22 (K3), Kraw\_25 (K4), LastHope\_23 (K1), LaterM\_23 (K1), LilPharaoh\_19 (K1), LindNT\_23 (K1), Llorens\_23 (K1), Lunahalos\_23 (K1), MacnCheese\_23 (K3), Malthus\_25 (K4), MarkPhew\_23 (K1), Marshawn\_24 (K6), McMater\_23 (K1), Mdavu\_19 (K1), MeaningOfLife\_23 (K1), Megsy\_23 (K1), Mitti\_24 (K4), Murucutumbu\_23 (K1), Mynx\_23 (K1), Nibb\_22 (K1), Nikao\_19 (K1), Niklas\_23 (K1), Nutello\_19 (K1), OmniCritical\_24 (K4), P3MA\_19 (singleton), Padfoot\_23 (K1), Padpat\_23 (K1), Patt\_24 (K4), Peanam\_23 (K1), Peel\_23 (K1), Pharb\_22 (K3), PhelpsODU\_22 (K6), Phrank\_22 (K6), Piatt\_23 (K1), Pixie\_22 (K3), Pokerus\_22 (K1), Prithvi\_23 (K1), QuincyRose\_22 (K1), Ramen\_23 (K1), Rapunzel97\_23 (K1), Richo\_23 (K1), Rosmarinus\_23 (K1), Ruthiejr\_23 (K4), SamScheppers\_22 (K4), SamuelLPlaqson\_23 (K1), SgtBeansprout\_19 (K1), Shadow1\_21 (K6), Shaobing\_23 (K1), ShedlockHolmes\_22 (K3), ShiaSurprise\_23 (K1), SirPhilip\_22 (K6), Slarp\_24 (K4), Slimphazie\_23 (K1), Spock\_23 (K1), Stinson\_23 (K1), Sulley\_23 (K1), Sunflower1121\_21 (K6), Syra333\_22 (K6), TBond007\_22 (K3), TClif\_22 (K6), Tachez\_23 (K1), TaiwanKao\_24 (K1), Tierra\_22 (K6), TingHuaYa\_23 (K1), TiniBug\_23 (K1), Tiri\_23 (K1), Topper\_23 (K1), Torres\_19 (K1), TreyKay\_23 (K1), TripleTrouble\_21 (K3), TruffulaTree\_23 (K1), Twitch\_23 (K1), Unicorn\_22 (K6), Urkel\_23 (K1), Validus\_23 (K1), Veliki\_23 (K1), Wintermute\_24 (K4), Ximenita\_23 (K6), YoureAdopted\_22 (K1), Yunkel11\_23 (K1), Zabiza\_23 (K1), Zavala\_23 (K1),

#### Start 115:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present

- Phage (with cluster) where this start called: DS6A\_21 (singleton),

#### Start 116:

- Found in 10 of 2251 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Sixama\_99 (DS),

#### Start 117:

- Found in 108 of 2251 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 59 of 2078
- Called 57.4% of time when present
- Phage (with cluster) where this start called: Agent47\_21 (K5), Arib1\_19 (P1), Atcoo\_19 (P1), Bartholomew\_19 (P1), BigNuz\_18 (P4), Brusacoram\_19 (P1), Bunnies\_19 (P1), CactusJack\_19 (P1), Camster\_19 (P1), Collard\_21 (K5), Donovan\_19 (P1), Dynamo\_19 (P1), Feyre\_21 (K5), FirstPlacePfu\_19 (P1), Fishburne\_19 (P1), Gengar\_21 (K5), Glaske\_19 (P1), Guillsminger\_21 (K5), HUHilltop\_19 (P1), Heftyboy\_21 (K5), InvictusManeo\_21 (K5), Jebeks\_19 (P1), Jung\_19 (P1), Juniormint\_19 (P1), Kari\_19 (P1), KilKor\_19 (P1), Kratio\_20 (K5), Ksquared\_19 (P1), Langerak\_19 (P1), Leston\_21 (K5), Majeke\_19 (P1), Malithi\_19 (P1), Mangethe\_19 (P1), Megiddo\_19 (P1), Miryou\_21 (K5), Nazo\_18 (P4), Necropolis\_19 (P1), OkiRoe\_21 (K5), Paola\_21 (K5), Phalm\_19 (P1), Phayonce\_18 (P5), Phegasus\_19 (P1), Phineas\_19 (P1), Polkaroo\_19 (P1), Purky\_18 (P6), Pygmy\_18 (P1), Shipwreck\_18 (P1), SoSeph\_21 (K5), Sonah\_19 (P1), StevieRay\_19 (P1), StressBall\_19 (P1), Techage\_19 (P1), Thespis\_19 (P1), ThulaThula\_18 (P5), Thyatira\_21 (K5), Tortellini\_18 (P2), Venti\_19 (P1), Vidya\_19 (P1), Waterfoul\_21 (K5), Willsammy\_19 (P1), Xavia\_19 (P3), Zilizebeth\_19 (P1),

#### Start 118:

- Found in 17 of 2251 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 8 of 2078
- Called 52.9% of time when present
- Phage (with cluster) where this start called: Adelaide\_17 (EP), Bran\_17 (EP), Dina\_17 (EP), GAL1\_20 (singleton), Lederberg\_17 (EP), SamW\_17 (EP), StAB\_17 (EP), Stiles\_17 (EP), Troy\_17 (EP),

#### Start 121:

- Found in 110 of 2251 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 0.9% of time when present
- Phage (with cluster) where this start called: LilSpotty\_18 (singleton),

#### Start 122:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA4\_19 (singleton),

#### Start 123:

- Found in 621 of 2251 ( 27.6% ) of genes in pham
- Manual Annotations of this start: 215 of 2078
- Called 36.6% of time when present

• Phage (with cluster) where this start called: Akhila\_17 (F1), Alexphander\_18 (F1), AlpineSix\_16 (F1), ArcusAngelus\_16 (F1), Ardmore\_16 (F1), Aubs\_16 (F1), Awesomesauce\_17 (F1), BabyBack\_30 (A2), Batiatus\_16 (F1), Beakin\_17 (F1), BigPhil\_17 (F1), Bipolar\_16 (F1), Blexus\_16 (F1), BlueCrab\_16 (F1), BobSwaget\_31 (A2), BobaPhett\_16 (F1), Bobi\_18 (F1), BodEinwohner17\_16 (F1), Boomer\_17 (F1), Brocalys\_16 (F1), Bubbles123\_17 (F1), Burwell21\_16 (F1), BuzzLyseyear\_18 (F1), ByChance\_16 (F1), Byougenkin\_16 (F1), Cabrinians\_16 (F1), CaptainTrips\_17 (F1), Cerasum\_17 (F1), Che8\_16 (F1), Chevrolet\_16 (F1), ChickenDinner\_17 (F1), Chuckly\_16 (F1), Clifton\_16 (F1), CloudWang3\_31 (A6), Coco12\_18 (F1), Colin\_32 (A2), Cornucopia\_17 (F1), Crumble\_16 (F1), DLane\_16 (F1), DRBy19\_16 (F1), DaWorst\_18 (F1), DaddyRickover\_16 (F1), Daenerys\_16 (F1), Dante\_16 (F1), DeadP\_16 (F1), Deb65\_16 (F1), DekHockey33\_30 (A15), DillTech15\_16 (F1), DocMcStuffins\_17 (F1), Donkeykong\_16 (F1), Doomphist\_16 (F1), Dorothy\_16 (F1), DosHalletts\_17 (F1), DotProduct\_16 (F1), Doug\_17 (F1), Drago\_17 (F1), Eish\_16 (F1), EleanorGeorge\_16 (F1), Emma\_16 (F1), Empress\_17 (F1), Enby\_17 (F1), Eradicator\_16 (F1), Estave1\_16 (F1), Fancypants\_16 (F1), Fastidio\_16 (F1), Filuzino\_16 (F1), Firehouse51\_17 (F1), Flathead\_17 (F1), Florinda\_16 (F1), Frankie\_17 (F1), FreddyB\_16 (F1), Fruitloop\_16 (F1), GUmbie\_16 (F1), Galactic\_16 (F1), Gandolph\_16 (F1), Geralt\_16 (F1), GigiOuiOui\_16 (F1), Girafales\_17 (F1), Girr\_16 (F1), Gorge\_16 (F1), Hades\_16 (F1), Hamulus\_16 (F1), Harley\_16 (F1), Hegedechwinu\_17 (F1), Hlubikazi\_16 (F1), IMpilo\_16 (F1), IbOuu\_16 (F1), Ibhubesi\_16 (F1), Inventum\_16 (F1), IrishSherpFalk\_17 (F1), JalFarm20\_18 (F1), James\_16 (F1), Jarcob\_16 (F1), Jinglebell\_15 (F1), Job42\_19 (F1), JoeyJr\_16 (F1), Jordennis\_31 (A6), Juice456\_18 (F1), Juniper1\_16 (F1), Kalpine\_31 (A2), Karhdo\_16 (F1), Kenuha5\_16 (F1), Kimberlium\_18 (F1), KingMidas\_17 (F1), Kingsley\_17 (F1), Koella\_16 (F1), Krakatau\_17 (F1), KristaRAM\_17 (F1), LastJedi\_16 (F1), Latretium\_17 (F1), Leozinho\_17 (F1), Leperchaun\_16 (F1), LilMoolah\_16 (F1), LittleShirley\_17 (F1), Lizziana\_16 (F1), Llama\_16 (F1), Llij\_16 (F1), Lokk\_31 (A2), Lorde\_17 (F1), Madiba\_17 (F1), Mahavrat\_16 (F1), Mandlovu\_16 (F1), Mantra\_16 (F1), Maravista\_16 (F1), Marker\_17 (F1), Martik\_16 (F1), Mattes\_16 (F1), Melissauren88\_16 (F1), MilanaBonita\_17 (F1), MilleniumForce\_17 (F1), MinionDave\_17 (F1), Minnie\_17 (F1), Misha28\_17 (F1), MisterCuddles\_16 (F1), Modragons\_16 (F1), Moonbeam\_17 (F1), Mova\_17 (F1), Mozy\_17 (F1), Ms6\_16 (F1), MulchExplorer\_19 (F1), MulchSalad\_16 (F), Mutaforma13\_16 (F1), Nimbo\_16 (F1), Nivrat\_16 (F1), NormanBulbieJr\_16 (F1), Ochi17\_16 (F1), OfUltron\_16 (F1), Ogopogo\_19 (F1), Oksu\_17 (F1), OldBen\_16 (F1), OlympiaSaint\_16 (F1), Ovechkin\_16 (F1), OwlsT2W\_18 (F1), PHappiness\_16 (F1), PMC\_16 (F1), Pacc40\_16 (F1), Phalconet\_16 (F1), Phanphagia\_16 (F1), Phasih\_17 (F1), Phatniss\_17 (F1), PhesterPotato\_16 (F1), Philus\_16 (F1), Piper2020\_17 (F1), Pippy\_16 (F1), Plumbus\_17 (F1), Poenanya\_16 (F1), Polka14\_17 (F1), PopTart\_16 (F1), Priscilla\_16 (F1), QuickMath\_17 (F1), Quico\_17 (F1), Radiance\_16 (F1), Ramsey\_17 (F1), RedBird\_16 (F1), Rialto\_18 (F1), RitaG\_16 (F1), Rita\_16 (F1), Rockne\_16 (F1), RockyHorror\_17 (F1), Royals2015\_16 (F1), Ruby\_16 (F1), SG4\_16 (F1), Saal\_16 (F1), Sandalphon\_17 (F1), Sassafras\_16 (F1), SassyB\_16 (F1), Scottish\_17 (F1), Sebastian\_16 (F1), Seagreen\_17 (F1), Shauna1\_16 (F1), ShiLan\_16 (F1), ShowerHandel\_16 (F1), ShroomBoi\_16 (F1), SiSi\_16 (F1), SimranZ1\_17 (F1), Sparkdehlily\_16 (F1), Spikelee\_17 (F1), Spoonbill\_16 (F1), Squirty\_17 (F3), StAnnes\_16 (F1), Stap\_17 (F1), Starcevich\_17 (F1), Strokeseat\_16 (F1), SuperGrey\_17 (F1), SwagPiggett\_16 (F1), SwirlSquare\_30 (A2), TDanisky\_16 (F1), Taj\_16 (F1), TootsiePop\_17 (F1), Tootsieroll\_17 (F1), Totinger\_17 (F1), Tweety\_16 (F1), UncleRicky\_17 (F1), VRedHorse\_16 (F1), Velveteen\_17 (F1), Veteran\_16 (F1), Wachhund\_16 (F1), Wee\_17 (F1), WeiHuaDA\_34 (A2), Whatsapiecost\_16 (F1), Whouxphf\_16 (F1), WillSterrel\_17 (F1), XFactor\_16 (F1),

XianYue\_28 (A2), Yorick\_16 (F1), Zerg\_16 (F1), Zizzle\_16 (F1),

Start 124:

- Found in 33 of 2251 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 30 of 2078
- Called 97.0% of time when present
- Phage (with cluster) where this start called: Ariel\_34 (J), BAKA\_34 (J), Bobby\_38 (J), Bombitas\_33 (J), Constella\_31 (J), Courthouse\_34 (J), DmpstrDiver\_35 (J), Dove\_34 (J), Ejimix\_37 (J), Gonephishing\_32 (J), Hannaconda\_31 (J), Hughesyang\_35 (J), Kalah2\_37 (J), KashFlow\_28 (J), Klein\_37 (J), LittleE\_37 (J), Lucky2013\_34 (J), MiaZeal\_34 (J), Minerva\_37 (J), Nitzel\_17 (F1), Odette\_36 (J), Omega\_36 (J), Optimus\_35 (J), Phoebus\_36 (J), Porcelain\_33 (J), Redno2\_35 (J), Schatzie\_34 (J), Squint\_33 (J), Thibault\_33 (J), ThreeRngTarjay\_35 (J), Wanda\_37 (J), Zelink\_38 (J),

Start 126:

- Found in 44 of 2251 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 42 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aggie\_18 (N), Andies\_18 (N), BabeRuth\_18 (N), Bosection6\_18 (N), Butters\_18 (N), Carcharodon\_18 (N), Charlie\_18 (N), Chewbacca\_18 (N), Duplicity\_18 (N), Fulbright\_18 (N), Gex\_18 (N), Hanako\_18 (N), Jamie19\_18 (N), Journey\_18 (N), Kevin1\_18 (N), Magsby\_18 (N), Melville\_18 (N), MichelleMyBell\_18 (N), Nenae\_18 (N), Panchino\_18 (N), Parmesanjohn\_18 (N), PhancyPhin\_18 (N), Philonius\_18 (N), Phloss\_18 (N), Phrann\_18 (N), Pipsqueaks\_18 (N), Purgamenstris\_18 (N), Raymond7\_18 (N), Rebel\_18 (N), Redi\_18 (N), Rubeelu\_18 (N), Schnauzer\_18 (N), Scitech\_18 (N), ShrimpFriedEgg\_18 (N), Shweta\_18 (N), Silvafighter\_18 (N), Silvy\_18 (N), SkinnyPete\_18 (N), Smurph\_18 (N), Snekmaggedon\_18 (N), SpongeBob\_18 (N), Tapioca\_18 (N), Xeno\_18 (N), Xerxes\_18 (N),

Start 128:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MooMoo\_16 (singleton),

Start 129:

- Found in 133 of 2251 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 79 of 2078
- Called 59.4% of time when present
- Phage (with cluster) where this start called: 244\_26 (E), ABCat\_23 (E), Adnama\_27 (E), AmericanBeauty\_26 (E), Argent26\_26 (E), BaboJay\_23 (E), BadStone\_23 (E), Balomoji\_23 (E), BigBubba\_25 (E), Buck\_23 (E), Cactus\_25 (E), ChosenOne\_23 (E), Command613\_25 (E), Contagion\_23 (E), Cookies\_24 (E), CrystalP\_24 (E), Czyszczon1\_25 (E), DrDrey\_25 (E), Dusk\_23 (E), Elite2014\_23 (E), Elph10\_25 (E), Eureka\_24 (E), Filch\_25 (E), Gator\_22 (E), Gemini\_27 (E), Goku\_24 (E), GoldenSpark\_26 (E), Goldilocks\_25 (E), GooberAzure\_26 (E), HanKaySha\_25 (E), Highbury\_25 (E), Holt\_25 (E), Hoonter\_26 (E), Kanye\_26 (E), Kimchi\_26 (E), Kostya\_24 (E), Lilac\_26 (E), Lilizi\_26 (E), Lilpickle\_23 (E), LunaStella\_18 (F4), MISSy\_23 (E), MPhalcon\_23 (E), MadamMonkfish\_24 (E), Manda\_25 (E), Miniwave\_24 (E), Misfit\_24 (E), Moldemort\_25 (E), Myrale\_24 (E), Nimrod\_24 (E), NoSleep\_25 (E), OrionPax\_25 (E), Paperbeatsrock\_26 (E), Pat3\_23 (E),

Pharsalus\_25 (E), PhatBacter\_24 (E), Phaux\_23 (E), Phrux\_24 (E), Quallification\_25 (E), Rimmer\_23 (E), Saints25\_25 (E), ShamWow\_24 (E), ShereKhan\_26 (E), Simpliphy\_25 (E), SirDuracell\_23 (E), SophKB\_24 (E), Sotrice96\_24 (E), Stark\_25 (E), StellaBean\_24 (E), StolenFromERC\_26 (E), Tarkin\_26 (E), TeardropMSU\_23 (E), Teaspoon\_25 (E), Terminus\_24 (E), Thresher\_25 (E), Tomaszewski\_23 (E), Traaww1\_22 (E), Tuco\_25 (E), Ukulele\_24 (E), Wiggin\_27 (E),

Start 131:

- Found in 6 of 2251 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 6 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Babsiella\_19 (I1), Brujita\_19 (I1), HC\_19 (I1), Island3\_19 (I1), QueenHazel\_19 (I1), Xula\_18 (I1),

Start 132:

- Found in 81 of 2251 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 45 of 2078
- Called 56.8% of time when present
- Phage (with cluster) where this start called: Angel\_18 (G1), Annihilator\_18 (G1), Antsirabe\_18 (G5), Aroostook\_18 (G1), Avocado\_18 (G2), Avrafan\_18 (G1), BPs\_18 (G1), Barkley26\_18 (G1), BruceB\_18 (G1), Cambiare\_19 (G2), CassieYates\_18 (G1), Cedasite\_18 (G1), Coleslaw\_18 (G1), Crespo\_18 (G1), DMoney\_18 (G1), Darionha\_18 (G1), ECartman\_18 (G1), Gideon\_18 (G1), GoldenAsh\_18 (G1), Gomashi\_18 (G1), Halo\_18 (G1), Hope\_18 (G1), Jolene\_18 (G1), JorRay\_18 (G1), Kareem\_18 (G1), Liefie\_18 (G1), LouisV14\_18 (G1), Marmie\_18 (G1), MarysWell\_23 (A5), Mowgli\_18 (G1), OctaviousRex\_18 (G1), Paito\_18 (G1), Peeb\_18 (G1), Periodt\_18 (G1), Phreak\_18 (G1), Pinnie\_19 (G3), Plagueis\_18 (G1), Renaissance\_18 (G1), Schiebel\_18 (G1), ShaboiShabazz\_18 (G1), Stargaze\_18 (G5), Taheera\_18 (G1), Terror\_18 (G1), TomBrady\_18 (G1), ZoMa\_18 (G1), Zombie\_18 (G1),

Start 133:

- Found in 53 of 2251 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 8 of 2078
- Called 28.3% of time when present
- Phage (with cluster) where this start called: AndPeggy\_17 (CT), Biskit\_19 (CT), Burnsey\_18 (CT), Carsonalex\_19 (CT), CherryonLim\_19 (CT), Elliott\_18 (CT), GoldHunter\_19 (CT), Nodigi\_20 (CT), Pons\_18 (CT), PotPie\_18 (CT), PsychoKiller\_18 (CT), RanchParmCat\_21 (CT), RedBaron\_19 (CT), SketchMex\_17 (CT), Sopespian\_18 (CT),

Start 135:

- Found in 23 of 2251 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 7 of 2078
- Called 34.8% of time when present
- Phage (with cluster) where this start called: FlagStaff\_18 (G2), Fryberger\_53 (DP), Guey18\_58 (DP), Keelan\_51 (DP), Pace1224\_18 (G2), Ronaldo\_56 (DP), Volt\_55 (DP), Ziko\_56 (DP),

Start 137:

- Found in 74 of 2251 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 2 of 2078
- Called 2.7% of time when present

- Phage (with cluster) where this start called: Y10\_24 (K4), Y2\_24 (K4),

#### Start 138:

- Found in 7 of 2251 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 5 of 2078
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Bowser\_19 (DB), Eyes\_19 (DB), MagicMan\_19 (DB), Opie\_19 (DB), Schnabeltier\_19 (DB), TaronosaurusRx\_19 (DB),

#### Start 141:

- Found in 53 of 2251 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 14 of 2078
- Called 30.2% of time when present
- Phage (with cluster) where this start called: Aliter\_30 (A9), Alma\_30 (A9), BBQValindra\_19 (DB), BackstagePass\_19 (DB), Bunker\_19 (DB), Cardigan\_47 (DD), Eidsmoe\_30 (A9), GEazy\_19 (DB), HannahD\_19 (DB), HortumSL17\_30 (A9), JonJames\_47 (DD), Myxus\_30 (A9), PackMan\_30 (A9), Phaeder\_30 (A9), Qobbit\_30 (A9), Yvonnetastic\_45 (DD),

#### Start 143:

- Found in 79 of 2251 ( 3.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.3% of time when present
- Phage (with cluster) where this start called: Jolie2\_18 (G4),

#### Start 144:

- Found in 696 of 2251 ( 30.9% ) of genes in pham
- Manual Annotations of this start: 603 of 2078
- Called 93.8% of time when present
- Phage (with cluster) where this start called: 20ES\_28 (A2), 40AC\_31 (A17), ACFishhook\_29 (A3), AN3\_28 (A2), AN9\_31 (A2), ANI8\_31 (A2), AbbyPaige\_30 (A2), AbbysRanger\_27 (A4), Abdiel\_26 (A4), Achebe\_26 (A4), Acolyte\_28 (A2), Adzzy\_29 (A2), Agape74\_30 (A2), Agatha\_18 (CT), AgentM\_24 (A5), Aglet\_29 (A3), AgronaGT15\_29 (A3), AikoCarson\_17 (CT), Airmid\_24 (A5), Albee\_27 (A4), Alberto7\_28 (A4), Amok\_17 (CT), Anaysia\_30 (A15), Aneem\_28 (A11), AnnaL29\_31 (A2), Annyong\_27 (A4), Anon\_28 (A15), Anselm\_28 (A2), Anthony\_27 (A20), Anubis\_31 (A3), Apricot\_19 (DN3), Aragog\_24 (A5), ArcherNM\_30 (A2), Archetta\_24 (A5), Arissanae\_28 (A9), Artemis2UCLA\_31 (A6), Arturo\_26 (A4), Asapag\_20 (DN1), Astro\_24 (A8), AugsMagnumOpus\_31 (A3), AvatarAhPeg\_28 (A4), Avlie17\_27 (A4), Axym\_18 (CT), Azira\_20 (CT), B1\_25 (A3), BABullseye\_31 (A6), BENtherdunthat\_20 (DN1), Baby16\_27 (A4), BabyJohn\_26 (A3), BabyRay\_27 (A3), Bachome\_28 (A11), Backyardigan\_27 (A4), Bactobuster\_29 (A2), Badger\_27 (A4), Baehexic\_29 (A2), BangNhom\_27 (A4), Bartimeaus\_27 (A4), Battleship\_31 (A15), Beauxregard13\_29 (A3), Beemo\_30 (A9), BellusTerra\_27 (A4), Benedict\_24 (A5), BengiVuitton\_29 (A2), Benvolio\_28 (A2), BiancaTri92\_30 (A2), BigChungus\_17 (CT), BillDoor\_20 (CT), Blackmoor\_27 (A4), Blinn1\_31 (A6), Blue7\_31 (A6), BlueBird\_28 (A3), Bluefalcon\_23 (A5), BogosyJay\_29 (A9), Bombshell\_27 (A4), Bonamassa\_24 (A5), Boohoo\_30 (A15), Bowtie\_28 (A11), Bradman\_27 (A2), BreSam8\_29 (A3), Broseidon\_27 (A4), Bruiser\_26 (A4), BubbleTrouble\_27 (A4), Bud\_28 (A11), Budski\_20 (DN), Bugatti\_27 (A3), Buggy\_30 (A2), Bumblebee11\_27 (A4), Burger\_26 (A4), Button\_19 (CT), Buttrmlkdreams\_18 (CT), BuzzBuzz\_28 (A3), Bxz2\_28 (A3), C3\_26 (A2), CRB1\_28 (A2), Caelakin\_27 (A4), Calvinny\_30 (A3), Camperdownii\_26 (A4), Candra\_31 (A6), Caraxes\_27 (A2), Caviar\_28 (A3), Centaur\_30 (A2), CentreCat\_27 (A4),



Cerulean\_28 (A4), Chadwick\_25 (A5), ChampagnePapi\_28 (A4), Changeling\_30 (A2), Chaph\_27 (A4), Chargerpower\_29 (A), Charm\_28 (A9), Chartreuse\_31 (A6), Che12\_30 (A2), CheeseTouch\_20 (DN1), ChipMunk\_30 (A2), Chiqui\_26 (A3), Chupacabra\_27 (A10), Cici\_27 (A4), Cintron\_27 (A4), Citius\_27 (A4), Clarenza\_27 (A4), Cleo\_18 (CT), CocoaBerry\_27 (A4), Colbster\_29 (A3), Commander\_27 (A4), Connomayer\_27 (A4), Conquerage\_30 (A9), Conspiracy\_24 (A5), Coog\_24 (A5), Cookiedough\_31 (A6), Cozz\_18 (CT), Crater\_18 (DN3), Crucio\_28 (A2), Cuco\_24 (A5), Cullens\_29 (A3), D29\_28 (A2), D32\_31 (A2), DBQu4n\_31 (A2), DaHudson\_29 (A3), DaVinci\_31 (A6), Daishi\_28 (A3), Dalmatian\_28 (A2), Danforth\_23 (A8), Darrell\_30 (A9), DarthPhader\_29 (A12), Datway\_27 (A4), Deano\_27 (A4), Deloris\_29 (A2), Dhanush\_27 (A4), Dieselweasel\_29 (A3), Dignity\_30 (A2), DirtyDunning\_27 (A4), Discoknowium\_24 (A5), Dixon\_24 (A8), DontArgue\_26 (A10), Dorothea\_31 (A6), Drake55\_30 (A2), Drake94\_26 (A10), Dre3\_18 (CT), DreamTeam1\_28 (A9), DroogsArmy\_28 (A7), DropBear\_27 (A3), Druantia\_27 (A4), Dublin\_23 (A5), DudeLittle\_28 (A2), Duplo\_31 (A2), DustyMartin\_31 (A10), EZMoney23\_32 (A2), EagleEye\_30 (A16), Eagle\_26 (A4), Eaglepride\_28 (A10), Eapen\_27 (A4), Ebony\_28 (A11), Echild\_28 (A2), Edison31\_27 (A10), EdogawaKiddo\_28 (A9), EITiger69\_24 (A5), Elephantoon\_29 (A9), Elinal\_19 (CT), Emalyn\_17 (CT), EmyBug\_30 (A9), EpicPhail\_29 (A3), Epsocamisio\_30 (A15), Equemioh13\_30 (A2), EricB\_31 (A6), Eris\_26 (A4), Eros\_27 (A4), Et2Brutus\_27 (A11), Eurydice\_27 (A4), EvilGenius\_30 (A2), Expelliarmus\_23 (A8), ExplosioNervosa\_30 (A9), Fameo\_28 (A2), Farber\_29 (A3), Fayely\_30 (A9), Feastonyeet\_17 (CT), Fernando\_29 (A3), Fibonacci\_28 (A11), FiringLine\_28 (A2), First\_0028 (A2), Flare16\_28 (A2), Flaverint\_28 (A11), Florean\_27 (A4), Flux\_27 (A4), FlyCatcher\_31 (A7), ForGetIt\_24 (A5), Fred313\_27 (A3), Fribs8\_19 (CT), Frickyeah\_20 (DN1), Funston\_27 (A4), Gadost\_27 (A4), Gail\_28 (A14), Garak\_32 (A6), GaugeLDP\_30 (A2), Gemma\_29 (A3), George\_23 (A5), Georgie2\_29 (A2), Getalong\_21 (DN1), Ghoulyboy\_24 (A5), GiKK\_21 (CT), Gibbous\_18 (CT), Gilberta\_28 (A11), GingkoMaracino\_29 (A3), Giroux\_27 (A3), Gladiator\_31 (A6), Goose\_27 (A10), GreedyLawyer\_31 (A6), Grif\_29 (A3), Groundhog\_23 (A8), Groupthink\_30 (A3), Grub\_29 (A3), Grum1\_29 (A3), Gruunaga\_31 (A6), GtownJaz\_29 (A3), HINdeR\_27 (A7), HamSlice\_26 (A4), Hammer\_31 (A6), Hanray\_29 (A9), Happiness\_27 (A4), HarryHoudini\_30 (A2), HashRod\_30 (A3), HaveUMetTed\_30 (A3), Heathen\_27 (A3), Heffalump\_30 (A2), HelDan\_27 (A3), Heliosoles\_29 (A3), Helmet\_32 (A6), Herbertwm\_25 (A2), Hercules11\_29 (A3), Hexamo\_31 (A6), Hexbug\_20 (CT), HippoPololi\_20 (CT), Horex\_29 (A9), Holli\_27 (A4), Holliday\_20 (DN1), Hookmount\_28 (A3), Hoot\_31 (A6), Horseradish\_19 (CT), Horus\_20 (DN1), Houdini22\_27 (A4), HuhtaEnerson15\_24 (A5), Hutc2\_28 (A11), Huxley\_27 (A4), ICleared\_27 (A4), Iceman\_28 (A4), Idleandcovert\_27 (A3), Indra\_31 (A6), Insomnia\_28 (A11), Iracema64\_28 (A4), IronMan\_30 (A2), Isca\_27 (A3), Isiphiwo\_31 (A6), Iwokeuplikedis\_29 (A2), JF2\_27 (A3), JF4\_27 (A3), JHC117\_29 (A3), JSwag\_30 (A15), Jaan\_31 (A2), Jabiru\_24 (A5), Jabith\_28 (A11), Jamzy\_21 (CT), Jaykayelowell\_27 (A4), Jeeves\_28 (A14), Jeffabunny\_31 (A6), JenCasNa\_29 (A3), JeppNRM\_30 (A3), Jerm\_30 (A2), JetBlade\_27 (A4), JewelBug\_31 (A6), Jiawan\_29 (A9), Jobu08\_29 (A3), JoongJeon\_27 (A4), Joselito\_28 (A11), JoshKayV\_30 (A2), Journey13\_26 (A2), Jovo\_24 (A5), Jsquared\_27 (A2), KADY\_30 (A3), KFPoly\_27 (A4), Kachowdy\_27 (A3), Kalb97\_30 (A3), Kalnoky\_30 (A3), Kamaru\_20 (DN1), Kampy\_27 (A4), Katalie136\_27 (A4), KatherineG\_30 (A15), KayGee\_18 (CT), Kazan\_31 (A6), Kenna\_19 (DN1), Kerberos\_31 (A2), Keziacharles14\_28 (A9), Kimona\_24 (A19), KingCyrus\_30 (A2), Kingmustik0402\_27 (A4), Kinmap\_29 (A21), Kipper29\_31 (A6), KittenMittens\_26 (A10), Koduck\_28 (A2), Koko\_31 (A6), Koreni\_26 (A4), Kratak\_27 (A4), Kremtemulon\_27 (A4), Kristoff\_28 (A10), Kyee\_27 (A4), L5\_28 (A2), LBerry\_29 (A3), LHTSCC\_28 (A4), LadyBird\_28 (A2), Lambert1\_28 (A3), Landor\_29 (A2),

LappelDuVide\_27 (A4), Larenn\_29 (A2), LarryKay\_29 (A3), LastResort\_30 (A15), Lauer\_17 (CT), Lemur\_27 (A4), LeoAvram\_27 (A4), Leogania\_30 (A2), Leroy\_20 (DN1), Lev2\_24 (A5), Leviathan\_30 (A2), LilTurb\_30 (A2), Lilbunny\_31 (A6), Lilith\_29 (A3), Lilleskat\_28 (A9), LitninMcQueen\_20 (DN1), LittleB\_27 (A4), LittleCherry\_24 (A5), LittleGuy\_27 (A4), LochMonster\_27 (A4), LoneWolf\_29 (A9), Looper\_31 (A15), Lorenzo\_27 (A4), Loser\_31 (A2), Louie6\_29 (A3), Luchador\_30 (A14), Lucivia\_28 (A11), Lucyedi\_29 (A16), LugYA\_31 (A3), Lunsford\_28 (A4), Lutum\_20 (DN1), MA5\_27 (A3), MAnor\_18 (CT), MK4\_27 (A3), MScarn\_20 (CT), MaCh\_28 (A11), MaVan\_20 (CT), Mabel\_28 (A11), MadMarie\_29 (A3), Mainiac\_29 (A3), MajorMajor\_27 (A2), Malec\_29 (A2), Malinsilva\_31 (A3), Malisha\_21 (DN), Maminiaina\_29 (A9), Manu\_30 (A3), MarQuardt\_29 (A3), Marchesa\_27 (A3), Margaret\_21 (CT), Margo\_28 (A3), Marie\_29 (A3), Marius\_30 (A3), Maverick\_27 (A4), Maxo\_27 (A4), Mayweather\_19 (CT), Mazhar510\_27 (A4), McFly\_31 (A6), Medusa\_27 (A4), MeeZee\_27 (A4), Melvin\_27 (A4), Methuselah\_28 (A3), Micasa\_24 (A5), Microwolf\_29 (A3), MiculUcigas\_28 (A2), Midas2\_24 (A5), Miko\_31 (A2), Milcery\_24 (A5), Millski\_26 (A4), MinecraftSteve\_31 (A15), Misomonster\_31 (A3), MissWhite\_28 (A2), MoneyMay\_29 (A3), Morpher26\_27 (A4), Morrow\_27 (A4), MuchMore\_31 (A3), Mulciber\_28 (A11), Munch\_28 (A11), Mundrea\_27 (A4), MunkgeeRoachy\_18 (CT), NaSiaTalie\_28 (A2), Naca\_24 (A5), Naji\_31 (A2), NearlyHeadless\_24 (A8), Nebs\_27 (A4), Nebulosus\_30 (A15), Nedarya\_29 (A15), Neeharika16\_31 (A6), Nemo27\_27 (A4), Newrala\_31 (A6), Nibbles\_20 (CT), NicoleTera\_32 (A2), Nina\_19 (CT), Noella\_28 (A3), Norbert\_27 (A3), NorthStar\_27 (A4), NotAPhaseMom\_27 (A4), NothingSpecial\_30 (A2), Nyxis\_27 (A4), OKCentral2016\_27 (A10), OKaNui\_28 (A4), Obama12\_28 (A4), Odin\_27 (A2), Ohfah\_27 (A4), OlanP\_29 (A3), Ollie\_29 (A3), Onglai\_29 (A9), Oofda\_31 (A15), Orange\_28 (A11), Orla\_20 (CT), P28Green\_29 (A3), PGHhamlin\_31 (A3), PP\_37 (A7), PainterBoy\_29 (A16), Palestino\_26 (A4), Panamaxus\_27 (A3), Pawn\_30 (A3), PeaceMeal1\_26 (A10), Peaches\_27 (A4), Pembroke\_29 (A3), Penny1\_29 (A3), Periwinkle\_22 (DN1), Perplexer\_27 (A4), PeterPeter\_27 (A4), Petersenfast\_27 (A11), PetiteSangsue\_27 (A4), PetterN\_25 (A5), Ph8s\_29 (A2), Phabuloso\_20 (DN1), Phacado\_27 (A4), Phaded\_31 (A2), Phantastic\_27 (A3), Pharaoh\_28 (A12), Felipe\_27 (A4), Phighter1804\_27 (A4), Phillis\_24 (A8), PhishRPhriends\_28 (A3), Phistory\_21 (DN1), Phlei\_23 (A13), Phlorence\_24 (A5), Phoebe\_29 (A3), Phonnegut\_30 (A9), Phontbonne\_27 (A4), Phoxy\_29 (A3), Phranny\_30 (A3), PickleBack\_24 (A5), Pioneer\_30 (A9), Pipcraft\_27 (A4), Piro94\_29 (A2), Pistachio\_28 (A3), Pmask\_31 (A6), Pocahontas\_28 (A3), Polymorphads\_27 (A4), Pomar16\_31 (A2), Poompha\_26 (A10), Popcicle\_28 (A3), PotatoSplit\_30 (A3), Power\_28 (A2), Priamo\_31 (A6), Priya\_30 (A9), Pukovnik\_30 (A2), Pumbaa\_27 (A4), Puppy\_28 (A3), PurpleHaze\_29 (A3), Quasar\_18 (CT), QueenB2\_28 (A2), QueenBeesly\_28 (A2), QuinnKiro\_27 (A3), Quokka\_26 (A2), Rachaly\_31 (A2), Rahalelujah\_27 (A9), ReMo\_30 (A15), Reba\_30 (A3), Rebeuca\_28 (A10), RedRock\_31 (A2), Refuge\_31 (A12), Relief\_27 (A4), Remus\_30 (A15), ResDef\_28 (A3), Retro23\_28 (A2), RhynO\_28 (A10), Rifter\_31 (A6), Roary\_24 (A8), Rockstar\_27 (A3), Roksolana\_31 (A6), Romney\_27 (A4), Roosevelt\_27 (A4), Rosa24\_26 (A4), Rosalind\_30 (A15), Rowdy\_31 (A10), Ruin\_27 (A4), Rummer\_29 (A3), RyeScarlet\_31 (A9), Sabertooth\_27 (A4), Sabia\_29 (A3), Sabinator\_29 (A3), Sachima\_28 (A9), Saintus\_24 (A8), Salz\_28 (A11), SaturnRing\_27 (A3), Scamp\_27 (A4), Scherzo\_30 (A9), Scorpia\_25 (A5), Scout\_27 (A3), SemperFi\_30 (A2), Serenity\_27 (A2), Severus\_26 (A10), Shaka\_27 (A4), Sham4\_28 (A11), Shapes\_31 (A10), ShayRa\_31 (A15), SheaKeira\_28 (A9), SheckWes\_17 (CT), Sheen\_29 (A7), SheldonCooper\_28 (A4), Shygu2\_27 (A4), Skipitt\_27 (A4), Smeadley\_24 (A8), Smeagan\_30 (A2), SmellyB\_31 (A6), SnapTap\_28 (A2), Snape\_28 (A11), Snickers\_29 (A3), SoYo\_29 (A3), SoilDragon\_29 (A3), SororFago\_28 (A14), Soshari\_31 (A3), Soups\_30 (A15),

Sparxx\_27 (A4), Spike509\_29 (A3), Spino\_27 (A4), Spooky\_20 (DN2), Spouty\_30 (A9), Squiddly\_22 (DN2), Stagni\_29 (A3), StarStuff\_31 (A2), Stasia\_28 (A4), SteamedHams\_20 (CT), Steamy\_29 (A12), Stephig9\_24 (A8), Stink\_28 (A4), Strosahl\_30 (A15), SummitAcademy\_17 (CT), Sunhee\_27 (A14), SuperAwesome\_31 (A6), SuperCallie99\_31 (A6), Superchunk\_27 (A2), Survivors\_20 (CT), SweatNTears\_20 (CT), SweetiePie\_28 (A2), Swirley\_24 (A5), Switzerland\_30 (A15), SydNat\_24 (A5), TNguyen7\_27 (A3), Taquarus\_27 (A4), TarsusIV\_28 (A2), Tarynearl\_23 (A5), Taurus\_29 (A3), Texage\_27 (A3), Thanksgivukkah\_27 (A4), Theia\_22 (A5), Tiffany\_29 (A3), Tiger\_24 (A5), Timothy\_28 (A11), Timshel\_28 (A7), TinaFeyge\_27 (A4), TinyTimmy\_28 (A11), Tinybot\_26 (A4), TopsytheTRex\_27 (A2), TiroTheta9\_27 (A4), Toaka\_27 (A9), Todacoro\_28 (A3), Tolls\_20 (CT), Tomathan\_31 (A2), ToneTone\_29 (A6), Topanga\_27 (A10), Toro\_30 (A7), Travvers\_31 (A2), Trike\_25 (A10), Trixie\_31 (A2), Troje\_18 (CT), Trooper\_28 (A2), TroyPia\_27 (A4), Tubs\_30 (A9), Tucker\_31 (A6), Turbido\_30 (A2), Twigg\_24 (A5), Twister\_27 (A10), TygerBlood\_27 (A4), Typhonomachy\_19 (CT), Ugenie5\_27 (A9), Ulysses\_26 (A4), UnionJack\_24 (A5), Updawg\_30 (A2), VA6\_28 (A2), VC3\_31 (A2), Vanisoa\_27 (A9), Veracruz\_27 (A3), Vine\_19 (CT), Vix\_29 (A3), VohminGhazi\_31 (A6), Waits\_30 (A15), WalterMcMickey\_27 (A10), Wander\_27 (A4), Watson\_29 (A3), Whabigail7\_30 (A2), Whitney\_21 (DN1), WideWale\_30 (A2), Wiks\_31 (A6), Wilbur\_27 (A4), Wile\_27 (A4), Wizard007\_27 (A4), Wooldri\_31 (A3), WunderPhul\_31 (A6), Xena\_27 (A4), Yakult\_19 (CT), Yarn\_17 (CT), Yecey3\_29 (A9), YoSam321\_27 (A4), Yokurt\_31 (A6), Yummy\_19 (CT), Zaka\_31 (A6), Zetzy\_28 (A3), Zimmer\_30 (A12), Zolita\_23 (A5), Zulu\_31 (A6),

#### Start 145:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mollymur\_31 (DL),

#### Start 146:

- Found in 242 of 2251 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 223 of 2078
- Called 96.7% of time when present
- Phage (with cluster) where this start called: A6\_25 (A1), AFIS\_27 (A1), Abbysshoes\_28 (A1), Abrogate\_280 (A1), Abscondus\_47 (CQ1), Acme\_29 (A1), Adahisdi\_28 (A1), Aeneas\_29 (A1), Ajay\_28 (A1), Alsfro\_31 (A1), Altman\_29 (A1), Alvin\_28 (A1), Anglerfish\_28 (A1), Aphelion\_48 (CQ1), Applejack\_27 (A1), Arcanine\_28 (A1), Arianna\_19 (EO), Arlo\_26 (A1), Ashballer\_27 (A1), Atkinbua\_29 (A1), BK1\_25 (A1), BPBiabs31\_28 (A1), Bachita\_50 (CQ1), BaconJack\_29 (A1), Barriga\_27 (A1), Beatrix\_27 (A1), BeesKnees\_28 (A1), Bethlehem\_27 (A1), Bexan\_26 (A1), Big3\_27 (A1), BigMau\_29 (A1), BigPaolini\_28 (A1), Bigfoot\_26 (A1), BillKnuckles\_28 (A1), Bircsak\_27 (A1), BluSpix\_27 (A1), Blue\_27 (A1), Bob3\_26 (A1), Bones\_27 (A1), Briton15\_29 (A1), Bruns\_26 (A1), BrutonGaster\_36 (CQ2), Burton\_28 (A1), Buttons\_29 (A1), Bxb1\_25 (A1), CactusRose\_26 (A1), Carlyle\_29 (A1), Chanagan\_26 (A1), Ciao\_27 (A1), ClubL\_48 (CQ1), Colleen\_19 (EO), ConceptII\_29 (A1), Corvo\_28 (A1), Crispicous1\_26 (A1), Cucurbita\_50 (CQ1), Cueyllyss\_27 (A1), Culver\_48 (CQ1), DD5\_28 (A1), Dexes\_28 (A1), Doom\_28 (A1), DrFeelGood\_26 (A1), DreamCatcher\_30 (A1), Dreamboat\_28 (A1), Dulcie\_26 (A1), Dussy\_28 (A1), Dusty\_46 (CQ1), Dynamix\_28 (A1), Edtherson\_28 (A1), Engineer\_49 (CQ1), Espresso\_27 (A1), Euphoria\_27 (A1), Eyeball\_27 (A1), Fajezeel\_29 (A1), Fascinus\_26 (A1), Fenn\_28 (A1), Forsytheast\_26 (A1), Francis47\_27 (A1), Frogopper\_28 (A1), Fushigi\_28 (A1), GageAP\_29 (A1), Gandalf20\_28 (A1),

Geeche\_47 (CQ1), Gompeii16\_27 (A1), Graduation\_29 (A1), GrecoEtereo\_29 (A1), Greg\_29 (A1), Gwendoluna\_29 (A1), Gyzlar\_29 (A1), Hami1\_29 (A1), HanShotFirst\_27 (A1), HarryOW\_28 (A1), Hermia\_30 (A1), HermioneGrange\_27 (A1), Homines\_27 (A1), Hope4ever\_27 (A1), ILeeKay\_29 (A1), Ichabod\_28 (A1), Inyanga\_26 (A1), JC27\_29 (A1), JackSparrow\_28 (A1), Jasper\_28 (A1), Jerm2\_28 (A1), Jorgensen\_27 (A1), JuliaChild\_29 (A1), KBG\_28 (A1), KSSJEB\_27 (A1), Kanely\_28 (A1), Kenmech\_30 (A1), Killigrew\_25 (A1), Kugel\_28 (A1), KyMonks1A\_29 (A1), Kykar\_25 (A1), Lamina13\_27 (A1), Lesedi\_26 (A1), Licorice\_29 (A1), LilBib\_28 (A1), Lockley\_27 (A1), Lopton\_28 (A1), Lozinak\_48 (CQ1), MPlant7149\_26 (A1), Magnito\_26 (A1), Makemake\_27 (A1), Manatee\_28 (A1), Marcell\_27 (A1), Marchy\_26 (A1), Marge\_28 (A1), Maroc7\_26 (A1), Marsha\_27 (A1), MaryBeth\_27 (A1), McGuire\_28 (A1), MetalQZJ\_27 (A1), Michley\_27 (A1), Miskis\_50 (CQ1), Mkhuseli\_28 (A1), Molly\_28 (A1), Monet\_29 (A1), Moose\_26 (A1), MrGordo\_27 (A1), Mryolo\_26 (A1), Mule\_27 (A1), Museum\_29 (A1), MyraDee\_25 (A18), NEHalo\_27 (A1), Naira\_28 (A1), Nerujay\_28 (A1), Nhonho\_27 (A1), Niza\_29 (A1), Norvs\_49 (CQ1), Norz\_29 (A1), Ohno789\_27 (A1), OneUp\_42 (CQ2), Oogway\_26 (A1), PSullivan\_29 (A1), PacerPaul\_27 (A1), Paphu\_26 (A1), Paraselene\_26 (A1), Pari\_28 (A1), Parliament\_26 (A1), PascalRango\_26 (A1), PattyP\_29 (A1), Payneful\_27 (A1), Pelly\_28 (A1), Pepe\_28 (A1), Perseus\_28 (A1), Peterson\_30 (A1), Petp2012\_29 (A1), Petruccio\_28 (A1), PherrisBueller\_28 (A1), PhinkBoden\_48 (CQ1), PhrostyMug\_27 (A1), PinkPlastic\_26 (A1), Pinto\_30 (A1), Pippin\_29 (A1), Pita2\_29 (A1), Poushou\_19 (EO), ProMouse\_26 (A1), QTRLifeCrisis\_27 (A1), Rajelicia\_27 (A1), Rhynn\_27 (A1), RidgeCB\_27 (A1), Ringer\_27 (A1), Rohr\_28 (A1), Rubeus\_28 (A1), Rufus\_28 (A1), Ruotula\_26 (A1), Rutherford\_29 (A1), STLscum\_28 (A1), Sagefire\_28 (A1), Sandaddy\_26 (A1), Sanya\_26 (A1), SarFire\_27 (A1), Scowl\_28 (A1), Seabiscuit\_29 (A1), Seanderson\_28 (A1), Sibs6\_29 (A1), SkiPole\_29 (A1), Slagathor\_28 (A1), Smairt\_28 (A1), Smeagol\_29 (A1), Smoothie\_49 (CQ1), Snazzy\_26 (A1), Solon\_27 (A1), Sorpresa\_27 (A1), SpikeBT\_29 (A1), Squee\_28 (A1), StrongArm\_26 (A1), Sumter\_26 (A1), Sunshine924\_26 (A1), SwissCheese\_28 (A1), Switzer\_28 (A1), Swole\_29 (A1), Target\_30 (A1), Tasp14\_28 (A1), Teodoridan\_25 (A1), TheloniousMonk\_29 (A1), Thor\_27 (A1), Toniann\_48 (CQ1), Topgun\_27 (A1), Tote\_29 (A1), TouchMeNot\_19 (EO), Traft412\_29 (A1), Treddle\_29 (A1), Tripl3t\_28 (A1), Trouble\_28 (A1), Turj99\_26 (A1), TwoPeat\_28 (A1), U2\_27 (A1), Violet\_26 (A1), Watermelon\_29 (A1), Wheeler\_27 (A1), Wilkins\_27 (A1), WilliamBoone\_48 (CQ1), Zeeculate\_27 (A1), Zephyr\_27 (A1),

#### Start 148:

- Found in 70 of 2251 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 14 of 2078
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Avani\_19 (F2), Bantam\_30 (DL), Blarby\_20 (F), Che9d\_19 (F2), Cindaradix\_26 (A4), Daredevil\_29 (DL), DatBoi\_31 (DL), Demsculpinboyz\_19 (F2), Jabbawokkie\_21 (F2), Miramae\_27 (A4), Noelle\_27 (A4), Soul22\_19 (F2), SpeedDemon\_320 (DL), Yoshi\_19 (F2), Zapner\_20 (F2),

#### Start 149:

- Found in 12 of 2251 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 8 of 2078
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Coriander\_19 (DB), DirtyBoi\_20 (DB), Dmitri\_19 (DB), Doggs\_18 (DB), Hedwig\_20 (DB), Kiko\_20 (DB), Nyceirae\_23 (DT), Phishy\_22 (DT), RayTheFireFly\_19 (DB), Vordorf\_22 (DT),

Start 150:

- Found in 74 of 2251 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 4 of 2078
- Called 6.8% of time when present
- Phage (with cluster) where this start called: BlueNGold\_100 (DS), Boopy\_101 (DS), Forza\_101 (DS), Mareelih\_99 (DS), Zareef\_22 (CT),

Start 151:

- Found in 7 of 2251 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 5 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aleemily\_19 (DZ), Cafasso\_19 (DZ), ModicumRichard\_19 (DZ), Morgana\_19 (DZ), ObLaDi\_19 (DZ), REQ3\_50 (singleton), VanLee\_20 (singleton),

Start 153:

- Found in 25 of 2251 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 11 of 2078
- Called 56.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan\_18 (DY), GMA2\_30 (DS), Gustav\_18 (CD), Heinz\_19 (DY), Hibiscus\_18 (DY), Jojo24\_18 (DY), Mahdia\_18 (CD), Puppies\_18 (CD), Reyja\_19 (DY), Santhid\_18 (DY), Tarzan\_18 (DY), Trine\_18 (CD), Upyo\_18 (CD), Widow\_18 (CD),

Start 154:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Juicebox\_19 (singleton),

Start 155:

- Found in 27 of 2251 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 4 of 2078
- Called 14.8% of time when present
- Phage (with cluster) where this start called: Bonanza\_23 (CA), Dinger\_23 (CA), Jester\_23 (CA), Malibo\_20 (DW),

Start 157:

- Found in 9 of 2251 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 4 of 2078
- Called 44.4% of time when present
- Phage (with cluster) where this start called: Dogfish\_21 (DT), Ewald\_22 (DT), Lilbeanie\_30 (DE5), Meyran\_21 (DT),

Start 160:

- Found in 22 of 2251 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 17 of 2078
- Called 81.8% of time when present
- Phage (with cluster) where this start called: APunk\_36 (DE4), Ali17\_31 (DE2), Belphegor\_33 (DE), Delrey21\_34 (DE4), DoctorFroggo\_34 (DE4), EMoore\_31 (DE2), Hans\_35 (DE2), Inspectinfecti\_34 (DE2), Leonard\_33 (DE2), MelBins\_34 (DE2), Phauci\_26 (DE2), Phinally\_33 (DE2), Sampson\_35 (DE4), Tardus\_36 (DE4),

Verity\_34 (DE4), ViaConlectus\_35 (DE4), Zipp\_34 (DE4), Zitch\_36 (DE4),

Start 161:

- Found in 223 of 2251 ( 9.9% ) of genes in pham
- Manual Annotations of this start: 4 of 2078
- Called 3.6% of time when present
- Phage (with cluster) where this start called: Agaliana\_28 (A1), GMonster\_26 (A1), IgnatiusPatJac\_26 (A1), Magnar\_27 (A1), Papez\_29 (A1), ShortQueendom\_26 (A1), StewieG\_26 (A1), Zeuska\_28 (A1),

Start 162:

- Found in 18 of 2251 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 16 of 2078
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Ayotoya\_22 (DI), BetterKatz\_22 (DI), Bock\_22 (DI), Brylie\_22 (DI), Chop\_22 (DI), DelRio\_23 (DI), DumpsterDude\_19 (DW), Francois\_22 (DI), GrandSlam\_22 (DI), Hamood\_22 (DI), Mulch\_22 (DI), Nadeem\_22 (DI), NancyRae\_22 (DI), Parada\_22 (DI), Pimento\_23 (DI), WheatThin\_22 (DI),

Start 163:

- Found in 14 of 2251 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 10 of 2078
- Called 78.6% of time when present
- Phage (with cluster) where this start called: Chickadee\_32 (DE3), Dextert\_33 (DE3), EdmundFerry\_31 (DE3), GTE6\_32 (DE3), GodonK\_89 (DK), Kwekel\_32 (DE3), Morrissey\_19 (CD), Phendrix\_87 (DK), RoadKill\_30 (DE3), Tiamoceli\_33 (DE3), Twonlo\_30 (DE3),

Start 164:

- Found in 2 of 2251 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ2\_20 (singleton), Whack\_18 (singleton),

Start 166:

- Found in 45 of 2251 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 2.2% of time when present
- Phage (with cluster) where this start called: PSonyx\_17 (singleton),

Start 167:

- Found in 10 of 2251 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Sleepyhead\_18 (singleton),

Start 168:

- Found in 91 of 2251 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 32 of 2078
- Called 36.3% of time when present

- Phage (with cluster) where this start called: Alatin\_23 (CA), Alpacados\_22 (CA), AngryOrchard\_22 (CA), AppleCloud\_21 (CA), Belenaria\_23 (CA), Bradshaw\_23 (CA), Bryce\_23 (CA), CosmicSans\_23 (CA), Erik\_23 (CA), Espica\_23 (CA), Gollum\_23 (CA), Harlequin\_23 (CA), Hiro\_23 (CA), Krishelle\_23 (CA), Lillie\_23 (CA), Naiad\_23 (CA), Nancinator\_23 (CA), Natosaleda\_23 (CA), Partridge\_23 (CA), PhailMary\_22 (CA), Phrankenstien\_23 (CA), RER2\_16 (CA), Rasputin\_23 (CA), RexFury\_23 (CA), Rhodalysa\_23 (CA), Shuman\_23 (CA), StCroix\_23 (CA), Swann\_23 (CA), TWAMP\_23 (CA), Takoda\_23 (CA), UhSalsa\_23 (CA), Yogi\_23 (CA), Yoncess\_23 (CA),

Start 170:

- Found in 100 of 2251 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 87 of 2078
- Called 97.0% of time when present
- Phage (with cluster) where this start called: Adora\_20 (CZ4), Agueybana\_19 (CZ1), AlumE\_19 (CZ1), Annalisa\_20 (CZ4), Antonio\_19 (CZ1), Arti\_41 (CR2), BatStarr\_19 (CZ1), BaxterFox\_18 (CZ3), Beenie\_20 (CZ4), Bialota\_19 (CZ1), Bonum\_44 (CR2), Bosnia\_19 (CZ1), BoyNamedSue\_19 (CZ1), Buggaboo\_42 (CR2), Bunnybear\_18 (CZ), Clark\_20 (CZ4), Commandaria\_43 (CR2), Dalilpop\_46 (CR1), DobbysSock\_19 (CZ4), Dolores\_20 (CZ4), Dorito\_19 (CZ4), Easley\_20 (CZ4), Emianna\_41 (CR2), Ennea\_47 (CR3), Eudoria\_19 (CZ1), Eviarto\_19 (CZ1), Flapper\_45 (CR1), Float294\_43 (CR3), Foxboro\_42 (CR2), Fury\_50 (CR5), GRU1\_31 (CR1), GTE5\_32 (CR1), GTE8\_30 (CR2), GrootJr\_43 (CR2), Herod\_19 (CZ1), Hortense\_20 (CZ4), Howe\_20 (CZ4), Hugley\_19 (CZ1), Hyzer\_19 (CZ1), IDyn\_42 (CR4), Jifall16\_40 (CR2), Kabluna\_44 (CR2), KidneyBean\_41 (CR2), Kita\_19 (CZ1), Kurt\_41 (CR2), Lollipop1437\_46 (CR3), Madeline\_19 (CZ1), Manasvini\_19 (CZ1), Maridalia\_18 (CZ1), Mbo4\_17 (singleton), Mcklovin\_20 (CZ4), MerCougar\_42 (CR2), MichaelScott\_20 (CZ4), NadineRae\_41 (CR4), NatB6\_41 (CR2), Neobush\_19 (CZ1), NosilaM\_44 (CR2), NovumRegina\_41 (CR2), Nymphadora\_19 (CZ1), Ohgeesy\_19 (CZ), Oregano\_20 (CZ4), Outis\_42 (CR2), P1201\_47 (singleton), PantheRoc\_19 (CZ3), Patio\_44 (CR3), Phomeo\_40 (CR2), PhriskyACE\_19 (CZ4), Pleakley\_50 (CR5), Polly\_19 (CZ1), Powerball\_19 (CZ4), Samman98\_20 (CZ4), Sekhmet\_20 (CZ4), Shlim410\_20 (CZ4), Sidious\_19 (CZ7), Skysand\_43 (CR3), StarStruck\_42 (CR2), Suerte\_18 (CZ4), Sukkupi\_43 (CR4), SuperSulley\_42 (CR2), Suscepit\_19 (CZ1), Tayonia\_19 (CZ1), ThankyouJordi\_18 (CZ1), Thimann\_20 (CZ4), TimTam\_19 (CZ1), TinyDot\_19 (singleton), Tracker\_41 (CR2), Trumpet\_19 (CZ1), Turuncu\_45 (CR1), Twinkle\_20 (CZ4), WelcomeAyanna\_18 (CZ1), Wheezy\_41 (CR2), WhoseManz\_43 (CR4), WinkNick\_20 (CZ4), Yeezy\_20 (CZ3), Yndexa\_43 (CR4), Zameen\_19 (CZ1), Zirinka\_19 (CZ1),

Start 171:

- Found in 43 of 2251 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 40 of 2078
- Called 97.7% of time when present
- Phage (with cluster) where this start called: Attis\_17 (CZ2), Bjanes7\_17 (CZ2), C3PO\_31 (EN), Clap\_17 (CZ2), Cruella\_31 (EN), Cynthia\_17 (CZ2), Darwin\_34 (EN), Denise\_17 (CZ5), Ebert\_17 (CZ2), EdnaMode\_17 (CZ2), Eyre\_17 (singleton), Faith5x5\_17 (CZ6), GemG\_17 (CZ2), Gizermo\_17 (CZ2), Gudmit\_18 (singleton), Haley23\_17 (CZ2), JCole\_17 (CZ2), Kimchi1738\_31 (EN), Lamberg\_17 (CZ2), LordFarquaad\_17 (CZ2), Lton\_17 (CZ), Matteo\_17 (CZ2), Mocha12\_17 (CZ2), Moosehead\_17 (CZ6), Nettuno\_17 (CZ2), OneDirection\_17 (CZ6), Pepperoni\_17 (CZ), PeteyPab\_33 (EN), Pickett\_17 (CZ2), PotatoChip\_34 (EN), RavenCo17\_17 (CZ8), Ruthy\_19 (DW), Sahara\_17 (CZ2), Savage\_17 (CZ2), SoilAssassin\_17 (CZ2),

Sproutie\_17 (CZ2), Stickynote\_33 (EN), TuertoX\_17 (CZ2), Vasanti\_17 (CZ2), Whiteclaw\_17 (CZ2), Yeet412\_17 (CZ2), Zion\_34 (EN),

Start 173:

- Found in 7 of 2251 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 7 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary\_45 (CR), Braxoaddie\_45 (CR), CoffeeBean\_45 (CR), GuyFagieri\_45 (CR), MacGully\_50 (CR), Maselop\_45 (CR), Polyuyki\_45 (CR),

Start 175:

- Found in 15 of 2251 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 6.7% of time when present
- Phage (with cluster) where this start called: ChewyVIII\_56 (singleton),

Start 177:

- Found in 11 of 2251 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 18.2% of time when present
- Phage (with cluster) where this start called: BiPauneto\_44 (CR4), HubbaBubba\_40 (CR4),

Start 178:

- Found in 84 of 2251 ( 3.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 3.6% of time when present
- Phage (with cluster) where this start called: Abblin\_35 (DE4), Natkenzie\_35 (DE4), Scioto\_35 (DE4),

Start 182:

- Found in 3 of 2251 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Finkle\_19 (singleton), GMA1\_19 (singleton),

Start 190:

- Found in 508 of 2251 ( 22.6% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 0.2% of time when present
- Phage (with cluster) where this start called: StepMih\_29 (A3),

Start 191:

- Found in 175 of 2251 ( 7.8% ) of genes in pham
- Manual Annotations of this start: 45 of 2078
- Called 30.3% of time when present
- Phage (with cluster) where this start called: Amao\_24 (E), Asriel\_23 (E), Barbarian\_23 (E), Bask21\_24 (E), Bench\_26 (E), BilboSwaggins\_24 (E), Bruin\_24 (E), BugsBunny\_22 (E), ChotaBhai\_24 (E), Daikon\_22 (E), DoctorDiddles\_24 (E), Dumbo\_24 (E), Easy2Say\_26 (E), Emmina\_25 (E), FairyPath\_24 (E), FireRed\_24 (E), Flypotenuse\_22 (E), Gage\_26 (E), Glexan\_22 (E), Harella\_23 (E), Henry\_24 (E),



Hokey\_26 (E), HufflyPuff\_23 (E), IHOP\_24 (E), Icee\_23 (E), Inca\_23 (E), JeTaimie\_26 (E), Marshmallow\_24 (E), Maxxinista\_25 (E), Mindy\_24 (E), Mosby\_23 (E), Murica\_23 (E), Murphy\_25 (E), Nala\_24 (E), NelitzaMV\_24 (E), Palpatine\_24 (E), Petra64142\_26 (E), Phaja\_24 (E), Policronamos\_24 (E), Porky\_24 (E), Pumpkin\_26 (E), Rakim\_25 (E), RiverMonster\_24 (E), Sassay\_23 (E), Stank\_27 (E), Superphikiman\_34 (J), TBrady12\_26 (E), Toto\_24 (E), Willez\_23 (E), Xandras\_26 (E), YassJohnny\_25 (E), Youngblood\_24 (E), xkcd\_25 (E),

#### Start 194:

- Found in 34 of 2251 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Marietta\_43 (CR4),

#### Start 195:

- Found in 54 of 2251 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 45 of 2078
- Called 87.0% of time when present
- Phage (with cluster) where this start called: Archimedes\_16 (DA), Archis\_20 (CV), Azula\_21 (CV), Barco\_19 (CV), Begonia\_20 (CV), BlingBling\_19 (CV), Blino\_19 (CV), Blueberry\_21 (CV), CaptainKirk2\_19 (CV), CarolAnn\_19 (CV), Delian\_19 (CV), Fairfaxidum\_19 (CV), Fenry\_18 (CV), Frizzle\_17 (DA), Frokostdame\_19 (CV), Gambino\_21 (CV), Ghobes\_16 (DA), Guacamole\_19 (CV), Hitter\_19 (CV), Jalammah\_21 (CV), JasperJr\_19 (CV), JuJu\_19 (CV), KappaFarmDelta\_19 (CV), Lysidious\_20 (CV), Malachai\_20 (CV), Melba\_19 (CV), Mellie\_18 (CV), MintFen\_19 (CV), MissRona\_21 (CV), Murp\_19 (CV), Obliviate\_18 (CV), PCoral7\_19 (CV), Petra\_21 (CV), PhrostedPhlake\_20 (CV), Pipp\_19 (CV), PrincePatrick\_19 (CV), Samba\_19 (CV), Sapo\_16 (DA), Toast\_19 (CV), UmaThurman\_19 (CV), Utz\_19 (CV), Walrus\_20 (CV), William\_19 (CV), Wisp\_18 (CV), Wocket\_20 (CV), Zarbodnamra\_19 (CV), ZiggyZoo\_18 (CV),

#### Start 205:

- Found in 1 of 2251 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace\_17 (singleton),

#### Start 211:

- Found in 65 of 2251 ( 2.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.5% of time when present
- Phage (with cluster) where this start called: RGL3\_16 (CA),

#### Start 214:

- Found in 35 of 2251 ( 1.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.7% of time when present
- Phage (with cluster) where this start called: GMA4\_18 (singleton), GTE2\_16 (CT),

#### Start 227:

- Found in 391 of 2251 ( 17.4% ) of genes in pham
- Manual Annotations of this start: 2 of 2078
- Called 0.5% of time when present

- Phage (with cluster) where this start called: DirtMcgirt\_17 (F1), Sarma624\_17 (F1),

Start 235:

- Found in 249 of 2251 ( 11.1% ) of genes in pham
- Manual Annotations of this start: 1 of 2078
- Called 0.4% of time when present
- Phage (with cluster) where this start called: Cjw1\_24 (E),

Start 257:

- Found in 12 of 2251 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 11 of 2078
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo\_26 (CU1), Catfish\_22 (CU5), Dardanus\_24 (CU3), DinoDaryn\_24 (CU1), Goib\_23 (CU1), Gspu1\_20 (CU2), Huff\_24 (CU1), Schmidt\_20 (CU4), Splinter\_22 (CU1), TZGordon\_24 (CU1), TinaLin\_25 (CU1), Vendetta\_22 (CU1),

### Summary by clusters:

There are 117 clusters represented in this pham: G5, G4, G3, G2, G1, CQ2, CQ1, F1, X, DC2, DC1, CZ8, CZ2, CZ3, CZ1, CZ6, CZ7, CZ4, CZ5, EN, P2, P3, EO, P1, P6, P4, P5, O, EP, CR2, CR3, CR1, CR4, CR5, DE1, DE2, DE3, DE4, DE5, singleton, K3, K2, K1, K7, K6, K5, K4, K8, CU5, CU4, CU3, CU2, CU1, DN4, DN1, DN3, DN2, F, CA, J, CD, CZ, CY, CR, Z, CV, CT, A20, A21, F2, F3, F4, DN, DL, DK, DH, DI, DD, DE, DB, DA, DZ, DY, DW, DT, DS, DP, A15, A14, A17, A16, A11, A10, A13, A12, I1, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, A, CY2, CY1, AB, E, AG, AH, Q, Y, N,

Info for manual annotations of cluster A:

- Start number 144 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 146 was manually annotated 204 times for cluster A1.
- Start number 161 was manually annotated 4 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 144 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 144 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 144 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 144 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 123 was manually annotated 1 time for cluster A15.
- Start number 144 was manually annotated 20 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 144 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 146 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 144 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 123 was manually annotated 5 times for cluster A2.
- Start number 144 was manually annotated 97 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 144 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 144 was manually annotated 111 times for cluster A3.
- Start number 190 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A4:

- Start number 144 was manually annotated 134 times for cluster A4.
- Start number 148 was manually annotated 3 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 132 was manually annotated 1 time for cluster A5.
- Start number 144 was manually annotated 37 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 123 was manually annotated 2 times for cluster A6.
- Start number 144 was manually annotated 40 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 144 was manually annotated 5 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 144 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 141 was manually annotated 8 times for cluster A9.
- Start number 144 was manually annotated 26 times for cluster A9.

Info for manual annotations of cluster AB:

- Start number 89 was manually annotated 4 times for cluster AB.

Info for manual annotations of cluster AG:

- Start number 91 was manually annotated 2 times for cluster AG.

Info for manual annotations of cluster AH:

- Start number 112 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster CA:

- Start number 155 was manually annotated 3 times for cluster CA.

- Start number 168 was manually annotated 32 times for cluster CA.

Info for manual annotations of cluster CD:

- Start number 153 was manually annotated 6 times for cluster CD.
- Start number 163 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CQ1:

- Start number 146 was manually annotated 12 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 146 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CR:

- Start number 173 was manually annotated 7 times for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 170 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 170 was manually annotated 20 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 170 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 170 was manually annotated 5 times for cluster CR4.
- Start number 177 was manually annotated 1 time for cluster CR4.
- Start number 194 was manually annotated 1 time for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 170 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CT:

- Start number 133 was manually annotated 8 times for cluster CT.
- Start number 144 was manually annotated 45 times for cluster CT.

Info for manual annotations of cluster CU1:

- Start number 257 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 257 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 257 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 257 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:

- Start number 195 was manually annotated 42 times for cluster CV.

Info for manual annotations of cluster CY:

- Start number 111 was manually annotated 7 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 111 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 95 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CZ:

- Start number 170 was manually annotated 2 times for cluster CZ.
- Start number 171 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 170 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 171 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 170 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 170 was manually annotated 20 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 171 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 171 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 170 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 171 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DA:

- Start number 195 was manually annotated 3 times for cluster DA.

Info for manual annotations of cluster DB:

- Start number 138 was manually annotated 5 times for cluster DB.
- Start number 141 was manually annotated 4 times for cluster DB.
- Start number 149 was manually annotated 6 times for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 97 was manually annotated 28 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 97 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DD:

- Start number 141 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DE1:

- Start number 97 was manually annotated 44 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 160 was manually annotated 8 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 163 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 160 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 157 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DH:

- Start number 111 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DI:

- Start number 162 was manually annotated 15 times for cluster DI.

Info for manual annotations of cluster DK:

- Start number 163 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DL:

- Start number 145 was manually annotated 1 time for cluster DL.
- Start number 148 was manually annotated 4 times for cluster DL.

Info for manual annotations of cluster DN:

- Start number 111 was manually annotated 4 times for cluster DN.
- Start number 144 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 144 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 144 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 144 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 111 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DP:

- Start number 135 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster DS:

- Start number 116 was manually annotated 1 time for cluster DS.
- Start number 150 was manually annotated 4 times for cluster DS.

Info for manual annotations of cluster DT:

- Start number 149 was manually annotated 2 times for cluster DT.
- Start number 157 was manually annotated 3 times for cluster DT.

Info for manual annotations of cluster DW:

- Start number 155 was manually annotated 1 time for cluster DW.
- Start number 162 was manually annotated 1 time for cluster DW.
- Start number 171 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster DY:

- Start number 153 was manually annotated 5 times for cluster DY.

Info for manual annotations of cluster DZ:

- Start number 151 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster E:

- Start number 129 was manually annotated 78 times for cluster E.
- Start number 191 was manually annotated 44 times for cluster E.
- Start number 235 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster EN:

- Start number 171 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster EO:

- Start number 146 was manually annotated 4 times for cluster EO.

Info for manual annotations of cluster EP:

- Start number 118 was manually annotated 8 times for cluster EP.

Info for manual annotations of cluster F1:

- Start number 123 was manually annotated 206 times for cluster F1.
- Start number 124 was manually annotated 1 time for cluster F1.
- Start number 227 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 148 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 123 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 110 was manually annotated 1 time for cluster F4.
- Start number 129 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster G1:

- Start number 109 was manually annotated 20 times for cluster G1.
- Start number 132 was manually annotated 40 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 132 was manually annotated 2 times for cluster G2.
- Start number 135 was manually annotated 1 time for cluster G2.

Info for manual annotations of cluster G3:

- Start number 132 was manually annotated 1 time for cluster G3.

Info for manual annotations of cluster G4:

- Start number 85 was manually annotated 1 time for cluster G4.
- Start number 86 was manually annotated 1 time for cluster G4.

Info for manual annotations of cluster G5:

- Start number 132 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster I1:

- Start number 131 was manually annotated 6 times for cluster I1.

Info for manual annotations of cluster J:

- Start number 124 was manually annotated 29 times for cluster J.
- Start number 191 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K1:

- Start number 109 was manually annotated 2 times for cluster K1.
- Start number 112 was manually annotated 2 times for cluster K1.
- Start number 114 was manually annotated 99 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 112 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 114 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 112 was manually annotated 4 times for cluster K4.
- Start number 114 was manually annotated 13 times for cluster K4.
- Start number 137 was manually annotated 2 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 117 was manually annotated 15 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 84 was manually annotated 1 time for cluster K6.
- Start number 93 was manually annotated 1 time for cluster K6.
- Start number 109 was manually annotated 3 times for cluster K6.
- Start number 112 was manually annotated 1 time for cluster K6.
- Start number 114 was manually annotated 16 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 114 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 114 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster N:

- Start number 126 was manually annotated 42 times for cluster N.

Info for manual annotations of cluster O:

- Start number 100 was manually annotated 2 times for cluster O.



- Start number 107 was manually annotated 25 times for cluster O.

Info for manual annotations of cluster P1:

- Start number 101 was manually annotated 2 times for cluster P1.
- Start number 117 was manually annotated 37 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 117 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 117 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 117 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 117 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 117 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:

- Start number 112 was manually annotated 22 times for cluster Q.

Info for manual annotations of cluster X:

- Start number 99 was manually annotated 2 times for cluster X.

Info for manual annotations of cluster Y:

- Start number 81 was manually annotated 4 times for cluster Y.

Info for manual annotations of cluster Z:

- Start number 112 was manually annotated 1 time for cluster Z.

### **Gene Information:**

Gene: 20ES\_28 Start: 20226, Stop: 21998, Start Num: 144

Candidate Starts for 20ES\_28:

(Start: 123 @20202 has 215 MA's), (Start: 144 @20226 has 603 MA's), (219, 20325), (277, 20460), (278, 20463), (305, 20535), (306, 20538), (338, 20592), (341, 20598), (349, 20631), (378, 20709), (417, 20796), (463, 20877), (467, 20880), (584, 21153), (631, 21258), (636, 21273), (675, 21399), (677, 21405), (713, 21453), (746, 21516), (750, 21531), (752, 21537), (770, 21591), (781, 21630), (784, 21645), (813, 21729),

Gene: 244\_26 Start: 20026, Stop: 21705, Start Num: 129

Candidate Starts for 244\_26:

(Start: 129 @20026 has 79 MA's), (Start: 191 @20110 has 45 MA's), (Start: 235 @20188 has 1 MA's), (268, 20275), (274, 20290), (300, 20338), (324, 20377), (356, 20464), (368, 20497), (381, 20533), (390, 20563), (392, 20569), (422, 20638), (461, 20668), (466, 20680), (468, 20683), (494, 20740), (565, 20872), (567, 20878), (592, 20944), (594, 20950), (601, 20974), (618, 21022), (627, 21046), (631, 21055), (658, 21130), (717, 21181), (725, 21196), (782, 21358), (788, 21385), (799, 21415), (843, 21520), (880, 21598), (887, 21634), (890, 21643), (900, 21676), (907, 21691),

Gene: 32HC\_26 Start: 18979, Stop: 20718, Start Num: 112

Candidate Starts for 32HC\_26:

(Start: 112 @18979 has 41 MA's), (184, 19051), (Start: 227 @19114 has 2 MA's), (244, 19171), (311, 19351), (342, 19414), (358, 19465), (365, 19486), (382, 19531), (448, 19648), (449, 19651), (487, 19735), (489, 19738), (496, 19753), (503, 19771), (541, 19831), (654, 20098), (689, 20161), (714, 20209), (802, 20434), (807, 20452), (850, 20536), (880, 20605), (901, 20689), (902, 20692), (913, 20710),

Gene: 40AC\_31 Start: 22419, Stop: 24191, Start Num: 144

Candidate Starts for 40AC\_31:

(Start: 123 @22395 has 215 MA's), (Start: 144 @22419 has 603 MA's), (219, 22518), (Start: 235 @22554 has 1 MA's), (277, 22653), (278, 22656), (305, 22728), (306, 22731), (338, 22785), (356, 22842), (378, 22902), (384, 22920), (417, 22989), (460, 23064), (463, 23070), (467, 23073), (547, 23262), (584, 23346), (585, 23349), (597, 23385), (631, 23451), (636, 23466), (674, 23589), (677, 23598), (682, 23613), (713, 23646), (731, 23676), (746, 23709), (750, 23724), (754, 23739), (770, 23784), (781, 23823), (784, 23838), (813, 23922), (842, 23988), (860, 24027), (862, 24033), (877, 24087), (888, 24129),

Gene: 8UZL\_21 Start: 16005, Stop: 17855, Start Num: 89

Candidate Starts for 8UZL\_21:

(78, 15969), (Start: 89 @16005 has 4 MA's), (140, 16083), (181, 16143), (Start: 227 @16209 has 2 MA's), (242, 16260), (248, 16275), (249, 16278), (372, 16584), (390, 16641), (412, 16689), (413, 16692), (436, 16755), (448, 16776), (454, 16794), (474, 16839), (479, 16848), (487, 16863), (499, 16887), (567, 16998), (583, 17037), (590, 17058), (601, 17094), (602, 17097), (622, 17139), (629, 17154), (632, 17160), (773, 17469), (775, 17478), (777, 17484), (781, 17496), (788, 17526), (795, 17544), (797, 17550), (850, 17670), (874, 17727), (898, 17814), (901, 17823),

Gene: A6\_25 Start: 20661, Stop: 22463, Start Num: 146

Candidate Starts for A6\_25:

(Start: 146 @20661 has 223 MA's), (Start: 161 @20682 has 4 MA's), (Start: 190 @20724 has 1 MA's), (216, 20769), (306, 20985), (332, 21030), (338, 21039), (349, 21078), (368, 21129), (369, 21132), (467, 21327), (500, 21396), (579, 21585), (583, 21597), (584, 21600), (591, 21621), (635, 21717), (636, 21720), (638, 21726), (665, 21795), (668, 21813), (670, 21822), (677, 21852), (731, 21948), (746, 21981), (750, 21996), (793, 22137), (813, 22194), (862, 22305),

Gene: ABCat\_23 Start: 19745, Stop: 21424, Start Num: 129

Candidate Starts for ABCat\_23:

(Start: 129 @19745 has 79 MA's), (Start: 191 @19829 has 45 MA's), (Start: 235 @19907 has 1 MA's), (268, 19994), (274, 20009), (300, 20057), (324, 20096), (356, 20183), (368, 20216), (381, 20252), (390, 20282), (392, 20288), (422, 20357), (461, 20387), (466, 20399), (468, 20402), (494, 20459), (565, 20591), (567, 20597), (592, 20663), (594, 20669), (601, 20693), (618, 20741), (627, 20765), (631, 20774), (658, 20849), (717, 20900), (725, 20915), (782, 21077), (788, 21104), (799, 21134), (843, 21239), (880, 21317), (887, 21353), (890, 21362), (900, 21395), (907, 21410),

Gene: ACFishhook\_29 Start: 20541, Stop: 22337, Start Num: 144

Candidate Starts for ACFishhook\_29:

(Start: 144 @20541 has 603 MA's), (Start: 190 @20598 has 1 MA's), (197, 20613), (230, 20667), (Start: 235 @20682 has 1 MA's), (272, 20769), (277, 20781), (278, 20784), (306, 20859), (315, 20874), (417, 21117), (500, 21270), (532, 21357), (583, 21471), (591, 21495), (595, 21507), (597, 21513), (636, 21594), (665, 21669), (668, 21687), (670, 21696), (675, 21720), (677, 21726), (695, 21765), (729, 21819), (731, 21822), (742, 21843), (813, 22068), (860, 22173), (862, 22179), (900, 22314),

Gene: AFIS\_27 Start: 21204, Stop: 23006, Start Num: 146

Candidate Starts for AFIS\_27:

(Start: 146 @21204 has 223 MA's), (Start: 161 @21225 has 4 MA's), (Start: 190 @21267 has 1 MA's),  
(216, 21312), (306, 21528), (332, 21573), (338, 21582), (349, 21621), (368, 21672), (369, 21675),  
(467, 21870), (500, 21939), (583, 22140), (584, 22143), (591, 22164), (635, 22260), (636, 22263),  
(638, 22269), (665, 22338), (668, 22356), (670, 22365), (677, 22395), (731, 22491), (746, 22524),  
(750, 22539), (793, 22680), (813, 22737), (862, 22848), (909, 23001),

Gene: AN3\_28 Start: 20204, Stop: 21994, Start Num: 144

Candidate Starts for AN3\_28:

(94, 20138), (Start: 123 @20180 has 215 MA's), (Start: 144 @20204 has 603 MA's), (277, 20438),  
(278, 20441), (305, 20513), (306, 20516), (315, 20531), (338, 20570), (341, 20576), (378, 20687),  
(384, 20705), (388, 20720), (417, 20774), (463, 20855), (467, 20858), (532, 21014), (546, 21044),  
(586, 21137), (636, 21251), (675, 21377), (746, 21512), (750, 21527), (756, 21551), (781, 21626),  
(782, 21629), (784, 21641), (813, 21725), (849, 21803), (860, 21830), (862, 21836), (873, 21881),  
(877, 21890), (900, 21971),

Gene: AN9\_31 Start: 20192, Stop: 21982, Start Num: 144

Candidate Starts for AN9\_31:

(94, 20126), (Start: 123 @20168 has 215 MA's), (Start: 144 @20192 has 603 MA's), (277, 20426),  
(278, 20429), (305, 20501), (306, 20504), (315, 20519), (338, 20558), (341, 20564), (378, 20675),  
(384, 20693), (388, 20708), (417, 20762), (463, 20843), (467, 20846), (532, 21002), (546, 21032),  
(586, 21125), (636, 21239), (675, 21365), (746, 21500), (750, 21515), (756, 21539), (781, 21614),  
(782, 21617), (784, 21629), (813, 21713), (849, 21791), (860, 21818), (862, 21824), (873, 21869),  
(877, 21878), (900, 21959),

Gene: ANI8\_31 Start: 20192, Stop: 21982, Start Num: 144

Candidate Starts for ANI8\_31:

(94, 20126), (Start: 123 @20168 has 215 MA's), (Start: 144 @20192 has 603 MA's), (277, 20426),  
(278, 20429), (305, 20501), (306, 20504), (315, 20519), (338, 20558), (341, 20564), (378, 20675),  
(384, 20693), (388, 20708), (417, 20762), (463, 20843), (467, 20846), (532, 21002), (546, 21032),  
(586, 21125), (636, 21239), (675, 21365), (746, 21500), (750, 21515), (756, 21539), (781, 21614),  
(782, 21617), (784, 21629), (813, 21713), (849, 21791), (860, 21818), (862, 21824), (873, 21869),  
(877, 21878), (900, 21959),

Gene: APunk\_36 Start: 30211, Stop: 31833, Start Num: 160

Candidate Starts for APunk\_36:

(Start: 116 @30154 has 1 MA's), (Start: 160 @30211 has 17 MA's), (178, 30232), (188, 30244), (219,  
30295), (236, 30334), (246, 30358), (277, 30430), (312, 30517), (341, 30568), (348, 30598), (378,  
30679), (386, 30706), (449, 30805), (460, 30835), (464, 30844), (481, 30877), (482, 30880), (508,  
30940), (547, 30988), (551, 30997), (596, 31096), (609, 31135), (619, 31147), (670, 31291), (675,  
31315), (711, 31342), (747, 31402), (749, 31405), (755, 31432), (769, 31447), (786, 31504), (790,  
31516), (806, 31564), (810, 31573), (813, 31579), (824, 31600), (842, 31633), (863, 31678), (880,  
31729), (900, 31807), (902, 31816),

Gene: Abblin\_35 Start: 30775, Stop: 32376, Start Num: 178

Candidate Starts for Abblin\_35:

(Start: 160 @30754 has 17 MA's), (178, 30775), (188, 30787), (219, 30838), (246, 30901), (277,  
30973), (312, 31060), (341, 31111), (348, 31141), (378, 31222), (386, 31249), (449, 31348), (460,  
31378), (464, 31387), (481, 31420), (482, 31423), (483, 31426), (489, 31435), (508, 31483), (547,  
31531), (551, 31540), (596, 31639), (609, 31678), (619, 31690), (665, 31807), (672, 31846), (711,  
31885), (746, 31942), (764, 31981), (769, 31990), (786, 32047), (790, 32059), (810, 32116), (813,

32122), (824, 32143), (842, 32176), (863, 32221), (900, 32350), (902, 32359),

Gene: AbbyPaige\_30 Start: 20697, Stop: 22469, Start Num: 144

Candidate Starts for AbbyPaige\_30:

(Start: 123 @20673 has 215 MA's), (Start: 144 @20697 has 603 MA's), (219, 20796), (251, 20880), (277, 20931), (278, 20934), (305, 21006), (306, 21009), (338, 21063), (349, 21102), (378, 21180), (417, 21267), (463, 21348), (467, 21351), (546, 21537), (584, 21624), (631, 21729), (636, 21744), (675, 21870), (677, 21876), (713, 21924), (750, 22002), (752, 22008), (770, 22062), (781, 22101), (784, 22116), (813, 22200), (862, 22311),

Gene: AbbysRanger\_27 Start: 19840, Stop: 21639, Start Num: 144

Candidate Starts for AbbysRanger\_27:

(Start: 123 @19816 has 215 MA's), (Start: 144 @19840 has 603 MA's), (Start: 190 @19900 has 1 MA's), (230, 19969), (263, 20047), (272, 20071), (277, 20083), (278, 20086), (292, 20122), (306, 20161), (315, 20176), (338, 20215), (369, 20308), (378, 20332), (417, 20419), (481, 20533), (500, 20572), (532, 20659), (553, 20704), (583, 20773), (591, 20797), (595, 20809), (636, 20896), (665, 20971), (668, 20989), (670, 20998), (675, 21022), (677, 21028), (682, 21043), (703, 21076), (729, 21121), (731, 21124), (742, 21145), (813, 21370), (849, 21448), (860, 21475), (862, 21481), (900, 21616),

Gene: Abbysshoes\_28 Start: 21319, Stop: 23121, Start Num: 146

Candidate Starts for Abbysshoes\_28:

(Start: 146 @21319 has 223 MA's), (Start: 161 @21340 has 4 MA's), (Start: 190 @21382 has 1 MA's), (216, 21427), (306, 21643), (332, 21688), (338, 21697), (349, 21736), (368, 21787), (369, 21790), (467, 21985), (500, 22054), (583, 22255), (584, 22258), (591, 22279), (635, 22375), (636, 22378), (638, 22384), (665, 22453), (668, 22471), (670, 22480), (677, 22510), (731, 22606), (746, 22639), (750, 22654), (793, 22795), (813, 22852), (862, 22963),

Gene: Abdiel\_26 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Abdiel\_26:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Abrogate\_280 Start: 21879, Stop: 23681, Start Num: 146

Candidate Starts for Abrogate\_280:

(Start: 146 @21879 has 223 MA's), (Start: 161 @21900 has 4 MA's), (Start: 190 @21942 has 1 MA's), (216, 21987), (306, 22203), (332, 22248), (338, 22257), (349, 22296), (368, 22347), (369, 22350), (467, 22545), (500, 22614), (583, 22815), (584, 22818), (591, 22839), (635, 22935), (636, 22938), (638, 22944), (665, 23013), (668, 23031), (670, 23040), (677, 23070), (731, 23166), (746, 23199), (750, 23214), (793, 23355), (813, 23412), (862, 23523),

Gene: Abscondus\_47 Start: 29340, Stop: 31031, Start Num: 146

Candidate Starts for Abscondus\_47:

(Start: 146 @29340 has 223 MA's), (188, 29400), (206, 29433), (Start: 227 @29463 has 2 MA's), (228, 29466), (282, 29625), (286, 29634), (349, 29763), (366, 29811), (494, 30024), (498, 30030), (506, 30054), (576, 30183), (583, 30204), (594, 30237), (658, 30435), (758, 30588), (788, 30687), (793, 30699), (796, 30708), (829, 30792), (888, 30939), (898, 30975),

Gene: Achebe\_26 Start: 19823, Stop: 21622, Start Num: 144

Candidate Starts for Achebe\_26:

(Start: 123 @19799 has 215 MA's), (Start: 144 @19823 has 603 MA's), (Start: 148 @19829 has 14 MA's), (Start: 190 @19883 has 1 MA's), (230, 19952), (263, 20030), (272, 20054), (278, 20069), (292, 20105), (306, 20144), (315, 20159), (338, 20198), (369, 20291), (378, 20315), (417, 20402), (481, 20516), (500, 20555), (532, 20642), (553, 20687), (583, 20756), (591, 20780), (595, 20792), (636, 20879), (665, 20954), (668, 20972), (670, 20981), (675, 21005), (677, 21011), (682, 21026), (703, 21059), (729, 21104), (731, 21107), (742, 21128), (813, 21353), (849, 21431), (860, 21458), (862, 21464), (900, 21599),

Gene: Acme\_29 Start: 21420, Stop: 23222, Start Num: 146

Candidate Starts for Acme\_29:

(Start: 146 @21420 has 223 MA's), (Start: 161 @21441 has 4 MA's), (Start: 190 @21483 has 1 MA's), (216, 21528), (306, 21744), (332, 21789), (338, 21798), (349, 21837), (368, 21888), (369, 21891), (467, 22086), (500, 22155), (583, 22356), (584, 22359), (591, 22380), (635, 22476), (636, 22479), (638, 22485), (665, 22554), (668, 22572), (670, 22581), (677, 22611), (731, 22707), (746, 22740), (750, 22755), (793, 22896), (813, 22953), (862, 23064),

Gene: Acolyte\_28 Start: 20741, Stop: 22531, Start Num: 144

Candidate Starts for Acolyte\_28:

(94, 20675), (Start: 123 @20717 has 215 MA's), (Start: 144 @20741 has 603 MA's), (219, 20840), (Start: 235 @20876 has 1 MA's), (242, 20894), (263, 20939), (272, 20963), (277, 20975), (278, 20978), (305, 21050), (306, 21053), (338, 21107), (341, 21113), (378, 21224), (384, 21242), (417, 21311), (455, 21371), (467, 21395), (495, 21455), (500, 21464), (532, 21551), (546, 21581), (595, 21701), (597, 21707), (636, 21788), (675, 21914), (695, 21959), (731, 22016), (746, 22049), (750, 22064), (756, 22088), (770, 22124), (781, 22163), (784, 22178), (813, 22262), (860, 22367), (862, 22373), (877, 22427), (900, 22508),

Gene: ActinUp\_23 Start: 17157, Stop: 18923, Start Num: 114

Candidate Starts for ActinUp\_23:

(Start: 114 @17157 has 139 MA's), (140, 17187), (236, 17346), (248, 17379), (258, 17409), (272, 17442), (278, 17454), (316, 17544), (337, 17586), (360, 17658), (362, 17667), (378, 17706), (392, 17751), (400, 17772), (403, 17775), (438, 17829), (448, 17847), (465, 17889), (468, 17895), (481, 17922), (564, 18060), (572, 18078), (587, 18120), (593, 18138), (603, 18168), (618, 18195), (655, 18300), (748, 18459), (757, 18495), (768, 18525), (772, 18534), (793, 18609), (810, 18660), (863, 18759), (890, 18855), (901, 18894), (902, 18897), (913, 18915),

Gene: Adahisdi\_28 Start: 21327, Stop: 23129, Start Num: 146

Candidate Starts for Adahisdi\_28:

(Start: 146 @21327 has 223 MA's), (Start: 161 @21348 has 4 MA's), (Start: 190 @21390 has 1 MA's), (216, 21435), (306, 21651), (332, 21696), (338, 21705), (349, 21744), (368, 21795), (369, 21798), (467, 21993), (500, 22062), (583, 22263), (584, 22266), (591, 22287), (635, 22383), (636, 22386), (638, 22392), (665, 22461), (668, 22479), (670, 22488), (677, 22518), (731, 22614), (746, 22647), (750, 22662), (793, 22803), (813, 22860), (862, 22971),

Gene: Adelaide\_17 Start: 16318, Stop: 18015, Start Num: 118

Candidate Starts for Adelaide\_17:

(Start: 118 @16318 has 8 MA's), (136, 16339), (196, 16423), (211, 16450), (216, 16456), (275, 16588), (295, 16639), (306, 16672), (322, 16696), (368, 16816), (380, 16849), (385, 16867), (411, 16921), (448, 16966), (472, 17023), (478, 17035), (497, 17074), (540, 17134), (549, 17155), (553, 17164), (579, 17221), (610, 17311), (661, 17419), (673, 17473), (675, 17479), (681, 17497), (752, 17593), (766, 17614), (784, 17659), (845, 17818), (855, 17833), (861, 17848), (863, 17860), (907, 18004),

Gene: Adephagia\_23 Start: 17154, Stop: 18920, Start Num: 114

Candidate Starts for Adephagia\_23:

(Start: 114 @17154 has 139 MA's), (140, 17184), (236, 17343), (248, 17376), (258, 17406), (272, 17439), (278, 17451), (316, 17541), (337, 17583), (360, 17655), (362, 17664), (378, 17703), (392, 17748), (400, 17769), (403, 17772), (438, 17826), (448, 17844), (465, 17886), (468, 17892), (481, 17919), (564, 18057), (572, 18075), (587, 18117), (593, 18135), (603, 18165), (618, 18192), (655, 18297), (748, 18456), (757, 18492), (768, 18522), (772, 18531), (793, 18606), (810, 18657), (863, 18756), (890, 18852), (901, 18891), (902, 18894), (913, 18912),

Gene: Adnama\_27 Start: 20253, Stop: 21932, Start Num: 129

Candidate Starts for Adnama\_27:

(Start: 129 @20253 has 79 MA's), (Start: 191 @20337 has 45 MA's), (Start: 235 @20415 has 1 MA's), (268, 20502), (274, 20517), (300, 20565), (324, 20604), (356, 20691), (368, 20724), (381, 20760), (390, 20790), (392, 20796), (422, 20865), (461, 20895), (466, 20907), (468, 20910), (494, 20967), (565, 21099), (567, 21105), (592, 21171), (594, 21177), (601, 21201), (618, 21249), (627, 21273), (631, 21282), (658, 21357), (717, 21408), (725, 21423), (782, 21585), (788, 21612), (799, 21642), (843, 21747), (880, 21825), (887, 21861), (890, 21870), (900, 21903), (907, 21918),

Gene: Adonis\_23 Start: 17160, Stop: 18926, Start Num: 114

Candidate Starts for Adonis\_23:

(Start: 114 @17160 has 139 MA's), (140, 17190), (236, 17349), (248, 17382), (258, 17412), (272, 17445), (278, 17457), (316, 17547), (337, 17589), (360, 17661), (362, 17670), (378, 17709), (392, 17754), (400, 17775), (403, 17778), (438, 17832), (448, 17850), (465, 17892), (468, 17898), (481, 17925), (564, 18063), (572, 18081), (587, 18123), (593, 18141), (603, 18171), (618, 18198), (655, 18303), (748, 18462), (757, 18498), (772, 18537), (793, 18612), (810, 18663), (890, 18858), (901, 18897), (902, 18900), (913, 18918),

Gene: Adora\_20 Start: 17855, Stop: 19435, Start Num: 170

Candidate Starts for Adora\_20:

(88, 17738), (Start: 170 @17855 has 87 MA's), (298, 18113), (307, 18134), (340, 18188), (351, 18227), (369, 18284), (377, 18305), (501, 18476), (507, 18494), (514, 18518), (521, 18539), (554, 18581), (592, 18662), (636, 18752), (655, 18803), (669, 18854), (670, 18857), (687, 18911), (751, 19001), (863, 19280), (865, 19289), (874, 19319),

Gene: Adzzy\_29 Start: 18919, Stop: 20709, Start Num: 144

Candidate Starts for Adzzy\_29:

(94, 18853), (Start: 123 @18895 has 215 MA's), (Start: 144 @18919 has 603 MA's), (185, 18964), (Start: 194 @18979 has 1 MA's), (242, 19072), (277, 19153), (278, 19156), (305, 19228), (306, 19231), (315, 19246), (338, 19285), (341, 19291), (378, 19402), (380, 19408), (388, 19435), (417, 19489), (463, 19570), (532, 19729), (546, 19759), (586, 19852), (597, 19885), (619, 19936), (636, 19966), (675, 20092), (721, 20173), (726, 20182), (746, 20227), (750, 20242), (756, 20266), (781, 20341), (782, 20344), (784, 20356), (813, 20440), (860, 20545), (877, 20605), (900, 20686),

Gene: Aeneas\_29 Start: 21456, Stop: 23258, Start Num: 146

Candidate Starts for Aeneas\_29:

(Start: 146 @21456 has 223 MA's), (Start: 161 @21477 has 4 MA's), (Start: 190 @21519 has 1 MA's), (216, 21564), (306, 21780), (332, 21825), (338, 21834), (349, 21873), (368, 21924), (369, 21927), (467, 22122), (500, 22191), (583, 22392), (584, 22395), (591, 22416), (635, 22512), (636, 22515), (638, 22521), (665, 22590), (668, 22608), (670, 22617), (677, 22647), (731, 22743), (746, 22776), (750, 22791), (793, 22932), (813, 22989), (862, 23100),

Gene: Affeca\_33 Start: 30652, Stop: 32415, Start Num: 97

Candidate Starts for Affeca\_33:

(90, 30634), (Start: 97 @30652 has 73 MA's), (Start: 121 @30688 has 1 MA's), (219, 30826), (262, 30922), (265, 30931), (288, 31000), (306, 31051), (332, 31096), (341, 31111), (368, 31192), (384, 31237), (386, 31246), (445, 31336), (458, 31366), (461, 31381), (472, 31405), (487, 31435), (551, 31540), (597, 31657), (607, 31675), (613, 31690), (631, 31720), (635, 31732), (636, 31735), (647, 31762), (793, 32086), (794, 32089), (810, 32137), (824, 32164), (832, 32191), (860, 32245), (866, 32272), (909, 32410),

Gene: Agaliana\_28 Start: 21421, Stop: 23202, Start Num: 161

Candidate Starts for Agaliana\_28:

(Start: 146 @21400 has 223 MA's), (Start: 161 @21421 has 4 MA's), (Start: 190 @21463 has 1 MA's), (216, 21508), (306, 21724), (332, 21769), (338, 21778), (368, 21868), (369, 21871), (378, 21895), (467, 22066), (500, 22135), (583, 22336), (584, 22339), (591, 22360), (635, 22456), (636, 22459), (638, 22465), (665, 22534), (668, 22552), (670, 22561), (677, 22591), (731, 22687), (746, 22720), (750, 22735), (793, 22876), (813, 22933), (862, 23044),

Gene: Agape74\_30 Start: 20673, Stop: 22445, Start Num: 144

Candidate Starts for Agape74\_30:

(Start: 123 @20649 has 215 MA's), (Start: 144 @20673 has 603 MA's), (219, 20772), (251, 20856), (277, 20907), (278, 20910), (305, 20982), (306, 20985), (338, 21039), (349, 21078), (378, 21156), (417, 21243), (463, 21324), (467, 21327), (584, 21600), (631, 21705), (636, 21720), (675, 21846), (677, 21852), (713, 21900), (750, 21978), (752, 21984), (770, 22038), (781, 22077), (784, 22092), (813, 22176), (862, 22287),

Gene: Agatha\_18 Start: 15732, Stop: 17429, Start Num: 144

Candidate Starts for Agatha\_18:

(Start: 133 @15729 has 8 MA's), (Start: 144 @15732 has 603 MA's), (264, 15942), (306, 16065), (336, 16116), (365, 16203), (377, 16233), (382, 16248), (385, 16260), (436, 16338), (442, 16350), (454, 16377), (465, 16410), (481, 16443), (487, 16455), (505, 16497), (574, 16620), (599, 16692), (636, 16770), (643, 16785), (650, 16803), (668, 16860), (731, 16953), (747, 16989), (750, 17001), (752, 17007), (755, 17019), (766, 17028), (791, 17100), (793, 17103), (795, 17109), (799, 17121), (824, 17181), (842, 17226), (847, 17235), (862, 17268), (882, 17334),

Gene: Agent47\_21 Start: 17591, Stop: 19363, Start Num: 117

Candidate Starts for Agent47\_21:

(Start: 117 @17591 has 59 MA's), (Start: 123 @17597 has 215 MA's), (143, 17621), (Start: 168 @17654 has 32 MA's), (197, 17702), (230, 17756), (248, 17807), (272, 17870), (321, 17978), (360, 18086), (400, 18200), (403, 18203), (424, 18242), (438, 18257), (444, 18269), (448, 18275), (463, 18311), (465, 18317), (468, 18323), (487, 18362), (499, 18386), (564, 18488), (588, 18551), (655, 18731), (708, 18830), (750, 18908), (756, 18932), (758, 18938), (771, 18971), (793, 19049), (795, 19055), (865, 19208), (895, 19313), (896, 19316), (901, 19334),

Gene: AgentM\_24 Start: 19734, Stop: 21533, Start Num: 144

Candidate Starts for AgentM\_24:

(Start: 144 @19734 has 603 MA's), (222, 19839), (236, 19872), (278, 19971), (306, 20046), (315, 20061), (336, 20097), (360, 20169), (365, 20184), (378, 20217), (380, 20223), (495, 20448), (499, 20454), (532, 20544), (580, 20649), (583, 20658), (597, 20700), (602, 20718), (635, 20778), (636, 20781), (665, 20856), (668, 20874), (729, 21015), (746, 21051), (813, 21264), (859, 21366), (862, 21375), (893, 21489), (900, 21510), (902, 21519),

Gene: Ageofdapage\_23 Start: 17088, Stop: 18854, Start Num: 114

Candidate Starts for Ageofdapage\_23:

(Start: 114 @17088 has 139 MA's), (140, 17118), (236, 17277), (248, 17310), (258, 17340), (272, 17373), (278, 17385), (316, 17475), (334, 17511), (337, 17517), (360, 17589), (362, 17598), (378, 17637), (392, 17682), (400, 17703), (403, 17706), (448, 17778), (463, 17814), (465, 17820), (468, 17826), (481, 17853), (499, 17889), (564, 17991), (572, 18009), (593, 18069), (603, 18099), (618, 18126), (655, 18231), (704, 18321), (748, 18390), (757, 18426), (768, 18456), (772, 18465), (793, 18540), (810, 18591), (863, 18690), (880, 18741), (890, 18786), (901, 18825), (902, 18828), (913, 18846),

Gene: Aggie\_18 Start: 14990, Stop: 16699, Start Num: 126

Candidate Starts for Aggie\_18:

(Start: 126 @14990 has 42 MA's), (Start: 150 @15017 has 4 MA's), (Start: 227 @15122 has 2 MA's), (229, 15134), (241, 15170), (258, 15221), (271, 15251), (274, 15257), (284, 15284), (287, 15290), (348, 15410), (367, 15464), (370, 15470), (377, 15488), (381, 15500), (382, 15503), (388, 15524), (403, 15566), (418, 15599), (459, 15650), (465, 15665), (484, 15707), (492, 15722), (494, 15728), (511, 15776), (525, 15800), (547, 15830), (564, 15854), (587, 15914), (591, 15926), (608, 15980), (614, 15989), (637, 16049), (638, 16052), (710, 16157), (717, 16166), (737, 16205), (781, 16343), (834, 16493), (836, 16496), (841, 16505), (860, 16526), (866, 16553), (880, 16589), (907, 16682),

Gene: Aglet\_29 Start: 20380, Stop: 22176, Start Num: 144

Candidate Starts for Aglet\_29:

(Start: 144 @20380 has 603 MA's), (Start: 190 @20437 has 1 MA's), (197, 20452), (219, 20485), (230, 20506), (Start: 235 @20521 has 1 MA's), (272, 20608), (277, 20620), (278, 20623), (306, 20698), (315, 20713), (336, 20749), (417, 20956), (481, 21070), (500, 21109), (532, 21196), (583, 21310), (591, 21334), (597, 21352), (636, 21433), (665, 21508), (668, 21526), (675, 21559), (677, 21565), (695, 21604), (729, 21658), (731, 21661), (742, 21682), (758, 21739), (813, 21907), (860, 22012), (862, 22018), (900, 22153),

Gene: AgronaGT15\_29 Start: 20287, Stop: 22083, Start Num: 144

Candidate Starts for AgronaGT15\_29:

(Start: 144 @20287 has 603 MA's), (Start: 190 @20344 has 1 MA's), (197, 20359), (219, 20392), (230, 20413), (Start: 235 @20428 has 1 MA's), (272, 20515), (277, 20527), (278, 20530), (306, 20605), (315, 20620), (336, 20656), (417, 20863), (481, 20977), (500, 21016), (532, 21103), (583, 21217), (591, 21241), (597, 21259), (636, 21340), (665, 21415), (668, 21433), (675, 21466), (677, 21472), (695, 21511), (729, 21565), (731, 21568), (742, 21589), (758, 21646), (813, 21814), (860, 21919), (862, 21925), (900, 22060),

Gene: Agueybana\_19 Start: 17777, Stop: 19375, Start Num: 170

Candidate Starts for Agueybana\_19:

(Start: 170 @17777 has 87 MA's), (295, 18026), (298, 18035), (306, 18053), (307, 18056), (340, 18110), (363, 18185), (385, 18254), (388, 18263), (392, 18275), (415, 18326), (435, 18353), (440, 18362), (441, 18365), (501, 18398), (519, 18455), (554, 18521), (603, 18632), (618, 18656), (636, 18692), (669, 18794), (687, 18851), (751, 18941), (799, 19058), (849, 19181), (874, 19259),

Gene: AikoCarson\_17 Start: 15037, Stop: 16731, Start Num: 144

Candidate Starts for AikoCarson\_17:

(Start: 133 @15034 has 8 MA's), (Start: 144 @15037 has 603 MA's), (214, 15136), (222, 15148), (264, 15244), (292, 15328), (336, 15418), (356, 15478), (385, 15562), (406, 15607), (436, 15640), (442, 15652), (453, 15676), (481, 15745), (487, 15757), (574, 15922), (599, 15994), (636, 16072), (643, 16087), (650, 16105), (668, 16162), (750, 16303), (752, 16309), (755, 16321), (766, 16330), (791, 16402), (793, 16405), (795, 16411), (799, 16423), (842, 16528), (847, 16537), (862, 16570), (907, 16723),

Gene: Ailee\_33 Start: 31142, Stop: 32905, Start Num: 97



Candidate Starts for Ailee\_33:

(90, 31124), (Start: 97 @31142 has 73 MA's), (Start: 121 @31178 has 1 MA's), (219, 31316), (262, 31412), (265, 31421), (288, 31490), (306, 31541), (332, 31586), (341, 31601), (368, 31682), (384, 31727), (386, 31736), (445, 31826), (458, 31856), (461, 31871), (472, 31895), (487, 31925), (551, 32030), (597, 32147), (607, 32165), (613, 32180), (631, 32210), (635, 32222), (636, 32225), (647, 32252), (793, 32576), (794, 32579), (810, 32627), (824, 32654), (832, 32681), (860, 32735), (866, 32762), (902, 32891),

Gene: Airmid\_24 Start: 18975, Stop: 20774, Start Num: 144

Candidate Starts for Airmid\_24:

(Start: 144 @18975 has 603 MA's), (278, 19212), (306, 19287), (315, 19302), (336, 19338), (360, 19410), (365, 19425), (378, 19458), (379, 19461), (380, 19464), (481, 19659), (495, 19689), (499, 19695), (532, 19785), (553, 19830), (583, 19899), (597, 19941), (602, 19959), (635, 20019), (636, 20022), (668, 20115), (729, 20256), (746, 20292), (859, 20607), (862, 20616), (900, 20751),

Gene: Ajay\_28 Start: 21632, Stop: 23434, Start Num: 146

Candidate Starts for Ajay\_28:

(Start: 146 @21632 has 223 MA's), (Start: 161 @21653 has 4 MA's), (Start: 190 @21695 has 1 MA's), (216, 21740), (306, 21956), (332, 22001), (338, 22010), (368, 22100), (369, 22103), (467, 22298), (500, 22367), (579, 22556), (583, 22568), (584, 22571), (591, 22592), (635, 22688), (636, 22691), (638, 22697), (665, 22766), (668, 22784), (670, 22793), (677, 22823), (731, 22919), (746, 22952), (750, 22967), (793, 23108), (813, 23165), (862, 23276),

Gene: Akhila\_17 Start: 15476, Stop: 17185, Start Num: 123

Candidate Starts for Akhila\_17:

(Start: 123 @15476 has 215 MA's), (193, 15563), (Start: 227 @15608 has 2 MA's), (233, 15632), (271, 15737), (274, 15743), (281, 15761), (300, 15791), (348, 15896), (370, 15956), (378, 15977), (381, 15986), (388, 16010), (459, 16136), (465, 16151), (468, 16157), (484, 16193), (486, 16196), (492, 16208), (494, 16214), (511, 16262), (515, 16274), (521, 16280), (564, 16340), (568, 16352), (583, 16388), (587, 16400), (614, 16475), (618, 16484), (625, 16502), (627, 16508), (638, 16538), (710, 16643), (717, 16652), (720, 16655), (729, 16676), (737, 16691), (758, 16757), (761, 16769), (791, 16868), (799, 16889), (810, 16922), (826, 16952), (836, 16982), (841, 16991), (844, 16997), (860, 17012), (861, 17015), (866, 17039), (877, 17069), (882, 17081), (887, 17111), (900, 17153),

Gene: Alatin\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Alatin\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Albee\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Albee\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Alberto7\_28 Start: 20129, Stop: 21907, Start Num: 144

Candidate Starts for Alberto7\_28:

(Start: 123 @20105 has 215 MA's), (Start: 144 @20129 has 603 MA's), (Start: 190 @20186 has 1 MA's), (222, 20240), (230, 20255), (236, 20273), (272, 20357), (277, 20369), (278, 20372), (306, 20447), (315, 20462), (338, 20501), (378, 20618), (417, 20705), (463, 20786), (489, 20834), (500, 20858), (532, 20945), (553, 20990), (584, 21062), (591, 21083), (597, 21101), (636, 21182), (668, 21275), (670, 21284), (675, 21308), (677, 21314), (687, 21338), (731, 21392), (742, 21413), (756, 21464), (763, 21488), (782, 21542), (813, 21638), (860, 21743), (863, 21758), (894, 21866), (900, 21884),

Gene: Aleemily\_19 Start: 16551, Stop: 18215, Start Num: 151

Candidate Starts for Aleemily\_19:

(Start: 141 @16536 has 14 MA's), (Start: 151 @16551 has 5 MA's), (Start: 155 @16557 has 4 MA's), (176, 16587), (183, 16596), (295, 16830), (306, 16863), (334, 16911), (360, 16986), (377, 17031), (417, 17121), (436, 17136), (459, 17190), (463, 17199), (481, 17232), (497, 17265), (500, 17271), (610, 17505), (619, 17517), (635, 17544), (646, 17577), (661, 17616), (665, 17625), (682, 17697), (718, 17712), (731, 17736), (750, 17784), (787, 17871), (795, 17892), (820, 17958), (849, 18024), (865, 18072), (891, 18162),

Gene: Alexphander\_18 Start: 15332, Stop: 17041, Start Num: 123

Candidate Starts for Alexphander\_18:

(Start: 123 @15332 has 215 MA's), (193, 15419), (Start: 227 @15464 has 2 MA's), (233, 15488), (251, 15545), (271, 15593), (274, 15599), (281, 15617), (300, 15647), (348, 15752), (367, 15806), (370, 15812), (373, 15821), (381, 15842), (388, 15866), (402, 15902), (403, 15908), (418, 15941), (420, 15944), (424, 15953), (443, 15968), (448, 15974), (459, 15992), (465, 16007), (468, 16013), (475, 16031), (477, 16034), (484, 16049), (492, 16064), (494, 16070), (511, 16118), (515, 16130), (521, 16136), (564, 16196), (568, 16208), (583, 16244), (587, 16256), (614, 16331), (618, 16340), (625, 16358), (627, 16364), (638, 16394), (710, 16499), (720, 16511), (737, 16547), (761, 16625), (791, 16724), (799, 16745), (810, 16778), (826, 16808), (836, 16838), (841, 16847), (844, 16853), (860, 16868), (861, 16871), (866, 16895), (877, 16925), (882, 16937), (887, 16967), (900, 17009),

Gene: Ali17\_31 Start: 28415, Stop: 30040, Start Num: 160

Candidate Starts for Ali17\_31:

(Start: 160 @28415 has 17 MA's), (169, 28427), (Start: 191 @28460 has 45 MA's), (Start: 195 @28469 has 45 MA's), (200, 28481), (222, 28511), (272, 28628), (277, 28640), (307, 28715), (341, 28775), (348, 28805), (449, 29012), (460, 29042), (481, 29084), (482, 29087), (489, 29099), (508, 29147), (547, 29195), (583, 29267), (595, 29300), (596, 29303), (609, 29342), (635, 29381), (664, 29468), (665, 29471), (711, 29549), (769, 29654), (795, 29735), (815, 29789), (863, 29885), (900, 30014), (907, 30029),

Gene: AlishaPH\_23 Start: 17147, Stop: 18913, Start Num: 114

Candidate Starts for AlishaPH\_23:

(Start: 114 @17147 has 139 MA's), (140, 17177), (236, 17336), (248, 17369), (258, 17399), (272, 17432), (278, 17444), (316, 17534), (337, 17576), (360, 17648), (362, 17657), (378, 17696), (392, 17741), (400, 17762), (403, 17765), (438, 17819), (448, 17837), (465, 17879), (468, 17885), (481, 17912), (564, 18050), (572, 18068), (587, 18110), (593, 18128), (603, 18158), (618, 18185), (655, 18290), (748, 18449), (757, 18485), (768, 18515), (772, 18524), (793, 18599), (810, 18650), (890, 18845), (901, 18884), (902, 18887), (913, 18905),

Gene: Aliter\_30 Start: 21674, Stop: 23467, Start Num: 141

Candidate Starts for Aliter\_30:

(Start: 141 @21674 has 14 MA's), (Start: 144 @21677 has 603 MA's), (277, 21911), (278, 21914), (305, 21986), (306, 21989), (315, 22004), (338, 22043), (341, 22049), (378, 22160), (417, 22247), (463, 22328), (467, 22331), (546, 22517), (576, 22580), (584, 22604), (586, 22610), (597, 22643),

(636, 22724), (675, 22850), (693, 22892), (695, 22895), (731, 22952), (746, 22985), (750, 23000), (781, 23099), (782, 23102), (784, 23114), (813, 23198), (842, 23264), (860, 23303), (862, 23309), (873, 23354), (890, 23411), (891, 23414),

Gene: Alkhayr\_54 Start: 33189, Stop: 34925, Start Num: 107

Candidate Starts for Alkhayr\_54:

(Start: 100 @33180 has 2 MA's), (Start: 107 @33189 has 25 MA's), (174, 33279), (240, 33396), (251, 33432), (259, 33453), (271, 33480), (274, 33486), (286, 33516), (302, 33540), (332, 33591), (381, 33729), (383, 33735), (400, 33786), (402, 33789), (407, 33807), (459, 33858), (468, 33879), (470, 33882), (492, 33930), (494, 33936), (511, 33984), (513, 33990), (515, 33996), (555, 34056), (564, 34080), (565, 34083), (583, 34128), (588, 34143), (591, 34152), (594, 34161), (608, 34206), (618, 34224), (631, 34257), (720, 34395), (729, 34416), (754, 34482), (762, 34512), (779, 34566), (791, 34608), (799, 34629), (805, 34650), (810, 34662), (821, 34683), (844, 34737), (880, 34815), (887, 34851), (893, 34872), (901, 34899),

Gene: Alma\_30 Start: 21753, Stop: 23546, Start Num: 141

Candidate Starts for Alma\_30:

(Start: 141 @21753 has 14 MA's), (Start: 144 @21756 has 603 MA's), (277, 21990), (278, 21993), (305, 22065), (306, 22068), (315, 22083), (338, 22122), (341, 22128), (378, 22239), (417, 22326), (463, 22407), (467, 22410), (495, 22470), (546, 22596), (576, 22659), (584, 22683), (586, 22689), (597, 22722), (636, 22803), (675, 22929), (693, 22971), (695, 22974), (731, 23031), (746, 23064), (750, 23079), (781, 23178), (782, 23181), (784, 23193), (813, 23277), (842, 23343), (860, 23382), (862, 23388), (873, 23433), (890, 23490), (891, 23493),

Gene: Alpacados\_22 Start: 16285, Stop: 17910, Start Num: 168

Candidate Starts for Alpacados\_22:

(Start: 155 @16270 has 4 MA's), (Start: 168 @16285 has 32 MA's), (211, 16354), (232, 16390), (306, 16576), (361, 16705), (378, 16747), (386, 16774), (394, 16798), (406, 16816), (436, 16846), (444, 16861), (467, 16912), (505, 16996), (576, 17113), (584, 17137), (635, 17251), (654, 17299), (665, 17329), (672, 17368), (675, 17380), (713, 17410), (750, 17488), (807, 17635), (818, 17659), (832, 17695), (854, 17734), (907, 17902),

Gene: AlpineSix\_16 Start: 15041, Stop: 16750, Start Num: 123

Candidate Starts for AlpineSix\_16:

(Start: 123 @15041 has 215 MA's), (193, 15128), (209, 15149), (Start: 227 @15173 has 2 MA's), (233, 15197), (240, 15218), (271, 15302), (274, 15308), (281, 15326), (300, 15356), (348, 15461), (367, 15515), (370, 15521), (377, 15539), (378, 15542), (381, 15551), (388, 15575), (418, 15650), (424, 15662), (443, 15677), (448, 15683), (459, 15701), (465, 15716), (468, 15722), (480, 15749), (484, 15758), (492, 15773), (494, 15779), (511, 15827), (515, 15839), (521, 15845), (564, 15905), (568, 15917), (583, 15953), (587, 15965), (594, 15986), (614, 16040), (618, 16049), (625, 16067), (627, 16073), (638, 16103), (710, 16208), (717, 16217), (720, 16220), (737, 16256), (751, 16295), (761, 16334), (799, 16454), (810, 16487), (826, 16517), (836, 16547), (841, 16556), (844, 16562), (860, 16577), (861, 16580), (865, 16601), (866, 16604), (880, 16640), (882, 16646), (887, 16676), (900, 16718),

Gene: Alsfro\_31 Start: 21865, Stop: 23667, Start Num: 146

Candidate Starts for Alsfro\_31:

(Start: 146 @21865 has 223 MA's), (Start: 161 @21886 has 4 MA's), (Start: 190 @21928 has 1 MA's), (216, 21973), (306, 22189), (332, 22234), (338, 22243), (368, 22333), (369, 22336), (378, 22360), (406, 22429), (467, 22531), (500, 22600), (579, 22789), (583, 22801), (584, 22804), (591, 22825), (635, 22921), (636, 22924), (638, 22930), (665, 22999), (668, 23017), (670, 23026), (677, 23056), (731, 23152), (746, 23185), (750, 23200), (793, 23341), (813, 23398), (862, 23509), (909, 23662),

Gene: Altman\_29 Start: 21923, Stop: 23725, Start Num: 146

Candidate Starts for Altman\_29:

(Start: 146 @21923 has 223 MA's), (Start: 161 @21944 has 4 MA's), (Start: 190 @21986 has 1 MA's), (216, 22031), (306, 22247), (332, 22292), (338, 22301), (349, 22340), (368, 22391), (369, 22394), (406, 22487), (467, 22589), (500, 22658), (583, 22859), (584, 22862), (591, 22883), (635, 22979), (636, 22982), (638, 22988), (665, 23057), (668, 23075), (670, 23084), (677, 23114), (731, 23210), (746, 23243), (750, 23258), (793, 23399), (813, 23456), (862, 23567),

Gene: AlumE\_19 Start: 17776, Stop: 19374, Start Num: 170

Candidate Starts for AlumE\_19:

(Start: 170 @17776 has 87 MA's), (298, 18034), (306, 18052), (307, 18055), (340, 18109), (363, 18184), (385, 18253), (388, 18262), (392, 18274), (397, 18286), (415, 18325), (435, 18352), (440, 18361), (441, 18364), (501, 18397), (519, 18454), (554, 18520), (603, 18631), (636, 18691), (669, 18793), (687, 18850), (751, 18940), (849, 19180), (874, 19258),

Gene: Alvin\_28 Start: 21635, Stop: 23437, Start Num: 146

Candidate Starts for Alvin\_28:

(Start: 146 @21635 has 223 MA's), (Start: 161 @21656 has 4 MA's), (Start: 190 @21698 has 1 MA's), (216, 21743), (306, 21959), (332, 22004), (338, 22013), (368, 22103), (369, 22106), (406, 22199), (467, 22301), (500, 22370), (579, 22559), (583, 22571), (584, 22574), (591, 22595), (635, 22691), (636, 22694), (638, 22700), (665, 22769), (668, 22787), (670, 22796), (677, 22826), (731, 22922), (746, 22955), (750, 22970), (793, 23111), (813, 23168), (862, 23279),

Gene: Amao\_24 Start: 19034, Stop: 20629, Start Num: 191

Candidate Starts for Amao\_24:

(Start: 129 @18950 has 79 MA's), (Start: 191 @19034 has 45 MA's), (Start: 235 @19112 has 1 MA's), (268, 19199), (274, 19214), (300, 19262), (324, 19301), (356, 19388), (368, 19421), (381, 19457), (390, 19487), (392, 19493), (422, 19562), (461, 19592), (466, 19604), (468, 19607), (494, 19664), (565, 19796), (567, 19802), (592, 19868), (594, 19874), (601, 19898), (618, 19946), (627, 19970), (631, 19979), (658, 20054), (717, 20105), (725, 20120), (782, 20282), (788, 20309), (799, 20339), (843, 20444), (880, 20522), (887, 20558), (890, 20567), (900, 20600), (907, 20615),

Gene: Amelie\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for Amelie\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499, 17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: AmericanBeauty\_26 Start: 19733, Stop: 21412, Start Num: 129

Candidate Starts for AmericanBeauty\_26:

(Start: 129 @19733 has 79 MA's), (Start: 191 @19817 has 45 MA's), (Start: 235 @19895 has 1 MA's), (268, 19982), (274, 19997), (300, 20045), (324, 20084), (356, 20171), (368, 20204), (381, 20240), (390, 20270), (392, 20276), (422, 20345), (461, 20375), (466, 20387), (468, 20390), (494, 20447), (565, 20579), (567, 20585), (592, 20651), (594, 20657), (601, 20681), (618, 20729), (627, 20753), (631, 20762), (658, 20837), (717, 20888), (725, 20903), (782, 21065), (788, 21092), (799, 21122), (843, 21227), (880, 21305), (887, 21341), (890, 21350), (900, 21383), (907, 21398),

Gene: Amgine\_21 Start: 17216, Stop: 19009, Start Num: 93

Candidate Starts for Amgine\_21:

(Start: 93 @17216 has 1 MA's), (Start: 109 @17246 has 26 MA's), (Start: 112 @17252 has 41 MA's), (Start: 114 @17255 has 139 MA's), (Start: 135 @17267 has 7 MA's), (140, 17273), (Start: 227 @17399 has 2 MA's), (230, 17414), (248, 17465), (258, 17495), (272, 17528), (316, 17630), (337, 17672), (360, 17744), (362, 17753), (423, 17897), (424, 17900), (438, 17915), (444, 17927), (448, 17933), (454, 17951), (465, 17975), (468, 17981), (481, 18008), (499, 18044), (572, 18164), (618, 18281), (632, 18314), (636, 18326), (641, 18338), (655, 18386), (756, 18578), (768, 18611), (772, 18620), (788, 18683), (793, 18695), (810, 18746), (813, 18752), (863, 18845), (880, 18896), (890, 18941), (901, 18980), (902, 18983), (913, 19001),

Gene: Aminay\_21 Start: 17435, Stop: 19210, Start Num: 114

Candidate Starts for Aminay\_21:

(12, 16757), (13, 16769), (27, 16964), (Start: 114 @17435 has 139 MA's), (Start: 227 @17579 has 2 MA's), (230, 17594), (248, 17645), (258, 17675), (278, 17720), (321, 17816), (356, 17912), (360, 17924), (393, 18020), (448, 18113), (454, 18131), (468, 18161), (487, 18200), (505, 18242), (564, 18326), (588, 18389), (599, 18422), (611, 18461), (655, 18590), (704, 18680), (708, 18689), (748, 18746), (756, 18779), (762, 18800), (768, 18812), (793, 18896), (810, 18947), (813, 18953), (865, 19055), (887, 19133), (893, 19154), (901, 19181), (913, 19202),

Gene: Amochick\_22 Start: 17409, Stop: 19151, Start Num: 112

Candidate Starts for Amochick\_22:

(Start: 112 @17409 has 41 MA's), (Start: 117 @17418 has 59 MA's), (152, 17460), (189, 17511), (201, 17535), (212, 17547), (Start: 227 @17568 has 2 MA's), (230, 17583), (236, 17601), (249, 17634), (255, 17661), (282, 17733), (325, 17823), (355, 17907), (358, 17916), (365, 17937), (388, 18003), (398, 18030), (416, 18063), (438, 18081), (449, 18102), (454, 18117), (455, 18120), (487, 18186), (489, 18189), (514, 18255), (527, 18267), (541, 18276), (555, 18279), (588, 18366), (605, 18420), (628, 18465), (631, 18471), (654, 18543), (665, 18573), (670, 18600), (704, 18636), (708, 18645), (756, 18723), (802, 18867), (807, 18885), (813, 18897), (822, 18912), (824, 18915), (831, 18936), (836, 18948), (865, 18996), (876, 19029), (896, 19104), (901, 19122), (913, 19143),

Gene: Amohnition\_22 Start: 17620, Stop: 19395, Start Num: 109

Candidate Starts for Amohnition\_22:

(Start: 93 @17590 has 1 MA's), (Start: 109 @17620 has 26 MA's), (Start: 114 @17629 has 139 MA's), (140, 17659), (Start: 227 @17785 has 2 MA's), (230, 17800), (236, 17818), (248, 17851), (272, 17914), (278, 17926), (282, 17944), (316, 18016), (334, 18052), (337, 18058), (362, 18139), (395, 18232), (400, 18244), (403, 18247), (423, 18283), (448, 18319), (465, 18361), (468, 18367), (481, 18394), (572, 18550), (603, 18640), (618, 18667), (636, 18712), (655, 18772), (698, 18847), (708, 18871), (748, 18931), (757, 18967), (768, 18997), (793, 19081), (865, 19240), (901, 19366), (902, 19369), (913, 19387),

Gene: Amok\_17 Start: 15034, Stop: 16728, Start Num: 144

Candidate Starts for Amok\_17:

(Start: 133 @15031 has 8 MA's), (Start: 144 @15034 has 603 MA's), (214, 15133), (222, 15145), (298, 15340), (336, 15415), (378, 15535), (385, 15559), (406, 15604), (436, 15637), (442, 15649), (453, 15673), (481, 15742), (487, 15754), (574, 15919), (599, 15991), (636, 16069), (643, 16084), (650, 16102), (668, 16159), (750, 16300), (752, 16306), (755, 16318), (766, 16327), (791, 16399), (793, 16402), (795, 16408), (799, 16420), (842, 16525), (847, 16534), (862, 16567), (907, 16720),

Gene: Amymech\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Amymech\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183),

(489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Anaya\_24 Start: 17173, Stop: 18939, Start Num: 114

Candidate Starts for Anaya\_24:

(Start: 114 @17173 has 139 MA's), (140, 17203), (236, 17362), (248, 17395), (258, 17425), (272, 17458), (278, 17470), (316, 17560), (337, 17602), (360, 17674), (362, 17683), (378, 17722), (392, 17767), (400, 17788), (403, 17791), (448, 17863), (465, 17905), (468, 17911), (481, 17938), (564, 18076), (572, 18094), (587, 18136), (593, 18154), (603, 18184), (655, 18316), (757, 18511), (768, 18541), (772, 18550), (793, 18625), (810, 18676), (813, 18682), (880, 18826), (890, 18871), (901, 18910), (902, 18913), (913, 18931),

Gene: Anaysia\_30 Start: 19096, Stop: 20883, Start Num: 144

Candidate Starts for Anaysia\_30:

(94, 19030), (Start: 123 @19072 has 215 MA's), (Start: 144 @19096 has 603 MA's), (236, 19234), (262, 19291), (278, 19333), (292, 19369), (306, 19408), (343, 19477), (349, 19501), (369, 19555), (448, 19705), (467, 19750), (481, 19780), (499, 19816), (515, 19867), (530, 19903), (553, 19951), (580, 20011), (635, 20140), (665, 20218), (750, 20419), (752, 20425), (782, 20521), (845, 20686), (880, 20785),

Gene: AndPeggy\_17 Start: 15394, Stop: 17094, Start Num: 133

Candidate Starts for AndPeggy\_17:

(Start: 133 @15394 has 8 MA's), (Start: 144 @15397 has 603 MA's), (214, 15499), (222, 15511), (264, 15607), (292, 15691), (336, 15781), (356, 15841), (365, 15868), (377, 15898), (378, 15901), (406, 15970), (436, 16003), (442, 16015), (444, 16018), (453, 16039), (454, 16042), (481, 16108), (487, 16120), (574, 16285), (636, 16435), (643, 16450), (650, 16468), (668, 16525), (750, 16666), (752, 16672), (755, 16684), (766, 16693), (791, 16765), (793, 16768), (795, 16774), (799, 16786), (842, 16891), (847, 16900), (862, 16933),

Gene: Andies\_18 Start: 14986, Stop: 16695, Start Num: 126

Candidate Starts for Andies\_18:

(Start: 126 @14986 has 42 MA's), (Start: 150 @15013 has 4 MA's), (Start: 227 @15118 has 2 MA's), (229, 15130), (241, 15166), (258, 15217), (271, 15247), (274, 15253), (284, 15280), (287, 15286), (348, 15406), (367, 15460), (370, 15466), (377, 15484), (381, 15496), (382, 15499), (388, 15520), (403, 15562), (418, 15595), (459, 15646), (465, 15661), (484, 15703), (492, 15718), (494, 15724), (511, 15772), (525, 15796), (547, 15826), (564, 15850), (591, 15922), (608, 15976), (614, 15985), (637, 16045), (638, 16048), (710, 16153), (717, 16162), (737, 16201), (781, 16339), (834, 16489), (836, 16492), (841, 16501), (860, 16522), (866, 16549), (880, 16585), (907, 16678),

Gene: Aneem\_28 Start: 20755, Stop: 22554, Start Num: 144

Candidate Starts for Aneem\_28:

(94, 20689), (Start: 123 @20731 has 215 MA's), (Start: 144 @20755 has 603 MA's), (183, 20797), (236, 20893), (242, 20908), (277, 20989), (278, 20992), (306, 21067), (315, 21082), (338, 21121), (341, 21127), (356, 21178), (378, 21238), (380, 21244), (417, 21325), (467, 21409), (518, 21535), (526, 21553), (540, 21580), (597, 21721), (631, 21787), (635, 21799), (636, 21802), (703, 21991), (721, 22018), (726, 22027), (736, 22048), (737, 22051), (746, 22072), (750, 22087), (756, 22111), (781, 22186), (784, 22201), (813, 22285), (860, 22390), (862, 22396), (877, 22450), (909, 22549),

Gene: Angel\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Angel\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's),  
(143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039),  
(334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369),  
(481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780),  
(665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050),  
(799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Angelica\_23 Start: 17122, Stop: 18888, Start Num: 114

Candidate Starts for Angelica\_23:

(Start: 114 @17122 has 139 MA's), (140, 17152), (236, 17311), (248, 17344), (258, 17374), (272,  
17407), (278, 17419), (316, 17509), (337, 17551), (360, 17623), (362, 17632), (378, 17671), (392,  
17716), (400, 17737), (403, 17740), (438, 17794), (448, 17812), (465, 17854), (468, 17860), (481,  
17887), (564, 18025), (572, 18043), (587, 18085), (593, 18103), (603, 18133), (618, 18160), (655,  
18265), (748, 18424), (757, 18460), (768, 18490), (772, 18499), (793, 18574), (810, 18625), (890,  
18820), (901, 18859), (902, 18862), (913, 18880),

Gene: Angelicage\_33 Start: 31069, Stop: 32832, Start Num: 97

Candidate Starts for Angelicage\_33:

(90, 31051), (Start: 97 @31069 has 73 MA's), (Start: 121 @31105 has 1 MA's), (219, 31243), (231,  
31267), (262, 31339), (265, 31348), (306, 31468), (332, 31513), (341, 31528), (345, 31546), (368,  
31609), (384, 31654), (386, 31663), (445, 31753), (458, 31783), (461, 31798), (465, 31807), (472,  
31822), (487, 31852), (597, 32074), (607, 32092), (613, 32107), (631, 32137), (635, 32149), (636,  
32152), (647, 32179), (793, 32503), (794, 32506), (810, 32554), (824, 32581), (832, 32608), (860,  
32662), (865, 32686), (866, 32689), (891, 32779), (909, 32827),

Gene: Angelique\_20 Start: 17710, Stop: 19410, Start Num: 111

Candidate Starts for Angelique\_20:

(Start: 95 @17686 has 1 MA's), (Start: 111 @17710 has 24 MA's), (152, 17752), (192, 17809), (217,  
17851), (303, 18040), (365, 18187), (368, 18193), (445, 18337), (449, 18343), (459, 18376), (497,  
18451), (635, 18733), (668, 18829), (739, 18952), (750, 18985), (752, 18991), (783, 19057), (793,  
19087), (860, 19243), (862, 19249), (897, 19378),

Gene: Anglerfish\_28 Start: 21836, Stop: 23638, Start Num: 146

Candidate Starts for Anglerfish\_28:

(Start: 146 @21836 has 223 MA's), (Start: 161 @21857 has 4 MA's), (Start: 190 @21899 has 1 MA's),  
(216, 21944), (306, 22160), (332, 22205), (338, 22214), (368, 22304), (369, 22307), (406, 22400),  
(467, 22502), (500, 22571), (583, 22772), (584, 22775), (591, 22796), (635, 22892), (636, 22895),  
(638, 22901), (665, 22970), (668, 22988), (670, 22997), (677, 23027), (731, 23123), (746, 23156),  
(750, 23171), (793, 23312), (813, 23369), (862, 23480), (909, 23633),

Gene: AngryOrchard\_22 Start: 16268, Stop: 17893, Start Num: 168

Candidate Starts for AngryOrchard\_22:

(Start: 155 @16253 has 4 MA's), (Start: 168 @16268 has 32 MA's), (211, 16337), (232, 16373), (286,  
16514), (306, 16559), (361, 16688), (378, 16730), (384, 16748), (386, 16757), (394, 16781), (406,  
16799), (436, 16829), (444, 16844), (445, 16847), (460, 16886), (467, 16895), (576, 17096), (635,  
17234), (665, 17312), (672, 17351), (675, 17363), (713, 17393), (750, 17471), (807, 17618), (854,  
17717), (860, 17732), (907, 17885),

Gene: AnnaL29\_31 Start: 22021, Stop: 23793, Start Num: 144

Candidate Starts for AnnaL29\_31:

(Start: 123 @21997 has 215 MA's), (Start: 144 @22021 has 603 MA's), (251, 22204), (277, 22255),  
(278, 22258), (305, 22330), (306, 22333), (338, 22387), (341, 22393), (349, 22426), (378, 22504),  
(380, 22510), (384, 22522), (417, 22591), (460, 22666), (463, 22672), (467, 22675), (487, 22717),

(547, 22864), (583, 22945), (584, 22948), (597, 22987), (631, 23053), (636, 23068), (677, 23200), (713, 23248), (742, 23299), (746, 23311), (750, 23326), (752, 23332), (770, 23386), (784, 23440), (813, 23524), (842, 23590), (860, 23629), (862, 23635),

Gene: Annalisa\_20 Start: 17346, Stop: 18926, Start Num: 170

Candidate Starts for Annalisa\_20:

(88, 17229), (Start: 170 @17346 has 87 MA's), (298, 17604), (307, 17625), (340, 17679), (351, 17718), (369, 17775), (377, 17796), (501, 17967), (507, 17985), (514, 18009), (521, 18030), (554, 18072), (592, 18153), (636, 18243), (669, 18345), (670, 18348), (687, 18402), (823, 18672), (863, 18771), (865, 18780), (874, 18810),

Gene: Annihilator\_18 Start: 16640, Stop: 18394, Start Num: 132

Candidate Starts for Annihilator\_18:

(Start: 109 @16631 has 26 MA's), (Start: 132 @16640 has 45 MA's), (Start: 137 @16646 has 2 MA's), (143, 16652), (230, 16784), (248, 16835), (258, 16865), (269, 16889), (309, 16991), (331, 17030), (334, 17036), (341, 17051), (353, 17096), (395, 17216), (425, 17273), (448, 17312), (468, 17360), (481, 17387), (487, 17399), (522, 17480), (564, 17525), (641, 17723), (649, 17753), (655, 17771), (665, 17798), (716, 17882), (730, 17900), (743, 17915), (756, 17963), (760, 17978), (782, 18041), (799, 18098), (813, 18137), (831, 18179), (863, 18230), (890, 18326), (913, 18386),

Gene: Annyong\_27 Start: 19828, Stop: 21606, Start Num: 144

Candidate Starts for Annyong\_27:

(Start: 123 @19804 has 215 MA's), (Start: 144 @19828 has 603 MA's), (Start: 190 @19885 has 1 MA's), (222, 19939), (230, 19954), (236, 19972), (272, 20056), (277, 20068), (278, 20071), (306, 20146), (315, 20161), (338, 20200), (378, 20317), (417, 20404), (463, 20485), (489, 20533), (500, 20557), (532, 20644), (553, 20689), (584, 20761), (591, 20782), (597, 20800), (636, 20881), (668, 20974), (670, 20983), (675, 21007), (677, 21013), (687, 21037), (731, 21091), (742, 21112), (756, 21163), (763, 21187), (782, 21241), (813, 21337), (860, 21442), (863, 21457), (894, 21565), (900, 21583),

Gene: Anon\_28 Start: 19727, Stop: 21511, Start Num: 144

Candidate Starts for Anon\_28:

(Start: 123 @19703 has 215 MA's), (Start: 144 @19727 has 603 MA's), (201, 19802), (230, 19847), (236, 19865), (278, 19964), (286, 19994), (292, 20000), (306, 20039), (315, 20054), (343, 20108), (349, 20132), (369, 20186), (380, 20216), (430, 20303), (448, 20336), (463, 20378), (467, 20381), (499, 20447), (515, 20498), (553, 20582), (635, 20771), (636, 20774), (659, 20837), (670, 20876), (682, 20921), (731, 21002), (746, 21035), (752, 21056), (771, 21113), (782, 21149), (813, 21242), (863, 21362), (890, 21455),

Gene: Anselm\_28 Start: 20293, Stop: 22065, Start Num: 144

Candidate Starts for Anselm\_28:

(Start: 123 @20269 has 215 MA's), (Start: 144 @20293 has 603 MA's), (219, 20392), (277, 20527), (278, 20530), (305, 20602), (306, 20605), (338, 20659), (349, 20698), (365, 20743), (378, 20776), (417, 20863), (463, 20944), (467, 20947), (584, 21220), (636, 21340), (675, 21466), (713, 21520), (721, 21529), (731, 21550), (746, 21583), (750, 21598), (752, 21604), (770, 21658), (781, 21697), (784, 21712), (813, 21796), (862, 21907), (900, 22042),

Gene: Anthony\_27 Start: 18675, Stop: 20474, Start Num: 144

Candidate Starts for Anthony\_27:

(94, 18609), (Start: 123 @18651 has 215 MA's), (Start: 144 @18675 has 603 MA's), (Start: 161 @18684 has 4 MA's), (219, 18774), (236, 18813), (277, 18909), (278, 18912), (305, 18984), (306, 18987), (338, 19041), (341, 19047), (378, 19158), (417, 19245), (463, 19326), (467, 19329), (532, 19485), (546, 19515), (597, 19641), (636, 19722), (675, 19848), (729, 19956), (731, 19959), (750,



20007), (770, 20067), (781, 20106), (784, 20121), (813, 20205), (860, 20310), (862, 20316), (865, 20334), (877, 20370), (900, 20451),

Gene: Antonio\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Antonio\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: Antsirabe\_18 Start: 16985, Stop: 18709, Start Num: 132

Candidate Starts for Antsirabe\_18:

(Start: 132 @16985 has 45 MA's), (228, 17105), (258, 17198), (309, 17324), (321, 17339), (334, 17369), (337, 17375), (341, 17384), (353, 17429), (395, 17549), (448, 17645), (465, 17687), (468, 17693), (487, 17732), (503, 17768), (522, 17813), (641, 18050), (655, 18098), (665, 18125), (691, 18161), (787, 18380), (799, 18413), (831, 18494), (890, 18641), (904, 18686),

Gene: Anubis\_31 Start: 20265, Stop: 22061, Start Num: 144

Candidate Starts for Anubis\_31:

(Start: 144 @20265 has 603 MA's), (Start: 190 @20322 has 1 MA's), (197, 20337), (219, 20370), (230, 20391), (Start: 235 @20406 has 1 MA's), (272, 20493), (277, 20505), (278, 20508), (306, 20583), (315, 20598), (336, 20634), (417, 20841), (481, 20955), (500, 20994), (532, 21081), (583, 21195), (591, 21219), (597, 21237), (636, 21318), (665, 21393), (668, 21411), (675, 21444), (677, 21450), (695, 21489), (729, 21543), (731, 21546), (742, 21567), (758, 21624), (813, 21792), (860, 21897), (862, 21903), (900, 22038),

Gene: Aphelion\_48 Start: 29609, Stop: 31300, Start Num: 146

Candidate Starts for Aphelion\_48:

(Start: 146 @29609 has 223 MA's), (188, 29669), (206, 29702), (228, 29735), (271, 29861), (282, 29894), (286, 29903), (349, 30032), (366, 30080), (494, 30293), (498, 30299), (506, 30323), (576, 30452), (583, 30473), (594, 30506), (658, 30704), (758, 30857), (788, 30956), (793, 30968), (796, 30977), (829, 31061), (888, 31208), (898, 31244), (902, 31256),

Gene: Apiary\_45 Start: 31353, Stop: 32927, Start Num: 173

Candidate Starts for Apiary\_45:

(Start: 173 @31353 has 7 MA's), (179, 31362), (219, 31416), (231, 31440), (236, 31443), (348, 31713), (372, 31776), (377, 31791), (442, 31908), (450, 31923), (493, 31980), (498, 31989), (511, 32031), (518, 32052), (534, 32082), (561, 32139), (596, 32214), (609, 32253), (644, 32310), (673, 32415), (674, 32418), (683, 32445), (752, 32523), (776, 32562), (829, 32718), (867, 32784),

Gene: Apocalypse\_23 Start: 17125, Stop: 18891, Start Num: 114

Candidate Starts for Apocalypse\_23:

(Start: 114 @17125 has 139 MA's), (140, 17155), (236, 17314), (248, 17347), (258, 17377), (272, 17410), (278, 17422), (316, 17512), (337, 17554), (360, 17626), (362, 17635), (378, 17674), (392, 17719), (400, 17740), (403, 17743), (438, 17797), (448, 17815), (465, 17857), (468, 17863), (481, 17890), (564, 18028), (572, 18046), (587, 18088), (593, 18106), (603, 18136), (618, 18163), (655, 18268), (748, 18427), (757, 18463), (768, 18493), (772, 18502), (793, 18577), (810, 18628), (890, 18823), (901, 18862), (902, 18865), (913, 18883),

Gene: AppleCloud\_21 Start: 16314, Stop: 17939, Start Num: 168

Candidate Starts for AppleCloud\_21:

(Start: 155 @16299 has 4 MA's), (Start: 168 @16314 has 32 MA's), (196, 16356), (211, 16383), (232, 16419), (286, 16560), (306, 16605), (361, 16734), (378, 16776), (384, 16794), (386, 16803), (394, 16827), (406, 16845), (436, 16875), (444, 16890), (445, 16893), (460, 16932), (467, 16941), (505, 17025), (546, 17079), (553, 17094), (576, 17142), (584, 17166), (635, 17280), (665, 17358), (672, 17397), (675, 17409), (678, 17418), (713, 17439), (750, 17517), (807, 17664), (854, 17763), (860, 17778), (907, 17931),

Gene: Applejack\_27 Start: 21097, Stop: 22899, Start Num: 146

Candidate Starts for Applejack\_27:

(Start: 146 @21097 has 223 MA's), (Start: 161 @21118 has 4 MA's), (Start: 190 @21160 has 1 MA's), (216, 21205), (306, 21421), (332, 21466), (338, 21475), (349, 21514), (368, 21565), (369, 21568), (467, 21763), (500, 21832), (583, 22033), (584, 22036), (591, 22057), (635, 22153), (636, 22156), (638, 22162), (665, 22231), (668, 22249), (670, 22258), (677, 22288), (731, 22384), (746, 22417), (750, 22432), (793, 22573), (813, 22630), (862, 22741),

Gene: Apricot\_19 Start: 15970, Stop: 17667, Start Num: 144

Candidate Starts for Apricot\_19:

(113, 15931), (Start: 144 @15970 has 603 MA's), (Start: 150 @15982 has 4 MA's), (Start: 153 @15985 has 11 MA's), (180, 16021), (202, 16060), (219, 16081), (239, 16123), (240, 16129), (241, 16132), (246, 16144), (263, 16180), (277, 16216), (295, 16273), (316, 16321), (331, 16348), (368, 16450), (382, 16489), (406, 16546), (414, 16564), (432, 16573), (436, 16579), (458, 16627), (469, 16657), (485, 16693), (489, 16699), (499, 16720), (500, 16723), (517, 16774), (547, 16801), (549, 16804), (561, 16831), (574, 16858), (599, 16930), (618, 16969), (649, 17023), (670, 17095), (683, 17140), (747, 17230), (752, 17248), (788, 17332), (791, 17341), (793, 17344), (795, 17350), (801, 17365), (811, 17395), (814, 17401), (824, 17422), (825, 17425), (849, 17479), (862, 17509), (863, 17518), (879, 17569), (887, 17602), (891, 17614), (896, 17632),

Gene: Aragog\_24 Start: 19764, Stop: 21563, Start Num: 144

Candidate Starts for Aragog\_24:

(Start: 144 @19764 has 603 MA's), (222, 19869), (236, 19902), (278, 20001), (306, 20076), (315, 20091), (336, 20127), (360, 20199), (365, 20214), (378, 20247), (380, 20253), (495, 20478), (499, 20484), (532, 20574), (580, 20679), (583, 20688), (597, 20730), (602, 20748), (635, 20808), (636, 20811), (665, 20886), (668, 20904), (729, 21045), (746, 21081), (813, 21294), (859, 21396), (862, 21405), (893, 21519), (900, 21540), (902, 21549),

Gene: Arcanine\_28 Start: 20852, Stop: 22654, Start Num: 146

Candidate Starts for Arcanine\_28:

(Start: 146 @20852 has 223 MA's), (Start: 161 @20873 has 4 MA's), (Start: 190 @20915 has 1 MA's), (216, 20960), (306, 21176), (332, 21221), (338, 21230), (368, 21320), (369, 21323), (406, 21416), (467, 21518), (500, 21587), (579, 21776), (583, 21788), (584, 21791), (591, 21812), (635, 21908), (636, 21911), (638, 21917), (665, 21986), (668, 22004), (670, 22013), (677, 22043), (731, 22139), (746, 22172), (750, 22187), (793, 22328), (813, 22385), (862, 22496),

Gene: ArcherNM\_30 Start: 21966, Stop: 23738, Start Num: 144

Candidate Starts for ArcherNM\_30:

(94, 21900), (Start: 123 @21942 has 215 MA's), (Start: 144 @21966 has 603 MA's), (251, 22149), (277, 22200), (278, 22203), (305, 22275), (306, 22278), (338, 22332), (341, 22338), (349, 22371), (378, 22449), (380, 22455), (384, 22467), (417, 22536), (460, 22611), (463, 22617), (467, 22620), (546, 22806), (583, 22890), (584, 22893), (597, 22932), (619, 22983), (631, 22998), (636, 23013), (675, 23139), (677, 23145), (713, 23193), (742, 23244), (746, 23256), (750, 23271), (752, 23277), (770, 23331), (784, 23385), (813, 23469), (842, 23535), (860, 23574), (862, 23580),

Gene: Archetta\_24 Start: 19557, Stop: 21356, Start Num: 144

Candidate Starts for Archetta\_24:

(Start: 144 @19557 has 603 MA's), (236, 19695), (278, 19794), (306, 19869), (336, 19920), (360, 19992), (365, 20007), (378, 20040), (380, 20046), (432, 20139), (481, 20241), (495, 20271), (499, 20277), (532, 20367), (546, 20397), (579, 20469), (583, 20481), (584, 20484), (597, 20523), (602, 20541), (635, 20601), (636, 20604), (656, 20655), (668, 20697), (729, 20838), (749, 20880), (862, 21198), (900, 21333),

Gene: Archimedes\_16 Start: 14567, Stop: 16171, Start Num: 195

Candidate Starts for Archimedes\_16:

(Start: 195 @14567 has 45 MA's), (237, 14654), (275, 14759), (298, 14822), (300, 14828), (308, 14852), (352, 14960), (378, 15029), (494, 15212), (500, 15224), (521, 15278), (592, 15422), (594, 15428), (623, 15494), (630, 15512), (670, 15638), (702, 15668), (757, 15749), (758, 15752), (791, 15860), (795, 15869), (805, 15902), (872, 16049),

Gene: Archis\_20 Start: 16861, Stop: 18507, Start Num: 195

Candidate Starts for Archis\_20:

(172, 16825), (Start: 195 @16861 has 45 MA's), (244, 16963), (272, 17041), (274, 17044), (308, 17140), (329, 17179), (357, 17260), (377, 17314), (382, 17329), (494, 17500), (506, 17530), (594, 17713), (601, 17737), (602, 17740), (626, 17788), (658, 17881), (664, 17893), (694, 17938), (702, 17953), (757, 18085), (758, 18088), (788, 18187), (795, 18205), (813, 18256), (843, 18322), (872, 18385), (877, 18397),

Gene: ArcusAngelus\_16 Start: 14845, Stop: 16554, Start Num: 123

Candidate Starts for ArcusAngelus\_16:

(Start: 123 @14845 has 215 MA's), (193, 14932), (Start: 227 @14977 has 2 MA's), (233, 15001), (271, 15106), (274, 15112), (281, 15130), (300, 15160), (348, 15265), (370, 15325), (378, 15346), (381, 15355), (386, 15373), (388, 15379), (418, 15454), (424, 15466), (443, 15481), (448, 15487), (459, 15505), (465, 15520), (468, 15526), (477, 15547), (484, 15562), (486, 15565), (492, 15577), (494, 15583), (511, 15631), (515, 15643), (521, 15649), (564, 15709), (568, 15721), (583, 15757), (587, 15769), (588, 15772), (594, 15790), (614, 15844), (618, 15853), (625, 15871), (627, 15877), (710, 16012), (717, 16021), (720, 16024), (737, 16060), (751, 16099), (761, 16138), (791, 16237), (799, 16258), (810, 16291), (826, 16321), (836, 16351), (839, 16357), (841, 16360), (844, 16366), (860, 16381), (861, 16384), (866, 16408), (882, 16450), (900, 16522), (901, 16528),

Gene: Ardmore\_16 Start: 14856, Stop: 16565, Start Num: 123

Candidate Starts for Ardmore\_16:

(Start: 123 @14856 has 215 MA's), (193, 14943), (Start: 227 @14988 has 2 MA's), (233, 15012), (271, 15117), (274, 15123), (281, 15141), (300, 15171), (348, 15276), (370, 15336), (378, 15357), (381, 15366), (388, 15390), (418, 15465), (420, 15468), (459, 15516), (465, 15531), (468, 15537), (484, 15573), (486, 15576), (492, 15588), (494, 15594), (511, 15642), (515, 15654), (521, 15660), (564, 15720), (568, 15732), (583, 15768), (587, 15780), (614, 15855), (618, 15864), (625, 15882), (627, 15888), (638, 15918), (710, 16023), (717, 16032), (720, 16035), (737, 16071), (761, 16149), (791, 16248), (799, 16269), (810, 16302), (826, 16332), (836, 16362), (841, 16371), (844, 16377), (860, 16392), (861, 16395), (866, 16419), (877, 16449), (882, 16461), (887, 16491), (900, 16533),

Gene: Argent26\_26 Start: 19736, Stop: 21415, Start Num: 129

Candidate Starts for Argent26\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: Arianna\_19 Start: 17425, Stop: 19089, Start Num: 146

Candidate Starts for Arianna\_19:

(Start: 146 @17425 has 223 MA's), (169, 17458), (295, 17716), (332, 17794), (377, 17917), (380, 17926), (381, 17929), (384, 17938), (386, 17947), (467, 18088), (472, 18100), (499, 18154), (575, 18289), (587, 18322), (593, 18340), (597, 18352), (602, 18367), (635, 18427), (644, 18448), (646, 18457), (668, 18523), (675, 18556), (713, 18586), (718, 18592), (721, 18595), (750, 18664), (791, 18763), (795, 18772), (861, 18928), (863, 18940),

Gene: Arib1\_19 Start: 16391, Stop: 18127, Start Num: 117

Candidate Starts for Arib1\_19:

(Start: 117 @16391 has 59 MA's), (178, 16472), (180, 16475), (220, 16526), (243, 16589), (246, 16595), (258, 16634), (272, 16667), (282, 16691), (344, 16811), (347, 16826), (356, 16850), (358, 16856), (386, 16940), (402, 16982), (418, 17021), (422, 17027), (452, 17066), (459, 17072), (470, 17096), (494, 17150), (503, 17171), (529, 17231), (573, 17309), (587, 17348), (598, 17381), (618, 17447), (627, 17471), (636, 17495), (647, 17525), (653, 17537), (735, 17639), (779, 17777), (805, 17861), (853, 17960), (877, 18017), (890, 18068), (907, 18116),

Gene: Ariel\_34 Start: 24674, Stop: 26407, Start Num: 124

Candidate Starts for Ariel\_34:

(Start: 124 @24674 has 30 MA's), (Start: 191 @24764 has 45 MA's), (193, 24767), (233, 24842), (243, 24869), (268, 24935), (282, 24971), (301, 25001), (306, 25016), (346, 25100), (358, 25136), (368, 25163), (382, 25202), (392, 25235), (395, 25244), (420, 25301), (451, 25343), (490, 25418), (494, 25430), (515, 25490), (552, 25544), (565, 25574), (573, 25592), (577, 25601), (588, 25634), (592, 25646), (594, 25652), (606, 25691), (627, 25748), (725, 25898), (735, 25916), (750, 25958), (756, 25982), (757, 25985), (761, 26000), (773, 26030), (782, 26060), (799, 26117), (868, 26267), (902, 26387), (907, 26393),

Gene: Arissanae\_28 Start: 19809, Stop: 21599, Start Num: 144

Candidate Starts for Arissanae\_28:

(Start: 141 @19806 has 14 MA's), (Start: 144 @19809 has 603 MA's), (Start: 167 @19827 has 1 MA's), (201, 19884), (216, 19905), (243, 19965), (263, 20007), (277, 20043), (278, 20046), (306, 20121), (338, 20175), (341, 20181), (368, 20265), (378, 20292), (380, 20298), (417, 20379), (463, 20460), (467, 20463), (495, 20523), (500, 20532), (576, 20712), (584, 20736), (597, 20775), (636, 20856), (695, 21027), (731, 21084), (736, 21093), (746, 21117), (750, 21132), (756, 21156), (770, 21192), (781, 21231), (784, 21246), (813, 21330), (842, 21396), (860, 21435), (862, 21441), (873, 21486),

Gene: Arlo\_26 Start: 20726, Stop: 22528, Start Num: 146

Candidate Starts for Arlo\_26:

(Start: 146 @20726 has 223 MA's), (Start: 161 @20747 has 4 MA's), (Start: 190 @20789 has 1 MA's), (216, 20834), (306, 21050), (332, 21095), (338, 21104), (349, 21143), (368, 21194), (369, 21197), (406, 21290), (467, 21392), (500, 21461), (583, 21662), (584, 21665), (591, 21686), (635, 21782), (636, 21785), (638, 21791), (665, 21860), (668, 21878), (670, 21887), (677, 21917), (731, 22013), (746, 22046), (750, 22061), (793, 22202), (813, 22259), (862, 22370),

Gene: Aroostook\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Aroostook\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050),

(799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Arri\_34 Start: 26557, Stop: 28323, Start Num: 97

Candidate Starts for Arri\_34:

(80, 26515), (Start: 97 @26557 has 73 MA's), (Start: 121 @26593 has 1 MA's), (Start: 148 @26626 has 14 MA's), (264, 26836), (265, 26839), (277, 26869), (298, 26935), (306, 26959), (311, 26968), (331, 27001), (386, 27154), (406, 27193), (445, 27244), (451, 27256), (458, 27274), (460, 27286), (465, 27298), (472, 27313), (487, 27343), (489, 27346), (499, 27367), (547, 27439), (568, 27487), (613, 27598), (632, 27631), (647, 27670), (649, 27673), (670, 27745), (707, 27811), (715, 27823), (793, 27994), (794, 27997), (810, 28045), (824, 28072), (832, 28099), (860, 28153), (891, 28270), (897, 28291), (909, 28318),

Gene: Artemis2UCLA\_31 Start: 19873, Stop: 21645, Start Num: 144

Candidate Starts for Artemis2UCLA\_31:

(94, 19807), (Start: 123 @19849 has 215 MA's), (Start: 144 @19873 has 603 MA's), (278, 20110), (305, 20182), (306, 20185), (315, 20200), (338, 20239), (341, 20245), (378, 20356), (380, 20362), (392, 20401), (417, 20443), (448, 20482), (463, 20524), (467, 20527), (532, 20683), (592, 20824), (597, 20839), (677, 21052), (742, 21151), (750, 21178), (765, 21229), (770, 21238), (781, 21277), (784, 21292), (813, 21376), (860, 21481), (862, 21487), (900, 21622),

Gene: Arti\_41 Start: 29812, Stop: 31425, Start Num: 170

Candidate Starts for Arti\_41:

(Start: 170 @29812 has 87 MA's), (Start: 194 @29848 has 1 MA's), (202, 29866), (236, 29926), (340, 30166), (343, 30178), (347, 30193), (372, 30259), (377, 30274), (386, 30298), (387, 30301), (432, 30385), (449, 30415), (450, 30418), (493, 30475), (510, 30523), (511, 30526), (518, 30547), (571, 30652), (592, 30697), (607, 30739), (673, 30913), (683, 30943), (688, 30949), (775, 31057), (776, 31060), (799, 31135), (887, 31354), (906, 31411),

Gene: Arturo\_26 Start: 19939, Stop: 21717, Start Num: 144

Candidate Starts for Arturo\_26:

(Start: 123 @19915 has 215 MA's), (Start: 144 @19939 has 603 MA's), (Start: 190 @19996 has 1 MA's), (222, 20050), (230, 20065), (236, 20083), (272, 20167), (277, 20179), (278, 20182), (306, 20257), (315, 20272), (338, 20311), (378, 20428), (417, 20515), (463, 20596), (489, 20644), (500, 20668), (532, 20755), (553, 20800), (584, 20872), (591, 20893), (597, 20911), (636, 20992), (668, 21085), (670, 21094), (675, 21118), (677, 21124), (687, 21148), (731, 21202), (742, 21223), (756, 21274), (763, 21298), (782, 21352), (813, 21448), (860, 21553), (863, 21568), (894, 21676), (900, 21694),

Gene: Asapag\_20 Start: 16428, Stop: 18125, Start Num: 144

Candidate Starts for Asapag\_20:

(113, 16389), (Start: 144 @16428 has 603 MA's), (Start: 150 @16440 has 4 MA's), (202, 16518), (219, 16539), (240, 16587), (243, 16596), (263, 16638), (277, 16674), (295, 16731), (302, 16752), (316, 16779), (331, 16806), (382, 16947), (406, 17004), (432, 17031), (436, 17037), (458, 17085), (469, 17115), (485, 17151), (499, 17178), (500, 17181), (517, 17232), (547, 17259), (549, 17262), (561, 17289), (574, 17316), (599, 17388), (618, 17427), (649, 17481), (664, 17523), (683, 17598), (736, 17661), (747, 17688), (752, 17706), (788, 17790), (791, 17799), (793, 17802), (795, 17808), (801, 17823), (811, 17853), (814, 17859), (824, 17880), (825, 17883), (849, 17937), (862, 17967), (863, 17976), (879, 18027), (887, 18060), (891, 18072), (896, 18090),

Gene: Asayake\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Asayake\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392,

17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Ashballer\_27 Start: 21575, Stop: 23377, Start Num: 146

Candidate Starts for Ashballer\_27:

(Start: 146 @21575 has 223 MA's), (Start: 161 @21596 has 4 MA's), (Start: 190 @21638 has 1 MA's), (216, 21683), (306, 21899), (332, 21944), (338, 21953), (349, 21992), (368, 22043), (369, 22046), (467, 22241), (500, 22310), (583, 22511), (584, 22514), (591, 22535), (635, 22631), (636, 22634), (638, 22640), (665, 22709), (668, 22727), (670, 22736), (677, 22766), (731, 22862), (746, 22895), (750, 22910), (793, 23051), (813, 23108), (862, 23219),

Gene: Ashertheman\_35 Start: 29935, Stop: 31698, Start Num: 97

Candidate Starts for Ashertheman\_35:

(Start: 97 @29935 has 73 MA's), (Start: 121 @29971 has 1 MA's), (211, 30100), (219, 30109), (262, 30205), (265, 30214), (288, 30283), (306, 30334), (311, 30343), (332, 30379), (341, 30394), (345, 30412), (368, 30475), (384, 30520), (386, 30529), (454, 30640), (458, 30649), (461, 30664), (472, 30688), (487, 30718), (597, 30940), (607, 30958), (613, 30973), (635, 31015), (636, 31018), (647, 31045), (688, 31165), (793, 31369), (794, 31372), (810, 31420), (824, 31447), (832, 31474), (860, 31528), (866, 31555),

Gene: Ashwin\_58 Start: 33959, Stop: 35695, Start Num: 107

Candidate Starts for Ashwin\_58:

(Start: 100 @33950 has 2 MA's), (Start: 107 @33959 has 25 MA's), (174, 34049), (240, 34166), (251, 34202), (259, 34223), (271, 34250), (274, 34256), (286, 34286), (302, 34310), (332, 34361), (381, 34499), (383, 34505), (400, 34556), (402, 34559), (407, 34577), (459, 34628), (468, 34649), (470, 34652), (492, 34700), (494, 34706), (511, 34754), (513, 34760), (515, 34766), (555, 34826), (564, 34850), (565, 34853), (583, 34898), (588, 34913), (591, 34922), (594, 34931), (608, 34976), (618, 34994), (631, 35027), (720, 35165), (729, 35186), (754, 35252), (762, 35282), (779, 35336), (791, 35378), (799, 35399), (805, 35420), (810, 35432), (821, 35453), (844, 35507), (880, 35585), (887, 35621), (893, 35642), (901, 35669),

Gene: Asriel\_23 Start: 18698, Stop: 20293, Start Num: 191

Candidate Starts for Asriel\_23:

(Start: 129 @18614 has 79 MA's), (Start: 191 @18698 has 45 MA's), (Start: 235 @18776 has 1 MA's), (268, 18863), (274, 18878), (300, 18926), (324, 18965), (356, 19052), (360, 19064), (368, 19085), (381, 19121), (390, 19151), (392, 19157), (422, 19226), (461, 19256), (466, 19268), (468, 19271), (494, 19328), (565, 19460), (567, 19466), (592, 19532), (594, 19538), (601, 19562), (618, 19610), (627, 19634), (631, 19643), (658, 19718), (717, 19769), (725, 19784), (782, 19946), (788, 19973), (799, 20003), (843, 20108), (880, 20186), (887, 20222), (890, 20231), (900, 20264), (907, 20279),

Gene: Astro\_24 Start: 18655, Stop: 20445, Start Num: 144

Candidate Starts for Astro\_24:

(Start: 123 @18631 has 215 MA's), (Start: 144 @18655 has 603 MA's), (214, 18748), (236, 18793), (278, 18892), (292, 18928), (306, 18967), (315, 18982), (336, 19018), (378, 19138), (380, 19144), (448, 19264), (505, 19393), (532, 19465), (583, 19579), (668, 19795), (675, 19828), (731, 19930), (746, 19963), (750, 19978), (758, 20008), (859, 20278), (862, 20287), (863, 20296), (896, 20410),

Gene: Atcoo\_19 Start: 16260, Stop: 17996, Start Num: 117

Candidate Starts for Atcoo\_19:

(Start: 101 @16236 has 2 MA's), (Start: 117 @16260 has 59 MA's), (Start: 166 @16320 has 1 MA's), (178, 16341), (180, 16344), (246, 16464), (258, 16503), (272, 16536), (282, 16560), (344, 16680),

(356, 16719), (358, 16725), (386, 16809), (388, 16815), (392, 16827), (402, 16851), (410, 16878), (422, 16896), (452, 16935), (459, 16941), (470, 16965), (494, 17019), (500, 17031), (503, 17040), (529, 17100), (573, 17178), (587, 17217), (598, 17250), (618, 17316), (624, 17331), (627, 17340), (636, 17364), (647, 17394), (653, 17406), (735, 17508), (740, 17520), (742, 17523), (745, 17529), (747, 17538), (779, 17646), (805, 17730), (853, 17829), (890, 17937), (907, 17985),

Gene: Atiba\_23 Start: 17117, Stop: 18883, Start Num: 114

Candidate Starts for Atiba\_23:

(Start: 114 @17117 has 139 MA's), (140, 17147), (236, 17306), (248, 17339), (258, 17369), (272, 17402), (278, 17414), (316, 17504), (337, 17546), (360, 17618), (362, 17627), (378, 17666), (392, 17711), (400, 17732), (403, 17735), (438, 17789), (448, 17807), (465, 17849), (468, 17855), (481, 17882), (564, 18020), (572, 18038), (587, 18080), (593, 18098), (603, 18128), (618, 18155), (655, 18260), (748, 18419), (757, 18455), (768, 18485), (772, 18494), (793, 18569), (810, 18620), (863, 18719), (890, 18815), (901, 18854), (902, 18857), (913, 18875),

Gene: Atkinbua\_29 Start: 21550, Stop: 23352, Start Num: 146

Candidate Starts for Atkinbua\_29:

(Start: 146 @21550 has 223 MA's), (Start: 161 @21571 has 4 MA's), (Start: 190 @21613 has 1 MA's), (216, 21658), (306, 21874), (332, 21919), (338, 21928), (349, 21967), (368, 22018), (369, 22021), (467, 22216), (500, 22285), (583, 22486), (584, 22489), (591, 22510), (635, 22606), (636, 22609), (638, 22615), (665, 22684), (668, 22702), (670, 22711), (677, 22741), (731, 22837), (746, 22870), (750, 22885), (793, 23026), (813, 23083), (862, 23194), (909, 23347),

Gene: Attis\_17 Start: 14751, Stop: 16460, Start Num: 171

Candidate Starts for Attis\_17:

(83, 14616), (Start: 171 @14751 has 40 MA's), (259, 14940), (262, 14943), (287, 15018), (315, 15072), (347, 15141), (351, 15153), (377, 15231), (378, 15234), (440, 15366), (462, 15420), (485, 15471), (500, 15501), (519, 15561), (525, 15573), (554, 15609), (607, 15726), (618, 15744), (637, 15783), (669, 15879), (736, 15987), (847, 16263), (849, 16266), (865, 16314), (874, 16344),

Gene: Aubs\_16 Start: 14966, Stop: 16675, Start Num: 123

Candidate Starts for Aubs\_16:

(Start: 123 @14966 has 215 MA's), (193, 15053), (Start: 227 @15098 has 2 MA's), (233, 15122), (271, 15227), (274, 15233), (281, 15251), (300, 15281), (348, 15386), (370, 15446), (378, 15467), (381, 15476), (388, 15500), (418, 15575), (443, 15602), (448, 15608), (459, 15626), (465, 15641), (468, 15647), (484, 15683), (486, 15686), (492, 15698), (494, 15704), (511, 15752), (515, 15764), (521, 15770), (564, 15830), (568, 15842), (583, 15878), (587, 15890), (614, 15965), (618, 15974), (625, 15992), (627, 15998), (638, 16028), (710, 16133), (717, 16142), (720, 16145), (737, 16181), (761, 16259), (791, 16358), (799, 16379), (810, 16412), (826, 16442), (836, 16472), (841, 16481), (844, 16487), (860, 16502), (861, 16505), (866, 16529), (877, 16559), (882, 16571), (887, 16601), (900, 16643),

Gene: AugsMagnumOpus\_31 Start: 20371, Stop: 22167, Start Num: 144

Candidate Starts for AugsMagnumOpus\_31:

(Start: 144 @20371 has 603 MA's), (Start: 190 @20428 has 1 MA's), (197, 20443), (219, 20476), (230, 20497), (Start: 235 @20512 has 1 MA's), (272, 20599), (277, 20611), (278, 20614), (306, 20689), (315, 20704), (336, 20740), (417, 20947), (481, 21061), (500, 21100), (532, 21187), (583, 21301), (591, 21325), (597, 21343), (636, 21424), (665, 21499), (668, 21517), (675, 21550), (677, 21556), (695, 21595), (729, 21649), (731, 21652), (742, 21673), (758, 21730), (813, 21898), (860, 22003), (862, 22009), (900, 22144),

Gene: AuntGwenStacy\_24 Start: 19608, Stop: 21443, Start Num: 81

Candidate Starts for AuntGwenStacy\_24:

(Start: 81 @19608 has 4 MA's), (102, 19656), (Start: 109 @19665 has 26 MA's), (142, 19704), (Start: 168 @19734 has 32 MA's), (Start: 175 @19746 has 1 MA's), (197, 19782), (221, 19812), (Start: 227 @19821 has 2 MA's), (230, 19836), (248, 19887), (249, 19890), (286, 19989), (347, 20130), (365, 20181), (368, 20187), (382, 20226), (400, 20280), (448, 20349), (465, 20391), (482, 20427), (487, 20436), (520, 20514), (526, 20523), (543, 20553), (563, 20586), (564, 20589), (587, 20649), (595, 20673), (598, 20682), (628, 20751), (664, 20856), (665, 20859), (670, 20886), (775, 21069), (877, 21324), (901, 21414), (902, 21417), (904, 21420),

Gene: Avani\_19 Start: 13744, Stop: 15408, Start Num: 148

Candidate Starts for Avani\_19:

(Start: 148 @13744 has 14 MA's), (201, 13825), (222, 13855), (232, 13876), (237, 13888), (265, 13954), (280, 13993), (281, 14005), (290, 14029), (313, 14086), (316, 14089), (330, 14113), (332, 14119), (334, 14122), (349, 14167), (356, 14185), (369, 14221), (417, 14332), (448, 14368), (458, 14395), (460, 14407), (461, 14410), (481, 14452), (487, 14464), (499, 14488), (540, 14542), (583, 14641), (620, 14734), (636, 14761), (642, 14773), (666, 14824), (668, 14839), (705, 14893), (726, 14920), (793, 15082), (794, 15085), (795, 15088), (842, 15205), (862, 15247), (885, 15331), (897, 15376), (902, 15394),

Gene: AvatarAhPeg\_28 Start: 20105, Stop: 21904, Start Num: 144

Candidate Starts for AvatarAhPeg\_28:

(Start: 123 @20081 has 215 MA's), (Start: 144 @20105 has 603 MA's), (Start: 148 @20111 has 14 MA's), (Start: 190 @20165 has 1 MA's), (230, 20234), (263, 20312), (272, 20336), (277, 20348), (278, 20351), (306, 20426), (315, 20441), (338, 20480), (369, 20573), (378, 20597), (417, 20684), (481, 20798), (532, 20924), (553, 20969), (583, 21038), (591, 21062), (595, 21074), (636, 21161), (668, 21254), (675, 21287), (677, 21293), (682, 21308), (729, 21386), (731, 21389), (742, 21410), (813, 21635), (849, 21713), (851, 21716), (860, 21740), (862, 21746), (900, 21881), (909, 21899),

Gene: Avle17\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Avle17\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Avocado\_18 Start: 16914, Stop: 18653, Start Num: 132

Candidate Starts for Avocado\_18:

(Start: 109 @16905 has 26 MA's), (Start: 132 @16914 has 45 MA's), (156, 16944), (197, 17007), (199, 17010), (215, 17028), (230, 17061), (247, 17109), (248, 17112), (309, 17268), (321, 17283), (353, 17373), (369, 17415), (395, 17493), (448, 17589), (454, 17607), (465, 17631), (468, 17637), (487, 17676), (503, 17712), (522, 17757), (564, 17802), (599, 17898), (601, 17907), (629, 17964), (655, 18042), (665, 18069), (691, 18105), (730, 18159), (756, 18222), (767, 18252), (799, 18357), (806, 18381), (826, 18420), (850, 18471), (902, 18627), (904, 18630),

Gene: Avrafan\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Avrafan\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050),



(799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Awesomesauce\_17 Start: 14672, Stop: 16381, Start Num: 123

Candidate Starts for Awesomesauce\_17:

(Start: 123 @14672 has 215 MA's), (193, 14759), (Start: 227 @14804 has 2 MA's), (233, 14828), (271, 14933), (274, 14939), (281, 14957), (284, 14966), (300, 14987), (348, 15092), (370, 15152), (373, 15161), (378, 15173), (381, 15182), (388, 15206), (402, 15242), (403, 15248), (407, 15260), (418, 15281), (420, 15284), (424, 15293), (443, 15308), (448, 15314), (459, 15332), (465, 15347), (468, 15353), (475, 15371), (477, 15374), (484, 15389), (492, 15404), (494, 15410), (511, 15458), (515, 15470), (521, 15476), (564, 15536), (568, 15548), (573, 15557), (583, 15584), (587, 15596), (594, 15617), (614, 15671), (618, 15680), (627, 15704), (638, 15734), (710, 15839), (720, 15851), (737, 15887), (761, 15965), (791, 16064), (799, 16085), (810, 16118), (826, 16148), (836, 16178), (839, 16184), (841, 16187), (844, 16193), (860, 16208), (861, 16211), (865, 16232), (882, 16277), (900, 16349), (901, 16355),

Gene: Axym\_18 Start: 15732, Stop: 17429, Start Num: 144

Candidate Starts for Axym\_18:

(Start: 133 @15729 has 8 MA's), (Start: 144 @15732 has 603 MA's), (264, 15942), (306, 16065), (336, 16116), (365, 16203), (369, 16212), (377, 16233), (382, 16248), (385, 16260), (436, 16338), (442, 16350), (454, 16377), (465, 16410), (481, 16443), (487, 16455), (505, 16497), (574, 16620), (599, 16692), (636, 16770), (643, 16785), (650, 16803), (668, 16860), (731, 16953), (747, 16989), (750, 17001), (752, 17007), (755, 17019), (766, 17028), (791, 17100), (793, 17103), (795, 17109), (799, 17121), (824, 17181), (842, 17226), (847, 17235), (862, 17268), (882, 17334),

Gene: Ayotoya\_22 Start: 18130, Stop: 19836, Start Num: 162

Candidate Starts for Ayotoya\_22:

(Start: 101 @18055 has 2 MA's), (Start: 162 @18130 has 16 MA's), (Start: 227 @18223 has 2 MA's), (230, 18238), (232, 18244), (256, 18319), (283, 18391), (336, 18502), (349, 18547), (356, 18565), (360, 18577), (444, 18748), (449, 18757), (451, 18763), (496, 18859), (514, 18910), (591, 19033), (603, 19072), (653, 19204), (714, 19318), (756, 19405), (792, 19519), (795, 19528), (836, 19633), (878, 19720), (913, 19828),

Gene: Azira\_20 Start: 16710, Stop: 18404, Start Num: 144

Candidate Starts for Azira\_20:

(37, 16299), (41, 16335), (47, 16386), (Start: 144 @16710 has 603 MA's), (Start: 150 @16722 has 4 MA's), (281, 16974), (289, 16995), (290, 16998), (306, 17043), (316, 17058), (349, 17136), (365, 17181), (406, 17283), (436, 17316), (442, 17328), (444, 17331), (465, 17388), (481, 17421), (489, 17436), (513, 17502), (549, 17544), (553, 17553), (574, 17598), (596, 17661), (635, 17742), (643, 17760), (647, 17769), (650, 17778), (668, 17835), (670, 17844), (750, 17976), (766, 18003), (777, 18024), (791, 18075), (793, 18078), (829, 18174), (842, 18201), (847, 18210), (849, 18213), (862, 18243), (865, 18261), (881, 18306), (907, 18396),

Gene: Azula\_21 Start: 16962, Stop: 18611, Start Num: 195

Candidate Starts for Azula\_21:

(172, 16926), (Start: 195 @16962 has 45 MA's), (200, 16971), (244, 17067), (272, 17145), (299, 17217), (308, 17244), (329, 17283), (357, 17364), (377, 17418), (494, 17604), (506, 17634), (563, 17733), (594, 17817), (601, 17841), (626, 17892), (658, 17985), (664, 17997), (694, 18042), (702, 18057), (757, 18189), (758, 18192), (788, 18291), (795, 18309), (813, 18360), (839, 18420), (843, 18426), (877, 18501),

Gene: AzulaCat\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for AzulaCat\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's),  
(143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039),  
(334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369),  
(481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780),  
(665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050),  
(799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: B1\_25 Start: 19592, Stop: 21391, Start Num: 144

Candidate Starts for B1\_25:

(Start: 144 @19592 has 603 MA's), (Start: 190 @19652 has 1 MA's), (230, 19721), (272, 19823), (277,  
19835), (278, 19838), (306, 19913), (315, 19928), (318, 19931), (338, 19967), (384, 20102), (417,  
20171), (481, 20285), (532, 20411), (583, 20525), (584, 20528), (591, 20549), (597, 20567), (636,  
20648), (665, 20723), (668, 20741), (670, 20750), (675, 20774), (677, 20780), (682, 20795), (695,  
20819), (703, 20828), (729, 20873), (731, 20876), (742, 20897), (746, 20909), (813, 21122), (825,  
21146), (860, 21227), (862, 21233), (900, 21368),

Gene: BABullseye\_31 Start: 20049, Stop: 21821, Start Num: 144

Candidate Starts for BABullseye\_31:

(Start: 144 @20049 has 603 MA's), (263, 20247), (278, 20286), (305, 20358), (306, 20361), (318,  
20379), (338, 20415), (341, 20421), (378, 20532), (380, 20538), (392, 20577), (417, 20619), (448,  
20658), (463, 20700), (467, 20703), (495, 20763), (592, 21000), (597, 21015), (636, 21096), (677,  
21228), (750, 21354), (765, 21405), (770, 21414), (781, 21453), (782, 21456), (784, 21468), (813,  
21552), (860, 21657), (862, 21663), (900, 21798),

Gene: BAKA\_34 Start: 27001, Stop: 28999, Start Num: 124

Candidate Starts for BAKA\_34:

(Start: 124 @27001 has 30 MA's), (Start: 191 @27091 has 45 MA's), (222, 27139), (233, 27169), (282,  
27298), (301, 27328), (346, 27427), (358, 27463), (368, 27490), (392, 27562), (395, 27571), (403,  
27592), (448, 27661), (468, 27700), (470, 27703), (475, 27718), (494, 27757), (511, 27805), (515,  
27817), (521, 27823), (552, 27871), (558, 27880), (565, 27901), (573, 27919), (590, 27967), (625,  
28069), (653, 28141), (667, 28186), (669, 28198), (684, 28333), (685, 28339), (686, 28363), (696,  
28435), (708, 28462), (800, 28711),

Gene: BBQValindra\_19 Start: 16628, Stop: 18358, Start Num: 141

Candidate Starts for BBQValindra\_19:

(17, 16001), (20, 16034), (33, 16169), (42, 16271), (46, 16292), (48, 16313), (72, 16508), (113,  
16592), (Start: 141 @16628 has 14 MA's), (281, 16898), (392, 17183), (414, 17225), (445, 17261),  
(458, 17291), (465, 17315), (485, 17357), (499, 17384), (537, 17441), (540, 17447), (579, 17534),  
(697, 17828), (737, 17894), (747, 17918), (752, 17936), (793, 18032), (799, 18050), (864, 18209),  
(888, 18296), (896, 18323),

Gene: BEEST\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for BEEST\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272,  
17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392,  
17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481,  
17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655,  
18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890,  
18886), (901, 18925), (902, 18928), (913, 18946),

Gene: BENtherdunthat\_20 Start: 16428, Stop: 18125, Start Num: 144

Candidate Starts for BENtherdunthat\_20:

(113, 16389), (Start: 144 @16428 has 603 MA's), (Start: 150 @16440 has 4 MA's), (202, 16518), (219, 16539), (240, 16587), (243, 16596), (263, 16638), (277, 16674), (295, 16731), (302, 16752), (316, 16779), (331, 16806), (382, 16947), (406, 17004), (432, 17031), (436, 17037), (458, 17085), (469, 17115), (485, 17151), (499, 17178), (500, 17181), (517, 17232), (547, 17259), (549, 17262), (561, 17289), (574, 17316), (599, 17388), (618, 17427), (649, 17481), (664, 17523), (683, 17598), (736, 17661), (747, 17688), (752, 17706), (788, 17790), (791, 17799), (793, 17802), (795, 17808), (801, 17823), (811, 17853), (814, 17859), (824, 17880), (825, 17883), (849, 17937), (862, 17967), (863, 17976), (879, 18027), (887, 18060), (891, 18072), (896, 18090),

Gene: BGIlluviae\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for BGIlluviae\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: BK1\_25 Start: 20661, Stop: 22463, Start Num: 146

Candidate Starts for BK1\_25:

(Start: 146 @20661 has 223 MA's), (Start: 161 @20682 has 4 MA's), (Start: 190 @20724 has 1 MA's), (216, 20769), (306, 20985), (332, 21030), (338, 21039), (349, 21078), (368, 21129), (369, 21132), (467, 21327), (500, 21396), (579, 21585), (583, 21597), (584, 21600), (591, 21621), (635, 21717), (636, 21720), (638, 21726), (665, 21795), (668, 21813), (670, 21822), (677, 21852), (731, 21948), (746, 21981), (750, 21996), (793, 22137), (813, 22194), (862, 22305),

Gene: BPBiabs31\_28 Start: 21364, Stop: 23166, Start Num: 146

Candidate Starts for BPBiabs31\_28:

(Start: 146 @21364 has 223 MA's), (Start: 161 @21385 has 4 MA's), (Start: 190 @21427 has 1 MA's), (216, 21472), (306, 21688), (332, 21733), (338, 21742), (349, 21781), (368, 21832), (369, 21835), (406, 21928), (467, 22030), (500, 22099), (583, 22300), (584, 22303), (591, 22324), (635, 22420), (636, 22423), (638, 22429), (665, 22498), (668, 22516), (670, 22525), (677, 22555), (731, 22651), (746, 22684), (750, 22699), (793, 22840), (813, 22897), (862, 23008),

Gene: BPs\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for BPs\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: BQuat\_18 Start: 16631, Stop: 18394, Start Num: 109

Candidate Starts for BQuat\_18:

(Start: 109 @16631 has 26 MA's), (Start: 132 @16640 has 45 MA's), (Start: 137 @16646 has 2 MA's), (143, 16652), (230, 16784), (248, 16835), (258, 16865), (269, 16889), (309, 16991), (331, 17030), (334, 17036), (341, 17051), (353, 17096), (395, 17216), (425, 17273), (448, 17312), (468, 17360), (481, 17387), (487, 17399), (522, 17480), (564, 17525), (641, 17723), (649, 17753), (655, 17771), (665, 17798), (716, 17882), (730, 17900), (743, 17915), (756, 17963), (760, 17978), (782, 18041), (799, 18098), (813, 18137), (831, 18179), (863, 18230), (890, 18326), (913, 18386),

Gene: BabeRuth\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for BabeRuth\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: BaboJay\_23 Start: 19296, Stop: 20975, Start Num: 129

Candidate Starts for BaboJay\_23:

(Start: 129 @19296 has 79 MA's), (Start: 191 @19380 has 45 MA's), (Start: 235 @19458 has 1 MA's), (268, 19545), (274, 19560), (300, 19608), (324, 19647), (356, 19734), (368, 19767), (381, 19803), (390, 19833), (392, 19839), (422, 19908), (461, 19938), (466, 19950), (468, 19953), (494, 20010), (565, 20142), (567, 20148), (592, 20214), (594, 20220), (601, 20244), (618, 20292), (627, 20316), (631, 20325), (658, 20400), (717, 20451), (725, 20466), (782, 20628), (788, 20655), (799, 20685), (843, 20790), (880, 20868), (887, 20904), (890, 20913), (900, 20946), (907, 20961),

Gene: Babsiella\_19 Start: 16430, Stop: 18163, Start Num: 131

Candidate Starts for Babsiella\_19:

(Start: 131 @16430 has 6 MA's), (206, 16529), (213, 16538), (241, 16604), (250, 16628), (272, 16688), (274, 16691), (284, 16718), (367, 16898), (377, 16922), (381, 16934), (388, 16958), (459, 17084), (465, 17099), (470, 17108), (486, 17144), (494, 17162), (515, 17222), (608, 17414), (614, 17423), (618, 17432), (627, 17456), (717, 17600), (740, 17645), (773, 17747), (775, 17756), (779, 17774), (781, 17777), (836, 17936), (846, 17954), (860, 17990), (863, 18005), (880, 18053), (897, 18122),

Gene: Baby16\_27 Start: 19836, Stop: 21614, Start Num: 144

Candidate Starts for Baby16\_27:

(Start: 123 @19812 has 215 MA's), (Start: 144 @19836 has 603 MA's), (Start: 190 @19893 has 1 MA's), (222, 19947), (230, 19962), (236, 19980), (272, 20064), (277, 20076), (278, 20079), (306, 20154), (315, 20169), (338, 20208), (378, 20325), (417, 20412), (463, 20493), (489, 20541), (500, 20565), (532, 20652), (553, 20697), (584, 20769), (591, 20790), (597, 20808), (636, 20889), (668, 20982), (670, 20991), (675, 21015), (677, 21021), (687, 21045), (731, 21099), (742, 21120), (756, 21171), (763, 21195), (782, 21249), (813, 21345), (860, 21450), (863, 21465), (894, 21573), (900, 21591),

Gene: BabyBack\_30 Start: 21767, Stop: 23563, Start Num: 123

Candidate Starts for BabyBack\_30:

(Start: 123 @21767 has 215 MA's), (Start: 144 @21791 has 603 MA's), (277, 22025), (278, 22028), (306, 22103), (318, 22121), (341, 22163), (378, 22274), (392, 22319), (417, 22361), (463, 22442), (467, 22445), (532, 22601), (546, 22631), (583, 22715), (584, 22718), (636, 22838), (675, 22964), (677, 22970), (713, 23018), (737, 23060), (742, 23069), (750, 23096), (756, 23120), (759, 23132), (781, 23195), (782, 23198), (784, 23210), (813, 23294), (860, 23399), (862, 23405), (865, 23423), (877, 23459), (900, 23540),

Gene: BabyJohn\_26 Start: 20176, Stop: 21975, Start Num: 144

Candidate Starts for BabyJohn\_26:

(Start: 144 @20176 has 603 MA's), (Start: 190 @20236 has 1 MA's), (230, 20305), (272, 20407), (277, 20419), (278, 20422), (306, 20497), (315, 20512), (318, 20515), (338, 20551), (384, 20686), (417, 20755), (481, 20869), (532, 20995), (583, 21109), (584, 21112), (591, 21133), (597, 21151), (636, 21232), (665, 21307), (668, 21325), (670, 21334), (675, 21358), (677, 21364), (682, 21379), (703,

21412), (729, 21457), (731, 21460), (742, 21481), (746, 21493), (813, 21706), (825, 21730), (860, 21811), (862, 21817), (892, 21928), (900, 21952),

Gene: BabyRay\_27 Start: 20152, Stop: 21951, Start Num: 144

Candidate Starts for BabyRay\_27:

(Start: 144 @20152 has 603 MA's), (Start: 190 @20212 has 1 MA's), (230, 20281), (272, 20383), (277, 20395), (278, 20398), (306, 20473), (315, 20488), (318, 20491), (338, 20527), (384, 20662), (417, 20731), (481, 20845), (532, 20971), (583, 21085), (584, 21088), (591, 21109), (597, 21127), (636, 21208), (665, 21283), (668, 21301), (670, 21310), (675, 21334), (677, 21340), (682, 21355), (703, 21388), (729, 21433), (731, 21436), (742, 21457), (746, 21469), (813, 21682), (825, 21706), (860, 21787), (862, 21793), (880, 21853), (900, 21928),

Gene: Bachita\_50 Start: 30042, Stop: 31733, Start Num: 146

Candidate Starts for Bachita\_50:

(Start: 146 @30042 has 223 MA's), (188, 30102), (206, 30135), (228, 30168), (271, 30294), (282, 30327), (286, 30336), (349, 30465), (366, 30513), (494, 30726), (498, 30732), (506, 30756), (576, 30885), (583, 30906), (594, 30939), (658, 31137), (758, 31290), (788, 31389), (793, 31401), (796, 31410), (829, 31494), (888, 31641), (898, 31677), (902, 31689),

Gene: Bachome\_28 Start: 20746, Stop: 22545, Start Num: 144

Candidate Starts for Bachome\_28:

(94, 20680), (Start: 123 @20722 has 215 MA's), (Start: 144 @20746 has 603 MA's), (183, 20788), (236, 20884), (242, 20899), (277, 20980), (278, 20983), (306, 21058), (315, 21073), (338, 21112), (341, 21118), (378, 21229), (380, 21235), (417, 21316), (467, 21400), (518, 21526), (535, 21562), (597, 21712), (631, 21778), (635, 21790), (636, 21793), (703, 21982), (721, 22009), (736, 22039), (737, 22042), (746, 22063), (750, 22078), (756, 22102), (781, 22177), (784, 22192), (813, 22276), (860, 22381), (862, 22387), (877, 22441), (909, 22540),

Gene: BackstagePass\_19 Start: 16768, Stop: 18498, Start Num: 141

Candidate Starts for BackstagePass\_19:

(72, 16648), (113, 16732), (Start: 141 @16768 has 14 MA's), (222, 16888), (272, 17005), (281, 17038), (316, 17122), (392, 17323), (414, 17365), (445, 17401), (458, 17431), (465, 17455), (485, 17497), (499, 17524), (537, 17581), (540, 17587), (579, 17674), (697, 17968), (737, 18034), (747, 18058), (752, 18076), (793, 18172), (799, 18190), (864, 18349), (888, 18436), (896, 18463),

Gene: Backyardigan\_27 Start: 19835, Stop: 21634, Start Num: 144

Candidate Starts for Backyardigan\_27:

(Start: 123 @19811 has 215 MA's), (Start: 144 @19835 has 603 MA's), (Start: 148 @19841 has 14 MA's), (Start: 190 @19895 has 1 MA's), (230, 19964), (263, 20042), (272, 20066), (278, 20081), (292, 20117), (306, 20156), (315, 20171), (338, 20210), (369, 20303), (378, 20327), (417, 20414), (481, 20528), (500, 20567), (532, 20654), (553, 20699), (583, 20768), (591, 20792), (595, 20804), (636, 20891), (665, 20966), (668, 20984), (670, 20993), (675, 21017), (677, 21023), (682, 21038), (703, 21071), (729, 21116), (731, 21119), (742, 21140), (813, 21365), (849, 21443), (860, 21470), (862, 21476), (900, 21611),

Gene: BaconJack\_29 Start: 21344, Stop: 23146, Start Num: 146

Candidate Starts for BaconJack\_29:

(Start: 146 @21344 has 223 MA's), (Start: 161 @21365 has 4 MA's), (Start: 190 @21407 has 1 MA's), (216, 21452), (306, 21668), (332, 21713), (338, 21722), (349, 21761), (368, 21812), (369, 21815), (467, 22010), (500, 22079), (583, 22280), (584, 22283), (591, 22304), (635, 22400), (636, 22403), (638, 22409), (665, 22478), (668, 22496), (670, 22505), (677, 22535), (731, 22631), (746, 22664), (750, 22679), (793, 22820), (813, 22877), (862, 22988),

Gene: Bactobuster\_29 Start: 21784, Stop: 23556, Start Num: 144

Candidate Starts for Bactobuster\_29:

(Start: 123 @21760 has 215 MA's), (Start: 144 @21784 has 603 MA's), (Start: 235 @21919 has 1 MA's), (242, 21937), (277, 22018), (278, 22021), (305, 22093), (306, 22096), (356, 22207), (365, 22234), (378, 22267), (392, 22312), (417, 22354), (467, 22438), (532, 22594), (547, 22627), (631, 22816), (636, 22831), (675, 22957), (677, 22963), (746, 23074), (750, 23089), (752, 23095), (756, 23113), (770, 23149), (781, 23188), (784, 23203), (860, 23392), (862, 23398), (865, 23416), (873, 23443),

Gene: BadStone\_23 Start: 19745, Stop: 21424, Start Num: 129

Candidate Starts for BadStone\_23:

(Start: 129 @19745 has 79 MA's), (Start: 191 @19829 has 45 MA's), (Start: 235 @19907 has 1 MA's), (268, 19994), (274, 20009), (300, 20057), (324, 20096), (356, 20183), (368, 20216), (381, 20252), (390, 20282), (392, 20288), (422, 20357), (461, 20387), (466, 20399), (468, 20402), (494, 20459), (565, 20591), (567, 20597), (592, 20663), (594, 20669), (601, 20693), (618, 20741), (627, 20765), (631, 20774), (658, 20849), (717, 20900), (725, 20915), (782, 21077), (788, 21104), (799, 21134), (843, 21239), (880, 21317), (887, 21353), (890, 21362), (900, 21395), (907, 21410),

Gene: Baddon\_34 Start: 30732, Stop: 32495, Start Num: 97

Candidate Starts for Baddon\_34:

(Start: 97 @30732 has 73 MA's), (Start: 121 @30768 has 1 MA's), (211, 30897), (219, 30906), (262, 31002), (265, 31011), (288, 31080), (306, 31131), (311, 31140), (332, 31176), (341, 31191), (345, 31209), (368, 31272), (384, 31317), (386, 31326), (458, 31446), (461, 31461), (472, 31485), (487, 31515), (597, 31737), (607, 31755), (613, 31770), (635, 31812), (636, 31815), (647, 31842), (688, 31962), (736, 32025), (793, 32166), (794, 32169), (810, 32217), (824, 32244), (832, 32271), (860, 32325), (866, 32352),

Gene: Badger\_27 Start: 19824, Stop: 21623, Start Num: 144

Candidate Starts for Badger\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 148 @19830 has 14 MA's), (Start: 190 @19884 has 1 MA's), (230, 19953), (263, 20031), (272, 20055), (278, 20070), (292, 20106), (306, 20145), (315, 20160), (338, 20199), (369, 20292), (378, 20316), (417, 20403), (481, 20517), (500, 20556), (532, 20643), (553, 20688), (583, 20757), (591, 20781), (595, 20793), (636, 20880), (665, 20955), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (682, 21027), (703, 21060), (729, 21105), (731, 21108), (742, 21129), (813, 21354), (849, 21432), (860, 21459), (862, 21465), (900, 21600),

Gene: Baehexic\_29 Start: 20675, Stop: 22447, Start Num: 144

Candidate Starts for Baehexic\_29:

(Start: 123 @20651 has 215 MA's), (Start: 144 @20675 has 603 MA's), (Start: 235 @20810 has 1 MA's), (277, 20909), (278, 20912), (305, 20984), (306, 20987), (338, 21041), (341, 21047), (360, 21110), (378, 21158), (417, 21245), (463, 21326), (467, 21329), (481, 21359), (532, 21485), (546, 21515), (584, 21602), (636, 21722), (674, 21845), (675, 21848), (677, 21854), (713, 21902), (746, 21965), (750, 21980), (752, 21986), (770, 22040), (781, 22079), (784, 22094), (795, 22127), (810, 22172), (860, 22283), (862, 22289), (877, 22343),

Gene: BaghaKamala\_23 Start: 17117, Stop: 18883, Start Num: 114

Candidate Starts for BaghaKamala\_23:

(Start: 114 @17117 has 139 MA's), (140, 17147), (236, 17306), (248, 17339), (258, 17369), (272, 17402), (278, 17414), (316, 17504), (337, 17546), (360, 17618), (362, 17627), (378, 17666), (392, 17711), (400, 17732), (403, 17735), (438, 17789), (448, 17807), (465, 17849), (468, 17855), (481, 17882), (564, 18020), (572, 18038), (587, 18080), (593, 18098), (603, 18128), (618, 18155), (655, 18260), (748, 18419), (757, 18455), (768, 18485), (772, 18494), (793, 18569), (810, 18620), (890,

18815), (901, 18854), (902, 18857), (913, 18875),

Gene: Bakery\_32 Start: 25768, Stop: 27534, Start Num: 97

Candidate Starts for Bakery\_32:

(80, 25726), (90, 25756), (Start: 97 @25768 has 73 MA's), (Start: 121 @25804 has 1 MA's), (Start: 141 @25828 has 14 MA's), (Start: 148 @25837 has 14 MA's), (240, 25993), (241, 25996), (264, 26047), (265, 26050), (277, 26080), (288, 26119), (306, 26170), (311, 26179), (331, 26212), (386, 26365), (406, 26404), (445, 26455), (451, 26467), (458, 26485), (460, 26497), (465, 26509), (472, 26524), (487, 26554), (489, 26557), (499, 26578), (568, 26698), (613, 26809), (632, 26842), (649, 26884), (670, 26956), (707, 27022), (793, 27205), (794, 27208), (810, 27256), (824, 27283), (832, 27310), (860, 27364), (891, 27481), (897, 27502), (909, 27529),

Gene: Balomoji\_23 Start: 19479, Stop: 21158, Start Num: 129

Candidate Starts for Balomoji\_23:

(Start: 129 @19479 has 79 MA's), (Start: 191 @19563 has 45 MA's), (Start: 235 @19641 has 1 MA's), (268, 19728), (274, 19743), (300, 19791), (324, 19830), (356, 19917), (368, 19950), (381, 19986), (390, 20016), (392, 20022), (422, 20091), (461, 20121), (466, 20133), (468, 20136), (494, 20193), (565, 20325), (567, 20331), (592, 20397), (594, 20403), (601, 20427), (618, 20475), (627, 20499), (631, 20508), (658, 20583), (717, 20634), (725, 20649), (782, 20811), (788, 20838), (799, 20868), (843, 20973), (880, 21051), (887, 21087), (890, 21096), (900, 21129), (907, 21144),

Gene: BangNhom\_27 Start: 20138, Stop: 21919, Start Num: 144

Candidate Starts for BangNhom\_27:

(Start: 123 @20114 has 215 MA's), (Start: 144 @20138 has 603 MA's), (Start: 148 @20144 has 14 MA's), (Start: 190 @20198 has 1 MA's), (197, 20213), (230, 20267), (236, 20285), (272, 20369), (277, 20381), (278, 20384), (306, 20459), (315, 20474), (338, 20513), (378, 20630), (417, 20717), (463, 20798), (489, 20846), (500, 20870), (532, 20957), (553, 21002), (584, 21074), (591, 21095), (597, 21113), (636, 21194), (665, 21269), (668, 21287), (670, 21296), (675, 21320), (677, 21326), (687, 21350), (726, 21392), (731, 21404), (742, 21425), (756, 21476), (763, 21500), (782, 21554), (813, 21650), (860, 21755), (863, 21770), (894, 21878), (900, 21896),

Gene: Banquo\_26 Start: 17827, Stop: 19155, Start Num: 257

Candidate Starts for Banquo\_26:

(Start: 257 @17827 has 11 MA's), (268, 17845), (314, 17953), (353, 18043), (364, 18076), (383, 18133), (388, 18151), (391, 18160), (399, 18181), (405, 18190), (421, 18223), (447, 18256), (516, 18319), (531, 18349), (536, 18358), (548, 18367), (554, 18376), (621, 18496), (636, 18523), (653, 18568), (664, 18598), (670, 18628), (729, 18700), (746, 18733), (749, 18739), (819, 18910), (849, 18961), (877, 19045), (881, 19054), (884, 19072), (908, 19144),

Gene: Bantam\_30 Start: 27105, Stop: 28868, Start Num: 148

Candidate Starts for Bantam\_30:

(72, 26973), (Start: 148 @27105 has 14 MA's), (188, 27162), (255, 27315), (284, 27390), (349, 27522), (366, 27570), (395, 27654), (468, 27816), (470, 27819), (490, 27861), (494, 27873), (498, 27879), (521, 27939), (525, 27945), (587, 28065), (598, 28098), (612, 28146), (658, 28272), (725, 28338), (788, 28524), (793, 28536), (824, 28614), (848, 28668), (914, 28860),

Gene: Barb\_33 Start: 26575, Stop: 28341, Start Num: 97

Candidate Starts for Barb\_33:

(80, 26533), (Start: 97 @26575 has 73 MA's), (Start: 121 @26611 has 1 MA's), (Start: 148 @26644 has 14 MA's), (264, 26854), (265, 26857), (277, 26887), (298, 26953), (306, 26977), (311, 26986), (331, 27019), (386, 27172), (406, 27211), (445, 27262), (451, 27274), (458, 27292), (460, 27304), (465, 27316), (472, 27331), (487, 27361), (489, 27364), (499, 27385), (547, 27457), (568, 27505), (613, 27616), (632, 27649), (649, 27691), (670, 27763), (707, 27829), (715, 27841), (793, 28012),

(794, 28015), (810, 28063), (824, 28090), (832, 28117), (860, 28171), (891, 28288), (897, 28309), (909, 28336),

Gene: Barbarian\_23 Start: 18698, Stop: 20293, Start Num: 191

Candidate Starts for Barbarian\_23:

(Start: 129 @18614 has 79 MA's), (Start: 191 @18698 has 45 MA's), (Start: 235 @18776 has 1 MA's), (268, 18863), (274, 18878), (300, 18926), (324, 18965), (356, 19052), (360, 19064), (368, 19085), (381, 19121), (390, 19151), (392, 19157), (422, 19226), (461, 19256), (466, 19268), (468, 19271), (494, 19328), (565, 19460), (567, 19466), (592, 19532), (594, 19538), (601, 19562), (618, 19610), (627, 19634), (631, 19643), (658, 19718), (717, 19769), (725, 19784), (782, 19946), (788, 19973), (799, 20003), (843, 20108), (880, 20186), (887, 20222), (890, 20231), (900, 20264), (907, 20279),

Gene: Barco\_19 Start: 16650, Stop: 18296, Start Num: 195

Candidate Starts for Barco\_19:

(172, 16614), (Start: 195 @16650 has 45 MA's), (244, 16752), (272, 16830), (274, 16833), (308, 16929), (329, 16968), (357, 17049), (377, 17103), (382, 17118), (494, 17289), (506, 17319), (594, 17502), (601, 17526), (602, 17529), (626, 17577), (658, 17670), (664, 17682), (694, 17727), (702, 17742), (757, 17874), (758, 17877), (788, 17976), (795, 17994), (813, 18045), (843, 18111), (872, 18174), (877, 18186),

Gene: Barkley26\_18 Start: 16652, Stop: 18406, Start Num: 132

Candidate Starts for Barkley26\_18:

(55, 16439), (Start: 109 @16643 has 26 MA's), (Start: 132 @16652 has 45 MA's), (Start: 137 @16658 has 2 MA's), (143, 16664), (197, 16742), (230, 16796), (248, 16847), (258, 16877), (269, 16901), (278, 16922), (309, 17003), (331, 17042), (334, 17048), (341, 17063), (353, 17108), (395, 17228), (425, 17285), (448, 17324), (465, 17366), (468, 17372), (481, 17399), (487, 17411), (522, 17492), (564, 17537), (583, 17585), (641, 17735), (649, 17765), (655, 17783), (665, 17810), (730, 17912), (743, 17927), (756, 17975), (760, 17990), (782, 18053), (799, 18110), (813, 18149), (831, 18191), (863, 18242), (890, 18338), (913, 18398),

Gene: BarrelRoll\_23 Start: 17140, Stop: 18906, Start Num: 114

Candidate Starts for BarrelRoll\_23:

(Start: 114 @17140 has 139 MA's), (140, 17170), (236, 17329), (248, 17362), (258, 17392), (272, 17425), (278, 17437), (316, 17527), (337, 17569), (360, 17641), (362, 17650), (378, 17689), (392, 17734), (400, 17755), (403, 17758), (438, 17812), (448, 17830), (465, 17872), (468, 17878), (481, 17905), (564, 18043), (572, 18061), (587, 18103), (593, 18121), (603, 18151), (618, 18178), (655, 18283), (748, 18442), (757, 18478), (768, 18508), (772, 18517), (793, 18592), (810, 18643), (890, 18838), (901, 18877), (902, 18880), (913, 18898),

Gene: Barriga\_27 Start: 20952, Stop: 22754, Start Num: 146

Candidate Starts for Barriga\_27:

(Start: 146 @20952 has 223 MA's), (Start: 161 @20973 has 4 MA's), (Start: 190 @21015 has 1 MA's), (216, 21060), (306, 21276), (332, 21321), (338, 21330), (349, 21369), (368, 21420), (369, 21423), (467, 21618), (500, 21687), (519, 21747), (583, 21888), (584, 21891), (591, 21912), (635, 22008), (636, 22011), (638, 22017), (665, 22086), (668, 22104), (670, 22113), (677, 22143), (731, 22239), (746, 22272), (750, 22287), (793, 22428), (813, 22485), (862, 22596),

Gene: Barsten\_35 Start: 30283, Stop: 32046, Start Num: 97

Candidate Starts for Barsten\_35:

(90, 30265), (Start: 97 @30283 has 73 MA's), (Start: 121 @30319 has 1 MA's), (219, 30457), (262, 30553), (265, 30562), (288, 30631), (306, 30682), (332, 30727), (341, 30742), (368, 30823), (384, 30868), (386, 30877), (445, 30967), (458, 30997), (461, 31012), (472, 31036), (487, 31066), (551, 31171), (597, 31288), (607, 31306), (613, 31321), (631, 31351), (635, 31363), (636, 31366), (647,



31393), (793, 31717), (794, 31720), (810, 31768), (824, 31795), (832, 31822), (860, 31876), (866, 31903), (902, 32032),

Gene: Bartholomew\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Bartholomew\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Bartimeaus\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Bartimeaus\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Bask21\_24 Start: 19009, Stop: 20604, Start Num: 191

Candidate Starts for Bask21\_24:

(Start: 129 @18925 has 79 MA's), (Start: 191 @19009 has 45 MA's), (Start: 235 @19087 has 1 MA's), (268, 19174), (274, 19189), (300, 19237), (324, 19276), (356, 19363), (368, 19396), (381, 19432), (390, 19462), (392, 19468), (422, 19537), (461, 19567), (466, 19579), (468, 19582), (494, 19639), (565, 19771), (567, 19777), (592, 19843), (594, 19849), (601, 19873), (618, 19921), (627, 19945), (631, 19954), (658, 20029), (717, 20080), (725, 20095), (782, 20257), (788, 20284), (799, 20314), (843, 20419), (880, 20497), (887, 20533), (890, 20542), (900, 20575), (907, 20590),

Gene: BatStarr\_19 Start: 17764, Stop: 19362, Start Num: 170

Candidate Starts for BatStarr\_19:

(Start: 170 @17764 has 87 MA's), (298, 18022), (306, 18040), (307, 18043), (340, 18097), (363, 18172), (385, 18241), (388, 18250), (392, 18262), (415, 18313), (435, 18340), (440, 18349), (441, 18352), (501, 18385), (519, 18442), (554, 18508), (603, 18619), (618, 18643), (636, 18679), (669, 18781), (687, 18838), (751, 18928), (849, 19168), (874, 19246),

Gene: Batiatus\_16 Start: 14857, Stop: 16566, Start Num: 123

Candidate Starts for Batiatus\_16:

(Start: 123 @14857 has 215 MA's), (193, 14944), (Start: 227 @14989 has 2 MA's), (233, 15013), (271, 15118), (274, 15124), (281, 15142), (300, 15172), (348, 15277), (370, 15337), (378, 15358), (381, 15367), (388, 15391), (403, 15433), (459, 15517), (465, 15532), (468, 15538), (484, 15574), (486, 15577), (492, 15589), (494, 15595), (511, 15643), (515, 15655), (521, 15661), (564, 15721), (568, 15733), (583, 15769), (587, 15781), (614, 15856), (618, 15865), (625, 15883), (627, 15889), (638, 15919), (710, 16024), (717, 16033), (720, 16036), (737, 16072), (761, 16150), (791, 16249), (799, 16270), (810, 16303), (826, 16333), (836, 16363), (841, 16372), (844, 16378), (860, 16393), (861, 16396), (866, 16420), (877, 16450), (882, 16462), (887, 16492), (900, 16534),

Gene: Battleship\_31 Start: 19208, Stop: 20995, Start Num: 144

Candidate Starts for Battleship\_31:

(94, 19142), (Start: 123 @19184 has 215 MA's), (Start: 144 @19208 has 603 MA's), (236, 19346), (262, 19403), (278, 19445), (292, 19481), (306, 19520), (343, 19589), (349, 19613), (369, 19667), (448, 19817), (467, 19862), (481, 19892), (499, 19928), (515, 19979), (530, 20015), (553, 20063), (580, 20123), (635, 20252), (665, 20330), (750, 20531), (752, 20537), (782, 20633), (845, 20798), (880, 20897),

Gene: Baumdotcom\_34 Start: 29556, Stop: 31319, Start Num: 97

Candidate Starts for Baumdotcom\_34:

(Start: 97 @29556 has 73 MA's), (Start: 121 @29592 has 1 MA's), (211, 29721), (219, 29730), (262, 29826), (265, 29835), (288, 29904), (306, 29955), (311, 29964), (332, 30000), (341, 30015), (345, 30033), (368, 30096), (384, 30141), (386, 30150), (454, 30261), (458, 30270), (461, 30285), (472, 30309), (487, 30339), (597, 30561), (607, 30579), (613, 30594), (635, 30636), (636, 30639), (647, 30666), (688, 30786), (736, 30849), (793, 30990), (794, 30993), (810, 31041), (824, 31068), (832, 31095), (860, 31149), (866, 31176), (891, 31266), (909, 31314),

Gene: BaxterFox\_18 Start: 17103, Stop: 18701, Start Num: 170

Candidate Starts for BaxterFox\_18:

(Start: 170 @17103 has 87 MA's), (298, 17361), (306, 17379), (307, 17382), (340, 17436), (363, 17511), (385, 17580), (388, 17589), (392, 17601), (397, 17613), (415, 17652), (435, 17679), (440, 17688), (441, 17691), (501, 17724), (519, 17781), (554, 17847), (603, 17958), (636, 18018), (669, 18120), (687, 18177), (751, 18267), (849, 18507), (874, 18585),

Gene: Beakin\_17 Start: 14663, Stop: 16372, Start Num: 123

Candidate Starts for Beakin\_17:

(Start: 123 @14663 has 215 MA's), (193, 14750), (Start: 227 @14795 has 2 MA's), (233, 14819), (271, 14924), (274, 14930), (281, 14948), (300, 14978), (348, 15083), (370, 15143), (378, 15164), (381, 15173), (386, 15191), (388, 15197), (418, 15272), (459, 15323), (465, 15338), (468, 15344), (484, 15380), (486, 15383), (492, 15395), (494, 15401), (511, 15449), (515, 15461), (521, 15467), (564, 15527), (568, 15539), (583, 15575), (587, 15587), (614, 15662), (618, 15671), (625, 15689), (627, 15695), (638, 15725), (710, 15830), (717, 15839), (720, 15842), (737, 15878), (761, 15956), (791, 16055), (799, 16076), (810, 16109), (826, 16139), (836, 16169), (841, 16178), (844, 16184), (860, 16199), (861, 16202), (866, 16226), (877, 16256), (882, 16268), (887, 16298), (900, 16340),

Gene: BearBQ\_19 Start: 17400, Stop: 19109, Start Num: 111

Candidate Starts for BearBQ\_19:

(Start: 111 @17400 has 24 MA's), (Start: 118 @17412 has 8 MA's), (Start: 121 @17415 has 1 MA's), (Start: 194 @17517 has 1 MA's), (216, 17553), (243, 17619), (290, 17712), (311, 17763), (319, 17772), (332, 17790), (347, 17832), (349, 17838), (358, 17862), (359, 17868), (365, 17886), (384, 17937), (385, 17943), (395, 17973), (433, 18015), (449, 18042), (458, 18066), (481, 18117), (482, 18120), (497, 18150), (579, 18300), (647, 18462), (668, 18528), (670, 18537), (672, 18549), (674, 18558), (739, 18651), (747, 18672), (750, 18684), (752, 18690), (754, 18699), (755, 18702), (783, 18756), (793, 18786), (818, 18855), (860, 18942), (862, 18948), (876, 18999), (900, 19086), (909, 19104),

Gene: Beatrix\_27 Start: 22534, Stop: 24336, Start Num: 146

Candidate Starts for Beatrix\_27:

(Start: 146 @22534 has 223 MA's), (Start: 161 @22555 has 4 MA's), (Start: 190 @22597 has 1 MA's), (216, 22642), (306, 22858), (332, 22903), (338, 22912), (349, 22951), (368, 23002), (369, 23005), (467, 23200), (500, 23269), (583, 23470), (584, 23473), (591, 23494), (635, 23590), (636, 23593), (638, 23599), (665, 23668), (668, 23686), (670, 23695), (677, 23725), (731, 23821), (746, 23854), (750, 23869), (793, 24010), (813, 24067), (862, 24178),

Gene: Beauxregard13\_29 Start: 20379, Stop: 22175, Start Num: 144

Candidate Starts for Beauxregard13\_29:

(Start: 144 @20379 has 603 MA's), (Start: 190 @20436 has 1 MA's), (197, 20451), (219, 20484), (230, 20505), (Start: 235 @20520 has 1 MA's), (272, 20607), (277, 20619), (278, 20622), (306, 20697), (315, 20712), (336, 20748), (417, 20955), (481, 21069), (500, 21108), (532, 21195), (583, 21309), (591, 21333), (597, 21351), (636, 21432), (665, 21507), (668, 21525), (675, 21558), (677, 21564), (695, 21603), (729, 21657), (731, 21660), (742, 21681), (758, 21738), (813, 21906), (860, 22011), (862, 22017), (900, 22152),

Gene: BeeGee\_20 Start: 17530, Stop: 19236, Start Num: 111

Candidate Starts for BeeGee\_20:

(Start: 95 @17506 has 1 MA's), (Start: 111 @17530 has 24 MA's), (192, 17635), (217, 17677), (251, 17752), (303, 17866), (365, 18013), (368, 18019), (384, 18064), (459, 18202), (497, 18277), (635, 18559), (644, 18580), (668, 18655), (715, 18742), (739, 18778), (750, 18811), (752, 18817), (783, 18883), (793, 18913), (860, 19069), (862, 19075), (865, 19093), (897, 19204),

Gene: Beemo\_30 Start: 21783, Stop: 23573, Start Num: 144

Candidate Starts for Beemo\_30:

(Start: 141 @21780 has 14 MA's), (Start: 144 @21783 has 603 MA's), (277, 22017), (278, 22020), (305, 22092), (306, 22095), (315, 22110), (338, 22149), (341, 22155), (378, 22266), (417, 22353), (463, 22434), (467, 22437), (546, 22623), (576, 22686), (584, 22710), (586, 22716), (597, 22749), (636, 22830), (675, 22956), (693, 22998), (731, 23058), (746, 23091), (750, 23106), (781, 23205), (782, 23208), (784, 23220), (813, 23304), (842, 23370), (860, 23409), (862, 23415), (873, 23460), (890, 23517), (891, 23520),

Gene: Beenie\_20 Start: 17703, Stop: 19283, Start Num: 170

Candidate Starts for Beenie\_20:

(88, 17586), (Start: 170 @17703 has 87 MA's), (298, 17961), (307, 17982), (340, 18036), (351, 18075), (369, 18132), (377, 18153), (501, 18324), (507, 18342), (514, 18366), (521, 18387), (554, 18429), (592, 18510), (636, 18600), (653, 18645), (669, 18702), (670, 18705), (687, 18759), (751, 18849), (863, 19128), (865, 19137), (874, 19167),

Gene: BeesKnees\_28 Start: 21151, Stop: 22953, Start Num: 146

Candidate Starts for BeesKnees\_28:

(Start: 146 @21151 has 223 MA's), (Start: 161 @21172 has 4 MA's), (Start: 190 @21214 has 1 MA's), (216, 21259), (306, 21475), (332, 21520), (338, 21529), (349, 21568), (368, 21619), (369, 21622), (467, 21817), (500, 21886), (583, 22087), (584, 22090), (591, 22111), (635, 22207), (636, 22210), (638, 22216), (665, 22285), (668, 22303), (670, 22312), (677, 22342), (731, 22438), (746, 22471), (750, 22486), (793, 22627), (813, 22684), (862, 22795),

Gene: Beezoo\_23 Start: 17164, Stop: 18930, Start Num: 114

Candidate Starts for Beezoo\_23:

(Start: 114 @17164 has 139 MA's), (140, 17194), (236, 17353), (248, 17386), (258, 17416), (272, 17449), (278, 17461), (316, 17551), (337, 17593), (360, 17665), (362, 17674), (378, 17713), (392, 17758), (400, 17779), (403, 17782), (438, 17836), (448, 17854), (465, 17896), (468, 17902), (481, 17929), (564, 18067), (572, 18085), (587, 18127), (593, 18145), (603, 18175), (618, 18202), (655, 18307), (748, 18466), (757, 18502), (772, 18541), (793, 18616), (810, 18667), (890, 18862), (901, 18901), (902, 18904), (913, 18922),

Gene: Begonia\_20 Start: 17128, Stop: 18774, Start Num: 195

Candidate Starts for Begonia\_20:

(172, 17092), (Start: 195 @17128 has 45 MA's), (244, 17230), (272, 17308), (308, 17407), (329, 17446), (357, 17527), (377, 17581), (382, 17596), (494, 17767), (506, 17797), (594, 17980), (601, 18004), (626, 18055), (658, 18148), (664, 18160), (694, 18205), (702, 18220), (757, 18352), (758,

18355), (788, 18454), (795, 18472), (813, 18523), (843, 18589), (872, 18652), (877, 18664),

Gene: Belenaria\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Belenaria\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Bella96\_23 Start: 17084, Stop: 18850, Start Num: 114

Candidate Starts for Bella96\_23:

(Start: 114 @17084 has 139 MA's), (140, 17114), (236, 17273), (248, 17306), (258, 17336), (272, 17369), (278, 17381), (316, 17471), (337, 17513), (360, 17585), (362, 17594), (378, 17633), (392, 17678), (403, 17702), (448, 17774), (465, 17816), (468, 17822), (481, 17849), (564, 17987), (572, 18005), (587, 18047), (593, 18065), (603, 18095), (618, 18122), (655, 18227), (704, 18317), (757, 18422), (768, 18452), (772, 18461), (793, 18536), (810, 18587), (890, 18782), (901, 18821), (902, 18824), (913, 18842),

Gene: Belladonna\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Belladonna\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: BellusTerra\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for BellusTerra\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Belphegor\_33 Start: 30018, Stop: 31643, Start Num: 160

Candidate Starts for Belphegor\_33:

(Start: 116 @29961 has 1 MA's), (Start: 160 @30018 has 17 MA's), (169, 30030), (Start: 191 @30063 has 45 MA's), (222, 30114), (272, 30231), (277, 30243), (284, 30273), (307, 30318), (336, 30369), (348, 30408), (449, 30615), (460, 30645), (464, 30654), (482, 30690), (508, 30750), (547, 30798), (551, 30807), (583, 30870), (596, 30906), (599, 30915), (609, 30945), (635, 30984), (664, 31071), (665, 31074), (711, 31152), (747, 31212), (769, 31257), (795, 31338), (815, 31392), (863, 31488), (890, 31584), (900, 31617),

Gene: Bench\_26 Start: 19690, Stop: 21285, Start Num: 191

Candidate Starts for Bench\_26:

(Start: 129 @19606 has 79 MA's), (Start: 191 @19690 has 45 MA's), (Start: 235 @19768 has 1 MA's), (268, 19855), (274, 19870), (300, 19918), (324, 19957), (356, 20044), (368, 20077), (381, 20113), (390, 20143), (392, 20149), (422, 20218), (461, 20248), (466, 20260), (468, 20263), (494, 20320), (565, 20452), (567, 20458), (592, 20524), (594, 20530), (601, 20554), (618, 20602), (627, 20626), (631, 20635), (658, 20710), (717, 20761), (725, 20776), (782, 20938), (788, 20965), (799, 20995),

(843, 21100), (880, 21178), (887, 21214), (890, 21223), (900, 21256), (907, 21271),

Gene: Benedict\_24 Start: 18978, Stop: 20777, Start Num: 144

Candidate Starts for Benedict\_24:

(Start: 144 @18978 has 603 MA's), (278, 19215), (306, 19290), (315, 19305), (336, 19341), (360, 19413), (365, 19428), (378, 19461), (380, 19467), (481, 19662), (495, 19692), (499, 19698), (532, 19788), (553, 19833), (583, 19902), (597, 19944), (602, 19962), (635, 20022), (636, 20025), (668, 20118), (729, 20259), (746, 20295), (859, 20610), (862, 20619), (900, 20754),

Gene: BengiVuitton\_29 Start: 20620, Stop: 22392, Start Num: 144

Candidate Starts for BengiVuitton\_29:

(Start: 123 @20596 has 215 MA's), (Start: 144 @20620 has 603 MA's), (219, 20719), (277, 20854), (278, 20857), (305, 20929), (306, 20932), (338, 20986), (341, 20992), (349, 21025), (365, 21070), (378, 21103), (417, 21190), (463, 21271), (467, 21274), (487, 21316), (546, 21460), (584, 21547), (631, 21652), (636, 21667), (675, 21793), (677, 21799), (713, 21847), (750, 21925), (752, 21931), (770, 21985), (781, 22024), (784, 22039), (813, 22123), (862, 22234),

Gene: Benvolio\_28 Start: 20292, Stop: 22064, Start Num: 144

Candidate Starts for Benvolio\_28:

(Start: 123 @20268 has 215 MA's), (Start: 144 @20292 has 603 MA's), (219, 20391), (251, 20475), (277, 20526), (278, 20529), (305, 20601), (306, 20604), (338, 20658), (349, 20697), (378, 20775), (417, 20862), (463, 20943), (467, 20946), (584, 21219), (636, 21339), (675, 21465), (677, 21471), (713, 21519), (746, 21582), (750, 21597), (752, 21603), (770, 21657), (781, 21696), (784, 21711), (813, 21795), (862, 21906),

Gene: Bethlehem\_27 Start: 22379, Stop: 24181, Start Num: 146

Candidate Starts for Bethlehem\_27:

(Start: 146 @22379 has 223 MA's), (Start: 161 @22400 has 4 MA's), (Start: 190 @22442 has 1 MA's), (216, 22487), (306, 22703), (332, 22748), (338, 22757), (368, 22847), (369, 22850), (406, 22943), (467, 23045), (500, 23114), (579, 23303), (583, 23315), (584, 23318), (591, 23339), (635, 23435), (636, 23438), (638, 23444), (665, 23513), (668, 23531), (670, 23540), (677, 23570), (731, 23666), (746, 23699), (750, 23714), (793, 23855), (813, 23912), (862, 24023),

Gene: BetterKatz\_22 Start: 17603, Stop: 19309, Start Num: 162

Candidate Starts for BetterKatz\_22:

(Start: 101 @17528 has 2 MA's), (Start: 162 @17603 has 16 MA's), (Start: 227 @17696 has 2 MA's), (230, 17711), (232, 17717), (256, 17792), (283, 17864), (336, 17975), (349, 18020), (356, 18038), (360, 18050), (444, 18221), (449, 18230), (451, 18236), (465, 18269), (496, 18332), (514, 18383), (541, 18407), (563, 18431), (591, 18506), (603, 18545), (653, 18677), (714, 18791), (756, 18878), (792, 18992), (795, 19001), (836, 19106), (878, 19193), (913, 19301),

Gene: Bexan\_26 Start: 22101, Stop: 23903, Start Num: 146

Candidate Starts for Bexan\_26:

(Start: 146 @22101 has 223 MA's), (Start: 161 @22122 has 4 MA's), (Start: 190 @22164 has 1 MA's), (216, 22209), (306, 22425), (332, 22470), (338, 22479), (349, 22518), (368, 22569), (369, 22572), (467, 22767), (500, 22836), (583, 23037), (584, 23040), (591, 23061), (635, 23157), (636, 23160), (638, 23166), (665, 23235), (668, 23253), (670, 23262), (677, 23292), (731, 23388), (746, 23421), (750, 23436), (758, 23466), (793, 23577), (813, 23634), (862, 23745),

Gene: BiPauneto\_44 Start: 29578, Stop: 31182, Start Num: 177

Candidate Starts for BiPauneto\_44:

(Start: 170 @29566 has 87 MA's), (Start: 175 @29575 has 1 MA's), (Start: 177 @29578 has 1 MA's), (Start: 194 @29602 has 1 MA's), (236, 29680), (306, 29863), (340, 29920), (343, 29932), (347,

29947), (372, 30013), (377, 30028), (386, 30052), (432, 30139), (436, 30145), (449, 30169), (493, 30229), (505, 30259), (511, 30280), (560, 30385), (571, 30406), (607, 30493), (635, 30541), (673, 30667), (688, 30703), (791, 30868), (798, 30886), (809, 30922), (885, 31096), (887, 31108), (906, 31165),

Gene: Bialota\_19 Start: 17776, Stop: 19374, Start Num: 170

Candidate Starts for Bialota\_19:

(Start: 170 @17776 has 87 MA's), (295, 18025), (298, 18034), (306, 18052), (307, 18055), (340, 18109), (363, 18184), (385, 18253), (388, 18262), (392, 18274), (397, 18286), (415, 18325), (435, 18352), (440, 18361), (441, 18364), (501, 18397), (519, 18454), (554, 18520), (603, 18631), (636, 18691), (669, 18793), (687, 18850), (751, 18940), (849, 19180), (874, 19258),

Gene: BiancaTri92\_30 Start: 21973, Stop: 23745, Start Num: 144

Candidate Starts for BiancaTri92\_30:

(Start: 123 @21949 has 215 MA's), (Start: 144 @21973 has 603 MA's), (Start: 235 @22108 has 1 MA's), (242, 22126), (277, 22207), (278, 22210), (305, 22282), (306, 22285), (338, 22339), (365, 22423), (378, 22456), (388, 22489), (417, 22543), (455, 22603), (463, 22624), (467, 22627), (546, 22813), (584, 22900), (597, 22939), (636, 23020), (675, 23146), (677, 23152), (687, 23176), (713, 23200), (746, 23263), (750, 23278), (752, 23284), (770, 23338), (781, 23377), (784, 23392), (862, 23587),

Gene: Bibwit\_34 Start: 30470, Stop: 32233, Start Num: 97

Candidate Starts for Bibwit\_34:

(90, 30452), (Start: 97 @30470 has 73 MA's), (Start: 121 @30506 has 1 MA's), (219, 30644), (262, 30740), (265, 30749), (288, 30818), (306, 30869), (332, 30914), (341, 30929), (368, 31010), (384, 31055), (386, 31064), (445, 31154), (458, 31184), (461, 31199), (465, 31208), (472, 31223), (487, 31253), (597, 31475), (607, 31493), (613, 31508), (631, 31538), (635, 31550), (636, 31553), (647, 31580), (793, 31904), (794, 31907), (810, 31955), (824, 31982), (832, 32009), (860, 32063), (865, 32087), (866, 32090), (891, 32180), (909, 32228),

Gene: Big3\_27 Start: 21732, Stop: 23534, Start Num: 146

Candidate Starts for Big3\_27:

(Start: 146 @21732 has 223 MA's), (Start: 161 @21753 has 4 MA's), (Start: 190 @21795 has 1 MA's), (216, 21840), (306, 22056), (332, 22101), (338, 22110), (349, 22149), (368, 22200), (369, 22203), (467, 22398), (500, 22467), (583, 22668), (584, 22671), (591, 22692), (635, 22788), (636, 22791), (638, 22797), (665, 22866), (668, 22884), (670, 22893), (677, 22923), (731, 23019), (746, 23052), (750, 23067), (793, 23208), (813, 23265), (862, 23376),

Gene: BigBubba\_25 Start: 19509, Stop: 21188, Start Num: 129

Candidate Starts for BigBubba\_25:

(Start: 129 @19509 has 79 MA's), (Start: 191 @19593 has 45 MA's), (Start: 235 @19671 has 1 MA's), (268, 19758), (274, 19773), (300, 19821), (324, 19860), (356, 19947), (368, 19980), (381, 20016), (390, 20046), (392, 20052), (422, 20121), (461, 20151), (466, 20163), (468, 20166), (494, 20223), (565, 20355), (567, 20361), (592, 20427), (594, 20433), (601, 20457), (618, 20505), (627, 20529), (631, 20538), (658, 20613), (717, 20664), (725, 20679), (782, 20841), (788, 20868), (799, 20898), (843, 21003), (880, 21081), (887, 21117), (890, 21126), (900, 21159), (907, 21174),

Gene: BigChungus\_17 Start: 15461, Stop: 17155, Start Num: 144

Candidate Starts for BigChungus\_17:

(Start: 133 @15458 has 8 MA's), (Start: 144 @15461 has 603 MA's), (214, 15560), (236, 15602), (265, 15671), (336, 15842), (365, 15929), (374, 15950), (377, 15959), (385, 15986), (406, 16031), (436, 16064), (444, 16079), (454, 16103), (465, 16136), (481, 16169), (487, 16181), (509, 16238), (546, 16286), (560, 16316), (574, 16346), (596, 16409), (617, 16460), (636, 16496), (643, 16511), (650,

16529), (668, 16586), (670, 16595), (747, 16715), (750, 16727), (777, 16775), (791, 16826), (793, 16829), (799, 16847), (829, 16925), (835, 16940), (842, 16952), (862, 16994), (902, 17141), (907, 17147),

Gene: BigMau\_29 Start: 21333, Stop: 23135, Start Num: 146

Candidate Starts for BigMau\_29:

(Start: 146 @21333 has 223 MA's), (Start: 161 @21354 has 4 MA's), (Start: 190 @21396 has 1 MA's), (216, 21441), (306, 21657), (332, 21702), (338, 21711), (349, 21750), (368, 21801), (369, 21804), (467, 21999), (500, 22068), (583, 22269), (584, 22272), (591, 22293), (635, 22389), (636, 22392), (638, 22398), (665, 22467), (668, 22485), (670, 22494), (677, 22524), (731, 22620), (746, 22653), (750, 22668), (793, 22809), (813, 22866), (862, 22977),

Gene: BigNuz\_18 Start: 16129, Stop: 17865, Start Num: 117

Candidate Starts for BigNuz\_18:

(Start: 117 @16129 has 59 MA's), (180, 16213), (243, 16327), (246, 16333), (251, 16354), (258, 16372), (272, 16405), (282, 16429), (356, 16588), (358, 16594), (396, 16708), (422, 16765), (452, 16804), (459, 16810), (470, 16834), (494, 16888), (500, 16900), (503, 16909), (529, 16969), (560, 17014), (564, 17026), (573, 17047), (587, 17086), (598, 17119), (601, 17131), (618, 17185), (627, 17209), (636, 17233), (647, 17263), (653, 17275), (735, 17377), (740, 17389), (745, 17398), (747, 17407), (779, 17515), (805, 17599), (853, 17698), (877, 17755), (907, 17854),

Gene: BigPaolini\_28 Start: 21730, Stop: 23532, Start Num: 146

Candidate Starts for BigPaolini\_28:

(Start: 146 @21730 has 223 MA's), (Start: 161 @21751 has 4 MA's), (Start: 190 @21793 has 1 MA's), (216, 21838), (306, 22054), (332, 22099), (338, 22108), (349, 22147), (368, 22198), (369, 22201), (467, 22396), (500, 22465), (583, 22666), (584, 22669), (591, 22690), (635, 22786), (636, 22789), (638, 22795), (665, 22864), (668, 22882), (670, 22891), (677, 22921), (731, 23017), (746, 23050), (750, 23065), (793, 23206), (813, 23263), (862, 23374), (909, 23527),

Gene: BigPhil\_17 Start: 14635, Stop: 16344, Start Num: 123

Candidate Starts for BigPhil\_17:

(Start: 123 @14635 has 215 MA's), (193, 14722), (Start: 227 @14767 has 2 MA's), (233, 14791), (271, 14896), (274, 14902), (281, 14920), (300, 14950), (348, 15055), (370, 15115), (378, 15136), (381, 15145), (388, 15169), (418, 15244), (420, 15247), (459, 15295), (465, 15310), (468, 15316), (484, 15352), (486, 15355), (492, 15367), (494, 15373), (511, 15421), (515, 15433), (521, 15439), (564, 15499), (568, 15511), (583, 15547), (587, 15559), (614, 15634), (618, 15643), (625, 15661), (627, 15667), (638, 15697), (710, 15802), (717, 15811), (720, 15814), (737, 15850), (761, 15928), (791, 16027), (799, 16048), (810, 16081), (826, 16111), (836, 16141), (841, 16150), (844, 16156), (860, 16171), (861, 16174), (866, 16198), (877, 16228), (882, 16240), (887, 16270), (900, 16312),

Gene: Bigfoot\_26 Start: 20939, Stop: 22741, Start Num: 146

Candidate Starts for Bigfoot\_26:

(Start: 146 @20939 has 223 MA's), (Start: 161 @20960 has 4 MA's), (Start: 190 @21002 has 1 MA's), (216, 21047), (306, 21263), (332, 21308), (338, 21317), (368, 21407), (369, 21410), (406, 21503), (467, 21605), (500, 21674), (579, 21863), (583, 21875), (584, 21878), (591, 21899), (635, 21995), (636, 21998), (638, 22004), (665, 22073), (668, 22091), (670, 22100), (677, 22130), (731, 22226), (746, 22259), (750, 22274), (758, 22304), (793, 22415), (813, 22472), (862, 22583),

Gene: Biglebops\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for Biglebops\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499,

17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: BilboSwaggins\_24 Start: 19830, Stop: 21425, Start Num: 191

Candidate Starts for BilboSwaggins\_24:

(Start: 129 @19746 has 79 MA's), (Start: 191 @19830 has 45 MA's), (Start: 235 @19908 has 1 MA's), (268, 19995), (274, 20010), (300, 20058), (324, 20097), (356, 20184), (368, 20217), (381, 20253), (390, 20283), (392, 20289), (422, 20358), (461, 20388), (466, 20400), (468, 20403), (494, 20460), (565, 20592), (567, 20598), (592, 20664), (594, 20670), (601, 20694), (618, 20742), (627, 20766), (631, 20775), (658, 20850), (717, 20901), (725, 20916), (782, 21078), (788, 21105), (799, 21135), (843, 21240), (880, 21318), (887, 21354), (890, 21363), (900, 21396), (907, 21411),

Gene: BillDoor\_20 Start: 15365, Stop: 17062, Start Num: 144

Candidate Starts for BillDoor\_20:

(Start: 133 @15362 has 8 MA's), (Start: 144 @15365 has 603 MA's), (214, 15467), (222, 15479), (264, 15575), (292, 15659), (336, 15749), (356, 15809), (365, 15836), (377, 15866), (378, 15869), (406, 15938), (436, 15971), (442, 15983), (444, 15986), (453, 16007), (454, 16010), (481, 16076), (487, 16088), (574, 16253), (636, 16403), (643, 16418), (650, 16436), (668, 16493), (750, 16634), (752, 16640), (755, 16652), (766, 16661), (791, 16733), (793, 16736), (795, 16742), (799, 16754), (835, 16847), (842, 16859), (847, 16868), (862, 16901),

Gene: BillKnuckles\_28 Start: 21817, Stop: 23619, Start Num: 146

Candidate Starts for BillKnuckles\_28:

(Start: 146 @21817 has 223 MA's), (Start: 161 @21838 has 4 MA's), (Start: 190 @21880 has 1 MA's), (216, 21925), (306, 22141), (332, 22186), (338, 22195), (349, 22234), (368, 22285), (380, 22318), (467, 22483), (500, 22552), (583, 22753), (584, 22756), (591, 22777), (635, 22873), (636, 22876), (638, 22882), (665, 22951), (668, 22969), (670, 22978), (677, 23008), (731, 23104), (746, 23137), (750, 23152), (793, 23293), (813, 23350), (862, 23461),

Gene: Bipolar\_16 Start: 14807, Stop: 16516, Start Num: 123

Candidate Starts for Bipolar\_16:

(Start: 123 @14807 has 215 MA's), (193, 14894), (Start: 227 @14939 has 2 MA's), (233, 14963), (271, 15068), (274, 15074), (281, 15092), (300, 15122), (348, 15227), (370, 15287), (378, 15308), (381, 15317), (388, 15341), (418, 15416), (420, 15419), (459, 15467), (465, 15482), (468, 15488), (484, 15524), (486, 15527), (492, 15539), (494, 15545), (511, 15593), (515, 15605), (521, 15611), (564, 15671), (568, 15683), (583, 15719), (587, 15731), (588, 15734), (614, 15806), (618, 15815), (625, 15833), (627, 15839), (638, 15869), (710, 15974), (717, 15983), (720, 15986), (737, 16022), (761, 16100), (791, 16199), (799, 16220), (810, 16253), (836, 16313), (841, 16322), (844, 16328), (860, 16343), (861, 16346), (866, 16370), (877, 16400), (882, 16412), (887, 16442), (900, 16484),

Gene: Bipper\_24 Start: 19740, Stop: 21590, Start Num: 81

Candidate Starts for Bipper\_24:

(Start: 81 @19740 has 4 MA's), (96, 19785), (Start: 175 @19884 has 1 MA's), (197, 19920), (221, 19950), (230, 19974), (248, 20025), (249, 20028), (286, 20127), (287, 20130), (347, 20268), (355, 20289), (365, 20319), (368, 20325), (382, 20364), (406, 20430), (439, 20472), (448, 20487), (465, 20529), (482, 20565), (487, 20574), (496, 20592), (520, 20652), (524, 20658), (526, 20661), (543, 20691), (563, 20724), (564, 20727), (576, 20754), (598, 20820), (708, 21069), (775, 21216), (797, 21288), (813, 21333), (826, 21357), (828, 21363), (877, 21471), (901, 21561), (902, 21564),

Gene: Bircsak\_27 Start: 21589, Stop: 23391, Start Num: 146

Candidate Starts for Bircsak\_27:



(Start: 146 @21589 has 223 MA's), (Start: 161 @21610 has 4 MA's), (Start: 190 @21652 has 1 MA's), (216, 21697), (306, 21913), (332, 21958), (338, 21967), (368, 22057), (369, 22060), (378, 22084), (467, 22255), (500, 22324), (583, 22525), (584, 22528), (591, 22549), (635, 22645), (636, 22648), (638, 22654), (665, 22723), (668, 22741), (670, 22750), (677, 22780), (731, 22876), (746, 22909), (750, 22924), (793, 23065), (813, 23122), (862, 23233),

Gene: Birdsong\_19 Start: 16293, Stop: 18002, Start Num: 111

Candidate Starts for Birdsong\_19:

(Start: 111 @16293 has 24 MA's), (Start: 118 @16305 has 8 MA's), (Start: 121 @16308 has 1 MA's), (Start: 194 @16410 has 1 MA's), (216, 16446), (243, 16512), (311, 16656), (319, 16665), (332, 16683), (347, 16725), (349, 16731), (358, 16755), (365, 16779), (384, 16830), (385, 16836), (395, 16866), (433, 16908), (445, 16929), (449, 16935), (458, 16959), (481, 17010), (482, 17013), (497, 17043), (579, 17193), (591, 17229), (647, 17355), (668, 17421), (670, 17430), (672, 17442), (674, 17451), (739, 17544), (747, 17565), (750, 17577), (752, 17583), (753, 17589), (755, 17595), (783, 17649), (793, 17679), (818, 17748), (860, 17835), (862, 17841), (876, 17892), (900, 17979), (909, 17997),

Gene: Biskit\_19 Start: 15377, Stop: 17077, Start Num: 133

Candidate Starts for Biskit\_19:

(113, 15350), (Start: 133 @15377 has 8 MA's), (Start: 144 @15380 has 603 MA's), (264, 15590), (332, 15758), (336, 15764), (374, 15872), (377, 15881), (385, 15908), (395, 15938), (406, 15953), (436, 15986), (442, 15998), (458, 16034), (481, 16091), (487, 16103), (574, 16268), (636, 16418), (643, 16433), (650, 16451), (668, 16508), (747, 16637), (750, 16649), (755, 16667), (766, 16676), (791, 16748), (793, 16751), (795, 16757), (799, 16769), (842, 16874), (847, 16883), (862, 16916),

Gene: Bizzy\_35 Start: 29879, Stop: 31642, Start Num: 97

Candidate Starts for Bizzy\_35:

(Start: 97 @29879 has 73 MA's), (Start: 121 @29915 has 1 MA's), (211, 30044), (219, 30053), (262, 30149), (265, 30158), (288, 30227), (306, 30278), (332, 30323), (341, 30338), (345, 30356), (368, 30419), (384, 30464), (386, 30473), (454, 30584), (458, 30593), (461, 30608), (465, 30617), (472, 30632), (487, 30662), (597, 30884), (607, 30902), (613, 30917), (635, 30959), (636, 30962), (647, 30989), (688, 31109), (793, 31313), (794, 31316), (810, 31364), (824, 31391), (832, 31418), (860, 31472), (866, 31499),

Gene: Bjaner7\_17 Start: 14751, Stop: 16460, Start Num: 171

Candidate Starts for Bjaner7\_17:

(83, 14616), (Start: 171 @14751 has 40 MA's), (259, 14940), (262, 14943), (287, 15018), (315, 15072), (347, 15141), (351, 15153), (377, 15231), (378, 15234), (440, 15366), (462, 15420), (485, 15471), (500, 15501), (519, 15561), (525, 15573), (554, 15609), (607, 15726), (618, 15744), (637, 15783), (669, 15879), (736, 15987), (847, 16263), (849, 16266), (865, 16314), (874, 16344),

Gene: Blackmoor\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Blackmoor\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Blarby\_20 Start: 14264, Stop: 15928, Start Num: 148

Candidate Starts for Blarby\_20:

(Start: 148 @14264 has 14 MA's), (201, 14345), (222, 14375), (237, 14408), (265, 14474), (280, 14513), (281, 14525), (290, 14549), (313, 14606), (316, 14609), (332, 14639), (334, 14642), (349, 14687), (356, 14705), (369, 14741), (384, 14783), (458, 14915), (460, 14927), (461, 14930), (465, 14939), (481, 14972), (487, 14984), (499, 15008), (636, 15281), (642, 15293), (664, 15338), (668, 15359), (791, 15599), (793, 15602), (794, 15605), (862, 15767), (867, 15791), (885, 15851), (902, 15914),

Gene: Blessica\_57 Start: 33788, Stop: 35524, Start Num: 107

Candidate Starts for Blessica\_57:

(Start: 100 @33779 has 2 MA's), (Start: 107 @33788 has 25 MA's), (174, 33878), (240, 33995), (251, 34031), (259, 34052), (271, 34079), (274, 34085), (286, 34115), (302, 34139), (332, 34190), (381, 34328), (383, 34334), (400, 34385), (402, 34388), (407, 34406), (459, 34457), (468, 34478), (470, 34481), (492, 34529), (494, 34535), (511, 34583), (513, 34589), (515, 34595), (555, 34655), (564, 34679), (565, 34682), (583, 34727), (588, 34742), (591, 34751), (594, 34760), (608, 34805), (618, 34823), (631, 34856), (720, 34994), (729, 35015), (754, 35081), (762, 35111), (779, 35165), (791, 35207), (799, 35228), (805, 35249), (810, 35261), (821, 35282), (844, 35336), (880, 35414), (887, 35450), (893, 35471), (901, 35498),

Gene: Blexus\_16 Start: 14994, Stop: 16703, Start Num: 123

Candidate Starts for Blexus\_16:

(Start: 123 @14994 has 215 MA's), (193, 15081), (Start: 227 @15126 has 2 MA's), (233, 15150), (251, 15207), (271, 15255), (274, 15261), (281, 15279), (300, 15309), (348, 15414), (370, 15474), (378, 15495), (381, 15504), (388, 15528), (459, 15654), (465, 15669), (468, 15675), (484, 15711), (486, 15714), (492, 15726), (494, 15732), (511, 15780), (515, 15792), (521, 15798), (564, 15858), (568, 15870), (583, 15906), (587, 15918), (614, 15993), (618, 16002), (625, 16020), (627, 16026), (638, 16056), (710, 16161), (720, 16173), (737, 16209), (761, 16287), (791, 16386), (799, 16407), (810, 16440), (826, 16470), (836, 16500), (841, 16509), (844, 16515), (860, 16530), (861, 16533), (865, 16554), (866, 16557), (882, 16599), (887, 16629), (900, 16671),

Gene: BlingBling\_19 Start: 16650, Stop: 18296, Start Num: 195

Candidate Starts for BlingBling\_19:

(172, 16614), (Start: 195 @16650 has 45 MA's), (244, 16752), (272, 16830), (274, 16833), (308, 16929), (329, 16968), (357, 17049), (377, 17103), (382, 17118), (494, 17289), (506, 17319), (594, 17502), (601, 17526), (602, 17529), (626, 17577), (658, 17670), (664, 17682), (694, 17727), (702, 17742), (757, 17874), (758, 17877), (788, 17976), (795, 17994), (813, 18045), (843, 18111), (872, 18174), (877, 18186),

Gene: Blinn1\_31 Start: 20042, Stop: 21814, Start Num: 144

Candidate Starts for Blinn1\_31:

(94, 19976), (Start: 123 @20018 has 215 MA's), (Start: 144 @20042 has 603 MA's), (236, 20180), (263, 20240), (277, 20276), (278, 20279), (305, 20351), (306, 20354), (338, 20408), (341, 20414), (356, 20465), (378, 20525), (380, 20531), (392, 20570), (417, 20612), (448, 20651), (463, 20693), (467, 20696), (495, 20756), (592, 20993), (597, 21008), (636, 21089), (667, 21176), (677, 21221), (750, 21347), (770, 21407), (781, 21446), (782, 21449), (784, 21461), (813, 21545), (860, 21650), (862, 21656), (900, 21791),

Gene: Blino\_19 Start: 16618, Stop: 18264, Start Num: 195

Candidate Starts for Blino\_19:

(172, 16582), (Start: 195 @16618 has 45 MA's), (244, 16720), (272, 16798), (274, 16801), (308, 16897), (329, 16936), (357, 17017), (377, 17071), (382, 17086), (494, 17257), (506, 17287), (594, 17470), (601, 17494), (626, 17545), (658, 17638), (664, 17650), (694, 17695), (702, 17710), (757, 17842), (758, 17845), (788, 17944), (795, 17962), (813, 18013), (839, 18073), (843, 18079), (872, 18142), (877, 18154),

Gene: Blizzard\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Blizzard\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: BluSpix\_27 Start: 21113, Stop: 22915, Start Num: 146

Candidate Starts for BluSpix\_27:

(Start: 146 @21113 has 223 MA's), (Start: 161 @21134 has 4 MA's), (Start: 190 @21176 has 1 MA's), (216, 21221), (306, 21437), (332, 21482), (338, 21491), (368, 21581), (369, 21584), (406, 21677), (467, 21779), (500, 21848), (583, 22049), (584, 22052), (591, 22073), (635, 22169), (636, 22172), (638, 22178), (665, 22247), (668, 22265), (670, 22274), (677, 22304), (731, 22400), (746, 22433), (750, 22448), (793, 22589), (813, 22646), (862, 22757),

Gene: Blue\_27 Start: 21585, Stop: 23387, Start Num: 146

Candidate Starts for Blue\_27:

(Start: 146 @21585 has 223 MA's), (Start: 161 @21606 has 4 MA's), (Start: 190 @21648 has 1 MA's), (216, 21693), (306, 21909), (332, 21954), (338, 21963), (368, 22053), (369, 22056), (406, 22149), (467, 22251), (500, 22320), (583, 22521), (584, 22524), (591, 22545), (635, 22641), (636, 22644), (638, 22650), (665, 22719), (668, 22737), (670, 22746), (677, 22776), (731, 22872), (746, 22905), (750, 22920), (793, 23061), (813, 23118), (862, 23229),

Gene: Blue7\_31 Start: 19963, Stop: 21735, Start Num: 144

Candidate Starts for Blue7\_31:

(94, 19897), (Start: 123 @19939 has 215 MA's), (Start: 144 @19963 has 603 MA's), (278, 20200), (305, 20272), (306, 20275), (315, 20290), (338, 20329), (341, 20335), (378, 20446), (380, 20452), (392, 20491), (417, 20533), (448, 20572), (463, 20614), (467, 20617), (532, 20773), (592, 20914), (597, 20929), (677, 21142), (742, 21241), (750, 21268), (765, 21319), (770, 21328), (781, 21367), (784, 21382), (813, 21466), (860, 21571), (862, 21577), (900, 21712),

Gene: BlueBird\_28 Start: 19904, Stop: 21700, Start Num: 144

Candidate Starts for BlueBird\_28:

(Start: 144 @19904 has 603 MA's), (Start: 190 @19961 has 1 MA's), (230, 20030), (272, 20132), (277, 20144), (278, 20147), (306, 20222), (315, 20237), (338, 20276), (384, 20411), (417, 20480), (481, 20594), (532, 20720), (583, 20834), (591, 20858), (597, 20876), (636, 20957), (665, 21032), (668, 21050), (670, 21059), (675, 21083), (677, 21089), (682, 21104), (703, 21137), (729, 21182), (731, 21185), (742, 21206), (746, 21218), (749, 21224), (763, 21281), (813, 21431), (825, 21455), (860, 21536), (862, 21542), (900, 21677),

Gene: BlueCrab\_16 Start: 14976, Stop: 16685, Start Num: 123

Candidate Starts for BlueCrab\_16:

(Start: 123 @14976 has 215 MA's), (193, 15063), (Start: 227 @15108 has 2 MA's), (233, 15132), (271, 15237), (274, 15243), (281, 15261), (300, 15291), (348, 15396), (370, 15456), (378, 15477), (381, 15486), (388, 15510), (459, 15636), (465, 15651), (468, 15657), (484, 15693), (486, 15696), (492, 15708), (494, 15714), (511, 15762), (515, 15774), (521, 15780), (564, 15840), (568, 15852), (583, 15888), (587, 15900), (614, 15975), (618, 15984), (625, 16002), (627, 16008), (638, 16038), (710, 16143), (717, 16152), (720, 16155), (737, 16191), (761, 16269), (791, 16368), (799, 16389), (810, 16422), (826, 16452), (836, 16482), (841, 16491), (844, 16497), (860, 16512), (861, 16515), (865, 16536), (866, 16539), (882, 16581), (887, 16611), (900, 16653),

Gene: BlueNGold\_100 Start: 60020, Stop: 61648, Start Num: 150

Candidate Starts for BlueNGold\_100:

(Start: 150 @60020 has 4 MA's), (Start: 166 @60035 has 1 MA's), (Start: 167 @60038 has 1 MA's), (188, 60065), (222, 60122), (237, 60158), (250, 60191), (265, 60221), (267, 60224), (292, 60293), (296, 60299), (365, 60464), (381, 60506), (384, 60515), (386, 60524), (390, 60536), (460, 60656), (547, 60809), (579, 60869), (643, 61016), (647, 61037), (653, 61052), (673, 61130), (675, 61136), (755, 61253), (769, 61268), (788, 61325), (799, 61355), (810, 61388), (867, 61508), (907, 61637),

Gene: Blueberry\_21 Start: 16962, Stop: 18611, Start Num: 195

Candidate Starts for Blueberry\_21:

(172, 16926), (Start: 195 @16962 has 45 MA's), (200, 16971), (244, 17067), (272, 17145), (299, 17217), (308, 17244), (329, 17283), (357, 17364), (377, 17418), (494, 17604), (506, 17634), (563, 17733), (594, 17817), (601, 17841), (626, 17892), (658, 17985), (664, 17997), (694, 18042), (702, 18057), (757, 18189), (758, 18192), (788, 18291), (795, 18309), (813, 18360), (839, 18420), (843, 18426), (877, 18501),

Gene: Bluefalcon\_23 Start: 19814, Stop: 21613, Start Num: 144

Candidate Starts for Bluefalcon\_23:

(Start: 144 @19814 has 603 MA's), (236, 19952), (278, 20051), (306, 20126), (336, 20177), (360, 20249), (365, 20264), (378, 20297), (380, 20303), (432, 20396), (481, 20498), (495, 20528), (499, 20534), (532, 20624), (546, 20654), (579, 20726), (583, 20738), (584, 20741), (597, 20780), (602, 20798), (635, 20858), (636, 20861), (656, 20912), (668, 20954), (729, 21095), (749, 21137), (862, 21455), (900, 21590),

Gene: Bob3\_26 Start: 20673, Stop: 22475, Start Num: 146

Candidate Starts for Bob3\_26:

(Start: 146 @20673 has 223 MA's), (Start: 161 @20694 has 4 MA's), (Start: 190 @20736 has 1 MA's), (216, 20781), (306, 20997), (332, 21042), (338, 21051), (349, 21090), (368, 21141), (369, 21144), (467, 21339), (500, 21408), (583, 21609), (584, 21612), (591, 21633), (635, 21729), (636, 21732), (638, 21738), (665, 21807), (668, 21825), (670, 21834), (677, 21864), (731, 21960), (746, 21993), (750, 22008), (793, 22149), (813, 22206), (862, 22317),

Gene: BobBob\_32 Start: 29751, Stop: 31514, Start Num: 97

Candidate Starts for BobBob\_32:

(90, 29733), (Start: 97 @29751 has 73 MA's), (Start: 121 @29787 has 1 MA's), (219, 29925), (262, 30021), (265, 30030), (288, 30099), (306, 30150), (332, 30195), (341, 30210), (368, 30291), (384, 30336), (386, 30345), (445, 30435), (458, 30465), (461, 30480), (472, 30504), (487, 30534), (551, 30639), (597, 30756), (607, 30774), (613, 30789), (631, 30819), (635, 30831), (636, 30834), (647, 30861), (793, 31185), (794, 31188), (810, 31236), (824, 31263), (832, 31290), (860, 31344), (866, 31371), (909, 31509),

Gene: BobSwaget\_31 Start: 21794, Stop: 23590, Start Num: 123

Candidate Starts for BobSwaget\_31:

(Start: 123 @21794 has 215 MA's), (Start: 144 @21818 has 603 MA's), (251, 22001), (277, 22052), (278, 22055), (305, 22127), (306, 22130), (338, 22184), (349, 22223), (378, 22301), (417, 22388), (463, 22469), (467, 22472), (487, 22514), (546, 22658), (576, 22721), (584, 22745), (597, 22784), (636, 22865), (677, 22997), (746, 23108), (750, 23123), (752, 23129), (770, 23183), (781, 23222), (784, 23237), (795, 23270), (813, 23321), (849, 23399), (860, 23426), (862, 23432), (877, 23486),

Gene: BobaPhett\_16 Start: 14804, Stop: 16513, Start Num: 123

Candidate Starts for BobaPhett\_16:

(Start: 123 @14804 has 215 MA's), (193, 14891), (Start: 227 @14936 has 2 MA's), (233, 14960), (251, 15017), (271, 15065), (274, 15071), (281, 15089), (300, 15119), (348, 15224), (367, 15278), (370, 15284), (373, 15293), (381, 15314), (388, 15338), (402, 15374), (403, 15380), (418, 15413), (420, 15416), (424, 15425), (443, 15440), (448, 15446), (459, 15464), (465, 15479), (468, 15485), (475, 15503), (477, 15506), (484, 15521), (492, 15536), (494, 15542), (511, 15590), (515, 15602), (521, 15608), (564, 15668), (568, 15680), (583, 15716), (587, 15728), (614, 15803), (618, 15812), (625, 15830), (627, 15836), (638, 15866), (710, 15971), (720, 15983), (737, 16019), (761, 16097), (799, 16217), (810, 16250), (826, 16280), (829, 16292), (836, 16310), (839, 16316), (841, 16319), (844, 16325), (860, 16340), (861, 16343), (865, 16364), (866, 16367), (882, 16409), (887, 16439), (900, 16481), (901, 16487),

Gene: Bobby\_38 Start: 28176, Stop: 30174, Start Num: 124

Candidate Starts for Bobby\_38:

(Start: 124 @28176 has 30 MA's), (Start: 191 @28266 has 45 MA's), (222, 28314), (233, 28344), (243, 28371), (282, 28473), (301, 28503), (327, 28554), (346, 28602), (358, 28638), (360, 28644), (368, 28665), (392, 28737), (395, 28746), (403, 28767), (468, 28875), (470, 28878), (475, 28893), (494, 28932), (511, 28980), (515, 28992), (521, 28998), (552, 29046), (558, 29055), (565, 29076), (573, 29094), (590, 29142), (625, 29244), (653, 29316), (667, 29361), (669, 29373), (684, 29508), (685, 29514), (686, 29538), (696, 29610), (708, 29637), (800, 29886),

Gene: Bobi\_18 Start: 15396, Stop: 17105, Start Num: 123

Candidate Starts for Bobi\_18:

(Start: 123 @15396 has 215 MA's), (193, 15483), (Start: 227 @15528 has 2 MA's), (233, 15552), (271, 15657), (274, 15663), (281, 15681), (300, 15711), (348, 15816), (370, 15876), (378, 15897), (381, 15906), (388, 15930), (459, 16056), (465, 16071), (468, 16077), (484, 16113), (486, 16116), (492, 16128), (494, 16134), (511, 16182), (515, 16194), (521, 16200), (564, 16260), (568, 16272), (583, 16308), (587, 16320), (614, 16395), (618, 16404), (625, 16422), (627, 16428), (638, 16458), (710, 16563), (717, 16572), (720, 16575), (737, 16611), (761, 16689), (791, 16788), (799, 16809), (810, 16842), (826, 16872), (836, 16902), (841, 16911), (844, 16917), (860, 16932), (861, 16935), (866, 16959), (877, 16989), (882, 17001), (887, 17031), (900, 17073),

Gene: Bock\_22 Start: 17353, Stop: 19059, Start Num: 162

Candidate Starts for Bock\_22:

(Start: 101 @17278 has 2 MA's), (Start: 162 @17353 has 16 MA's), (Start: 227 @17446 has 2 MA's), (230, 17461), (232, 17467), (256, 17542), (283, 17614), (336, 17725), (349, 17770), (356, 17788), (360, 17800), (404, 17920), (444, 17971), (449, 17980), (451, 17986), (465, 18019), (496, 18082), (514, 18133), (541, 18157), (563, 18181), (591, 18256), (603, 18295), (653, 18427), (714, 18541), (756, 18628), (792, 18742), (795, 18751), (836, 18856), (878, 18943), (913, 19051),

Gene: BodEinwohner17\_16 Start: 14976, Stop: 16685, Start Num: 123

Candidate Starts for BodEinwohner17\_16:

(Start: 123 @14976 has 215 MA's), (193, 15063), (Start: 227 @15108 has 2 MA's), (233, 15132), (271, 15237), (274, 15243), (281, 15261), (300, 15291), (348, 15396), (370, 15456), (378, 15477), (381, 15486), (388, 15510), (459, 15636), (465, 15651), (468, 15657), (484, 15693), (486, 15696), (492, 15708), (494, 15714), (511, 15762), (515, 15774), (521, 15780), (564, 15840), (568, 15852), (583, 15888), (587, 15900), (614, 15975), (618, 15984), (625, 16002), (627, 16008), (638, 16038), (710, 16143), (720, 16155), (737, 16191), (761, 16269), (791, 16368), (799, 16389), (810, 16422), (826, 16452), (836, 16482), (841, 16491), (844, 16497), (860, 16512), (861, 16515), (865, 16536), (866, 16539), (882, 16581), (887, 16611), (900, 16653),

Gene: Bogie\_18 Start: 16084, Stop: 17844, Start Num: 101

Candidate Starts for Bogie\_18:

(Start: 101 @16084 has 2 MA's), (Start: 117 @16108 has 59 MA's), (Start: 166 @16168 has 1 MA's), (178, 16189), (180, 16192), (246, 16312), (258, 16351), (272, 16384), (282, 16408), (344, 16528), (356, 16567), (358, 16573), (386, 16657), (388, 16663), (392, 16675), (402, 16699), (410, 16726), (422, 16744), (452, 16783), (459, 16789), (470, 16813), (494, 16867), (500, 16879), (503, 16888), (529, 16948), (573, 17026), (587, 17065), (598, 17098), (618, 17164), (624, 17179), (627, 17188), (636, 17212), (647, 17242), (653, 17254), (735, 17356), (740, 17368), (742, 17371), (745, 17377), (747, 17386), (779, 17494), (805, 17578), (853, 17677), (890, 17785), (907, 17833),

Gene: BogosyJay\_29 Start: 21309, Stop: 23099, Start Num: 144

Candidate Starts for BogosyJay\_29:

(Start: 123 @21285 has 215 MA's), (Start: 144 @21309 has 603 MA's), (277, 21543), (278, 21546), (305, 21618), (306, 21621), (315, 21636), (338, 21675), (341, 21681), (365, 21759), (378, 21792), (417, 21879), (463, 21960), (467, 21963), (518, 22089), (576, 22212), (580, 22224), (584, 22236), (586, 22242), (597, 22275), (636, 22356), (675, 22482), (703, 22536), (706, 22542), (731, 22584), (736, 22593), (746, 22617), (750, 22632), (756, 22656), (770, 22692), (781, 22731), (784, 22746), (813, 22830), (860, 22935), (862, 22941), (873, 22986), (890, 23043),

Gene: Boiiii\_23 Start: 17190, Stop: 18956, Start Num: 114

Candidate Starts for Boiiii\_23:

(Start: 114 @17190 has 139 MA's), (140, 17220), (236, 17379), (248, 17412), (258, 17442), (272, 17475), (278, 17487), (316, 17577), (337, 17619), (360, 17691), (362, 17700), (378, 17739), (392, 17784), (400, 17805), (403, 17808), (438, 17862), (448, 17880), (465, 17922), (468, 17928), (481, 17955), (564, 18093), (572, 18111), (587, 18153), (593, 18171), (603, 18201), (618, 18228), (655, 18333), (748, 18492), (757, 18528), (768, 18558), (772, 18567), (793, 18642), (810, 18693), (890, 18888), (901, 18927), (902, 18930), (913, 18948),

Gene: Boilgate\_20 Start: 17568, Stop: 19349, Start Num: 114

Candidate Starts for Boilgate\_20:

(Start: 109 @17559 has 26 MA's), (Start: 112 @17565 has 41 MA's), (Start: 114 @17568 has 139 MA's), (Start: 175 @17631 has 1 MA's), (197, 17667), (230, 17721), (248, 17772), (258, 17802), (311, 17931), (316, 17937), (321, 17943), (334, 17973), (356, 18039), (360, 18051), (438, 18222), (448, 18240), (468, 18288), (481, 18315), (487, 18327), (499, 18351), (564, 18453), (565, 18456), (587, 18513), (594, 18534), (599, 18549), (611, 18588), (636, 18657), (655, 18717), (714, 18825), (734, 18861), (748, 18885), (768, 18951), (772, 18960), (788, 19023), (793, 19035), (813, 19092), (831, 19134), (852, 19170), (887, 19272), (901, 19320), (913, 19341),

Gene: Bombitas\_33 Start: 26624, Stop: 28357, Start Num: 124

Candidate Starts for Bombitas\_33:

(Start: 124 @26624 has 30 MA's), (Start: 191 @26714 has 45 MA's), (222, 26762), (233, 26792), (243, 26819), (282, 26921), (301, 26951), (346, 27050), (358, 27086), (360, 27092), (368, 27113), (392, 27185), (395, 27194), (403, 27215), (448, 27284), (468, 27323), (470, 27326), (475, 27341), (494, 27380), (511, 27428), (515, 27440), (521, 27446), (552, 27494), (558, 27503), (565, 27524), (573, 27542), (590, 27590), (625, 27692), (647, 27752), (653, 27764), (725, 27848), (731, 27860), (735, 27866), (740, 27878), (742, 27881), (753, 27920), (758, 27938), (772, 27974), (773, 27980), (799, 28067), (834, 28157), (863, 28199), (868, 28217), (878, 28247), (888, 28289), (907, 28343),

Gene: Bombshell\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Bombshell\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756,

21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Bonamassa\_24 Start: 19658, Stop: 21454, Start Num: 144

Candidate Starts for Bonamassa\_24:

(Start: 144 @19658 has 603 MA's), (222, 19763), (236, 19796), (278, 19895), (306, 19970), (315, 19985), (336, 20021), (360, 20093), (365, 20108), (380, 20147), (388, 20174), (395, 20195), (430, 20234), (495, 20372), (499, 20378), (553, 20513), (579, 20570), (580, 20573), (583, 20582), (597, 20624), (602, 20642), (635, 20702), (636, 20705), (668, 20798), (670, 20807), (675, 20831), (729, 20939), (746, 20975), (813, 21185), (859, 21287), (862, 21296), (893, 21410), (900, 21431), (902, 21440),

Gene: Bonanza\_23 Start: 16308, Stop: 17948, Start Num: 155

Candidate Starts for Bonanza\_23:

(Start: 155 @16308 has 4 MA's), (Start: 168 @16323 has 32 MA's), (211, 16392), (232, 16428), (306, 16614), (361, 16743), (378, 16785), (386, 16812), (394, 16836), (406, 16854), (436, 16884), (444, 16899), (467, 16950), (505, 17034), (576, 17151), (584, 17175), (635, 17289), (654, 17337), (665, 17367), (672, 17406), (675, 17418), (713, 17448), (750, 17526), (807, 17673), (818, 17697), (832, 17733), (854, 17772), (907, 17940),

Gene: Bones\_27 Start: 21039, Stop: 22841, Start Num: 146

Candidate Starts for Bones\_27:

(Start: 146 @21039 has 223 MA's), (Start: 161 @21060 has 4 MA's), (Start: 190 @21102 has 1 MA's), (216, 21147), (306, 21363), (332, 21408), (338, 21417), (368, 21507), (369, 21510), (467, 21705), (500, 21774), (579, 21963), (583, 21975), (584, 21978), (591, 21999), (635, 22095), (636, 22098), (638, 22104), (665, 22173), (668, 22191), (670, 22200), (677, 22230), (731, 22326), (746, 22359), (750, 22374), (793, 22515), (813, 22572), (862, 22683), (909, 22836),

Gene: Bonum\_44 Start: 30146, Stop: 31762, Start Num: 170

Candidate Starts for Bonum\_44:

(Start: 170 @30146 has 87 MA's), (236, 30260), (265, 30344), (347, 30527), (372, 30593), (377, 30608), (386, 30632), (432, 30719), (449, 30749), (450, 30752), (493, 30809), (518, 30881), (571, 30986), (607, 31073), (635, 31121), (673, 31247), (688, 31283), (776, 31394), (799, 31469), (877, 31646), (887, 31688), (906, 31745),

Gene: Boohoo\_30 Start: 19096, Stop: 20883, Start Num: 144

Candidate Starts for Boohoo\_30:

(94, 19030), (Start: 123 @19072 has 215 MA's), (Start: 144 @19096 has 603 MA's), (236, 19234), (262, 19291), (278, 19333), (292, 19369), (306, 19408), (343, 19477), (349, 19501), (369, 19555), (448, 19705), (467, 19750), (481, 19780), (499, 19816), (515, 19867), (530, 19903), (553, 19951), (580, 20011), (635, 20140), (665, 20218), (750, 20419), (752, 20425), (782, 20521), (845, 20686), (880, 20785),

Gene: Boomer\_17 Start: 14621, Stop: 16330, Start Num: 123

Candidate Starts for Boomer\_17:

(Start: 123 @14621 has 215 MA's), (193, 14708), (Start: 227 @14753 has 2 MA's), (233, 14777), (251, 14834), (271, 14882), (274, 14888), (281, 14906), (300, 14936), (348, 15041), (367, 15095), (370, 15101), (373, 15110), (378, 15122), (381, 15131), (388, 15155), (402, 15191), (403, 15197), (407, 15209), (418, 15230), (420, 15233), (424, 15242), (443, 15257), (448, 15263), (459, 15281), (465, 15296), (468, 15302), (475, 15320), (477, 15323), (484, 15338), (492, 15353), (494, 15359), (506, 15389), (511, 15407), (515, 15419), (521, 15425), (564, 15485), (568, 15497), (583, 15533), (587, 15545), (594, 15566), (614, 15620), (618, 15629), (627, 15653), (638, 15683), (710, 15788), (720, 15800), (737, 15836), (751, 15875), (761, 15914), (791, 16013), (799, 16034), (810, 16067), (826,

16097), (836, 16127), (841, 16136), (844, 16142), (860, 16157), (861, 16160), (865, 16181), (866, 16184), (882, 16226), (887, 16256), (900, 16298),

Gene: Boopy\_101 Start: 60032, Stop: 61660, Start Num: 150

Candidate Starts for Boopy\_101:

(Start: 150 @60032 has 4 MA's), (Start: 166 @60047 has 1 MA's), (Start: 167 @60050 has 1 MA's), (188, 60077), (222, 60134), (237, 60170), (250, 60203), (265, 60233), (267, 60236), (292, 60305), (296, 60311), (365, 60476), (381, 60518), (384, 60527), (386, 60536), (390, 60548), (460, 60668), (547, 60821), (579, 60881), (643, 61028), (647, 61049), (653, 61064), (673, 61142), (675, 61148), (755, 61265), (769, 61280), (788, 61337), (799, 61367), (810, 61400), (867, 61520), (907, 61649),

Gene: BoostSeason\_19 Start: 15039, Stop: 16808, Start Num: 112

Candidate Starts for BoostSeason\_19:

(Start: 93 @15003 has 1 MA's), (Start: 109 @15033 has 26 MA's), (Start: 112 @15039 has 41 MA's), (Start: 135 @15054 has 7 MA's), (Start: 168 @15096 has 32 MA's), (197, 15144), (Start: 227 @15183 has 2 MA's), (230, 15198), (248, 15249), (258, 15279), (272, 15312), (278, 15324), (282, 15342), (316, 15414), (321, 15420), (356, 15516), (360, 15528), (393, 15624), (448, 15717), (465, 15759), (468, 15765), (487, 15804), (499, 15828), (503, 15840), (564, 15930), (567, 15939), (588, 15993), (598, 16023), (640, 16134), (655, 16185), (714, 16293), (768, 16407), (772, 16416), (793, 16491), (810, 16542), (813, 16548), (863, 16644), (881, 16698), (901, 16779), (913, 16800),

Gene: Bora\_54 Start: 33145, Stop: 34881, Start Num: 107

Candidate Starts for Bora\_54:

(Start: 100 @33136 has 2 MA's), (Start: 107 @33145 has 25 MA's), (174, 33235), (240, 33352), (251, 33388), (259, 33409), (271, 33436), (274, 33442), (286, 33472), (302, 33496), (332, 33547), (381, 33685), (383, 33691), (400, 33742), (402, 33745), (407, 33763), (459, 33814), (468, 33835), (470, 33838), (492, 33886), (494, 33892), (511, 33940), (513, 33946), (515, 33952), (555, 34012), (564, 34036), (565, 34039), (583, 34084), (588, 34099), (591, 34108), (594, 34117), (608, 34162), (618, 34180), (631, 34213), (720, 34351), (729, 34372), (754, 34438), (762, 34468), (779, 34522), (791, 34564), (799, 34585), (805, 34606), (810, 34618), (821, 34639), (844, 34693), (880, 34771), (887, 34807), (893, 34828), (901, 34855),

Gene: Bosection6\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Bosection6\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Bosnia\_19 Start: 17764, Stop: 19362, Start Num: 170

Candidate Starts for Bosnia\_19:

(Start: 170 @17764 has 87 MA's), (298, 18022), (306, 18040), (307, 18043), (340, 18097), (363, 18172), (385, 18241), (388, 18250), (392, 18262), (415, 18313), (435, 18340), (440, 18349), (441, 18352), (501, 18385), (519, 18442), (554, 18508), (603, 18619), (618, 18643), (636, 18679), (669, 18781), (687, 18838), (751, 18928), (849, 19168), (874, 19246),

Gene: Bowser\_19 Start: 16618, Stop: 18348, Start Num: 138

Candidate Starts for Bowser\_19:

(72, 16501), (113, 16585), (Start: 121 @16597 has 1 MA's), (Start: 138 @16618 has 5 MA's), (272, 16855), (281, 16888), (368, 17101), (392, 17173), (414, 17215), (445, 17251), (458, 17281), (465,



17305), (485, 17347), (499, 17374), (500, 17377), (537, 17431), (540, 17437), (579, 17524), (690, 17815), (697, 17818), (752, 17926), (793, 18022), (799, 18040), (824, 18100), (849, 18157), (863, 18196), (864, 18199), (867, 18211), (888, 18286), (896, 18313),

Gene: Bowtie\_28 Start: 20755, Stop: 22554, Start Num: 144

Candidate Starts for Bowtie\_28:

(94, 20689), (Start: 123 @20731 has 215 MA's), (Start: 144 @20755 has 603 MA's), (183, 20797), (236, 20893), (242, 20908), (277, 20989), (278, 20992), (306, 21067), (315, 21082), (338, 21121), (341, 21127), (378, 21238), (380, 21244), (417, 21325), (467, 21409), (518, 21535), (526, 21553), (540, 21580), (597, 21721), (631, 21787), (635, 21799), (636, 21802), (674, 21925), (703, 21991), (721, 22018), (736, 22048), (737, 22051), (746, 22072), (750, 22087), (756, 22111), (781, 22186), (784, 22201), (813, 22285), (860, 22390), (862, 22396), (877, 22450), (909, 22549),

Gene: BoyNamedSue\_19 Start: 17776, Stop: 19374, Start Num: 170

Candidate Starts for BoyNamedSue\_19:

(Start: 170 @17776 has 87 MA's), (298, 18034), (306, 18052), (307, 18055), (340, 18109), (363, 18184), (385, 18253), (388, 18262), (392, 18274), (397, 18286), (415, 18325), (435, 18352), (440, 18361), (441, 18364), (501, 18397), (519, 18454), (554, 18520), (603, 18631), (636, 18691), (669, 18793), (687, 18850), (751, 18940), (849, 19180), (874, 19258),

Gene: Bradissa\_20 Start: 17713, Stop: 19419, Start Num: 111

Candidate Starts for Bradissa\_20:

(Start: 95 @17689 has 1 MA's), (Start: 111 @17713 has 24 MA's), (152, 17761), (192, 17818), (217, 17860), (303, 18049), (365, 18196), (368, 18202), (384, 18247), (459, 18385), (497, 18460), (635, 18742), (644, 18763), (668, 18838), (715, 18925), (739, 18961), (750, 18994), (752, 19000), (783, 19066), (793, 19096), (860, 19252), (862, 19258), (865, 19276), (897, 19387),

Gene: Bradman\_27 Start: 19074, Stop: 20864, Start Num: 144

Candidate Starts for Bradman\_27:

(94, 19008), (Start: 123 @19050 has 215 MA's), (Start: 144 @19074 has 603 MA's), (236, 19212), (242, 19227), (277, 19308), (278, 19311), (305, 19383), (306, 19386), (338, 19440), (341, 19446), (345, 19464), (365, 19524), (378, 19557), (380, 19563), (392, 19602), (417, 19644), (463, 19725), (467, 19728), (495, 19788), (546, 19914), (583, 19998), (597, 20040), (619, 20091), (636, 20121), (675, 20247), (707, 20310), (746, 20382), (750, 20397), (756, 20421), (781, 20496), (784, 20511), (813, 20595), (860, 20700), (862, 20706), (865, 20724), (873, 20751), (877, 20760),

Gene: Bradshaw\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Bradshaw\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Bran\_17 Start: 16323, Stop: 18020, Start Num: 118

Candidate Starts for Bran\_17:

(Start: 118 @16323 has 8 MA's), (136, 16344), (196, 16428), (211, 16455), (216, 16461), (275, 16593), (295, 16644), (306, 16677), (322, 16701), (368, 16821), (380, 16854), (385, 16872), (411, 16926), (448, 16971), (472, 17028), (478, 17040), (497, 17079), (540, 17139), (549, 17160), (553, 17169), (579, 17226), (610, 17316), (661, 17424), (673, 17478), (675, 17484), (681, 17502), (752, 17598), (766, 17619), (784, 17664), (845, 17823), (855, 17838), (861, 17853), (863, 17865), (907, 18009),

Gene: Brandonk123\_36 Start: 30817, Stop: 32580, Start Num: 97

Candidate Starts for Brandonk123\_36:

(90, 30799), (Start: 97 @30817 has 73 MA's), (Start: 121 @30853 has 1 MA's), (219, 30991), (262, 31087), (265, 31096), (288, 31165), (306, 31216), (332, 31261), (341, 31276), (368, 31357), (384, 31402), (386, 31411), (445, 31501), (458, 31531), (461, 31546), (472, 31570), (487, 31600), (597, 31822), (607, 31840), (613, 31855), (631, 31885), (635, 31897), (636, 31900), (647, 31927), (793, 32251), (794, 32254), (810, 32302), (824, 32329), (832, 32356), (860, 32410), (866, 32437), (909, 32575),

Gene: Braxoaddie\_45 Start: 31342, Stop: 32916, Start Num: 173

Candidate Starts for Braxoaddie\_45:

(Start: 173 @31342 has 7 MA's), (179, 31351), (219, 31405), (231, 31429), (236, 31432), (348, 31702), (372, 31765), (377, 31780), (442, 31897), (450, 31912), (493, 31969), (498, 31978), (511, 32020), (518, 32041), (534, 32071), (561, 32128), (596, 32203), (644, 32299), (673, 32404), (674, 32407), (683, 32434), (752, 32512), (776, 32551), (829, 32707), (867, 32773),

Gene: BreSam8\_29 Start: 20372, Stop: 22168, Start Num: 144

Candidate Starts for BreSam8\_29:

(Start: 144 @20372 has 603 MA's), (Start: 190 @20429 has 1 MA's), (197, 20444), (230, 20498), (Start: 235 @20513 has 1 MA's), (272, 20600), (277, 20612), (278, 20615), (306, 20690), (315, 20705), (336, 20741), (417, 20948), (500, 21101), (532, 21188), (583, 21302), (591, 21326), (597, 21344), (636, 21425), (665, 21500), (668, 21518), (675, 21551), (677, 21557), (695, 21596), (729, 21650), (731, 21653), (742, 21674), (758, 21731), (813, 21899), (860, 22004), (862, 22010), (900, 22145),

Gene: BritBrat\_20 Start: 17542, Stop: 19272, Start Num: 95

Candidate Starts for BritBrat\_20:

(Start: 95 @17542 has 1 MA's), (Start: 111 @17566 has 24 MA's), (192, 17671), (217, 17713), (251, 17788), (303, 17902), (365, 18049), (368, 18055), (384, 18100), (459, 18238), (497, 18313), (635, 18595), (644, 18616), (668, 18691), (715, 18778), (739, 18814), (750, 18847), (752, 18853), (783, 18919), (793, 18949), (860, 19105), (862, 19111), (865, 19129), (897, 19240),

Gene: Briton15\_29 Start: 21386, Stop: 23188, Start Num: 146

Candidate Starts for Briton15\_29:

(Start: 146 @21386 has 223 MA's), (Start: 161 @21407 has 4 MA's), (Start: 190 @21449 has 1 MA's), (216, 21494), (306, 21710), (332, 21755), (338, 21764), (349, 21803), (368, 21854), (369, 21857), (406, 21950), (467, 22052), (500, 22121), (579, 22310), (583, 22322), (584, 22325), (591, 22346), (635, 22442), (636, 22445), (638, 22451), (665, 22520), (668, 22538), (670, 22547), (677, 22577), (731, 22673), (746, 22706), (750, 22721), (793, 22862), (813, 22919), (862, 23030),

Gene: Brocalys\_16 Start: 14792, Stop: 16501, Start Num: 123

Candidate Starts for Brocalys\_16:

(Start: 123 @14792 has 215 MA's), (193, 14879), (Start: 227 @14924 has 2 MA's), (233, 14948), (271, 15053), (274, 15059), (281, 15077), (300, 15107), (348, 15212), (370, 15272), (378, 15293), (381, 15302), (388, 15326), (459, 15452), (465, 15467), (468, 15473), (484, 15509), (486, 15512), (492, 15524), (494, 15530), (511, 15578), (515, 15590), (521, 15596), (564, 15656), (568, 15668), (583, 15704), (587, 15716), (614, 15791), (618, 15800), (625, 15818), (627, 15824), (638, 15854), (710, 15959), (717, 15968), (720, 15971), (737, 16007), (761, 16085), (791, 16184), (799, 16205), (810, 16238), (826, 16268), (836, 16298), (841, 16307), (844, 16313), (860, 16328), (861, 16331), (866, 16355), (877, 16385), (882, 16397), (887, 16427), (900, 16469),

Gene: Broseidon\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Broseidon\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: BruceB\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for BruceB\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Bruin\_24 Start: 19853, Stop: 21448, Start Num: 191

Candidate Starts for Bruin\_24:

(Start: 129 @19769 has 79 MA's), (Start: 191 @19853 has 45 MA's), (Start: 235 @19931 has 1 MA's), (268, 20018), (274, 20033), (300, 20081), (324, 20120), (356, 20207), (368, 20240), (381, 20276), (390, 20306), (392, 20312), (422, 20381), (461, 20411), (466, 20423), (468, 20426), (494, 20483), (565, 20615), (567, 20621), (592, 20687), (594, 20693), (601, 20717), (618, 20765), (627, 20789), (631, 20798), (658, 20873), (717, 20924), (725, 20939), (782, 21101), (788, 21128), (799, 21158), (843, 21263), (880, 21341), (887, 21377), (890, 21386), (900, 21419), (907, 21434),

Gene: Bruiser\_26 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Bruiser\_26:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Brujita\_19 Start: 16495, Stop: 18228, Start Num: 131

Candidate Starts for Brujita\_19:

(Start: 131 @16495 has 6 MA's), (206, 16594), (213, 16603), (241, 16669), (250, 16693), (272, 16753), (274, 16756), (284, 16783), (367, 16963), (377, 16987), (381, 16999), (388, 17023), (459, 17149), (465, 17164), (470, 17173), (486, 17209), (494, 17227), (515, 17287), (587, 17413), (608, 17479), (614, 17488), (618, 17497), (627, 17521), (717, 17665), (740, 17710), (773, 17812), (775, 17821), (779, 17839), (781, 17842), (836, 18001), (846, 18019), (860, 18055), (863, 18070), (880, 18118), (897, 18187),

Gene: Bruns\_26 Start: 21014, Stop: 22816, Start Num: 146

Candidate Starts for Bruns\_26:

(Start: 146 @21014 has 223 MA's), (Start: 161 @21035 has 4 MA's), (Start: 190 @21077 has 1 MA's), (216, 21122), (306, 21338), (332, 21383), (338, 21392), (368, 21482), (369, 21485), (378, 21509), (406, 21578), (467, 21680), (500, 21749), (579, 21938), (583, 21950), (584, 21953), (591, 21974), (635, 22070), (636, 22073), (638, 22079), (665, 22148), (668, 22166), (670, 22175), (677, 22205), (731, 22301), (746, 22334), (750, 22349), (793, 22490), (813, 22547), (862, 22658),

Gene: Brusacoram\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Brusacoram\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: BrutonGaster\_36 Start: 25954, Stop: 27642, Start Num: 146

Candidate Starts for BrutonGaster\_36:

(Start: 146 @25954 has 223 MA's), (188, 26014), (193, 26023), (206, 26047), (253, 26164), (255, 26170), (281, 26236), (306, 26284), (347, 26371), (349, 26377), (366, 26425), (368, 26428), (383, 26470), (465, 26575), (494, 26638), (498, 26644), (506, 26668), (587, 26830), (616, 26920), (653, 27028), (658, 27046), (710, 27088), (736, 27133), (739, 27139), (758, 27199), (788, 27298), (793, 27310), (796, 27319), (880, 27511), (888, 27550), (898, 27586), (914, 27634),

Gene: Bryce\_23 Start: 16323, Stop: 17948, Start Num: 168

Candidate Starts for Bryce\_23:

(Start: 155 @16308 has 4 MA's), (Start: 168 @16323 has 32 MA's), (196, 16365), (211, 16392), (232, 16428), (306, 16614), (361, 16743), (378, 16785), (386, 16812), (394, 16836), (406, 16854), (436, 16884), (444, 16899), (467, 16950), (505, 17034), (576, 17151), (584, 17175), (635, 17289), (654, 17337), (665, 17367), (672, 17406), (675, 17418), (713, 17448), (750, 17526), (807, 17673), (818, 17697), (832, 17733), (854, 17772), (907, 17940),

Gene: Bryler\_22 Start: 16350, Stop: 18116, Start Num: 114

Candidate Starts for Bryler\_22:

(Start: 109 @16341 has 26 MA's), (Start: 114 @16350 has 139 MA's), (140, 16380), (Start: 227 @16506 has 2 MA's), (230, 16521), (236, 16539), (248, 16572), (258, 16602), (278, 16647), (316, 16737), (334, 16773), (360, 16851), (362, 16860), (392, 16944), (395, 16953), (400, 16965), (403, 16968), (412, 16986), (424, 17007), (438, 17022), (444, 17034), (448, 17040), (465, 17082), (468, 17088), (572, 17271), (593, 17331), (629, 17415), (636, 17433), (655, 17493), (698, 17568), (708, 17592), (748, 17652), (756, 17685), (757, 17688), (762, 17706), (772, 17727), (793, 17802), (810, 17853), (813, 17859), (824, 17880), (863, 17952), (880, 18003), (901, 18087), (902, 18090), (913, 18108),

Gene: Brylie\_22 Start: 17344, Stop: 19050, Start Num: 162

Candidate Starts for Brylie\_22:

(Start: 101 @17269 has 2 MA's), (Start: 162 @17344 has 16 MA's), (Start: 227 @17437 has 2 MA's), (230, 17452), (232, 17458), (256, 17533), (283, 17605), (336, 17716), (349, 17761), (356, 17779), (360, 17791), (444, 17962), (449, 17971), (451, 17977), (465, 18010), (496, 18073), (514, 18124), (541, 18148), (563, 18172), (591, 18247), (603, 18286), (653, 18418), (714, 18532), (756, 18619), (792, 18733), (795, 18742), (836, 18847), (878, 18934), (913, 19042),

Gene: BubbleTrouble\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for BubbleTrouble\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900,

21582),

Gene: Bubbles123\_17 Start: 15521, Stop: 17230, Start Num: 123

Candidate Starts for Bubbles123\_17:

(Start: 123 @15521 has 215 MA's), (193, 15608), (Start: 227 @15653 has 2 MA's), (233, 15677), (271, 15782), (274, 15788), (281, 15806), (300, 15836), (348, 15941), (370, 16001), (378, 16022), (381, 16031), (388, 16055), (459, 16181), (465, 16196), (468, 16202), (484, 16238), (486, 16241), (492, 16253), (494, 16259), (511, 16307), (515, 16319), (521, 16325), (564, 16385), (568, 16397), (583, 16433), (587, 16445), (614, 16520), (618, 16529), (625, 16547), (627, 16553), (638, 16583), (710, 16688), (717, 16697), (720, 16700), (737, 16736), (761, 16814), (791, 16913), (799, 16934), (810, 16967), (826, 16997), (836, 17027), (841, 17036), (844, 17042), (860, 17057), (861, 17060), (866, 17084), (877, 17114), (882, 17126), (887, 17156), (900, 17198),

Gene: Buck\_23 Start: 19702, Stop: 21381, Start Num: 129

Candidate Starts for Buck\_23:

(Start: 129 @19702 has 79 MA's), (Start: 191 @19786 has 45 MA's), (Start: 235 @19864 has 1 MA's), (268, 19951), (274, 19966), (300, 20014), (324, 20053), (356, 20140), (368, 20173), (381, 20209), (390, 20239), (392, 20245), (422, 20314), (461, 20344), (466, 20356), (468, 20359), (494, 20416), (565, 20548), (567, 20554), (592, 20620), (594, 20626), (601, 20650), (618, 20698), (627, 20722), (631, 20731), (658, 20806), (717, 20857), (725, 20872), (782, 21034), (788, 21061), (799, 21091), (843, 21196), (880, 21274), (887, 21310), (890, 21319), (900, 21352), (907, 21367),

Gene: Bud\_28 Start: 20761, Stop: 22560, Start Num: 144

Candidate Starts for Bud\_28:

(94, 20695), (Start: 123 @20737 has 215 MA's), (Start: 144 @20761 has 603 MA's), (183, 20803), (236, 20899), (242, 20914), (277, 20995), (278, 20998), (306, 21073), (315, 21088), (338, 21127), (341, 21133), (356, 21184), (378, 21244), (380, 21250), (417, 21331), (467, 21415), (518, 21541), (526, 21559), (540, 21586), (597, 21727), (631, 21793), (635, 21805), (636, 21808), (703, 21997), (721, 22024), (726, 22033), (736, 22054), (737, 22057), (746, 22078), (750, 22093), (756, 22117), (781, 22192), (784, 22207), (813, 22291), (860, 22396), (862, 22402), (877, 22456), (909, 22555),

Gene: Budski\_20 Start: 16421, Stop: 18118, Start Num: 144

Candidate Starts for Budski\_20:

(113, 16382), (Start: 144 @16421 has 603 MA's), (Start: 150 @16433 has 4 MA's), (180, 16472), (202, 16511), (219, 16532), (240, 16580), (243, 16589), (263, 16631), (277, 16667), (295, 16724), (316, 16772), (331, 16799), (382, 16940), (406, 16997), (414, 17015), (432, 17024), (436, 17030), (458, 17078), (469, 17108), (485, 17144), (489, 17150), (499, 17171), (500, 17174), (517, 17225), (547, 17252), (549, 17255), (561, 17282), (574, 17309), (599, 17381), (618, 17420), (649, 17474), (664, 17516), (683, 17591), (736, 17654), (747, 17681), (749, 17684), (752, 17699), (788, 17783), (791, 17792), (793, 17795), (795, 17801), (799, 17813), (801, 17816), (811, 17846), (814, 17852), (824, 17873), (825, 17876), (849, 17930), (862, 17960), (863, 17969), (879, 18020), (887, 18053), (891, 18065), (896, 18083),

Gene: Bugatti\_27 Start: 19904, Stop: 21700, Start Num: 144

Candidate Starts for Bugatti\_27:

(Start: 144 @19904 has 603 MA's), (Start: 190 @19961 has 1 MA's), (230, 20030), (272, 20132), (277, 20144), (278, 20147), (306, 20222), (315, 20237), (338, 20276), (384, 20411), (417, 20480), (481, 20594), (532, 20720), (583, 20834), (591, 20858), (597, 20876), (636, 20957), (665, 21032), (668, 21050), (670, 21059), (675, 21083), (677, 21089), (682, 21104), (703, 21137), (729, 21182), (731, 21185), (742, 21206), (746, 21218), (749, 21224), (763, 21281), (813, 21431), (825, 21455), (860, 21536), (862, 21542), (900, 21677),

Gene: Buggaboo\_42 Start: 30625, Stop: 32241, Start Num: 170

Candidate Starts for Buggaboo\_42:

(Start: 170 @30625 has 87 MA's), (Start: 177 @30637 has 1 MA's), (236, 30739), (265, 30823), (347, 31006), (372, 31072), (377, 31087), (386, 31111), (432, 31198), (449, 31228), (450, 31231), (493, 31288), (518, 31360), (571, 31465), (607, 31552), (635, 31600), (673, 31726), (688, 31762), (776, 31873), (799, 31948), (877, 32125), (887, 32167), (906, 32224),

Gene: BugsBunny\_22 Start: 19419, Stop: 21014, Start Num: 191

Candidate Starts for BugsBunny\_22:

(Start: 129 @19335 has 79 MA's), (Start: 191 @19419 has 45 MA's), (Start: 235 @19497 has 1 MA's), (268, 19584), (274, 19599), (300, 19647), (324, 19686), (356, 19773), (368, 19806), (381, 19842), (390, 19872), (392, 19878), (422, 19947), (461, 19977), (466, 19989), (468, 19992), (494, 20049), (565, 20181), (567, 20187), (592, 20253), (594, 20259), (601, 20283), (618, 20331), (627, 20355), (631, 20364), (658, 20439), (717, 20490), (725, 20505), (782, 20667), (788, 20694), (799, 20724), (843, 20829), (880, 20907), (887, 20943), (890, 20952), (900, 20985), (907, 21000),

Gene: Buggy\_30 Start: 20696, Stop: 22468, Start Num: 144

Candidate Starts for Buggy\_30:

(Start: 123 @20672 has 215 MA's), (Start: 144 @20696 has 603 MA's), (219, 20795), (251, 20879), (277, 20930), (278, 20933), (305, 21005), (306, 21008), (338, 21062), (349, 21101), (378, 21179), (417, 21266), (463, 21347), (467, 21350), (546, 21536), (584, 21623), (631, 21728), (636, 21743), (675, 21869), (677, 21875), (713, 21923), (750, 22001), (752, 22007), (770, 22061), (781, 22100), (784, 22115), (813, 22199), (862, 22310),

Gene: Bumblebee11\_27 Start: 19826, Stop: 21625, Start Num: 144

Candidate Starts for Bumblebee11\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 190 @19886 has 1 MA's), (230, 19955), (263, 20033), (272, 20057), (278, 20072), (292, 20108), (306, 20147), (315, 20162), (338, 20201), (369, 20294), (378, 20318), (417, 20405), (481, 20519), (500, 20558), (532, 20645), (553, 20690), (583, 20759), (591, 20783), (595, 20795), (636, 20882), (665, 20957), (668, 20975), (670, 20984), (675, 21008), (677, 21014), (682, 21029), (703, 21062), (729, 21107), (731, 21110), (742, 21131), (813, 21356), (849, 21434), (860, 21461), (862, 21467), (900, 21602),

Gene: Bunker\_19 Start: 16748, Stop: 18478, Start Num: 141

Candidate Starts for Bunker\_19:

(72, 16628), (113, 16712), (Start: 141 @16748 has 14 MA's), (281, 17018), (316, 17102), (392, 17303), (414, 17345), (445, 17381), (458, 17411), (465, 17435), (485, 17477), (499, 17504), (500, 17507), (537, 17561), (540, 17567), (579, 17654), (697, 17948), (737, 18014), (747, 18038), (752, 18056), (793, 18152), (799, 18170), (864, 18329), (888, 18416), (890, 18422), (896, 18443),

Gene: Bunnies\_19 Start: 16407, Stop: 18143, Start Num: 117

Candidate Starts for Bunnies\_19:

(Start: 101 @16383 has 2 MA's), (Start: 117 @16407 has 59 MA's), (Start: 166 @16467 has 1 MA's), (178, 16488), (180, 16491), (246, 16611), (258, 16650), (272, 16683), (282, 16707), (344, 16827), (356, 16866), (358, 16872), (386, 16956), (388, 16962), (392, 16974), (402, 16998), (410, 17025), (422, 17043), (452, 17082), (459, 17088), (470, 17112), (494, 17166), (500, 17178), (503, 17187), (529, 17247), (573, 17325), (587, 17364), (598, 17397), (618, 17463), (624, 17478), (627, 17487), (636, 17511), (647, 17541), (653, 17553), (735, 17655), (740, 17667), (742, 17670), (745, 17676), (747, 17685), (779, 17793), (805, 17877), (853, 17976), (890, 18084), (907, 18132),

Gene: Bunnybear\_18 Start: 17781, Stop: 19379, Start Num: 170

Candidate Starts for Bunnybear\_18:

(61, 17559), (64, 17580), (69, 17610), (88, 17664), (Start: 170 @17781 has 87 MA's), (298, 18039), (306, 18057), (307, 18060), (340, 18114), (351, 18153), (363, 18189), (385, 18258), (388, 18267),

(415, 18330), (435, 18357), (440, 18366), (441, 18369), (501, 18402), (519, 18459), (521, 18465), (554, 18525), (591, 18603), (600, 18627), (603, 18636), (618, 18660), (636, 18696), (669, 18798), (687, 18855), (729, 18894), (732, 18900), (736, 18906), (751, 18945), (799, 19062), (849, 19185), (874, 19263),

Gene: Burger\_26 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Burger\_26:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Burnsey\_18 Start: 15730, Stop: 17430, Start Num: 133

Candidate Starts for Burnsey\_18:

(113, 15703), (Start: 133 @15730 has 8 MA's), (Start: 144 @15733 has 603 MA's), (264, 15943), (306, 16066), (336, 16117), (365, 16204), (369, 16213), (377, 16234), (382, 16249), (385, 16261), (436, 16339), (442, 16351), (454, 16378), (465, 16411), (481, 16444), (487, 16456), (505, 16498), (574, 16621), (599, 16693), (636, 16771), (643, 16786), (650, 16804), (668, 16861), (731, 16954), (747, 16990), (750, 17002), (752, 17008), (755, 17020), (766, 17029), (791, 17101), (793, 17104), (795, 17110), (799, 17122), (824, 17182), (842, 17227), (847, 17236), (862, 17269), (882, 17335),

Gene: Burton\_28 Start: 21234, Stop: 23036, Start Num: 146

Candidate Starts for Burton\_28:

(Start: 146 @21234 has 223 MA's), (Start: 161 @21255 has 4 MA's), (Start: 190 @21297 has 1 MA's), (216, 21342), (306, 21558), (332, 21603), (338, 21612), (349, 21651), (368, 21702), (369, 21705), (406, 21798), (467, 21900), (500, 21969), (583, 22170), (584, 22173), (591, 22194), (635, 22290), (636, 22293), (638, 22299), (665, 22368), (668, 22386), (670, 22395), (677, 22425), (731, 22521), (746, 22554), (750, 22569), (793, 22710), (813, 22767), (862, 22878),

Gene: Burwell21\_16 Start: 14811, Stop: 16520, Start Num: 123

Candidate Starts for Burwell21\_16:

(Start: 123 @14811 has 215 MA's), (193, 14898), (Start: 227 @14943 has 2 MA's), (233, 14967), (271, 15072), (274, 15078), (281, 15096), (300, 15126), (348, 15231), (367, 15285), (370, 15291), (373, 15300), (381, 15321), (388, 15345), (402, 15381), (403, 15387), (418, 15420), (420, 15423), (424, 15432), (443, 15447), (448, 15453), (459, 15471), (465, 15486), (468, 15492), (475, 15510), (477, 15513), (484, 15528), (492, 15543), (494, 15549), (511, 15597), (515, 15609), (521, 15615), (564, 15675), (568, 15687), (583, 15723), (587, 15735), (614, 15810), (618, 15819), (625, 15837), (627, 15843), (638, 15873), (710, 15978), (720, 15990), (737, 16026), (761, 16104), (799, 16224), (810, 16257), (826, 16287), (829, 16299), (836, 16317), (839, 16323), (841, 16326), (844, 16332), (860, 16347), (861, 16350), (865, 16371), (866, 16374), (882, 16416), (887, 16446), (900, 16488), (901, 16494),

Gene: Butters\_18 Start: 14956, Stop: 16665, Start Num: 126

Candidate Starts for Butters\_18:

(Start: 126 @14956 has 42 MA's), (Start: 150 @14983 has 4 MA's), (Start: 227 @15088 has 2 MA's), (229, 15100), (241, 15136), (258, 15187), (268, 15208), (271, 15217), (274, 15223), (282, 15244), (287, 15256), (367, 15430), (370, 15436), (377, 15454), (381, 15466), (382, 15469), (388, 15490), (418, 15565), (443, 15592), (459, 15616), (460, 15619), (465, 15631), (484, 15673), (492, 15688), (494, 15694), (499, 15703), (511, 15742), (547, 15796), (564, 15820), (587, 15880), (608, 15946), (614, 15955), (618, 15964), (637, 16015), (638, 16018), (710, 16123), (737, 16171), (758, 16237),

(781, 16309), (836, 16462), (841, 16471), (860, 16492), (863, 16507), (866, 16519), (880, 16555), (882, 16561),

Gene: Button\_19 Start: 14787, Stop: 16475, Start Num: 144

Candidate Starts for Button\_19:

(35, 14367), (113, 14757), (Start: 133 @14784 has 8 MA's), (Start: 144 @14787 has 603 MA's), (236, 14928), (277, 15027), (290, 15072), (365, 15255), (377, 15285), (390, 15327), (406, 15357), (436, 15387), (442, 15399), (444, 15402), (481, 15492), (508, 15558), (513, 15573), (546, 15609), (553, 15624), (561, 15642), (579, 15681), (581, 15687), (610, 15771), (634, 15807), (635, 15810), (636, 15813), (643, 15828), (650, 15846), (651, 15849), (668, 15903), (747, 16032), (750, 16044), (752, 16050), (754, 16059), (766, 16071), (791, 16143), (793, 16146), (794, 16149), (829, 16245), (862, 16314), (863, 16323), (900, 16452), (902, 16461), (907, 16467),

Gene: Buttons\_29 Start: 22075, Stop: 23877, Start Num: 146

Candidate Starts for Buttons\_29:

(Start: 146 @22075 has 223 MA's), (Start: 161 @22096 has 4 MA's), (Start: 190 @22138 has 1 MA's), (216, 22183), (306, 22399), (332, 22444), (338, 22453), (349, 22492), (368, 22543), (369, 22546), (406, 22639), (467, 22741), (500, 22810), (519, 22870), (583, 23011), (584, 23014), (591, 23035), (635, 23131), (636, 23134), (638, 23140), (665, 23209), (668, 23227), (670, 23236), (677, 23266), (731, 23362), (746, 23395), (750, 23410), (793, 23551), (813, 23608), (862, 23719),

Gene: Buttrmlkdreams\_18 Start: 15362, Stop: 17059, Start Num: 144

Candidate Starts for Buttrmlkdreams\_18:

(113, 15332), (Start: 133 @15359 has 8 MA's), (Start: 144 @15362 has 603 MA's), (264, 15572), (332, 15740), (336, 15746), (356, 15806), (374, 15854), (377, 15863), (385, 15890), (395, 15920), (406, 15935), (436, 15968), (442, 15980), (458, 16016), (481, 16073), (487, 16085), (553, 16205), (562, 16226), (574, 16250), (636, 16400), (643, 16415), (650, 16433), (668, 16490), (747, 16619), (750, 16631), (755, 16649), (766, 16658), (791, 16730), (793, 16733), (795, 16739), (799, 16751), (842, 16856), (847, 16865), (862, 16898),

Gene: BuzzBuzz\_28 Start: 20463, Stop: 22259, Start Num: 144

Candidate Starts for BuzzBuzz\_28:

(Start: 144 @20463 has 603 MA's), (Start: 190 @20520 has 1 MA's), (197, 20535), (219, 20568), (230, 20589), (Start: 235 @20604 has 1 MA's), (272, 20691), (277, 20703), (278, 20706), (306, 20781), (315, 20796), (336, 20832), (417, 21039), (481, 21153), (500, 21192), (532, 21279), (583, 21393), (591, 21417), (597, 21435), (636, 21516), (665, 21591), (668, 21609), (675, 21642), (677, 21648), (695, 21687), (729, 21741), (731, 21744), (742, 21765), (758, 21822), (813, 21990), (860, 22095), (862, 22101), (900, 22236),

Gene: BuzzLyseyear\_18 Start: 15198, Stop: 16907, Start Num: 123

Candidate Starts for BuzzLyseyear\_18:

(Start: 123 @15198 has 215 MA's), (193, 15285), (Start: 227 @15330 has 2 MA's), (233, 15354), (271, 15459), (274, 15465), (281, 15483), (300, 15513), (348, 15618), (370, 15678), (378, 15699), (381, 15708), (388, 15732), (459, 15858), (465, 15873), (468, 15879), (475, 15897), (477, 15900), (484, 15915), (492, 15930), (494, 15936), (511, 15984), (515, 15996), (521, 16002), (564, 16062), (568, 16074), (583, 16110), (587, 16122), (614, 16197), (618, 16206), (625, 16224), (627, 16230), (638, 16260), (710, 16365), (720, 16377), (737, 16413), (761, 16491), (799, 16611), (810, 16644), (826, 16674), (829, 16686), (836, 16704), (839, 16710), (841, 16713), (844, 16719), (860, 16734), (861, 16737), (865, 16758), (866, 16761), (882, 16803), (887, 16833), (900, 16875), (901, 16881),

Gene: Bxb1\_25 Start: 21185, Stop: 22987, Start Num: 146

Candidate Starts for Bxb1\_25:



(Start: 146 @21185 has 223 MA's), (Start: 161 @21206 has 4 MA's), (Start: 190 @21248 has 1 MA's), (216, 21293), (306, 21509), (332, 21554), (338, 21563), (349, 21602), (368, 21653), (369, 21656), (467, 21851), (500, 21920), (583, 22121), (584, 22124), (591, 22145), (635, 22241), (636, 22244), (638, 22250), (665, 22319), (668, 22337), (670, 22346), (677, 22376), (731, 22472), (746, 22505), (750, 22520), (793, 22661), (813, 22718), (862, 22829),

Gene: Bxz2\_28 Start: 20473, Stop: 22269, Start Num: 144

Candidate Starts for Bxz2\_28:

(Start: 144 @20473 has 603 MA's), (Start: 190 @20530 has 1 MA's), (197, 20545), (219, 20578), (230, 20599), (Start: 235 @20614 has 1 MA's), (272, 20701), (277, 20713), (278, 20716), (306, 20791), (315, 20806), (336, 20842), (417, 21049), (481, 21163), (500, 21202), (532, 21289), (583, 21403), (591, 21427), (597, 21445), (636, 21526), (665, 21601), (668, 21619), (675, 21652), (677, 21658), (695, 21697), (729, 21751), (731, 21754), (742, 21775), (758, 21832), (813, 22000), (860, 22105), (862, 22111), (900, 22246),

Gene: ByChance\_16 Start: 14817, Stop: 16526, Start Num: 123

Candidate Starts for ByChance\_16:

(Start: 123 @14817 has 215 MA's), (193, 14904), (Start: 227 @14949 has 2 MA's), (233, 14973), (271, 15078), (274, 15084), (281, 15102), (300, 15132), (348, 15237), (370, 15297), (378, 15318), (381, 15327), (388, 15351), (418, 15426), (420, 15429), (459, 15477), (465, 15492), (468, 15498), (484, 15534), (492, 15549), (494, 15555), (511, 15603), (515, 15615), (521, 15621), (564, 15681), (568, 15693), (583, 15729), (587, 15741), (614, 15816), (618, 15825), (625, 15843), (627, 15849), (638, 15879), (710, 15984), (720, 15996), (737, 16032), (761, 16110), (799, 16230), (810, 16263), (826, 16293), (836, 16323), (841, 16332), (844, 16338), (860, 16353), (861, 16356), (866, 16380), (877, 16410), (882, 16422), (887, 16452), (900, 16494),

Gene: Byougenkin\_16 Start: 14826, Stop: 16535, Start Num: 123

Candidate Starts for Byougenkin\_16:

(Start: 123 @14826 has 215 MA's), (193, 14913), (Start: 227 @14958 has 2 MA's), (233, 14982), (271, 15087), (274, 15093), (281, 15111), (300, 15141), (348, 15246), (370, 15306), (378, 15327), (381, 15336), (386, 15354), (388, 15360), (459, 15486), (465, 15501), (468, 15507), (484, 15543), (486, 15546), (492, 15558), (494, 15564), (511, 15612), (515, 15624), (521, 15630), (564, 15690), (568, 15702), (583, 15738), (587, 15750), (614, 15825), (618, 15834), (625, 15852), (627, 15858), (638, 15888), (710, 15993), (717, 16002), (720, 16005), (737, 16041), (758, 16107), (761, 16119), (791, 16218), (799, 16239), (810, 16272), (826, 16302), (836, 16332), (841, 16341), (844, 16347), (860, 16362), (861, 16365), (866, 16389), (882, 16431), (887, 16461), (900, 16503), (901, 16509),

Gene: C3\_26 Start: 20192, Stop: 21982, Start Num: 144

Candidate Starts for C3\_26:

(94, 20126), (Start: 123 @20168 has 215 MA's), (Start: 144 @20192 has 603 MA's), (277, 20426), (278, 20429), (305, 20501), (306, 20504), (315, 20519), (338, 20558), (341, 20564), (378, 20675), (384, 20693), (388, 20708), (417, 20762), (463, 20843), (467, 20846), (532, 21002), (546, 21032), (586, 21125), (636, 21239), (675, 21365), (746, 21500), (750, 21515), (756, 21539), (781, 21614), (782, 21617), (784, 21629), (813, 21713), (849, 21791), (860, 21818), (862, 21824), (873, 21869), (877, 21878), (900, 21959),

Gene: C3PO\_31 Start: 28482, Stop: 30080, Start Num: 171

Candidate Starts for C3PO\_31:

(Start: 171 @28482 has 40 MA's), (239, 28581), (263, 28650), (278, 28689), (338, 28824), (358, 28884), (436, 29037), (442, 29049), (448, 29058), (449, 29061), (486, 29106), (493, 29121), (498, 29130), (501, 29139), (518, 29193), (528, 29211), (557, 29265), (653, 29481), (678, 29574), (762, 29682), (784, 29736), (808, 29811), (867, 29940), (905, 30066),

Gene: CLED96\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for CLED96\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: CRB1\_28 Start: 20183, Stop: 21955, Start Num: 144

Candidate Starts for CRB1\_28:

(Start: 123 @20159 has 215 MA's), (Start: 144 @20183 has 603 MA's), (219, 20282), (277, 20417), (278, 20420), (305, 20492), (306, 20495), (338, 20549), (341, 20555), (349, 20588), (378, 20666), (417, 20753), (463, 20834), (467, 20837), (546, 21023), (584, 21110), (631, 21215), (636, 21230), (675, 21356), (677, 21362), (713, 21410), (746, 21473), (750, 21488), (752, 21494), (759, 21524), (770, 21548), (781, 21587), (784, 21602), (813, 21686),

Gene: CREW\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for CREW\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Cabrinians\_16 Start: 14807, Stop: 16516, Start Num: 123

Candidate Starts for Cabrinians\_16:

(Start: 123 @14807 has 215 MA's), (193, 14894), (Start: 227 @14939 has 2 MA's), (233, 14963), (271, 15068), (274, 15074), (281, 15092), (300, 15122), (348, 15227), (370, 15287), (378, 15308), (381, 15317), (388, 15341), (418, 15416), (420, 15419), (459, 15467), (465, 15482), (468, 15488), (484, 15524), (486, 15527), (492, 15539), (494, 15545), (511, 15593), (515, 15605), (521, 15611), (564, 15671), (568, 15683), (583, 15719), (587, 15731), (614, 15806), (618, 15815), (625, 15833), (627, 15839), (638, 15869), (710, 15974), (720, 15986), (737, 16022), (761, 16100), (799, 16220), (810, 16253), (826, 16283), (836, 16313), (841, 16322), (844, 16328), (860, 16343), (861, 16346), (866, 16370), (877, 16400), (882, 16412), (887, 16442), (900, 16484),

Gene: Cactus\_25 Start: 18958, Stop: 20637, Start Num: 129

Candidate Starts for Cactus\_25:

(Start: 129 @18958 has 79 MA's), (Start: 191 @19042 has 45 MA's), (Start: 235 @19120 has 1 MA's), (268, 19207), (274, 19222), (300, 19270), (324, 19309), (356, 19396), (368, 19429), (381, 19465), (390, 19495), (392, 19501), (422, 19570), (461, 19600), (466, 19612), (468, 19615), (494, 19672), (565, 19804), (567, 19810), (592, 19876), (594, 19882), (601, 19906), (618, 19954), (627, 19978), (631, 19987), (658, 20062), (717, 20113), (725, 20128), (782, 20290), (788, 20317), (799, 20347), (843, 20452), (880, 20530), (887, 20566), (890, 20575), (900, 20608), (907, 20623),

Gene: CactusJack\_19 Start: 16273, Stop: 18009, Start Num: 117

Candidate Starts for CactusJack\_19:

(Start: 101 @16249 has 2 MA's), (Start: 117 @16273 has 59 MA's), (Start: 166 @16333 has 1 MA's), (178, 16354), (180, 16357), (246, 16477), (258, 16516), (272, 16549), (282, 16573), (344, 16693), (356, 16732), (358, 16738), (386, 16822), (388, 16828), (392, 16840), (402, 16864), (410, 16891), (422, 16909), (452, 16948), (459, 16954), (470, 16978), (494, 17032), (500, 17044), (503, 17053), (529, 17113), (573, 17191), (587, 17230), (598, 17263), (618, 17329), (627, 17353), (636, 17377),

(647, 17407), (735, 17521), (740, 17533), (745, 17542), (747, 17551), (779, 17659), (805, 17743), (853, 17842), (890, 17950), (907, 17998),

Gene: CactusRose\_26 Start: 21034, Stop: 22836, Start Num: 146

Candidate Starts for CactusRose\_26:

(Start: 146 @21034 has 223 MA's), (Start: 161 @21055 has 4 MA's), (Start: 190 @21097 has 1 MA's), (216, 21142), (306, 21358), (332, 21403), (338, 21412), (368, 21502), (406, 21598), (467, 21700), (500, 21769), (583, 21970), (584, 21973), (591, 21994), (635, 22090), (636, 22093), (638, 22099), (665, 22168), (668, 22186), (670, 22195), (677, 22225), (731, 22321), (746, 22354), (750, 22369), (758, 22399), (793, 22510), (813, 22567), (862, 22678),

Gene: Caelakin\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Caelakin\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Cafasso\_19 Start: 16548, Stop: 18212, Start Num: 151

Candidate Starts for Cafasso\_19:

(Start: 141 @16533 has 14 MA's), (Start: 151 @16548 has 5 MA's), (Start: 155 @16554 has 4 MA's), (176, 16584), (183, 16593), (295, 16827), (306, 16860), (334, 16908), (360, 16983), (377, 17028), (417, 17118), (436, 17133), (459, 17187), (463, 17196), (481, 17229), (497, 17262), (500, 17268), (610, 17502), (619, 17514), (635, 17541), (646, 17574), (661, 17613), (665, 17622), (682, 17694), (718, 17709), (731, 17733), (750, 17781), (787, 17868), (795, 17889), (820, 17955), (849, 18021), (865, 18069), (891, 18159), (909, 18207),

Gene: Cain\_22 Start: 16338, Stop: 18104, Start Num: 114

Candidate Starts for Cain\_22:

(Start: 109 @16329 has 26 MA's), (Start: 114 @16338 has 139 MA's), (140, 16368), (Start: 227 @16494 has 2 MA's), (230, 16509), (236, 16527), (248, 16560), (258, 16590), (278, 16635), (316, 16725), (334, 16761), (360, 16839), (362, 16848), (392, 16932), (395, 16941), (400, 16953), (403, 16956), (412, 16974), (424, 16995), (438, 17010), (444, 17022), (448, 17028), (465, 17070), (468, 17076), (572, 17259), (593, 17319), (629, 17403), (636, 17421), (655, 17481), (698, 17556), (708, 17580), (748, 17640), (756, 17673), (757, 17676), (762, 17694), (772, 17715), (793, 17790), (810, 17841), (813, 17847), (824, 17868), (863, 17940), (880, 17991), (901, 18075), (902, 18078), (913, 18096),

Gene: Calvinny\_30 Start: 20460, Stop: 22256, Start Num: 144

Candidate Starts for Calvinny\_30:

(Start: 144 @20460 has 603 MA's), (Start: 190 @20517 has 1 MA's), (197, 20532), (230, 20586), (Start: 235 @20601 has 1 MA's), (272, 20688), (277, 20700), (278, 20703), (306, 20778), (315, 20793), (417, 21036), (500, 21189), (532, 21276), (576, 21369), (583, 21390), (591, 21414), (595, 21426), (597, 21432), (636, 21513), (665, 21588), (668, 21606), (670, 21615), (675, 21639), (677, 21645), (682, 21660), (695, 21684), (729, 21738), (731, 21741), (742, 21762), (860, 22092), (862, 22098), (900, 22233),

Gene: Cambiare\_19 Start: 17379, Stop: 19118, Start Num: 132

Candidate Starts for Cambiare\_19:

(Start: 109 @17370 has 26 MA's), (Start: 132 @17379 has 45 MA's), (156, 17409), (197, 17472), (199, 17475), (215, 17493), (230, 17526), (247, 17574), (248, 17577), (309, 17733), (321, 17748), (353, 17838), (369, 17880), (395, 17958), (448, 18054), (454, 18072), (465, 18096), (468, 18102), (487, 18141), (503, 18177), (522, 18222), (564, 18267), (599, 18363), (601, 18372), (629, 18429), (655, 18507), (665, 18534), (691, 18570), (730, 18624), (756, 18687), (767, 18717), (799, 18822), (806, 18846), (826, 18885), (850, 18936), (902, 19092), (904, 19095),

Gene: Camperdownii\_26 Start: 19446, Stop: 21227, Start Num: 144

Candidate Starts for Camperdownii\_26:

(Start: 123 @19422 has 215 MA's), (Start: 144 @19446 has 603 MA's), (Start: 148 @19452 has 14 MA's), (Start: 190 @19506 has 1 MA's), (197, 19521), (230, 19575), (236, 19593), (272, 19677), (277, 19689), (278, 19692), (306, 19767), (315, 19782), (338, 19821), (378, 19938), (417, 20025), (463, 20106), (489, 20154), (500, 20178), (532, 20265), (553, 20310), (584, 20382), (591, 20403), (597, 20421), (636, 20502), (668, 20595), (670, 20604), (675, 20628), (677, 20634), (687, 20658), (731, 20712), (742, 20733), (756, 20784), (763, 20808), (782, 20862), (813, 20958), (860, 21063), (863, 21078), (894, 21186), (900, 21204),

Gene: Camri\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Camri\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Camster\_19 Start: 16386, Stop: 18122, Start Num: 117

Candidate Starts for Camster\_19:

(Start: 101 @16362 has 2 MA's), (Start: 117 @16386 has 59 MA's), (Start: 166 @16446 has 1 MA's), (178, 16467), (180, 16470), (246, 16590), (258, 16629), (272, 16662), (282, 16686), (344, 16806), (356, 16845), (358, 16851), (386, 16935), (388, 16941), (392, 16953), (402, 16977), (410, 17004), (422, 17022), (452, 17061), (459, 17067), (470, 17091), (494, 17145), (500, 17157), (503, 17166), (529, 17226), (573, 17304), (587, 17343), (598, 17376), (618, 17442), (624, 17457), (627, 17466), (636, 17490), (647, 17520), (653, 17532), (735, 17634), (740, 17646), (742, 17649), (745, 17655), (747, 17664), (779, 17772), (805, 17856), (853, 17955), (890, 18063), (907, 18111),

Gene: Candra\_31 Start: 20012, Stop: 21784, Start Num: 144

Candidate Starts for Candra\_31:

(94, 19946), (Start: 123 @19988 has 215 MA's), (Start: 144 @20012 has 603 MA's), (278, 20249), (305, 20321), (306, 20324), (315, 20339), (338, 20378), (341, 20384), (378, 20495), (380, 20501), (392, 20540), (417, 20582), (448, 20621), (463, 20663), (467, 20666), (532, 20822), (592, 20963), (597, 20978), (636, 21059), (677, 21191), (750, 21317), (765, 21368), (770, 21377), (781, 21416), (782, 21419), (784, 21431), (813, 21515), (860, 21620), (862, 21626), (900, 21761),

Gene: Capricorn\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Capricorn\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: CaptainKirk2\_19 Start: 16674, Stop: 18320, Start Num: 195

Candidate Starts for CaptainKirk2\_19:

(172, 16638), (Start: 195 @16674 has 45 MA's), (244, 16776), (270, 16848), (272, 16854), (274, 16857), (308, 16953), (329, 16992), (357, 17073), (377, 17127), (382, 17142), (460, 17238), (494, 17313), (506, 17343), (594, 17526), (601, 17550), (658, 17694), (664, 17706), (702, 17766), (757, 17898), (758, 17901), (788, 18000), (795, 18018), (813, 18069), (843, 18135), (872, 18198), (877, 18210),

Gene: CaptainTrips\_17 Start: 15501, Stop: 17210, Start Num: 123

Candidate Starts for CaptainTrips\_17:

(Start: 123 @15501 has 215 MA's), (193, 15588), (Start: 227 @15633 has 2 MA's), (233, 15657), (240, 15678), (271, 15762), (274, 15768), (281, 15786), (300, 15816), (348, 15921), (370, 15981), (378, 16002), (381, 16011), (386, 16029), (388, 16035), (459, 16161), (465, 16176), (468, 16182), (484, 16218), (486, 16221), (492, 16233), (494, 16239), (511, 16287), (515, 16299), (521, 16305), (564, 16365), (568, 16377), (583, 16413), (587, 16425), (614, 16500), (618, 16509), (625, 16527), (627, 16533), (638, 16563), (710, 16668), (717, 16677), (720, 16680), (737, 16716), (761, 16794), (791, 16893), (799, 16914), (810, 16947), (826, 16977), (836, 17007), (841, 17016), (844, 17022), (860, 17037), (861, 17040), (866, 17064), (877, 17094), (882, 17106), (887, 17136), (900, 17178),

Gene: Caraxes\_27 Start: 18835, Stop: 20625, Start Num: 144

Candidate Starts for Caraxes\_27:

(94, 18769), (Start: 123 @18811 has 215 MA's), (Start: 144 @18835 has 603 MA's), (Start: 161 @18844 has 4 MA's), (242, 18988), (277, 19069), (278, 19072), (305, 19144), (306, 19147), (315, 19162), (338, 19201), (341, 19207), (378, 19318), (380, 19324), (388, 19351), (417, 19405), (463, 19486), (467, 19489), (532, 19645), (546, 19675), (583, 19759), (597, 19801), (619, 19852), (636, 19882), (675, 20008), (701, 20062), (721, 20089), (726, 20098), (731, 20110), (746, 20143), (750, 20158), (756, 20182), (781, 20257), (782, 20260), (784, 20272), (813, 20356), (860, 20461), (873, 20512), (877, 20521), (900, 20602),

Gene: Carcharodon\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Carcharodon\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Cardigan\_47 Start: 30787, Stop: 32481, Start Num: 141

Candidate Starts for Cardigan\_47:

(Start: 141 @30787 has 14 MA's), (188, 30853), (Start: 191 @30859 has 45 MA's), (228, 30916), (282, 31075), (287, 31087), (349, 31213), (366, 31261), (465, 31411), (490, 31462), (494, 31474), (498, 31480), (568, 31621), (576, 31636), (666, 31903), (756, 32032), (758, 32038), (760, 32047), (782, 32110), (793, 32149), (796, 32158), (813, 32206), (848, 32281), (876, 32341), (888, 32389), (896, 32416), (898, 32425), (900, 32428),

Gene: Carlyle\_29 Start: 21914, Stop: 23716, Start Num: 146

Candidate Starts for Carlyle\_29:

(Start: 146 @21914 has 223 MA's), (Start: 161 @21935 has 4 MA's), (Start: 190 @21977 has 1 MA's), (216, 22022), (306, 22238), (332, 22283), (338, 22292), (349, 22331), (368, 22382), (369, 22385), (467, 22580), (500, 22649), (583, 22850), (584, 22853), (591, 22874), (635, 22970), (636, 22973), (638, 22979), (665, 23048), (668, 23066), (677, 23105), (731, 23201), (746, 23234), (750, 23249),

(793, 23390), (813, 23447), (862, 23558), (909, 23711),

Gene: CarolAnn\_19 Start: 16617, Stop: 18263, Start Num: 195

Candidate Starts for CarolAnn\_19:

(172, 16581), (Start: 195 @16617 has 45 MA's), (244, 16719), (272, 16797), (274, 16800), (308, 16896), (329, 16935), (357, 17016), (377, 17070), (382, 17085), (494, 17256), (506, 17286), (594, 17469), (601, 17493), (626, 17544), (658, 17637), (664, 17649), (694, 17694), (702, 17709), (757, 17841), (758, 17844), (788, 17943), (795, 17961), (813, 18012), (839, 18072), (843, 18078), (872, 18141), (877, 18153),

Gene: Carsonalex\_19 Start: 15787, Stop: 17487, Start Num: 133

Candidate Starts for Carsonalex\_19:

(Start: 133 @15787 has 8 MA's), (Start: 144 @15790 has 603 MA's), (264, 16000), (306, 16123), (336, 16174), (365, 16261), (382, 16306), (385, 16318), (436, 16396), (442, 16408), (454, 16435), (465, 16468), (481, 16501), (487, 16513), (505, 16555), (574, 16678), (599, 16750), (636, 16828), (643, 16843), (650, 16861), (668, 16918), (731, 17011), (747, 17047), (750, 17059), (752, 17065), (755, 17077), (766, 17086), (791, 17158), (793, 17161), (795, 17167), (799, 17179), (824, 17239), (842, 17284), (847, 17293), (862, 17326), (882, 17392),

Gene: CaseJules\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for CaseJules\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Cashline\_20 Start: 17390, Stop: 19096, Start Num: 111

Candidate Starts for Cashline\_20:

(Start: 95 @17366 has 1 MA's), (Start: 111 @17390 has 24 MA's), (217, 17537), (251, 17612), (303, 17726), (365, 17873), (368, 17879), (459, 18062), (497, 18137), (635, 18419), (644, 18440), (668, 18515), (715, 18602), (739, 18638), (750, 18671), (752, 18677), (783, 18743), (793, 18773), (860, 18929), (862, 18935), (865, 18953), (897, 19064),

Gene: CassieYates\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for CassieYates\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Catdawg\_56 Start: 33524, Stop: 35260, Start Num: 107

Candidate Starts for Catdawg\_56:

(Start: 100 @33515 has 2 MA's), (Start: 107 @33524 has 25 MA's), (174, 33614), (240, 33731), (251, 33767), (259, 33788), (271, 33815), (274, 33821), (302, 33875), (332, 33926), (381, 34064), (383, 34070), (400, 34121), (402, 34124), (407, 34142), (459, 34193), (468, 34214), (470, 34217), (492, 34265), (494, 34271), (511, 34319), (513, 34325), (515, 34331), (555, 34391), (564, 34415), (565, 34418), (583, 34463), (588, 34478), (591, 34487), (594, 34496), (608, 34541), (618, 34559), (631, 34592), (720, 34730), (729, 34751), (754, 34817), (762, 34847), (779, 34901), (791, 34943), (799, 34964), (805, 34985), (810, 34997), (821, 35018), (844, 35072), (880, 35150), (887, 35186), (893,

35207), (901, 35234),

Gene: Catfish\_22 Start: 18471, Stop: 19802, Start Num: 257

Candidate Starts for Catfish\_22:

(Start: 257 @18471 has 11 MA's), (317, 18603), (333, 18633), (353, 18690), (364, 18723), (386, 18792), (392, 18810), (437, 18891), (504, 18930), (531, 18996), (536, 19005), (548, 19014), (588, 19071), (607, 19116), (618, 19134), (636, 19170), (666, 19251), (672, 19287), (799, 19506), (823, 19566), (863, 19647), (867, 19662), (877, 19692), (881, 19701),

Gene: Caviar\_28 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for Caviar\_28:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481, 21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729, 21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Cedasite\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Cedasite\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Centaur\_30 Start: 20653, Stop: 22425, Start Num: 144

Candidate Starts for Centaur\_30:

(Start: 123 @20629 has 215 MA's), (Start: 144 @20653 has 603 MA's), (Start: 235 @20788 has 1 MA's), (277, 20887), (278, 20890), (305, 20962), (306, 20965), (338, 21019), (341, 21025), (360, 21088), (378, 21136), (388, 21169), (417, 21223), (463, 21304), (467, 21307), (481, 21337), (546, 21493), (584, 21580), (636, 21700), (674, 21823), (675, 21826), (677, 21832), (713, 21880), (746, 21943), (750, 21958), (752, 21964), (770, 22018), (781, 22057), (784, 22072), (795, 22105), (810, 22150), (860, 22261), (862, 22267), (877, 22321),

Gene: CentreCat\_27 Start: 19828, Stop: 21606, Start Num: 144

Candidate Starts for CentreCat\_27:

(Start: 123 @19804 has 215 MA's), (Start: 144 @19828 has 603 MA's), (Start: 190 @19885 has 1 MA's), (222, 19939), (230, 19954), (236, 19972), (272, 20056), (277, 20068), (278, 20071), (306, 20146), (315, 20161), (338, 20200), (378, 20317), (417, 20404), (463, 20485), (489, 20533), (500, 20557), (532, 20644), (553, 20689), (584, 20761), (591, 20782), (597, 20800), (636, 20881), (668, 20974), (670, 20983), (675, 21007), (677, 21013), (687, 21037), (731, 21091), (742, 21112), (756, 21163), (763, 21187), (782, 21241), (813, 21337), (860, 21442), (863, 21457), (894, 21565), (900, 21583),

Gene: Cerasum\_17 Start: 14635, Stop: 16344, Start Num: 123

Candidate Starts for Cerasum\_17:

(Start: 123 @14635 has 215 MA's), (193, 14722), (Start: 227 @14767 has 2 MA's), (233, 14791), (271, 14896), (274, 14902), (281, 14920), (300, 14950), (348, 15055), (370, 15115), (378, 15136), (381, 15145), (388, 15169), (418, 15244), (420, 15247), (459, 15295), (465, 15310), (468, 15316), (484, 15352), (486, 15355), (492, 15367), (494, 15373), (511, 15421), (515, 15433), (521, 15439), (564, 15499), (568, 15511), (583, 15547), (587, 15559), (614, 15634), (618, 15643), (625, 15661), (627,

15667), (638, 15697), (710, 15802), (717, 15811), (720, 15814), (737, 15850), (761, 15928), (791, 16027), (799, 16048), (810, 16081), (826, 16111), (836, 16141), (841, 16150), (844, 16156), (860, 16171), (861, 16174), (866, 16198), (877, 16228), (882, 16240), (887, 16270), (900, 16312),

Gene: Cerulean\_28 Start: 20139, Stop: 21920, Start Num: 144

Candidate Starts for Cerulean\_28:

(Start: 123 @20115 has 215 MA's), (Start: 144 @20139 has 603 MA's), (Start: 148 @20145 has 14 MA's), (Start: 190 @20199 has 1 MA's), (197, 20214), (230, 20268), (236, 20286), (272, 20370), (277, 20382), (278, 20385), (306, 20460), (315, 20475), (338, 20514), (378, 20631), (417, 20718), (463, 20799), (489, 20847), (500, 20871), (532, 20958), (553, 21003), (584, 21075), (591, 21096), (597, 21114), (636, 21195), (665, 21270), (668, 21288), (670, 21297), (675, 21321), (677, 21327), (687, 21351), (726, 21393), (731, 21405), (742, 21426), (756, 21477), (763, 21501), (782, 21555), (813, 21651), (860, 21756), (863, 21771), (894, 21879), (900, 21897),

Gene: ChadMasterC\_35 Start: 31682, Stop: 33445, Start Num: 97

Candidate Starts for ChadMasterC\_35:

(90, 31664), (Start: 97 @31682 has 73 MA's), (Start: 121 @31718 has 1 MA's), (219, 31856), (262, 31952), (265, 31961), (288, 32030), (306, 32081), (332, 32126), (368, 32222), (384, 32267), (386, 32276), (445, 32366), (458, 32396), (461, 32411), (472, 32435), (487, 32465), (551, 32570), (597, 32687), (607, 32705), (613, 32720), (631, 32750), (635, 32762), (636, 32765), (647, 32792), (793, 33116), (794, 33119), (810, 33167), (824, 33194), (832, 33221), (860, 33275), (866, 33302), (902, 33431),

Gene: Chadwick\_25 Start: 18946, Stop: 20745, Start Num: 144

Candidate Starts for Chadwick\_25:

(Start: 144 @18946 has 603 MA's), (278, 19183), (306, 19258), (315, 19273), (336, 19309), (360, 19381), (365, 19396), (378, 19429), (380, 19435), (481, 19630), (495, 19660), (499, 19666), (532, 19756), (553, 19801), (583, 19870), (597, 19912), (602, 19930), (635, 19990), (636, 19993), (668, 20086), (729, 20227), (746, 20263), (859, 20578), (862, 20587), (900, 20722),

Gene: ChampagnePapi\_28 Start: 20138, Stop: 21919, Start Num: 144

Candidate Starts for ChampagnePapi\_28:

(Start: 123 @20114 has 215 MA's), (Start: 144 @20138 has 603 MA's), (Start: 148 @20144 has 14 MA's), (Start: 190 @20198 has 1 MA's), (197, 20213), (230, 20267), (236, 20285), (272, 20369), (277, 20381), (278, 20384), (306, 20459), (315, 20474), (338, 20513), (378, 20630), (417, 20717), (463, 20798), (489, 20846), (500, 20870), (532, 20957), (553, 21002), (584, 21074), (591, 21095), (597, 21113), (636, 21194), (665, 21269), (668, 21287), (670, 21296), (675, 21320), (677, 21326), (687, 21350), (726, 21392), (731, 21404), (742, 21425), (756, 21476), (763, 21500), (782, 21554), (813, 21650), (860, 21755), (863, 21770), (894, 21878), (900, 21896),

Gene: Chanagan\_26 Start: 20699, Stop: 22501, Start Num: 146

Candidate Starts for Chanagan\_26:

(Start: 146 @20699 has 223 MA's), (Start: 161 @20720 has 4 MA's), (Start: 190 @20762 has 1 MA's), (216, 20807), (306, 21023), (332, 21068), (338, 21077), (349, 21116), (368, 21167), (369, 21170), (406, 21263), (467, 21365), (500, 21434), (583, 21635), (584, 21638), (591, 21659), (635, 21755), (636, 21758), (638, 21764), (665, 21833), (668, 21851), (670, 21860), (677, 21890), (731, 21986), (746, 22019), (750, 22034), (793, 22175), (813, 22232), (862, 22343),

Gene: Chance64\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Chance64\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369),



(481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Chancellor\_24 Start: 18633, Stop: 20420, Start Num: 114

Candidate Starts for Chancellor\_24:

(Start: 93 @18594 has 1 MA's), (Start: 109 @18624 has 26 MA's), (Start: 112 @18630 has 41 MA's), (Start: 114 @18633 has 139 MA's), (Start: 168 @18690 has 32 MA's), (197, 18738), (Start: 227 @18777 has 2 MA's), (230, 18792), (236, 18810), (248, 18843), (258, 18873), (278, 18918), (282, 18936), (316, 19008), (321, 19014), (334, 19044), (356, 19110), (360, 19122), (412, 19257), (444, 19305), (448, 19311), (454, 19329), (468, 19359), (487, 19398), (564, 19524), (587, 19584), (588, 19587), (594, 19605), (599, 19620), (655, 19788), (670, 19842), (708, 19887), (734, 19932), (748, 19956), (756, 19989), (768, 20022), (788, 20094), (793, 20106), (810, 20157), (813, 20163), (865, 20265), (901, 20391), (913, 20412),

Gene: Changeling\_30 Start: 22020, Stop: 23792, Start Num: 144

Candidate Starts for Changeling\_30:

(Start: 123 @21996 has 215 MA's), (Start: 144 @22020 has 603 MA's), (277, 22254), (278, 22257), (305, 22329), (306, 22332), (338, 22386), (349, 22425), (378, 22503), (417, 22590), (463, 22671), (467, 22674), (546, 22860), (583, 22944), (584, 22947), (597, 22986), (619, 23037), (631, 23052), (636, 23067), (677, 23199), (713, 23247), (742, 23298), (746, 23310), (750, 23325), (752, 23331), (770, 23385), (784, 23439), (813, 23523), (842, 23589), (849, 23601), (860, 23628), (862, 23634),

Gene: Chaph\_27 Start: 19836, Stop: 21614, Start Num: 144

Candidate Starts for Chaph\_27:

(Start: 123 @19812 has 215 MA's), (Start: 144 @19836 has 603 MA's), (Start: 190 @19893 has 1 MA's), (222, 19947), (230, 19962), (236, 19980), (272, 20064), (277, 20076), (278, 20079), (306, 20154), (315, 20169), (338, 20208), (378, 20325), (417, 20412), (463, 20493), (489, 20541), (500, 20565), (532, 20652), (553, 20697), (584, 20769), (591, 20790), (597, 20808), (636, 20889), (668, 20982), (670, 20991), (675, 21015), (677, 21021), (687, 21045), (731, 21099), (742, 21120), (756, 21171), (763, 21195), (782, 21249), (813, 21345), (860, 21450), (863, 21465), (894, 21573), (900, 21591),

Gene: Chargerpower\_29 Start: 19510, Stop: 21282, Start Num: 144

Candidate Starts for Chargerpower\_29:

(Start: 141 @19507 has 14 MA's), (Start: 144 @19510 has 603 MA's), (216, 19606), (243, 19666), (252, 19699), (278, 19747), (295, 19789), (305, 19819), (306, 19822), (338, 19876), (341, 19882), (378, 19993), (392, 20038), (395, 20047), (417, 20080), (467, 20164), (495, 20224), (576, 20413), (597, 20476), (675, 20683), (713, 20737), (731, 20767), (736, 20776), (750, 20815), (756, 20839), (781, 20914), (782, 20917), (784, 20929), (860, 21118), (862, 21124), (873, 21169), (900, 21259),

Gene: Charlie\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Charlie\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Charm\_28 Start: 19700, Stop: 21490, Start Num: 144

Candidate Starts for Charm\_28:

(94, 19634), (Start: 123 @19676 has 215 MA's), (Start: 144 @19700 has 603 MA's), (277, 19934), (278, 19937), (305, 20009), (306, 20012), (318, 20030), (338, 20066), (341, 20072), (356, 20123), (365, 20150), (368, 20156), (378, 20183), (380, 20189), (417, 20270), (463, 20351), (467, 20354), (495, 20414), (576, 20603), (597, 20666), (619, 20717), (636, 20747), (675, 20873), (731, 20975), (736, 20984), (746, 21008), (750, 21023), (756, 21047), (781, 21122), (784, 21137), (813, 21221), (860, 21326), (862, 21332), (877, 21386), (890, 21434),

Gene: Charming\_35 Start: 30317, Stop: 32080, Start Num: 97

Candidate Starts for Charming\_35:

(90, 30299), (Start: 97 @30317 has 73 MA's), (Start: 121 @30353 has 1 MA's), (219, 30491), (262, 30587), (265, 30596), (288, 30665), (306, 30716), (332, 30761), (341, 30776), (368, 30857), (384, 30902), (386, 30911), (445, 31001), (448, 31004), (458, 31031), (461, 31046), (472, 31070), (487, 31100), (597, 31322), (607, 31340), (613, 31355), (631, 31385), (635, 31397), (636, 31400), (647, 31427), (791, 31748), (793, 31751), (794, 31754), (810, 31802), (824, 31829), (832, 31856), (860, 31910), (865, 31934), (866, 31937), (909, 32075),

Gene: Chartreuse\_31 Start: 19923, Stop: 21695, Start Num: 144

Candidate Starts for Chartreuse\_31:

(94, 19857), (Start: 123 @19899 has 215 MA's), (Start: 144 @19923 has 603 MA's), (263, 20121), (278, 20160), (305, 20232), (306, 20235), (318, 20253), (338, 20289), (341, 20295), (378, 20406), (380, 20412), (392, 20451), (417, 20493), (448, 20532), (463, 20574), (467, 20577), (495, 20637), (592, 20874), (597, 20889), (636, 20970), (677, 21102), (750, 21228), (765, 21279), (770, 21288), (781, 21327), (782, 21330), (784, 21342), (813, 21426), (860, 21531), (862, 21537), (900, 21672),

Gene: Che12\_30 Start: 19088, Stop: 20878, Start Num: 144

Candidate Starts for Che12\_30:

(Start: 123 @19064 has 215 MA's), (Start: 144 @19088 has 603 MA's), (242, 19241), (277, 19322), (278, 19325), (306, 19400), (315, 19415), (338, 19454), (341, 19460), (378, 19571), (380, 19577), (388, 19604), (417, 19658), (463, 19739), (467, 19742), (532, 19898), (546, 19928), (597, 20054), (619, 20105), (631, 20120), (636, 20135), (675, 20261), (721, 20342), (726, 20351), (746, 20396), (750, 20411), (756, 20435), (781, 20510), (782, 20513), (784, 20525), (813, 20609), (860, 20714), (877, 20774), (900, 20855),

Gene: Che8\_16 Start: 14833, Stop: 16542, Start Num: 123

Candidate Starts for Che8\_16:

(Start: 123 @14833 has 215 MA's), (193, 14920), (209, 14941), (Start: 227 @14965 has 2 MA's), (233, 14989), (240, 15010), (271, 15094), (274, 15100), (281, 15118), (300, 15148), (348, 15253), (370, 15313), (378, 15334), (381, 15343), (386, 15361), (388, 15367), (418, 15442), (459, 15493), (465, 15508), (468, 15514), (484, 15550), (486, 15553), (492, 15565), (494, 15571), (511, 15619), (515, 15631), (521, 15637), (564, 15697), (568, 15709), (583, 15745), (587, 15757), (614, 15832), (618, 15841), (625, 15859), (627, 15865), (638, 15895), (710, 16000), (717, 16009), (720, 16012), (737, 16048), (750, 16084), (751, 16087), (761, 16126), (791, 16225), (799, 16246), (810, 16279), (826, 16309), (834, 16336), (836, 16339), (841, 16348), (844, 16354), (860, 16369), (861, 16372), (865, 16393), (866, 16396), (882, 16438), (887, 16468), (900, 16510),

Gene: Che9d\_19 Start: 13752, Stop: 15416, Start Num: 148

Candidate Starts for Che9d\_19:

(Start: 148 @13752 has 14 MA's), (201, 13833), (222, 13863), (232, 13884), (237, 13896), (265, 13962), (280, 14001), (281, 14013), (290, 14037), (313, 14094), (316, 14097), (330, 14121), (332, 14127), (334, 14130), (349, 14175), (356, 14193), (369, 14229), (417, 14340), (448, 14376), (458, 14403), (460, 14415), (461, 14418), (465, 14427), (481, 14460), (487, 14472), (499, 14496), (620, 14742), (636, 14769), (642, 14781), (666, 14832), (668, 14847), (705, 14901), (726, 14928), (793, 15090), (794, 15093), (795, 15096), (842, 15213), (862, 15255), (885, 15339), (897, 15384), (902,

15402),

Gene: CheeseTouch\_20 Start: 16421, Stop: 18118, Start Num: 144

Candidate Starts for CheeseTouch\_20:

(113, 16382), (Start: 144 @16421 has 603 MA's), (Start: 150 @16433 has 4 MA's), (202, 16511), (219, 16532), (240, 16580), (243, 16589), (263, 16631), (277, 16667), (295, 16724), (316, 16772), (331, 16799), (406, 16997), (414, 17015), (432, 17024), (436, 17030), (458, 17078), (469, 17108), (485, 17144), (499, 17171), (500, 17174), (517, 17225), (549, 17255), (561, 17282), (574, 17309), (599, 17381), (618, 17420), (649, 17474), (664, 17516), (683, 17591), (736, 17654), (747, 17681), (749, 17684), (752, 17699), (788, 17783), (791, 17792), (793, 17795), (795, 17801), (799, 17813), (801, 17816), (811, 17846), (814, 17852), (824, 17873), (825, 17876), (849, 17930), (862, 17960), (863, 17969), (879, 18020), (887, 18053), (891, 18065), (896, 18083),

Gene: CheetoDust\_23 Start: 17165, Stop: 18931, Start Num: 114

Candidate Starts for CheetoDust\_23:

(Start: 114 @17165 has 139 MA's), (140, 17195), (236, 17354), (248, 17387), (258, 17417), (272, 17450), (278, 17462), (316, 17552), (337, 17594), (360, 17666), (362, 17675), (378, 17714), (392, 17759), (400, 17780), (403, 17783), (438, 17837), (448, 17855), (465, 17897), (468, 17903), (481, 17930), (564, 18068), (572, 18086), (587, 18128), (593, 18146), (603, 18176), (618, 18203), (655, 18308), (748, 18467), (757, 18503), (768, 18533), (772, 18542), (793, 18617), (810, 18668), (890, 18863), (901, 18902), (902, 18905), (913, 18923),

Gene: Cheetobro\_24 Start: 18630, Stop: 20417, Start Num: 114

Candidate Starts for Cheetobro\_24:

(Start: 93 @18591 has 1 MA's), (Start: 109 @18621 has 26 MA's), (Start: 112 @18627 has 41 MA's), (Start: 114 @18630 has 139 MA's), (Start: 168 @18687 has 32 MA's), (197, 18735), (Start: 227 @18774 has 2 MA's), (230, 18789), (236, 18807), (248, 18840), (258, 18870), (278, 18915), (282, 18933), (316, 19005), (321, 19011), (334, 19041), (356, 19107), (360, 19119), (412, 19254), (444, 19302), (448, 19308), (454, 19326), (468, 19356), (487, 19395), (564, 19521), (587, 19581), (588, 19584), (594, 19602), (599, 19617), (655, 19785), (670, 19839), (708, 19884), (734, 19929), (748, 19953), (756, 19986), (768, 20019), (788, 20091), (793, 20103), (810, 20154), (813, 20160), (865, 20262), (901, 20388), (913, 20409),

Gene: Cherrybomb426\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Cherrybomb426\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: CherryonLim\_19 Start: 16167, Stop: 17864, Start Num: 133

Candidate Starts for CherryonLim\_19:

(Start: 133 @16167 has 8 MA's), (Start: 144 @16170 has 603 MA's), (214, 16269), (236, 16311), (243, 16332), (336, 16551), (377, 16668), (385, 16695), (406, 16740), (417, 16758), (436, 16773), (444, 16788), (465, 16845), (481, 16878), (487, 16890), (539, 16977), (546, 16995), (560, 17025), (574, 17055), (580, 17070), (596, 17118), (617, 17169), (636, 17205), (643, 17220), (650, 17238), (668, 17295), (747, 17424), (750, 17436), (791, 17535), (793, 17538), (799, 17556), (829, 17634), (842, 17661), (862, 17703), (902, 17850), (907, 17856),

Gene: Chevrolet\_16 Start: 14845, Stop: 16554, Start Num: 123

Candidate Starts for Chevrolet\_16:

(Start: 123 @14845 has 215 MA's), (193, 14932), (Start: 227 @14977 has 2 MA's), (233, 15001), (271, 15106), (274, 15112), (281, 15130), (300, 15160), (348, 15265), (370, 15325), (378, 15346), (381, 15355), (386, 15373), (388, 15379), (418, 15454), (424, 15466), (443, 15481), (448, 15487), (459, 15505), (465, 15520), (468, 15526), (477, 15547), (484, 15562), (486, 15565), (492, 15577), (494, 15583), (511, 15631), (515, 15643), (521, 15649), (564, 15709), (568, 15721), (583, 15757), (587, 15769), (588, 15772), (594, 15790), (614, 15844), (618, 15853), (625, 15871), (627, 15877), (710, 16012), (717, 16021), (720, 16024), (737, 16060), (751, 16099), (761, 16138), (791, 16237), (799, 16258), (810, 16291), (826, 16321), (836, 16351), (839, 16357), (841, 16360), (844, 16366), (860, 16381), (861, 16384), (866, 16408), (882, 16450), (900, 16522), (901, 16528),

Gene: Chewbacca\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Chewbacca\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: ChewyVIII\_56 Start: 38189, Stop: 39760, Start Num: 175

Candidate Starts for ChewyVIII\_56:

(120, 38114), (Start: 175 @38189 has 1 MA's), (241, 38300), (251, 38333), (277, 38396), (338, 38519), (347, 38549), (356, 38573), (368, 38606), (377, 38630), (409, 38702), (450, 38753), (493, 38810), (512, 38864), (536, 38915), (609, 39083), (636, 39125), (670, 39227), (749, 39338), (774, 39386), (799, 39467), (812, 39506), (858, 39581), (863, 39599), (866, 39611), (887, 39686), (891, 39698), (896, 39716),

Gene: Chickadee\_32 Start: 27527, Stop: 29146, Start Num: 163

Candidate Starts for Chickadee\_32:

(Start: 163 @27527 has 10 MA's), (178, 27548), (219, 27611), (272, 27734), (277, 27746), (298, 27803), (341, 27881), (382, 28004), (449, 28118), (460, 28148), (481, 28190), (508, 28253), (547, 28301), (551, 28310), (579, 28361), (596, 28409), (664, 28574), (670, 28604), (742, 28703), (746, 28712), (747, 28715), (769, 28760), (786, 28817), (788, 28823), (790, 28829), (806, 28877), (810, 28886), (813, 28892), (815, 28895), (842, 28946), (863, 28991), (883, 29060), (896, 29108), (900, 29120),

Gene: ChickenDinner\_17 Start: 14677, Stop: 16386, Start Num: 123

Candidate Starts for ChickenDinner\_17:

(Start: 123 @14677 has 215 MA's), (193, 14764), (Start: 227 @14809 has 2 MA's), (233, 14833), (271, 14938), (274, 14944), (281, 14962), (284, 14971), (300, 14992), (348, 15097), (370, 15157), (373, 15166), (378, 15178), (381, 15187), (388, 15211), (402, 15247), (403, 15253), (407, 15265), (418, 15286), (420, 15289), (424, 15298), (443, 15313), (448, 15319), (459, 15337), (465, 15352), (468, 15358), (475, 15376), (477, 15379), (484, 15394), (492, 15409), (494, 15415), (511, 15463), (515, 15475), (521, 15481), (564, 15541), (568, 15553), (573, 15562), (583, 15589), (587, 15601), (614, 15676), (618, 15685), (625, 15703), (627, 15709), (638, 15739), (710, 15844), (717, 15853), (720, 15856), (737, 15892), (761, 15970), (791, 16069), (799, 16090), (810, 16123), (826, 16153), (836, 16183), (839, 16189), (841, 16192), (844, 16198), (860, 16213), (861, 16216), (865, 16237), (866, 16240), (882, 16282), (900, 16354), (901, 16360),

Gene: ChipMunk\_30 Start: 20600, Stop: 22372, Start Num: 144

Candidate Starts for ChipMunk\_30:

(Start: 123 @20576 has 215 MA's), (Start: 144 @20600 has 603 MA's), (219, 20699), (251, 20783), (277, 20834), (278, 20837), (305, 20909), (306, 20912), (338, 20966), (349, 21005), (378, 21083), (417, 21170), (463, 21251), (467, 21254), (584, 21527), (631, 21632), (636, 21647), (675, 21773), (677, 21779), (713, 21827), (721, 21836), (731, 21857), (746, 21890), (750, 21905), (752, 21911), (770, 21965), (781, 22004), (784, 22019), (813, 22103), (862, 22214),

Gene: Chiqui\_26 Start: 20176, Stop: 21975, Start Num: 144

Candidate Starts for Chiqui\_26:

(Start: 144 @20176 has 603 MA's), (Start: 190 @20236 has 1 MA's), (230, 20305), (272, 20407), (277, 20419), (278, 20422), (306, 20497), (315, 20512), (318, 20515), (338, 20551), (384, 20686), (417, 20755), (481, 20869), (532, 20995), (583, 21109), (584, 21112), (591, 21133), (597, 21151), (636, 21232), (665, 21307), (668, 21325), (670, 21334), (675, 21358), (677, 21364), (682, 21379), (703, 21412), (729, 21457), (731, 21460), (742, 21481), (746, 21493), (813, 21706), (825, 21730), (860, 21811), (862, 21817), (892, 21928), (900, 21952),

Gene: Chop\_22 Start: 17878, Stop: 19584, Start Num: 162

Candidate Starts for Chop\_22:

(Start: 101 @17803 has 2 MA's), (Start: 162 @17878 has 16 MA's), (Start: 227 @17971 has 2 MA's), (230, 17986), (232, 17992), (256, 18067), (283, 18139), (336, 18250), (349, 18295), (356, 18313), (360, 18325), (444, 18496), (449, 18505), (451, 18511), (496, 18607), (514, 18658), (591, 18781), (603, 18820), (653, 18952), (714, 19066), (756, 19153), (792, 19267), (795, 19276), (836, 19381), (878, 19468), (913, 19576),

Gene: ChosenOne\_23 Start: 18953, Stop: 20632, Start Num: 129

Candidate Starts for ChosenOne\_23:

(Start: 129 @18953 has 79 MA's), (Start: 191 @19037 has 45 MA's), (Start: 235 @19115 has 1 MA's), (268, 19202), (274, 19217), (300, 19265), (324, 19304), (356, 19391), (368, 19424), (381, 19460), (390, 19490), (392, 19496), (422, 19565), (461, 19595), (466, 19607), (468, 19610), (494, 19667), (565, 19799), (567, 19805), (592, 19871), (594, 19877), (601, 19901), (618, 19949), (627, 19973), (631, 19982), (658, 20057), (717, 20108), (725, 20123), (782, 20285), (788, 20312), (799, 20342), (843, 20447), (880, 20525), (887, 20561), (890, 20570), (900, 20603), (907, 20618),

Gene: ChotaBhai\_24 Start: 19079, Stop: 20674, Start Num: 191

Candidate Starts for ChotaBhai\_24:

(Start: 129 @18995 has 79 MA's), (Start: 191 @19079 has 45 MA's), (Start: 235 @19157 has 1 MA's), (268, 19244), (274, 19259), (300, 19307), (324, 19346), (356, 19433), (368, 19466), (381, 19502), (390, 19532), (392, 19538), (422, 19607), (461, 19637), (466, 19649), (468, 19652), (494, 19709), (565, 19841), (567, 19847), (592, 19913), (594, 19919), (601, 19943), (618, 19991), (627, 20015), (631, 20024), (658, 20099), (717, 20150), (725, 20165), (782, 20327), (788, 20354), (799, 20384), (843, 20489), (880, 20567), (887, 20603), (890, 20612), (900, 20645), (907, 20660),

Gene: Chris\_22 Start: 16379, Stop: 18145, Start Num: 114

Candidate Starts for Chris\_22:

(Start: 93 @16340 has 1 MA's), (Start: 109 @16370 has 26 MA's), (Start: 114 @16379 has 139 MA's), (140, 16409), (Start: 227 @16535 has 2 MA's), (230, 16550), (248, 16601), (272, 16664), (321, 16772), (334, 16802), (360, 16880), (362, 16889), (378, 16928), (393, 16976), (400, 16994), (423, 17033), (424, 17036), (438, 17051), (444, 17063), (448, 17069), (454, 17087), (465, 17111), (468, 17117), (481, 17144), (499, 17180), (564, 17282), (572, 17300), (593, 17360), (636, 17462), (641, 17474), (655, 17522), (664, 17546), (698, 17597), (719, 17636), (748, 17681), (756, 17714), (758, 17720), (768, 17747), (788, 17819), (793, 17831), (810, 17882), (813, 17888), (863, 17981), (880, 18032), (890, 18077), (913, 18137),

Gene: Chuckly\_16 Start: 14978, Stop: 16687, Start Num: 123

Candidate Starts for Chuckly\_16:

(Start: 123 @14978 has 215 MA's), (193, 15065), (Start: 227 @15110 has 2 MA's), (233, 15134), (271, 15239), (274, 15245), (281, 15263), (300, 15293), (348, 15398), (370, 15458), (378, 15479), (381, 15488), (388, 15512), (418, 15587), (459, 15638), (465, 15653), (468, 15659), (484, 15695), (486, 15698), (492, 15710), (494, 15716), (511, 15764), (515, 15776), (521, 15782), (564, 15842), (568, 15854), (583, 15890), (587, 15902), (614, 15977), (618, 15986), (625, 16004), (627, 16010), (638, 16040), (710, 16145), (717, 16154), (720, 16157), (737, 16193), (761, 16271), (791, 16370), (799, 16391), (810, 16424), (826, 16454), (836, 16484), (841, 16493), (844, 16499), (860, 16514), (861, 16517), (866, 16541), (877, 16571), (882, 16583), (887, 16613), (900, 16655),

Gene: Chupacabra\_27 Start: 19785, Stop: 21563, Start Num: 144

Candidate Starts for Chupacabra\_27:

(Start: 123 @19761 has 215 MA's), (Start: 144 @19785 has 603 MA's), (Start: 190 @19842 has 1 MA's), (197, 19857), (230, 19911), (272, 20013), (277, 20025), (278, 20028), (306, 20103), (315, 20118), (338, 20157), (378, 20274), (384, 20292), (417, 20361), (460, 20436), (481, 20475), (500, 20514), (532, 20601), (546, 20631), (553, 20646), (576, 20694), (591, 20739), (595, 20751), (597, 20757), (635, 20835), (636, 20838), (668, 20931), (670, 20940), (675, 20964), (677, 20970), (682, 20985), (713, 21018), (742, 21069), (749, 21087), (758, 21126), (759, 21132), (793, 21237), (813, 21294), (825, 21318), (827, 21324), (860, 21399), (862, 21405), (863, 21414), (900, 21540),

Gene: Ciao\_27 Start: 21042, Stop: 22844, Start Num: 146

Candidate Starts for Ciao\_27:

(Start: 146 @21042 has 223 MA's), (Start: 161 @21063 has 4 MA's), (Start: 190 @21105 has 1 MA's), (216, 21150), (306, 21366), (332, 21411), (338, 21420), (349, 21459), (368, 21510), (369, 21513), (467, 21708), (500, 21777), (583, 21978), (584, 21981), (591, 22002), (635, 22098), (636, 22101), (638, 22107), (665, 22176), (668, 22194), (670, 22203), (677, 22233), (731, 22329), (746, 22362), (750, 22377), (793, 22518), (813, 22575), (862, 22686),

Gene: Cici\_27 Start: 19820, Stop: 21619, Start Num: 144

Candidate Starts for Cici\_27:

(Start: 123 @19796 has 215 MA's), (Start: 144 @19820 has 603 MA's), (Start: 148 @19826 has 14 MA's), (Start: 190 @19880 has 1 MA's), (230, 19949), (263, 20027), (272, 20051), (278, 20066), (292, 20102), (306, 20141), (315, 20156), (338, 20195), (369, 20288), (378, 20312), (417, 20399), (481, 20513), (500, 20552), (532, 20639), (553, 20684), (583, 20753), (591, 20777), (595, 20789), (636, 20876), (665, 20951), (668, 20969), (670, 20978), (675, 21002), (677, 21008), (682, 21023), (703, 21056), (729, 21101), (731, 21104), (742, 21125), (813, 21350), (849, 21428), (860, 21455), (862, 21461), (900, 21596),

Gene: Cindaradix\_26 Start: 19557, Stop: 21350, Start Num: 148

Candidate Starts for Cindaradix\_26:

(Start: 123 @19527 has 215 MA's), (Start: 144 @19551 has 603 MA's), (Start: 148 @19557 has 14 MA's), (Start: 190 @19611 has 1 MA's), (230, 19680), (263, 19758), (272, 19782), (278, 19797), (292, 19833), (306, 19872), (315, 19887), (338, 19926), (369, 20019), (378, 20043), (417, 20130), (481, 20244), (500, 20283), (532, 20370), (553, 20415), (583, 20484), (591, 20508), (595, 20520), (636, 20607), (665, 20682), (668, 20700), (670, 20709), (675, 20733), (677, 20739), (682, 20754), (703, 20787), (729, 20832), (731, 20835), (742, 20856), (813, 21081), (860, 21186), (862, 21192), (900, 21327),

Gene: Cintron\_27 Start: 19875, Stop: 21653, Start Num: 144

Candidate Starts for Cintron\_27:

(Start: 123 @19851 has 215 MA's), (Start: 144 @19875 has 603 MA's), (Start: 190 @19932 has 1 MA's), (222, 19986), (230, 20001), (236, 20019), (272, 20103), (277, 20115), (278, 20118), (306, 20193), (315, 20208), (338, 20247), (378, 20364), (417, 20451), (463, 20532), (489, 20580), (500,

20604), (532, 20691), (553, 20736), (584, 20808), (591, 20829), (597, 20847), (636, 20928), (668, 21021), (670, 21030), (675, 21054), (677, 21060), (687, 21084), (731, 21138), (742, 21159), (756, 21210), (763, 21234), (782, 21288), (813, 21384), (860, 21489), (863, 21504), (894, 21612), (900, 21630),

Gene: Citius\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Citius\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Cjw1\_24 Start: 20668, Stop: 22185, Start Num: 235

Candidate Starts for Cjw1\_24:

(Start: 129 @20506 has 79 MA's), (Start: 191 @20590 has 45 MA's), (Start: 235 @20668 has 1 MA's), (268, 20755), (274, 20770), (300, 20818), (324, 20857), (356, 20944), (368, 20977), (381, 21013), (390, 21043), (392, 21049), (422, 21118), (461, 21148), (466, 21160), (468, 21163), (494, 21220), (565, 21352), (567, 21358), (592, 21424), (594, 21430), (601, 21454), (618, 21502), (627, 21526), (631, 21535), (658, 21610), (717, 21661), (725, 21676), (782, 21838), (788, 21865), (799, 21895), (843, 22000), (880, 22078), (887, 22114), (890, 22123), (900, 22156), (907, 22171),

Gene: ClamChowder\_33 Start: 26575, Stop: 28341, Start Num: 97

Candidate Starts for ClamChowder\_33:

(80, 26533), (Start: 97 @26575 has 73 MA's), (Start: 121 @26611 has 1 MA's), (Start: 148 @26644 has 14 MA's), (264, 26854), (265, 26857), (277, 26887), (298, 26953), (306, 26977), (311, 26986), (331, 27019), (386, 27172), (406, 27211), (445, 27262), (451, 27274), (458, 27292), (460, 27304), (465, 27316), (472, 27331), (487, 27361), (489, 27364), (499, 27385), (547, 27457), (568, 27505), (613, 27616), (632, 27649), (649, 27691), (670, 27763), (707, 27829), (715, 27841), (793, 28012), (794, 28015), (810, 28063), (824, 28090), (832, 28117), (860, 28171), (891, 28288), (897, 28309), (909, 28336),

Gene: Clap\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Clap\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Clarenza\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Clarenza\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Clark\_20 Start: 17346, Stop: 18926, Start Num: 170

Candidate Starts for Clark\_20:

(88, 17229), (Start: 170 @17346 has 87 MA's), (298, 17604), (307, 17625), (340, 17679), (351, 17718), (369, 17775), (377, 17796), (501, 17967), (507, 17985), (514, 18009), (521, 18030), (554, 18072), (592, 18153), (636, 18243), (653, 18288), (669, 18345), (670, 18348), (687, 18402), (751, 18492), (863, 18771), (865, 18780), (874, 18810),

Gene: Cleo\_18 Start: 15991, Stop: 17682, Start Num: 144

Candidate Starts for Cleo\_18:

(Start: 144 @15991 has 603 MA's), (222, 16105), (237, 16138), (316, 16339), (336, 16375), (365, 16462), (406, 16564), (436, 16597), (442, 16609), (444, 16612), (465, 16669), (481, 16702), (489, 16717), (501, 16744), (513, 16783), (546, 16819), (549, 16825), (574, 16879), (583, 16903), (596, 16942), (598, 16948), (635, 17020), (643, 17038), (647, 17047), (650, 17056), (668, 17113), (671, 17131), (747, 17242), (750, 17254), (766, 17281), (791, 17353), (793, 17356), (829, 17452), (842, 17479), (856, 17503), (862, 17521),

Gene: Clifton\_16 Start: 14762, Stop: 16471, Start Num: 123

Candidate Starts for Clifton\_16:

(Start: 123 @14762 has 215 MA's), (193, 14849), (Start: 227 @14894 has 2 MA's), (233, 14918), (271, 15023), (274, 15029), (281, 15047), (300, 15077), (348, 15182), (370, 15242), (378, 15263), (381, 15272), (388, 15296), (459, 15422), (465, 15437), (468, 15443), (484, 15479), (486, 15482), (492, 15494), (494, 15500), (511, 15548), (515, 15560), (521, 15566), (564, 15626), (568, 15638), (583, 15674), (587, 15686), (614, 15761), (618, 15770), (625, 15788), (627, 15794), (638, 15824), (710, 15929), (717, 15938), (720, 15941), (737, 15977), (761, 16055), (791, 16154), (799, 16175), (810, 16208), (826, 16238), (836, 16268), (841, 16277), (844, 16283), (860, 16298), (861, 16301), (866, 16325), (877, 16355), (882, 16367), (887, 16397), (900, 16439),

Gene: CloudWang3\_31 Start: 19949, Stop: 21745, Start Num: 123

Candidate Starts for CloudWang3\_31:

(94, 19907), (Start: 123 @19949 has 215 MA's), (Start: 144 @19973 has 603 MA's), (278, 20210), (305, 20282), (306, 20285), (315, 20300), (338, 20339), (341, 20345), (378, 20456), (380, 20462), (392, 20501), (417, 20543), (448, 20582), (463, 20624), (467, 20627), (532, 20783), (592, 20924), (597, 20939), (677, 21152), (742, 21251), (750, 21278), (765, 21329), (770, 21338), (781, 21377), (784, 21392), (813, 21476), (860, 21581), (862, 21587), (900, 21722),

Gene: Clown\_35 Start: 28603, Stop: 30369, Start Num: 97

Candidate Starts for Clown\_35:

(74, 28540), (Start: 97 @28603 has 73 MA's), (Start: 148 @28672 has 14 MA's), (264, 28882), (265, 28885), (267, 28888), (277, 28915), (298, 28981), (306, 29005), (311, 29014), (371, 29152), (383, 29188), (458, 29320), (460, 29332), (465, 29344), (472, 29359), (487, 29389), (499, 29413), (505, 29431), (547, 29485), (568, 29533), (570, 29536), (591, 29593), (597, 29611), (613, 29644), (632, 29677), (635, 29686), (637, 29692), (670, 29791), (707, 29857), (793, 30040), (794, 30043), (797, 30052), (810, 30091), (824, 30118), (832, 30145), (835, 30151), (860, 30199), (862, 30205), (866, 30226), (891, 30316), (897, 30337),

Gene: ClubL\_48 Start: 29531, Stop: 31222, Start Num: 146

Candidate Starts for ClubL\_48:

(Start: 146 @29531 has 223 MA's), (188, 29591), (206, 29624), (228, 29657), (271, 29783), (282, 29816), (286, 29825), (349, 29954), (366, 30002), (494, 30215), (498, 30221), (506, 30245), (576, 30374), (583, 30395), (594, 30428), (658, 30626), (758, 30779), (788, 30878), (793, 30890), (796, 30899), (829, 30983), (888, 31130), (898, 31166), (902, 31178),

Gene: Coco12\_18 Start: 15204, Stop: 16913, Start Num: 123

Candidate Starts for Coco12\_18:



(Start: 123 @15204 has 215 MA's), (193, 15291), (Start: 227 @15336 has 2 MA's), (233, 15360), (271, 15465), (274, 15471), (281, 15489), (300, 15519), (348, 15624), (370, 15684), (378, 15705), (381, 15714), (388, 15738), (418, 15813), (420, 15816), (459, 15864), (465, 15879), (468, 15885), (484, 15921), (486, 15924), (492, 15936), (494, 15942), (511, 15990), (515, 16002), (521, 16008), (564, 16068), (568, 16080), (583, 16116), (587, 16128), (614, 16203), (618, 16212), (625, 16230), (627, 16236), (638, 16266), (710, 16371), (717, 16380), (720, 16383), (737, 16419), (761, 16497), (791, 16596), (799, 16617), (810, 16650), (826, 16680), (836, 16710), (841, 16719), (844, 16725), (860, 16740), (861, 16743), (877, 16797), (882, 16809), (887, 16839), (900, 16881),

Gene: Cocoaberry\_27 Start: 19831, Stop: 21609, Start Num: 144

Candidate Starts for Cocoaberry\_27:

(Start: 123 @19807 has 215 MA's), (Start: 144 @19831 has 603 MA's), (Start: 190 @19888 has 1 MA's), (222, 19942), (230, 19957), (236, 19975), (272, 20059), (277, 20071), (278, 20074), (306, 20149), (315, 20164), (338, 20203), (378, 20320), (417, 20407), (463, 20488), (489, 20536), (500, 20560), (532, 20647), (553, 20692), (584, 20764), (591, 20785), (597, 20803), (636, 20884), (668, 20977), (670, 20986), (675, 21010), (677, 21016), (687, 21040), (731, 21094), (742, 21115), (756, 21166), (763, 21190), (782, 21244), (813, 21340), (860, 21445), (863, 21460), (894, 21568), (900, 21586),

Gene: CoffeeBean\_45 Start: 31300, Stop: 32874, Start Num: 173

Candidate Starts for CoffeeBean\_45:

(Start: 173 @31300 has 7 MA's), (179, 31309), (219, 31363), (231, 31387), (236, 31390), (348, 31660), (372, 31723), (377, 31738), (442, 31855), (450, 31870), (493, 31927), (498, 31936), (511, 31978), (518, 31999), (534, 32029), (561, 32086), (596, 32161), (644, 32257), (673, 32362), (674, 32365), (683, 32392), (752, 32470), (776, 32509), (829, 32665), (867, 32731),

Gene: Colbster\_29 Start: 20379, Stop: 22175, Start Num: 144

Candidate Starts for Colbster\_29:

(Start: 144 @20379 has 603 MA's), (Start: 190 @20436 has 1 MA's), (197, 20451), (219, 20484), (230, 20505), (Start: 235 @20520 has 1 MA's), (272, 20607), (277, 20619), (278, 20622), (306, 20697), (315, 20712), (336, 20748), (417, 20955), (481, 21069), (500, 21108), (532, 21195), (583, 21309), (591, 21333), (597, 21351), (636, 21432), (665, 21507), (668, 21525), (675, 21558), (677, 21564), (695, 21603), (729, 21657), (731, 21660), (742, 21681), (758, 21738), (813, 21906), (860, 22011), (862, 22017), (900, 22152),

Gene: Coleslaw\_18 Start: 16640, Stop: 18394, Start Num: 132

Candidate Starts for Coleslaw\_18:

(Start: 109 @16631 has 26 MA's), (Start: 132 @16640 has 45 MA's), (Start: 137 @16646 has 2 MA's), (143, 16652), (230, 16784), (248, 16835), (258, 16865), (269, 16889), (309, 16991), (331, 17030), (334, 17036), (341, 17051), (353, 17096), (395, 17216), (425, 17273), (448, 17312), (468, 17360), (481, 17387), (487, 17399), (522, 17480), (564, 17525), (641, 17723), (649, 17753), (655, 17771), (665, 17798), (716, 17882), (730, 17900), (743, 17915), (756, 17963), (760, 17978), (782, 18041), (799, 18098), (813, 18137), (831, 18179), (863, 18230), (890, 18326), (913, 18386),

Gene: Colin\_32 Start: 21871, Stop: 23667, Start Num: 123

Candidate Starts for Colin\_32:

(Start: 123 @21871 has 215 MA's), (Start: 144 @21895 has 603 MA's), (277, 22129), (278, 22132), (305, 22204), (306, 22207), (338, 22261), (341, 22267), (349, 22300), (378, 22378), (417, 22465), (463, 22546), (467, 22549), (481, 22579), (584, 22822), (597, 22861), (619, 22912), (631, 22927), (636, 22942), (677, 23074), (713, 23122), (731, 23152), (737, 23164), (750, 23200), (752, 23206), (770, 23260), (784, 23314), (813, 23398), (842, 23464), (860, 23503), (862, 23509),

Gene: Collard\_21 Start: 17552, Stop: 19324, Start Num: 117

Candidate Starts for Collard\_21:

(Start: 117 @17552 has 59 MA's), (Start: 123 @17558 has 215 MA's), (143, 17582), (Start: 168 @17615 has 32 MA's), (197, 17663), (230, 17717), (248, 17768), (272, 17831), (321, 17939), (360, 18047), (400, 18161), (403, 18164), (424, 18203), (438, 18218), (444, 18230), (448, 18236), (463, 18272), (465, 18278), (468, 18284), (487, 18323), (499, 18347), (564, 18449), (588, 18512), (655, 18692), (708, 18791), (750, 18869), (756, 18893), (758, 18899), (771, 18932), (793, 19010), (795, 19016), (865, 19169), (895, 19274), (896, 19277), (901, 19295),

Gene: Colleen\_19 Start: 17425, Stop: 19089, Start Num: 146

Candidate Starts for Colleen\_19:

(Start: 146 @17425 has 223 MA's), (169, 17458), (295, 17716), (332, 17794), (377, 17917), (380, 17926), (381, 17929), (384, 17938), (386, 17947), (467, 18088), (472, 18100), (499, 18154), (575, 18289), (587, 18322), (593, 18340), (597, 18352), (602, 18367), (635, 18427), (644, 18448), (646, 18457), (668, 18523), (675, 18556), (713, 18586), (718, 18592), (721, 18595), (750, 18664), (791, 18763), (795, 18772), (861, 18928), (863, 18940),

Gene: Command613\_25 Start: 20014, Stop: 21693, Start Num: 129

Candidate Starts for Command613\_25:

(Start: 129 @20014 has 79 MA's), (Start: 191 @20098 has 45 MA's), (Start: 235 @20176 has 1 MA's), (268, 20263), (274, 20278), (300, 20326), (324, 20365), (356, 20452), (368, 20485), (381, 20521), (390, 20551), (392, 20557), (422, 20626), (461, 20656), (466, 20668), (468, 20671), (494, 20728), (565, 20860), (567, 20866), (592, 20932), (594, 20938), (601, 20962), (618, 21010), (627, 21034), (631, 21043), (658, 21118), (717, 21169), (725, 21184), (782, 21346), (788, 21373), (799, 21403), (843, 21508), (880, 21586), (887, 21622), (890, 21631), (900, 21664), (907, 21679),

Gene: Commandaria\_43 Start: 31143, Stop: 32756, Start Num: 170

Candidate Starts for Commandaria\_43:

(Start: 170 @31143 has 87 MA's), (Start: 194 @31179 has 1 MA's), (202, 31197), (226, 31230), (236, 31257), (318, 31458), (347, 31524), (372, 31590), (377, 31605), (432, 31716), (449, 31746), (450, 31749), (488, 31794), (493, 31806), (510, 31854), (511, 31857), (571, 31983), (592, 32028), (593, 32031), (607, 32070), (635, 32118), (673, 32244), (688, 32280), (791, 32445), (799, 32466), (826, 32535), (861, 32589), (867, 32613), (887, 32685), (906, 32742),

Gene: Commander\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Commander\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: ConceptII\_29 Start: 22056, Stop: 23858, Start Num: 146

Candidate Starts for ConceptII\_29:

(Start: 146 @22056 has 223 MA's), (Start: 161 @22077 has 4 MA's), (Start: 190 @22119 has 1 MA's), (216, 22164), (306, 22380), (332, 22425), (338, 22434), (349, 22473), (368, 22524), (369, 22527), (406, 22620), (467, 22722), (500, 22791), (583, 22992), (584, 22995), (591, 23016), (635, 23112), (636, 23115), (638, 23121), (665, 23190), (668, 23208), (670, 23217), (677, 23247), (731, 23343), (746, 23376), (750, 23391), (793, 23532), (813, 23589), (862, 23700),

Gene: Confidence\_20 Start: 17560, Stop: 19266, Start Num: 111

Candidate Starts for Confidence\_20:

(Start: 95 @17536 has 1 MA's), (Start: 111 @17560 has 24 MA's), (192, 17665), (217, 17707), (251, 17782), (303, 17896), (365, 18043), (368, 18049), (459, 18232), (497, 18307), (598, 18514), (635, 18589), (644, 18610), (668, 18685), (715, 18772), (739, 18808), (744, 18817), (750, 18841), (752, 18847), (783, 18913), (793, 18943), (860, 19099), (862, 19105), (865, 19123), (897, 19234),

Gene: Connomayer\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Connomayer\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Conquerage\_30 Start: 21779, Stop: 23569, Start Num: 144

Candidate Starts for Conquerage\_30:

(Start: 141 @21776 has 14 MA's), (Start: 144 @21779 has 603 MA's), (277, 22013), (278, 22016), (305, 22088), (306, 22091), (315, 22106), (338, 22145), (341, 22151), (378, 22262), (417, 22349), (463, 22430), (467, 22433), (495, 22493), (546, 22619), (576, 22682), (584, 22706), (586, 22712), (597, 22745), (636, 22826), (675, 22952), (693, 22994), (731, 23054), (746, 23087), (750, 23102), (781, 23201), (782, 23204), (784, 23216), (813, 23300), (842, 23366), (860, 23405), (862, 23411), (873, 23456), (890, 23513), (891, 23516),

Gene: Conspiracy\_24 Start: 19564, Stop: 21363, Start Num: 144

Candidate Starts for Conspiracy\_24:

(Start: 144 @19564 has 603 MA's), (236, 19702), (278, 19801), (306, 19876), (336, 19927), (360, 19999), (365, 20014), (378, 20047), (380, 20053), (432, 20146), (481, 20248), (495, 20278), (499, 20284), (532, 20374), (546, 20404), (579, 20476), (583, 20488), (584, 20491), (597, 20530), (602, 20548), (635, 20608), (636, 20611), (656, 20662), (668, 20704), (729, 20845), (749, 20887), (862, 21205), (900, 21340),

Gene: Constella\_31 Start: 26122, Stop: 28120, Start Num: 124

Candidate Starts for Constella\_31:

(Start: 124 @26122 has 30 MA's), (Start: 191 @26212 has 45 MA's), (222, 26260), (233, 26290), (243, 26317), (282, 26419), (301, 26449), (346, 26548), (358, 26584), (360, 26590), (368, 26611), (392, 26683), (395, 26692), (403, 26713), (448, 26782), (468, 26821), (470, 26824), (475, 26839), (494, 26878), (511, 26926), (515, 26938), (521, 26944), (552, 26992), (558, 27001), (565, 27022), (573, 27040), (590, 27088), (625, 27190), (647, 27250), (653, 27262), (667, 27307), (669, 27319), (684, 27454), (685, 27460), (686, 27484), (696, 27556), (708, 27583), (800, 27832),

Gene: Contagion\_23 Start: 19253, Stop: 20932, Start Num: 129

Candidate Starts for Contagion\_23:

(Start: 129 @19253 has 79 MA's), (Start: 191 @19337 has 45 MA's), (Start: 235 @19415 has 1 MA's), (268, 19502), (274, 19517), (300, 19565), (324, 19604), (356, 19691), (368, 19724), (381, 19760), (390, 19790), (392, 19796), (422, 19865), (461, 19895), (466, 19907), (468, 19910), (494, 19967), (565, 20099), (567, 20105), (592, 20171), (594, 20177), (601, 20201), (618, 20249), (627, 20273), (631, 20282), (658, 20357), (717, 20408), (725, 20423), (782, 20585), (788, 20612), (799, 20642), (843, 20747), (880, 20825), (887, 20861), (890, 20870), (900, 20903), (907, 20918),

Gene: Coog\_24 Start: 19707, Stop: 21503, Start Num: 144

Candidate Starts for Coog\_24:

(Start: 132 @19695 has 45 MA's), (Start: 144 @19707 has 603 MA's), (222, 19812), (236, 19845), (278, 19944), (306, 20019), (315, 20034), (336, 20070), (360, 20142), (365, 20157), (380, 20196), (495, 20421), (499, 20427), (553, 20562), (579, 20619), (580, 20622), (583, 20631), (597, 20673), (602, 20691), (635, 20751), (636, 20754), (668, 20847), (670, 20856), (675, 20880), (729, 20988), (746, 21024), (813, 21234), (859, 21336), (862, 21345), (900, 21480), (902, 21489),

Gene: Cookiedough\_31 Start: 19969, Stop: 21741, Start Num: 144

Candidate Starts for Cookiedough\_31:

(94, 19903), (Start: 123 @19945 has 215 MA's), (Start: 144 @19969 has 603 MA's), (263, 20167), (278, 20206), (305, 20278), (306, 20281), (318, 20299), (338, 20335), (341, 20341), (378, 20452), (380, 20458), (392, 20497), (417, 20539), (448, 20578), (463, 20620), (467, 20623), (495, 20683), (592, 20920), (597, 20935), (636, 21016), (677, 21148), (750, 21274), (765, 21325), (770, 21334), (781, 21373), (782, 21376), (784, 21388), (813, 21472), (860, 21577), (862, 21583), (900, 21718),

Gene: Cookies\_24 Start: 19615, Stop: 21294, Start Num: 129

Candidate Starts for Cookies\_24:

(Start: 129 @19615 has 79 MA's), (Start: 191 @19699 has 45 MA's), (Start: 235 @19777 has 1 MA's), (268, 19864), (274, 19879), (300, 19927), (324, 19966), (356, 20053), (368, 20086), (381, 20122), (390, 20152), (392, 20158), (422, 20227), (461, 20257), (466, 20269), (468, 20272), (494, 20329), (565, 20461), (567, 20467), (592, 20533), (594, 20539), (601, 20563), (618, 20611), (627, 20635), (631, 20644), (658, 20719), (717, 20770), (725, 20785), (782, 20947), (788, 20974), (799, 21004), (843, 21109), (880, 21187), (887, 21223), (890, 21232), (900, 21265), (907, 21280),

Gene: Coriander\_19 Start: 17505, Stop: 19199, Start Num: 149

Candidate Starts for Coriander\_19:

(32, 17034), (48, 17184), (113, 17463), (Start: 121 @17475 has 1 MA's), (Start: 149 @17505 has 8 MA's), (219, 17607), (232, 17634), (237, 17646), (240, 17658), (265, 17715), (281, 17766), (289, 17787), (311, 17844), (316, 17850), (377, 18000), (445, 18123), (469, 18183), (485, 18219), (537, 18303), (561, 18357), (668, 18618), (703, 18690), (705, 18693), (736, 18735), (752, 18780), (793, 18876), (794, 18879), (799, 18894), (864, 19053), (865, 19059), (891, 19146), (907, 19191),

Gene: Corndog\_59 Start: 34518, Stop: 36254, Start Num: 107

Candidate Starts for Corndog\_59:

(Start: 100 @34509 has 2 MA's), (Start: 107 @34518 has 25 MA's), (174, 34608), (240, 34725), (251, 34761), (259, 34782), (271, 34809), (274, 34815), (286, 34845), (302, 34869), (332, 34920), (381, 35058), (383, 35064), (400, 35115), (402, 35118), (407, 35136), (459, 35187), (468, 35208), (470, 35211), (492, 35259), (494, 35265), (511, 35313), (513, 35319), (515, 35325), (555, 35385), (564, 35409), (565, 35412), (583, 35457), (588, 35472), (591, 35481), (594, 35490), (608, 35535), (618, 35553), (631, 35586), (720, 35724), (729, 35745), (754, 35811), (762, 35841), (779, 35895), (791, 35937), (799, 35958), (805, 35979), (810, 35991), (821, 36012), (844, 36066), (880, 36144), (887, 36180), (893, 36201), (901, 36228),

Gene: Cornucopia\_17 Start: 14844, Stop: 16553, Start Num: 123

Candidate Starts for Cornucopia\_17:

(Start: 123 @14844 has 215 MA's), (193, 14931), (Start: 227 @14976 has 2 MA's), (233, 15000), (271, 15105), (274, 15111), (281, 15129), (300, 15159), (348, 15264), (370, 15324), (378, 15345), (381, 15354), (388, 15378), (418, 15453), (459, 15504), (465, 15519), (468, 15525), (484, 15561), (486, 15564), (492, 15576), (494, 15582), (511, 15630), (515, 15642), (521, 15648), (564, 15708), (568, 15720), (583, 15756), (587, 15768), (614, 15843), (618, 15852), (625, 15870), (627, 15876), (638, 15906), (710, 16011), (720, 16023), (737, 16059), (761, 16137), (791, 16236), (799, 16257), (810, 16290), (826, 16320), (836, 16350), (841, 16359), (844, 16365), (860, 16380), (861, 16383), (866, 16407), (882, 16449), (900, 16521),

Gene: Corvo\_28 Start: 22053, Stop: 23855, Start Num: 146

Candidate Starts for Corvo\_28:

(Start: 146 @22053 has 223 MA's), (Start: 161 @22074 has 4 MA's), (Start: 190 @22116 has 1 MA's), (216, 22161), (306, 22377), (332, 22422), (338, 22431), (368, 22521), (369, 22524), (406, 22617), (467, 22719), (500, 22788), (579, 22977), (583, 22989), (584, 22992), (591, 23013), (635, 23109), (636, 23112), (638, 23118), (665, 23187), (668, 23205), (670, 23214), (677, 23244), (731, 23340), (746, 23373), (750, 23388), (793, 23529), (813, 23586), (862, 23697),

Gene: CosmicSans\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for CosmicSans\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Courthouse\_34 Start: 25078, Stop: 26811, Start Num: 124

Candidate Starts for Courthouse\_34:

(Start: 124 @25078 has 30 MA's), (Start: 191 @25168 has 45 MA's), (193, 25171), (233, 25246), (243, 25273), (268, 25339), (282, 25375), (301, 25405), (306, 25420), (346, 25504), (358, 25540), (368, 25567), (382, 25606), (392, 25639), (395, 25648), (420, 25705), (451, 25747), (490, 25822), (494, 25834), (515, 25894), (552, 25948), (565, 25978), (573, 25996), (577, 26005), (588, 26038), (592, 26050), (594, 26056), (606, 26095), (627, 26152), (725, 26302), (735, 26320), (750, 26362), (756, 26386), (757, 26389), (761, 26404), (773, 26434), (782, 26464), (799, 26521), (868, 26671), (902, 26791), (907, 26797),

Gene: CoveyB\_34 Start: 26333, Stop: 28141, Start Num: 80

Candidate Starts for CoveyB\_34:

(80, 26333), (Start: 97 @26375 has 73 MA's), (Start: 121 @26411 has 1 MA's), (Start: 148 @26444 has 14 MA's), (264, 26654), (265, 26657), (277, 26687), (298, 26753), (306, 26777), (311, 26786), (331, 26819), (386, 26972), (406, 27011), (445, 27062), (451, 27074), (458, 27092), (460, 27104), (465, 27116), (472, 27131), (487, 27161), (489, 27164), (499, 27185), (547, 27257), (568, 27305), (613, 27416), (632, 27449), (647, 27488), (649, 27491), (670, 27563), (707, 27629), (715, 27641), (793, 27812), (797, 27824), (799, 27830), (810, 27863), (824, 27890), (832, 27917), (860, 27971), (891, 28088), (897, 28109), (909, 28136),

Gene: Cozz\_18 Start: 15733, Stop: 17430, Start Num: 144

Candidate Starts for Cozz\_18:

(Start: 133 @15730 has 8 MA's), (Start: 144 @15733 has 603 MA's), (264, 15943), (306, 16066), (336, 16117), (365, 16204), (377, 16234), (382, 16249), (385, 16261), (436, 16339), (442, 16351), (454, 16378), (465, 16411), (481, 16444), (487, 16456), (505, 16498), (574, 16621), (599, 16693), (636, 16771), (643, 16786), (650, 16804), (668, 16861), (731, 16954), (747, 16990), (750, 17002), (752, 17008), (755, 17020), (766, 17029), (791, 17101), (793, 17104), (795, 17110), (799, 17122), (824, 17182), (842, 17227), (847, 17236), (862, 17269), (882, 17335),

Gene: Cracklewink\_24 Start: 19740, Stop: 21590, Start Num: 81

Candidate Starts for Cracklewink\_24:

(Start: 81 @19740 has 4 MA's), (96, 19785), (Start: 175 @19884 has 1 MA's), (197, 19920), (221, 19950), (230, 19974), (248, 20025), (249, 20028), (286, 20127), (287, 20130), (347, 20268), (355, 20289), (365, 20319), (368, 20325), (382, 20364), (406, 20430), (439, 20472), (448, 20487), (465, 20529), (482, 20565), (487, 20574), (496, 20592), (520, 20652), (524, 20658), (526, 20661), (543, 20691), (563, 20724), (564, 20727), (576, 20754), (598, 20820), (708, 21069), (775, 21216), (797, 21288), (813, 21333), (826, 21357), (828, 21363), (877, 21471), (901, 21561), (902, 21564),

Gene: Crater\_18 Start: 15970, Stop: 17667, Start Num: 144

Candidate Starts for Crater\_18:

(113, 15931), (Start: 144 @15970 has 603 MA's), (Start: 150 @15982 has 4 MA's), (Start: 153 @15985 has 11 MA's), (180, 16021), (202, 16060), (219, 16081), (239, 16123), (240, 16129), (241, 16132), (246, 16144), (263, 16180), (277, 16216), (295, 16273), (316, 16321), (331, 16348), (368, 16450), (382, 16489), (406, 16546), (414, 16564), (432, 16573), (436, 16579), (458, 16627), (469, 16657), (485, 16693), (489, 16699), (499, 16720), (500, 16723), (517, 16774), (547, 16801), (549, 16804), (561, 16831), (574, 16858), (599, 16930), (618, 16969), (649, 17023), (670, 17095), (683, 17140), (747, 17230), (752, 17248), (788, 17332), (791, 17341), (793, 17344), (795, 17350), (801, 17365), (811, 17395), (814, 17401), (824, 17422), (825, 17425), (849, 17479), (862, 17509), (863, 17518), (879, 17569), (887, 17602), (891, 17614), (896, 17632),

Gene: Crespo\_18 Start: 16650, Stop: 18404, Start Num: 132

Candidate Starts for Crespo\_18:

(Start: 109 @16641 has 26 MA's), (Start: 132 @16650 has 45 MA's), (Start: 137 @16656 has 2 MA's), (143, 16662), (230, 16794), (248, 16845), (258, 16875), (269, 16899), (309, 17001), (331, 17040), (334, 17046), (341, 17061), (353, 17106), (395, 17226), (425, 17283), (448, 17322), (468, 17370), (481, 17397), (487, 17409), (522, 17490), (564, 17535), (641, 17733), (649, 17763), (655, 17781), (665, 17808), (716, 17892), (730, 17910), (743, 17925), (756, 17973), (760, 17988), (782, 18051), (799, 18108), (813, 18147), (831, 18189), (863, 18240), (890, 18336), (913, 18396),

Gene: CrimD\_23 Start: 17126, Stop: 18892, Start Num: 114

Candidate Starts for CrimD\_23:

(Start: 114 @17126 has 139 MA's), (140, 17156), (236, 17315), (248, 17348), (258, 17378), (272, 17411), (278, 17423), (316, 17513), (337, 17555), (357, 17618), (360, 17627), (362, 17636), (378, 17675), (392, 17720), (400, 17741), (403, 17744), (448, 17816), (465, 17858), (468, 17864), (481, 17891), (564, 18029), (572, 18047), (587, 18089), (593, 18107), (603, 18137), (618, 18164), (655, 18269), (748, 18428), (757, 18464), (768, 18494), (772, 18503), (793, 18578), (810, 18629), (890, 18824), (901, 18863), (902, 18866), (913, 18884),

Gene: Crispicous1\_26 Start: 20570, Stop: 22372, Start Num: 146

Candidate Starts for Crispicous1\_26:

(Start: 146 @20570 has 223 MA's), (Start: 161 @20591 has 4 MA's), (Start: 190 @20633 has 1 MA's), (216, 20678), (306, 20894), (332, 20939), (338, 20948), (349, 20987), (368, 21038), (380, 21071), (467, 21236), (500, 21305), (583, 21506), (584, 21509), (591, 21530), (635, 21626), (636, 21629), (638, 21635), (665, 21704), (668, 21722), (670, 21731), (677, 21761), (731, 21857), (746, 21890), (750, 21905), (793, 22046), (813, 22103), (862, 22214),

Gene: Crucio\_28 Start: 20118, Stop: 21890, Start Num: 144

Candidate Starts for Crucio\_28:

(94, 20052), (Start: 123 @20094 has 215 MA's), (Start: 144 @20118 has 603 MA's), (219, 20217), (251, 20301), (277, 20352), (278, 20355), (305, 20427), (306, 20430), (338, 20484), (349, 20523), (365, 20568), (378, 20601), (417, 20688), (463, 20769), (467, 20772), (584, 21045), (636, 21165), (713, 21345), (746, 21408), (750, 21423), (752, 21429), (770, 21483), (781, 21522), (784, 21537), (813, 21621), (862, 21732), (900, 21867),

Gene: Cruella\_31 Start: 28482, Stop: 30080, Start Num: 171

Candidate Starts for Cruella\_31:

(Start: 171 @28482 has 40 MA's), (239, 28581), (263, 28650), (278, 28689), (338, 28824), (358, 28884), (436, 29037), (442, 29049), (448, 29058), (449, 29061), (486, 29106), (493, 29121), (498, 29130), (501, 29139), (518, 29193), (528, 29211), (557, 29265), (653, 29481), (678, 29574), (762, 29682), (784, 29736), (808, 29811), (867, 29940), (905, 30066),

Gene: Crumble\_16 Start: 14809, Stop: 16518, Start Num: 123

Candidate Starts for Crumble\_16:

(Start: 123 @14809 has 215 MA's), (193, 14896), (Start: 227 @14941 has 2 MA's), (233, 14965), (271, 15070), (274, 15076), (281, 15094), (300, 15124), (348, 15229), (370, 15289), (378, 15310), (381, 15319), (388, 15343), (418, 15418), (420, 15421), (459, 15469), (465, 15484), (468, 15490), (484, 15526), (486, 15529), (492, 15541), (494, 15547), (511, 15595), (515, 15607), (521, 15613), (564, 15673), (568, 15685), (583, 15721), (587, 15733), (614, 15808), (618, 15817), (625, 15835), (627, 15841), (638, 15871), (710, 15976), (717, 15985), (720, 15988), (737, 16024), (761, 16102), (791, 16201), (799, 16222), (810, 16255), (826, 16285), (836, 16315), (841, 16324), (844, 16330), (860, 16345), (861, 16348), (866, 16372), (877, 16402), (882, 16414), (887, 16444), (900, 16486),

Gene: CrystalP\_24 Start: 19746, Stop: 21425, Start Num: 129

Candidate Starts for CrystalP\_24:

(Start: 129 @19746 has 79 MA's), (Start: 191 @19830 has 45 MA's), (Start: 235 @19908 has 1 MA's), (268, 19995), (274, 20010), (300, 20058), (324, 20097), (356, 20184), (368, 20217), (381, 20253), (390, 20283), (392, 20289), (422, 20358), (461, 20388), (466, 20400), (468, 20403), (494, 20460), (565, 20592), (567, 20598), (592, 20664), (594, 20670), (601, 20694), (618, 20742), (627, 20766), (631, 20775), (658, 20850), (717, 20901), (725, 20916), (782, 21078), (788, 21105), (799, 21135), (843, 21240), (880, 21318), (887, 21354), (890, 21363), (900, 21396), (907, 21411),

Gene: Cuco\_24 Start: 19657, Stop: 21453, Start Num: 144

Candidate Starts for Cuco\_24:

(Start: 144 @19657 has 603 MA's), (222, 19762), (236, 19795), (278, 19894), (306, 19969), (315, 19984), (336, 20020), (360, 20092), (365, 20107), (380, 20146), (388, 20173), (395, 20194), (430, 20233), (495, 20371), (499, 20377), (553, 20512), (579, 20569), (580, 20572), (583, 20581), (597, 20623), (602, 20641), (635, 20701), (636, 20704), (668, 20797), (670, 20806), (675, 20830), (729, 20938), (746, 20974), (813, 21184), (859, 21286), (862, 21295), (900, 21430), (902, 21439),

Gene: Cucurbita\_50 Start: 30901, Stop: 32592, Start Num: 146

Candidate Starts for Cucurbita\_50:

(Start: 146 @30901 has 223 MA's), (188, 30961), (206, 30994), (228, 31027), (271, 31153), (282, 31186), (286, 31195), (349, 31324), (366, 31372), (494, 31585), (498, 31591), (506, 31615), (576, 31744), (583, 31765), (594, 31798), (658, 31996), (758, 32149), (788, 32248), (793, 32260), (796, 32269), (829, 32353), (888, 32500), (898, 32536), (902, 32548),

Gene: Cueyllyss\_27 Start: 21272, Stop: 23074, Start Num: 146

Candidate Starts for Cueyllyss\_27:

(Start: 146 @21272 has 223 MA's), (Start: 161 @21293 has 4 MA's), (Start: 190 @21335 has 1 MA's), (216, 21380), (306, 21596), (332, 21641), (338, 21650), (368, 21740), (369, 21743), (406, 21836), (467, 21938), (500, 22007), (579, 22196), (583, 22208), (584, 22211), (591, 22232), (635, 22328), (636, 22331), (638, 22337), (665, 22406), (668, 22424), (670, 22433), (677, 22463), (731, 22559), (746, 22592), (750, 22607), (793, 22748), (813, 22805), (849, 22883),

Gene: Cullens\_29 Start: 20378, Stop: 22174, Start Num: 144

Candidate Starts for Cullens\_29:

(Start: 144 @20378 has 603 MA's), (Start: 190 @20435 has 1 MA's), (197, 20450), (219, 20483), (230, 20504), (Start: 235 @20519 has 1 MA's), (272, 20606), (277, 20618), (278, 20621), (306, 20696), (315, 20711), (336, 20747), (417, 20954), (481, 21068), (500, 21107), (532, 21194), (583, 21308), (591, 21332), (597, 21350), (636, 21431), (665, 21506), (668, 21524), (675, 21557), (677, 21563), (695, 21602), (729, 21656), (731, 21659), (742, 21680), (758, 21737), (813, 21905), (860, 22010), (862, 22016), (900, 22151),

Gene: Culver\_48 Start: 29340, Stop: 31031, Start Num: 146

Candidate Starts for Culver\_48:

(Start: 146 @29340 has 223 MA's), (188, 29400), (206, 29433), (Start: 227 @29463 has 2 MA's), (228, 29466), (282, 29625), (286, 29634), (349, 29763), (366, 29811), (494, 30024), (498, 30030), (506, 30054), (576, 30183), (583, 30204), (594, 30237), (658, 30435), (758, 30588), (788, 30687), (793, 30699), (796, 30708), (829, 30792), (888, 30939), (898, 30975),

Gene: Curiosium\_24 Start: 16874, Stop: 18640, Start Num: 114

Candidate Starts for Curiosium\_24:

(Start: 114 @16874 has 139 MA's), (140, 16904), (236, 17063), (248, 17096), (258, 17126), (272, 17159), (278, 17171), (334, 17297), (337, 17303), (348, 17342), (360, 17375), (362, 17384), (378, 17423), (400, 17489), (403, 17492), (448, 17564), (465, 17606), (468, 17612), (481, 17639), (499, 17675), (564, 17777), (572, 17795), (587, 17837), (593, 17855), (603, 17885), (618, 17912), (655, 18017), (704, 18107), (757, 18212), (768, 18242), (793, 18326), (810, 18377), (826, 18407), (863, 18476), (880, 18527), (901, 18611), (902, 18614), (913, 18632),

Gene: Cynthia\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Cynthia\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Czyszczone1\_25 Start: 19491, Stop: 21170, Start Num: 129

Candidate Starts for Czyszczone1\_25:

(Start: 129 @19491 has 79 MA's), (Start: 191 @19575 has 45 MA's), (Start: 235 @19653 has 1 MA's), (268, 19740), (274, 19755), (300, 19803), (324, 19842), (356, 19929), (368, 19962), (381, 19998), (390, 20028), (392, 20034), (422, 20103), (461, 20133), (466, 20145), (468, 20148), (494, 20205), (565, 20337), (567, 20343), (592, 20409), (594, 20415), (601, 20439), (618, 20487), (627, 20511), (631, 20520), (658, 20595), (717, 20646), (725, 20661), (782, 20823), (788, 20850), (799, 20880), (843, 20985), (880, 21063), (887, 21099), (890, 21108), (900, 21141), (907, 21156),

Gene: D29\_28 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for D29\_28:

(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (699, 21273), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474), (784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: D32\_31 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for D32\_31:

(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (699, 21273), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474), (784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: DBQu4n\_31 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for DBQu4n\_31:



(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (242, 20202), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (386, 20559), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474), (784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: DD5\_28 Start: 21820, Stop: 23622, Start Num: 146

Candidate Starts for DD5\_28:

(Start: 146 @21820 has 223 MA's), (Start: 161 @21841 has 4 MA's), (Start: 190 @21883 has 1 MA's), (216, 21928), (306, 22144), (332, 22189), (338, 22198), (368, 22288), (369, 22291), (467, 22486), (500, 22555), (519, 22615), (579, 22744), (583, 22756), (584, 22759), (591, 22780), (635, 22876), (636, 22879), (638, 22885), (665, 22954), (668, 22972), (670, 22981), (677, 23011), (731, 23107), (746, 23140), (750, 23155), (793, 23296), (813, 23353), (862, 23464),

Gene: DLane\_16 Start: 14795, Stop: 16504, Start Num: 123

Candidate Starts for DLane\_16:

(Start: 123 @14795 has 215 MA's), (193, 14882), (Start: 227 @14927 has 2 MA's), (233, 14951), (271, 15056), (274, 15062), (281, 15080), (300, 15110), (348, 15215), (370, 15275), (378, 15296), (381, 15305), (388, 15329), (459, 15455), (465, 15470), (468, 15476), (484, 15512), (486, 15515), (492, 15527), (494, 15533), (511, 15581), (515, 15593), (521, 15599), (564, 15659), (568, 15671), (583, 15707), (587, 15719), (614, 15794), (618, 15803), (625, 15821), (627, 15827), (638, 15857), (710, 15962), (717, 15971), (720, 15974), (737, 16010), (761, 16088), (791, 16187), (799, 16208), (810, 16241), (826, 16271), (836, 16301), (841, 16310), (844, 16316), (860, 16331), (861, 16334), (866, 16358), (877, 16388), (882, 16400), (887, 16430), (900, 16472),

Gene: DMoney\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for DMoney\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: DNAlll\_0018 Start: 16649, Stop: 18412, Start Num: 109

Candidate Starts for DNAlll\_0018:

(Start: 109 @16649 has 26 MA's), (Start: 132 @16658 has 45 MA's), (Start: 137 @16664 has 2 MA's), (143, 16670), (230, 16802), (248, 16853), (258, 16883), (269, 16907), (309, 17009), (331, 17048), (334, 17054), (341, 17069), (353, 17114), (395, 17234), (425, 17291), (448, 17330), (468, 17378), (481, 17405), (487, 17417), (522, 17498), (564, 17543), (641, 17741), (649, 17771), (655, 17789), (665, 17816), (716, 17900), (730, 17918), (743, 17933), (756, 17981), (760, 17996), (782, 18059), (799, 18116), (813, 18155), (831, 18197), (863, 18248), (890, 18344), (913, 18404),

Gene: DRBy19\_16 Start: 14836, Stop: 16545, Start Num: 123

Candidate Starts for DRBy19\_16:

(Start: 123 @14836 has 215 MA's), (193, 14923), (Start: 227 @14968 has 2 MA's), (233, 14992), (251, 15049), (271, 15097), (274, 15103), (281, 15121), (300, 15151), (348, 15256), (367, 15310), (370, 15316), (373, 15325), (381, 15346), (388, 15370), (402, 15406), (403, 15412), (418, 15445), (420, 15448), (424, 15457), (443, 15472), (448, 15478), (459, 15496), (465, 15511), (468, 15517), (475, 15535), (477, 15538), (484, 15553), (492, 15568), (494, 15574), (511, 15622), (515, 15634), (521, 15640), (564, 15700), (568, 15712), (583, 15748), (587, 15760), (614, 15835), (618, 15844), (625, 15862), (627, 15868), (638, 15898), (710, 16003), (720, 16015), (737, 16051), (761, 16129), (799,

16249), (810, 16282), (826, 16312), (829, 16324), (836, 16342), (839, 16348), (841, 16351), (844, 16357), (860, 16372), (861, 16375), (865, 16396), (866, 16399), (882, 16441), (887, 16471), (900, 16513), (901, 16519),

Gene: DS6A\_21 Start: 16975, Stop: 18714, Start Num: 115

Candidate Starts for DS6A\_21:

(Start: 95 @16945 has 1 MA's), (103, 16957), (Start: 115 @16975 has 1 MA's), (Start: 157 @17029 has 4 MA's), (201, 17095), (204, 17101), (210, 17107), (219, 17119), (222, 17125), (232, 17146), (237, 17158), (262, 17215), (272, 17242), (280, 17263), (290, 17299), (295, 17311), (306, 17344), (316, 17359), (332, 17389), (341, 17404), (377, 17512), (382, 17527), (385, 17539), (386, 17542), (432, 17611), (445, 17635), (448, 17638), (465, 17689), (481, 17722), (499, 17758), (540, 17818), (547, 17836), (551, 17845), (553, 17848), (583, 17917), (607, 17989), (614, 18007), (632, 18037), (635, 18046), (668, 18142), (670, 18151), (752, 18289), (793, 18385), (794, 18388), (810, 18436), (813, 18442), (862, 18550), (880, 18613), (885, 18637), (897, 18682), (902, 18700), (907, 18706),

Gene: DaHudson\_29 Start: 20371, Stop: 22167, Start Num: 144

Candidate Starts for DaHudson\_29:

(Start: 144 @20371 has 603 MA's), (Start: 190 @20428 has 1 MA's), (197, 20443), (219, 20476), (230, 20497), (Start: 235 @20512 has 1 MA's), (272, 20599), (277, 20611), (278, 20614), (306, 20689), (315, 20704), (336, 20740), (417, 20947), (481, 21061), (500, 21100), (532, 21187), (583, 21301), (591, 21325), (597, 21343), (636, 21424), (665, 21499), (668, 21517), (675, 21550), (677, 21556), (695, 21595), (729, 21649), (731, 21652), (742, 21673), (758, 21730), (813, 21898), (860, 22003), (862, 22009), (900, 22144),

Gene: DaVinci\_31 Start: 19977, Stop: 21749, Start Num: 144

Candidate Starts for DaVinci\_31:

(94, 19911), (Start: 123 @19953 has 215 MA's), (Start: 144 @19977 has 603 MA's), (263, 20175), (278, 20214), (305, 20286), (306, 20289), (318, 20307), (338, 20343), (341, 20349), (378, 20460), (380, 20466), (392, 20505), (417, 20547), (448, 20586), (463, 20628), (467, 20631), (495, 20691), (592, 20928), (597, 20943), (636, 21024), (677, 21156), (750, 21282), (765, 21333), (770, 21342), (781, 21381), (782, 21384), (784, 21396), (813, 21480), (860, 21585), (862, 21591), (900, 21726),

Gene: DaWorst\_18 Start: 15337, Stop: 17046, Start Num: 123

Candidate Starts for DaWorst\_18:

(Start: 123 @15337 has 215 MA's), (193, 15424), (Start: 227 @15469 has 2 MA's), (233, 15493), (251, 15550), (271, 15598), (274, 15604), (281, 15622), (300, 15652), (348, 15757), (367, 15811), (370, 15817), (373, 15826), (381, 15847), (388, 15871), (402, 15907), (403, 15913), (418, 15946), (420, 15949), (424, 15958), (443, 15973), (448, 15979), (459, 15997), (465, 16012), (468, 16018), (475, 16036), (477, 16039), (484, 16054), (492, 16069), (494, 16075), (511, 16123), (515, 16135), (521, 16141), (564, 16201), (568, 16213), (583, 16249), (587, 16261), (614, 16336), (618, 16345), (625, 16363), (627, 16369), (638, 16399), (710, 16504), (720, 16516), (737, 16552), (761, 16630), (799, 16750), (810, 16783), (826, 16813), (829, 16825), (836, 16843), (839, 16849), (841, 16852), (844, 16858), (860, 16873), (861, 16876), (865, 16897), (866, 16900), (882, 16942), (887, 16972), (900, 17014), (901, 17020),

Gene: DaddyRickover\_16 Start: 14976, Stop: 16685, Start Num: 123

Candidate Starts for DaddyRickover\_16:

(Start: 123 @14976 has 215 MA's), (193, 15063), (Start: 227 @15108 has 2 MA's), (233, 15132), (271, 15237), (274, 15243), (281, 15261), (300, 15291), (348, 15396), (370, 15456), (378, 15477), (381, 15486), (388, 15510), (459, 15636), (465, 15651), (468, 15657), (484, 15693), (486, 15696), (492, 15708), (494, 15714), (511, 15762), (515, 15774), (521, 15780), (564, 15840), (568, 15852), (583, 15888), (587, 15900), (614, 15975), (618, 15984), (625, 16002), (627, 16008), (638, 16038), (710, 16143), (717, 16152), (720, 16155), (737, 16191), (761, 16269), (791, 16368), (799, 16389), (810,

16422), (826, 16452), (836, 16482), (841, 16491), (844, 16497), (860, 16512), (861, 16515), (865, 16536), (866, 16539), (882, 16581), (887, 16611), (900, 16653),

Gene: Daegal\_23 Start: 17697, Stop: 19439, Start Num: 112

Candidate Starts for Daegal\_23:

(Start: 112 @17697 has 41 MA's), (Start: 117 @17706 has 59 MA's), (152, 17748), (189, 17799), (201, 17823), (212, 17835), (Start: 227 @17856 has 2 MA's), (230, 17871), (236, 17889), (249, 17922), (255, 17949), (282, 18021), (325, 18111), (355, 18195), (358, 18204), (365, 18225), (388, 18291), (398, 18318), (416, 18351), (438, 18369), (449, 18390), (454, 18405), (455, 18408), (487, 18474), (489, 18477), (514, 18543), (527, 18555), (541, 18564), (555, 18567), (588, 18654), (605, 18708), (628, 18753), (631, 18759), (654, 18831), (665, 18861), (670, 18888), (704, 18924), (708, 18933), (756, 19011), (802, 19155), (807, 19173), (813, 19185), (822, 19200), (824, 19203), (831, 19224), (836, 19236), (865, 19284), (876, 19317), (896, 19392), (901, 19410), (913, 19431),

Gene: Daenerys\_16 Start: 14808, Stop: 16517, Start Num: 123

Candidate Starts for Daenerys\_16:

(Start: 123 @14808 has 215 MA's), (193, 14895), (Start: 227 @14940 has 2 MA's), (233, 14964), (271, 15069), (274, 15075), (281, 15093), (300, 15123), (348, 15228), (370, 15288), (378, 15309), (381, 15318), (388, 15342), (459, 15468), (465, 15483), (468, 15489), (484, 15525), (486, 15528), (492, 15540), (494, 15546), (511, 15594), (515, 15606), (521, 15612), (564, 15672), (568, 15684), (583, 15720), (587, 15732), (614, 15807), (618, 15816), (625, 15834), (627, 15840), (638, 15870), (710, 15975), (717, 15984), (720, 15987), (737, 16023), (761, 16101), (791, 16200), (799, 16221), (810, 16254), (826, 16284), (836, 16314), (841, 16323), (844, 16329), (860, 16344), (861, 16347), (865, 16368), (866, 16371), (882, 16413), (887, 16443), (900, 16485),

Gene: Daikon\_22 Start: 19567, Stop: 21162, Start Num: 191

Candidate Starts for Daikon\_22:

(Start: 129 @19483 has 79 MA's), (Start: 191 @19567 has 45 MA's), (Start: 235 @19645 has 1 MA's), (268, 19732), (274, 19747), (300, 19795), (324, 19834), (356, 19921), (368, 19954), (381, 19990), (390, 20020), (392, 20026), (422, 20095), (461, 20125), (466, 20137), (468, 20140), (494, 20197), (565, 20329), (567, 20335), (592, 20401), (594, 20407), (601, 20431), (618, 20479), (627, 20503), (631, 20512), (658, 20587), (717, 20638), (725, 20653), (782, 20815), (788, 20842), (799, 20872), (843, 20977), (880, 21055), (887, 21091), (890, 21100), (900, 21133), (907, 21148),

Gene: Daishi\_28 Start: 19304, Stop: 21100, Start Num: 144

Candidate Starts for Daishi\_28:

(Start: 144 @19304 has 603 MA's), (Start: 190 @19361 has 1 MA's), (197, 19376), (219, 19409), (230, 19430), (Start: 235 @19445 has 1 MA's), (272, 19532), (277, 19544), (278, 19547), (306, 19622), (315, 19637), (336, 19673), (417, 19880), (481, 19994), (500, 20033), (532, 20120), (583, 20234), (591, 20258), (597, 20276), (636, 20357), (665, 20432), (668, 20450), (675, 20483), (677, 20489), (695, 20528), (729, 20582), (731, 20585), (742, 20606), (758, 20663), (813, 20831), (860, 20936), (862, 20942), (900, 21077),

Gene: Dalilpop\_46 Start: 32122, Stop: 33741, Start Num: 170

Candidate Starts for Dalilpop\_46:

(Start: 170 @32122 has 87 MA's), (179, 32137), (Start: 194 @32158 has 1 MA's), (236, 32236), (282, 32374), (347, 32503), (358, 32533), (368, 32560), (372, 32569), (377, 32584), (432, 32695), (449, 32725), (450, 32728), (493, 32785), (593, 33010), (607, 33049), (635, 33097), (673, 33223), (688, 33259), (749, 33316), (776, 33370), (799, 33445), (863, 33577), (885, 33652), (887, 33664), (891, 33676), (893, 33685), (906, 33721),

Gene: Dalmatian\_28 Start: 20265, Stop: 22037, Start Num: 144

Candidate Starts for Dalmatian\_28:

(Start: 123 @20241 has 215 MA's), (Start: 144 @20265 has 603 MA's), (277, 20499), (278, 20502), (305, 20574), (306, 20577), (338, 20631), (349, 20670), (365, 20715), (378, 20748), (417, 20835), (463, 20916), (467, 20919), (584, 21192), (636, 21312), (675, 21438), (713, 21492), (746, 21555), (750, 21570), (752, 21576), (770, 21630), (781, 21669), (784, 21684), (813, 21768), (862, 21879),

Gene: Dalmuri\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Dalmuri\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Danforth\_23 Start: 18634, Stop: 20424, Start Num: 144

Candidate Starts for Danforth\_23:

(Start: 123 @18610 has 215 MA's), (Start: 144 @18634 has 603 MA's), (214, 18727), (236, 18772), (278, 18871), (292, 18907), (306, 18946), (315, 18961), (336, 18997), (378, 19117), (380, 19123), (448, 19243), (505, 19372), (532, 19444), (583, 19558), (668, 19774), (675, 19807), (731, 19909), (746, 19942), (750, 19957), (758, 19987), (859, 20257), (862, 20266), (863, 20275), (896, 20389),

Gene: Dante\_16 Start: 14825, Stop: 16534, Start Num: 123

Candidate Starts for Dante\_16:

(Start: 123 @14825 has 215 MA's), (193, 14912), (Start: 227 @14957 has 2 MA's), (233, 14981), (271, 15086), (274, 15092), (281, 15110), (300, 15140), (348, 15245), (370, 15305), (378, 15326), (381, 15335), (388, 15359), (459, 15485), (465, 15500), (468, 15506), (484, 15542), (486, 15545), (492, 15557), (494, 15563), (511, 15611), (515, 15623), (521, 15629), (564, 15689), (568, 15701), (583, 15737), (587, 15749), (614, 15824), (618, 15833), (625, 15851), (627, 15857), (638, 15887), (710, 15992), (717, 16001), (720, 16004), (737, 16040), (761, 16118), (791, 16217), (799, 16238), (810, 16271), (826, 16301), (836, 16331), (841, 16340), (844, 16346), (860, 16361), (861, 16364), (866, 16388), (877, 16418), (882, 16430), (887, 16460), (900, 16502),

Gene: Danyall\_33 Start: 26375, Stop: 28141, Start Num: 97

Candidate Starts for Danyall\_33:

(80, 26333), (Start: 97 @26375 has 73 MA's), (Start: 121 @26411 has 1 MA's), (Start: 148 @26444 has 14 MA's), (264, 26654), (265, 26657), (277, 26687), (298, 26753), (306, 26777), (311, 26786), (331, 26819), (386, 26972), (406, 27011), (445, 27062), (451, 27074), (458, 27092), (460, 27104), (465, 27116), (472, 27131), (487, 27161), (489, 27164), (499, 27185), (547, 27257), (568, 27305), (613, 27416), (632, 27449), (647, 27488), (649, 27491), (670, 27563), (707, 27629), (715, 27641), (793, 27812), (797, 27824), (799, 27830), (810, 27863), (824, 27890), (832, 27917), (860, 27971), (891, 28088), (897, 28109), (909, 28136),

Gene: Dardanus\_24 Start: 16682, Stop: 18013, Start Num: 257

Candidate Starts for Dardanus\_24:

(Start: 257 @16682 has 11 MA's), (268, 16703), (335, 16847), (349, 16889), (364, 16934), (368, 16949), (388, 17009), (391, 17018), (437, 17102), (536, 17216), (548, 17225), (580, 17270), (618, 17345), (633, 17372), (653, 17426), (672, 17498), (746, 17591), (749, 17597), (763, 17630), (799, 17717), (856, 17828), (867, 17873), (874, 17897), (880, 17909), (881, 17912), (887, 17945),

Gene: Daredevil\_29 Start: 25466, Stop: 27352, Start Num: 148

Candidate Starts for Daredevil\_29:

(83, 25364), (Start: 148 @25466 has 14 MA's), (224, 25577), (241, 25628), (255, 25676), (321, 25808), (349, 25883), (366, 25931), (395, 26015), (426, 26153), (456, 26252), (490, 26345), (494,

26357), (498, 26363), (506, 26387), (521, 26423), (525, 26429), (587, 26549), (598, 26582), (601, 26594), (625, 26654), (658, 26756), (710, 26798), (725, 26822), (772, 26945), (793, 27020), (799, 27038), (848, 27152), (914, 27344),

Gene: Darionha\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Darionha\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Darrell\_30 Start: 21743, Stop: 23533, Start Num: 144

Candidate Starts for Darrell\_30:

(Start: 123 @21719 has 215 MA's), (Start: 144 @21743 has 603 MA's), (277, 21977), (278, 21980), (305, 22052), (306, 22055), (315, 22070), (338, 22109), (341, 22115), (345, 22133), (378, 22226), (388, 22259), (417, 22313), (463, 22394), (467, 22397), (518, 22523), (546, 22583), (576, 22646), (584, 22670), (586, 22676), (597, 22709), (675, 22916), (681, 22934), (693, 22958), (703, 22970), (731, 23018), (746, 23051), (750, 23066), (752, 23072), (781, 23165), (782, 23168), (784, 23180), (813, 23264), (842, 23330), (860, 23369), (862, 23375), (873, 23420), (890, 23477), (891, 23480),

Gene: DARTH\_P\_22 Start: 17578, Stop: 19344, Start Num: 114

Candidate Starts for DARTH\_P\_22:

(Start: 93 @17539 has 1 MA's), (Start: 109 @17569 has 26 MA's), (Start: 114 @17578 has 139 MA's), (140, 17608), (Start: 227 @17734 has 2 MA's), (230, 17749), (236, 17767), (248, 17800), (272, 17863), (278, 17875), (282, 17893), (316, 17965), (334, 18001), (337, 18007), (362, 18088), (400, 18193), (403, 18196), (423, 18232), (448, 18268), (465, 18310), (468, 18316), (481, 18343), (499, 18379), (572, 18499), (603, 18589), (618, 18616), (636, 18661), (655, 18721), (698, 18796), (708, 18820), (748, 18880), (757, 18916), (768, 18946), (793, 19030), (810, 19081), (865, 19189), (901, 19315), (902, 19318), (913, 19336),

Gene: DARTH\_P\_29 Start: 21735, Stop: 23507, Start Num: 144

Candidate Starts for DARTH\_P\_29:

(94, 21669), (Start: 123 @21711 has 215 MA's), (Start: 144 @21735 has 603 MA's), (242, 21888), (277, 21969), (278, 21972), (305, 22044), (306, 22047), (338, 22101), (341, 22107), (356, 22158), (378, 22218), (392, 22263), (417, 22305), (463, 22386), (597, 22701), (636, 22782), (643, 22797), (677, 22914), (746, 23025), (750, 23040), (756, 23064), (781, 23139), (784, 23154), (795, 23187), (813, 23238), (860, 23343), (900, 23484),

Gene: DARTH\_P\_23 Start: 16514, Stop: 18280, Start Num: 114

Candidate Starts for DARTH\_P\_23:

(Start: 109 @16505 has 26 MA's), (Start: 114 @16514 has 139 MA's), (Start: 117 @16520 has 59 MA's), (140, 16544), (Start: 168 @16583 has 32 MA's), (Start: 227 @16670 has 2 MA's), (230, 16685), (236, 16703), (248, 16736), (316, 16901), (334, 16937), (360, 17015), (362, 17024), (400, 17129), (403, 17132), (424, 17171), (444, 17198), (448, 17204), (465, 17246), (468, 17252), (481, 17279), (564, 17417), (572, 17435), (603, 17525), (618, 17552), (632, 17585), (655, 17657), (670, 17711), (704, 17747), (719, 17771), (748, 17816), (756, 17849), (760, 17864), (768, 17882), (772, 17891), (793, 17966), (810, 18017), (813, 18023), (865, 18125), (901, 18251), (902, 18254), (913, 18272),

Gene: Darwin\_34 Start: 28167, Stop: 29765, Start Num: 171

Candidate Starts for Darwin\_34:

(Start: 171 @28167 has 40 MA's), (239, 28266), (263, 28335), (278, 28374), (338, 28509), (358, 28569), (408, 28695), (436, 28722), (442, 28734), (448, 28743), (449, 28746), (486, 28791), (493, 28806), (498, 28815), (501, 28824), (518, 28878), (528, 28896), (557, 28950), (653, 29166), (678, 29259), (762, 29367), (784, 29421), (808, 29496), (867, 29625), (905, 29751),

Gene: DatBoi\_31 Start: 27896, Stop: 29605, Start Num: 148

Candidate Starts for DatBoi\_31:

(Start: 148 @27896 has 14 MA's), (218, 27998), (284, 28181), (349, 28313), (360, 28343), (366, 28361), (409, 28484), (494, 28610), (498, 28616), (514, 28667), (525, 28682), (587, 28802), (598, 28835), (658, 29009), (725, 29075), (788, 29261), (793, 29273), (824, 29351), (848, 29405), (910, 29573), (914, 29597),

Gene: Datway\_27 Start: 19835, Stop: 21634, Start Num: 144

Candidate Starts for Datway\_27:

(Start: 123 @19811 has 215 MA's), (Start: 144 @19835 has 603 MA's), (Start: 148 @19841 has 14 MA's), (Start: 190 @19895 has 1 MA's), (230, 19964), (263, 20042), (272, 20066), (278, 20081), (292, 20117), (306, 20156), (315, 20171), (338, 20210), (369, 20303), (378, 20327), (417, 20414), (481, 20528), (500, 20567), (532, 20654), (553, 20699), (583, 20768), (591, 20792), (595, 20804), (636, 20891), (665, 20966), (668, 20984), (670, 20993), (675, 21017), (677, 21023), (682, 21038), (703, 21071), (729, 21116), (731, 21119), (742, 21140), (813, 21365), (849, 21443), (860, 21470), (862, 21476), (900, 21611),

Gene: DeadP\_16 Start: 14839, Stop: 16548, Start Num: 123

Candidate Starts for DeadP\_16:

(Start: 123 @14839 has 215 MA's), (193, 14926), (Start: 227 @14971 has 2 MA's), (233, 14995), (271, 15100), (274, 15106), (281, 15124), (300, 15154), (348, 15259), (370, 15319), (377, 15337), (378, 15340), (381, 15349), (388, 15373), (459, 15499), (465, 15514), (468, 15520), (484, 15556), (486, 15559), (492, 15571), (494, 15577), (511, 15625), (515, 15637), (521, 15643), (564, 15703), (568, 15715), (583, 15751), (587, 15763), (614, 15838), (618, 15847), (625, 15865), (627, 15871), (638, 15901), (710, 16006), (717, 16015), (720, 16018), (737, 16054), (761, 16132), (791, 16231), (799, 16252), (810, 16285), (826, 16315), (836, 16345), (841, 16354), (844, 16360), (860, 16375), (861, 16378), (866, 16402), (877, 16432), (882, 16444), (887, 16474), (900, 16516),

Gene: Deano\_27 Start: 19835, Stop: 21613, Start Num: 144

Candidate Starts for Deano\_27:

(Start: 123 @19811 has 215 MA's), (Start: 144 @19835 has 603 MA's), (Start: 190 @19892 has 1 MA's), (222, 19946), (230, 19961), (236, 19979), (272, 20063), (277, 20075), (278, 20078), (306, 20153), (315, 20168), (338, 20207), (378, 20324), (417, 20411), (463, 20492), (489, 20540), (500, 20564), (532, 20651), (553, 20696), (584, 20768), (591, 20789), (597, 20807), (636, 20888), (668, 20981), (670, 20990), (675, 21014), (677, 21020), (687, 21044), (731, 21098), (742, 21119), (756, 21170), (763, 21194), (782, 21248), (813, 21344), (860, 21449), (863, 21464), (894, 21572), (900, 21590),

Gene: Deb65\_16 Start: 14805, Stop: 16514, Start Num: 123

Candidate Starts for Deb65\_16:

(Start: 123 @14805 has 215 MA's), (193, 14892), (Start: 227 @14937 has 2 MA's), (233, 14961), (271, 15066), (274, 15072), (281, 15090), (300, 15120), (348, 15225), (370, 15285), (378, 15306), (381, 15315), (388, 15339), (459, 15465), (465, 15480), (468, 15486), (484, 15522), (486, 15525), (492, 15537), (494, 15543), (511, 15591), (515, 15603), (521, 15609), (564, 15669), (568, 15681), (583, 15717), (587, 15729), (614, 15804), (618, 15813), (625, 15831), (627, 15837), (638, 15867), (710, 15972), (720, 15984), (737, 16020), (761, 16098), (791, 16197), (799, 16218), (810, 16251), (826, 16281), (836, 16311), (841, 16320), (844, 16326), (860, 16341), (861, 16344), (865, 16365), (866, 16368), (882, 16410), (887, 16440), (900, 16482),

Gene: Deby\_23 Start: 17122, Stop: 18888, Start Num: 114

Candidate Starts for Deby\_23:

(Start: 114 @17122 has 139 MA's), (140, 17152), (236, 17311), (248, 17344), (258, 17374), (272, 17407), (278, 17419), (316, 17509), (337, 17551), (360, 17623), (362, 17632), (378, 17671), (392, 17716), (400, 17737), (403, 17740), (438, 17794), (448, 17812), (465, 17854), (468, 17860), (481, 17887), (564, 18025), (572, 18043), (587, 18085), (593, 18103), (603, 18133), (618, 18160), (655, 18265), (748, 18424), (757, 18460), (768, 18490), (772, 18499), (793, 18574), (810, 18625), (890, 18820), (901, 18859), (902, 18862), (913, 18880),

Gene: DeepSoil15\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for DeepSoil15\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: DekHockey33\_30 Start: 19191, Stop: 21002, Start Num: 123

Candidate Starts for DekHockey33\_30:

(94, 19149), (Start: 123 @19191 has 215 MA's), (Start: 144 @19215 has 603 MA's), (236, 19353), (262, 19410), (278, 19452), (292, 19488), (306, 19527), (343, 19596), (349, 19620), (369, 19674), (448, 19824), (467, 19869), (481, 19899), (499, 19935), (515, 19986), (530, 20022), (553, 20070), (580, 20130), (635, 20259), (665, 20337), (750, 20538), (752, 20544), (782, 20640), (845, 20805), (880, 20904),

Gene: DelRio\_23 Start: 18352, Stop: 20058, Start Num: 162

Candidate Starts for DelRio\_23:

(Start: 101 @18277 has 2 MA's), (Start: 162 @18352 has 16 MA's), (Start: 227 @18445 has 2 MA's), (230, 18460), (232, 18466), (256, 18541), (283, 18613), (336, 18724), (349, 18769), (356, 18787), (360, 18799), (444, 18970), (449, 18979), (451, 18985), (465, 19018), (496, 19081), (514, 19132), (541, 19156), (563, 19180), (591, 19255), (603, 19294), (653, 19426), (714, 19540), (756, 19627), (792, 19741), (795, 19750), (836, 19855), (878, 19942), (913, 20050),

Gene: Delian\_19 Start: 16674, Stop: 18320, Start Num: 195

Candidate Starts for Delian\_19:

(172, 16638), (Start: 195 @16674 has 45 MA's), (244, 16776), (270, 16848), (272, 16854), (274, 16857), (308, 16953), (329, 16992), (357, 17073), (377, 17127), (382, 17142), (460, 17238), (494, 17313), (506, 17343), (594, 17526), (601, 17550), (658, 17694), (664, 17706), (702, 17766), (757, 17898), (758, 17901), (788, 18000), (795, 18018), (813, 18069), (843, 18135), (872, 18198), (877, 18210),

Gene: Deloris\_29 Start: 20620, Stop: 22392, Start Num: 144

Candidate Starts for Deloris\_29:

(Start: 123 @20596 has 215 MA's), (Start: 144 @20620 has 603 MA's), (219, 20719), (277, 20854), (278, 20857), (305, 20929), (306, 20932), (338, 20986), (341, 20992), (349, 21025), (365, 21070), (378, 21103), (417, 21190), (463, 21271), (467, 21274), (487, 21316), (546, 21460), (584, 21547), (631, 21652), (636, 21667), (675, 21793), (677, 21799), (713, 21847), (750, 21925), (752, 21931), (770, 21985), (781, 22024), (784, 22039), (813, 22123), (862, 22234),

Gene: Delrey21\_34 Start: 30944, Stop: 32566, Start Num: 160

Candidate Starts for Delrey21\_34:

(Start: 116 @30887 has 1 MA's), (Start: 160 @30944 has 17 MA's), (178, 30965), (219, 31028), (246, 31091), (272, 31151), (277, 31163), (312, 31250), (341, 31301), (348, 31331), (378, 31412), (386, 31439), (449, 31538), (460, 31568), (464, 31577), (482, 31613), (508, 31673), (547, 31721), (551, 31730), (596, 31829), (609, 31868), (619, 31880), (672, 32036), (675, 32048), (711, 32075), (746, 32132), (764, 32171), (769, 32180), (786, 32237), (790, 32249), (806, 32297), (810, 32306), (813, 32312), (824, 32333), (863, 32411), (902, 32549),

Gene: Demsculpinboyz\_19 Start: 13737, Stop: 15401, Start Num: 148

Candidate Starts for Demsculpinboyz\_19:

(Start: 148 @13737 has 14 MA's), (201, 13818), (222, 13848), (232, 13869), (237, 13881), (265, 13947), (280, 13986), (281, 13998), (290, 14022), (313, 14079), (316, 14082), (330, 14106), (332, 14112), (334, 14115), (349, 14160), (356, 14178), (369, 14214), (385, 14262), (417, 14325), (448, 14361), (458, 14388), (460, 14400), (461, 14403), (481, 14445), (487, 14457), (499, 14481), (540, 14535), (583, 14634), (620, 14727), (636, 14754), (642, 14766), (666, 14817), (668, 14832), (793, 15075), (794, 15078), (795, 15081), (842, 15198), (862, 15240), (885, 15324), (897, 15369), (902, 15387),

Gene: Denise\_17 Start: 14794, Stop: 16503, Start Num: 171

Candidate Starts for Denise\_17:

(Start: 171 @14794 has 40 MA's), (237, 14911), (259, 14983), (262, 14986), (287, 15061), (306, 15100), (315, 15115), (340, 15157), (347, 15184), (377, 15274), (378, 15277), (440, 15409), (462, 15463), (500, 15544), (519, 15604), (521, 15610), (578, 15697), (607, 15769), (618, 15787), (637, 15826), (665, 15898), (666, 15901), (669, 15922), (788, 16156), (794, 16171), (799, 16186), (807, 16213), (847, 16306), (849, 16309), (865, 16357), (874, 16387), (880, 16399), (890, 16444),

Gene: Derg\_32 Start: 29475, Stop: 31238, Start Num: 97

Candidate Starts for Derg\_32:

(Start: 97 @29475 has 73 MA's), (Start: 121 @29511 has 1 MA's), (211, 29640), (219, 29649), (262, 29745), (265, 29754), (288, 29823), (306, 29874), (311, 29883), (332, 29919), (341, 29934), (345, 29952), (368, 30015), (384, 30060), (386, 30069), (458, 30189), (461, 30204), (472, 30228), (487, 30258), (597, 30480), (607, 30498), (613, 30513), (635, 30555), (636, 30558), (647, 30585), (688, 30705), (736, 30768), (793, 30909), (794, 30912), (810, 30960), (824, 30987), (832, 31014), (860, 31068), (866, 31095),

Gene: Devera\_23 Start: 17169, Stop: 18935, Start Num: 114

Candidate Starts for Devera\_23:

(Start: 114 @17169 has 139 MA's), (140, 17199), (236, 17358), (248, 17391), (258, 17421), (272, 17454), (278, 17466), (316, 17556), (334, 17592), (337, 17598), (360, 17670), (362, 17679), (378, 17718), (392, 17763), (393, 17766), (400, 17784), (403, 17787), (448, 17859), (465, 17901), (468, 17907), (481, 17934), (499, 17970), (522, 18027), (564, 18072), (572, 18090), (593, 18150), (603, 18180), (618, 18207), (655, 18312), (704, 18402), (748, 18471), (757, 18507), (768, 18537), (772, 18546), (793, 18621), (810, 18672), (863, 18771), (880, 18822), (901, 18906), (902, 18909), (913, 18927),

Gene: Dewey\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Dewey\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417),



(628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Dxdert\_33 Start: 27970, Stop: 29589, Start Num: 163

Candidate Starts for Dxdert\_33:

(Start: 163 @27970 has 10 MA's), (178, 27991), (219, 28054), (272, 28177), (277, 28189), (298, 28246), (341, 28324), (382, 28447), (449, 28561), (460, 28591), (481, 28633), (508, 28696), (547, 28744), (551, 28753), (579, 28804), (596, 28852), (664, 29017), (670, 29047), (746, 29155), (747, 29158), (769, 29203), (786, 29260), (788, 29266), (790, 29272), (806, 29320), (810, 29329), (813, 29335), (815, 29338), (842, 29389), (863, 29434), (883, 29503), (896, 29551), (900, 29563),

Gene: Dexes\_28 Start: 21780, Stop: 23582, Start Num: 146

Candidate Starts for Dexes\_28:

(Start: 146 @21780 has 223 MA's), (Start: 161 @21801 has 4 MA's), (Start: 190 @21843 has 1 MA's), (216, 21888), (306, 22104), (332, 22149), (338, 22158), (349, 22197), (368, 22248), (369, 22251), (467, 22446), (583, 22716), (584, 22719), (591, 22740), (635, 22836), (636, 22839), (638, 22845), (665, 22914), (668, 22932), (670, 22941), (677, 22971), (731, 23067), (746, 23100), (750, 23115), (793, 23256), (813, 23313), (862, 23424),

Gene: Dhanush\_27 Start: 19830, Stop: 21608, Start Num: 144

Candidate Starts for Dhanush\_27:

(Start: 123 @19806 has 215 MA's), (Start: 144 @19830 has 603 MA's), (Start: 190 @19887 has 1 MA's), (222, 19941), (230, 19956), (236, 19974), (272, 20058), (277, 20070), (278, 20073), (306, 20148), (315, 20163), (338, 20202), (378, 20319), (417, 20406), (463, 20487), (489, 20535), (500, 20559), (532, 20646), (553, 20691), (584, 20763), (591, 20784), (597, 20802), (636, 20883), (668, 20976), (670, 20985), (675, 21009), (677, 21015), (687, 21039), (731, 21093), (742, 21114), (756, 21165), (763, 21189), (782, 21243), (813, 21339), (860, 21444), (863, 21459), (894, 21567), (900, 21585),

Gene: Dieselweasel\_29 Start: 20380, Stop: 22176, Start Num: 144

Candidate Starts for Dieselweasel\_29:

(Start: 144 @20380 has 603 MA's), (Start: 190 @20437 has 1 MA's), (197, 20452), (219, 20485), (230, 20506), (Start: 235 @20521 has 1 MA's), (272, 20608), (277, 20620), (278, 20623), (306, 20698), (315, 20713), (336, 20749), (417, 20956), (481, 21070), (500, 21109), (532, 21196), (583, 21310), (591, 21334), (597, 21352), (609, 21391), (636, 21433), (665, 21508), (668, 21526), (675, 21559), (677, 21565), (695, 21604), (729, 21658), (731, 21661), (742, 21682), (758, 21739), (813, 21907), (860, 22012), (862, 22018), (900, 22153),

Gene: Dignity\_30 Start: 20641, Stop: 22413, Start Num: 144

Candidate Starts for Dignity\_30:

(Start: 123 @20617 has 215 MA's), (Start: 144 @20641 has 603 MA's), (219, 20740), (251, 20824), (277, 20875), (278, 20878), (305, 20950), (306, 20953), (338, 21007), (349, 21046), (378, 21124), (417, 21211), (463, 21292), (467, 21295), (546, 21481), (584, 21568), (631, 21673), (636, 21688), (675, 21814), (677, 21820), (713, 21868), (750, 21946), (752, 21952), (770, 22006), (781, 22045), (784, 22060), (813, 22144), (862, 22255),

Gene: DillTech15\_16 Start: 14841, Stop: 16550, Start Num: 123

Candidate Starts for DillTech15\_16:

(Start: 123 @14841 has 215 MA's), (193, 14928), (Start: 227 @14973 has 2 MA's), (233, 14997), (271, 15102), (274, 15108), (281, 15126), (300, 15156), (348, 15261), (367, 15315), (370, 15321), (373, 15330), (381, 15351), (388, 15375), (402, 15411), (403, 15417), (418, 15450), (420, 15453), (424, 15462), (443, 15477), (448, 15483), (459, 15501), (465, 15516), (468, 15522), (475, 15540), (477,

15543), (484, 15558), (492, 15573), (494, 15579), (511, 15627), (515, 15639), (521, 15645), (564, 15705), (568, 15717), (583, 15753), (587, 15765), (614, 15840), (618, 15849), (625, 15867), (627, 15873), (710, 16008), (720, 16020), (737, 16056), (799, 16254), (810, 16287), (826, 16317), (836, 16347), (841, 16356), (844, 16362), (860, 16377), (861, 16380), (865, 16401), (866, 16404), (882, 16446), (887, 16476), (900, 16518), (901, 16524),

Gene: Dina\_17 Start: 16286, Stop: 17983, Start Num: 118

Candidate Starts for Dina\_17:

(Start: 118 @16286 has 8 MA's), (136, 16307), (196, 16391), (211, 16418), (216, 16424), (275, 16556), (295, 16607), (306, 16640), (310, 16649), (368, 16784), (380, 16817), (385, 16835), (411, 16889), (448, 16934), (472, 16991), (478, 17003), (497, 17042), (535, 17093), (540, 17102), (549, 17123), (579, 17189), (610, 17279), (661, 17387), (673, 17441), (675, 17447), (681, 17465), (752, 17561), (766, 17582), (784, 17627), (845, 17786), (855, 17801), (861, 17816), (863, 17828), (907, 17972),

Gene: Dinger\_23 Start: 16304, Stop: 17944, Start Num: 155

Candidate Starts for Dinger\_23:

(Start: 155 @16304 has 4 MA's), (Start: 168 @16319 has 32 MA's), (211, 16388), (232, 16424), (306, 16610), (361, 16739), (378, 16781), (384, 16799), (386, 16808), (394, 16832), (406, 16850), (436, 16880), (444, 16895), (445, 16898), (460, 16937), (467, 16946), (505, 17030), (576, 17147), (584, 17171), (635, 17285), (665, 17363), (672, 17402), (675, 17414), (678, 17423), (713, 17444), (750, 17522), (807, 17669), (854, 17768), (860, 17783), (907, 17936),

Gene: DinoDaryn\_24 Start: 16702, Stop: 18030, Start Num: 257

Candidate Starts for DinoDaryn\_24:

(Start: 257 @16702 has 11 MA's), (267, 16717), (317, 16831), (333, 16861), (349, 16906), (364, 16951), (383, 17008), (388, 17026), (391, 17035), (401, 17059), (405, 17065), (406, 17068), (437, 17119), (447, 17131), (509, 17173), (531, 17224), (536, 17233), (548, 17242), (580, 17287), (636, 17398), (653, 17443), (671, 17512), (680, 17533), (749, 17614), (763, 17647), (799, 17734), (812, 17770), (819, 17785), (823, 17794), (849, 17836), (881, 17929), (884, 17947), (899, 18004), (902, 18013),

Gene: DirtMcgirt\_17 Start: 14762, Stop: 16339, Start Num: 227

Candidate Starts for DirtMcgirt\_17:

(Start: 123 @14630 has 215 MA's), (193, 14717), (Start: 227 @14762 has 2 MA's), (233, 14786), (251, 14843), (271, 14891), (274, 14897), (281, 14915), (300, 14945), (348, 15050), (367, 15104), (370, 15110), (373, 15119), (378, 15131), (381, 15140), (388, 15164), (402, 15200), (403, 15206), (407, 15218), (418, 15239), (420, 15242), (424, 15251), (443, 15266), (448, 15272), (459, 15290), (465, 15305), (468, 15311), (475, 15329), (477, 15332), (484, 15347), (492, 15362), (494, 15368), (506, 15398), (511, 15416), (515, 15428), (521, 15434), (564, 15494), (568, 15506), (583, 15542), (587, 15554), (594, 15575), (614, 15629), (618, 15638), (627, 15662), (638, 15692), (710, 15797), (720, 15809), (737, 15845), (751, 15884), (761, 15923), (791, 16022), (799, 16043), (810, 16076), (826, 16106), (836, 16136), (841, 16145), (844, 16151), (860, 16166), (861, 16169), (865, 16190), (866, 16193), (882, 16235), (887, 16265), (900, 16307), (901, 16313),

Gene: DirtyBoi\_20 Start: 16958, Stop: 18652, Start Num: 149

Candidate Starts for DirtyBoi\_20:

(Start: 121 @16928 has 1 MA's), (Start: 149 @16958 has 8 MA's), (219, 17060), (240, 17111), (265, 17168), (281, 17219), (311, 17297), (316, 17303), (377, 17453), (445, 17576), (469, 17636), (485, 17672), (504, 17714), (537, 17756), (547, 17780), (561, 17810), (668, 18071), (705, 18146), (736, 18188), (752, 18233), (793, 18329), (794, 18332), (799, 18347), (864, 18506), (865, 18512), (891, 18599), (907, 18644),

Gene: DirtyDunning\_27 Start: 19823, Stop: 21601, Start Num: 144

Candidate Starts for DirtyDunning\_27:

(Start: 123 @19799 has 215 MA's), (Start: 144 @19823 has 603 MA's), (Start: 190 @19880 has 1 MA's), (222, 19934), (230, 19949), (236, 19967), (272, 20051), (277, 20063), (278, 20066), (306, 20141), (315, 20156), (338, 20195), (378, 20312), (417, 20399), (463, 20480), (489, 20528), (500, 20552), (532, 20639), (553, 20684), (584, 20756), (591, 20777), (597, 20795), (636, 20876), (668, 20969), (670, 20978), (675, 21002), (677, 21008), (687, 21032), (731, 21086), (742, 21107), (756, 21158), (763, 21182), (813, 21332), (860, 21437), (863, 21452), (894, 21560), (900, 21578),

Gene: Discoknowium\_24 Start: 19773, Stop: 21572, Start Num: 144

Candidate Starts for Discoknowium\_24:

(Start: 144 @19773 has 603 MA's), (222, 19878), (236, 19911), (278, 20010), (306, 20085), (315, 20100), (336, 20136), (360, 20208), (365, 20223), (378, 20256), (380, 20262), (495, 20487), (499, 20493), (532, 20583), (580, 20688), (583, 20697), (597, 20739), (602, 20757), (635, 20817), (636, 20820), (665, 20895), (668, 20913), (729, 21054), (746, 21090), (813, 21303), (859, 21405), (862, 21414), (893, 21528), (900, 21549), (902, 21558),

Gene: DismalFunk\_19 Start: 15013, Stop: 16782, Start Num: 112

Candidate Starts for DismalFunk\_19:

(Start: 93 @14977 has 1 MA's), (Start: 109 @15007 has 26 MA's), (Start: 112 @15013 has 41 MA's), (Start: 135 @15028 has 7 MA's), (Start: 168 @15070 has 32 MA's), (197, 15118), (Start: 227 @15157 has 2 MA's), (230, 15172), (248, 15223), (258, 15253), (272, 15286), (278, 15298), (282, 15316), (316, 15388), (321, 15394), (356, 15490), (360, 15502), (395, 15604), (403, 15619), (423, 15655), (448, 15691), (468, 15739), (487, 15778), (499, 15802), (503, 15814), (564, 15904), (567, 15913), (655, 16159), (670, 16213), (714, 16267), (768, 16381), (772, 16390), (793, 16465), (810, 16516), (813, 16522), (852, 16603), (863, 16618), (881, 16672), (901, 16753), (913, 16774),

Gene: DismalStressor\_19 Start: 15013, Stop: 16782, Start Num: 112

Candidate Starts for DismalStressor\_19:

(Start: 93 @14977 has 1 MA's), (Start: 109 @15007 has 26 MA's), (Start: 112 @15013 has 41 MA's), (Start: 135 @15028 has 7 MA's), (Start: 168 @15070 has 32 MA's), (197, 15118), (Start: 227 @15157 has 2 MA's), (230, 15172), (248, 15223), (258, 15253), (272, 15286), (278, 15298), (282, 15316), (316, 15388), (321, 15394), (356, 15490), (360, 15502), (395, 15604), (403, 15619), (423, 15655), (448, 15691), (468, 15739), (487, 15778), (499, 15802), (503, 15814), (564, 15904), (567, 15913), (655, 16159), (670, 16213), (714, 16267), (768, 16381), (772, 16390), (793, 16465), (810, 16516), (813, 16522), (852, 16603), (863, 16618), (881, 16672), (901, 16753), (913, 16774),

Gene: Dixon\_24 Start: 18653, Stop: 20443, Start Num: 144

Candidate Starts for Dixon\_24:

(Start: 123 @18629 has 215 MA's), (Start: 144 @18653 has 603 MA's), (214, 18746), (236, 18791), (278, 18890), (292, 18926), (306, 18965), (315, 18980), (336, 19016), (378, 19136), (380, 19142), (448, 19262), (505, 19391), (532, 19463), (583, 19577), (668, 19793), (675, 19826), (731, 19928), (746, 19961), (750, 19976), (758, 20006), (859, 20276), (862, 20285), (863, 20294), (896, 20408),

Gene: Dmitri\_19 Start: 17502, Stop: 19196, Start Num: 149

Candidate Starts for Dmitri\_19:

(113, 17460), (Start: 121 @17472 has 1 MA's), (Start: 149 @17502 has 8 MA's), (219, 17604), (240, 17655), (265, 17712), (281, 17763), (311, 17841), (316, 17847), (377, 17997), (445, 18120), (469, 18180), (485, 18216), (504, 18258), (537, 18300), (561, 18354), (668, 18615), (705, 18690), (736, 18732), (752, 18777), (793, 18873), (794, 18876), (799, 18891), (864, 19050), (865, 19056), (891, 19143), (907, 19188),

Gene: DmpstrDiver\_35 Start: 27492, Stop: 29490, Start Num: 124

Candidate Starts for DmpstrDiver\_35:

(Start: 124 @27492 has 30 MA's), (Start: 191 @27582 has 45 MA's), (222, 27630), (233, 27660), (243, 27687), (282, 27789), (301, 27819), (327, 27870), (346, 27918), (358, 27954), (360, 27960), (368, 27981), (392, 28053), (395, 28062), (403, 28083), (468, 28191), (470, 28194), (475, 28209), (494, 28248), (511, 28296), (515, 28308), (521, 28314), (552, 28362), (558, 28371), (565, 28392), (573, 28410), (590, 28458), (625, 28560), (653, 28632), (667, 28677), (669, 28689), (684, 28824), (685, 28830), (686, 28854), (696, 28926), (708, 28953), (800, 29202),

Gene: DobbysSock\_19 Start: 16820, Stop: 18400, Start Num: 170

Candidate Starts for DobbysSock\_19:

(88, 16703), (Start: 170 @16820 has 87 MA's), (298, 17078), (307, 17099), (340, 17153), (351, 17192), (369, 17249), (377, 17270), (501, 17441), (507, 17459), (514, 17483), (521, 17504), (554, 17546), (592, 17627), (636, 17717), (669, 17819), (670, 17822), (687, 17876), (823, 18146), (863, 18245), (865, 18254), (874, 18284),

Gene: DocMcStuffins\_17 Start: 14677, Stop: 16386, Start Num: 123

Candidate Starts for DocMcStuffins\_17:

(Start: 123 @14677 has 215 MA's), (193, 14764), (Start: 227 @14809 has 2 MA's), (233, 14833), (271, 14938), (274, 14944), (281, 14962), (284, 14971), (300, 14992), (348, 15097), (370, 15157), (373, 15166), (378, 15178), (381, 15187), (388, 15211), (402, 15247), (403, 15253), (407, 15265), (418, 15286), (420, 15289), (424, 15298), (443, 15313), (448, 15319), (459, 15337), (465, 15352), (468, 15358), (475, 15376), (477, 15379), (484, 15394), (492, 15409), (494, 15415), (511, 15463), (515, 15475), (521, 15481), (564, 15541), (568, 15553), (573, 15562), (583, 15589), (587, 15601), (614, 15676), (618, 15685), (625, 15703), (627, 15709), (638, 15739), (710, 15844), (717, 15853), (720, 15856), (737, 15892), (761, 15970), (791, 16069), (799, 16090), (810, 16123), (826, 16153), (836, 16183), (839, 16189), (841, 16192), (844, 16198), (860, 16213), (861, 16216), (865, 16237), (866, 16240), (882, 16282), (900, 16354), (901, 16360),

Gene: DoctorDiddles\_24 Start: 18992, Stop: 20587, Start Num: 191

Candidate Starts for DoctorDiddles\_24:

(Start: 129 @18908 has 79 MA's), (Start: 191 @18992 has 45 MA's), (Start: 235 @19070 has 1 MA's), (268, 19157), (274, 19172), (300, 19220), (324, 19259), (356, 19346), (368, 19379), (381, 19415), (390, 19445), (392, 19451), (422, 19520), (461, 19550), (466, 19562), (468, 19565), (494, 19622), (565, 19754), (567, 19760), (592, 19826), (594, 19832), (601, 19856), (618, 19904), (627, 19928), (631, 19937), (658, 20012), (717, 20063), (725, 20078), (782, 20240), (788, 20267), (799, 20297), (843, 20402), (880, 20480), (887, 20516), (890, 20525), (900, 20558), (907, 20573),

Gene: DoctorFroggo\_34 Start: 30944, Stop: 32566, Start Num: 160

Candidate Starts for DoctorFroggo\_34:

(Start: 116 @30887 has 1 MA's), (Start: 160 @30944 has 17 MA's), (178, 30965), (219, 31028), (246, 31091), (272, 31151), (277, 31163), (312, 31250), (341, 31301), (348, 31331), (378, 31412), (386, 31439), (449, 31538), (460, 31568), (464, 31577), (482, 31613), (508, 31673), (547, 31721), (551, 31730), (596, 31829), (609, 31868), (619, 31880), (672, 32036), (675, 32048), (711, 32075), (746, 32132), (764, 32171), (769, 32180), (786, 32237), (790, 32249), (806, 32297), (810, 32306), (813, 32312), (824, 32333), (863, 32411), (902, 32549),

Gene: Dogfish\_21 Start: 18185, Stop: 19831, Start Num: 157

Candidate Starts for Dogfish\_21:

(Start: 157 @18185 has 4 MA's), (221, 18275), (230, 18299), (232, 18305), (261, 18383), (284, 18449), (287, 18455), (337, 18566), (341, 18575), (347, 18602), (350, 18611), (358, 18632), (444, 18803), (445, 18806), (474, 18872), (482, 18887), (506, 18941), (555, 18971), (559, 18980), (576, 19022), (583, 19043), (599, 19091), (602, 19103), (610, 19130), (641, 19199), (662, 19268), (670, 19301), (716, 19358), (757, 19409), (780, 19478), (806, 19565), (813, 19580), (838, 19637), (843,

19646), (878, 19724), (881, 19730),

Gene: Doggs\_18 Start: 17205, Stop: 18899, Start Num: 149

Candidate Starts for Doggs\_18:

(32, 16734), (48, 16884), (Start: 121 @17175 has 1 MA's), (Start: 149 @17205 has 8 MA's), (219, 17307), (232, 17334), (237, 17346), (240, 17358), (265, 17415), (281, 17466), (289, 17487), (311, 17544), (316, 17550), (377, 17700), (445, 17823), (469, 17883), (485, 17919), (537, 18003), (561, 18057), (668, 18318), (703, 18390), (705, 18393), (736, 18435), (752, 18480), (793, 18576), (794, 18579), (799, 18594), (864, 18753), (865, 18759), (891, 18846), (907, 18891),

Gene: Dole\_23 Start: 17171, Stop: 18937, Start Num: 114

Candidate Starts for Dole\_23:

(Start: 114 @17171 has 139 MA's), (140, 17201), (236, 17360), (248, 17393), (258, 17423), (272, 17456), (278, 17468), (316, 17558), (334, 17594), (337, 17600), (360, 17672), (362, 17681), (378, 17720), (392, 17765), (393, 17768), (400, 17786), (403, 17789), (448, 17861), (465, 17903), (468, 17909), (481, 17936), (499, 17972), (522, 18029), (564, 18074), (572, 18092), (593, 18152), (603, 18182), (618, 18209), (655, 18314), (704, 18404), (748, 18473), (757, 18509), (768, 18539), (772, 18548), (793, 18623), (810, 18674), (863, 18773), (880, 18824), (901, 18908), (902, 18911), (913, 18929),

Gene: Dolores\_20 Start: 17322, Stop: 18902, Start Num: 170

Candidate Starts for Dolores\_20:

(88, 17205), (Start: 170 @17322 has 87 MA's), (298, 17580), (307, 17601), (340, 17655), (351, 17694), (369, 17751), (377, 17772), (501, 17943), (507, 17961), (514, 17985), (521, 18006), (554, 18048), (592, 18129), (636, 18219), (653, 18264), (669, 18321), (670, 18324), (687, 18378), (751, 18468), (863, 18747), (865, 18756), (874, 18786),

Gene: DonkeyMan\_18 Start: 14949, Stop: 16565, Start Num: 153

Candidate Starts for DonkeyMan\_18:

(Start: 153 @14949 has 11 MA's), (219, 15048), (231, 15072), (277, 15183), (278, 15186), (281, 15204), (284, 15213), (322, 15279), (328, 15294), (332, 15303), (336, 15309), (360, 15381), (366, 15399), (385, 15453), (389, 15462), (417, 15516), (448, 15552), (449, 15555), (499, 15663), (544, 15735), (547, 15741), (551, 15750), (560, 15768), (599, 15858), (653, 15972), (657, 15990), (664, 16002), (679, 16068), (735, 16116), (740, 16128), (746, 16140), (752, 16161), (755, 16173), (769, 16188), (782, 16218), (791, 16254), (873, 16443), (891, 16506), (897, 16527), (907, 16551),

Gene: Donkeykong\_16 Start: 14982, Stop: 16691, Start Num: 123

Candidate Starts for Donkeykong\_16:

(Start: 123 @14982 has 215 MA's), (193, 15069), (Start: 227 @15114 has 2 MA's), (233, 15138), (251, 15195), (271, 15243), (274, 15249), (281, 15267), (300, 15297), (348, 15402), (370, 15462), (373, 15471), (381, 15492), (388, 15516), (403, 15558), (418, 15591), (424, 15603), (443, 15618), (448, 15624), (459, 15642), (465, 15657), (468, 15663), (484, 15699), (492, 15714), (494, 15720), (511, 15768), (515, 15780), (521, 15786), (564, 15846), (568, 15858), (583, 15894), (587, 15906), (614, 15981), (618, 15990), (625, 16008), (627, 16014), (638, 16044), (710, 16149), (717, 16158), (720, 16161), (737, 16197), (761, 16275), (791, 16374), (799, 16395), (810, 16428), (826, 16458), (836, 16488), (841, 16497), (844, 16503), (860, 16518), (861, 16521), (866, 16545), (877, 16575), (882, 16587), (887, 16617), (900, 16659),

Gene: Donovan\_19 Start: 16374, Stop: 18110, Start Num: 117

Candidate Starts for Donovan\_19:

(Start: 101 @16350 has 2 MA's), (Start: 117 @16374 has 59 MA's), (Start: 166 @16434 has 1 MA's), (178, 16455), (180, 16458), (246, 16578), (258, 16617), (272, 16650), (282, 16674), (344, 16794), (356, 16833), (358, 16839), (386, 16923), (388, 16929), (392, 16941), (402, 16965), (410, 16992),

(422, 17010), (452, 17049), (459, 17055), (470, 17079), (494, 17133), (500, 17145), (503, 17154), (529, 17214), (573, 17292), (587, 17331), (598, 17364), (618, 17430), (624, 17445), (627, 17454), (636, 17478), (647, 17508), (653, 17520), (735, 17622), (740, 17634), (742, 17637), (745, 17643), (747, 17652), (779, 17760), (805, 17844), (853, 17943), (890, 18051), (907, 18099),

Gene: DontArgue\_26 Start: 18145, Stop: 19923, Start Num: 144

Candidate Starts for DontArgue\_26:

(Start: 123 @18121 has 215 MA's), (Start: 144 @18145 has 603 MA's), (Start: 190 @18202 has 1 MA's), (197, 18217), (216, 18247), (230, 18271), (277, 18385), (278, 18388), (306, 18463), (378, 18634), (417, 18721), (460, 18796), (481, 18835), (532, 18961), (553, 19006), (591, 19099), (595, 19111), (668, 19291), (670, 19300), (675, 19324), (677, 19330), (682, 19345), (713, 19378), (742, 19429), (813, 19654), (860, 19759), (862, 19765), (863, 19774), (900, 19900),

Gene: Doom\_28 Start: 21888, Stop: 23690, Start Num: 146

Candidate Starts for Doom\_28:

(Start: 146 @21888 has 223 MA's), (Start: 161 @21909 has 4 MA's), (Start: 190 @21951 has 1 MA's), (216, 21996), (306, 22212), (332, 22257), (338, 22266), (349, 22305), (368, 22356), (369, 22359), (467, 22554), (500, 22623), (583, 22824), (584, 22827), (591, 22848), (635, 22944), (636, 22947), (638, 22953), (665, 23022), (668, 23040), (670, 23049), (677, 23079), (731, 23175), (746, 23208), (750, 23223), (793, 23364), (813, 23421), (862, 23532), (909, 23685),

Gene: Doomphist\_16 Start: 14940, Stop: 16649, Start Num: 123

Candidate Starts for Doomphist\_16:

(Start: 123 @14940 has 215 MA's), (193, 15027), (Start: 227 @15072 has 2 MA's), (233, 15096), (271, 15201), (274, 15207), (281, 15225), (300, 15255), (348, 15360), (370, 15420), (378, 15441), (381, 15450), (388, 15474), (418, 15549), (459, 15600), (465, 15615), (468, 15621), (484, 15657), (486, 15660), (492, 15672), (494, 15678), (511, 15726), (515, 15738), (521, 15744), (564, 15804), (568, 15816), (583, 15852), (587, 15864), (614, 15939), (618, 15948), (625, 15966), (627, 15972), (638, 16002), (710, 16107), (720, 16119), (737, 16155), (761, 16233), (791, 16332), (799, 16353), (810, 16386), (826, 16416), (836, 16446), (839, 16452), (841, 16455), (844, 16461), (860, 16476), (861, 16479), (865, 16500), (866, 16503), (882, 16545), (900, 16617), (901, 16623),

Gene: Dorito\_19 Start: 16822, Stop: 18402, Start Num: 170

Candidate Starts for Dorito\_19:

(10, 16045), (23, 16201), (39, 16396), (43, 16432), (44, 16435), (52, 16519), (53, 16525), (69, 16651), (88, 16705), (Start: 170 @16822 has 87 MA's), (265, 16993), (298, 17080), (306, 17098), (307, 17101), (340, 17155), (351, 17194), (369, 17251), (377, 17272), (501, 17443), (507, 17461), (514, 17485), (521, 17506), (554, 17548), (592, 17629), (636, 17719), (669, 17821), (687, 17878), (751, 17968), (863, 18247), (865, 18256), (874, 18286),

Gene: Dorothea\_31 Start: 19977, Stop: 21749, Start Num: 144

Candidate Starts for Dorothea\_31:

(94, 19911), (Start: 123 @19953 has 215 MA's), (Start: 144 @19977 has 603 MA's), (263, 20175), (278, 20214), (305, 20286), (306, 20289), (318, 20307), (338, 20343), (341, 20349), (378, 20460), (380, 20466), (417, 20547), (448, 20586), (463, 20628), (467, 20631), (495, 20691), (592, 20928), (597, 20943), (636, 21024), (667, 21111), (677, 21156), (750, 21282), (765, 21333), (770, 21342), (781, 21381), (782, 21384), (784, 21396), (813, 21480), (860, 21585), (862, 21591), (900, 21726),

Gene: Dorothy\_16 Start: 14766, Stop: 16475, Start Num: 123

Candidate Starts for Dorothy\_16:

(Start: 123 @14766 has 215 MA's), (193, 14853), (Start: 227 @14898 has 2 MA's), (233, 14922), (271, 15027), (274, 15033), (281, 15051), (300, 15081), (348, 15186), (370, 15246), (378, 15267), (381, 15276), (388, 15300), (459, 15426), (465, 15441), (468, 15447), (484, 15483), (486, 15486), (492,

15498), (494, 15504), (511, 15552), (515, 15564), (521, 15570), (564, 15630), (568, 15642), (583, 15678), (587, 15690), (614, 15765), (618, 15774), (625, 15792), (627, 15798), (638, 15828), (710, 15933), (717, 15942), (720, 15945), (737, 15981), (761, 16059), (791, 16158), (799, 16179), (810, 16212), (826, 16242), (836, 16272), (841, 16281), (844, 16287), (860, 16302), (861, 16305), (865, 16326), (866, 16329), (882, 16371), (887, 16401), (900, 16443),

Gene: DosHalletts\_17 Start: 14741, Stop: 16450, Start Num: 123

Candidate Starts for DosHalletts\_17:

(Start: 123 @14741 has 215 MA's), (193, 14828), (Start: 227 @14873 has 2 MA's), (233, 14897), (259, 14975), (271, 15002), (274, 15008), (281, 15026), (300, 15056), (348, 15161), (370, 15221), (378, 15242), (381, 15251), (388, 15275), (403, 15317), (418, 15350), (424, 15362), (443, 15377), (459, 15401), (465, 15416), (468, 15422), (484, 15458), (492, 15473), (494, 15479), (511, 15527), (515, 15539), (521, 15545), (564, 15605), (568, 15617), (583, 15653), (587, 15665), (614, 15740), (618, 15749), (625, 15767), (627, 15773), (638, 15803), (710, 15908), (717, 15917), (720, 15920), (737, 15956), (761, 16034), (791, 16133), (799, 16154), (810, 16187), (826, 16217), (834, 16244), (836, 16247), (841, 16256), (844, 16262), (860, 16277), (861, 16280), (865, 16301), (866, 16304), (869, 16313), (882, 16346), (887, 16376), (900, 16418),

Gene: DotProduct\_16 Start: 14816, Stop: 16525, Start Num: 123

Candidate Starts for DotProduct\_16:

(Start: 123 @14816 has 215 MA's), (193, 14903), (Start: 227 @14948 has 2 MA's), (233, 14972), (240, 14993), (271, 15077), (274, 15083), (281, 15101), (300, 15131), (348, 15236), (370, 15296), (373, 15305), (378, 15317), (381, 15326), (388, 15350), (418, 15425), (420, 15428), (443, 15452), (448, 15458), (459, 15476), (465, 15491), (468, 15497), (475, 15515), (477, 15518), (484, 15533), (486, 15536), (492, 15548), (494, 15554), (506, 15584), (511, 15602), (515, 15614), (521, 15620), (564, 15680), (568, 15692), (583, 15728), (587, 15740), (594, 15761), (614, 15815), (618, 15824), (627, 15848), (638, 15878), (710, 15983), (717, 15992), (720, 15995), (737, 16031), (751, 16070), (761, 16109), (791, 16208), (799, 16229), (810, 16262), (826, 16292), (836, 16322), (841, 16331), (844, 16337), (860, 16352), (861, 16355), (865, 16376), (866, 16379), (882, 16421), (887, 16451), (900, 16493), (901, 16499),

Gene: Doug\_17 Start: 15357, Stop: 17066, Start Num: 123

Candidate Starts for Doug\_17:

(Start: 123 @15357 has 215 MA's), (193, 15444), (Start: 227 @15489 has 2 MA's), (233, 15513), (271, 15618), (274, 15624), (281, 15642), (300, 15672), (348, 15777), (370, 15837), (378, 15858), (381, 15867), (388, 15891), (459, 16017), (465, 16032), (468, 16038), (484, 16074), (486, 16077), (492, 16089), (494, 16095), (511, 16143), (515, 16155), (521, 16161), (564, 16221), (568, 16233), (583, 16269), (587, 16281), (594, 16302), (614, 16356), (618, 16365), (625, 16383), (627, 16389), (710, 16524), (720, 16536), (737, 16572), (761, 16650), (791, 16749), (799, 16770), (810, 16803), (826, 16833), (836, 16863), (839, 16869), (841, 16872), (844, 16878), (860, 16893), (861, 16896), (865, 16917), (866, 16920), (882, 16962), (900, 17034),

Gene: Dove\_34 Start: 26623, Stop: 28356, Start Num: 124

Candidate Starts for Dove\_34:

(Start: 124 @26623 has 30 MA's), (Start: 191 @26713 has 45 MA's), (222, 26761), (233, 26791), (243, 26818), (282, 26920), (301, 26950), (346, 27049), (358, 27085), (360, 27091), (368, 27112), (392, 27184), (395, 27193), (403, 27214), (448, 27283), (468, 27322), (470, 27325), (475, 27340), (494, 27379), (511, 27427), (515, 27439), (521, 27445), (552, 27493), (558, 27502), (565, 27523), (573, 27541), (590, 27589), (625, 27691), (647, 27751), (653, 27763), (725, 27847), (731, 27859), (735, 27865), (740, 27877), (742, 27880), (753, 27919), (758, 27937), (772, 27973), (773, 27979), (799, 28066), (834, 28156), (863, 28198), (868, 28216), (878, 28246), (888, 28288), (907, 28342),

Gene: DrDrey\_25 Start: 20238, Stop: 21917, Start Num: 129

Candidate Starts for DrDrey\_25:

(Start: 129 @20238 has 79 MA's), (Start: 191 @20322 has 45 MA's), (Start: 235 @20400 has 1 MA's), (268, 20487), (274, 20502), (300, 20550), (324, 20589), (356, 20676), (368, 20709), (381, 20745), (390, 20775), (392, 20781), (422, 20850), (461, 20880), (466, 20892), (468, 20895), (494, 20952), (565, 21084), (567, 21090), (592, 21156), (594, 21162), (601, 21186), (618, 21234), (627, 21258), (631, 21267), (658, 21342), (717, 21393), (725, 21408), (782, 21570), (788, 21597), (799, 21627), (843, 21732), (880, 21810), (887, 21846), (890, 21855), (900, 21888), (907, 21903),

Gene: DrFeelGood\_26 Start: 21434, Stop: 23236, Start Num: 146

Candidate Starts for DrFeelGood\_26:

(Start: 146 @21434 has 223 MA's), (Start: 161 @21455 has 4 MA's), (Start: 190 @21497 has 1 MA's), (216, 21542), (306, 21758), (332, 21803), (338, 21812), (349, 21851), (368, 21902), (369, 21905), (467, 22100), (500, 22169), (583, 22370), (584, 22373), (591, 22394), (635, 22490), (636, 22493), (638, 22499), (665, 22568), (668, 22586), (670, 22595), (677, 22625), (731, 22721), (746, 22754), (750, 22769), (793, 22910), (813, 22967), (862, 23078), (909, 23231),

Gene: DrHayes\_23 Start: 17102, Stop: 18868, Start Num: 114

Candidate Starts for DrHayes\_23:

(Start: 114 @17102 has 139 MA's), (140, 17132), (236, 17291), (248, 17324), (258, 17354), (272, 17387), (278, 17399), (316, 17489), (337, 17531), (360, 17603), (362, 17612), (378, 17651), (392, 17696), (403, 17720), (448, 17792), (465, 17834), (468, 17840), (481, 17867), (564, 18005), (572, 18023), (587, 18065), (603, 18113), (618, 18140), (655, 18245), (704, 18335), (757, 18440), (768, 18470), (772, 18479), (793, 18554), (810, 18605), (890, 18800), (901, 18839), (902, 18842), (913, 18860),

Gene: Drago\_17 Start: 14628, Stop: 16337, Start Num: 123

Candidate Starts for Drago\_17:

(Start: 123 @14628 has 215 MA's), (193, 14715), (Start: 227 @14760 has 2 MA's), (233, 14784), (251, 14841), (271, 14889), (274, 14895), (281, 14913), (300, 14943), (348, 15048), (367, 15102), (370, 15108), (373, 15117), (378, 15129), (381, 15138), (388, 15162), (402, 15198), (403, 15204), (407, 15216), (418, 15237), (420, 15240), (424, 15249), (443, 15264), (448, 15270), (459, 15288), (465, 15303), (468, 15309), (475, 15327), (477, 15330), (484, 15345), (492, 15360), (494, 15366), (506, 15396), (511, 15414), (515, 15426), (521, 15432), (564, 15492), (568, 15504), (583, 15540), (587, 15552), (594, 15573), (614, 15627), (618, 15636), (627, 15660), (638, 15690), (710, 15795), (720, 15807), (737, 15843), (751, 15882), (761, 15921), (791, 16020), (799, 16041), (810, 16074), (826, 16104), (836, 16134), (841, 16143), (844, 16149), (860, 16164), (861, 16167), (865, 16188), (866, 16191), (882, 16233), (887, 16263), (900, 16305), (901, 16311),

Gene: Drake55\_30 Start: 20670, Stop: 22442, Start Num: 144

Candidate Starts for Drake55\_30:

(Start: 123 @20646 has 215 MA's), (Start: 144 @20670 has 603 MA's), (Start: 235 @20805 has 1 MA's), (277, 20904), (278, 20907), (305, 20979), (306, 20982), (338, 21036), (341, 21042), (360, 21105), (378, 21153), (388, 21186), (392, 21198), (417, 21240), (463, 21321), (467, 21324), (481, 21354), (546, 21510), (584, 21597), (631, 21702), (636, 21717), (674, 21840), (675, 21843), (677, 21849), (713, 21897), (746, 21960), (750, 21975), (752, 21981), (770, 22035), (781, 22074), (784, 22089), (795, 22122), (810, 22167), (860, 22278), (862, 22284), (877, 22338),

Gene: Drake94\_26 Start: 17881, Stop: 19659, Start Num: 144

Candidate Starts for Drake94\_26:

(Start: 123 @17857 has 215 MA's), (Start: 144 @17881 has 603 MA's), (Start: 190 @17938 has 1 MA's), (197, 17953), (230, 18007), (277, 18121), (278, 18124), (306, 18199), (330, 18238), (378, 18370), (417, 18457), (460, 18532), (481, 18571), (500, 18610), (532, 18697), (553, 18742), (583, 18811), (591, 18835), (595, 18847), (597, 18853), (668, 19027), (670, 19036), (675, 19060), (677,



19066), (682, 19081), (713, 19114), (742, 19165), (758, 19222), (759, 19228), (813, 19390), (860, 19495), (862, 19501), (863, 19510), (900, 19636),

Gene: Dre3\_18 Start: 15938, Stop: 17629, Start Num: 144

Candidate Starts for Dre3\_18:

(Start: 144 @15938 has 603 MA's), (222, 16052), (237, 16085), (316, 16286), (336, 16322), (365, 16409), (406, 16511), (436, 16544), (442, 16556), (444, 16559), (465, 16616), (481, 16649), (489, 16664), (501, 16691), (513, 16730), (546, 16766), (549, 16772), (574, 16826), (583, 16850), (596, 16889), (598, 16895), (635, 16967), (643, 16985), (647, 16994), (650, 17003), (668, 17060), (671, 17078), (747, 17189), (750, 17201), (754, 17216), (766, 17228), (791, 17300), (793, 17303), (829, 17399), (842, 17426), (856, 17450), (862, 17468),

Gene: DreamCatcher\_30 Start: 22505, Stop: 24307, Start Num: 146

Candidate Starts for DreamCatcher\_30:

(Start: 146 @22505 has 223 MA's), (Start: 161 @22526 has 4 MA's), (Start: 190 @22568 has 1 MA's), (216, 22613), (306, 22829), (332, 22874), (338, 22883), (349, 22922), (368, 22973), (369, 22976), (467, 23171), (500, 23240), (583, 23441), (584, 23444), (591, 23465), (635, 23561), (636, 23564), (638, 23570), (665, 23639), (668, 23657), (670, 23666), (677, 23696), (731, 23792), (746, 23825), (750, 23840), (793, 23981), (813, 24038), (862, 24149), (909, 24302),

Gene: DreamTeam1\_28 Start: 19699, Stop: 21489, Start Num: 144

Candidate Starts for DreamTeam1\_28:

(94, 19633), (Start: 123 @19675 has 215 MA's), (Start: 144 @19699 has 603 MA's), (277, 19933), (278, 19936), (305, 20008), (306, 20011), (315, 20026), (318, 20029), (338, 20065), (341, 20071), (356, 20122), (365, 20149), (368, 20155), (378, 20182), (380, 20188), (388, 20215), (417, 20269), (463, 20350), (467, 20353), (495, 20413), (576, 20602), (597, 20665), (619, 20716), (636, 20746), (675, 20872), (731, 20974), (736, 20983), (746, 21007), (750, 21022), (756, 21046), (781, 21121), (784, 21136), (813, 21220), (860, 21325), (862, 21331), (877, 21385), (890, 21433),

Gene: Dreamboat\_28 Start: 21057, Stop: 22859, Start Num: 146

Candidate Starts for Dreamboat\_28:

(Start: 146 @21057 has 223 MA's), (Start: 161 @21078 has 4 MA's), (Start: 190 @21120 has 1 MA's), (216, 21165), (306, 21381), (332, 21426), (338, 21435), (368, 21525), (369, 21528), (467, 21723), (500, 21792), (583, 21993), (584, 21996), (591, 22017), (635, 22113), (636, 22116), (638, 22122), (665, 22191), (668, 22209), (670, 22218), (677, 22248), (731, 22344), (746, 22377), (750, 22392), (793, 22533), (813, 22590), (862, 22701),

Gene: DroogsArmy\_28 Start: 22621, Stop: 24423, Start Num: 144

Candidate Starts for DroogsArmy\_28:

(Start: 132 @22609 has 45 MA's), (Start: 144 @22621 has 603 MA's), (188, 22666), (198, 22687), (277, 22852), (278, 22855), (306, 22930), (315, 22945), (380, 23107), (382, 23113), (417, 23188), (495, 23332), (547, 23458), (553, 23470), (583, 23539), (597, 23581), (635, 23677), (636, 23680), (643, 23695), (665, 23755), (668, 23773), (670, 23782), (675, 23806), (677, 23812), (729, 23905), (731, 23908), (746, 23941), (750, 23956), (759, 23992), (761, 23998), (788, 24085), (791, 24094), (851, 24235), (862, 24265), (863, 24274), (891, 24370), (907, 24415),

Gene: DropBear\_27 Start: 19967, Stop: 21766, Start Num: 144

Candidate Starts for DropBear\_27:

(Start: 144 @19967 has 603 MA's), (Start: 190 @20027 has 1 MA's), (230, 20096), (272, 20198), (277, 20210), (278, 20213), (306, 20288), (315, 20303), (318, 20306), (338, 20342), (384, 20477), (417, 20546), (481, 20660), (532, 20786), (583, 20900), (591, 20924), (595, 20936), (597, 20942), (636, 21023), (665, 21098), (668, 21116), (670, 21125), (675, 21149), (677, 21155), (682, 21170), (707, 21212), (726, 21239), (729, 21248), (731, 21251), (742, 21272), (746, 21284), (813, 21497), (860,

21602), (862, 21608), (900, 21743),

Gene: Druantia\_27 Start: 19828, Stop: 21606, Start Num: 144

Candidate Starts for Druantia\_27:

(Start: 123 @19804 has 215 MA's), (Start: 144 @19828 has 603 MA's), (Start: 190 @19885 has 1 MA's), (222, 19939), (230, 19954), (236, 19972), (272, 20056), (277, 20068), (278, 20071), (306, 20146), (315, 20161), (338, 20200), (378, 20317), (417, 20404), (463, 20485), (489, 20533), (500, 20557), (532, 20644), (553, 20689), (584, 20761), (591, 20782), (597, 20800), (636, 20881), (668, 20974), (670, 20983), (675, 21007), (677, 21013), (687, 21037), (731, 21091), (742, 21112), (756, 21163), (763, 21187), (782, 21241), (813, 21337), (860, 21442), (863, 21457), (894, 21565), (900, 21583),

Gene: Dublin\_23 Start: 19626, Stop: 21422, Start Num: 144

Candidate Starts for Dublin\_23:

(Start: 144 @19626 has 603 MA's), (222, 19731), (236, 19764), (278, 19863), (306, 19938), (315, 19953), (336, 19989), (360, 20061), (365, 20076), (380, 20115), (430, 20202), (481, 20310), (495, 20340), (499, 20346), (553, 20481), (579, 20538), (580, 20541), (583, 20550), (597, 20592), (602, 20610), (635, 20670), (636, 20673), (668, 20766), (670, 20775), (675, 20799), (729, 20907), (746, 20943), (813, 21153), (835, 21207), (859, 21255), (862, 21264), (893, 21378), (900, 21399), (902, 21408),

Gene: DudeLittle\_28 Start: 20267, Stop: 22039, Start Num: 144

Candidate Starts for DudeLittle\_28:

(Start: 123 @20243 has 215 MA's), (Start: 144 @20267 has 603 MA's), (277, 20501), (278, 20504), (305, 20576), (306, 20579), (338, 20633), (349, 20672), (365, 20717), (378, 20750), (417, 20837), (463, 20918), (467, 20921), (584, 21194), (636, 21314), (675, 21440), (713, 21494), (721, 21503), (731, 21524), (746, 21557), (750, 21572), (752, 21578), (770, 21632), (781, 21671), (784, 21686), (813, 21770), (862, 21881),

Gene: Dulcie\_26 Start: 20754, Stop: 22556, Start Num: 146

Candidate Starts for Dulcie\_26:

(Start: 146 @20754 has 223 MA's), (Start: 161 @20775 has 4 MA's), (Start: 190 @20817 has 1 MA's), (216, 20862), (306, 21078), (332, 21123), (338, 21132), (349, 21171), (368, 21222), (369, 21225), (467, 21420), (500, 21489), (583, 21690), (584, 21693), (591, 21714), (635, 21810), (636, 21813), (638, 21819), (665, 21888), (668, 21906), (670, 21915), (677, 21945), (731, 22041), (746, 22074), (750, 22089), (793, 22230), (813, 22287), (862, 22398),

Gene: Dumbo\_24 Start: 19297, Stop: 20892, Start Num: 191

Candidate Starts for Dumbo\_24:

(Start: 129 @19213 has 79 MA's), (Start: 191 @19297 has 45 MA's), (Start: 235 @19375 has 1 MA's), (268, 19462), (274, 19477), (300, 19525), (324, 19564), (356, 19651), (368, 19684), (381, 19720), (390, 19750), (392, 19756), (422, 19825), (461, 19855), (466, 19867), (468, 19870), (494, 19927), (565, 20059), (567, 20065), (592, 20131), (594, 20137), (601, 20161), (618, 20209), (627, 20233), (631, 20242), (658, 20317), (717, 20368), (725, 20383), (782, 20545), (788, 20572), (799, 20602), (843, 20707), (880, 20785), (887, 20821), (890, 20830), (900, 20863), (907, 20878),

Gene: DumpsterDude\_19 Start: 16204, Stop: 17910, Start Num: 162

Candidate Starts for DumpsterDude\_19:

(142, 16180), (Start: 162 @16204 has 16 MA's), (Start: 171 @16216 has 40 MA's), (201, 16264), (256, 16393), (260, 16399), (283, 16465), (337, 16579), (358, 16645), (360, 16651), (449, 16831), (451, 16837), (489, 16918), (563, 17032), (603, 17146), (618, 17179), (631, 17209), (632, 17212), (651, 17275), (653, 17278), (665, 17311), (756, 17479), (758, 17485), (789, 17584), (850, 17728), (913, 17902),

Gene: Duplicity\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Duplicity\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's),  
(229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289),  
(348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523),  
(403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727),  
(511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979),  
(614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342),  
(834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Duplo\_31 Start: 20087, Stop: 21877, Start Num: 144

Candidate Starts for Duplo\_31:

(94, 20021), (Start: 123 @20063 has 215 MA's), (Start: 144 @20087 has 603 MA's), (242, 20240),  
(277, 20321), (278, 20324), (305, 20396), (306, 20399), (315, 20414), (338, 20453), (341, 20459),  
(378, 20570), (384, 20588), (386, 20597), (417, 20657), (463, 20738), (467, 20741), (532, 20897),  
(546, 20927), (636, 21134), (675, 21260), (731, 21362), (746, 21395), (750, 21410), (756, 21434),  
(781, 21509), (782, 21512), (784, 21524), (813, 21608), (849, 21686), (860, 21713), (862, 21719),  
(873, 21764), (877, 21773), (900, 21854),

Gene: Durfee\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Durfee\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272,  
17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392,  
17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481,  
17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655,  
18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890,  
18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Dusk\_23 Start: 19405, Stop: 21084, Start Num: 129

Candidate Starts for Dusk\_23:

(Start: 129 @19405 has 79 MA's), (Start: 191 @19489 has 45 MA's), (Start: 235 @19567 has 1 MA's),  
(268, 19654), (274, 19669), (300, 19717), (324, 19756), (356, 19843), (368, 19876), (381, 19912),  
(390, 19942), (392, 19948), (422, 20017), (461, 20047), (466, 20059), (468, 20062), (494, 20119),  
(565, 20251), (567, 20257), (592, 20323), (594, 20329), (601, 20353), (618, 20401), (627, 20425),  
(631, 20434), (658, 20509), (717, 20560), (725, 20575), (782, 20737), (788, 20764), (799, 20794),  
(843, 20899), (880, 20977), (887, 21013), (890, 21022), (900, 21055), (907, 21070),

Gene: Dussy\_28 Start: 21319, Stop: 23121, Start Num: 146

Candidate Starts for Dussy\_28:

(Start: 146 @21319 has 223 MA's), (Start: 161 @21340 has 4 MA's), (Start: 190 @21382 has 1 MA's),  
(216, 21427), (306, 21643), (332, 21688), (338, 21697), (349, 21736), (368, 21787), (369, 21790),  
(467, 21985), (500, 22054), (583, 22255), (584, 22258), (591, 22279), (635, 22375), (636, 22378),  
(638, 22384), (665, 22453), (668, 22471), (670, 22480), (677, 22510), (731, 22606), (746, 22639),  
(750, 22654), (793, 22795), (813, 22852), (862, 22963),

Gene: DustyMartin\_31 Start: 19855, Stop: 21633, Start Num: 144

Candidate Starts for DustyMartin\_31:

(Start: 144 @19855 has 603 MA's), (Start: 190 @19912 has 1 MA's), (197, 19927), (219, 19960), (230,  
19981), (272, 20083), (277, 20095), (278, 20098), (306, 20173), (315, 20188), (338, 20227), (378,  
20344), (384, 20362), (417, 20431), (453, 20485), (460, 20506), (481, 20545), (500, 20584), (532,  
20671), (553, 20716), (576, 20764), (583, 20785), (591, 20809), (595, 20821), (597, 20827), (636,  
20908), (668, 21001), (670, 21010), (675, 21034), (677, 21040), (682, 21055), (713, 21088), (742,

21139), (749, 21157), (759, 21202), (813, 21364), (825, 21388), (827, 21394), (860, 21469), (862, 21475), (863, 21484), (880, 21535), (900, 21610),

Gene: Dusty\_46 Start: 29340, Stop: 31031, Start Num: 146

Candidate Starts for Dusty\_46:

(Start: 146 @29340 has 223 MA's), (188, 29400), (206, 29433), (Start: 227 @29463 has 2 MA's), (228, 29466), (282, 29625), (286, 29634), (349, 29763), (366, 29811), (494, 30024), (498, 30030), (506, 30054), (576, 30183), (583, 30204), (594, 30237), (658, 30435), (758, 30588), (788, 30687), (793, 30699), (796, 30708), (829, 30792), (888, 30939), (898, 30975),

Gene: Dylan\_56 Start: 33569, Stop: 35305, Start Num: 107

Candidate Starts for Dylan\_56:

(Start: 100 @33560 has 2 MA's), (Start: 107 @33569 has 25 MA's), (174, 33659), (240, 33776), (251, 33812), (259, 33833), (271, 33860), (274, 33866), (286, 33896), (302, 33920), (332, 33971), (381, 34109), (383, 34115), (400, 34166), (402, 34169), (407, 34187), (459, 34238), (468, 34259), (470, 34262), (484, 34295), (492, 34310), (494, 34316), (511, 34364), (513, 34370), (515, 34376), (555, 34436), (564, 34460), (565, 34463), (583, 34508), (588, 34523), (591, 34532), (594, 34541), (608, 34586), (618, 34604), (631, 34637), (720, 34775), (729, 34796), (754, 34862), (762, 34892), (779, 34946), (791, 34988), (799, 35009), (805, 35030), (810, 35042), (821, 35063), (844, 35117), (880, 35195), (887, 35231), (893, 35252), (901, 35279),

Gene: Dynamix\_28 Start: 21136, Stop: 22938, Start Num: 146

Candidate Starts for Dynamix\_28:

(Start: 146 @21136 has 223 MA's), (Start: 161 @21157 has 4 MA's), (Start: 190 @21199 has 1 MA's), (216, 21244), (306, 21460), (332, 21505), (338, 21514), (368, 21604), (369, 21607), (406, 21700), (467, 21802), (500, 21871), (583, 22072), (584, 22075), (591, 22096), (635, 22192), (636, 22195), (638, 22201), (665, 22270), (668, 22288), (670, 22297), (677, 22327), (731, 22423), (746, 22456), (750, 22471), (793, 22612), (813, 22669), (862, 22780), (909, 22933),

Gene: Dynamo\_19 Start: 16394, Stop: 18130, Start Num: 117

Candidate Starts for Dynamo\_19:

(Start: 101 @16370 has 2 MA's), (Start: 117 @16394 has 59 MA's), (Start: 166 @16454 has 1 MA's), (178, 16475), (180, 16478), (246, 16598), (258, 16637), (272, 16670), (282, 16694), (344, 16814), (356, 16853), (358, 16859), (386, 16943), (388, 16949), (392, 16961), (402, 16985), (410, 17012), (422, 17030), (452, 17069), (459, 17075), (470, 17099), (494, 17153), (500, 17165), (503, 17174), (529, 17234), (573, 17312), (587, 17351), (598, 17384), (618, 17450), (624, 17465), (627, 17474), (636, 17498), (647, 17528), (653, 17540), (735, 17642), (740, 17654), (742, 17657), (745, 17663), (747, 17672), (779, 17780), (805, 17864), (853, 17963), (890, 18071), (907, 18119),

Gene: ECartman\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for ECartman\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: EMoore\_31 Start: 29511, Stop: 31136, Start Num: 160

Candidate Starts for EMoore\_31:

(Start: 116 @29454 has 1 MA's), (Start: 160 @29511 has 17 MA's), (169, 29523), (Start: 191 @29556 has 45 MA's), (222, 29607), (272, 29724), (277, 29736), (307, 29811), (336, 29862), (341, 29871), (348, 29901), (386, 30009), (449, 30108), (460, 30138), (464, 30147), (481, 30180), (482, 30183),

(508, 30243), (547, 30291), (583, 30363), (595, 30396), (596, 30399), (609, 30438), (635, 30477), (664, 30564), (665, 30567), (670, 30594), (711, 30645), (747, 30705), (769, 30750), (795, 30831), (806, 30867), (810, 30876), (815, 30885), (863, 30981), (890, 31077), (900, 31110), (907, 31125),

Gene: EMSquaredA\_20 Start: 17566, Stop: 19272, Start Num: 111

Candidate Starts for EMSquaredA\_20:

(Start: 95 @17542 has 1 MA's), (Start: 111 @17566 has 24 MA's), (192, 17671), (217, 17713), (251, 17788), (303, 17902), (365, 18049), (368, 18055), (384, 18100), (459, 18238), (497, 18313), (635, 18595), (644, 18616), (668, 18691), (715, 18778), (739, 18814), (750, 18847), (752, 18853), (783, 18919), (793, 18949), (860, 19105), (862, 19111), (865, 19129), (897, 19240),

Gene: EZMoney23\_32 Start: 22145, Stop: 23917, Start Num: 144

Candidate Starts for EZMoney23\_32:

(Start: 123 @22121 has 215 MA's), (Start: 144 @22145 has 603 MA's), (277, 22379), (278, 22382), (305, 22454), (306, 22457), (338, 22511), (349, 22550), (378, 22628), (417, 22715), (463, 22796), (467, 22799), (546, 22985), (576, 23048), (584, 23072), (597, 23111), (631, 23177), (636, 23192), (677, 23324), (731, 23402), (746, 23435), (750, 23450), (770, 23510), (781, 23549), (784, 23564), (795, 23597), (813, 23648), (860, 23753), (862, 23759),

Gene: Eagle\_26 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Eagle\_26:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: EagleEye\_30 Start: 20938, Stop: 22728, Start Num: 144

Candidate Starts for EagleEye\_30:

(Start: 123 @20914 has 215 MA's), (Start: 144 @20938 has 603 MA's), (242, 21091), (277, 21172), (278, 21175), (305, 21247), (306, 21250), (318, 21268), (330, 21289), (338, 21304), (341, 21310), (356, 21361), (378, 21421), (417, 21508), (463, 21589), (467, 21592), (546, 21778), (576, 21841), (584, 21865), (597, 21904), (636, 21985), (675, 22111), (707, 22174), (750, 22261), (781, 22360), (795, 22408), (813, 22459), (862, 22570), (877, 22624),

Gene: Eaglepride\_28 Start: 19807, Stop: 21585, Start Num: 144

Candidate Starts for Eaglepride\_28:

(Start: 123 @19783 has 215 MA's), (Start: 144 @19807 has 603 MA's), (Start: 190 @19864 has 1 MA's), (230, 19933), (272, 20035), (277, 20047), (278, 20050), (306, 20125), (315, 20140), (338, 20179), (378, 20296), (417, 20383), (460, 20458), (481, 20497), (532, 20623), (553, 20668), (583, 20737), (591, 20761), (595, 20773), (597, 20779), (668, 20953), (670, 20962), (675, 20986), (677, 20992), (713, 21040), (742, 21091), (749, 21109), (860, 21421), (862, 21427), (863, 21436), (900, 21562),

Gene: Eapen\_27 Start: 19826, Stop: 21604, Start Num: 144

Candidate Starts for Eapen\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 190 @19883 has 1 MA's), (222, 19937), (230, 19952), (236, 19970), (272, 20054), (277, 20066), (278, 20069), (306, 20144), (315, 20159), (338, 20198), (378, 20315), (417, 20402), (463, 20483), (489, 20531), (500, 20555), (532, 20642), (553, 20687), (584, 20759), (591, 20780), (597, 20798), (636, 20879), (668, 20972), (670, 20981), (675, 21005), (677, 21011), (687, 21035), (731, 21089), (742, 21110), (756,

21161), (763, 21185), (782, 21239), (813, 21335), (860, 21440), (863, 21455), (894, 21563), (900, 21581),

Gene: Easley\_20 Start: 17332, Stop: 18912, Start Num: 170

Candidate Starts for Easley\_20:

(88, 17215), (Start: 170 @17332 has 87 MA's), (298, 17590), (307, 17611), (340, 17665), (351, 17704), (369, 17761), (377, 17782), (501, 17953), (507, 17971), (514, 17995), (521, 18016), (554, 18058), (592, 18139), (636, 18229), (669, 18331), (670, 18334), (687, 18388), (751, 18478), (863, 18757), (865, 18766), (874, 18796),

Gene: Easy2Say\_26 Start: 21080, Stop: 22675, Start Num: 191

Candidate Starts for Easy2Say\_26:

(Start: 129 @20996 has 79 MA's), (Start: 191 @21080 has 45 MA's), (Start: 235 @21158 has 1 MA's), (268, 21245), (274, 21260), (300, 21308), (324, 21347), (356, 21434), (368, 21467), (381, 21503), (390, 21533), (392, 21539), (422, 21608), (461, 21638), (466, 21650), (468, 21653), (494, 21710), (565, 21842), (567, 21848), (592, 21914), (594, 21920), (601, 21944), (618, 21992), (627, 22016), (631, 22025), (658, 22100), (717, 22151), (725, 22166), (782, 22328), (788, 22355), (799, 22385), (843, 22490), (880, 22568), (887, 22604), (890, 22613), (900, 22646), (907, 22661),

Gene: Ebert\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Ebert\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Ebony\_28 Start: 20798, Stop: 22597, Start Num: 144

Candidate Starts for Ebony\_28:

(94, 20732), (Start: 123 @20774 has 215 MA's), (Start: 144 @20798 has 603 MA's), (183, 20840), (236, 20936), (242, 20951), (277, 21032), (278, 21035), (306, 21110), (315, 21125), (338, 21164), (341, 21170), (356, 21221), (378, 21281), (380, 21287), (417, 21368), (467, 21452), (518, 21578), (526, 21596), (540, 21623), (597, 21764), (631, 21830), (635, 21842), (636, 21845), (703, 22034), (721, 22061), (726, 22070), (736, 22091), (737, 22094), (746, 22115), (750, 22130), (756, 22154), (781, 22229), (784, 22244), (813, 22328), (860, 22433), (862, 22439), (877, 22493), (909, 22592),

Gene: Echild\_28 Start: 20292, Stop: 22064, Start Num: 144

Candidate Starts for Echild\_28:

(Start: 123 @20268 has 215 MA's), (Start: 144 @20292 has 603 MA's), (219, 20391), (251, 20475), (277, 20526), (278, 20529), (305, 20601), (306, 20604), (338, 20658), (349, 20697), (378, 20775), (417, 20862), (463, 20943), (467, 20946), (584, 21219), (636, 21339), (675, 21465), (677, 21471), (713, 21519), (746, 21582), (750, 21597), (752, 21603), (770, 21657), (781, 21696), (784, 21711), (813, 21795), (862, 21906),

Gene: Ecliptus\_24 Start: 18429, Stop: 20138, Start Num: 111

Candidate Starts for Ecliptus\_24:

(Start: 111 @18429 has 24 MA's), (Start: 118 @18441 has 8 MA's), (Start: 121 @18444 has 1 MA's), (Start: 194 @18546 has 1 MA's), (216, 18582), (243, 18648), (311, 18792), (319, 18801), (332, 18819), (347, 18861), (349, 18867), (358, 18891), (365, 18915), (384, 18966), (385, 18972), (395, 19002), (433, 19044), (445, 19065), (449, 19071), (458, 19095), (481, 19146), (482, 19149), (497, 19179), (579, 19329), (591, 19365), (647, 19491), (668, 19557), (670, 19566), (674, 19587), (739, 19680), (747, 19701), (750, 19713), (752, 19719), (754, 19728), (755, 19731), (783, 19785), (793, 19815), (818, 19884), (860, 19971), (862, 19977), (876, 20028), (900, 20115), (909, 20133),

Gene: Edison31\_27 Start: 19822, Stop: 21600, Start Num: 144

Candidate Starts for Edison31\_27:

(Start: 144 @19822 has 603 MA's), (Start: 190 @19879 has 1 MA's), (197, 19894), (219, 19927), (230, 19948), (272, 20050), (277, 20062), (278, 20065), (306, 20140), (315, 20155), (338, 20194), (378, 20311), (384, 20329), (417, 20398), (460, 20473), (481, 20512), (500, 20551), (532, 20638), (553, 20683), (583, 20752), (591, 20776), (595, 20788), (597, 20794), (636, 20875), (668, 20968), (670, 20977), (675, 21001), (677, 21007), (682, 21022), (713, 21055), (742, 21106), (749, 21124), (758, 21163), (788, 21262), (813, 21331), (825, 21355), (827, 21361), (860, 21436), (862, 21442), (863, 21451), (880, 21502), (900, 21577),

Gene: EdmundFerry\_31 Start: 27556, Stop: 29175, Start Num: 163

Candidate Starts for EdmundFerry\_31:

(Start: 163 @27556 has 10 MA's), (178, 27577), (219, 27640), (272, 27763), (277, 27775), (298, 27832), (341, 27910), (382, 28033), (449, 28147), (460, 28177), (481, 28219), (508, 28282), (547, 28330), (551, 28339), (579, 28390), (596, 28438), (664, 28603), (670, 28633), (746, 28741), (747, 28744), (769, 28789), (786, 28846), (788, 28852), (790, 28858), (806, 28906), (810, 28915), (813, 28921), (815, 28924), (842, 28975), (863, 29020), (883, 29089), (896, 29137), (900, 29149),

Gene: EdnaMode\_17 Start: 14694, Stop: 16403, Start Num: 171

Candidate Starts for EdnaMode\_17:

(Start: 171 @14694 has 40 MA's), (237, 14811), (259, 14883), (287, 14961), (347, 15084), (355, 15105), (377, 15174), (378, 15177), (397, 15234), (440, 15309), (462, 15363), (500, 15444), (519, 15504), (607, 15669), (618, 15687), (624, 15702), (637, 15726), (665, 15798), (666, 15801), (669, 15822), (788, 16056), (794, 16071), (807, 16113), (847, 16206), (849, 16209), (865, 16257), (874, 16287), (890, 16344),

Gene: EdogawaKiddo\_28 Start: 21749, Stop: 23539, Start Num: 144

Candidate Starts for EdogawaKiddo\_28:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986), (305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319), (463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715), (636, 22796), (675, 22922), (693, 22964), (731, 23024), (746, 23057), (750, 23072), (781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381), (873, 23426), (890, 23483), (891, 23486),

Gene: Edtherson\_28 Start: 21883, Stop: 23685, Start Num: 146

Candidate Starts for Edtherson\_28:

(Start: 146 @21883 has 223 MA's), (Start: 161 @21904 has 4 MA's), (Start: 190 @21946 has 1 MA's), (216, 21991), (306, 22207), (332, 22252), (338, 22261), (349, 22300), (368, 22351), (369, 22354), (406, 22447), (467, 22549), (500, 22618), (583, 22819), (584, 22822), (591, 22843), (635, 22939), (636, 22942), (638, 22948), (665, 23017), (668, 23035), (670, 23044), (677, 23074), (731, 23170), (746, 23203), (750, 23218), (793, 23359), (813, 23416), (862, 23527),

Gene: Efra2\_23 Start: 16364, Stop: 18130, Start Num: 114

Candidate Starts for Efra2\_23:

(Start: 114 @16364 has 139 MA's), (Start: 117 @16370 has 59 MA's), (140, 16394), (236, 16553), (248, 16586), (258, 16616), (272, 16649), (278, 16661), (316, 16751), (337, 16793), (360, 16865), (362, 16874), (378, 16913), (392, 16958), (400, 16979), (403, 16982), (448, 17054), (465, 17096), (468, 17102), (481, 17129), (564, 17267), (572, 17285), (587, 17327), (593, 17345), (603, 17375), (655, 17507), (704, 17597), (757, 17702), (768, 17732), (793, 17816), (810, 17867), (863, 17966), (890, 18062), (901, 18101), (902, 18104), (913, 18122),

Gene: Eidsmoe\_30 Start: 21776, Stop: 23569, Start Num: 141

Candidate Starts for Eidsmoe\_30:

(Start: 141 @21776 has 14 MA's), (Start: 144 @21779 has 603 MA's), (277, 22013), (278, 22016), (305, 22088), (306, 22091), (315, 22106), (338, 22145), (341, 22151), (378, 22262), (417, 22349), (463, 22430), (467, 22433), (495, 22493), (546, 22619), (576, 22682), (584, 22706), (586, 22712), (597, 22745), (636, 22826), (675, 22952), (693, 22994), (695, 22997), (731, 23054), (746, 23087), (750, 23102), (781, 23201), (782, 23204), (784, 23216), (813, 23300), (842, 23366), (860, 23405), (862, 23411), (873, 23456), (890, 23513), (891, 23516),

Gene: Ein37\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Ein37\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Eish\_16 Start: 14946, Stop: 16655, Start Num: 123

Candidate Starts for Eish\_16:

(Start: 123 @14946 has 215 MA's), (Start: 227 @15078 has 2 MA's), (233, 15102), (271, 15207), (274, 15213), (281, 15231), (300, 15261), (348, 15366), (370, 15426), (373, 15435), (381, 15456), (388, 15480), (403, 15522), (418, 15555), (424, 15567), (459, 15606), (465, 15621), (468, 15627), (484, 15663), (492, 15678), (494, 15684), (506, 15714), (511, 15732), (515, 15744), (521, 15750), (564, 15810), (583, 15858), (587, 15870), (614, 15945), (618, 15954), (627, 15978), (638, 16008), (710, 16113), (720, 16125), (737, 16161), (761, 16239), (791, 16338), (799, 16359), (810, 16392), (826, 16422), (836, 16452), (841, 16461), (844, 16467), (860, 16482), (861, 16485), (865, 16506), (866, 16509), (882, 16551), (887, 16581), (900, 16623), (901, 16629),

Gene: Ejimix\_37 Start: 28088, Stop: 30086, Start Num: 124

Candidate Starts for Ejimix\_37:

(Start: 124 @28088 has 30 MA's), (Start: 191 @28178 has 45 MA's), (222, 28226), (233, 28256), (243, 28283), (282, 28385), (301, 28415), (327, 28466), (346, 28514), (358, 28550), (360, 28556), (368, 28577), (392, 28649), (395, 28658), (403, 28679), (468, 28787), (470, 28790), (475, 28805), (494, 28844), (511, 28892), (515, 28904), (521, 28910), (552, 28958), (558, 28967), (565, 28988), (573, 29006), (590, 29054), (625, 29156), (653, 29228), (667, 29273), (669, 29285), (684, 29420), (685, 29426), (686, 29450), (696, 29522), (708, 29549), (800, 29798),

Gene: Ekdilam\_20 Start: 17331, Stop: 19106, Start Num: 109

Candidate Starts for Ekdilam\_20:

(Start: 93 @17301 has 1 MA's), (Start: 109 @17331 has 26 MA's), (Start: 114 @17340 has 139 MA's), (140, 17370), (Start: 227 @17496 has 2 MA's), (230, 17511), (236, 17529), (248, 17562), (272, 17625), (278, 17637), (282, 17655), (316, 17727), (337, 17769), (362, 17850), (400, 17955), (403, 17958), (423, 17994), (448, 18030), (465, 18072), (468, 18078), (481, 18105), (572, 18261), (603, 18351), (618, 18378), (636, 18423), (655, 18483), (698, 18558), (708, 18582), (748, 18642), (757, 18678), (768, 18708), (793, 18792), (865, 18951), (901, 19077), (902, 19080), (913, 19098),

Gene: EITiger69\_24 Start: 18976, Stop: 20775, Start Num: 144

Candidate Starts for EITiger69\_24:

(Start: 144 @18976 has 603 MA's), (278, 19213), (292, 19249), (306, 19288), (315, 19303), (336, 19339), (360, 19411), (365, 19426), (378, 19459), (380, 19465), (481, 19660), (495, 19690), (499,



19696), (532, 19786), (553, 19831), (583, 19900), (597, 19942), (602, 19960), (635, 20020), (636, 20023), (668, 20116), (729, 20257), (746, 20293), (859, 20608), (862, 20617), (900, 20752),

Gene: EleanorGeorge\_16 Start: 14974, Stop: 16683, Start Num: 123

Candidate Starts for EleanorGeorge\_16:

(Start: 123 @14974 has 215 MA's), (193, 15061), (Start: 227 @15106 has 2 MA's), (233, 15130), (271, 15235), (274, 15241), (281, 15259), (300, 15289), (348, 15394), (370, 15454), (378, 15475), (381, 15484), (386, 15502), (388, 15508), (459, 15634), (465, 15649), (468, 15655), (484, 15691), (486, 15694), (492, 15706), (494, 15712), (511, 15760), (515, 15772), (521, 15778), (564, 15838), (568, 15850), (583, 15886), (587, 15898), (614, 15973), (618, 15982), (625, 16000), (627, 16006), (638, 16036), (710, 16141), (717, 16150), (720, 16153), (737, 16189), (761, 16267), (791, 16366), (799, 16387), (810, 16420), (826, 16450), (836, 16480), (841, 16489), (844, 16495), (860, 16510), (861, 16513), (866, 16537), (877, 16567), (882, 16579), (887, 16609), (900, 16651),

Gene: Elephantoon\_29 Start: 21187, Stop: 22977, Start Num: 144

Candidate Starts for Elephantoon\_29:

(Start: 123 @21163 has 215 MA's), (Start: 144 @21187 has 603 MA's), (277, 21421), (278, 21424), (305, 21496), (306, 21499), (318, 21517), (338, 21553), (341, 21559), (349, 21592), (356, 21610), (378, 21670), (388, 21703), (417, 21757), (463, 21838), (467, 21841), (518, 21967), (546, 22027), (576, 22090), (595, 22147), (636, 22234), (675, 22360), (681, 22378), (693, 22402), (731, 22462), (746, 22495), (750, 22510), (781, 22609), (782, 22612), (784, 22624), (813, 22708), (842, 22774), (860, 22813), (862, 22819), (873, 22864), (890, 22921), (891, 22924),

Gene: Elinal\_19 Start: 15418, Stop: 17112, Start Num: 144

Candidate Starts for Elinal\_19:

(Start: 133 @15415 has 8 MA's), (Start: 144 @15418 has 603 MA's), (214, 15517), (236, 15559), (336, 15799), (365, 15886), (374, 15907), (377, 15916), (385, 15943), (406, 15988), (436, 16021), (444, 16036), (454, 16060), (465, 16093), (481, 16126), (487, 16138), (509, 16195), (539, 16225), (546, 16243), (560, 16273), (574, 16303), (596, 16366), (617, 16417), (636, 16453), (643, 16468), (650, 16486), (668, 16543), (670, 16552), (747, 16672), (750, 16684), (777, 16732), (791, 16783), (793, 16786), (799, 16804), (829, 16882), (842, 16909), (862, 16951), (902, 17098), (907, 17104),

Gene: Elliott\_18 Start: 15729, Stop: 17429, Start Num: 133

Candidate Starts for Elliott\_18:

(Start: 133 @15729 has 8 MA's), (Start: 144 @15732 has 603 MA's), (264, 15942), (306, 16065), (336, 16116), (365, 16203), (369, 16212), (377, 16233), (382, 16248), (385, 16260), (436, 16338), (442, 16350), (454, 16377), (465, 16410), (481, 16443), (487, 16455), (505, 16497), (574, 16620), (599, 16692), (636, 16770), (643, 16785), (650, 16803), (668, 16860), (731, 16953), (747, 16989), (750, 17001), (752, 17007), (755, 17019), (766, 17028), (791, 17100), (793, 17103), (795, 17109), (799, 17121), (824, 17181), (842, 17226), (847, 17235), (862, 17268), (882, 17334),

Gene: Elite2014\_23 Start: 18953, Stop: 20632, Start Num: 129

Candidate Starts for Elite2014\_23:

(Start: 129 @18953 has 79 MA's), (Start: 191 @19037 has 45 MA's), (Start: 235 @19115 has 1 MA's), (268, 19202), (274, 19217), (300, 19265), (324, 19304), (356, 19391), (368, 19424), (381, 19460), (390, 19490), (392, 19496), (422, 19565), (461, 19595), (466, 19607), (468, 19610), (494, 19667), (565, 19799), (567, 19805), (592, 19871), (594, 19877), (601, 19901), (618, 19949), (627, 19973), (631, 19982), (658, 20057), (717, 20108), (725, 20123), (782, 20285), (788, 20312), (799, 20342), (843, 20447), (880, 20525), (887, 20561), (890, 20570), (900, 20603), (907, 20618),

Gene: Ellie\_20 Start: 17336, Stop: 19090, Start Num: 114

Candidate Starts for Ellie\_20:

(Start: 93 @17297 has 1 MA's), (Start: 109 @17327 has 26 MA's), (Start: 112 @17333 has 41 MA's), (Start: 114 @17336 has 139 MA's), (Start: 135 @17348 has 7 MA's), (140, 17354), (Start: 227 @17480 has 2 MA's), (230, 17495), (248, 17546), (258, 17576), (272, 17609), (316, 17711), (334, 17747), (337, 17753), (362, 17834), (423, 17978), (424, 17981), (438, 17996), (444, 18008), (448, 18014), (454, 18032), (465, 18056), (468, 18062), (481, 18089), (572, 18245), (618, 18362), (632, 18395), (636, 18407), (641, 18419), (655, 18467), (756, 18659), (768, 18692), (772, 18701), (788, 18764), (793, 18776), (810, 18827), (813, 18833), (863, 18926), (880, 18977), (890, 19022), (901, 19061), (902, 19064), (913, 19082),

Gene: Elph10\_25 Start: 19216, Stop: 20895, Start Num: 129

Candidate Starts for Elph10\_25:

(Start: 129 @19216 has 79 MA's), (Start: 191 @19300 has 45 MA's), (Start: 235 @19378 has 1 MA's), (268, 19465), (274, 19480), (300, 19528), (324, 19567), (356, 19654), (368, 19687), (381, 19723), (390, 19753), (392, 19759), (422, 19828), (461, 19858), (466, 19870), (468, 19873), (494, 19930), (565, 20062), (567, 20068), (592, 20134), (594, 20140), (601, 20164), (618, 20212), (627, 20236), (631, 20245), (658, 20320), (717, 20371), (725, 20386), (782, 20548), (788, 20575), (799, 20605), (843, 20710), (880, 20788), (887, 20824), (890, 20833), (900, 20866), (907, 20881),

Gene: Emalyn\_17 Start: 15033, Stop: 16727, Start Num: 144

Candidate Starts for Emalyn\_17:

(Start: 133 @15030 has 8 MA's), (Start: 144 @15033 has 603 MA's), (214, 15132), (222, 15144), (264, 15240), (292, 15324), (336, 15414), (356, 15474), (385, 15558), (406, 15603), (436, 15636), (442, 15648), (453, 15672), (481, 15741), (487, 15753), (574, 15918), (599, 15990), (636, 16068), (643, 16083), (650, 16101), (668, 16158), (750, 16299), (752, 16305), (755, 16317), (766, 16326), (791, 16398), (793, 16401), (795, 16407), (799, 16419), (842, 16524), (847, 16533), (862, 16566), (907, 16719),

Gene: Emerson\_23 Start: 17148, Stop: 18914, Start Num: 114

Candidate Starts for Emerson\_23:

(Start: 114 @17148 has 139 MA's), (140, 17178), (236, 17337), (248, 17370), (258, 17400), (272, 17433), (278, 17445), (316, 17535), (337, 17577), (360, 17649), (362, 17658), (378, 17697), (392, 17742), (400, 17763), (403, 17766), (438, 17820), (448, 17838), (465, 17880), (468, 17886), (481, 17913), (564, 18051), (572, 18069), (587, 18111), (593, 18129), (603, 18159), (618, 18186), (655, 18291), (748, 18450), (757, 18486), (768, 18516), (772, 18525), (793, 18600), (810, 18651), (890, 18846), (901, 18885), (902, 18888), (913, 18906),

Gene: Emianna\_41 Start: 30825, Stop: 32438, Start Num: 170

Candidate Starts for Emianna\_41:

(Start: 170 @30825 has 87 MA's), (Start: 194 @30861 has 1 MA's), (202, 30879), (236, 30939), (340, 31179), (343, 31191), (347, 31206), (372, 31272), (377, 31287), (386, 31311), (387, 31314), (432, 31398), (449, 31428), (450, 31431), (493, 31488), (510, 31536), (511, 31539), (518, 31560), (571, 31665), (592, 31710), (607, 31752), (673, 31926), (683, 31956), (688, 31962), (775, 32070), (776, 32073), (799, 32148), (887, 32367), (906, 32424),

Gene: Emma\_16 Start: 14857, Stop: 16566, Start Num: 123

Candidate Starts for Emma\_16:

(Start: 123 @14857 has 215 MA's), (193, 14944), (Start: 227 @14989 has 2 MA's), (233, 15013), (271, 15118), (274, 15124), (281, 15142), (300, 15172), (348, 15277), (370, 15337), (378, 15358), (381, 15367), (388, 15391), (459, 15517), (465, 15532), (468, 15538), (484, 15574), (486, 15577), (492, 15589), (494, 15595), (511, 15643), (515, 15655), (521, 15661), (564, 15721), (568, 15733), (583, 15769), (587, 15781), (614, 15856), (618, 15865), (625, 15883), (627, 15889), (638, 15919), (710, 16024), (717, 16033), (720, 16036), (737, 16072), (761, 16150), (791, 16249), (799, 16270), (810, 16303), (826, 16333), (836, 16363), (841, 16372), (844, 16378), (860, 16393), (861, 16396), (866,

16420), (877, 16450), (882, 16462), (887, 16492), (900, 16534),

Gene: Emmina\_25 Start: 19661, Stop: 21256, Start Num: 191

Candidate Starts for Emmina\_25:

(Start: 129 @19577 has 79 MA's), (Start: 191 @19661 has 45 MA's), (Start: 235 @19739 has 1 MA's), (268, 19826), (274, 19841), (300, 19889), (324, 19928), (356, 20015), (368, 20048), (381, 20084), (390, 20114), (392, 20120), (422, 20189), (461, 20219), (466, 20231), (468, 20234), (494, 20291), (565, 20423), (567, 20429), (592, 20495), (594, 20501), (601, 20525), (618, 20573), (627, 20597), (631, 20606), (658, 20681), (717, 20732), (725, 20747), (782, 20909), (788, 20936), (799, 20966), (843, 21071), (880, 21149), (887, 21185), (890, 21194), (900, 21227), (907, 21242),

Gene: Empress\_17 Start: 16157, Stop: 17866, Start Num: 123

Candidate Starts for Empress\_17:

(Start: 123 @16157 has 215 MA's), (193, 16244), (Start: 227 @16289 has 2 MA's), (233, 16313), (271, 16418), (274, 16424), (281, 16442), (300, 16472), (348, 16577), (370, 16637), (378, 16658), (381, 16667), (388, 16691), (459, 16817), (465, 16832), (468, 16838), (484, 16874), (486, 16877), (492, 16889), (494, 16895), (511, 16943), (515, 16955), (521, 16961), (564, 17021), (568, 17033), (583, 17069), (587, 17081), (614, 17156), (618, 17165), (625, 17183), (627, 17189), (638, 17219), (710, 17324), (717, 17333), (720, 17336), (737, 17372), (761, 17450), (791, 17549), (799, 17570), (810, 17603), (826, 17633), (836, 17663), (841, 17672), (844, 17678), (860, 17693), (861, 17696), (865, 17717), (866, 17720), (882, 17762), (887, 17792), (900, 17834),

Gene: EmyBug\_30 Start: 21779, Stop: 23569, Start Num: 144

Candidate Starts for EmyBug\_30:

(Start: 141 @21776 has 14 MA's), (Start: 144 @21779 has 603 MA's), (277, 22013), (278, 22016), (305, 22088), (306, 22091), (315, 22106), (338, 22145), (341, 22151), (378, 22262), (417, 22349), (463, 22430), (467, 22433), (495, 22493), (546, 22619), (576, 22682), (584, 22706), (586, 22712), (597, 22745), (636, 22826), (675, 22952), (693, 22994), (695, 22997), (731, 23054), (746, 23087), (750, 23102), (781, 23201), (782, 23204), (784, 23216), (813, 23300), (842, 23366), (860, 23405), (862, 23411), (873, 23456), (890, 23513), (891, 23516),

Gene: EnalisNailo\_20 Start: 17715, Stop: 19421, Start Num: 111

Candidate Starts for EnalisNailo\_20:

(Start: 95 @17691 has 1 MA's), (Start: 111 @17715 has 24 MA's), (152, 17763), (192, 17820), (217, 17862), (303, 18051), (365, 18198), (368, 18204), (384, 18249), (459, 18387), (497, 18462), (635, 18744), (644, 18765), (668, 18840), (715, 18927), (739, 18963), (750, 18996), (752, 19002), (783, 19068), (793, 19098), (860, 19254), (862, 19260), (865, 19278), (897, 19389),

Gene: Enby\_17 Start: 14628, Stop: 16337, Start Num: 123

Candidate Starts for Enby\_17:

(Start: 123 @14628 has 215 MA's), (193, 14715), (Start: 227 @14760 has 2 MA's), (233, 14784), (251, 14841), (271, 14889), (274, 14895), (281, 14913), (300, 14943), (348, 15048), (367, 15102), (370, 15108), (373, 15117), (378, 15129), (381, 15138), (388, 15162), (402, 15198), (403, 15204), (407, 15216), (418, 15237), (420, 15240), (424, 15249), (443, 15264), (448, 15270), (459, 15288), (465, 15303), (468, 15309), (475, 15327), (477, 15330), (484, 15345), (492, 15360), (494, 15366), (506, 15396), (511, 15414), (515, 15426), (521, 15432), (564, 15492), (568, 15504), (583, 15540), (587, 15552), (594, 15573), (614, 15627), (618, 15636), (627, 15660), (638, 15690), (710, 15795), (720, 15807), (737, 15843), (751, 15882), (761, 15921), (791, 16020), (799, 16041), (810, 16074), (826, 16104), (836, 16134), (841, 16143), (844, 16149), (860, 16164), (861, 16167), (865, 16188), (866, 16191), (882, 16233), (887, 16263), (900, 16305), (901, 16311),

Gene: Engineer\_49 Start: 29557, Stop: 31248, Start Num: 146

Candidate Starts for Engineer\_49:

(Start: 146 @29557 has 223 MA's), (188, 29617), (206, 29650), (Start: 227 @29680 has 2 MA's), (228, 29683), (282, 29842), (286, 29851), (349, 29980), (366, 30028), (494, 30241), (498, 30247), (506, 30271), (576, 30400), (583, 30421), (594, 30454), (658, 30652), (758, 30805), (788, 30904), (793, 30916), (796, 30925), (829, 31009), (888, 31156), (898, 31192),

Gene: Enkosi\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for Enkosi\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499, 17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: Ennea\_47 Start: 31470, Stop: 33092, Start Num: 170

Candidate Starts for Ennea\_47:

(Start: 170 @31470 has 87 MA's), (236, 31587), (340, 31827), (343, 31839), (347, 31854), (372, 31920), (377, 31935), (432, 32046), (449, 32076), (450, 32079), (493, 32136), (518, 32208), (571, 32313), (607, 32400), (635, 32448), (673, 32574), (674, 32577), (688, 32610), (749, 32667), (799, 32796), (812, 32835), (866, 32940), (885, 33003), (887, 33015), (891, 33027), (893, 33036), (906, 33072),

Gene: EpicPhail\_29 Start: 20379, Stop: 22175, Start Num: 144

Candidate Starts for EpicPhail\_29:

(Start: 144 @20379 has 603 MA's), (Start: 190 @20436 has 1 MA's), (197, 20451), (219, 20484), (230, 20505), (Start: 235 @20520 has 1 MA's), (272, 20607), (277, 20619), (278, 20622), (306, 20697), (315, 20712), (336, 20748), (417, 20955), (481, 21069), (500, 21108), (532, 21195), (583, 21309), (591, 21333), (597, 21351), (636, 21432), (665, 21507), (668, 21525), (675, 21558), (677, 21564), (695, 21603), (729, 21657), (731, 21660), (742, 21681), (758, 21738), (813, 21906), (860, 22011), (862, 22017), (900, 22152),

Gene: Eponine\_24 Start: 18523, Stop: 20310, Start Num: 114

Candidate Starts for Eponine\_24:

(Start: 93 @18484 has 1 MA's), (Start: 109 @18514 has 26 MA's), (Start: 112 @18520 has 41 MA's), (Start: 114 @18523 has 139 MA's), (Start: 137 @18538 has 2 MA's), (Start: 168 @18580 has 32 MA's), (197, 18628), (Start: 227 @18667 has 2 MA's), (230, 18682), (236, 18700), (248, 18733), (258, 18763), (278, 18808), (282, 18826), (316, 18898), (321, 18904), (334, 18934), (336, 18937), (356, 19000), (360, 19012), (412, 19147), (423, 19165), (444, 19195), (448, 19201), (454, 19219), (468, 19249), (487, 19288), (564, 19414), (588, 19477), (655, 19678), (670, 19732), (708, 19777), (734, 19822), (748, 19846), (756, 19879), (768, 19912), (788, 19984), (793, 19996), (810, 20047), (813, 20053), (865, 20155), (901, 20281), (913, 20302),

Gene: Epsocamisio\_30 Start: 19093, Stop: 20880, Start Num: 144

Candidate Starts for Epsocamisio\_30:

(94, 19027), (Start: 123 @19069 has 215 MA's), (Start: 144 @19093 has 603 MA's), (236, 19231), (262, 19288), (278, 19330), (292, 19366), (306, 19405), (343, 19474), (349, 19498), (369, 19552), (448, 19702), (467, 19747), (481, 19777), (499, 19813), (515, 19864), (530, 19900), (553, 19948), (580, 20008), (635, 20137), (665, 20215), (750, 20416), (752, 20422), (782, 20518), (845, 20683), (880, 20782),

Gene: Equemioh13\_30 Start: 20656, Stop: 22428, Start Num: 144

Candidate Starts for Equemioh13\_30:

(Start: 123 @20632 has 215 MA's), (Start: 144 @20656 has 603 MA's), (Start: 235 @20791 has 1 MA's), (277, 20890), (278, 20893), (305, 20965), (306, 20968), (338, 21022), (341, 21028), (360, 21091), (378, 21139), (388, 21172), (417, 21226), (463, 21307), (467, 21310), (481, 21340), (546, 21496), (584, 21583), (636, 21703), (674, 21826), (675, 21829), (677, 21835), (713, 21883), (746, 21946), (750, 21961), (752, 21967), (770, 22021), (781, 22060), (784, 22075), (795, 22108), (810, 22153), (860, 22264), (862, 22270), (877, 22324),

Gene: Eradicator\_16 Start: 14770, Stop: 16479, Start Num: 123

Candidate Starts for Eradicator\_16:

(Start: 123 @14770 has 215 MA's), (193, 14857), (Start: 227 @14902 has 2 MA's), (233, 14926), (251, 14983), (271, 15031), (274, 15037), (281, 15055), (300, 15085), (348, 15190), (367, 15244), (370, 15250), (373, 15259), (381, 15280), (388, 15304), (402, 15340), (403, 15346), (418, 15379), (420, 15382), (424, 15391), (443, 15406), (448, 15412), (459, 15430), (465, 15445), (468, 15451), (475, 15469), (477, 15472), (484, 15487), (492, 15502), (494, 15508), (511, 15556), (515, 15568), (521, 15574), (564, 15634), (568, 15646), (583, 15682), (587, 15694), (614, 15769), (618, 15778), (625, 15796), (627, 15802), (638, 15832), (710, 15937), (720, 15949), (737, 15985), (761, 16063), (799, 16183), (810, 16216), (826, 16246), (829, 16258), (836, 16276), (839, 16282), (841, 16285), (844, 16291), (860, 16306), (861, 16309), (865, 16330), (866, 16333), (882, 16375), (887, 16405), (900, 16447), (901, 16453),

Gene: EricB\_31 Start: 19969, Stop: 21741, Start Num: 144

Candidate Starts for EricB\_31:

(94, 19903), (Start: 123 @19945 has 215 MA's), (Start: 144 @19969 has 603 MA's), (263, 20167), (278, 20206), (305, 20278), (306, 20281), (318, 20299), (338, 20335), (341, 20341), (378, 20452), (380, 20458), (392, 20497), (417, 20539), (448, 20578), (463, 20620), (467, 20623), (495, 20683), (592, 20920), (597, 20935), (636, 21016), (677, 21148), (750, 21274), (765, 21325), (770, 21334), (781, 21373), (782, 21376), (784, 21388), (813, 21472), (860, 21577), (862, 21583), (900, 21718),

Gene: Erik\_23 Start: 16348, Stop: 17973, Start Num: 168

Candidate Starts for Erik\_23:

(Start: 168 @16348 has 32 MA's), (211, 16417), (232, 16453), (263, 16525), (306, 16639), (361, 16768), (378, 16810), (384, 16828), (386, 16837), (394, 16861), (406, 16879), (432, 16903), (436, 16909), (444, 16924), (445, 16927), (467, 16975), (576, 17176), (584, 17200), (635, 17314), (665, 17392), (672, 17431), (675, 17443), (713, 17473), (750, 17551), (807, 17698), (854, 17797), (860, 17812), (907, 17965),

Gene: Eris\_26 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Eris\_26:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Eros\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Eros\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756,

21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Espica\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Espica\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Espresso\_27 Start: 21202, Stop: 23004, Start Num: 146

Candidate Starts for Espresso\_27:

(Start: 146 @21202 has 223 MA's), (Start: 161 @21223 has 4 MA's), (Start: 190 @21265 has 1 MA's), (216, 21310), (306, 21526), (332, 21571), (338, 21580), (349, 21619), (368, 21670), (369, 21673), (467, 21868), (500, 21937), (583, 22138), (584, 22141), (591, 22162), (635, 22258), (636, 22261), (638, 22267), (665, 22336), (668, 22354), (670, 22363), (677, 22393), (731, 22489), (746, 22522), (750, 22537), (793, 22678), (813, 22735), (862, 22846),

Gene: Estave1\_16 Start: 14924, Stop: 16633, Start Num: 123

Candidate Starts for Estave1\_16:

(Start: 123 @14924 has 215 MA's), (193, 15011), (Start: 227 @15056 has 2 MA's), (233, 15080), (251, 15137), (271, 15185), (274, 15191), (281, 15209), (284, 15218), (300, 15239), (348, 15344), (367, 15398), (370, 15404), (373, 15413), (381, 15434), (388, 15458), (402, 15494), (403, 15500), (407, 15512), (418, 15533), (448, 15566), (459, 15584), (465, 15599), (468, 15605), (477, 15626), (484, 15641), (492, 15656), (494, 15662), (499, 15671), (511, 15710), (515, 15722), (521, 15728), (564, 15788), (583, 15836), (587, 15848), (594, 15869), (614, 15923), (618, 15932), (627, 15956), (710, 16091), (720, 16103), (737, 16139), (761, 16217), (791, 16316), (799, 16337), (810, 16370), (826, 16400), (836, 16430), (841, 16439), (844, 16445), (860, 16460), (861, 16463), (865, 16484), (866, 16487), (882, 16529), (900, 16601),

Gene: Et2Brutus\_27 Start: 20758, Stop: 22557, Start Num: 144

Candidate Starts for Et2Brutus\_27:

(94, 20692), (Start: 123 @20734 has 215 MA's), (Start: 144 @20758 has 603 MA's), (183, 20800), (236, 20896), (242, 20911), (277, 20992), (278, 20995), (306, 21070), (315, 21085), (338, 21124), (341, 21130), (356, 21181), (378, 21241), (380, 21247), (417, 21328), (467, 21412), (518, 21538), (526, 21556), (540, 21583), (597, 21724), (631, 21790), (635, 21802), (636, 21805), (703, 21994), (721, 22021), (726, 22030), (736, 22051), (737, 22054), (746, 22075), (750, 22090), (756, 22114), (781, 22189), (784, 22204), (813, 22288), (860, 22393), (862, 22399), (877, 22453), (909, 22552),

Gene: Eudoria\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Eudoria\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: Euphoria\_27 Start: 21090, Stop: 22892, Start Num: 146

Candidate Starts for Euphoria\_27:

(Start: 146 @21090 has 223 MA's), (Start: 161 @21111 has 4 MA's), (Start: 190 @21153 has 1 MA's), (216, 21198), (306, 21414), (332, 21459), (338, 21468), (368, 21558), (369, 21561), (467, 21756), (500, 21825), (583, 22026), (584, 22029), (591, 22050), (635, 22146), (636, 22149), (638, 22155),

(665, 22224), (668, 22242), (670, 22251), (677, 22281), (731, 22377), (746, 22410), (750, 22425), (793, 22566), (813, 22623), (862, 22734), (909, 22887),

Gene: Eureka\_24 Start: 19731, Stop: 21410, Start Num: 129

Candidate Starts for Eureka\_24:

(Start: 129 @19731 has 79 MA's), (Start: 191 @19815 has 45 MA's), (Start: 235 @19893 has 1 MA's), (268, 19980), (274, 19995), (300, 20043), (324, 20082), (356, 20169), (368, 20202), (381, 20238), (390, 20268), (392, 20274), (422, 20343), (461, 20373), (466, 20385), (468, 20388), (494, 20445), (565, 20577), (567, 20583), (592, 20649), (594, 20655), (601, 20679), (618, 20727), (627, 20751), (631, 20760), (658, 20835), (717, 20886), (725, 20901), (782, 21063), (788, 21090), (799, 21120), (843, 21225), (880, 21303), (887, 21339), (890, 21348), (900, 21381), (907, 21396),

Gene: Eurydice\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Eurydice\_27:

(66, 19674), (82, 19719), (Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Evamon\_31 Start: 25861, Stop: 27627, Start Num: 97

Candidate Starts for Evamon\_31:

(80, 25819), (Start: 97 @25861 has 73 MA's), (Start: 121 @25897 has 1 MA's), (Start: 148 @25930 has 14 MA's), (240, 26086), (264, 26140), (265, 26143), (277, 26173), (298, 26239), (306, 26263), (311, 26272), (331, 26305), (386, 26458), (406, 26497), (445, 26548), (451, 26560), (458, 26578), (460, 26590), (465, 26602), (472, 26617), (487, 26647), (489, 26650), (499, 26671), (547, 26743), (568, 26791), (613, 26902), (632, 26935), (647, 26974), (649, 26977), (670, 27049), (707, 27115), (715, 27127), (793, 27298), (794, 27301), (810, 27349), (824, 27376), (832, 27403), (860, 27457), (891, 27574), (897, 27595), (909, 27622),

Gene: Evanesce\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Evanesce\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Eviarto\_19 Start: 17764, Stop: 19362, Start Num: 170

Candidate Starts for Eviarto\_19:

(Start: 170 @17764 has 87 MA's), (298, 18022), (306, 18040), (307, 18043), (340, 18097), (363, 18172), (385, 18241), (388, 18250), (392, 18262), (415, 18313), (435, 18340), (440, 18349), (441, 18352), (501, 18385), (519, 18442), (554, 18508), (603, 18619), (618, 18643), (636, 18679), (669, 18781), (687, 18838), (751, 18928), (849, 19168), (874, 19246),

Gene: EvilGenius\_30 Start: 20609, Stop: 22381, Start Num: 144

Candidate Starts for EvilGenius\_30:

(Start: 123 @20585 has 215 MA's), (Start: 144 @20609 has 603 MA's), (219, 20708), (251, 20792), (277, 20843), (278, 20846), (305, 20918), (306, 20921), (338, 20975), (349, 21014), (378, 21092), (417, 21179), (463, 21260), (467, 21263), (546, 21449), (584, 21536), (631, 21641), (636, 21656), (675, 21782), (677, 21788), (713, 21836), (721, 21845), (731, 21866), (746, 21899), (750, 21914), (752, 21920), (770, 21974), (781, 22013), (784, 22028), (813, 22112), (862, 22223),

Gene: Ewald\_22 Start: 18458, Stop: 20104, Start Num: 157

Candidate Starts for Ewald\_22:

(63, 18257), (77, 18317), (Start: 121 @18410 has 1 MA's), (Start: 149 @18446 has 8 MA's), (Start: 157 @18458 has 4 MA's), (Start: 168 @18470 has 32 MA's), (230, 18572), (232, 18578), (249, 18626), (261, 18656), (284, 18722), (287, 18728), (337, 18839), (341, 18848), (347, 18875), (350, 18884), (358, 18905), (444, 19076), (445, 19079), (474, 19145), (482, 19160), (505, 19211), (555, 19244), (559, 19253), (576, 19295), (583, 19316), (599, 19364), (602, 19376), (610, 19403), (641, 19472), (662, 19541), (670, 19574), (716, 19631), (748, 19646), (757, 19682), (780, 19751), (806, 19838), (813, 19853), (838, 19910), (843, 19919), (865, 19958), (878, 19997), (881, 20003),

Gene: Expelliarmus\_23 Start: 18620, Stop: 20410, Start Num: 144

Candidate Starts for Expelliarmus\_23:

(Start: 123 @18596 has 215 MA's), (Start: 144 @18620 has 603 MA's), (214, 18713), (236, 18758), (278, 18857), (292, 18893), (306, 18932), (315, 18947), (336, 18983), (378, 19103), (380, 19109), (448, 19229), (505, 19358), (532, 19430), (583, 19544), (668, 19760), (675, 19793), (731, 19895), (746, 19928), (750, 19943), (758, 19973), (859, 20243), (862, 20252), (863, 20261), (896, 20375),

Gene: ExplosioNervosa\_30 Start: 21782, Stop: 23572, Start Num: 144

Candidate Starts for ExplosioNervosa\_30:

(Start: 141 @21779 has 14 MA's), (Start: 144 @21782 has 603 MA's), (277, 22016), (278, 22019), (305, 22091), (306, 22094), (315, 22109), (338, 22148), (341, 22154), (378, 22265), (417, 22352), (463, 22433), (467, 22436), (546, 22622), (576, 22685), (584, 22709), (586, 22715), (597, 22748), (636, 22829), (675, 22955), (693, 22997), (731, 23057), (746, 23090), (750, 23105), (781, 23204), (782, 23207), (784, 23219), (813, 23303), (842, 23369), (860, 23408), (862, 23414), (873, 23459), (890, 23516), (891, 23519),

Gene: Eyeball\_27 Start: 20895, Stop: 22697, Start Num: 146

Candidate Starts for Eyeball\_27:

(Start: 146 @20895 has 223 MA's), (Start: 161 @20916 has 4 MA's), (Start: 190 @20958 has 1 MA's), (216, 21003), (306, 21219), (332, 21264), (338, 21273), (349, 21312), (368, 21363), (369, 21366), (467, 21561), (500, 21630), (583, 21831), (584, 21834), (591, 21855), (635, 21951), (636, 21954), (638, 21960), (665, 22029), (668, 22047), (670, 22056), (677, 22086), (731, 22182), (746, 22215), (750, 22230), (793, 22371), (813, 22428), (862, 22539),

Gene: Eyes\_19 Start: 16632, Stop: 18362, Start Num: 138

Candidate Starts for Eyes\_19:

(33, 16176), (46, 16299), (48, 16320), (72, 16515), (113, 16599), (Start: 121 @16611 has 1 MA's), (Start: 138 @16632 has 5 MA's), (272, 16869), (281, 16902), (316, 16986), (392, 17187), (414, 17229), (445, 17265), (458, 17295), (465, 17319), (485, 17361), (499, 17388), (537, 17445), (540, 17451), (579, 17538), (697, 17832), (737, 17898), (747, 17922), (752, 17940), (793, 18036), (799, 18054), (863, 18210), (864, 18213), (867, 18225), (888, 18300), (896, 18327),

Gene: Eyre\_17 Start: 15369, Stop: 17078, Start Num: 171

Candidate Starts for Eyre\_17:

(Start: 171 @15369 has 40 MA's), (237, 15486), (287, 15636), (340, 15732), (347, 15759), (378, 15852), (382, 15864), (462, 16038), (511, 16155), (519, 16179), (607, 16344), (637, 16401), (652, 16440), (669, 16497), (670, 16500), (729, 16593), (746, 16626), (847, 16881), (849, 16884), (865,



16932), (874, 16962), (890, 17019),

Gene: FF47\_21 Start: 15896, Stop: 17782, Start Num: 78

Candidate Starts for FF47\_21:

(78, 15896), (Start: 89 @15932 has 4 MA's), (Start: 117 @15983 has 59 MA's), (140, 16010), (181, 16070), (Start: 227 @16136 has 2 MA's), (242, 16187), (249, 16205), (372, 16511), (390, 16568), (412, 16616), (413, 16619), (436, 16682), (448, 16703), (474, 16766), (479, 16775), (487, 16790), (567, 16925), (583, 16964), (590, 16985), (602, 17024), (622, 17066), (629, 17081), (632, 17087), (773, 17396), (775, 17405), (777, 17411), (781, 17423), (788, 17453), (797, 17477), (850, 17597), (874, 17654), (898, 17741), (901, 17750),

Gene: Fairfaxidum\_19 Start: 16818, Stop: 18467, Start Num: 195

Candidate Starts for Fairfaxidum\_19:

(34, 16287), (36, 16317), (38, 16323), (50, 16455), (56, 16512), (57, 16521), (Start: 99 @16680 has 2 MA's), (172, 16782), (Start: 195 @16818 has 45 MA's), (244, 16923), (272, 17001), (293, 17061), (299, 17073), (300, 17076), (308, 17100), (377, 17274), (382, 17289), (415, 17373), (460, 17385), (464, 17394), (465, 17397), (473, 17418), (494, 17460), (506, 17490), (594, 17673), (601, 17697), (626, 17748), (658, 17841), (664, 17853), (692, 17895), (702, 17913), (758, 18048), (788, 18147), (795, 18165), (813, 18216), (839, 18276), (843, 18282), (877, 18357),

Gene: FairyPath\_24 Start: 20027, Stop: 21622, Start Num: 191

Candidate Starts for FairyPath\_24:

(Start: 129 @19943 has 79 MA's), (Start: 191 @20027 has 45 MA's), (Start: 235 @20105 has 1 MA's), (268, 20192), (274, 20207), (300, 20255), (324, 20294), (356, 20381), (368, 20414), (381, 20450), (390, 20480), (392, 20486), (422, 20555), (461, 20585), (466, 20597), (468, 20600), (494, 20657), (565, 20789), (567, 20795), (592, 20861), (594, 20867), (601, 20891), (618, 20939), (627, 20963), (631, 20972), (658, 21047), (717, 21098), (725, 21113), (782, 21275), (788, 21302), (799, 21332), (843, 21437), (880, 21515), (887, 21551), (890, 21560), (900, 21593), (907, 21608),

Gene: Faith5x5\_17 Start: 14654, Stop: 16363, Start Num: 171

Candidate Starts for Faith5x5\_17:

(83, 14519), (Start: 171 @14654 has 40 MA's), (197, 14696), (237, 14771), (259, 14843), (262, 14846), (276, 14882), (287, 14921), (315, 14975), (347, 15044), (351, 15056), (377, 15134), (378, 15137), (462, 15323), (500, 15404), (519, 15464), (521, 15470), (554, 15512), (592, 15593), (607, 15629), (618, 15647), (624, 15662), (637, 15686), (666, 15761), (669, 15782), (670, 15785), (788, 16016), (794, 16031), (847, 16166), (849, 16169), (865, 16217), (874, 16247), (885, 16283),

Gene: Fajezeel\_29 Start: 21405, Stop: 23207, Start Num: 146

Candidate Starts for Fajezeel\_29:

(Start: 146 @21405 has 223 MA's), (Start: 161 @21426 has 4 MA's), (Start: 190 @21468 has 1 MA's), (216, 21513), (306, 21729), (332, 21774), (338, 21783), (368, 21873), (369, 21876), (467, 22071), (500, 22140), (583, 22341), (584, 22344), (591, 22365), (635, 22461), (636, 22464), (638, 22470), (665, 22539), (668, 22557), (670, 22566), (677, 22596), (731, 22692), (746, 22725), (750, 22740), (793, 22881), (813, 22938), (862, 23049),

Gene: Fameo\_28 Start: 20236, Stop: 22008, Start Num: 144

Candidate Starts for Fameo\_28:

(94, 20170), (Start: 123 @20212 has 215 MA's), (Start: 144 @20236 has 603 MA's), (277, 20470), (278, 20473), (305, 20545), (306, 20548), (338, 20602), (349, 20641), (365, 20686), (378, 20719), (417, 20806), (463, 20887), (467, 20890), (584, 21163), (636, 21283), (675, 21409), (713, 21463), (721, 21472), (731, 21493), (746, 21526), (750, 21541), (752, 21547), (770, 21601), (781, 21640), (784, 21655), (813, 21739), (862, 21850),

Gene: Familton\_57 Start: 33481, Stop: 35217, Start Num: 107

Candidate Starts for Familton\_57:

(Start: 100 @33472 has 2 MA's), (Start: 107 @33481 has 25 MA's), (174, 33571), (240, 33688), (251, 33724), (259, 33745), (271, 33772), (274, 33778), (286, 33808), (302, 33832), (332, 33883), (381, 34021), (383, 34027), (400, 34078), (402, 34081), (407, 34099), (459, 34150), (468, 34171), (470, 34174), (492, 34222), (494, 34228), (511, 34276), (513, 34282), (515, 34288), (555, 34348), (564, 34372), (565, 34375), (583, 34420), (588, 34435), (591, 34444), (594, 34453), (608, 34498), (618, 34516), (631, 34549), (720, 34687), (729, 34708), (754, 34774), (762, 34804), (779, 34858), (791, 34900), (799, 34921), (805, 34942), (810, 34954), (821, 34975), (844, 35029), (880, 35107), (887, 35143), (893, 35164), (901, 35191),

Gene: Fancypants\_16 Start: 14817, Stop: 16526, Start Num: 123

Candidate Starts for Fancypants\_16:

(Start: 123 @14817 has 215 MA's), (193, 14904), (209, 14925), (Start: 227 @14949 has 2 MA's), (233, 14973), (240, 14994), (271, 15078), (274, 15084), (281, 15102), (300, 15132), (348, 15237), (367, 15291), (370, 15297), (377, 15315), (378, 15318), (381, 15327), (388, 15351), (418, 15426), (424, 15438), (443, 15453), (448, 15459), (459, 15477), (465, 15492), (468, 15498), (477, 15519), (484, 15534), (492, 15549), (494, 15555), (511, 15603), (515, 15615), (521, 15621), (564, 15681), (568, 15693), (583, 15729), (587, 15741), (614, 15816), (618, 15825), (625, 15843), (627, 15849), (638, 15879), (710, 15984), (717, 15993), (720, 15996), (737, 16032), (761, 16110), (791, 16209), (799, 16230), (810, 16263), (826, 16293), (836, 16323), (841, 16332), (844, 16338), (860, 16353), (861, 16356), (866, 16380), (877, 16410), (882, 16422), (887, 16452), (900, 16494),

Gene: Farber\_29 Start: 20372, Stop: 22168, Start Num: 144

Candidate Starts for Farber\_29:

(Start: 144 @20372 has 603 MA's), (Start: 190 @20429 has 1 MA's), (197, 20444), (219, 20477), (230, 20498), (Start: 235 @20513 has 1 MA's), (272, 20600), (277, 20612), (278, 20615), (306, 20690), (315, 20705), (336, 20741), (417, 20948), (481, 21062), (500, 21101), (532, 21188), (583, 21302), (591, 21326), (597, 21344), (636, 21425), (665, 21500), (668, 21518), (675, 21551), (677, 21557), (695, 21596), (729, 21650), (731, 21653), (742, 21674), (758, 21731), (813, 21899), (860, 22004), (862, 22010), (900, 22145),

Gene: Fascinus\_26 Start: 20958, Stop: 22760, Start Num: 146

Candidate Starts for Fascinus\_26:

(Start: 146 @20958 has 223 MA's), (Start: 161 @20979 has 4 MA's), (Start: 190 @21021 has 1 MA's), (216, 21066), (306, 21282), (332, 21327), (338, 21336), (349, 21375), (368, 21426), (369, 21429), (467, 21624), (500, 21693), (583, 21894), (584, 21897), (591, 21918), (635, 22014), (636, 22017), (638, 22023), (665, 22092), (668, 22110), (670, 22119), (677, 22149), (731, 22245), (746, 22278), (750, 22293), (793, 22434), (813, 22491), (862, 22602),

Gene: Fastidio\_16 Start: 14771, Stop: 16480, Start Num: 123

Candidate Starts for Fastidio\_16:

(Start: 123 @14771 has 215 MA's), (193, 14858), (Start: 227 @14903 has 2 MA's), (233, 14927), (271, 15032), (274, 15038), (281, 15056), (300, 15086), (348, 15191), (367, 15245), (370, 15251), (378, 15272), (381, 15281), (388, 15305), (403, 15347), (459, 15431), (465, 15446), (468, 15452), (484, 15488), (486, 15491), (492, 15503), (494, 15509), (511, 15557), (515, 15569), (521, 15575), (564, 15635), (568, 15647), (583, 15683), (587, 15695), (614, 15770), (618, 15779), (625, 15797), (627, 15803), (638, 15833), (710, 15938), (717, 15947), (720, 15950), (737, 15986), (761, 16064), (791, 16163), (799, 16184), (810, 16217), (826, 16247), (836, 16277), (841, 16286), (844, 16292), (860, 16307), (861, 16310), (866, 16334), (877, 16364), (882, 16376), (887, 16406), (900, 16448),

Gene: Fayely\_30 Start: 21782, Stop: 23572, Start Num: 144

Candidate Starts for Fayely\_30:

(Start: 141 @21779 has 14 MA's), (Start: 144 @21782 has 603 MA's), (277, 22016), (278, 22019), (305, 22091), (306, 22094), (315, 22109), (338, 22148), (341, 22154), (378, 22265), (417, 22352), (463, 22433), (467, 22436), (546, 22622), (576, 22685), (584, 22709), (586, 22715), (597, 22748), (636, 22829), (675, 22955), (693, 22997), (731, 23057), (746, 23090), (750, 23105), (781, 23204), (782, 23207), (784, 23219), (813, 23303), (842, 23369), (860, 23408), (862, 23414), (873, 23459), (890, 23516), (891, 23519),

Gene: Feastonyeet\_17 Start: 15461, Stop: 17155, Start Num: 144

Candidate Starts for Feastonyeet\_17:

(Start: 133 @15458 has 8 MA's), (Start: 144 @15461 has 603 MA's), (214, 15560), (236, 15602), (265, 15671), (336, 15842), (365, 15929), (374, 15950), (377, 15959), (385, 15986), (406, 16031), (436, 16064), (444, 16079), (454, 16103), (465, 16136), (481, 16169), (487, 16181), (509, 16238), (546, 16286), (560, 16316), (574, 16346), (596, 16409), (617, 16460), (636, 16496), (643, 16511), (650, 16529), (668, 16586), (670, 16595), (747, 16715), (750, 16727), (777, 16775), (791, 16826), (793, 16829), (799, 16847), (829, 16925), (835, 16940), (842, 16952), (862, 16994), (902, 17141), (907, 17147),

Gene: Fefferhead\_22 Start: 17500, Stop: 19257, Start Num: 112

Candidate Starts for Fefferhead\_22:

(Start: 93 @17464 has 1 MA's), (Start: 109 @17494 has 26 MA's), (Start: 112 @17500 has 41 MA's), (Start: 114 @17503 has 139 MA's), (Start: 135 @17515 has 7 MA's), (140, 17521), (Start: 227 @17647 has 2 MA's), (230, 17662), (248, 17713), (258, 17743), (272, 17776), (316, 17878), (337, 17920), (360, 17992), (362, 18001), (423, 18145), (424, 18148), (438, 18163), (444, 18175), (448, 18181), (454, 18199), (465, 18223), (468, 18229), (481, 18256), (572, 18412), (618, 18529), (632, 18562), (636, 18574), (641, 18586), (655, 18634), (756, 18826), (768, 18859), (788, 18931), (793, 18943), (810, 18994), (813, 19000), (863, 19093), (880, 19144), (890, 19189), (901, 19228), (902, 19231), (913, 19249),

Gene: Fenn\_28 Start: 22770, Stop: 24572, Start Num: 146

Candidate Starts for Fenn\_28:

(Start: 146 @22770 has 223 MA's), (Start: 161 @22791 has 4 MA's), (Start: 190 @22833 has 1 MA's), (216, 22878), (306, 23094), (332, 23139), (338, 23148), (349, 23187), (368, 23238), (369, 23241), (467, 23436), (500, 23505), (519, 23565), (583, 23706), (584, 23709), (591, 23730), (635, 23826), (636, 23829), (638, 23835), (665, 23904), (668, 23922), (670, 23931), (677, 23961), (731, 24057), (746, 24090), (750, 24105), (793, 24246), (813, 24303), (862, 24414),

Gene: Fenry\_18 Start: 16369, Stop: 18015, Start Num: 195

Candidate Starts for Fenry\_18:

(172, 16333), (Start: 195 @16369 has 45 MA's), (244, 16471), (274, 16552), (308, 16648), (329, 16687), (345, 16732), (349, 16747), (357, 16768), (377, 16822), (382, 16837), (494, 17008), (506, 17038), (563, 17137), (594, 17221), (601, 17245), (626, 17296), (658, 17389), (664, 17401), (694, 17446), (702, 17461), (757, 17593), (758, 17596), (788, 17695), (795, 17713), (813, 17764), (839, 17824), (843, 17830), (872, 17893), (877, 17905),

Gene: Fernando\_29 Start: 20378, Stop: 22174, Start Num: 144

Candidate Starts for Fernando\_29:

(Start: 144 @20378 has 603 MA's), (Start: 190 @20435 has 1 MA's), (197, 20450), (219, 20483), (230, 20504), (Start: 235 @20519 has 1 MA's), (272, 20606), (277, 20618), (278, 20621), (306, 20696), (315, 20711), (336, 20747), (417, 20954), (481, 21068), (500, 21107), (532, 21194), (583, 21308), (591, 21332), (597, 21350), (636, 21431), (665, 21506), (668, 21524), (675, 21557), (677, 21563), (695, 21602), (729, 21656), (731, 21659), (742, 21680), (758, 21737), (813, 21905), (860, 22010), (862, 22016), (900, 22151),

Gene: Feyre\_21 Start: 17413, Stop: 19185, Start Num: 117

Candidate Starts for Feyre\_21:

(Start: 117 @17413 has 59 MA's), (Start: 123 @17419 has 215 MA's), (143, 17443), (Start: 168 @17476 has 32 MA's), (197, 17524), (230, 17578), (248, 17629), (272, 17692), (321, 17800), (360, 17908), (400, 18022), (403, 18025), (424, 18064), (438, 18079), (444, 18091), (448, 18097), (465, 18139), (468, 18145), (487, 18184), (499, 18208), (564, 18310), (588, 18373), (602, 18418), (655, 18553), (708, 18652), (750, 18730), (756, 18754), (758, 18760), (762, 18775), (793, 18871), (795, 18877), (865, 19030), (895, 19135), (896, 19138), (901, 19156),

Gene: Fibonacci\_28 Start: 20752, Stop: 22551, Start Num: 144

Candidate Starts for Fibonacci\_28:

(94, 20686), (Start: 123 @20728 has 215 MA's), (Start: 144 @20752 has 603 MA's), (183, 20794), (236, 20890), (242, 20905), (277, 20986), (278, 20989), (306, 21064), (315, 21079), (338, 21118), (341, 21124), (378, 21235), (380, 21241), (417, 21322), (467, 21406), (518, 21532), (526, 21550), (540, 21577), (597, 21718), (631, 21784), (635, 21796), (636, 21799), (703, 21988), (721, 22015), (726, 22024), (736, 22045), (737, 22048), (746, 22069), (750, 22084), (756, 22108), (781, 22183), (784, 22198), (813, 22282), (860, 22387), (862, 22393), (877, 22447), (909, 22546),

Gene: Filch\_25 Start: 19504, Stop: 21183, Start Num: 129

Candidate Starts for Filch\_25:

(Start: 129 @19504 has 79 MA's), (Start: 191 @19588 has 45 MA's), (Start: 235 @19666 has 1 MA's), (268, 19753), (274, 19768), (300, 19816), (324, 19855), (356, 19942), (368, 19975), (381, 20011), (390, 20041), (392, 20047), (422, 20116), (461, 20146), (466, 20158), (468, 20161), (494, 20218), (565, 20350), (567, 20356), (592, 20422), (594, 20428), (601, 20452), (618, 20500), (627, 20524), (631, 20533), (658, 20608), (717, 20659), (725, 20674), (782, 20836), (788, 20863), (799, 20893), (843, 20998), (880, 21076), (887, 21112), (890, 21121), (900, 21154), (907, 21169),

Gene: Filuzino\_16 Start: 14799, Stop: 16508, Start Num: 123

Candidate Starts for Filuzino\_16:

(Start: 123 @14799 has 215 MA's), (193, 14886), (Start: 227 @14931 has 2 MA's), (233, 14955), (271, 15060), (274, 15066), (281, 15084), (300, 15114), (348, 15219), (370, 15279), (373, 15288), (377, 15297), (378, 15300), (381, 15309), (388, 15333), (418, 15408), (459, 15459), (465, 15474), (468, 15480), (484, 15516), (486, 15519), (492, 15531), (494, 15537), (511, 15585), (515, 15597), (521, 15603), (564, 15663), (568, 15675), (583, 15711), (587, 15723), (614, 15798), (618, 15807), (625, 15825), (627, 15831), (638, 15861), (710, 15966), (717, 15975), (720, 15978), (737, 16014), (761, 16092), (791, 16191), (799, 16212), (810, 16245), (826, 16275), (836, 16305), (841, 16314), (844, 16320), (860, 16335), (861, 16338), (866, 16362), (877, 16392), (882, 16404), (887, 16434), (900, 16476),

Gene: Findley\_19 Start: 15016, Stop: 16785, Start Num: 112

Candidate Starts for Findley\_19:

(Start: 93 @14980 has 1 MA's), (Start: 109 @15010 has 26 MA's), (Start: 112 @15016 has 41 MA's), (Start: 135 @15031 has 7 MA's), (Start: 168 @15073 has 32 MA's), (197, 15121), (Start: 227 @15160 has 2 MA's), (230, 15175), (248, 15226), (258, 15256), (272, 15289), (278, 15301), (282, 15319), (316, 15391), (321, 15397), (356, 15493), (360, 15505), (395, 15607), (403, 15622), (423, 15658), (448, 15694), (468, 15742), (487, 15781), (499, 15805), (503, 15817), (564, 15907), (567, 15916), (640, 16111), (655, 16162), (670, 16216), (714, 16270), (768, 16384), (772, 16393), (793, 16468), (810, 16519), (813, 16525), (863, 16621), (881, 16675), (901, 16756), (913, 16777),

Gene: Finkle\_19 Start: 16256, Stop: 17803, Start Num: 182

Candidate Starts for Finkle\_19:

(67, 16073), (79, 16106), (Start: 166 @16241 has 1 MA's), (Start: 182 @16256 has 1 MA's), (187, 16262), (226, 16325), (272, 16439), (276, 16448), (277, 16451), (280, 16454), (284, 16475), (306,

16520), (307, 16523), (340, 16577), (377, 16688), (392, 16736), (441, 16823), (495, 16844), (497, 16847), (504, 16865), (554, 16967), (581, 17021), (597, 17066), (636, 17147), (672, 17261), (673, 17267), (712, 17297), (719, 17306), (751, 17372), (807, 17513), (812, 17525), (849, 17600), (863, 17645), (895, 17759), (899, 17774),

Gene: Fionnbharth\_24 Start: 18623, Stop: 20410, Start Num: 114

Candidate Starts for Fionnbharth\_24:

(Start: 93 @18584 has 1 MA's), (Start: 109 @18614 has 26 MA's), (Start: 112 @18620 has 41 MA's), (Start: 114 @18623 has 139 MA's), (Start: 137 @18638 has 2 MA's), (Start: 168 @18680 has 32 MA's), (197, 18728), (Start: 227 @18767 has 2 MA's), (230, 18782), (236, 18800), (248, 18833), (258, 18863), (278, 18908), (282, 18926), (316, 18998), (321, 19004), (334, 19034), (336, 19037), (356, 19100), (360, 19112), (412, 19247), (423, 19265), (444, 19295), (448, 19301), (454, 19319), (468, 19349), (487, 19388), (564, 19514), (588, 19577), (655, 19778), (670, 19832), (708, 19877), (734, 19922), (748, 19946), (756, 19979), (757, 19982), (768, 20012), (788, 20084), (793, 20096), (810, 20147), (813, 20153), (865, 20255), (901, 20381), (913, 20402),

Gene: FireRed\_24 Start: 19858, Stop: 21453, Start Num: 191

Candidate Starts for FireRed\_24:

(Start: 129 @19774 has 79 MA's), (Start: 191 @19858 has 45 MA's), (Start: 235 @19936 has 1 MA's), (268, 20023), (274, 20038), (300, 20086), (324, 20125), (356, 20212), (368, 20245), (381, 20281), (390, 20311), (392, 20317), (422, 20386), (461, 20416), (466, 20428), (468, 20431), (494, 20488), (565, 20620), (567, 20626), (592, 20692), (594, 20698), (601, 20722), (618, 20770), (627, 20794), (631, 20803), (658, 20878), (717, 20929), (725, 20944), (782, 21106), (788, 21133), (799, 21163), (843, 21268), (880, 21346), (887, 21382), (890, 21391), (900, 21424), (907, 21439),

Gene: Fireball\_32 Start: 25984, Stop: 27750, Start Num: 97

Candidate Starts for Fireball\_32:

(80, 25942), (Start: 97 @25984 has 73 MA's), (Start: 121 @26020 has 1 MA's), (Start: 148 @26053 has 14 MA's), (264, 26263), (265, 26266), (277, 26296), (298, 26362), (306, 26386), (311, 26395), (331, 26428), (386, 26581), (406, 26620), (445, 26671), (451, 26683), (458, 26701), (460, 26713), (465, 26725), (472, 26740), (487, 26770), (489, 26773), (499, 26794), (547, 26866), (568, 26914), (613, 27025), (632, 27058), (649, 27100), (670, 27172), (707, 27238), (715, 27250), (793, 27421), (794, 27424), (810, 27472), (824, 27499), (832, 27526), (835, 27532), (860, 27580), (891, 27697), (897, 27718),

Gene: Firecracker\_57 Start: 33671, Stop: 35407, Start Num: 107

Candidate Starts for Firecracker\_57:

(Start: 100 @33662 has 2 MA's), (Start: 107 @33671 has 25 MA's), (174, 33761), (240, 33878), (251, 33914), (259, 33935), (271, 33962), (274, 33968), (286, 33998), (302, 34022), (332, 34073), (381, 34211), (383, 34217), (400, 34268), (402, 34271), (407, 34289), (459, 34340), (468, 34361), (470, 34364), (492, 34412), (494, 34418), (511, 34466), (513, 34472), (515, 34478), (555, 34538), (564, 34562), (565, 34565), (583, 34610), (588, 34625), (591, 34634), (594, 34643), (608, 34688), (618, 34706), (631, 34739), (720, 34877), (729, 34898), (754, 34964), (762, 34994), (779, 35048), (791, 35090), (799, 35111), (805, 35132), (810, 35144), (821, 35165), (844, 35219), (880, 35297), (887, 35333), (893, 35354), (901, 35381),

Gene: Firehouse51\_17 Start: 15366, Stop: 17075, Start Num: 123

Candidate Starts for Firehouse51\_17:

(Start: 123 @15366 has 215 MA's), (193, 15453), (Start: 227 @15498 has 2 MA's), (233, 15522), (271, 15627), (274, 15633), (281, 15651), (300, 15681), (348, 15786), (370, 15846), (378, 15867), (381, 15876), (388, 15900), (402, 15936), (459, 16026), (465, 16041), (468, 16047), (484, 16083), (486, 16086), (492, 16098), (494, 16104), (511, 16152), (515, 16164), (521, 16170), (564, 16230), (568, 16242), (583, 16278), (587, 16290), (614, 16365), (618, 16374), (625, 16392), (627, 16398), (638,

16428), (710, 16533), (717, 16542), (720, 16545), (737, 16581), (761, 16659), (791, 16758), (799, 16779), (810, 16812), (826, 16842), (836, 16872), (841, 16881), (844, 16887), (860, 16902), (861, 16905), (866, 16929), (877, 16959), (882, 16971), (887, 17001), (900, 17043),

Gene: FiringLine\_28 Start: 20118, Stop: 21890, Start Num: 144

Candidate Starts for FiringLine\_28:

(94, 20052), (Start: 123 @20094 has 215 MA's), (Start: 144 @20118 has 603 MA's), (219, 20217), (251, 20301), (277, 20352), (278, 20355), (305, 20427), (306, 20430), (338, 20484), (349, 20523), (365, 20568), (378, 20601), (417, 20688), (463, 20769), (467, 20772), (584, 21045), (636, 21165), (675, 21291), (713, 21345), (746, 21408), (750, 21423), (752, 21429), (770, 21483), (781, 21522), (784, 21537), (788, 21552), (813, 21621), (862, 21732), (900, 21867),

Gene: First\_0028 Start: 20226, Stop: 21998, Start Num: 144

Candidate Starts for First\_0028:

(Start: 123 @20202 has 215 MA's), (Start: 144 @20226 has 603 MA's), (219, 20325), (277, 20460), (278, 20463), (305, 20535), (306, 20538), (338, 20592), (341, 20598), (349, 20631), (378, 20709), (417, 20796), (463, 20877), (467, 20880), (584, 21153), (631, 21258), (636, 21273), (675, 21399), (677, 21405), (713, 21453), (746, 21516), (750, 21531), (752, 21537), (759, 21567), (770, 21591), (781, 21630), (784, 21645), (813, 21729), (851, 21810),

Gene: FirstPlacePfu\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for FirstPlacePfu\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Fishburne\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Fishburne\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Fitzgerald\_33 Start: 30900, Stop: 32663, Start Num: 97

Candidate Starts for Fitzgerald\_33:

(90, 30882), (Start: 97 @30900 has 73 MA's), (Start: 121 @30936 has 1 MA's), (219, 31074), (262, 31170), (265, 31179), (288, 31248), (306, 31299), (332, 31344), (341, 31359), (368, 31440), (384, 31485), (386, 31494), (406, 31533), (445, 31584), (458, 31614), (461, 31629), (472, 31653), (487, 31683), (551, 31788), (597, 31905), (607, 31923), (613, 31938), (631, 31968), (635, 31980), (636, 31983), (647, 32010), (793, 32334), (794, 32337), (810, 32385), (824, 32412), (832, 32439), (860, 32493), (866, 32520), (902, 32649),

Gene: FlagStaff\_18 Start: 16851, Stop: 18575, Start Num: 135

Candidate Starts for FlagStaff\_18:

(Start: 135 @16851 has 7 MA's), (197, 16923), (258, 17058), (287, 17133), (309, 17184), (321, 17199), (334, 17229), (337, 17235), (353, 17289), (395, 17409), (420, 17454), (448, 17505), (451,

17514), (468, 17553), (487, 17592), (503, 17628), (522, 17673), (564, 17718), (618, 17859), (641, 17916), (655, 17964), (665, 17991), (698, 18039), (730, 18081), (756, 18144), (787, 18246), (810, 18312), (885, 18486), (904, 18552),

Gene: Flapper\_45 Start: 31189, Stop: 32808, Start Num: 170

Candidate Starts for Flapper\_45:

(Start: 170 @31189 has 87 MA's), (179, 31204), (Start: 194 @31225 has 1 MA's), (236, 31303), (347, 31570), (358, 31600), (368, 31627), (372, 31636), (377, 31651), (432, 31762), (449, 31792), (450, 31795), (493, 31852), (593, 32077), (607, 32116), (635, 32164), (673, 32290), (688, 32326), (749, 32383), (776, 32437), (799, 32512), (863, 32644), (885, 32719), (887, 32731), (891, 32743), (893, 32752), (906, 32788),

Gene: Flare16\_28 Start: 20214, Stop: 21986, Start Num: 144

Candidate Starts for Flare16\_28:

(Start: 123 @20190 has 215 MA's), (Start: 144 @20214 has 603 MA's), (Start: 235 @20349 has 1 MA's), (277, 20448), (278, 20451), (305, 20523), (306, 20526), (338, 20580), (341, 20586), (360, 20649), (378, 20697), (388, 20730), (417, 20784), (463, 20865), (467, 20868), (481, 20898), (546, 21054), (584, 21141), (636, 21261), (674, 21384), (675, 21387), (677, 21393), (713, 21441), (746, 21504), (750, 21519), (752, 21525), (770, 21579), (781, 21618), (784, 21633), (795, 21666), (860, 21822), (862, 21828), (877, 21882),

Gene: Flathead\_17 Start: 14674, Stop: 16383, Start Num: 123

Candidate Starts for Flathead\_17:

(Start: 123 @14674 has 215 MA's), (193, 14761), (Start: 227 @14806 has 2 MA's), (233, 14830), (271, 14935), (274, 14941), (281, 14959), (300, 14989), (348, 15094), (370, 15154), (378, 15175), (381, 15184), (388, 15208), (459, 15334), (465, 15349), (468, 15355), (484, 15391), (486, 15394), (492, 15406), (494, 15412), (511, 15460), (515, 15472), (521, 15478), (564, 15538), (568, 15550), (583, 15586), (587, 15598), (614, 15673), (618, 15682), (625, 15700), (627, 15706), (638, 15736), (710, 15841), (717, 15850), (720, 15853), (737, 15889), (761, 15967), (791, 16066), (799, 16087), (810, 16120), (826, 16150), (836, 16180), (841, 16189), (844, 16195), (860, 16210), (861, 16213), (866, 16237), (877, 16267), (882, 16279), (887, 16309), (900, 16351),

Gene: Flatwoods\_35 Start: 29836, Stop: 31599, Start Num: 97

Candidate Starts for Flatwoods\_35:

(Start: 97 @29836 has 73 MA's), (Start: 121 @29872 has 1 MA's), (211, 30001), (219, 30010), (262, 30106), (265, 30115), (288, 30184), (306, 30235), (311, 30244), (332, 30280), (341, 30295), (345, 30313), (368, 30376), (384, 30421), (386, 30430), (454, 30541), (458, 30550), (461, 30565), (465, 30574), (472, 30589), (487, 30619), (597, 30841), (607, 30859), (613, 30874), (635, 30916), (636, 30919), (647, 30946), (688, 31066), (793, 31270), (794, 31273), (810, 31321), (824, 31348), (832, 31375), (860, 31429), (866, 31456),

Gene: Flaverint\_28 Start: 20749, Stop: 22548, Start Num: 144

Candidate Starts for Flaverint\_28:

(94, 20683), (Start: 123 @20725 has 215 MA's), (Start: 144 @20749 has 603 MA's), (183, 20791), (236, 20887), (242, 20902), (277, 20983), (278, 20986), (306, 21061), (315, 21076), (338, 21115), (341, 21121), (378, 21232), (380, 21238), (417, 21319), (467, 21403), (518, 21529), (526, 21547), (540, 21574), (597, 21715), (631, 21781), (635, 21793), (636, 21796), (703, 21985), (721, 22012), (726, 22021), (736, 22042), (737, 22045), (746, 22066), (750, 22081), (756, 22105), (781, 22180), (784, 22195), (813, 22279), (860, 22384), (862, 22390), (877, 22444), (909, 22543),

Gene: Float294\_43 Start: 30912, Stop: 32534, Start Num: 170

Candidate Starts for Float294\_43:

(Start: 170 @30912 has 87 MA's), (236, 31029), (263, 31107), (340, 31269), (343, 31281), (347, 31296), (372, 31362), (377, 31377), (432, 31488), (449, 31518), (450, 31521), (493, 31578), (518, 31650), (560, 31734), (571, 31755), (607, 31842), (635, 31890), (673, 32016), (674, 32019), (688, 32052), (749, 32109), (799, 32238), (812, 32277), (866, 32382), (885, 32445), (887, 32457), (891, 32469), (893, 32478), (906, 32514),

Gene: Floral\_20 Start: 17566, Stop: 19272, Start Num: 111

Candidate Starts for Floral\_20:

(Start: 95 @17542 has 1 MA's), (Start: 111 @17566 has 24 MA's), (192, 17671), (217, 17713), (251, 17788), (303, 17902), (365, 18049), (368, 18055), (384, 18100), (459, 18238), (497, 18313), (635, 18595), (644, 18616), (668, 18691), (715, 18778), (739, 18814), (750, 18847), (752, 18853), (783, 18919), (793, 18949), (860, 19105), (862, 19111), (865, 19129), (897, 19240),

Gene: Florean\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Florean\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Florinda\_16 Start: 14828, Stop: 16537, Start Num: 123

Candidate Starts for Florinda\_16:

(Start: 123 @14828 has 215 MA's), (193, 14915), (Start: 227 @14960 has 2 MA's), (233, 14984), (271, 15089), (274, 15095), (281, 15113), (300, 15143), (348, 15248), (370, 15308), (378, 15329), (381, 15338), (388, 15362), (459, 15488), (465, 15503), (468, 15509), (475, 15527), (477, 15530), (484, 15545), (486, 15548), (492, 15560), (494, 15566), (499, 15575), (511, 15614), (515, 15626), (521, 15632), (564, 15692), (583, 15740), (587, 15752), (614, 15827), (618, 15836), (625, 15854), (627, 15860), (638, 15890), (710, 15995), (720, 16007), (737, 16043), (761, 16121), (791, 16220), (799, 16241), (810, 16274), (826, 16304), (836, 16334), (841, 16343), (844, 16349), (860, 16364), (861, 16367), (865, 16388), (866, 16391), (882, 16433), (887, 16463), (900, 16505),

Gene: Flux\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Flux\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: FlyCatcher\_31 Start: 22924, Stop: 24726, Start Num: 144

Candidate Starts for FlyCatcher\_31:

(Start: 132 @22912 has 45 MA's), (Start: 144 @22924 has 603 MA's), (Start: 190 @22972 has 1 MA's), (198, 22990), (277, 23155), (278, 23158), (306, 23233), (315, 23248), (338, 23287), (380, 23410), (382, 23416), (392, 23449), (417, 23491), (495, 23635), (547, 23761), (583, 23842), (597, 23884), (615, 23932), (635, 23980), (636, 23983), (665, 24058), (668, 24076), (670, 24085), (675, 24109), (677, 24115), (729, 24208), (731, 24211), (746, 24244), (750, 24259), (793, 24400), (851, 24538), (860, 24562), (862, 24568), (891, 24673),



Gene: Flypotenuse\_22 Start: 19446, Stop: 21041, Start Num: 191

Candidate Starts for Flypotenuse\_22:

(Start: 129 @19362 has 79 MA's), (Start: 191 @19446 has 45 MA's), (Start: 235 @19524 has 1 MA's), (268, 19611), (274, 19626), (300, 19674), (324, 19713), (356, 19800), (368, 19833), (381, 19869), (390, 19899), (392, 19905), (422, 19974), (461, 20004), (466, 20016), (468, 20019), (494, 20076), (565, 20208), (567, 20214), (592, 20280), (594, 20286), (601, 20310), (618, 20358), (627, 20382), (631, 20391), (658, 20466), (717, 20517), (725, 20532), (782, 20694), (788, 20721), (799, 20751), (843, 20856), (880, 20934), (887, 20970), (890, 20979), (900, 21012), (907, 21027),

Gene: ForGetIt\_24 Start: 19589, Stop: 21388, Start Num: 144

Candidate Starts for ForGetIt\_24:

(Start: 144 @19589 has 603 MA's), (236, 19727), (278, 19826), (306, 19901), (336, 19952), (360, 20024), (365, 20039), (378, 20072), (380, 20078), (432, 20171), (481, 20273), (495, 20303), (499, 20309), (532, 20399), (546, 20429), (579, 20501), (583, 20513), (584, 20516), (597, 20555), (602, 20573), (635, 20633), (636, 20636), (656, 20687), (668, 20729), (729, 20870), (749, 20912), (862, 21230), (900, 21365),

Gene: Forge\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Forge\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Forsytheast\_26 Start: 21094, Stop: 22896, Start Num: 146

Candidate Starts for Forsytheast\_26:

(Start: 146 @21094 has 223 MA's), (Start: 161 @21115 has 4 MA's), (Start: 190 @21157 has 1 MA's), (216, 21202), (306, 21418), (332, 21463), (338, 21472), (349, 21511), (368, 21562), (369, 21565), (467, 21760), (500, 21829), (583, 22030), (584, 22033), (591, 22054), (635, 22150), (636, 22153), (638, 22159), (665, 22228), (668, 22246), (670, 22255), (677, 22285), (731, 22381), (746, 22414), (750, 22429), (758, 22459), (793, 22570), (813, 22627), (862, 22738),

Gene: Forza\_101 Start: 59948, Stop: 61576, Start Num: 150

Candidate Starts for Forza\_101:

(Start: 150 @59948 has 4 MA's), (Start: 166 @59963 has 1 MA's), (Start: 167 @59966 has 1 MA's), (188, 59993), (222, 60050), (237, 60086), (250, 60119), (265, 60149), (267, 60152), (292, 60221), (296, 60227), (365, 60392), (381, 60434), (384, 60443), (386, 60452), (390, 60464), (460, 60584), (547, 60737), (579, 60797), (643, 60944), (647, 60965), (653, 60980), (673, 61058), (675, 61064), (755, 61181), (769, 61196), (788, 61253), (799, 61283), (810, 61316), (867, 61436), (907, 61565),

Gene: Fosterous\_33 Start: 30742, Stop: 32505, Start Num: 97

Candidate Starts for Fosterous\_33:

(90, 30724), (Start: 97 @30742 has 73 MA's), (Start: 121 @30778 has 1 MA's), (219, 30916), (262, 31012), (265, 31021), (288, 31090), (306, 31141), (332, 31186), (341, 31201), (368, 31282), (384, 31327), (386, 31336), (445, 31426), (458, 31456), (461, 31471), (472, 31495), (487, 31525), (597, 31747), (607, 31765), (613, 31780), (631, 31810), (635, 31822), (636, 31825), (647, 31852), (791, 32173), (793, 32176), (794, 32179), (810, 32227), (824, 32254), (832, 32281), (860, 32335), (865, 32359), (866, 32362), (891, 32452), (909, 32500),

Gene: FoulBall\_56 Start: 33475, Stop: 35211, Start Num: 107

Candidate Starts for FoulBall\_56:

(Start: 100 @33466 has 2 MA's), (Start: 107 @33475 has 25 MA's), (174, 33565), (240, 33682), (251, 33718), (259, 33739), (271, 33766), (274, 33772), (286, 33802), (302, 33826), (332, 33877), (381, 34015), (383, 34021), (400, 34072), (402, 34075), (407, 34093), (459, 34144), (468, 34165), (470, 34168), (492, 34216), (494, 34222), (511, 34270), (513, 34276), (515, 34282), (555, 34342), (564, 34366), (565, 34369), (583, 34414), (588, 34429), (591, 34438), (594, 34447), (608, 34492), (618, 34510), (631, 34543), (720, 34681), (729, 34702), (754, 34768), (762, 34798), (779, 34852), (791, 34894), (799, 34915), (805, 34936), (810, 34948), (821, 34969), (844, 35023), (880, 35101), (887, 35137), (893, 35158), (901, 35185),

Gene: Foxboro\_42 Start: 31331, Stop: 32944, Start Num: 170

Candidate Starts for Foxboro\_42:

(Start: 170 @31331 has 87 MA's), (Start: 194 @31367 has 1 MA's), (202, 31385), (236, 31445), (340, 31685), (343, 31697), (347, 31712), (372, 31778), (377, 31793), (386, 31817), (387, 31820), (432, 31904), (449, 31934), (450, 31937), (493, 31994), (510, 32042), (511, 32045), (518, 32066), (571, 32171), (592, 32216), (607, 32258), (673, 32432), (683, 32462), (688, 32468), (775, 32576), (776, 32579), (799, 32654), (887, 32873), (906, 32930),

Gene: Francis47\_27 Start: 21642, Stop: 23444, Start Num: 146

Candidate Starts for Francis47\_27:

(Start: 146 @21642 has 223 MA's), (Start: 161 @21663 has 4 MA's), (Start: 190 @21705 has 1 MA's), (216, 21750), (306, 21966), (332, 22011), (338, 22020), (368, 22110), (369, 22113), (378, 22137), (467, 22308), (500, 22377), (583, 22578), (584, 22581), (591, 22602), (635, 22698), (636, 22701), (638, 22707), (665, 22776), (668, 22794), (670, 22803), (677, 22833), (731, 22929), (746, 22962), (750, 22977), (793, 23118), (813, 23175), (862, 23286),

Gene: Francois\_22 Start: 17367, Stop: 19073, Start Num: 162

Candidate Starts for Francois\_22:

(Start: 101 @17292 has 2 MA's), (Start: 162 @17367 has 16 MA's), (Start: 227 @17460 has 2 MA's), (230, 17475), (256, 17556), (279, 17607), (283, 17628), (336, 17739), (349, 17784), (356, 17802), (360, 17814), (444, 17985), (449, 17994), (451, 18000), (487, 18078), (496, 18096), (514, 18147), (541, 18171), (565, 18201), (591, 18270), (603, 18309), (653, 18441), (670, 18501), (714, 18555), (756, 18642), (792, 18756), (795, 18765), (836, 18870), (878, 18957), (913, 19065),

Gene: Frankie\_17 Start: 14912, Stop: 16621, Start Num: 123

Candidate Starts for Frankie\_17:

(Start: 123 @14912 has 215 MA's), (Start: 227 @15044 has 2 MA's), (233, 15068), (240, 15089), (271, 15173), (274, 15179), (281, 15197), (300, 15227), (348, 15332), (370, 15392), (373, 15401), (377, 15410), (378, 15413), (381, 15422), (388, 15446), (418, 15521), (459, 15572), (465, 15587), (468, 15593), (484, 15629), (492, 15644), (494, 15650), (511, 15698), (515, 15710), (521, 15716), (564, 15776), (568, 15788), (583, 15824), (587, 15836), (614, 15911), (618, 15920), (625, 15938), (627, 15944), (638, 15974), (710, 16079), (720, 16091), (737, 16127), (761, 16205), (799, 16325), (810, 16358), (826, 16388), (836, 16418), (841, 16427), (844, 16433), (860, 16448), (861, 16451), (866, 16475), (877, 16505), (882, 16517), (887, 16547), (900, 16589),

Gene: Fred313\_27 Start: 19652, Stop: 21451, Start Num: 144

Candidate Starts for Fred313\_27:

(Start: 144 @19652 has 603 MA's), (Start: 190 @19712 has 1 MA's), (230, 19781), (272, 19883), (277, 19895), (278, 19898), (306, 19973), (315, 19988), (318, 19991), (338, 20027), (384, 20162), (417, 20231), (481, 20345), (532, 20471), (583, 20585), (591, 20609), (595, 20621), (597, 20627), (636, 20708), (665, 20783), (668, 20801), (670, 20810), (675, 20834), (677, 20840), (682, 20855), (707, 20897), (726, 20924), (729, 20933), (731, 20936), (742, 20957), (746, 20969), (813, 21182), (860,

21287), (862, 21293), (900, 21428),

Gene: FreddyB\_16 Start: 14816, Stop: 16525, Start Num: 123

Candidate Starts for FreddyB\_16:

(Start: 123 @14816 has 215 MA's), (193, 14903), (Start: 227 @14948 has 2 MA's), (233, 14972), (271, 15077), (274, 15083), (281, 15101), (300, 15131), (348, 15236), (370, 15296), (378, 15317), (381, 15326), (388, 15350), (459, 15476), (465, 15491), (468, 15497), (484, 15533), (486, 15536), (492, 15548), (494, 15554), (511, 15602), (515, 15614), (521, 15620), (564, 15680), (568, 15692), (583, 15728), (587, 15740), (614, 15815), (618, 15824), (625, 15842), (627, 15848), (638, 15878), (710, 15983), (720, 15995), (737, 16031), (761, 16109), (799, 16229), (810, 16262), (826, 16292), (836, 16322), (841, 16331), (844, 16337), (860, 16352), (861, 16355), (866, 16379), (877, 16409), (882, 16421), (887, 16451), (900, 16493),

Gene: Fribs8\_19 Start: 16521, Stop: 18215, Start Num: 144

Candidate Starts for Fribs8\_19:

(Start: 144 @16521 has 603 MA's), (Start: 150 @16533 has 4 MA's), (222, 16635), (289, 16806), (290, 16809), (306, 16854), (332, 16899), (349, 16947), (365, 16992), (406, 17094), (436, 17127), (442, 17139), (444, 17142), (465, 17199), (481, 17232), (489, 17247), (501, 17274), (513, 17313), (549, 17355), (553, 17364), (574, 17409), (583, 17433), (596, 17472), (635, 17553), (643, 17571), (647, 17580), (650, 17589), (668, 17646), (670, 17655), (750, 17787), (752, 17793), (766, 17814), (791, 17886), (793, 17889), (829, 17985), (842, 18012), (847, 18021), (849, 18024), (862, 18054), (881, 18117),

Gene: Frickyeah\_20 Start: 16428, Stop: 18125, Start Num: 144

Candidate Starts for Frickyeah\_20:

(113, 16389), (Start: 144 @16428 has 603 MA's), (Start: 150 @16440 has 4 MA's), (202, 16518), (219, 16539), (240, 16587), (243, 16596), (263, 16638), (277, 16674), (295, 16731), (302, 16752), (316, 16779), (331, 16806), (382, 16947), (406, 17004), (432, 17031), (436, 17037), (458, 17085), (469, 17115), (485, 17151), (499, 17178), (500, 17181), (517, 17232), (547, 17259), (549, 17262), (561, 17289), (574, 17316), (599, 17388), (618, 17427), (649, 17481), (664, 17523), (683, 17598), (736, 17661), (747, 17688), (752, 17706), (788, 17790), (791, 17799), (793, 17802), (795, 17808), (801, 17823), (811, 17853), (814, 17859), (824, 17880), (825, 17883), (849, 17937), (862, 17967), (863, 17976), (879, 18027), (887, 18060), (891, 18072), (896, 18090),

Gene: Frizzle\_17 Start: 14350, Stop: 15954, Start Num: 195

Candidate Starts for Frizzle\_17:

(56, 14044), (178, 14323), (Start: 195 @14350 has 45 MA's), (298, 14605), (299, 14608), (300, 14611), (308, 14635), (311, 14641), (333, 14683), (413, 14905), (464, 14929), (465, 14932), (466, 14935), (494, 14995), (555, 15106), (556, 15109), (579, 15166), (592, 15205), (594, 15211), (647, 15346), (664, 15391), (670, 15421), (795, 15652), (805, 15685), (831, 15745), (843, 15769), (902, 15937), (907, 15943),

Gene: Froghopper\_28 Start: 21057, Stop: 22859, Start Num: 146

Candidate Starts for Froghopper\_28:

(Start: 146 @21057 has 223 MA's), (Start: 161 @21078 has 4 MA's), (Start: 190 @21120 has 1 MA's), (216, 21165), (306, 21381), (332, 21426), (338, 21435), (349, 21474), (368, 21525), (369, 21528), (406, 21621), (467, 21723), (500, 21792), (583, 21993), (584, 21996), (591, 22017), (635, 22113), (636, 22116), (638, 22122), (665, 22191), (668, 22209), (670, 22218), (677, 22248), (731, 22344), (746, 22377), (750, 22392), (793, 22533), (813, 22590), (862, 22701),

Gene: Frokostdame\_19 Start: 16616, Stop: 18265, Start Num: 195

Candidate Starts for Frokostdame\_19:

(172, 16580), (Start: 195 @16616 has 45 MA's), (200, 16625), (244, 16721), (272, 16799), (308, 16898), (329, 16937), (357, 17018), (377, 17072), (382, 17087), (415, 17171), (494, 17258), (506, 17288), (594, 17471), (601, 17495), (626, 17546), (658, 17639), (664, 17651), (694, 17696), (702, 17711), (716, 17738), (757, 17843), (758, 17846), (788, 17945), (795, 17963), (813, 18014), (839, 18074), (843, 18080), (877, 18155),

Gene: Frosty24\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Frosty24\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Fruitloop\_16 Start: 14838, Stop: 16547, Start Num: 123

Candidate Starts for Fruitloop\_16:

(Start: 123 @14838 has 215 MA's), (193, 14925), (Start: 227 @14970 has 2 MA's), (233, 14994), (271, 15099), (274, 15105), (281, 15123), (300, 15153), (348, 15258), (370, 15318), (378, 15339), (381, 15348), (386, 15366), (388, 15372), (459, 15498), (465, 15513), (468, 15519), (484, 15555), (486, 15558), (492, 15570), (494, 15576), (511, 15624), (515, 15636), (521, 15642), (564, 15702), (568, 15714), (583, 15750), (587, 15762), (614, 15837), (618, 15846), (625, 15864), (627, 15870), (638, 15900), (710, 16005), (717, 16014), (720, 16017), (737, 16053), (761, 16131), (791, 16230), (799, 16251), (810, 16284), (826, 16314), (836, 16344), (841, 16353), (844, 16359), (860, 16374), (861, 16377), (866, 16401), (877, 16431), (882, 16443), (887, 16473), (900, 16515),

Gene: Fryberger\_53 Start: 27936, Stop: 29621, Start Num: 135

Candidate Starts for Fryberger\_53:

(59, 27744), (60, 27753), (62, 27759), (87, 27861), (102, 27891), (Start: 135 @27936 has 7 MA's), (232, 28077), (292, 28236), (316, 28290), (378, 28446), (434, 28545), (458, 28593), (481, 28650), (489, 28665), (546, 28755), (600, 28893), (635, 28956), (668, 29052), (703, 29103), (705, 29106), (711, 29118), (750, 29193), (754, 29208), (791, 29292), (824, 29373), (897, 29589), (902, 29607),

Gene: Fugax\_33 Start: 26575, Stop: 28341, Start Num: 97

Candidate Starts for Fugax\_33:

(80, 26533), (Start: 97 @26575 has 73 MA's), (Start: 121 @26611 has 1 MA's), (Start: 148 @26644 has 14 MA's), (264, 26854), (265, 26857), (277, 26887), (298, 26953), (306, 26977), (311, 26986), (331, 27019), (386, 27172), (406, 27211), (445, 27262), (451, 27274), (458, 27292), (460, 27304), (465, 27316), (472, 27331), (487, 27361), (489, 27364), (499, 27385), (547, 27457), (568, 27505), (613, 27616), (632, 27649), (649, 27691), (670, 27763), (707, 27829), (715, 27841), (793, 28012), (794, 28015), (810, 28063), (824, 28090), (832, 28117), (860, 28171), (891, 28288), (897, 28309), (909, 28336),

Gene: Fulbright\_18 Start: 14986, Stop: 16695, Start Num: 126

Candidate Starts for Fulbright\_18:

(Start: 126 @14986 has 42 MA's), (Start: 150 @15013 has 4 MA's), (Start: 227 @15118 has 2 MA's), (229, 15130), (241, 15166), (258, 15217), (271, 15247), (274, 15253), (284, 15280), (287, 15286), (348, 15406), (367, 15460), (370, 15466), (377, 15484), (381, 15496), (382, 15499), (388, 15520), (403, 15562), (418, 15595), (459, 15646), (465, 15661), (484, 15703), (492, 15718), (494, 15724), (511, 15772), (525, 15796), (547, 15826), (564, 15850), (587, 15910), (591, 15922), (608, 15976), (614, 15985), (637, 16045), (638, 16048), (710, 16153), (717, 16162), (737, 16201), (781, 16339), (834, 16489), (836, 16492), (841, 16501), (860, 16522), (866, 16549), (880, 16585), (907, 16678),

Gene: Funston\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Funston\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Fury\_50 Start: 30682, Stop: 32301, Start Num: 170

Candidate Starts for Fury\_50:

(Start: 170 @30682 has 87 MA's), (179, 30697), (202, 30736), (236, 30796), (265, 30880), (347, 31063), (372, 31129), (377, 31144), (390, 31180), (432, 31255), (449, 31285), (450, 31288), (457, 31306), (493, 31345), (505, 31375), (596, 31579), (607, 31609), (635, 31657), (636, 31660), (673, 31783), (688, 31819), (799, 32005), (869, 32158), (885, 32212), (887, 32224), (891, 32236), (906, 32281),

Gene: Fushigi\_28 Start: 21514, Stop: 23316, Start Num: 146

Candidate Starts for Fushigi\_28:

(Start: 146 @21514 has 223 MA's), (Start: 161 @21535 has 4 MA's), (Start: 190 @21577 has 1 MA's), (216, 21622), (306, 21838), (332, 21883), (338, 21892), (349, 21931), (368, 21982), (369, 21985), (380, 22015), (467, 22180), (500, 22249), (583, 22450), (584, 22453), (591, 22474), (635, 22570), (636, 22573), (638, 22579), (665, 22648), (668, 22666), (670, 22675), (677, 22705), (731, 22801), (746, 22834), (750, 22849), (793, 22990), (813, 23047), (862, 23158),

Gene: GAL1\_20 Start: 16985, Stop: 18748, Start Num: 118

Candidate Starts for GAL1\_20:

(113, 16976), (Start: 118 @16985 has 8 MA's), (184, 17072), (202, 17108), (234, 17159), (241, 17183), (243, 17189), (255, 17249), (263, 17264), (288, 17339), (290, 17345), (323, 17414), (341, 17444), (347, 17471), (349, 17477), (359, 17507), (365, 17525), (376, 17552), (379, 17561), (382, 17570), (384, 17576), (385, 17582), (395, 17612), (433, 17654), (445, 17675), (449, 17681), (453, 17693), (482, 17759), (495, 17786), (497, 17789), (568, 17915), (591, 17975), (605, 18011), (635, 18071), (636, 18074), (644, 18092), (647, 18101), (668, 18167), (670, 18176), (739, 18290), (750, 18323), (754, 18338), (764, 18347), (783, 18395), (793, 18425), (813, 18482), (815, 18485), (818, 18494), (835, 18536), (860, 18581), (862, 18587), (867, 18611), (869, 18617), (876, 18638), (890, 18692), (897, 18716), (902, 18734), (909, 18743),

Gene: GEazy\_19 Start: 16647, Stop: 18377, Start Num: 141

Candidate Starts for GEazy\_19:

(72, 16527), (113, 16611), (Start: 141 @16647 has 14 MA's), (222, 16767), (252, 16851), (272, 16884), (281, 16917), (316, 17001), (392, 17202), (414, 17244), (445, 17280), (458, 17310), (465, 17334), (485, 17376), (499, 17403), (500, 17406), (537, 17460), (540, 17466), (579, 17553), (737, 17913), (747, 17937), (752, 17955), (793, 18051), (799, 18069), (864, 18228), (888, 18315), (896, 18342),

Gene: GMA1\_19 Start: 15927, Stop: 17480, Start Num: 182

Candidate Starts for GMA1\_19:

(79, 15795), (Start: 182 @15927 has 1 MA's), (231, 16008), (248, 16050), (272, 16116), (276, 16125), (277, 16128), (280, 16131), (298, 16179), (306, 16197), (307, 16200), (377, 16365), (388, 16401), (392, 16413), (397, 16425), (500, 16530), (504, 16542), (512, 16569), (589, 16719), (618, 16788), (636, 16824), (672, 16938), (673, 16944), (712, 16974), (719, 16983), (740, 17019), (746, 17031), (762, 17067), (773, 17079), (807, 17190), (812, 17202), (849, 17277), (861, 17310), (863, 17322),

(876, 17364), (880, 17373), (895, 17436),

Gene: GMA2\_30 Start: 31614, Stop: 33245, Start Num: 153

Candidate Starts for GMA2\_30:

(Start: 153 @31614 has 11 MA's), (250, 31785), (272, 31833), (278, 31848), (296, 31893), (368, 32064), (381, 32100), (384, 32109), (385, 32115), (386, 32118), (390, 32130), (460, 32250), (512, 32367), (551, 32412), (643, 32613), (647, 32634), (653, 32649), (670, 32709), (731, 32787), (742, 32808), (746, 32817), (769, 32865), (886, 33171), (900, 33219),

Gene: GMA4\_18 Start: 16957, Stop: 18117, Start Num: 214

Candidate Starts for GMA4\_18:

(214, 16957), (216, 16960), (219, 16963), (225, 16972), (246, 17032), (247, 17035), (263, 17068), (285, 17125), (316, 17179), (323, 17191), (335, 17218), (348, 17263), (420, 17452), (449, 17506), (451, 17512), (491, 17602), (537, 17713), (578, 17815), (601, 17887), (663, 18070),

Gene: GMonster\_26 Start: 20497, Stop: 22278, Start Num: 161

Candidate Starts for GMonster\_26:

(Start: 146 @20476 has 223 MA's), (Start: 161 @20497 has 4 MA's), (Start: 190 @20539 has 1 MA's), (216, 20584), (306, 20800), (332, 20845), (338, 20854), (368, 20944), (369, 20947), (378, 20971), (406, 21040), (467, 21142), (500, 21211), (579, 21400), (583, 21412), (584, 21415), (591, 21436), (635, 21532), (636, 21535), (638, 21541), (665, 21610), (668, 21628), (670, 21637), (677, 21667), (731, 21763), (746, 21796), (750, 21811), (793, 21952), (813, 22009), (862, 22120),

Gene: GRU1\_31 Start: 23089, Stop: 24708, Start Num: 170

Candidate Starts for GRU1\_31:

(Start: 170 @23089 has 87 MA's), (179, 23104), (Start: 194 @23125 has 1 MA's), (236, 23203), (282, 23341), (347, 23470), (358, 23500), (368, 23527), (372, 23536), (377, 23551), (432, 23662), (449, 23692), (450, 23695), (493, 23752), (593, 23977), (607, 24016), (635, 24064), (673, 24190), (688, 24226), (749, 24283), (776, 24337), (799, 24412), (863, 24544), (885, 24619), (887, 24631), (891, 24643), (893, 24652), (906, 24688),

Gene: GTE2\_16 Start: 15173, Stop: 16768, Start Num: 214

Candidate Starts for GTE2\_16:

(Start: 133 @15068 has 8 MA's), (Start: 144 @15071 has 603 MA's), (214, 15173), (222, 15185), (264, 15281), (292, 15365), (336, 15455), (356, 15515), (365, 15542), (377, 15572), (378, 15575), (385, 15599), (395, 15629), (406, 15644), (436, 15677), (442, 15689), (444, 15692), (453, 15713), (481, 15782), (487, 15794), (505, 15836), (574, 15959), (636, 16109), (643, 16124), (650, 16142), (668, 16199), (750, 16340), (752, 16346), (755, 16358), (766, 16367), (791, 16439), (793, 16442), (795, 16448), (799, 16460), (835, 16553), (842, 16565), (847, 16574), (862, 16607),

Gene: GTE5\_32 Start: 24044, Stop: 25663, Start Num: 170

Candidate Starts for GTE5\_32:

(Start: 170 @24044 has 87 MA's), (179, 24059), (Start: 194 @24080 has 1 MA's), (236, 24158), (347, 24425), (358, 24455), (368, 24482), (372, 24491), (377, 24506), (432, 24617), (449, 24647), (450, 24650), (493, 24707), (571, 24884), (593, 24932), (607, 24971), (609, 24980), (635, 25019), (673, 25145), (688, 25181), (749, 25238), (776, 25292), (799, 25367), (863, 25499), (885, 25574), (887, 25586), (891, 25598), (893, 25607), (906, 25643),

Gene: GTE6\_32 Start: 28048, Stop: 29667, Start Num: 163

Candidate Starts for GTE6\_32:

(Start: 163 @28048 has 10 MA's), (178, 28069), (219, 28132), (272, 28255), (277, 28267), (298, 28324), (341, 28402), (382, 28525), (449, 28639), (460, 28669), (481, 28711), (508, 28774), (547, 28822), (551, 28831), (579, 28882), (596, 28930), (664, 29095), (670, 29125), (742, 29224), (746,

29233), (747, 29236), (769, 29281), (786, 29338), (788, 29344), (790, 29350), (806, 29398), (810, 29407), (813, 29413), (815, 29416), (842, 29467), (863, 29512), (883, 29581), (896, 29629), (900, 29641),

Gene: GTE8\_30 Start: 24084, Stop: 25697, Start Num: 170

Candidate Starts for GTE8\_30:

(Start: 170 @24084 has 87 MA's), (Start: 194 @24120 has 1 MA's), (236, 24198), (340, 24438), (343, 24450), (347, 24465), (372, 24531), (377, 24546), (386, 24570), (432, 24657), (449, 24687), (450, 24690), (488, 24735), (493, 24747), (510, 24795), (511, 24798), (518, 24819), (592, 24969), (607, 25011), (673, 25185), (688, 25221), (775, 25329), (776, 25332), (799, 25407), (887, 25626), (906, 25683),

Gene: GUmbie\_16 Start: 14805, Stop: 16514, Start Num: 123

Candidate Starts for GUmbie\_16:

(Start: 123 @14805 has 215 MA's), (193, 14892), (Start: 227 @14937 has 2 MA's), (233, 14961), (271, 15066), (274, 15072), (281, 15090), (300, 15120), (348, 15225), (367, 15279), (370, 15285), (373, 15294), (378, 15306), (381, 15315), (388, 15339), (402, 15375), (403, 15381), (407, 15393), (418, 15414), (420, 15417), (424, 15426), (443, 15441), (448, 15447), (459, 15465), (465, 15480), (468, 15486), (475, 15504), (477, 15507), (484, 15522), (492, 15537), (494, 15543), (506, 15573), (511, 15591), (515, 15603), (521, 15609), (564, 15669), (568, 15681), (583, 15717), (587, 15729), (594, 15750), (614, 15804), (618, 15813), (627, 15837), (638, 15867), (710, 15972), (720, 15984), (737, 16020), (751, 16059), (761, 16098), (791, 16197), (799, 16218), (810, 16251), (826, 16281), (836, 16311), (841, 16320), (844, 16326), (860, 16341), (861, 16344), (865, 16365), (866, 16368), (882, 16410), (887, 16440), (900, 16482), (901, 16488),

Gene: Gadost\_27 Start: 19831, Stop: 21609, Start Num: 144

Candidate Starts for Gadost\_27:

(Start: 123 @19807 has 215 MA's), (Start: 144 @19831 has 603 MA's), (Start: 190 @19888 has 1 MA's), (222, 19942), (230, 19957), (236, 19975), (272, 20059), (277, 20071), (278, 20074), (306, 20149), (315, 20164), (338, 20203), (378, 20320), (417, 20407), (463, 20488), (489, 20536), (500, 20560), (532, 20647), (553, 20692), (584, 20764), (591, 20785), (597, 20803), (636, 20884), (668, 20977), (670, 20986), (675, 21010), (677, 21016), (687, 21040), (731, 21094), (742, 21115), (756, 21166), (763, 21190), (782, 21244), (813, 21340), (860, 21445), (863, 21460), (894, 21568), (900, 21586),

Gene: Gaea\_34 Start: 29484, Stop: 31247, Start Num: 97

Candidate Starts for Gaea\_34:

(Start: 97 @29484 has 73 MA's), (Start: 121 @29520 has 1 MA's), (211, 29649), (219, 29658), (262, 29754), (265, 29763), (288, 29832), (306, 29883), (311, 29892), (332, 29928), (341, 29943), (345, 29961), (368, 30024), (384, 30069), (386, 30078), (458, 30198), (461, 30213), (465, 30222), (472, 30237), (487, 30267), (597, 30489), (607, 30507), (613, 30522), (635, 30564), (636, 30567), (647, 30594), (688, 30714), (749, 30807), (793, 30918), (794, 30921), (810, 30969), (824, 30996), (832, 31023), (860, 31077), (866, 31104),

Gene: Gage\_26 Start: 19820, Stop: 21415, Start Num: 191

Candidate Starts for Gage\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: GageAP\_29 Start: 21828, Stop: 23630, Start Num: 146

Candidate Starts for GageAP\_29:

(Start: 146 @21828 has 223 MA's), (Start: 161 @21849 has 4 MA's), (Start: 190 @21891 has 1 MA's), (216, 21936), (306, 22152), (332, 22197), (338, 22206), (349, 22245), (368, 22296), (369, 22299), (467, 22494), (500, 22563), (583, 22764), (584, 22767), (591, 22788), (635, 22884), (636, 22887), (638, 22893), (665, 22962), (668, 22980), (670, 22989), (677, 23019), (731, 23115), (746, 23148), (750, 23163), (793, 23304), (813, 23361), (862, 23472), (909, 23625),

Gene: Gaia\_16 Start: 15059, Stop: 16948, Start Num: 99

Candidate Starts for Gaia\_16:

(Start: 99 @15059 has 2 MA's), (106, 15068), (119, 15089), (Start: 175 @15158 has 1 MA's), (189, 15176), (197, 15194), (230, 15248), (242, 15284), (248, 15299), (249, 15302), (272, 15362), (309, 15455), (334, 15500), (337, 15506), (340, 15512), (345, 15533), (348, 15545), (365, 15593), (380, 15632), (381, 15635), (382, 15638), (393, 15674), (400, 15692), (415, 15719), (421, 15728), (448, 15767), (454, 15785), (476, 15833), (497, 15875), (515, 15929), (517, 15935), (519, 15941), (532, 15971), (550, 16010), (552, 16019), (563, 16043), (565, 16049), (598, 16139), (602, 16154), (629, 16220), (641, 16250), (655, 16298), (664, 16322), (665, 16325), (670, 16352), (719, 16412), (727, 16433), (738, 16454), (754, 16502), (757, 16514), (773, 16559), (788, 16619), (826, 16715), (828, 16721), (836, 16745), (843, 16757), (850, 16766), (863, 16784), (880, 16835), (891, 16883), (893, 16892), (896, 16901), (898, 16910), (900, 16913), (913, 16940),

Gene: Gail\_28 Start: 19405, Stop: 21204, Start Num: 144

Candidate Starts for Gail\_28:

(Start: 141 @19402 has 14 MA's), (Start: 144 @19405 has 603 MA's), (Start: 235 @19540 has 1 MA's), (265, 19609), (278, 19642), (305, 19714), (306, 19717), (318, 19735), (341, 19777), (378, 19888), (384, 19906), (392, 19933), (395, 19942), (417, 19975), (460, 20050), (463, 20056), (467, 20059), (495, 20119), (535, 20221), (547, 20248), (576, 20308), (584, 20332), (597, 20371), (636, 20452), (707, 20650), (750, 20737), (752, 20743), (781, 20836), (860, 21040), (862, 21046),

Gene: Galactic\_16 Start: 14803, Stop: 16512, Start Num: 123

Candidate Starts for Galactic\_16:

(Start: 123 @14803 has 215 MA's), (193, 14890), (Start: 227 @14935 has 2 MA's), (233, 14959), (271, 15064), (274, 15070), (281, 15088), (300, 15118), (348, 15223), (370, 15283), (378, 15304), (381, 15313), (388, 15337), (459, 15463), (465, 15478), (468, 15484), (484, 15520), (486, 15523), (492, 15535), (494, 15541), (511, 15589), (515, 15601), (521, 15607), (564, 15667), (568, 15679), (583, 15715), (587, 15727), (614, 15802), (618, 15811), (625, 15829), (627, 15835), (638, 15865), (710, 15970), (717, 15979), (720, 15982), (737, 16018), (761, 16096), (791, 16195), (799, 16216), (810, 16249), (826, 16279), (836, 16309), (841, 16318), (844, 16324), (860, 16339), (861, 16342), (866, 16366), (877, 16396), (882, 16408), (887, 16438), (900, 16480),

Gene: Galadriel\_35 Start: 31231, Stop: 32994, Start Num: 97

Candidate Starts for Galadriel\_35:

(90, 31213), (Start: 97 @31231 has 73 MA's), (Start: 121 @31267 has 1 MA's), (219, 31405), (262, 31501), (265, 31510), (288, 31579), (306, 31630), (332, 31675), (341, 31690), (368, 31771), (384, 31816), (386, 31825), (445, 31915), (458, 31945), (461, 31960), (472, 31984), (487, 32014), (551, 32119), (597, 32236), (607, 32254), (613, 32269), (631, 32299), (635, 32311), (636, 32314), (647, 32341), (793, 32665), (794, 32668), (810, 32716), (824, 32743), (832, 32770), (860, 32824), (865, 32848), (866, 32851), (891, 32941), (909, 32989),

Gene: Gambino\_21 Start: 16962, Stop: 18611, Start Num: 195

Candidate Starts for Gambino\_21:

(172, 16926), (Start: 195 @16962 has 45 MA's), (200, 16971), (244, 17067), (272, 17145), (299, 17217), (308, 17244), (329, 17283), (357, 17364), (377, 17418), (494, 17604), (506, 17634), (563,



17733), (594, 17817), (601, 17841), (626, 17892), (658, 17985), (664, 17997), (694, 18042), (702, 18057), (757, 18189), (758, 18192), (788, 18291), (795, 18309), (813, 18360), (839, 18420), (843, 18426), (877, 18501),

Gene: Gancho\_21 Start: 17127, Stop: 18869, Start Num: 112

Candidate Starts for Gancho\_21:

(58, 16953), (Start: 112 @17127 has 41 MA's), (Start: 117 @17136 has 59 MA's), (179, 17217), (189, 17229), (201, 17253), (212, 17265), (Start: 227 @17286 has 2 MA's), (230, 17301), (255, 17379), (282, 17451), (325, 17541), (355, 17625), (358, 17634), (365, 17655), (388, 17721), (398, 17748), (416, 17781), (438, 17799), (448, 17817), (449, 17820), (454, 17835), (455, 17838), (487, 17904), (489, 17907), (514, 17973), (555, 17997), (588, 18084), (605, 18138), (628, 18183), (631, 18189), (641, 18216), (654, 18261), (704, 18354), (708, 18363), (756, 18441), (802, 18585), (807, 18603), (813, 18615), (822, 18630), (824, 18633), (831, 18654), (865, 18714), (876, 18747), (878, 18753), (880, 18756), (896, 18822), (913, 18861),

Gene: Gandalf20\_28 Start: 21933, Stop: 23735, Start Num: 146

Candidate Starts for Gandalf20\_28:

(Start: 146 @21933 has 223 MA's), (Start: 161 @21954 has 4 MA's), (Start: 190 @21996 has 1 MA's), (216, 22041), (306, 22257), (332, 22302), (338, 22311), (349, 22350), (368, 22401), (369, 22404), (467, 22599), (500, 22668), (583, 22869), (584, 22872), (591, 22893), (635, 22989), (636, 22992), (638, 22998), (665, 23067), (668, 23085), (670, 23094), (677, 23124), (731, 23220), (746, 23253), (750, 23268), (793, 23409), (813, 23466), (862, 23577),

Gene: Gandalph\_16 Start: 14822, Stop: 16531, Start Num: 123

Candidate Starts for Gandalph\_16:

(Start: 123 @14822 has 215 MA's), (193, 14909), (Start: 227 @14954 has 2 MA's), (233, 14978), (271, 15083), (274, 15089), (281, 15107), (300, 15137), (348, 15242), (367, 15296), (370, 15302), (373, 15311), (378, 15323), (381, 15332), (388, 15356), (402, 15392), (403, 15398), (407, 15410), (418, 15431), (420, 15434), (424, 15443), (443, 15458), (448, 15464), (459, 15482), (465, 15497), (468, 15503), (475, 15521), (477, 15524), (484, 15539), (486, 15542), (492, 15554), (494, 15560), (511, 15608), (515, 15620), (521, 15626), (564, 15686), (568, 15698), (583, 15734), (587, 15746), (594, 15767), (614, 15821), (618, 15830), (625, 15848), (627, 15854), (638, 15884), (710, 15989), (717, 15998), (720, 16001), (737, 16037), (751, 16076), (761, 16115), (791, 16214), (799, 16235), (810, 16268), (826, 16298), (836, 16328), (841, 16337), (844, 16343), (860, 16358), (861, 16361), (866, 16385), (877, 16415), (882, 16427), (887, 16457), (900, 16499),

Gene: Ganymede\_24 Start: 17168, Stop: 18934, Start Num: 114

Candidate Starts for Ganymede\_24:

(Start: 114 @17168 has 139 MA's), (140, 17198), (236, 17357), (248, 17390), (258, 17420), (272, 17453), (278, 17465), (316, 17555), (337, 17597), (360, 17669), (362, 17678), (378, 17717), (392, 17762), (400, 17783), (403, 17786), (438, 17840), (448, 17858), (465, 17900), (468, 17906), (481, 17933), (564, 18071), (572, 18089), (587, 18131), (593, 18149), (603, 18179), (618, 18206), (655, 18311), (748, 18470), (757, 18506), (772, 18545), (793, 18620), (810, 18671), (890, 18866), (901, 18905), (902, 18908), (913, 18926),

Gene: Garak\_32 Start: 19977, Stop: 21749, Start Num: 144

Candidate Starts for Garak\_32:

(94, 19911), (Start: 123 @19953 has 215 MA's), (Start: 144 @19977 has 603 MA's), (278, 20214), (305, 20286), (306, 20289), (315, 20304), (338, 20343), (341, 20349), (378, 20460), (380, 20466), (392, 20505), (417, 20547), (448, 20586), (463, 20628), (467, 20631), (532, 20787), (592, 20928), (597, 20943), (677, 21156), (742, 21255), (750, 21282), (765, 21333), (770, 21342), (781, 21381), (782, 21384), (860, 21585), (862, 21591), (900, 21726),

Gene: Gator\_22 Start: 19361, Stop: 21040, Start Num: 129

Candidate Starts for Gator\_22:

(Start: 129 @19361 has 79 MA's), (Start: 191 @19445 has 45 MA's), (Start: 235 @19523 has 1 MA's), (268, 19610), (274, 19625), (300, 19673), (324, 19712), (356, 19799), (368, 19832), (381, 19868), (390, 19898), (392, 19904), (422, 19973), (461, 20003), (466, 20015), (468, 20018), (494, 20075), (565, 20207), (567, 20213), (592, 20279), (594, 20285), (601, 20309), (618, 20357), (627, 20381), (631, 20390), (658, 20465), (717, 20516), (725, 20531), (782, 20693), (788, 20720), (799, 20750), (843, 20855), (880, 20933), (887, 20969), (890, 20978), (900, 21011), (907, 21026),

Gene: GaugeLDP\_30 Start: 21466, Stop: 23238, Start Num: 144

Candidate Starts for GaugeLDP\_30:

(Start: 123 @21442 has 215 MA's), (Start: 144 @21466 has 603 MA's), (Start: 235 @21601 has 1 MA's), (277, 21700), (278, 21703), (306, 21778), (318, 21796), (338, 21832), (341, 21838), (356, 21889), (378, 21949), (392, 21994), (417, 22036), (455, 22096), (463, 22117), (467, 22120), (532, 22276), (583, 22390), (584, 22393), (636, 22513), (675, 22639), (677, 22645), (737, 22735), (742, 22744), (750, 22771), (756, 22795), (781, 22870), (782, 22873), (784, 22885), (813, 22969), (851, 23050), (860, 23074), (862, 23080), (877, 23134), (900, 23215),

Gene: Geeche\_47 Start: 29431, Stop: 31122, Start Num: 146

Candidate Starts for Geeche\_47:

(Start: 146 @29431 has 223 MA's), (188, 29491), (206, 29524), (228, 29557), (271, 29683), (282, 29716), (286, 29725), (349, 29854), (366, 29902), (494, 30115), (498, 30121), (506, 30145), (576, 30274), (583, 30295), (594, 30328), (658, 30526), (758, 30679), (788, 30778), (793, 30790), (796, 30799), (829, 30883), (888, 31030), (898, 31066), (902, 31078),

Gene: GemG\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for GemG\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Gemini\_27 Start: 20253, Stop: 21932, Start Num: 129

Candidate Starts for Gemini\_27:

(Start: 129 @20253 has 79 MA's), (Start: 191 @20337 has 45 MA's), (Start: 235 @20415 has 1 MA's), (268, 20502), (274, 20517), (300, 20565), (324, 20604), (356, 20691), (368, 20724), (381, 20760), (390, 20790), (392, 20796), (422, 20865), (461, 20895), (466, 20907), (468, 20910), (494, 20967), (565, 21099), (567, 21105), (592, 21171), (594, 21177), (601, 21201), (618, 21249), (627, 21273), (631, 21282), (658, 21357), (717, 21408), (725, 21423), (782, 21585), (788, 21612), (799, 21642), (843, 21747), (880, 21825), (887, 21861), (890, 21870), (900, 21903), (907, 21918),

Gene: Gemma\_29 Start: 20456, Stop: 22252, Start Num: 144

Candidate Starts for Gemma\_29:

(Start: 144 @20456 has 603 MA's), (Start: 190 @20513 has 1 MA's), (197, 20528), (230, 20582), (Start: 235 @20597 has 1 MA's), (272, 20684), (277, 20696), (278, 20699), (306, 20774), (315, 20789), (417, 21032), (500, 21185), (532, 21272), (576, 21365), (583, 21386), (591, 21410), (595, 21422), (597, 21428), (636, 21509), (665, 21584), (668, 21602), (670, 21611), (675, 21635), (677, 21641), (682, 21656), (695, 21680), (729, 21734), (731, 21737), (742, 21758), (860, 22088), (862, 22094), (900, 22229),

Gene: Gengar\_21 Start: 17520, Stop: 19292, Start Num: 117

Candidate Starts for Gengar\_21:

(Start: 117 @17520 has 59 MA's), (Start: 123 @17526 has 215 MA's), (143, 17550), (Start: 168 @17583 has 32 MA's), (197, 17631), (230, 17685), (248, 17736), (272, 17799), (321, 17907), (360, 18015), (400, 18129), (403, 18132), (424, 18171), (438, 18186), (444, 18198), (448, 18204), (465, 18246), (468, 18252), (487, 18291), (499, 18315), (564, 18417), (588, 18480), (602, 18525), (655, 18660), (708, 18759), (750, 18837), (756, 18861), (762, 18882), (793, 18978), (795, 18984), (865, 19137), (895, 19242), (896, 19245), (901, 19263),

Gene: Geodirt\_32 Start: 30217, Stop: 31980, Start Num: 97

Candidate Starts for Geodirt\_32:

(90, 30199), (Start: 97 @30217 has 73 MA's), (Start: 121 @30253 has 1 MA's), (219, 30391), (262, 30487), (265, 30496), (288, 30565), (306, 30616), (332, 30661), (341, 30676), (368, 30757), (384, 30802), (386, 30811), (445, 30901), (458, 30931), (461, 30946), (472, 30970), (487, 31000), (551, 31105), (597, 31222), (607, 31240), (613, 31255), (631, 31285), (635, 31297), (636, 31300), (647, 31327), (793, 31651), (794, 31654), (810, 31702), (824, 31729), (832, 31756), (860, 31810), (866, 31837), (909, 31975),

Gene: George\_23 Start: 19658, Stop: 21454, Start Num: 144

Candidate Starts for George\_23:

(Start: 144 @19658 has 603 MA's), (222, 19763), (236, 19796), (278, 19895), (306, 19970), (315, 19985), (336, 20021), (360, 20093), (365, 20108), (380, 20147), (388, 20174), (395, 20195), (430, 20234), (481, 20342), (495, 20372), (499, 20378), (553, 20513), (579, 20570), (580, 20573), (583, 20582), (597, 20624), (602, 20642), (635, 20702), (636, 20705), (668, 20798), (670, 20807), (675, 20831), (729, 20939), (746, 20975), (813, 21185), (859, 21287), (862, 21296), (893, 21410), (900, 21431), (902, 21440),

Gene: Georgie2\_29 Start: 20109, Stop: 21881, Start Num: 144

Candidate Starts for Georgie2\_29:

(94, 20043), (Start: 123 @20085 has 215 MA's), (Start: 144 @20109 has 603 MA's), (219, 20208), (251, 20292), (277, 20343), (278, 20346), (305, 20418), (306, 20421), (338, 20475), (349, 20514), (365, 20559), (378, 20592), (417, 20679), (463, 20760), (467, 20763), (584, 21036), (636, 21156), (675, 21282), (713, 21336), (746, 21399), (750, 21414), (752, 21420), (770, 21474), (781, 21513), (784, 21528), (813, 21612), (862, 21723), (900, 21858),

Gene: Geraldini\_23 Start: 17164, Stop: 18930, Start Num: 114

Candidate Starts for Geraldini\_23:

(Start: 114 @17164 has 139 MA's), (140, 17194), (236, 17353), (248, 17386), (258, 17416), (272, 17449), (278, 17461), (316, 17551), (337, 17593), (360, 17665), (362, 17674), (378, 17713), (392, 17758), (400, 17779), (403, 17782), (438, 17836), (448, 17854), (465, 17896), (468, 17902), (481, 17929), (564, 18067), (572, 18085), (587, 18127), (593, 18145), (603, 18175), (618, 18202), (655, 18307), (748, 18466), (757, 18502), (772, 18541), (793, 18616), (810, 18667), (890, 18862), (901, 18901), (902, 18904), (913, 18922),

Gene: Geralt\_16 Start: 14805, Stop: 16514, Start Num: 123

Candidate Starts for Geralt\_16:

(Start: 123 @14805 has 215 MA's), (193, 14892), (Start: 227 @14937 has 2 MA's), (233, 14961), (271, 15066), (274, 15072), (281, 15090), (300, 15120), (348, 15225), (370, 15285), (378, 15306), (381, 15315), (388, 15339), (459, 15465), (465, 15480), (468, 15486), (484, 15522), (486, 15525), (492, 15537), (494, 15543), (511, 15591), (515, 15603), (521, 15609), (564, 15669), (568, 15681), (583, 15717), (587, 15729), (614, 15804), (618, 15813), (625, 15831), (627, 15837), (638, 15867), (710, 15972), (717, 15981), (720, 15984), (737, 16020), (761, 16098), (791, 16197), (799, 16218), (810, 16251), (826, 16281), (836, 16311), (841, 16320), (844, 16326), (860, 16341), (861, 16344), (866, 16368), (877, 16398), (882, 16410), (887, 16440), (900, 16482),

Gene: Getalong\_21 Start: 17225, Stop: 18922, Start Num: 144

Candidate Starts for Getalong\_21:

(113, 17186), (Start: 144 @17225 has 603 MA's), (Start: 150 @17237 has 4 MA's), (Start: 153 @17240 has 11 MA's), (180, 17276), (202, 17315), (219, 17336), (239, 17378), (240, 17384), (241, 17387), (246, 17399), (263, 17435), (277, 17471), (295, 17528), (316, 17576), (331, 17603), (368, 17705), (382, 17744), (406, 17801), (414, 17819), (432, 17828), (436, 17834), (458, 17882), (469, 17912), (485, 17948), (489, 17954), (499, 17975), (500, 17978), (517, 18029), (547, 18056), (549, 18059), (561, 18086), (574, 18113), (599, 18185), (618, 18224), (649, 18278), (670, 18350), (683, 18395), (747, 18485), (752, 18503), (788, 18587), (791, 18596), (793, 18599), (795, 18605), (801, 18620), (811, 18650), (814, 18656), (824, 18677), (825, 18680), (849, 18734), (862, 18764), (863, 18773), (879, 18824), (887, 18857), (891, 18869), (896, 18887),

Gene: Gex\_18 Start: 14985, Stop: 16694, Start Num: 126

Candidate Starts for Gex\_18:

(Start: 126 @14985 has 42 MA's), (Start: 150 @15012 has 4 MA's), (Start: 227 @15117 has 2 MA's), (229, 15129), (241, 15165), (258, 15216), (271, 15246), (274, 15252), (284, 15279), (287, 15285), (348, 15405), (367, 15459), (370, 15465), (377, 15483), (381, 15495), (382, 15498), (388, 15519), (403, 15561), (418, 15594), (459, 15645), (465, 15660), (484, 15702), (492, 15717), (494, 15723), (511, 15771), (525, 15795), (547, 15825), (564, 15849), (587, 15909), (591, 15921), (608, 15975), (614, 15984), (637, 16044), (638, 16047), (710, 16152), (717, 16161), (737, 16200), (781, 16338), (834, 16488), (836, 16491), (841, 16500), (860, 16521), (866, 16548), (880, 16584), (907, 16677),

Gene: Gezellig\_32 Start: 25951, Stop: 27759, Start Num: 80

Candidate Starts for Gezellig\_32:

(80, 25951), (Start: 97 @25993 has 73 MA's), (Start: 121 @26029 has 1 MA's), (Start: 148 @26062 has 14 MA's), (264, 26272), (265, 26275), (277, 26305), (298, 26371), (306, 26395), (311, 26404), (331, 26437), (386, 26590), (406, 26629), (445, 26680), (451, 26692), (458, 26710), (460, 26722), (465, 26734), (472, 26749), (487, 26779), (489, 26782), (499, 26803), (547, 26875), (568, 26923), (613, 27034), (632, 27067), (647, 27106), (649, 27109), (670, 27181), (707, 27247), (715, 27259), (793, 27430), (794, 27433), (810, 27481), (824, 27508), (832, 27535), (860, 27589), (891, 27706), (897, 27727), (909, 27754),

Gene: Ghobes\_16 Start: 14348, Stop: 15952, Start Num: 195

Candidate Starts for Ghobes\_16:

(56, 14042), (178, 14321), (Start: 195 @14348 has 45 MA's), (298, 14603), (299, 14606), (300, 14609), (308, 14633), (311, 14639), (333, 14681), (341, 14699), (383, 14825), (413, 14903), (464, 14927), (465, 14930), (466, 14933), (494, 14993), (555, 15104), (556, 15107), (579, 15164), (592, 15203), (594, 15209), (601, 15233), (664, 15389), (670, 15419), (795, 15650), (805, 15683), (831, 15743), (843, 15767), (902, 15935), (907, 15941),

Gene: Ghoulboy\_24 Start: 19904, Stop: 21703, Start Num: 144

Candidate Starts for Ghoulboy\_24:

(Start: 144 @19904 has 603 MA's), (236, 20042), (278, 20141), (306, 20216), (336, 20267), (360, 20339), (365, 20354), (378, 20387), (380, 20393), (432, 20486), (481, 20588), (495, 20618), (499, 20624), (532, 20714), (546, 20744), (583, 20828), (584, 20831), (597, 20870), (602, 20888), (635, 20948), (636, 20951), (668, 21044), (729, 21185), (749, 21227), (862, 21545), (900, 21680), (902, 21689),

Gene: GiKK\_21 Start: 15090, Stop: 16778, Start Num: 144

Candidate Starts for GiKK\_21:

(35, 14670), (113, 15060), (Start: 133 @15087 has 8 MA's), (Start: 144 @15090 has 603 MA's), (236, 15231), (277, 15330), (290, 15375), (365, 15558), (377, 15588), (390, 15630), (406, 15660), (436, 15690), (442, 15702), (444, 15705), (481, 15795), (508, 15861), (513, 15876), (546, 15912), (553,

15927), (561, 15945), (579, 15984), (581, 15990), (610, 16074), (634, 16110), (635, 16113), (636, 16116), (643, 16131), (650, 16149), (651, 16152), (668, 16206), (747, 16335), (750, 16347), (754, 16362), (766, 16374), (791, 16446), (793, 16449), (794, 16452), (829, 16548), (862, 16617), (863, 16626), (896, 16743), (902, 16764), (907, 16770),

Gene: Gibbous\_18 Start: 15938, Stop: 17629, Start Num: 144

Candidate Starts for Gibbous\_18:

(Start: 144 @15938 has 603 MA's), (222, 16052), (237, 16085), (316, 16286), (336, 16322), (365, 16409), (406, 16511), (436, 16544), (442, 16556), (444, 16559), (465, 16616), (481, 16649), (489, 16664), (501, 16691), (513, 16730), (546, 16766), (549, 16772), (574, 16826), (583, 16850), (596, 16889), (598, 16895), (635, 16967), (643, 16985), (647, 16994), (650, 17003), (668, 17060), (671, 17078), (747, 17189), (750, 17201), (754, 17216), (766, 17228), (791, 17300), (793, 17303), (829, 17399), (842, 17426), (856, 17450), (862, 17468),

Gene: Gideon\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Gideon\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: GigiOuiOui\_16 Start: 14934, Stop: 16643, Start Num: 123

Candidate Starts for GigiOuiOui\_16:

(Start: 123 @14934 has 215 MA's), (193, 15021), (209, 15042), (Start: 227 @15066 has 2 MA's), (233, 15090), (271, 15195), (274, 15201), (281, 15219), (300, 15249), (348, 15354), (367, 15408), (370, 15414), (373, 15423), (381, 15444), (388, 15468), (402, 15504), (403, 15510), (418, 15543), (420, 15546), (424, 15555), (443, 15570), (448, 15576), (459, 15594), (465, 15609), (468, 15615), (475, 15633), (477, 15636), (484, 15651), (492, 15666), (494, 15672), (511, 15720), (515, 15732), (521, 15738), (564, 15798), (568, 15810), (583, 15846), (587, 15858), (614, 15933), (618, 15942), (625, 15960), (627, 15966), (638, 15996), (710, 16101), (720, 16113), (737, 16149), (761, 16227), (799, 16347), (810, 16380), (826, 16410), (829, 16422), (836, 16440), (839, 16446), (841, 16449), (844, 16455), (860, 16470), (861, 16473), (865, 16494), (866, 16497), (882, 16539), (887, 16569), (900, 16611), (901, 16617),

Gene: Gilberta\_28 Start: 20746, Stop: 22545, Start Num: 144

Candidate Starts for Gilberta\_28:

(94, 20680), (Start: 123 @20722 has 215 MA's), (Start: 144 @20746 has 603 MA's), (183, 20788), (236, 20884), (242, 20899), (277, 20980), (278, 20983), (305, 21055), (306, 21058), (315, 21073), (338, 21112), (341, 21118), (378, 21229), (380, 21235), (417, 21316), (467, 21400), (518, 21526), (526, 21544), (540, 21571), (597, 21712), (631, 21778), (635, 21790), (636, 21793), (703, 21982), (721, 22009), (726, 22018), (736, 22039), (737, 22042), (746, 22063), (750, 22078), (756, 22102), (781, 22177), (784, 22192), (813, 22276), (860, 22381), (862, 22387), (877, 22441), (909, 22540),

Gene: Giles\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Giles\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642),

(756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: GingkoMaracino\_29 Start: 20265, Stop: 22061, Start Num: 144

Candidate Starts for GingkoMaracino\_29:

(Start: 144 @20265 has 603 MA's), (Start: 190 @20322 has 1 MA's), (197, 20337), (219, 20370), (230, 20391), (Start: 235 @20406 has 1 MA's), (272, 20493), (277, 20505), (278, 20508), (306, 20583), (315, 20598), (336, 20634), (417, 20841), (481, 20955), (500, 20994), (532, 21081), (583, 21195), (591, 21219), (597, 21237), (636, 21318), (665, 21393), (668, 21411), (675, 21444), (677, 21450), (695, 21489), (729, 21543), (731, 21546), (742, 21567), (758, 21624), (813, 21792), (860, 21897), (862, 21903), (900, 22038),

Gene: Girafales\_17 Start: 14636, Stop: 16345, Start Num: 123

Candidate Starts for Girafales\_17:

(Start: 123 @14636 has 215 MA's), (193, 14723), (Start: 227 @14768 has 2 MA's), (233, 14792), (271, 14897), (274, 14903), (281, 14921), (300, 14951), (348, 15056), (370, 15116), (378, 15137), (381, 15146), (388, 15170), (459, 15296), (465, 15311), (468, 15317), (475, 15335), (477, 15338), (484, 15353), (486, 15356), (492, 15368), (494, 15374), (499, 15383), (511, 15422), (515, 15434), (521, 15440), (564, 15500), (583, 15548), (587, 15560), (614, 15635), (618, 15644), (625, 15662), (627, 15668), (638, 15698), (710, 15803), (720, 15815), (737, 15851), (761, 15929), (791, 16028), (799, 16049), (810, 16082), (826, 16112), (836, 16142), (841, 16151), (844, 16157), (860, 16172), (861, 16175), (865, 16196), (866, 16199), (882, 16241), (887, 16271), (900, 16313),

Gene: Giroux\_27 Start: 19904, Stop: 21700, Start Num: 144

Candidate Starts for Giroux\_27:

(Start: 144 @19904 has 603 MA's), (Start: 190 @19961 has 1 MA's), (230, 20030), (272, 20132), (277, 20144), (278, 20147), (306, 20222), (315, 20237), (338, 20276), (384, 20411), (417, 20480), (481, 20594), (532, 20720), (583, 20834), (591, 20858), (597, 20876), (636, 20957), (665, 21032), (668, 21050), (670, 21059), (675, 21083), (677, 21089), (682, 21104), (703, 21137), (729, 21182), (731, 21185), (742, 21206), (746, 21218), (749, 21224), (763, 21281), (813, 21431), (825, 21455), (860, 21536), (862, 21542), (900, 21677),

Gene: Girr\_16 Start: 14774, Stop: 16483, Start Num: 123

Candidate Starts for Girr\_16:

(Start: 123 @14774 has 215 MA's), (193, 14861), (Start: 227 @14906 has 2 MA's), (233, 14930), (271, 15035), (274, 15041), (281, 15059), (300, 15089), (348, 15194), (367, 15248), (370, 15254), (373, 15263), (378, 15275), (381, 15284), (388, 15308), (402, 15344), (403, 15350), (407, 15362), (418, 15383), (420, 15386), (424, 15395), (443, 15410), (448, 15416), (459, 15434), (465, 15449), (468, 15455), (475, 15473), (477, 15476), (484, 15491), (492, 15506), (494, 15512), (506, 15542), (511, 15560), (515, 15572), (521, 15578), (564, 15638), (568, 15650), (583, 15686), (587, 15698), (594, 15719), (614, 15773), (618, 15782), (627, 15806), (638, 15836), (710, 15941), (720, 15953), (737, 15989), (751, 16028), (761, 16067), (791, 16166), (799, 16187), (810, 16220), (826, 16250), (836, 16280), (841, 16289), (844, 16295), (860, 16310), (861, 16313), (865, 16334), (866, 16337), (882, 16379), (887, 16409), (900, 16451), (901, 16457),

Gene: Gizermo\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Gizermo\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Gladiator\_31 Start: 19963, Stop: 21735, Start Num: 144

Candidate Starts for Gladiator\_31:

(94, 19897), (Start: 123 @19939 has 215 MA's), (Start: 144 @19963 has 603 MA's), (278, 20200), (305, 20272), (306, 20275), (315, 20290), (338, 20329), (341, 20335), (378, 20446), (380, 20452), (392, 20491), (417, 20533), (448, 20572), (463, 20614), (467, 20617), (532, 20773), (592, 20914), (597, 20929), (677, 21142), (742, 21241), (750, 21268), (765, 21319), (770, 21328), (781, 21367), (782, 21370), (813, 21466), (860, 21571), (862, 21577), (900, 21712),

Gene: Glaske\_19 Start: 16273, Stop: 18009, Start Num: 117

Candidate Starts for Glaske\_19:

(Start: 101 @16249 has 2 MA's), (Start: 117 @16273 has 59 MA's), (Start: 166 @16333 has 1 MA's), (178, 16354), (180, 16357), (246, 16477), (258, 16516), (272, 16549), (282, 16573), (344, 16693), (356, 16732), (358, 16738), (386, 16822), (388, 16828), (392, 16840), (402, 16864), (410, 16891), (422, 16909), (452, 16948), (459, 16954), (470, 16978), (494, 17032), (500, 17044), (503, 17053), (529, 17113), (573, 17191), (587, 17230), (598, 17263), (618, 17329), (627, 17353), (636, 17377), (647, 17407), (735, 17521), (740, 17533), (745, 17542), (747, 17551), (779, 17659), (805, 17743), (853, 17842), (890, 17950), (907, 17998),

Gene: Glexan\_22 Start: 19446, Stop: 21041, Start Num: 191

Candidate Starts for Glexan\_22:

(Start: 129 @19362 has 79 MA's), (Start: 191 @19446 has 45 MA's), (Start: 235 @19524 has 1 MA's), (268, 19611), (274, 19626), (300, 19674), (324, 19713), (356, 19800), (368, 19833), (381, 19869), (390, 19899), (392, 19905), (422, 19974), (461, 20004), (466, 20016), (468, 20019), (494, 20076), (565, 20208), (567, 20214), (592, 20280), (594, 20286), (601, 20310), (618, 20358), (627, 20382), (631, 20391), (658, 20466), (717, 20517), (725, 20532), (782, 20694), (788, 20721), (799, 20751), (843, 20856), (880, 20934), (887, 20970), (890, 20979), (900, 21012), (907, 21027),

Gene: GodonK\_89 Start: 52336, Stop: 53952, Start Num: 163

Candidate Starts for GodonK\_89:

(Start: 163 @52336 has 10 MA's), (Start: 167 @52342 has 1 MA's), (222, 52426), (250, 52495), (265, 52525), (267, 52528), (278, 52558), (292, 52597), (365, 52768), (375, 52792), (381, 52810), (386, 52828), (396, 52858), (445, 52924), (448, 52927), (460, 52960), (489, 53017), (495, 53032), (497, 53035), (499, 53038), (546, 53110), (553, 53125), (560, 53140), (575, 53161), (580, 53176), (643, 53320), (647, 53341), (653, 53356), (673, 53434), (682, 53461), (711, 53467), (747, 53527), (769, 53572), (788, 53629), (791, 53638), (799, 53659), (863, 53797), (865, 53806),

Gene: Goib\_23 Start: 16480, Stop: 17808, Start Num: 257

Candidate Starts for Goib\_23:

(Start: 257 @16480 has 11 MA's), (267, 16495), (333, 16639), (349, 16684), (364, 16729), (372, 16753), (382, 16783), (383, 16786), (388, 16804), (391, 16813), (401, 16837), (406, 16846), (437, 16897), (447, 16909), (531, 17002), (536, 17011), (548, 17020), (580, 17065), (590, 17083), (636, 17176), (653, 17221), (671, 17290), (680, 17311), (749, 17392), (763, 17425), (799, 17512), (812, 17548), (819, 17563), (823, 17572), (849, 17614), (863, 17653), (881, 17707), (884, 17725), (899, 17782), (902, 17791),

Gene: Goku\_24 Start: 19460, Stop: 21139, Start Num: 129

Candidate Starts for Goku\_24:

(Start: 129 @19460 has 79 MA's), (Start: 191 @19544 has 45 MA's), (Start: 235 @19622 has 1 MA's), (268, 19709), (274, 19724), (300, 19772), (324, 19811), (356, 19898), (368, 19931), (381, 19967), (390, 19997), (392, 20003), (422, 20072), (461, 20102), (466, 20114), (468, 20117), (494, 20174), (565, 20306), (567, 20312), (592, 20378), (594, 20384), (601, 20408), (618, 20456), (627, 20480), (631, 20489), (658, 20564), (717, 20615), (725, 20630), (782, 20792), (788, 20819), (799, 20849), (843, 20954), (880, 21032), (887, 21068), (890, 21077), (900, 21110), (907, 21125),

Gene: GoldHunter\_19 Start: 15730, Stop: 17430, Start Num: 133

Candidate Starts for GoldHunter\_19:

(Start: 133 @15730 has 8 MA's), (Start: 144 @15733 has 603 MA's), (264, 15943), (306, 16066), (336, 16117), (365, 16204), (369, 16213), (377, 16234), (382, 16249), (385, 16261), (436, 16339), (442, 16351), (454, 16378), (465, 16411), (481, 16444), (487, 16456), (505, 16498), (574, 16621), (599, 16693), (636, 16771), (643, 16786), (650, 16804), (668, 16861), (731, 16954), (747, 16990), (750, 17002), (752, 17008), (755, 17020), (766, 17029), (791, 17101), (793, 17104), (795, 17110), (799, 17122), (824, 17182), (842, 17227), (847, 17236), (862, 17269), (882, 17335),

Gene: GoldenAsh\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for GoldenAsh\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: GoldenSpark\_26 Start: 19736, Stop: 21415, Start Num: 129

Candidate Starts for GoldenSpark\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: Goldilocks\_25 Start: 19156, Stop: 20835, Start Num: 129

Candidate Starts for Goldilocks\_25:

(Start: 129 @19156 has 79 MA's), (Start: 191 @19240 has 45 MA's), (Start: 235 @19318 has 1 MA's), (268, 19405), (274, 19420), (300, 19468), (324, 19507), (356, 19594), (368, 19627), (381, 19663), (390, 19693), (392, 19699), (422, 19768), (461, 19798), (466, 19810), (468, 19813), (494, 19870), (565, 20002), (567, 20008), (592, 20074), (594, 20080), (601, 20104), (618, 20152), (627, 20176), (631, 20185), (658, 20260), (717, 20311), (725, 20326), (782, 20488), (788, 20515), (799, 20545), (843, 20650), (880, 20728), (887, 20764), (890, 20773), (900, 20806), (907, 20821),

Gene: Gollum\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Gollum\_23:

(Start: 155 @16334 has 4 MA's), (Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Gomashi\_18 Start: 16650, Stop: 18404, Start Num: 132

Candidate Starts for Gomashi\_18:

(Start: 109 @16641 has 26 MA's), (Start: 132 @16650 has 45 MA's), (Start: 137 @16656 has 2 MA's), (143, 16662), (230, 16794), (248, 16845), (258, 16875), (269, 16899), (309, 17001), (331, 17040), (334, 17046), (341, 17061), (353, 17106), (395, 17226), (425, 17283), (448, 17322), (468, 17370), (481, 17397), (487, 17409), (522, 17490), (564, 17535), (641, 17733), (649, 17763), (655, 17781), (665, 17808), (716, 17892), (730, 17910), (743, 17925), (756, 17973), (760, 17988), (782, 18051), (799, 18108), (813, 18147), (831, 18189), (863, 18240), (890, 18336), (913, 18396),



Gene: Gompeii16\_27 Start: 21590, Stop: 23392, Start Num: 146

Candidate Starts for Gompeii16\_27:

(Start: 146 @21590 has 223 MA's), (Start: 161 @21611 has 4 MA's), (Start: 190 @21653 has 1 MA's), (216, 21698), (306, 21914), (332, 21959), (338, 21968), (368, 22058), (369, 22061), (378, 22085), (467, 22256), (500, 22325), (583, 22526), (584, 22529), (591, 22550), (635, 22646), (636, 22649), (638, 22655), (665, 22724), (668, 22742), (670, 22751), (677, 22781), (731, 22877), (746, 22910), (750, 22925), (793, 23066), (813, 23123), (862, 23234),

Gene: Gonephishing\_32 Start: 25229, Stop: 26962, Start Num: 124

Candidate Starts for Gonephishing\_32:

(Start: 124 @25229 has 30 MA's), (Start: 191 @25319 has 45 MA's), (193, 25322), (243, 25424), (268, 25490), (282, 25526), (301, 25556), (306, 25571), (346, 25655), (358, 25691), (368, 25718), (382, 25757), (392, 25790), (395, 25799), (420, 25856), (451, 25898), (490, 25973), (494, 25985), (515, 26045), (521, 26051), (552, 26099), (565, 26129), (573, 26147), (577, 26156), (588, 26189), (592, 26201), (594, 26207), (606, 26246), (627, 26303), (725, 26453), (735, 26471), (750, 26513), (756, 26537), (757, 26540), (761, 26555), (773, 26585), (782, 26615), (799, 26672), (868, 26822), (907, 26948),

Gene: GooberAzure\_26 Start: 19736, Stop: 21415, Start Num: 129

Candidate Starts for GooberAzure\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: Goose\_27 Start: 19786, Stop: 21564, Start Num: 144

Candidate Starts for Goose\_27:

(Start: 123 @19762 has 215 MA's), (Start: 144 @19786 has 603 MA's), (Start: 190 @19843 has 1 MA's), (197, 19858), (230, 19912), (272, 20014), (277, 20026), (278, 20029), (306, 20104), (315, 20119), (338, 20158), (378, 20275), (384, 20293), (417, 20362), (460, 20437), (481, 20476), (500, 20515), (532, 20602), (546, 20632), (553, 20647), (576, 20695), (591, 20740), (595, 20752), (597, 20758), (635, 20836), (636, 20839), (668, 20932), (670, 20941), (675, 20965), (677, 20971), (682, 20986), (713, 21019), (742, 21070), (749, 21088), (758, 21127), (759, 21133), (793, 21238), (813, 21295), (825, 21319), (827, 21325), (860, 21400), (862, 21406), (863, 21415), (900, 21541),

Gene: Gorge\_16 Start: 14790, Stop: 16499, Start Num: 123

Candidate Starts for Gorge\_16:

(Start: 123 @14790 has 215 MA's), (193, 14877), (Start: 227 @14922 has 2 MA's), (233, 14946), (251, 15003), (271, 15051), (274, 15057), (281, 15075), (300, 15105), (348, 15210), (367, 15264), (370, 15270), (373, 15279), (381, 15300), (388, 15324), (402, 15360), (403, 15366), (418, 15399), (420, 15402), (424, 15411), (443, 15426), (448, 15432), (459, 15450), (465, 15465), (468, 15471), (475, 15489), (477, 15492), (484, 15507), (492, 15522), (494, 15528), (511, 15576), (515, 15588), (521, 15594), (525, 15600), (564, 15654), (568, 15666), (583, 15702), (587, 15714), (614, 15789), (618, 15798), (625, 15816), (627, 15822), (638, 15852), (710, 15957), (720, 15969), (737, 16005), (761, 16083), (799, 16203), (810, 16236), (826, 16266), (829, 16278), (836, 16296), (839, 16302), (841, 16305), (844, 16311), (860, 16326), (861, 16329), (865, 16350), (866, 16353), (882, 16395), (887, 16425), (900, 16467), (901, 16473),

Gene: Graduation\_29 Start: 21859, Stop: 23661, Start Num: 146

Candidate Starts for Graduation\_29:

(Start: 146 @21859 has 223 MA's), (Start: 161 @21880 has 4 MA's), (Start: 190 @21922 has 1 MA's), (216, 21967), (306, 22183), (332, 22228), (338, 22237), (349, 22276), (368, 22327), (369, 22330), (467, 22525), (500, 22594), (583, 22795), (584, 22798), (591, 22819), (635, 22915), (636, 22918), (638, 22924), (665, 22993), (668, 23011), (670, 23020), (677, 23050), (731, 23146), (746, 23179), (750, 23194), (793, 23335), (813, 23392),

Gene: GrandSlam\_22 Start: 17878, Stop: 19584, Start Num: 162

Candidate Starts for GrandSlam\_22:

(Start: 101 @17803 has 2 MA's), (Start: 162 @17878 has 16 MA's), (Start: 227 @17971 has 2 MA's), (230, 17986), (232, 17992), (256, 18067), (283, 18139), (336, 18250), (349, 18295), (356, 18313), (360, 18325), (444, 18496), (449, 18505), (451, 18511), (496, 18607), (514, 18658), (591, 18781), (603, 18820), (653, 18952), (714, 19066), (756, 19153), (792, 19267), (795, 19276), (836, 19381), (878, 19468), (913, 19576),

Gene: Gravaillia\_22 Start: 17133, Stop: 18875, Start Num: 112

Candidate Starts for Gravaillia\_22:

(58, 16959), (Start: 112 @17133 has 41 MA's), (Start: 117 @17142 has 59 MA's), (189, 17235), (201, 17259), (212, 17271), (Start: 227 @17292 has 2 MA's), (230, 17307), (255, 17385), (282, 17457), (325, 17547), (345, 17601), (355, 17631), (358, 17640), (365, 17661), (388, 17727), (398, 17754), (416, 17787), (438, 17805), (448, 17823), (449, 17826), (454, 17841), (455, 17844), (487, 17910), (489, 17913), (514, 17979), (555, 18003), (588, 18090), (605, 18144), (628, 18189), (631, 18195), (641, 18222), (654, 18267), (704, 18360), (708, 18369), (756, 18447), (802, 18591), (807, 18609), (813, 18621), (822, 18636), (824, 18639), (831, 18660), (865, 18720), (876, 18753), (878, 18759), (880, 18762), (896, 18828), (913, 18867),

Gene: GreaseLightnin\_19 Start: 16367, Stop: 18127, Start Num: 101

Candidate Starts for GreaseLightnin\_19:

(Start: 101 @16367 has 2 MA's), (Start: 117 @16391 has 59 MA's), (Start: 166 @16451 has 1 MA's), (178, 16472), (180, 16475), (246, 16595), (258, 16634), (272, 16667), (282, 16691), (344, 16811), (356, 16850), (358, 16856), (386, 16940), (388, 16946), (392, 16958), (402, 16982), (410, 17009), (422, 17027), (452, 17066), (459, 17072), (470, 17096), (494, 17150), (500, 17162), (503, 17171), (529, 17231), (573, 17309), (587, 17348), (598, 17381), (618, 17447), (624, 17462), (627, 17471), (636, 17495), (647, 17525), (653, 17537), (735, 17639), (740, 17651), (742, 17654), (745, 17660), (747, 17669), (779, 17777), (805, 17861), (853, 17960), (890, 18068), (907, 18116),

Gene: GrecoEtereo\_29 Start: 21899, Stop: 23701, Start Num: 146

Candidate Starts for GrecoEtereo\_29:

(Start: 146 @21899 has 223 MA's), (Start: 161 @21920 has 4 MA's), (Start: 190 @21962 has 1 MA's), (216, 22007), (306, 22223), (332, 22268), (338, 22277), (349, 22316), (368, 22367), (369, 22370), (467, 22565), (500, 22634), (583, 22835), (584, 22838), (591, 22859), (635, 22955), (636, 22958), (638, 22964), (665, 23033), (668, 23051), (670, 23060), (677, 23090), (731, 23186), (746, 23219), (750, 23234), (793, 23375), (813, 23432), (862, 23543),

Gene: GreedyLawyer\_31 Start: 19976, Stop: 21748, Start Num: 144

Candidate Starts for GreedyLawyer\_31:

(94, 19910), (Start: 123 @19952 has 215 MA's), (Start: 144 @19976 has 603 MA's), (263, 20174), (278, 20213), (305, 20285), (306, 20288), (318, 20306), (338, 20342), (341, 20348), (378, 20459), (380, 20465), (392, 20504), (417, 20546), (448, 20585), (463, 20627), (467, 20630), (495, 20690), (592, 20927), (597, 20942), (636, 21023), (677, 21155), (750, 21281), (765, 21332), (770, 21341), (781, 21380), (782, 21383), (784, 21395), (813, 21479), (860, 21584), (862, 21590), (900, 21725),

Gene: Greg\_29 Start: 21405, Stop: 23207, Start Num: 146

Candidate Starts for Greg\_29:

(Start: 146 @21405 has 223 MA's), (Start: 161 @21426 has 4 MA's), (Start: 190 @21468 has 1 MA's), (216, 21513), (306, 21729), (332, 21774), (338, 21783), (368, 21873), (369, 21876), (467, 22071), (500, 22140), (583, 22341), (584, 22344), (591, 22365), (635, 22461), (636, 22464), (638, 22470), (665, 22539), (668, 22557), (670, 22566), (677, 22596), (731, 22692), (746, 22725), (750, 22740), (793, 22881), (813, 22938), (862, 23049),

Gene: Grif\_29 Start: 20462, Stop: 22258, Start Num: 144

Candidate Starts for Grif\_29:

(Start: 144 @20462 has 603 MA's), (Start: 190 @20519 has 1 MA's), (197, 20534), (230, 20588), (Start: 235 @20603 has 1 MA's), (272, 20690), (277, 20702), (278, 20705), (306, 20780), (315, 20795), (336, 20831), (417, 21038), (500, 21191), (532, 21278), (583, 21392), (591, 21416), (597, 21434), (636, 21515), (665, 21590), (668, 21608), (675, 21641), (677, 21647), (695, 21686), (729, 21740), (731, 21743), (742, 21764), (758, 21821), (813, 21989), (860, 22094), (862, 22100), (900, 22235),

Gene: Grizzly\_18 Start: 16643, Stop: 18406, Start Num: 109

Candidate Starts for Grizzly\_18:

(55, 16439), (Start: 109 @16643 has 26 MA's), (Start: 132 @16652 has 45 MA's), (Start: 137 @16658 has 2 MA's), (143, 16664), (197, 16742), (230, 16796), (248, 16847), (258, 16877), (269, 16901), (278, 16922), (309, 17003), (331, 17042), (334, 17048), (341, 17063), (353, 17108), (395, 17228), (425, 17285), (448, 17324), (465, 17366), (468, 17372), (481, 17399), (487, 17411), (522, 17492), (564, 17537), (583, 17585), (641, 17735), (649, 17765), (655, 17783), (665, 17810), (730, 17912), (743, 17927), (756, 17975), (760, 17990), (782, 18053), (799, 18110), (813, 18149), (831, 18191), (863, 18242), (890, 18338), (913, 18398),

Gene: GrootJr\_43 Start: 30207, Stop: 31820, Start Num: 170

Candidate Starts for GrootJr\_43:

(Start: 170 @30207 has 87 MA's), (Start: 194 @30243 has 1 MA's), (202, 30261), (236, 30321), (340, 30561), (343, 30573), (347, 30588), (372, 30654), (377, 30669), (386, 30693), (387, 30696), (432, 30780), (449, 30810), (450, 30813), (493, 30870), (510, 30918), (511, 30921), (518, 30942), (571, 31047), (592, 31092), (607, 31134), (673, 31308), (683, 31338), (688, 31344), (775, 31452), (776, 31455), (799, 31530), (887, 31749), (906, 31806),

Gene: Groundhog\_23 Start: 18621, Stop: 20411, Start Num: 144

Candidate Starts for Groundhog\_23:

(Start: 123 @18597 has 215 MA's), (Start: 144 @18621 has 603 MA's), (214, 18714), (236, 18759), (278, 18858), (292, 18894), (306, 18933), (315, 18948), (336, 18984), (378, 19104), (380, 19110), (448, 19230), (505, 19359), (532, 19431), (583, 19545), (668, 19761), (675, 19794), (731, 19896), (746, 19929), (750, 19944), (758, 19974), (859, 20244), (862, 20253), (863, 20262), (896, 20376),

Gene: Groupthink\_30 Start: 20460, Stop: 22256, Start Num: 144

Candidate Starts for Groupthink\_30:

(Start: 144 @20460 has 603 MA's), (Start: 190 @20517 has 1 MA's), (197, 20532), (230, 20586), (Start: 235 @20601 has 1 MA's), (272, 20688), (277, 20700), (278, 20703), (306, 20778), (315, 20793), (417, 21036), (500, 21189), (532, 21276), (576, 21369), (583, 21390), (591, 21414), (595, 21426), (597, 21432), (636, 21513), (665, 21588), (668, 21606), (670, 21615), (675, 21639), (677, 21645), (682, 21660), (695, 21684), (729, 21738), (731, 21741), (742, 21762), (860, 22092), (862, 22098), (900, 22233),

Gene: Grub\_29 Start: 20371, Stop: 22167, Start Num: 144

Candidate Starts for Grub\_29:

(Start: 144 @20371 has 603 MA's), (Start: 190 @20428 has 1 MA's), (197, 20443), (219, 20476), (230, 20497), (Start: 235 @20512 has 1 MA's), (272, 20599), (277, 20611), (278, 20614), (306, 20689),

(315, 20704), (336, 20740), (417, 20947), (481, 21061), (500, 21100), (532, 21187), (583, 21301), (591, 21325), (597, 21343), (636, 21424), (665, 21499), (668, 21517), (675, 21550), (677, 21556), (695, 21595), (729, 21649), (731, 21652), (742, 21673), (758, 21730), (813, 21898), (860, 22003), (862, 22009), (900, 22144),

Gene: Grum1\_29 Start: 20375, Stop: 22171, Start Num: 144

Candidate Starts for Grum1\_29:

(Start: 144 @20375 has 603 MA's), (Start: 190 @20432 has 1 MA's), (197, 20447), (219, 20480), (230, 20501), (Start: 235 @20516 has 1 MA's), (272, 20603), (277, 20615), (278, 20618), (306, 20693), (315, 20708), (336, 20744), (379, 20867), (417, 20951), (481, 21065), (500, 21104), (532, 21191), (583, 21305), (591, 21329), (597, 21347), (636, 21428), (665, 21503), (668, 21521), (675, 21554), (677, 21560), (695, 21599), (729, 21653), (731, 21656), (742, 21677), (773, 21776), (860, 22007), (862, 22013), (900, 22148),

Gene: Gruunaga\_31 Start: 19963, Stop: 21735, Start Num: 144

Candidate Starts for Gruunaga\_31:

(94, 19897), (Start: 123 @19939 has 215 MA's), (Start: 144 @19963 has 603 MA's), (278, 20200), (305, 20272), (306, 20275), (315, 20290), (338, 20329), (341, 20335), (378, 20446), (380, 20452), (392, 20491), (417, 20533), (448, 20572), (463, 20614), (467, 20617), (532, 20773), (592, 20914), (597, 20929), (677, 21142), (742, 21241), (750, 21268), (765, 21319), (770, 21328), (781, 21367), (782, 21370), (813, 21466), (860, 21571), (862, 21577), (900, 21712),

Gene: Gspu1\_20 Start: 15750, Stop: 17078, Start Num: 257

Candidate Starts for Gspu1\_20:

(Start: 257 @15750 has 11 MA's), (268, 15768), (333, 15909), (349, 15954), (364, 15999), (388, 16074), (391, 16083), (437, 16167), (447, 16179), (531, 16272), (536, 16281), (548, 16290), (580, 16335), (590, 16353), (618, 16410), (636, 16446), (666, 16527), (672, 16563), (746, 16656), (763, 16695), (812, 16818), (840, 16869), (863, 16923), (867, 16938), (874, 16962), (877, 16968), (881, 16977), (908, 17067),

Gene: GtownJaz\_29 Start: 20380, Stop: 22176, Start Num: 144

Candidate Starts for GtownJaz\_29:

(Start: 144 @20380 has 603 MA's), (Start: 190 @20437 has 1 MA's), (197, 20452), (219, 20485), (230, 20506), (Start: 235 @20521 has 1 MA's), (272, 20608), (277, 20620), (278, 20623), (306, 20698), (315, 20713), (336, 20749), (417, 20956), (481, 21070), (500, 21109), (532, 21196), (583, 21310), (591, 21334), (597, 21352), (636, 21433), (665, 21508), (668, 21526), (675, 21559), (677, 21565), (695, 21604), (729, 21658), (731, 21661), (742, 21682), (758, 21739), (813, 21907), (860, 22012), (862, 22018), (900, 22153),

Gene: Guacamole\_19 Start: 16654, Stop: 18300, Start Num: 195

Candidate Starts for Guacamole\_19:

(172, 16618), (Start: 195 @16654 has 45 MA's), (244, 16756), (272, 16834), (274, 16837), (308, 16933), (329, 16972), (357, 17053), (377, 17107), (382, 17122), (494, 17293), (506, 17323), (594, 17506), (601, 17530), (602, 17533), (626, 17581), (658, 17674), (664, 17686), (694, 17731), (702, 17746), (757, 17878), (758, 17881), (788, 17980), (795, 17998), (813, 18049), (843, 18115), (872, 18178), (877, 18190),

Gene: Guanica15\_23 Start: 16380, Stop: 18146, Start Num: 114

Candidate Starts for Guanica15\_23:

(Start: 114 @16380 has 139 MA's), (Start: 117 @16386 has 59 MA's), (140, 16410), (236, 16569), (248, 16602), (258, 16632), (259, 16635), (272, 16665), (278, 16677), (316, 16767), (337, 16809), (360, 16881), (362, 16890), (378, 16929), (392, 16974), (400, 16995), (403, 16998), (448, 17070), (465, 17112), (468, 17118), (481, 17145), (564, 17283), (572, 17301), (587, 17343), (593, 17361),

(603, 17391), (655, 17523), (704, 17613), (757, 17718), (768, 17748), (793, 17832), (810, 17883), (863, 17982), (890, 18078), (901, 18117), (902, 18120), (913, 18138),

Gene: Gudmit\_18 Start: 15558, Stop: 17267, Start Num: 171

Candidate Starts for Gudmit\_18:

(Start: 162 @15543 has 16 MA's), (Start: 171 @15558 has 40 MA's), (287, 15822), (315, 15876), (347, 15945), (351, 15957), (361, 15987), (377, 16035), (435, 16161), (471, 16245), (479, 16266), (485, 16278), (500, 16308), (519, 16368), (554, 16416), (591, 16494), (607, 16533), (618, 16551), (636, 16587), (652, 16629), (666, 16665), (669, 16686), (670, 16689), (729, 16782), (794, 16935), (799, 16950), (807, 16977), (849, 17073), (865, 17121), (874, 17151), (891, 17211),

Gene: Guey18\_58 Start: 29129, Stop: 30814, Start Num: 135

Candidate Starts for Guey18\_58:

(59, 28937), (60, 28946), (62, 28952), (87, 29054), (102, 29084), (Start: 135 @29129 has 7 MA's), (232, 29270), (292, 29429), (316, 29483), (378, 29639), (434, 29738), (458, 29786), (489, 29858), (546, 29948), (600, 30086), (668, 30245), (703, 30296), (705, 30299), (711, 30311), (750, 30386), (754, 30401), (791, 30485), (824, 30566), (867, 30677), (897, 30782), (902, 30800),

Gene: Guillsminger\_21 Start: 17495, Stop: 19267, Start Num: 117

Candidate Starts for Guillsminger\_21:

(Start: 117 @17495 has 59 MA's), (Start: 123 @17501 has 215 MA's), (143, 17525), (Start: 168 @17558 has 32 MA's), (197, 17606), (230, 17660), (248, 17711), (272, 17774), (321, 17882), (360, 17990), (400, 18104), (403, 18107), (424, 18146), (438, 18161), (444, 18173), (448, 18179), (465, 18221), (468, 18227), (487, 18266), (499, 18290), (564, 18392), (588, 18455), (602, 18500), (655, 18635), (708, 18734), (750, 18812), (756, 18836), (758, 18842), (762, 18857), (793, 18953), (795, 18959), (865, 19112), (895, 19217), (896, 19220), (901, 19238),

Gene: Gustav\_18 Start: 15136, Stop: 16749, Start Num: 153

Candidate Starts for Gustav\_18:

(Start: 153 @15136 has 11 MA's), (Start: 157 @15142 has 4 MA's), (185, 15181), (216, 15232), (219, 15235), (233, 15265), (292, 15412), (328, 15481), (366, 15586), (378, 15616), (417, 15703), (449, 15742), (467, 15784), (501, 15856), (512, 15889), (535, 15901), (553, 15940), (575, 15976), (576, 15979), (583, 16000), (598, 16042), (618, 16084), (653, 16159), (657, 16177), (664, 16189), (665, 16192), (735, 16303), (742, 16318), (746, 16327), (769, 16375), (862, 16585), (891, 16693),

Gene: Gustavo\_34 Start: 29639, Stop: 31402, Start Num: 97

Candidate Starts for Gustavo\_34:

(Start: 97 @29639 has 73 MA's), (Start: 121 @29675 has 1 MA's), (211, 29804), (219, 29813), (262, 29909), (265, 29918), (288, 29987), (306, 30038), (311, 30047), (332, 30083), (341, 30098), (345, 30116), (368, 30179), (384, 30224), (386, 30233), (454, 30344), (458, 30353), (461, 30368), (472, 30392), (487, 30422), (597, 30644), (607, 30662), (613, 30677), (635, 30719), (647, 30749), (688, 30869), (749, 30962), (793, 31073), (794, 31076), (810, 31124), (824, 31151), (832, 31178), (860, 31232),

Gene: GuyFagieri\_45 Start: 31180, Stop: 32754, Start Num: 173

Candidate Starts for GuyFagieri\_45:

(Start: 173 @31180 has 7 MA's), (179, 31189), (Start: 182 @31192 has 1 MA's), (219, 31243), (231, 31267), (236, 31270), (343, 31522), (348, 31540), (372, 31603), (377, 31618), (442, 31735), (450, 31750), (493, 31807), (498, 31816), (511, 31858), (518, 31879), (534, 31909), (560, 31963), (644, 32137), (673, 32242), (674, 32245), (683, 32272), (762, 32365), (809, 32497), (829, 32545), (867, 32611), (877, 32641), (896, 32713),

Gene: Gwendoluna\_29 Start: 22990, Stop: 24792, Start Num: 146

Candidate Starts for Gwendoluna\_29:

(Start: 146 @22990 has 223 MA's), (Start: 161 @23011 has 4 MA's), (Start: 190 @23053 has 1 MA's), (216, 23098), (306, 23314), (332, 23359), (338, 23368), (349, 23407), (368, 23458), (369, 23461), (467, 23656), (500, 23725), (583, 23926), (584, 23929), (591, 23950), (635, 24046), (636, 24049), (638, 24055), (665, 24124), (668, 24142), (670, 24151), (677, 24181), (731, 24277), (746, 24310), (750, 24325), (793, 24466), (813, 24523), (862, 24634),

Gene: Gyzlar\_29 Start: 22353, Stop: 24155, Start Num: 146

Candidate Starts for Gyzlar\_29:

(Start: 146 @22353 has 223 MA's), (Start: 161 @22374 has 4 MA's), (Start: 190 @22416 has 1 MA's), (216, 22461), (306, 22677), (332, 22722), (338, 22731), (349, 22770), (368, 22821), (369, 22824), (467, 23019), (500, 23088), (583, 23289), (584, 23292), (591, 23313), (635, 23409), (636, 23412), (638, 23418), (665, 23487), (668, 23505), (670, 23514), (677, 23544), (731, 23640), (746, 23673), (750, 23688), (793, 23829), (813, 23886), (862, 23997),

Gene: HC\_19 Start: 16486, Stop: 18219, Start Num: 131

Candidate Starts for HC\_19:

(Start: 131 @16486 has 6 MA's), (206, 16585), (213, 16594), (241, 16660), (250, 16684), (272, 16744), (274, 16747), (284, 16774), (367, 16954), (377, 16978), (381, 16990), (388, 17014), (459, 17140), (465, 17155), (470, 17164), (486, 17200), (494, 17218), (608, 17470), (614, 17479), (627, 17512), (717, 17656), (740, 17701), (773, 17803), (775, 17812), (779, 17830), (781, 17833), (813, 17932), (836, 17992), (846, 18010), (860, 18046), (863, 18061), (880, 18109), (897, 18178),

Gene: HH92\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for HH92\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: HINdeR\_27 Start: 22725, Stop: 24527, Start Num: 144

Candidate Starts for HINdeR\_27:

(66, 22575), (82, 22620), (Start: 123 @22701 has 215 MA's), (Start: 132 @22713 has 45 MA's), (Start: 144 @22725 has 603 MA's), (188, 22770), (198, 22791), (219, 22821), (277, 22956), (278, 22959), (306, 23034), (338, 23088), (380, 23211), (382, 23217), (392, 23250), (417, 23292), (467, 23376), (481, 23406), (495, 23436), (547, 23562), (583, 23643), (597, 23685), (635, 23781), (636, 23784), (643, 23799), (665, 23859), (668, 23877), (670, 23886), (675, 23910), (677, 23916), (729, 24009), (731, 24012), (740, 24030), (746, 24045), (750, 24060), (759, 24096), (791, 24198), (862, 24369), (891, 24474), (907, 24519),

Gene: HUHilltop\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for HUHilltop\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Hades\_16 Start: 14815, Stop: 16524, Start Num: 123

Candidate Starts for Hades\_16:

(Start: 123 @14815 has 215 MA's), (193, 14902), (Start: 227 @14947 has 2 MA's), (233, 14971), (271, 15076), (274, 15082), (281, 15100), (300, 15130), (348, 15235), (370, 15295), (378, 15316), (381, 15325), (388, 15349), (459, 15475), (465, 15490), (468, 15496), (484, 15532), (486, 15535), (492, 15547), (494, 15553), (511, 15601), (515, 15613), (521, 15619), (564, 15679), (568, 15691), (583, 15727), (587, 15739), (614, 15814), (618, 15823), (625, 15841), (627, 15847), (638, 15877), (710, 15982), (717, 15991), (720, 15994), (737, 16030), (761, 16108), (791, 16207), (799, 16228), (810, 16261), (826, 16291), (836, 16321), (841, 16330), (844, 16336), (860, 16351), (861, 16354), (866, 16378), (877, 16408), (882, 16420), (887, 16450), (900, 16492),

Gene: Hadrien\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Hadrien\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Hail\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Hail\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Haley23\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Haley23\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Halo\_18 Start: 16644, Stop: 18398, Start Num: 132

Candidate Starts for Halo\_18:

(Start: 109 @16635 has 26 MA's), (Start: 132 @16644 has 45 MA's), (Start: 137 @16650 has 2 MA's), (143, 16656), (230, 16788), (248, 16839), (258, 16869), (269, 16893), (309, 16995), (331, 17034), (334, 17040), (341, 17055), (353, 17100), (395, 17220), (425, 17277), (448, 17316), (468, 17364), (481, 17391), (487, 17403), (522, 17484), (564, 17529), (641, 17727), (649, 17757), (655, 17775), (665, 17802), (716, 17886), (730, 17904), (743, 17919), (756, 17967), (760, 17982), (782, 18045), (799, 18102), (813, 18141), (831, 18183), (863, 18234), (890, 18330), (913, 18390),

Gene: Halo3\_32 Start: 26286, Stop: 28052, Start Num: 97

Candidate Starts for Halo3\_32:

(80, 26244), (Start: 97 @26286 has 73 MA's), (Start: 121 @26322 has 1 MA's), (Start: 148 @26355 has 14 MA's), (264, 26565), (265, 26568), (277, 26598), (298, 26664), (306, 26688), (311, 26697), (331, 26730), (386, 26883), (406, 26922), (445, 26973), (451, 26985), (458, 27003), (460, 27015), (465, 27027), (472, 27042), (487, 27072), (489, 27075), (499, 27096), (547, 27168), (568, 27216), (613, 27327), (632, 27360), (647, 27399), (649, 27402), (670, 27474), (707, 27540), (715, 27552), (793, 27723), (794, 27726), (810, 27774), (824, 27801), (832, 27828), (860, 27882), (891, 27999), (897, 28020), (909, 28047),

Gene: HamSlice\_26 Start: 19825, Stop: 21603, Start Num: 144

Candidate Starts for HamSlice\_26:

(Start: 123 @19801 has 215 MA's), (Start: 144 @19825 has 603 MA's), (Start: 190 @19882 has 1 MA's), (222, 19936), (230, 19951), (236, 19969), (272, 20053), (277, 20065), (278, 20068), (306, 20143), (315, 20158), (338, 20197), (378, 20314), (417, 20401), (463, 20482), (489, 20530), (500, 20554), (532, 20641), (553, 20686), (584, 20758), (591, 20779), (597, 20797), (636, 20878), (668, 20971), (670, 20980), (675, 21004), (677, 21010), (687, 21034), (731, 21088), (742, 21109), (756, 21160), (763, 21184), (782, 21238), (813, 21334), (860, 21439), (863, 21454), (894, 21562), (900, 21580),

Gene: Hami1\_29 Start: 21499, Stop: 23301, Start Num: 146

Candidate Starts for Hami1\_29:

(Start: 146 @21499 has 223 MA's), (Start: 161 @21520 has 4 MA's), (Start: 190 @21562 has 1 MA's), (216, 21607), (306, 21823), (332, 21868), (338, 21877), (349, 21916), (368, 21967), (369, 21970), (467, 22165), (500, 22234), (583, 22435), (584, 22438), (591, 22459), (635, 22555), (636, 22558), (638, 22564), (668, 22651), (670, 22660), (677, 22690), (731, 22786), (746, 22819), (750, 22834), (793, 22975), (813, 23032), (862, 23143),

Gene: Hammer\_31 Start: 19978, Stop: 21750, Start Num: 144

Candidate Starts for Hammer\_31:

(94, 19912), (Start: 123 @19954 has 215 MA's), (Start: 144 @19978 has 603 MA's), (278, 20215), (305, 20287), (306, 20290), (315, 20305), (338, 20344), (341, 20350), (378, 20461), (380, 20467), (392, 20506), (417, 20548), (448, 20587), (463, 20629), (467, 20632), (532, 20788), (592, 20929), (597, 20944), (677, 21157), (750, 21283), (765, 21334), (770, 21343), (781, 21382), (782, 21385), (860, 21586), (862, 21592), (900, 21727),

Gene: Hammy\_22 Start: 17572, Stop: 19338, Start Num: 114

Candidate Starts for Hammy\_22:

(Start: 93 @17533 has 1 MA's), (Start: 109 @17563 has 26 MA's), (Start: 114 @17572 has 139 MA's), (140, 17602), (Start: 227 @17728 has 2 MA's), (230, 17743), (248, 17794), (272, 17857), (278, 17869), (282, 17887), (316, 17959), (334, 17995), (337, 18001), (362, 18082), (395, 18175), (400, 18187), (403, 18190), (423, 18226), (448, 18262), (465, 18304), (468, 18310), (481, 18337), (499, 18373), (572, 18493), (603, 18583), (618, 18610), (636, 18655), (655, 18715), (698, 18790), (708, 18814), (748, 18874), (757, 18910), (768, 18940), (793, 19024), (810, 19075), (865, 19183), (901, 19309), (902, 19312), (913, 19330),

Gene: Hamood\_22 Start: 17878, Stop: 19584, Start Num: 162

Candidate Starts for Hamood\_22:

(Start: 101 @17803 has 2 MA's), (Start: 162 @17878 has 16 MA's), (Start: 227 @17971 has 2 MA's), (230, 17986), (232, 17992), (256, 18067), (283, 18139), (336, 18250), (349, 18295), (356, 18313), (360, 18325), (444, 18496), (449, 18505), (451, 18511), (496, 18607), (514, 18658), (591, 18781), (603, 18820), (653, 18952), (714, 19066), (756, 19153), (792, 19267), (795, 19276), (836, 19381), (878, 19468), (913, 19576),

Gene: Hamulus\_16 Start: 14812, Stop: 16521, Start Num: 123



Candidate Starts for Hamulus\_16:

(Start: 123 @14812 has 215 MA's), (193, 14899), (Start: 227 @14944 has 2 MA's), (233, 14968), (271, 15073), (274, 15079), (281, 15097), (300, 15127), (348, 15232), (370, 15292), (377, 15310), (378, 15313), (381, 15322), (386, 15340), (388, 15346), (418, 15421), (420, 15424), (459, 15472), (465, 15487), (468, 15493), (484, 15529), (486, 15532), (492, 15544), (494, 15550), (511, 15598), (515, 15610), (521, 15616), (564, 15676), (568, 15688), (583, 15724), (587, 15736), (614, 15811), (618, 15820), (625, 15838), (627, 15844), (638, 15874), (710, 15979), (717, 15988), (720, 15991), (737, 16027), (761, 16105), (791, 16204), (799, 16225), (810, 16258), (826, 16288), (836, 16318), (841, 16327), (844, 16333), (860, 16348), (861, 16351), (866, 16375), (877, 16405), (882, 16417), (887, 16447), (900, 16489),

Gene: HanKaySha\_25 Start: 19488, Stop: 21167, Start Num: 129

Candidate Starts for HanKaySha\_25:

(Start: 129 @19488 has 79 MA's), (Start: 191 @19572 has 45 MA's), (Start: 235 @19650 has 1 MA's), (268, 19737), (274, 19752), (300, 19800), (324, 19839), (356, 19926), (368, 19959), (381, 19995), (390, 20025), (392, 20031), (422, 20100), (461, 20130), (466, 20142), (468, 20145), (494, 20202), (565, 20334), (567, 20340), (592, 20406), (594, 20412), (601, 20436), (618, 20484), (627, 20508), (631, 20517), (658, 20592), (717, 20643), (725, 20658), (782, 20820), (788, 20847), (799, 20877), (843, 20982), (880, 21060), (887, 21096), (890, 21105), (900, 21138), (907, 21153),

Gene: HanShotFirst\_27 Start: 21033, Stop: 22835, Start Num: 146

Candidate Starts for HanShotFirst\_27:

(Start: 146 @21033 has 223 MA's), (Start: 161 @21054 has 4 MA's), (Start: 190 @21096 has 1 MA's), (216, 21141), (306, 21357), (332, 21402), (338, 21411), (368, 21501), (369, 21504), (406, 21597), (467, 21699), (500, 21768), (579, 21957), (583, 21969), (584, 21972), (591, 21993), (635, 22089), (636, 22092), (638, 22098), (665, 22167), (668, 22185), (670, 22194), (677, 22224), (731, 22320), (746, 22353), (750, 22368), (793, 22509), (813, 22566), (862, 22677),

Gene: Hanako\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Hanako\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Hannaconda\_31 Start: 23714, Stop: 25447, Start Num: 124

Candidate Starts for Hannaconda\_31:

(Start: 124 @23714 has 30 MA's), (Start: 191 @23804 has 45 MA's), (193, 23807), (243, 23909), (268, 23975), (282, 24011), (301, 24041), (306, 24056), (346, 24140), (358, 24176), (368, 24203), (382, 24242), (392, 24275), (395, 24284), (420, 24341), (451, 24383), (490, 24458), (494, 24470), (515, 24530), (552, 24584), (565, 24614), (573, 24632), (577, 24641), (588, 24674), (592, 24686), (594, 24692), (606, 24731), (627, 24788), (725, 24938), (735, 24956), (750, 24998), (756, 25022), (757, 25025), (761, 25040), (773, 25070), (782, 25100), (799, 25157), (868, 25307), (902, 25427), (907, 25433),

Gene: HannahD\_19 Start: 16647, Stop: 18377, Start Num: 141

Candidate Starts for HannahD\_19:

(72, 16527), (113, 16611), (Start: 141 @16647 has 14 MA's), (222, 16767), (252, 16851), (272, 16884), (281, 16917), (316, 17001), (392, 17202), (414, 17244), (445, 17280), (458, 17310), (465,

17334), (485, 17376), (499, 17403), (500, 17406), (537, 17460), (540, 17466), (579, 17553), (737, 17913), (747, 17937), (752, 17955), (793, 18051), (799, 18069), (864, 18228), (888, 18315), (896, 18342),

Gene: Hanray\_29 Start: 21753, Stop: 23543, Start Num: 144

Candidate Starts for Hanray\_29:

(Start: 141 @21750 has 14 MA's), (Start: 144 @21753 has 603 MA's), (277, 21987), (278, 21990), (305, 22062), (306, 22065), (315, 22080), (338, 22119), (341, 22125), (378, 22236), (417, 22323), (463, 22404), (467, 22407), (546, 22593), (576, 22656), (584, 22680), (586, 22686), (597, 22719), (636, 22800), (675, 22926), (693, 22968), (731, 23028), (746, 23061), (750, 23076), (781, 23175), (782, 23178), (784, 23190), (813, 23274), (842, 23340), (860, 23379), (862, 23385), (873, 23430), (890, 23487), (891, 23490),

Gene: Hans\_35 Start: 29139, Stop: 30764, Start Num: 160

Candidate Starts for Hans\_35:

(Start: 160 @29139 has 17 MA's), (169, 29151), (Start: 191 @29184 has 45 MA's), (Start: 195 @29193 has 45 MA's), (200, 29205), (222, 29235), (272, 29352), (277, 29364), (307, 29439), (341, 29499), (348, 29529), (449, 29736), (460, 29766), (482, 29811), (508, 29871), (547, 29919), (583, 29991), (595, 30024), (596, 30027), (609, 30066), (635, 30105), (664, 30192), (665, 30195), (711, 30273), (747, 30333), (769, 30378), (795, 30459), (815, 30513), (863, 30609), (900, 30738), (907, 30753),

Gene: Happiness\_27 Start: 19833, Stop: 21611, Start Num: 144

Candidate Starts for Happiness\_27:

(Start: 123 @19809 has 215 MA's), (Start: 144 @19833 has 603 MA's), (Start: 190 @19890 has 1 MA's), (222, 19944), (230, 19959), (236, 19977), (272, 20061), (277, 20073), (278, 20076), (306, 20151), (315, 20166), (338, 20205), (378, 20322), (417, 20409), (463, 20490), (489, 20538), (500, 20562), (532, 20649), (553, 20694), (584, 20766), (591, 20787), (597, 20805), (668, 20979), (670, 20988), (675, 21012), (677, 21018), (687, 21042), (731, 21096), (742, 21117), (756, 21168), (763, 21192), (782, 21246), (813, 21342), (860, 21447), (863, 21462), (894, 21570), (900, 21588),

Gene: Harella\_23 Start: 19962, Stop: 21557, Start Num: 191

Candidate Starts for Harella\_23:

(Start: 129 @19878 has 79 MA's), (Start: 191 @19962 has 45 MA's), (Start: 235 @20040 has 1 MA's), (268, 20127), (274, 20142), (300, 20190), (324, 20229), (356, 20316), (368, 20349), (381, 20385), (390, 20415), (392, 20421), (422, 20490), (461, 20520), (466, 20532), (468, 20535), (494, 20592), (565, 20724), (567, 20730), (592, 20796), (594, 20802), (601, 20826), (618, 20874), (627, 20898), (631, 20907), (658, 20982), (717, 21033), (725, 21048), (782, 21210), (788, 21237), (799, 21267), (843, 21372), (880, 21450), (887, 21486), (890, 21495), (900, 21528), (907, 21543),

Gene: Harlequin\_23 Start: 16299, Stop: 17924, Start Num: 168

Candidate Starts for Harlequin\_23:

(Start: 155 @16284 has 4 MA's), (Start: 168 @16299 has 32 MA's), (196, 16341), (211, 16368), (232, 16404), (306, 16590), (361, 16719), (378, 16761), (386, 16788), (394, 16812), (406, 16830), (436, 16860), (444, 16875), (467, 16926), (505, 17010), (576, 17127), (584, 17151), (635, 17265), (654, 17313), (665, 17343), (672, 17382), (675, 17394), (713, 17424), (750, 17502), (807, 17649), (818, 17673), (832, 17709), (854, 17748), (907, 17916),

Gene: Harley\_16 Start: 14800, Stop: 16509, Start Num: 123

Candidate Starts for Harley\_16:

(Start: 123 @14800 has 215 MA's), (193, 14887), (Start: 227 @14932 has 2 MA's), (233, 14956), (271, 15061), (274, 15067), (281, 15085), (300, 15115), (348, 15220), (370, 15280), (378, 15301), (381, 15310), (386, 15328), (388, 15334), (403, 15376), (418, 15409), (424, 15421), (443, 15436), (448,

15442), (459, 15460), (465, 15475), (468, 15481), (477, 15502), (484, 15517), (486, 15520), (492, 15532), (494, 15538), (511, 15586), (515, 15598), (521, 15604), (564, 15664), (568, 15676), (583, 15712), (587, 15724), (594, 15745), (614, 15799), (618, 15808), (625, 15826), (627, 15832), (710, 15967), (717, 15976), (720, 15979), (737, 16015), (751, 16054), (761, 16093), (791, 16192), (799, 16213), (810, 16246), (826, 16276), (836, 16306), (839, 16312), (841, 16315), (844, 16321), (860, 16336), (861, 16339), (865, 16360), (866, 16363), (882, 16405), (900, 16477), (901, 16483),

Gene: HarryHoudini\_30 Start: 20673, Stop: 22445, Start Num: 144

Candidate Starts for HarryHoudini\_30:

(Start: 123 @20649 has 215 MA's), (Start: 144 @20673 has 603 MA's), (Start: 235 @20808 has 1 MA's), (242, 20826), (277, 20907), (278, 20910), (305, 20982), (306, 20985), (338, 21039), (341, 21045), (360, 21108), (365, 21123), (378, 21156), (388, 21189), (417, 21243), (463, 21324), (467, 21327), (481, 21357), (546, 21513), (584, 21600), (636, 21720), (674, 21843), (675, 21846), (677, 21852), (713, 21900), (737, 21942), (746, 21963), (750, 21978), (752, 21984), (770, 22038), (781, 22077), (784, 22092), (795, 22125), (810, 22170), (860, 22281), (862, 22287), (865, 22305), (877, 22341),

Gene: HarryOW\_28 Start: 21487, Stop: 23289, Start Num: 146

Candidate Starts for HarryOW\_28:

(Start: 146 @21487 has 223 MA's), (Start: 161 @21508 has 4 MA's), (Start: 190 @21550 has 1 MA's), (216, 21595), (306, 21811), (332, 21856), (338, 21865), (349, 21904), (368, 21955), (369, 21958), (406, 22051), (467, 22153), (500, 22222), (583, 22423), (584, 22426), (591, 22447), (635, 22543), (636, 22546), (638, 22552), (665, 22621), (668, 22639), (670, 22648), (677, 22678), (731, 22774), (746, 22807), (750, 22822), (793, 22963), (813, 23020), (862, 23131),

Gene: HashRod\_30 Start: 20466, Stop: 22262, Start Num: 144

Candidate Starts for HashRod\_30:

(Start: 144 @20466 has 603 MA's), (Start: 190 @20523 has 1 MA's), (197, 20538), (219, 20571), (230, 20592), (Start: 235 @20607 has 1 MA's), (272, 20694), (277, 20706), (278, 20709), (306, 20784), (315, 20799), (336, 20835), (379, 20958), (417, 21042), (481, 21156), (500, 21195), (532, 21282), (583, 21396), (591, 21420), (597, 21438), (636, 21519), (665, 21594), (668, 21612), (675, 21645), (677, 21651), (695, 21690), (729, 21744), (731, 21747), (742, 21768), (758, 21825), (813, 21993), (860, 22098), (862, 22104), (900, 22239),

Gene: HaveUMetTed\_30 Start: 20453, Stop: 22249, Start Num: 144

Candidate Starts for HaveUMetTed\_30:

(Start: 144 @20453 has 603 MA's), (Start: 190 @20510 has 1 MA's), (197, 20525), (230, 20579), (Start: 235 @20594 has 1 MA's), (272, 20681), (277, 20693), (278, 20696), (306, 20771), (315, 20786), (417, 21029), (500, 21182), (532, 21269), (583, 21383), (591, 21407), (595, 21419), (597, 21425), (636, 21506), (665, 21581), (668, 21599), (670, 21608), (675, 21632), (677, 21638), (695, 21677), (729, 21731), (731, 21734), (742, 21755), (813, 21980), (860, 22085), (862, 22091), (900, 22226),

Gene: Heathen\_27 Start: 19708, Stop: 21507, Start Num: 144

Candidate Starts for Heathen\_27:

(Start: 144 @19708 has 603 MA's), (Start: 190 @19768 has 1 MA's), (230, 19837), (272, 19939), (277, 19951), (278, 19954), (306, 20029), (315, 20044), (318, 20047), (338, 20083), (384, 20218), (417, 20287), (481, 20401), (532, 20527), (583, 20641), (591, 20665), (595, 20677), (597, 20683), (636, 20764), (665, 20839), (668, 20857), (670, 20866), (675, 20890), (677, 20896), (682, 20911), (707, 20953), (726, 20980), (729, 20989), (731, 20992), (742, 21013), (746, 21025), (813, 21238), (860, 21343), (862, 21349), (900, 21484),

Gene: Hedwig\_20 Start: 16954, Stop: 18648, Start Num: 149

Candidate Starts for Hedwig\_20:

(Start: 121 @16924 has 1 MA's), (Start: 149 @16954 has 8 MA's), (219, 17056), (240, 17107), (265, 17164), (281, 17215), (311, 17293), (316, 17299), (377, 17449), (445, 17572), (469, 17632), (485, 17668), (504, 17710), (537, 17752), (547, 17776), (561, 17806), (668, 18067), (705, 18142), (736, 18184), (752, 18229), (793, 18325), (794, 18328), (799, 18343), (864, 18502), (865, 18508), (891, 18595), (907, 18640),

Gene: HedwigODU\_23 Start: 17157, Stop: 18923, Start Num: 114

Candidate Starts for HedwigODU\_23:

(Start: 114 @17157 has 139 MA's), (140, 17187), (236, 17346), (248, 17379), (258, 17409), (272, 17442), (278, 17454), (316, 17544), (337, 17586), (360, 17658), (362, 17667), (378, 17706), (392, 17751), (400, 17772), (403, 17775), (438, 17829), (448, 17847), (465, 17889), (468, 17895), (481, 17922), (564, 18060), (572, 18078), (587, 18120), (593, 18138), (603, 18168), (618, 18195), (655, 18300), (748, 18459), (757, 18495), (768, 18525), (772, 18534), (793, 18609), (810, 18660), (863, 18759), (890, 18855), (901, 18894), (902, 18897), (913, 18915),

Gene: Heffalump\_30 Start: 22038, Stop: 23810, Start Num: 144

Candidate Starts for Heffalump\_30:

(94, 21972), (Start: 123 @22014 has 215 MA's), (Start: 144 @22038 has 603 MA's), (277, 22272), (278, 22275), (305, 22347), (306, 22350), (338, 22404), (349, 22443), (365, 22488), (378, 22521), (417, 22608), (463, 22689), (467, 22692), (584, 22965), (636, 23085), (675, 23211), (713, 23265), (721, 23274), (731, 23295), (746, 23328), (750, 23343), (752, 23349), (770, 23403), (781, 23442), (784, 23457), (813, 23541), (862, 23652),

Gene: Heftyboy\_21 Start: 17643, Stop: 19415, Start Num: 117

Candidate Starts for Heftyboy\_21:

(Start: 117 @17643 has 59 MA's), (Start: 123 @17649 has 215 MA's), (143, 17673), (Start: 168 @17706 has 32 MA's), (197, 17754), (230, 17808), (248, 17859), (272, 17922), (321, 18030), (360, 18138), (400, 18252), (403, 18255), (424, 18294), (438, 18309), (444, 18321), (448, 18327), (463, 18363), (465, 18369), (468, 18375), (487, 18414), (499, 18438), (564, 18540), (588, 18603), (602, 18648), (655, 18783), (708, 18882), (750, 18960), (756, 18984), (762, 19005), (771, 19023), (793, 19101), (795, 19107), (865, 19260), (895, 19365), (896, 19368), (901, 19386),

Gene: Hegedechwinu\_17 Start: 14659, Stop: 16368, Start Num: 123

Candidate Starts for Hegedechwinu\_17:

(Start: 123 @14659 has 215 MA's), (193, 14746), (Start: 227 @14791 has 2 MA's), (233, 14815), (271, 14920), (274, 14926), (281, 14944), (300, 14974), (348, 15079), (370, 15139), (378, 15160), (381, 15169), (388, 15193), (459, 15319), (465, 15334), (468, 15340), (484, 15376), (486, 15379), (492, 15391), (494, 15397), (511, 15445), (515, 15457), (521, 15463), (564, 15523), (568, 15535), (583, 15571), (587, 15583), (614, 15658), (618, 15667), (625, 15685), (627, 15691), (638, 15721), (710, 15826), (717, 15835), (720, 15838), (737, 15874), (761, 15952), (791, 16051), (799, 16072), (810, 16105), (826, 16135), (836, 16165), (841, 16174), (844, 16180), (860, 16195), (861, 16198), (866, 16222), (877, 16252), (882, 16264), (887, 16294), (900, 16336),

Gene: Heinz\_19 Start: 15040, Stop: 16656, Start Num: 153

Candidate Starts for Heinz\_19:

(Start: 153 @15040 has 11 MA's), (219, 15139), (231, 15163), (277, 15274), (278, 15277), (281, 15295), (284, 15304), (322, 15370), (328, 15385), (332, 15394), (336, 15400), (366, 15490), (385, 15544), (389, 15553), (448, 15643), (464, 15685), (467, 15688), (489, 15733), (499, 15754), (539, 15811), (544, 15826), (547, 15832), (551, 15841), (560, 15859), (599, 15949), (604, 15964), (653, 16063), (657, 16081), (664, 16093), (671, 16132), (679, 16159), (735, 16207), (740, 16219), (746, 16231), (752, 16252), (755, 16264), (769, 16279), (782, 16309), (791, 16345), (863, 16498), (873, 16534), (890, 16594), (891, 16597), (897, 16618), (907, 16642),

Gene: HelDan\_27 Start: 19960, Stop: 21759, Start Num: 144

Candidate Starts for HelDan\_27:

(Start: 144 @19960 has 603 MA's), (Start: 190 @20020 has 1 MA's), (230, 20089), (272, 20191), (277, 20203), (278, 20206), (306, 20281), (315, 20296), (318, 20299), (338, 20335), (384, 20470), (417, 20539), (481, 20653), (532, 20779), (583, 20893), (591, 20917), (595, 20929), (597, 20935), (636, 21016), (665, 21091), (668, 21109), (670, 21118), (675, 21142), (677, 21148), (682, 21163), (707, 21205), (726, 21232), (729, 21241), (731, 21244), (742, 21265), (746, 21277), (813, 21490), (860, 21595), (862, 21601), (900, 21736),

Gene: Heliosoles\_29 Start: 20460, Stop: 22256, Start Num: 144

Candidate Starts for Heliosoles\_29:

(Start: 144 @20460 has 603 MA's), (Start: 190 @20517 has 1 MA's), (197, 20532), (230, 20586), (Start: 235 @20601 has 1 MA's), (272, 20688), (277, 20700), (278, 20703), (306, 20778), (315, 20793), (417, 21036), (500, 21189), (532, 21276), (576, 21369), (583, 21390), (591, 21414), (595, 21426), (597, 21432), (636, 21513), (665, 21588), (668, 21606), (670, 21615), (675, 21639), (677, 21645), (682, 21660), (695, 21684), (729, 21738), (731, 21741), (742, 21762), (860, 22092), (862, 22098), (900, 22233),

Gene: Helmet\_32 Start: 19977, Stop: 21749, Start Num: 144

Candidate Starts for Helmet\_32:

(94, 19911), (Start: 123 @19953 has 215 MA's), (Start: 144 @19977 has 603 MA's), (278, 20214), (305, 20286), (306, 20289), (315, 20304), (338, 20343), (341, 20349), (378, 20460), (380, 20466), (392, 20505), (417, 20547), (448, 20586), (463, 20628), (467, 20631), (532, 20787), (592, 20928), (597, 20943), (677, 21156), (742, 21255), (750, 21282), (765, 21333), (770, 21342), (781, 21381), (782, 21384), (860, 21585), (862, 21591), (900, 21726),

Gene: Henry\_24 Start: 19829, Stop: 21424, Start Num: 191

Candidate Starts for Henry\_24:

(Start: 129 @19745 has 79 MA's), (Start: 191 @19829 has 45 MA's), (Start: 235 @19907 has 1 MA's), (268, 19994), (274, 20009), (300, 20057), (324, 20096), (356, 20183), (368, 20216), (381, 20252), (390, 20282), (392, 20288), (422, 20357), (461, 20387), (466, 20399), (468, 20402), (494, 20459), (565, 20591), (567, 20597), (592, 20663), (594, 20669), (601, 20693), (618, 20741), (627, 20765), (631, 20774), (658, 20849), (717, 20900), (725, 20915), (782, 21077), (788, 21104), (799, 21134), (843, 21239), (880, 21317), (887, 21353), (890, 21362), (900, 21395), (907, 21410),

Gene: Herbertwm\_25 Start: 18795, Stop: 20585, Start Num: 144

Candidate Starts for Herbertwm\_25:

(94, 18729), (Start: 123 @18771 has 215 MA's), (Start: 144 @18795 has 603 MA's), (Start: 194 @18855 has 1 MA's), (Start: 235 @18930 has 1 MA's), (236, 18933), (242, 18948), (277, 19029), (278, 19032), (306, 19107), (315, 19122), (338, 19161), (360, 19230), (388, 19311), (417, 19365), (448, 19404), (463, 19446), (595, 19755), (731, 20070), (736, 20079), (750, 20118), (752, 20124), (756, 20142), (758, 20148), (781, 20217), (784, 20232), (849, 20394), (860, 20421), (900, 20562),

Gene: Hercules11\_29 Start: 20386, Stop: 22182, Start Num: 144

Candidate Starts for Hercules11\_29:

(Start: 144 @20386 has 603 MA's), (Start: 190 @20443 has 1 MA's), (197, 20458), (219, 20491), (230, 20512), (Start: 235 @20527 has 1 MA's), (272, 20614), (277, 20626), (278, 20629), (306, 20704), (315, 20719), (336, 20755), (417, 20962), (481, 21076), (500, 21115), (583, 21316), (591, 21340), (597, 21358), (636, 21439), (665, 21514), (668, 21532), (675, 21565), (677, 21571), (695, 21610), (729, 21664), (731, 21667), (742, 21688), (758, 21745), (813, 21913), (860, 22018), (862, 22024), (900, 22159),

Gene: Hermia\_30 Start: 22615, Stop: 24417, Start Num: 146

Candidate Starts for Hermia\_30:

(Start: 146 @22615 has 223 MA's), (Start: 161 @22636 has 4 MA's), (Start: 190 @22678 has 1 MA's), (216, 22723), (306, 22939), (332, 22984), (338, 22993), (349, 23032), (368, 23083), (369, 23086), (467, 23281), (500, 23350), (583, 23551), (584, 23554), (591, 23575), (635, 23671), (636, 23674), (638, 23680), (665, 23749), (668, 23767), (670, 23776), (677, 23806), (731, 23902), (746, 23935), (750, 23950), (758, 23980), (793, 24091), (813, 24148), (862, 24259), (909, 24412),

Gene: HermioneGrange\_27 Start: 21061, Stop: 22863, Start Num: 146

Candidate Starts for HermioneGrange\_27:

(Start: 146 @21061 has 223 MA's), (Start: 161 @21082 has 4 MA's), (Start: 190 @21124 has 1 MA's), (216, 21169), (306, 21385), (332, 21430), (338, 21439), (368, 21529), (369, 21532), (406, 21625), (467, 21727), (500, 21796), (579, 21985), (583, 21997), (584, 22000), (591, 22021), (635, 22117), (636, 22120), (638, 22126), (665, 22195), (668, 22213), (670, 22222), (677, 22252), (731, 22348), (746, 22381), (750, 22396), (793, 22537), (813, 22594), (862, 22705),

Gene: Herod\_19 Start: 17764, Stop: 19362, Start Num: 170

Candidate Starts for Herod\_19:

(Start: 170 @17764 has 87 MA's), (298, 18022), (306, 18040), (307, 18043), (340, 18097), (363, 18172), (385, 18241), (388, 18250), (392, 18262), (415, 18313), (435, 18340), (440, 18349), (441, 18352), (501, 18385), (519, 18442), (554, 18508), (603, 18619), (618, 18643), (636, 18679), (648, 18712), (669, 18781), (687, 18838), (751, 18928), (849, 19168), (874, 19246),

Gene: Hexamo\_31 Start: 19945, Stop: 21717, Start Num: 144

Candidate Starts for Hexamo\_31:

(94, 19879), (Start: 123 @19921 has 215 MA's), (Start: 144 @19945 has 603 MA's), (278, 20182), (305, 20254), (306, 20257), (315, 20272), (338, 20311), (341, 20317), (378, 20428), (380, 20434), (392, 20473), (417, 20515), (448, 20554), (463, 20596), (467, 20599), (532, 20755), (592, 20896), (597, 20911), (677, 21124), (742, 21223), (750, 21250), (765, 21301), (770, 21310), (781, 21349), (784, 21364), (813, 21448), (860, 21553), (862, 21559), (900, 21694),

Gene: Hexbug\_20 Start: 15776, Stop: 17464, Start Num: 144

Candidate Starts for Hexbug\_20:

(113, 15746), (Start: 133 @15773 has 8 MA's), (Start: 144 @15776 has 603 MA's), (236, 15917), (277, 16016), (292, 16067), (302, 16094), (365, 16244), (377, 16274), (385, 16301), (392, 16322), (395, 16331), (406, 16346), (436, 16376), (442, 16388), (445, 16394), (448, 16397), (453, 16412), (481, 16481), (513, 16562), (549, 16604), (553, 16613), (561, 16631), (581, 16676), (610, 16760), (634, 16796), (635, 16799), (636, 16802), (643, 16817), (650, 16835), (668, 16892), (675, 16925), (747, 17021), (750, 17033), (752, 17039), (754, 17048), (766, 17060), (791, 17132), (793, 17135), (794, 17138), (799, 17153), (842, 17261), (847, 17270), (862, 17303), (863, 17312), (900, 17441), (907, 17456),

Gene: Hibiscus\_18 Start: 14988, Stop: 16604, Start Num: 153

Candidate Starts for Hibiscus\_18:

(102, 14922), (Start: 153 @14988 has 11 MA's), (219, 15087), (231, 15111), (277, 15222), (278, 15225), (281, 15243), (284, 15252), (322, 15318), (328, 15333), (332, 15342), (336, 15348), (366, 15438), (385, 15492), (389, 15501), (448, 15591), (499, 15702), (544, 15774), (547, 15780), (551, 15789), (560, 15807), (599, 15897), (653, 16011), (657, 16029), (664, 16041), (671, 16080), (679, 16107), (735, 16155), (740, 16167), (746, 16179), (752, 16200), (755, 16212), (769, 16227), (782, 16257), (791, 16293), (863, 16446), (873, 16482), (890, 16542), (891, 16545), (897, 16566), (907, 16590),

Gene: Highbury\_25 Start: 19407, Stop: 21086, Start Num: 129

Candidate Starts for Highbury\_25:

(Start: 129 @19407 has 79 MA's), (Start: 191 @19491 has 45 MA's), (Start: 235 @19569 has 1 MA's), (268, 19656), (274, 19671), (300, 19719), (324, 19758), (356, 19845), (368, 19878), (381, 19914), (390, 19944), (392, 19950), (422, 20019), (461, 20049), (466, 20061), (468, 20064), (494, 20121), (565, 20253), (567, 20259), (592, 20325), (594, 20331), (601, 20355), (618, 20403), (627, 20427), (631, 20436), (658, 20511), (717, 20562), (725, 20577), (782, 20739), (788, 20766), (799, 20796), (843, 20901), (880, 20979), (887, 21015), (890, 21024), (900, 21057), (907, 21072),

Gene: Hilltopfarm\_24 Start: 19638, Stop: 21473, Start Num: 81

Candidate Starts for Hilltopfarm\_24:

(Start: 81 @19638 has 4 MA's), (102, 19686), (Start: 109 @19695 has 26 MA's), (142, 19734), (Start: 168 @19764 has 32 MA's), (Start: 175 @19776 has 1 MA's), (197, 19812), (221, 19842), (Start: 227 @19851 has 2 MA's), (230, 19866), (248, 19917), (249, 19920), (286, 20019), (347, 20160), (365, 20211), (368, 20217), (382, 20256), (400, 20310), (448, 20379), (465, 20421), (482, 20457), (487, 20466), (520, 20544), (526, 20553), (543, 20583), (563, 20616), (564, 20619), (587, 20679), (595, 20703), (598, 20712), (628, 20781), (664, 20886), (665, 20889), (670, 20916), (775, 21099), (877, 21354), (901, 21444), (902, 21447), (904, 21450),

Gene: HippoPololi\_20 Start: 16592, Stop: 18283, Start Num: 144

Candidate Starts for HippoPololi\_20:

(113, 16559), (Start: 144 @16592 has 603 MA's), (Start: 150 @16604 has 4 MA's), (222, 16706), (236, 16736), (316, 16940), (336, 16976), (349, 17018), (365, 17063), (406, 17165), (436, 17198), (442, 17210), (444, 17213), (465, 17270), (481, 17303), (489, 17318), (501, 17345), (513, 17384), (549, 17426), (553, 17435), (574, 17480), (583, 17504), (596, 17543), (643, 17639), (647, 17648), (650, 17657), (668, 17714), (671, 17732), (731, 17807), (750, 17855), (754, 17870), (766, 17882), (791, 17954), (793, 17957), (794, 17960), (795, 17963), (829, 18053), (842, 18080), (862, 18122), (863, 18131), (865, 18140),

Gene: Hiro\_23 Start: 16605, Stop: 18230, Start Num: 168

Candidate Starts for Hiro\_23:

(Start: 155 @16590 has 4 MA's), (Start: 168 @16605 has 32 MA's), (196, 16647), (211, 16674), (232, 16710), (286, 16851), (306, 16896), (361, 17025), (378, 17067), (384, 17085), (386, 17094), (394, 17118), (406, 17136), (436, 17166), (444, 17181), (445, 17184), (460, 17223), (467, 17232), (505, 17316), (546, 17370), (553, 17385), (576, 17433), (584, 17457), (635, 17571), (665, 17649), (672, 17688), (675, 17700), (678, 17709), (713, 17730), (750, 17808), (807, 17955), (854, 18054), (860, 18069), (907, 18222),

Gene: Hitter\_19 Start: 16650, Stop: 18296, Start Num: 195

Candidate Starts for Hitter\_19:

(172, 16614), (Start: 195 @16650 has 45 MA's), (244, 16752), (272, 16830), (274, 16833), (308, 16929), (329, 16968), (349, 17028), (357, 17049), (377, 17103), (382, 17118), (460, 17214), (494, 17289), (506, 17319), (594, 17502), (601, 17526), (626, 17577), (658, 17670), (664, 17682), (694, 17727), (702, 17742), (757, 17874), (758, 17877), (788, 17976), (795, 17994), (813, 18045), (843, 18111), (872, 18174), (877, 18186),

Gene: Hlubikazi\_16 Start: 14904, Stop: 16613, Start Num: 123

Candidate Starts for Hlubikazi\_16:

(Start: 123 @14904 has 215 MA's), (193, 14991), (Start: 227 @15036 has 2 MA's), (233, 15060), (271, 15165), (274, 15171), (281, 15189), (300, 15219), (348, 15324), (370, 15384), (378, 15405), (381, 15414), (388, 15438), (459, 15564), (465, 15579), (468, 15585), (484, 15621), (486, 15624), (492, 15636), (494, 15642), (511, 15690), (515, 15702), (521, 15708), (564, 15768), (568, 15780), (583, 15816), (587, 15828), (614, 15903), (618, 15912), (625, 15930), (627, 15936), (638, 15966), (710, 16071), (717, 16080), (720, 16083), (737, 16119), (761, 16197), (791, 16296), (799, 16317), (810,

16350), (826, 16380), (836, 16410), (841, 16419), (844, 16425), (860, 16440), (861, 16443), (866, 16467), (877, 16497), (882, 16509), (887, 16539), (900, 16581),

Gene: Holec\_29 Start: 21753, Stop: 23543, Start Num: 144

Candidate Starts for Holec\_29:

(Start: 141 @21750 has 14 MA's), (Start: 144 @21753 has 603 MA's), (277, 21987), (278, 21990), (305, 22062), (306, 22065), (315, 22080), (338, 22119), (341, 22125), (378, 22236), (417, 22323), (463, 22404), (467, 22407), (546, 22593), (576, 22656), (584, 22680), (586, 22686), (597, 22719), (636, 22800), (675, 22926), (693, 22968), (726, 23016), (731, 23028), (746, 23061), (750, 23076), (781, 23175), (782, 23178), (784, 23190), (813, 23274), (842, 23340), (860, 23379), (862, 23385), (873, 23430), (890, 23487), (891, 23490),

Gene: Holli\_27 Start: 19617, Stop: 21395, Start Num: 144

Candidate Starts for Holli\_27:

(Start: 123 @19593 has 215 MA's), (Start: 144 @19617 has 603 MA's), (Start: 190 @19674 has 1 MA's), (222, 19728), (230, 19743), (236, 19761), (272, 19845), (277, 19857), (278, 19860), (306, 19935), (315, 19950), (338, 19989), (378, 20106), (417, 20193), (463, 20274), (489, 20322), (500, 20346), (532, 20433), (553, 20478), (584, 20550), (591, 20571), (597, 20589), (636, 20670), (668, 20763), (670, 20772), (675, 20796), (677, 20802), (687, 20826), (731, 20880), (742, 20901), (756, 20952), (763, 20976), (782, 21030), (813, 21126), (860, 21231), (863, 21246), (894, 21354), (900, 21372),

Gene: Holliday\_20 Start: 16421, Stop: 18118, Start Num: 144

Candidate Starts for Holliday\_20:

(113, 16382), (Start: 144 @16421 has 603 MA's), (Start: 150 @16433 has 4 MA's), (180, 16472), (202, 16511), (219, 16532), (240, 16580), (243, 16589), (263, 16631), (277, 16667), (295, 16724), (316, 16772), (331, 16799), (382, 16940), (406, 16997), (414, 17015), (432, 17024), (436, 17030), (458, 17078), (469, 17108), (485, 17144), (489, 17150), (499, 17171), (500, 17174), (517, 17225), (547, 17252), (549, 17255), (561, 17282), (574, 17309), (599, 17381), (618, 17420), (649, 17474), (664, 17516), (683, 17591), (736, 17654), (747, 17681), (749, 17684), (752, 17699), (788, 17783), (791, 17792), (793, 17795), (795, 17801), (799, 17813), (801, 17816), (811, 17846), (814, 17852), (824, 17873), (825, 17876), (849, 17930), (862, 17960), (863, 17969), (879, 18020), (887, 18053), (891, 18065), (896, 18083),

Gene: Holt\_25 Start: 19026, Stop: 20705, Start Num: 129

Candidate Starts for Holt\_25:

(Start: 129 @19026 has 79 MA's), (Start: 191 @19110 has 45 MA's), (Start: 235 @19188 has 1 MA's), (268, 19275), (274, 19290), (300, 19338), (324, 19377), (356, 19464), (368, 19497), (381, 19533), (390, 19563), (392, 19569), (422, 19638), (461, 19668), (466, 19680), (468, 19683), (494, 19740), (565, 19872), (567, 19878), (592, 19944), (594, 19950), (601, 19974), (618, 20022), (627, 20046), (631, 20055), (658, 20130), (717, 20181), (725, 20196), (782, 20358), (788, 20385), (799, 20415), (843, 20520), (880, 20598), (887, 20634), (890, 20643), (900, 20676), (907, 20691),

Gene: Homines\_27 Start: 21386, Stop: 23188, Start Num: 146

Candidate Starts for Homines\_27:

(Start: 146 @21386 has 223 MA's), (Start: 161 @21407 has 4 MA's), (Start: 190 @21449 has 1 MA's), (216, 21494), (306, 21710), (332, 21755), (338, 21764), (349, 21803), (368, 21854), (369, 21857), (406, 21950), (467, 22052), (500, 22121), (583, 22322), (584, 22325), (591, 22346), (635, 22442), (636, 22445), (638, 22451), (665, 22520), (668, 22538), (670, 22547), (677, 22577), (731, 22673), (746, 22706), (750, 22721), (793, 22862), (813, 22919), (862, 23030), (909, 23183),

Gene: Homura\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Homura\_23:



(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Hookmount\_28 Start: 20456, Stop: 22255, Start Num: 144

Candidate Starts for Hookmount\_28:

(Start: 144 @20456 has 603 MA's), (Start: 190 @20516 has 1 MA's), (230, 20585), (272, 20687), (277, 20699), (278, 20702), (306, 20777), (315, 20792), (338, 20831), (384, 20966), (417, 21035), (481, 21149), (532, 21275), (583, 21389), (591, 21413), (595, 21425), (597, 21431), (636, 21512), (665, 21587), (668, 21605), (670, 21614), (675, 21638), (677, 21644), (682, 21659), (703, 21692), (729, 21737), (731, 21740), (742, 21761), (782, 21890), (813, 21986), (860, 22091), (862, 22097), (900, 22232),

Gene: Hoonter\_26 Start: 19736, Stop: 21415, Start Num: 129

Candidate Starts for Hoonter\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: Hoot\_31 Start: 19955, Stop: 21727, Start Num: 144

Candidate Starts for Hoot\_31:

(94, 19889), (Start: 123 @19931 has 215 MA's), (Start: 144 @19955 has 603 MA's), (263, 20153), (278, 20192), (305, 20264), (306, 20267), (318, 20285), (338, 20321), (341, 20327), (378, 20438), (380, 20444), (392, 20483), (417, 20525), (448, 20564), (463, 20606), (467, 20609), (495, 20669), (592, 20906), (597, 20921), (636, 21002), (677, 21134), (750, 21260), (765, 21311), (770, 21320), (781, 21359), (782, 21362), (784, 21374), (813, 21458), (860, 21563), (862, 21569), (900, 21704),

Gene: Hope\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Hope\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Hope4ever\_27 Start: 21502, Stop: 23304, Start Num: 146

Candidate Starts for Hope4ever\_27:

(Start: 146 @21502 has 223 MA's), (Start: 161 @21523 has 4 MA's), (Start: 190 @21565 has 1 MA's), (216, 21610), (306, 21826), (332, 21871), (338, 21880), (349, 21919), (368, 21970), (369, 21973), (406, 22066), (467, 22168), (500, 22237), (579, 22426), (583, 22438), (584, 22441), (591, 22462), (635, 22558), (636, 22561), (638, 22567), (665, 22636), (668, 22654), (670, 22663), (677, 22693), (731, 22789), (746, 22822), (750, 22837), (793, 22978), (813, 23035), (862, 23146),

Gene: Hohey\_26 Start: 20107, Stop: 21702, Start Num: 191

Candidate Starts for Hohey\_26:

(Start: 129 @20023 has 79 MA's), (Start: 191 @20107 has 45 MA's), (Start: 235 @20185 has 1 MA's),  
(268, 20272), (274, 20287), (300, 20335), (324, 20374), (356, 20461), (368, 20494), (381, 20530),  
(390, 20560), (392, 20566), (422, 20635), (461, 20665), (466, 20677), (468, 20680), (494, 20737),  
(565, 20869), (567, 20875), (592, 20941), (594, 20947), (601, 20971), (618, 21019), (627, 21043),  
(631, 21052), (658, 21127), (717, 21178), (725, 21193), (782, 21355), (788, 21382), (799, 21412),  
(843, 21517), (880, 21595), (887, 21631), (890, 21640), (900, 21673), (907, 21688),

Gene: Horseradish\_19 Start: 15276, Stop: 16973, Start Num: 144

Candidate Starts for Horseradish\_19:

(113, 15246), (Start: 133 @15273 has 8 MA's), (Start: 144 @15276 has 603 MA's), (264, 15486), (332,  
15654), (336, 15660), (374, 15768), (385, 15804), (395, 15834), (406, 15849), (436, 15882), (442,  
15894), (458, 15930), (481, 15987), (487, 15999), (553, 16119), (562, 16140), (574, 16164), (636,  
16314), (643, 16329), (650, 16347), (668, 16404), (747, 16533), (750, 16545), (755, 16563), (766,  
16572), (791, 16644), (793, 16647), (795, 16653), (799, 16665), (842, 16770), (847, 16779), (862,  
16812), (896, 16938),

Gene: Hortense\_20 Start: 17902, Stop: 19482, Start Num: 170

Candidate Starts for Hortense\_20:

(88, 17785), (Start: 170 @17902 has 87 MA's), (298, 18160), (307, 18181), (340, 18235), (351,  
18274), (369, 18331), (377, 18352), (501, 18523), (507, 18541), (514, 18565), (521, 18586), (554,  
18628), (592, 18709), (636, 18799), (655, 18850), (669, 18901), (670, 18904), (687, 18958), (751,  
19048), (863, 19327), (865, 19336), (874, 19366),

Gene: HortumSL17\_30 Start: 21746, Stop: 23539, Start Num: 141

Candidate Starts for HortumSL17\_30:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986),  
(305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319),  
(463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715),  
(636, 22796), (675, 22922), (693, 22964), (695, 22967), (731, 23024), (746, 23057), (750, 23072),  
(781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381),  
(873, 23426), (890, 23483), (891, 23486),

Gene: Horus\_20 Start: 16434, Stop: 18131, Start Num: 144

Candidate Starts for Horus\_20:

(113, 16395), (Start: 144 @16434 has 603 MA's), (Start: 150 @16446 has 4 MA's), (Start: 153  
@16449 has 11 MA's), (180, 16485), (202, 16524), (219, 16545), (239, 16587), (240, 16593), (241,  
16596), (246, 16608), (263, 16644), (277, 16680), (295, 16737), (316, 16785), (331, 16812), (368,  
16914), (382, 16953), (406, 17010), (414, 17028), (432, 17037), (436, 17043), (458, 17091), (469,  
17121), (485, 17157), (489, 17163), (499, 17184), (500, 17187), (517, 17238), (547, 17265), (549,  
17268), (561, 17295), (574, 17322), (599, 17394), (618, 17433), (649, 17487), (670, 17559), (683,  
17604), (747, 17694), (752, 17712), (788, 17796), (791, 17805), (793, 17808), (795, 17814), (801,  
17829), (811, 17859), (814, 17865), (824, 17886), (825, 17889), (849, 17943), (862, 17973), (863,  
17982), (879, 18033), (887, 18066), (891, 18078), (896, 18096),

Gene: Hotshotbaby7\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Hotshotbaby7\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's),  
(143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039),  
(334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369),  
(481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780),  
(665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050),  
(799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Houdini22\_27 Start: 19831, Stop: 21609, Start Num: 144

Candidate Starts for Houdini22\_27:

(Start: 123 @19807 has 215 MA's), (Start: 144 @19831 has 603 MA's), (Start: 190 @19888 has 1 MA's), (222, 19942), (230, 19957), (236, 19975), (272, 20059), (277, 20071), (278, 20074), (306, 20149), (315, 20164), (338, 20203), (378, 20320), (417, 20407), (463, 20488), (489, 20536), (500, 20560), (532, 20647), (553, 20692), (584, 20764), (591, 20785), (597, 20803), (636, 20884), (668, 20977), (670, 20986), (675, 21010), (677, 21016), (687, 21040), (731, 21094), (742, 21115), (756, 21166), (763, 21190), (782, 21244), (813, 21340), (860, 21445), (863, 21460), (894, 21568), (900, 21586),

Gene: Howe\_20 Start: 17902, Stop: 19482, Start Num: 170

Candidate Starts for Howe\_20:

(88, 17785), (Start: 170 @17902 has 87 MA's), (298, 18160), (307, 18181), (340, 18235), (351, 18274), (369, 18331), (377, 18352), (501, 18523), (507, 18541), (514, 18565), (521, 18586), (554, 18628), (592, 18709), (636, 18799), (655, 18850), (669, 18901), (670, 18904), (687, 18958), (751, 19048), (863, 19327), (865, 19336), (874, 19366),

Gene: HubbaBubba\_40 Start: 26590, Stop: 28194, Start Num: 177

Candidate Starts for HubbaBubba\_40:

(Start: 170 @26578 has 87 MA's), (Start: 175 @26587 has 1 MA's), (Start: 177 @26590 has 1 MA's), (Start: 194 @26614 has 1 MA's), (236, 26692), (306, 26875), (340, 26932), (343, 26944), (347, 26959), (372, 27025), (377, 27040), (386, 27064), (432, 27151), (436, 27157), (449, 27181), (493, 27241), (505, 27271), (511, 27292), (560, 27397), (571, 27418), (607, 27505), (635, 27553), (673, 27679), (688, 27715), (791, 27880), (798, 27898), (809, 27934), (885, 28108), (887, 28120), (906, 28177),

Gene: HufflyPuff\_23 Start: 19814, Stop: 21409, Start Num: 191

Candidate Starts for HufflyPuff\_23:

(Start: 129 @19730 has 79 MA's), (Start: 191 @19814 has 45 MA's), (Start: 235 @19892 has 1 MA's), (268, 19979), (274, 19994), (300, 20042), (324, 20081), (356, 20168), (368, 20201), (381, 20237), (390, 20267), (392, 20273), (422, 20342), (461, 20372), (466, 20384), (468, 20387), (494, 20444), (565, 20576), (567, 20582), (592, 20648), (594, 20654), (601, 20678), (618, 20726), (627, 20750), (631, 20759), (658, 20834), (717, 20885), (725, 20900), (782, 21062), (788, 21089), (799, 21119), (843, 21224), (880, 21302), (887, 21338), (890, 21347), (900, 21380), (907, 21395),

Gene: Huffly\_24 Start: 16702, Stop: 18030, Start Num: 257

Candidate Starts for Huffly\_24:

(Start: 257 @16702 has 11 MA's), (267, 16717), (317, 16831), (333, 16861), (349, 16906), (364, 16951), (383, 17008), (388, 17026), (391, 17035), (401, 17059), (405, 17065), (406, 17068), (437, 17119), (447, 17131), (509, 17173), (531, 17224), (536, 17233), (548, 17242), (580, 17287), (636, 17398), (653, 17443), (671, 17512), (680, 17533), (749, 17614), (763, 17647), (799, 17734), (812, 17770), (819, 17785), (823, 17794), (849, 17836), (881, 17929), (884, 17947), (899, 18004), (902, 18013),

Gene: Hughesyang\_35 Start: 27496, Stop: 29229, Start Num: 124

Candidate Starts for Hughesyang\_35:

(Start: 124 @27496 has 30 MA's), (Start: 191 @27586 has 45 MA's), (222, 27634), (233, 27664), (243, 27691), (282, 27793), (301, 27823), (346, 27922), (358, 27958), (360, 27964), (368, 27985), (392, 28057), (395, 28066), (403, 28087), (448, 28156), (468, 28195), (470, 28198), (475, 28213), (494, 28252), (511, 28300), (515, 28312), (521, 28318), (552, 28366), (558, 28375), (565, 28396), (573, 28414), (590, 28462), (625, 28564), (647, 28624), (653, 28636), (725, 28720), (731, 28732), (735, 28738), (740, 28750), (742, 28753), (753, 28792), (758, 28810), (772, 28846), (773, 28852), (799, 28939), (834, 29029), (863, 29071), (868, 29089), (878, 29119), (888, 29161), (907, 29215),

Gene: Hugley\_19 Start: 17764, Stop: 19362, Start Num: 170

Candidate Starts for Hugley\_19:

(Start: 170 @17764 has 87 MA's), (298, 18022), (306, 18040), (307, 18043), (340, 18097), (363, 18172), (385, 18241), (388, 18250), (392, 18262), (415, 18313), (435, 18340), (440, 18349), (441, 18352), (501, 18385), (519, 18442), (554, 18508), (603, 18619), (618, 18643), (636, 18679), (648, 18712), (669, 18781), (687, 18838), (751, 18928), (849, 19168), (874, 19246),

Gene: HuhtaEnerson15\_24 Start: 19658, Stop: 21454, Start Num: 144

Candidate Starts for HuhtaEnerson15\_24:

(Start: 144 @19658 has 603 MA's), (222, 19763), (236, 19796), (278, 19895), (306, 19970), (315, 19985), (336, 20021), (360, 20093), (365, 20108), (380, 20147), (388, 20174), (395, 20195), (430, 20234), (495, 20372), (499, 20378), (579, 20570), (580, 20573), (583, 20582), (597, 20624), (602, 20642), (635, 20702), (636, 20705), (668, 20798), (670, 20807), (675, 20831), (729, 20939), (746, 20975), (813, 21185), (859, 21287), (862, 21296), (893, 21410), (900, 21431), (902, 21440),

Gene: Hurricane\_22 Start: 17587, Stop: 19350, Start Num: 114

Candidate Starts for Hurricane\_22:

(Start: 109 @17578 has 26 MA's), (Start: 114 @17587 has 139 MA's), (196, 17689), (230, 17746), (248, 17797), (258, 17827), (269, 17851), (360, 18082), (362, 18091), (368, 18103), (400, 18196), (403, 18199), (448, 18271), (451, 18280), (465, 18313), (468, 18319), (487, 18358), (503, 18394), (564, 18484), (588, 18547), (622, 18634), (655, 18727), (698, 18802), (760, 18931), (771, 18955), (778, 18982), (795, 19039), (810, 19084), (863, 19186), (871, 19213), (887, 19273), (890, 19282), (896, 19303), (901, 19321), (904, 19327), (913, 19342),

Gene: Hutc2\_28 Start: 20752, Stop: 22551, Start Num: 144

Candidate Starts for Hutc2\_28:

(94, 20686), (Start: 123 @20728 has 215 MA's), (Start: 144 @20752 has 603 MA's), (183, 20794), (236, 20890), (242, 20905), (277, 20986), (278, 20989), (306, 21064), (315, 21079), (338, 21118), (341, 21124), (356, 21175), (378, 21235), (380, 21241), (417, 21322), (467, 21406), (518, 21532), (526, 21550), (540, 21577), (597, 21718), (631, 21784), (635, 21796), (636, 21799), (703, 21988), (721, 22015), (726, 22024), (736, 22045), (737, 22048), (746, 22069), (750, 22084), (756, 22108), (781, 22183), (784, 22198), (813, 22282), (860, 22387), (862, 22393), (877, 22447), (909, 22546),

Gene: Huxley\_27 Start: 19891, Stop: 21669, Start Num: 144

Candidate Starts for Huxley\_27:

(Start: 123 @19867 has 215 MA's), (Start: 144 @19891 has 603 MA's), (Start: 190 @19948 has 1 MA's), (222, 20002), (230, 20017), (236, 20035), (272, 20119), (277, 20131), (278, 20134), (306, 20209), (315, 20224), (338, 20263), (378, 20380), (417, 20467), (463, 20548), (489, 20596), (500, 20620), (532, 20707), (553, 20752), (584, 20824), (591, 20845), (597, 20863), (636, 20944), (668, 21037), (670, 21046), (675, 21070), (677, 21076), (687, 21100), (731, 21154), (742, 21175), (756, 21226), (763, 21250), (813, 21400), (860, 21505), (863, 21520), (894, 21628), (900, 21646),

Gene: Hyperbowlee\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Hyperbowlee\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Hyzer\_19 Start: 17835, Stop: 19433, Start Num: 170

Candidate Starts for Hyzer\_19:

(64, 17634), (Start: 170 @17835 has 87 MA's), (298, 18093), (306, 18111), (307, 18114), (340, 18168), (363, 18243), (385, 18312), (388, 18321), (392, 18333), (415, 18384), (435, 18411), (440, 18420), (441, 18423), (501, 18456), (519, 18513), (554, 18579), (603, 18690), (618, 18714), (636, 18750), (669, 18852), (751, 18999), (849, 19239), (874, 19317),

Gene: ICleared\_27 Start: 19825, Stop: 21603, Start Num: 144

Candidate Starts for ICleared\_27:

(Start: 123 @19801 has 215 MA's), (Start: 144 @19825 has 603 MA's), (Start: 190 @19882 has 1 MA's), (222, 19936), (230, 19951), (236, 19969), (272, 20053), (277, 20065), (278, 20068), (306, 20143), (315, 20158), (338, 20197), (378, 20314), (417, 20401), (463, 20482), (489, 20530), (500, 20554), (532, 20641), (553, 20686), (584, 20758), (591, 20779), (597, 20797), (636, 20878), (668, 20971), (670, 20980), (675, 21004), (677, 21010), (687, 21034), (731, 21088), (742, 21109), (756, 21160), (763, 21184), (782, 21238), (813, 21334), (860, 21439), (863, 21454), (894, 21562), (900, 21580),

Gene: IDyn\_42 Start: 27974, Stop: 29590, Start Num: 170

Candidate Starts for IDyn\_42:

(Start: 170 @27974 has 87 MA's), (Start: 177 @27986 has 1 MA's), (Start: 194 @28010 has 1 MA's), (236, 28088), (306, 28271), (340, 28328), (343, 28340), (347, 28355), (372, 28421), (377, 28436), (386, 28460), (432, 28547), (436, 28553), (449, 28577), (493, 28637), (505, 28667), (511, 28688), (560, 28793), (571, 28814), (607, 28901), (635, 28949), (673, 29075), (688, 29111), (791, 29276), (798, 29294), (809, 29330), (885, 29504), (887, 29516), (906, 29573),

Gene: IHOP\_24 Start: 20006, Stop: 21601, Start Num: 191

Candidate Starts for IHOP\_24:

(Start: 129 @19922 has 79 MA's), (Start: 191 @20006 has 45 MA's), (Start: 235 @20084 has 1 MA's), (268, 20171), (274, 20186), (300, 20234), (324, 20273), (356, 20360), (368, 20393), (381, 20429), (390, 20459), (392, 20465), (422, 20534), (461, 20564), (466, 20576), (468, 20579), (494, 20636), (565, 20768), (567, 20774), (592, 20840), (594, 20846), (601, 20870), (618, 20918), (627, 20942), (631, 20951), (658, 21026), (717, 21077), (725, 21092), (782, 21254), (788, 21281), (799, 21311), (843, 21416), (880, 21494), (887, 21530), (890, 21539), (900, 21572), (907, 21587),

Gene: ILeeKay\_29 Start: 21266, Stop: 23068, Start Num: 146

Candidate Starts for ILeeKay\_29:

(Start: 146 @21266 has 223 MA's), (Start: 161 @21287 has 4 MA's), (Start: 190 @21329 has 1 MA's), (216, 21374), (306, 21590), (332, 21635), (338, 21644), (349, 21683), (368, 21734), (369, 21737), (467, 21932), (500, 22001), (583, 22202), (584, 22205), (591, 22226), (635, 22322), (636, 22325), (638, 22331), (665, 22400), (668, 22418), (670, 22427), (677, 22457), (731, 22553), (746, 22586), (750, 22601), (793, 22742), (813, 22799), (862, 22910),

Gene: IMpilo\_16 Start: 14837, Stop: 16546, Start Num: 123

Candidate Starts for IMpilo\_16:

(Start: 123 @14837 has 215 MA's), (193, 14924), (Start: 227 @14969 has 2 MA's), (233, 14993), (271, 15098), (274, 15104), (281, 15122), (300, 15152), (348, 15257), (370, 15317), (373, 15326), (377, 15335), (378, 15338), (381, 15347), (388, 15371), (418, 15446), (459, 15497), (465, 15512), (468, 15518), (484, 15554), (486, 15557), (492, 15569), (494, 15575), (511, 15623), (515, 15635), (521, 15641), (564, 15701), (568, 15713), (583, 15749), (587, 15761), (614, 15836), (618, 15845), (625, 15863), (627, 15869), (638, 15899), (710, 16004), (717, 16013), (720, 16016), (737, 16052), (761, 16130), (791, 16229), (799, 16250), (810, 16283), (826, 16313), (836, 16343), (841, 16352), (844, 16358), (860, 16373), (861, 16376), (866, 16400), (877, 16430), (882, 16442), (887, 16472), (900, 16514),

Gene: lbOuu\_16 Start: 14805, Stop: 16514, Start Num: 123

Candidate Starts for lbOuu\_16:

(Start: 123 @14805 has 215 MA's), (193, 14892), (Start: 227 @14937 has 2 MA's), (233, 14961), (271, 15066), (274, 15072), (281, 15090), (300, 15120), (348, 15225), (367, 15279), (370, 15285), (373, 15294), (378, 15306), (381, 15315), (388, 15339), (459, 15465), (465, 15480), (468, 15486), (484, 15522), (492, 15537), (494, 15543), (511, 15591), (515, 15603), (521, 15609), (564, 15669), (568, 15681), (583, 15717), (587, 15729), (614, 15804), (618, 15813), (625, 15831), (627, 15837), (638, 15867), (710, 15972), (717, 15981), (720, 15984), (737, 16020), (761, 16098), (791, 16197), (799, 16218), (810, 16251), (826, 16281), (836, 16311), (841, 16320), (844, 16326), (860, 16341), (861, 16344), (865, 16365), (866, 16368), (882, 16410), (887, 16440), (900, 16482),

Gene: lbhubesi\_16 Start: 14800, Stop: 16509, Start Num: 123

Candidate Starts for lbhubesi\_16:

(Start: 123 @14800 has 215 MA's), (193, 14887), (Start: 227 @14932 has 2 MA's), (233, 14956), (271, 15061), (274, 15067), (281, 15085), (300, 15115), (348, 15220), (370, 15280), (378, 15301), (381, 15310), (386, 15328), (388, 15334), (403, 15376), (418, 15409), (424, 15421), (443, 15436), (448, 15442), (459, 15460), (465, 15475), (468, 15481), (477, 15502), (484, 15517), (486, 15520), (492, 15532), (494, 15538), (511, 15586), (515, 15598), (521, 15604), (564, 15664), (568, 15676), (583, 15712), (587, 15724), (594, 15745), (614, 15799), (618, 15808), (625, 15826), (627, 15832), (710, 15967), (717, 15976), (720, 15979), (737, 16015), (751, 16054), (761, 16093), (791, 16192), (799, 16213), (810, 16246), (826, 16276), (836, 16306), (839, 16312), (841, 16315), (844, 16321), (860, 16336), (861, 16339), (865, 16360), (866, 16363), (882, 16405), (900, 16477), (901, 16483),

Gene: lcee\_23 Start: 19489, Stop: 21084, Start Num: 191

Candidate Starts for lcee\_23:

(Start: 129 @19405 has 79 MA's), (Start: 191 @19489 has 45 MA's), (Start: 235 @19567 has 1 MA's), (268, 19654), (274, 19669), (300, 19717), (324, 19756), (356, 19843), (368, 19876), (381, 19912), (390, 19942), (392, 19948), (422, 20017), (461, 20047), (466, 20059), (468, 20062), (494, 20119), (565, 20251), (567, 20257), (592, 20323), (594, 20329), (601, 20353), (618, 20401), (627, 20425), (631, 20434), (658, 20509), (717, 20560), (725, 20575), (782, 20737), (788, 20764), (799, 20794), (843, 20899), (880, 20977), (887, 21013), (890, 21022), (900, 21055), (907, 21070),

Gene: lceman\_28 Start: 20116, Stop: 21894, Start Num: 144

Candidate Starts for lceman\_28:

(Start: 123 @20092 has 215 MA's), (Start: 144 @20116 has 603 MA's), (Start: 190 @20173 has 1 MA's), (222, 20227), (230, 20242), (236, 20260), (272, 20344), (277, 20356), (278, 20359), (306, 20434), (315, 20449), (338, 20488), (378, 20605), (417, 20692), (463, 20773), (489, 20821), (500, 20845), (532, 20932), (553, 20977), (584, 21049), (591, 21070), (597, 21088), (636, 21169), (668, 21262), (670, 21271), (675, 21295), (677, 21301), (687, 21325), (731, 21379), (742, 21400), (756, 21451), (763, 21475), (782, 21529), (813, 21625), (860, 21730), (863, 21745), (894, 21853), (900, 21871),

Gene: lchabod\_28 Start: 21290, Stop: 23092, Start Num: 146

Candidate Starts for lchabod\_28:

(Start: 146 @21290 has 223 MA's), (Start: 161 @21311 has 4 MA's), (Start: 190 @21353 has 1 MA's), (216, 21398), (306, 21614), (332, 21659), (338, 21668), (349, 21707), (368, 21758), (369, 21761), (467, 21956), (500, 22025), (583, 22226), (584, 22229), (591, 22250), (635, 22346), (636, 22349), (638, 22355), (665, 22424), (668, 22442), (670, 22451), (677, 22481), (731, 22577), (746, 22610), (750, 22625), (793, 22766), (813, 22823), (862, 22934),

Gene: IdentityCrisis\_17 Start: 14307, Stop: 16073, Start Num: 109

Candidate Starts for IdentityCrisis\_17:

(Start: 109 @14307 has 26 MA's), (165, 14379), (214, 14460), (230, 14484), (243, 14526), (294, 14628), (303, 14652), (311, 14670), (368, 14805), (382, 14844), (429, 14949), (445, 14979), (463, 15027), (579, 15243), (635, 15375), (668, 15471), (681, 15522), (750, 15648), (752, 15654), (791, 15747), (793, 15750), (857, 15897), (862, 15912), (897, 16041), (900, 16050),

Gene: Idergollasper\_56 Start: 33475, Stop: 35211, Start Num: 107

Candidate Starts for Idergollasper\_56:

(Start: 100 @33466 has 2 MA's), (Start: 107 @33475 has 25 MA's), (174, 33565), (240, 33682), (251, 33718), (259, 33739), (271, 33766), (274, 33772), (302, 33826), (332, 33877), (381, 34015), (383, 34021), (400, 34072), (402, 34075), (407, 34093), (459, 34144), (468, 34165), (470, 34168), (492, 34216), (494, 34222), (511, 34270), (513, 34276), (515, 34282), (555, 34342), (564, 34366), (565, 34369), (583, 34414), (588, 34429), (591, 34438), (594, 34447), (608, 34492), (618, 34510), (631, 34543), (720, 34681), (729, 34702), (754, 34768), (762, 34798), (779, 34852), (791, 34894), (799, 34915), (805, 34936), (810, 34948), (821, 34969), (844, 35023), (880, 35101), (887, 35137), (893, 35158), (901, 35185),

Gene: Idleandcovert\_27 Start: 19904, Stop: 21700, Start Num: 144

Candidate Starts for Idleandcovert\_27:

(Start: 144 @19904 has 603 MA's), (Start: 190 @19961 has 1 MA's), (230, 20030), (272, 20132), (277, 20144), (278, 20147), (306, 20222), (315, 20237), (338, 20276), (384, 20411), (417, 20480), (481, 20594), (532, 20720), (583, 20834), (591, 20858), (597, 20876), (636, 20957), (665, 21032), (668, 21050), (670, 21059), (675, 21083), (677, 21089), (682, 21104), (703, 21137), (729, 21182), (731, 21185), (742, 21206), (746, 21218), (749, 21224), (763, 21281), (813, 21431), (825, 21455), (860, 21536), (862, 21542), (900, 21677),

Gene: IgnatiusPatJac\_26 Start: 21135, Stop: 22916, Start Num: 161

Candidate Starts for IgnatiusPatJac\_26:

(Start: 146 @21114 has 223 MA's), (Start: 161 @21135 has 4 MA's), (Start: 190 @21177 has 1 MA's), (216, 21222), (306, 21438), (332, 21483), (338, 21492), (368, 21582), (369, 21585), (406, 21678), (467, 21780), (500, 21849), (583, 22050), (584, 22053), (591, 22074), (635, 22170), (636, 22173), (638, 22179), (665, 22248), (668, 22266), (670, 22275), (677, 22305), (731, 22401), (746, 22434), (750, 22449), (793, 22590), (813, 22647), (862, 22758),

Gene: Illumine\_23 Start: 17171, Stop: 18937, Start Num: 114

Candidate Starts for Illumine\_23:

(Start: 114 @17171 has 139 MA's), (140, 17201), (236, 17360), (248, 17393), (258, 17423), (272, 17456), (278, 17468), (316, 17558), (334, 17594), (337, 17600), (360, 17672), (362, 17681), (378, 17720), (392, 17765), (393, 17768), (400, 17786), (403, 17789), (448, 17861), (465, 17903), (468, 17909), (481, 17936), (499, 17972), (522, 18029), (564, 18074), (572, 18092), (593, 18152), (603, 18182), (618, 18209), (655, 18314), (704, 18404), (748, 18473), (757, 18509), (768, 18539), (772, 18548), (793, 18623), (810, 18674), (863, 18773), (880, 18824), (901, 18908), (902, 18911), (913, 18929),

Gene: Inca\_23 Start: 18509, Stop: 20104, Start Num: 191

Candidate Starts for Inca\_23:

(Start: 129 @18425 has 79 MA's), (Start: 191 @18509 has 45 MA's), (Start: 235 @18587 has 1 MA's), (268, 18674), (274, 18689), (300, 18737), (324, 18776), (356, 18863), (368, 18896), (381, 18932), (390, 18962), (392, 18968), (422, 19037), (461, 19067), (466, 19079), (468, 19082), (494, 19139), (565, 19271), (567, 19277), (592, 19343), (594, 19349), (601, 19373), (618, 19421), (627, 19445), (631, 19454), (658, 19529), (717, 19580), (725, 19595), (782, 19757), (788, 19784), (799, 19814), (843, 19919), (880, 19997), (887, 20033), (890, 20042), (900, 20075), (907, 20090),

Gene: Indra\_31 Start: 19978, Stop: 21750, Start Num: 144

Candidate Starts for Indra\_31:

(94, 19912), (Start: 123 @19954 has 215 MA's), (Start: 144 @19978 has 603 MA's), (278, 20215), (305, 20287), (306, 20290), (315, 20305), (338, 20344), (341, 20350), (378, 20461), (380, 20467), (392, 20506), (417, 20548), (448, 20587), (463, 20629), (467, 20632), (532, 20788), (592, 20929), (597, 20944), (677, 21157), (742, 21256), (750, 21283), (765, 21334), (770, 21343), (781, 21382), (782, 21385), (860, 21586), (862, 21592), (900, 21727),

Gene: Inky\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Inky\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Insomnia\_28 Start: 20807, Stop: 22606, Start Num: 144

Candidate Starts for Insomnia\_28:

(94, 20741), (Start: 123 @20783 has 215 MA's), (Start: 144 @20807 has 603 MA's), (183, 20849), (236, 20945), (242, 20960), (277, 21041), (278, 21044), (306, 21119), (315, 21134), (338, 21173), (341, 21179), (356, 21230), (378, 21290), (380, 21296), (417, 21377), (467, 21461), (518, 21587), (526, 21605), (540, 21632), (597, 21773), (631, 21839), (635, 21851), (636, 21854), (703, 22043), (721, 22070), (726, 22079), (736, 22100), (737, 22103), (746, 22124), (750, 22139), (756, 22163), (781, 22238), (784, 22253), (813, 22337), (860, 22442), (862, 22448), (877, 22502), (909, 22601),

Gene: Inspectinfecti\_34 Start: 29501, Stop: 31126, Start Num: 160

Candidate Starts for Inspectinfecti\_34:

(Start: 160 @29501 has 17 MA's), (169, 29513), (Start: 191 @29546 has 45 MA's), (Start: 195 @29555 has 45 MA's), (200, 29567), (222, 29597), (272, 29714), (277, 29726), (307, 29801), (341, 29861), (348, 29891), (449, 30098), (460, 30128), (482, 30173), (508, 30233), (547, 30281), (583, 30353), (595, 30386), (596, 30389), (609, 30428), (635, 30467), (664, 30554), (665, 30557), (711, 30635), (747, 30695), (769, 30740), (795, 30821), (815, 30875), (863, 30971), (900, 31100), (907, 31115),

Gene: Inventum\_16 Start: 14940, Stop: 16649, Start Num: 123

Candidate Starts for Inventum\_16:

(Start: 123 @14940 has 215 MA's), (193, 15027), (Start: 227 @15072 has 2 MA's), (233, 15096), (271, 15201), (274, 15207), (281, 15225), (300, 15255), (348, 15360), (370, 15420), (378, 15441), (381, 15450), (388, 15474), (459, 15600), (465, 15615), (468, 15621), (484, 15657), (486, 15660), (492, 15672), (494, 15678), (511, 15726), (515, 15738), (521, 15744), (564, 15804), (568, 15816), (583, 15852), (587, 15864), (614, 15939), (618, 15948), (625, 15966), (627, 15972), (638, 16002), (710, 16107), (720, 16119), (737, 16155), (761, 16233), (791, 16332), (799, 16353), (810, 16386), (826, 16416), (836, 16446), (841, 16455), (844, 16461), (860, 16476), (861, 16479), (865, 16500), (866, 16503), (882, 16545), (887, 16575), (900, 16617),

Gene: InvictusManeo\_21 Start: 17595, Stop: 19367, Start Num: 117

Candidate Starts for InvictusManeo\_21:

(Start: 117 @17595 has 59 MA's), (Start: 123 @17601 has 215 MA's), (143, 17625), (Start: 168 @17658 has 32 MA's), (197, 17706), (230, 17760), (248, 17811), (272, 17874), (321, 17982), (360, 18090), (400, 18204), (403, 18207), (424, 18246), (438, 18261), (444, 18273), (448, 18279), (463, 18315), (465, 18321), (468, 18327), (487, 18366), (499, 18390), (564, 18492), (588, 18555), (655, 18735), (708, 18834), (750, 18912), (756, 18936), (758, 18942), (771, 18975), (793, 19053), (795, 19059), (865, 19212), (895, 19317), (896, 19320), (901, 19338),



Gene: Inyanga\_26 Start: 20869, Stop: 22671, Start Num: 146

Candidate Starts for Inyanga\_26:

(Start: 146 @20869 has 223 MA's), (Start: 161 @20890 has 4 MA's), (Start: 190 @20932 has 1 MA's), (216, 20977), (306, 21193), (332, 21238), (338, 21247), (349, 21286), (368, 21337), (369, 21340), (467, 21535), (500, 21604), (583, 21805), (584, 21808), (591, 21829), (635, 21925), (636, 21928), (638, 21934), (665, 22003), (668, 22021), (670, 22030), (677, 22060), (731, 22156), (746, 22189), (750, 22204), (793, 22345), (813, 22402), (862, 22513), (909, 22666),

Gene: Iracema64\_28 Start: 20138, Stop: 21916, Start Num: 144

Candidate Starts for Iracema64\_28:

(Start: 123 @20114 has 215 MA's), (Start: 144 @20138 has 603 MA's), (Start: 190 @20195 has 1 MA's), (222, 20249), (230, 20264), (236, 20282), (272, 20366), (277, 20378), (278, 20381), (306, 20456), (315, 20471), (338, 20510), (378, 20627), (417, 20714), (463, 20795), (489, 20843), (500, 20867), (532, 20954), (553, 20999), (584, 21071), (591, 21092), (597, 21110), (668, 21284), (670, 21293), (675, 21317), (677, 21323), (687, 21347), (731, 21401), (742, 21422), (756, 21473), (763, 21497), (782, 21551), (813, 21647), (860, 21752), (863, 21767), (894, 21875), (900, 21893),

Gene: IrishSherpFalk\_17 Start: 16164, Stop: 17873, Start Num: 123

Candidate Starts for IrishSherpFalk\_17:

(Start: 123 @16164 has 215 MA's), (193, 16251), (Start: 227 @16296 has 2 MA's), (233, 16320), (271, 16425), (274, 16431), (281, 16449), (300, 16479), (348, 16584), (370, 16644), (378, 16665), (381, 16674), (388, 16698), (402, 16734), (403, 16740), (418, 16773), (420, 16776), (424, 16785), (443, 16800), (448, 16806), (459, 16824), (465, 16839), (468, 16845), (475, 16863), (477, 16866), (484, 16881), (492, 16896), (494, 16902), (511, 16950), (515, 16962), (521, 16968), (564, 17028), (568, 17040), (583, 17076), (587, 17088), (614, 17163), (618, 17172), (625, 17190), (627, 17196), (638, 17226), (710, 17331), (720, 17343), (737, 17379), (761, 17457), (799, 17577), (810, 17610), (826, 17640), (829, 17652), (836, 17670), (839, 17676), (841, 17679), (844, 17685), (860, 17700), (861, 17703), (865, 17724), (866, 17727), (882, 17769), (887, 17799), (900, 17841), (901, 17847),

Gene: IronMan\_30 Start: 21747, Stop: 23519, Start Num: 144

Candidate Starts for IronMan\_30:

(Start: 144 @21747 has 603 MA's), (Start: 235 @21882 has 1 MA's), (277, 21981), (278, 21984), (305, 22056), (306, 22059), (332, 22104), (356, 22170), (365, 22197), (378, 22230), (417, 22317), (467, 22401), (532, 22557), (547, 22590), (597, 22713), (631, 22779), (636, 22794), (675, 22920), (677, 22926), (713, 22974), (746, 23037), (750, 23052), (752, 23058), (756, 23076), (781, 23151), (813, 23250), (860, 23355), (862, 23361), (865, 23379), (873, 23406),

Gene: Isca\_27 Start: 19841, Stop: 21640, Start Num: 144

Candidate Starts for Isca\_27:

(Start: 144 @19841 has 603 MA's), (Start: 190 @19901 has 1 MA's), (230, 19970), (272, 20072), (277, 20084), (278, 20087), (306, 20162), (315, 20177), (318, 20180), (338, 20216), (384, 20351), (417, 20420), (481, 20534), (532, 20660), (583, 20774), (584, 20777), (591, 20798), (597, 20816), (636, 20897), (665, 20972), (668, 20990), (670, 20999), (677, 21029), (682, 21044), (695, 21068), (703, 21077), (729, 21122), (731, 21125), (742, 21146), (746, 21158), (813, 21371), (825, 21395), (860, 21476), (862, 21482), (900, 21617),

Gene: Isiphiwo\_31 Start: 20047, Stop: 21819, Start Num: 144

Candidate Starts for Isiphiwo\_31:

(Start: 144 @20047 has 603 MA's), (263, 20245), (278, 20284), (305, 20356), (306, 20359), (318, 20377), (338, 20413), (341, 20419), (378, 20530), (380, 20536), (417, 20617), (448, 20656), (463, 20698), (467, 20701), (495, 20761), (592, 20998), (597, 21013), (636, 21094), (677, 21226), (687, 21250), (750, 21352), (765, 21403), (770, 21412), (781, 21451), (782, 21454), (784, 21466), (813,

21550), (860, 21655), (862, 21661), (900, 21796),

Gene: Island3\_19 Start: 16495, Stop: 18228, Start Num: 131

Candidate Starts for Island3\_19:

(Start: 131 @16495 has 6 MA's), (206, 16594), (213, 16603), (241, 16669), (250, 16693), (272, 16753), (274, 16756), (284, 16783), (367, 16963), (377, 16987), (381, 16999), (388, 17023), (459, 17149), (465, 17164), (470, 17173), (486, 17209), (494, 17227), (515, 17287), (587, 17413), (608, 17479), (614, 17488), (618, 17497), (627, 17521), (717, 17665), (740, 17710), (773, 17812), (775, 17821), (779, 17839), (781, 17842), (836, 18001), (846, 18019), (860, 18055), (863, 18070), (880, 18118), (897, 18187),

Gene: Iwokeuplikedis\_29 Start: 19935, Stop: 21707, Start Num: 144

Candidate Starts for Iwokeuplikedis\_29:

(Start: 123 @19911 has 215 MA's), (Start: 144 @19935 has 603 MA's), (219, 20034), (Start: 235 @20070 has 1 MA's), (242, 20088), (277, 20169), (278, 20172), (305, 20244), (306, 20247), (338, 20301), (341, 20307), (365, 20385), (378, 20418), (417, 20505), (463, 20586), (467, 20589), (532, 20745), (546, 20775), (584, 20862), (631, 20967), (636, 20982), (677, 21114), (713, 21162), (746, 21225), (750, 21240), (752, 21246), (754, 21255), (770, 21300), (781, 21339), (784, 21354), (795, 21387), (860, 21543), (862, 21549), (873, 21594),

Gene: JAWS\_23 Start: 17142, Stop: 18908, Start Num: 114

Candidate Starts for JAWS\_23:

(Start: 114 @17142 has 139 MA's), (140, 17172), (236, 17331), (248, 17364), (258, 17394), (272, 17427), (278, 17439), (316, 17529), (337, 17571), (360, 17643), (362, 17652), (378, 17691), (392, 17736), (400, 17757), (403, 17760), (438, 17814), (448, 17832), (465, 17874), (468, 17880), (481, 17907), (564, 18045), (572, 18063), (587, 18105), (593, 18123), (603, 18153), (618, 18180), (655, 18285), (748, 18444), (757, 18480), (768, 18510), (772, 18519), (793, 18594), (810, 18645), (890, 18840), (901, 18879), (902, 18882), (913, 18900),

Gene: JC27\_29 Start: 22002, Stop: 23804, Start Num: 146

Candidate Starts for JC27\_29:

(Start: 146 @22002 has 223 MA's), (Start: 161 @22023 has 4 MA's), (Start: 190 @22065 has 1 MA's), (216, 22110), (306, 22326), (332, 22371), (338, 22380), (349, 22419), (368, 22470), (369, 22473), (467, 22668), (500, 22737), (583, 22938), (584, 22941), (591, 22962), (635, 23058), (636, 23061), (638, 23067), (665, 23136), (668, 23154), (677, 23193), (731, 23289), (746, 23322), (750, 23337), (793, 23478), (813, 23535), (862, 23646),

Gene: JCole\_17 Start: 14749, Stop: 16458, Start Num: 171

Candidate Starts for JCole\_17:

(83, 14614), (Start: 171 @14749 has 40 MA's), (237, 14866), (259, 14938), (262, 14941), (276, 14977), (287, 15016), (298, 15037), (347, 15139), (377, 15229), (378, 15232), (440, 15364), (462, 15418), (485, 15469), (500, 15499), (519, 15559), (525, 15571), (554, 15607), (572, 15646), (592, 15688), (607, 15724), (618, 15742), (624, 15757), (637, 15781), (665, 15853), (669, 15877), (736, 15985), (788, 16111), (794, 16126), (807, 16168), (847, 16261), (849, 16264), (865, 16312), (874, 16342), (882, 16360), (883, 16372), (893, 16411),

Gene: JF1\_24 Start: 18622, Stop: 20409, Start Num: 114

Candidate Starts for JF1\_24:

(Start: 93 @18583 has 1 MA's), (Start: 109 @18613 has 26 MA's), (Start: 112 @18619 has 41 MA's), (Start: 114 @18622 has 139 MA's), (Start: 137 @18637 has 2 MA's), (Start: 168 @18679 has 32 MA's), (197, 18727), (Start: 227 @18766 has 2 MA's), (230, 18781), (236, 18799), (248, 18832), (258, 18862), (278, 18907), (282, 18925), (316, 18997), (321, 19003), (334, 19033), (336, 19036), (356, 19099), (360, 19111), (412, 19246), (423, 19264), (444, 19294), (448, 19300), (454, 19318), (468,

19348), (487, 19387), (564, 19513), (588, 19576), (655, 19777), (670, 19831), (708, 19876), (734, 19921), (748, 19945), (756, 19978), (768, 20011), (788, 20083), (793, 20095), (810, 20146), (813, 20152), (865, 20254), (901, 20380), (913, 20401),

Gene: JF2\_27 Start: 19592, Stop: 21391, Start Num: 144

Candidate Starts for JF2\_27:

(Start: 144 @19592 has 603 MA's), (Start: 190 @19652 has 1 MA's), (230, 19721), (272, 19823), (277, 19835), (278, 19838), (306, 19913), (315, 19928), (318, 19931), (338, 19967), (384, 20102), (417, 20171), (481, 20285), (532, 20411), (583, 20525), (584, 20528), (591, 20549), (597, 20567), (636, 20648), (665, 20723), (668, 20741), (670, 20750), (675, 20774), (677, 20780), (682, 20795), (695, 20819), (703, 20828), (729, 20873), (731, 20876), (742, 20897), (746, 20909), (813, 21122), (825, 21146), (860, 21227), (862, 21233), (900, 21368),

Gene: JF4\_27 Start: 19592, Stop: 21391, Start Num: 144

Candidate Starts for JF4\_27:

(Start: 144 @19592 has 603 MA's), (Start: 190 @19652 has 1 MA's), (230, 19721), (272, 19823), (277, 19835), (278, 19838), (306, 19913), (315, 19928), (318, 19931), (338, 19967), (384, 20102), (417, 20171), (481, 20285), (532, 20411), (583, 20525), (584, 20528), (591, 20549), (597, 20567), (636, 20648), (665, 20723), (668, 20741), (670, 20750), (675, 20774), (677, 20780), (682, 20795), (695, 20819), (703, 20828), (729, 20873), (731, 20876), (742, 20897), (746, 20909), (813, 21122), (825, 21146), (860, 21227), (862, 21233), (900, 21368),

Gene: JHC117\_29 Start: 20377, Stop: 22173, Start Num: 144

Candidate Starts for JHC117\_29:

(Start: 144 @20377 has 603 MA's), (Start: 190 @20434 has 1 MA's), (197, 20449), (219, 20482), (230, 20503), (Start: 235 @20518 has 1 MA's), (272, 20605), (277, 20617), (278, 20620), (306, 20695), (315, 20710), (336, 20746), (417, 20953), (481, 21067), (500, 21106), (519, 21166), (532, 21193), (583, 21307), (591, 21331), (597, 21349), (636, 21430), (665, 21505), (668, 21523), (675, 21556), (677, 21562), (695, 21601), (729, 21655), (731, 21658), (742, 21679), (758, 21736), (813, 21904), (860, 22009), (862, 22015), (900, 22150),

Gene: JKSyngboy\_32 Start: 30214, Stop: 31977, Start Num: 97

Candidate Starts for JKSyngboy\_32:

(Start: 97 @30214 has 73 MA's), (Start: 121 @30250 has 1 MA's), (211, 30379), (219, 30388), (231, 30412), (262, 30484), (265, 30493), (288, 30562), (306, 30613), (311, 30622), (332, 30658), (341, 30673), (345, 30691), (368, 30754), (384, 30799), (386, 30808), (458, 30928), (461, 30943), (465, 30952), (472, 30967), (487, 30997), (607, 31237), (613, 31252), (635, 31294), (636, 31297), (647, 31324), (736, 31507), (793, 31648), (794, 31651), (810, 31699), (824, 31726), (832, 31753), (860, 31807), (866, 31834),

Gene: JSwag\_30 Start: 19079, Stop: 20866, Start Num: 144

Candidate Starts for JSwag\_30:

(94, 19013), (Start: 123 @19055 has 215 MA's), (Start: 144 @19079 has 603 MA's), (236, 19217), (262, 19274), (278, 19316), (292, 19352), (306, 19391), (343, 19460), (349, 19484), (369, 19538), (448, 19688), (467, 19733), (481, 19763), (499, 19799), (515, 19850), (530, 19886), (553, 19934), (580, 19994), (635, 20123), (665, 20201), (750, 20402), (752, 20408), (782, 20504), (845, 20669), (880, 20768),

Gene: Jaan\_31 Start: 22136, Stop: 23908, Start Num: 144

Candidate Starts for Jaan\_31:

(Start: 123 @22112 has 215 MA's), (Start: 144 @22136 has 603 MA's), (Start: 235 @22271 has 1 MA's), (242, 22289), (277, 22370), (278, 22373), (305, 22445), (306, 22448), (356, 22559), (365, 22586), (378, 22619), (392, 22664), (417, 22706), (467, 22790), (532, 22946), (547, 22979), (631,

23168), (636, 23183), (675, 23309), (677, 23315), (746, 23426), (750, 23441), (752, 23447), (770, 23501), (781, 23540), (784, 23555), (813, 23639), (860, 23744), (862, 23750), (865, 23768), (873, 23795),

Gene: Jabbawokkie\_21 Start: 14267, Stop: 15931, Start Num: 148

Candidate Starts for Jabbawokkie\_21:

(Start: 148 @14267 has 14 MA's), (201, 14348), (222, 14378), (232, 14399), (237, 14411), (265, 14477), (280, 14516), (281, 14528), (290, 14552), (313, 14609), (316, 14612), (330, 14636), (332, 14642), (334, 14645), (349, 14690), (356, 14708), (369, 14744), (417, 14855), (448, 14891), (458, 14918), (460, 14930), (461, 14933), (481, 14975), (487, 14987), (499, 15011), (540, 15065), (583, 15164), (620, 15257), (636, 15284), (642, 15296), (666, 15347), (668, 15362), (705, 15416), (726, 15443), (793, 15605), (794, 15608), (795, 15611), (842, 15728), (862, 15770), (885, 15854), (897, 15899), (902, 15917),

Gene: Jabberwocky\_33 Start: 31361, Stop: 33124, Start Num: 97

Candidate Starts for Jabberwocky\_33:

(90, 31343), (Start: 97 @31361 has 73 MA's), (Start: 121 @31397 has 1 MA's), (219, 31535), (262, 31631), (265, 31640), (288, 31709), (306, 31760), (332, 31805), (341, 31820), (368, 31901), (384, 31946), (386, 31955), (445, 32045), (458, 32075), (461, 32090), (472, 32114), (487, 32144), (551, 32249), (597, 32366), (607, 32384), (613, 32399), (631, 32429), (635, 32441), (636, 32444), (647, 32471), (793, 32795), (794, 32798), (810, 32846), (824, 32873), (832, 32900), (860, 32954), (866, 32981), (902, 33110),

Gene: Jabiru\_24 Start: 19026, Stop: 20825, Start Num: 144

Candidate Starts for Jabiru\_24:

(Start: 144 @19026 has 603 MA's), (278, 19263), (306, 19338), (315, 19353), (336, 19389), (360, 19461), (365, 19476), (378, 19509), (379, 19512), (380, 19515), (481, 19710), (495, 19740), (499, 19746), (532, 19836), (553, 19881), (583, 19950), (597, 19992), (602, 20010), (635, 20070), (636, 20073), (668, 20166), (729, 20307), (746, 20343), (813, 20556), (859, 20658), (862, 20667), (900, 20802),

Gene: Jabith\_28 Start: 20807, Stop: 22606, Start Num: 144

Candidate Starts for Jabith\_28:

(94, 20741), (Start: 123 @20783 has 215 MA's), (Start: 144 @20807 has 603 MA's), (183, 20849), (236, 20945), (242, 20960), (277, 21041), (278, 21044), (306, 21119), (315, 21134), (338, 21173), (341, 21179), (356, 21230), (378, 21290), (380, 21296), (417, 21377), (467, 21461), (518, 21587), (526, 21605), (540, 21632), (597, 21773), (631, 21839), (635, 21851), (636, 21854), (703, 22043), (721, 22070), (726, 22079), (736, 22100), (737, 22103), (746, 22124), (750, 22139), (756, 22163), (781, 22238), (784, 22253), (813, 22337), (860, 22442), (862, 22448), (877, 22502), (909, 22601),

Gene: Jablanski\_20 Start: 17677, Stop: 19383, Start Num: 111

Candidate Starts for Jablanski\_20:

(Start: 95 @17653 has 1 MA's), (Start: 111 @17677 has 24 MA's), (192, 17782), (217, 17824), (251, 17899), (303, 18013), (365, 18160), (368, 18166), (459, 18349), (497, 18424), (635, 18706), (644, 18727), (668, 18802), (739, 18925), (750, 18958), (752, 18964), (783, 19030), (793, 19060), (860, 19216), (862, 19222), (865, 19240), (897, 19351),

Gene: Jace\_17 Start: 14739, Stop: 16253, Start Num: 205

Candidate Starts for Jace\_17:

(59, 14448), (79, 14538), (104, 14598), (Start: 205 @14739 has 1 MA's), (230, 14781), (246, 14826), (265, 14880), (280, 14913), (299, 14964), (361, 15099), (368, 15120), (369, 15123), (377, 15144), (394, 15198), (397, 15204), (500, 15306), (504, 15318), (509, 15336), (533, 15390), (586, 15480), (636, 15594), (670, 15696), (749, 15807), (849, 16056), (875, 16137), (880, 16146), (891, 16194),

Gene: JackSparrow\_28 Start: 21464, Stop: 23266, Start Num: 146

Candidate Starts for JackSparrow\_28:

(Start: 146 @21464 has 223 MA's), (Start: 161 @21485 has 4 MA's), (Start: 190 @21527 has 1 MA's), (216, 21572), (306, 21788), (332, 21833), (338, 21842), (349, 21881), (368, 21932), (369, 21935), (467, 22130), (500, 22199), (583, 22400), (584, 22403), (591, 22424), (635, 22520), (636, 22523), (638, 22529), (665, 22598), (668, 22616), (670, 22625), (677, 22655), (731, 22751), (746, 22784), (750, 22799), (793, 22940), (813, 22997), (862, 23108),

Gene: JacoRen57\_17 Start: 15449, Stop: 17296, Start Num: 89

Candidate Starts for JacoRen57\_17:

(Start: 89 @15449 has 4 MA's), (Start: 175 @15563 has 1 MA's), (Start: 190 @15584 has 1 MA's), (Start: 227 @15638 has 2 MA's), (230, 15653), (249, 15707), (278, 15779), (334, 15905), (342, 15926), (355, 15968), (360, 15983), (368, 16004), (372, 16013), (386, 16058), (392, 16076), (393, 16079), (444, 16208), (448, 16214), (454, 16232), (468, 16262), (474, 16277), (503, 16337), (526, 16388), (563, 16424), (564, 16427), (609, 16556), (741, 16811), (771, 16901), (773, 16910), (788, 16967), (826, 17060), (863, 17129), (898, 17255), (901, 17264),

Gene: JalFarm20\_18 Start: 15176, Stop: 16885, Start Num: 123

Candidate Starts for JalFarm20\_18:

(Start: 123 @15176 has 215 MA's), (193, 15263), (Start: 227 @15308 has 2 MA's), (233, 15332), (271, 15437), (274, 15443), (281, 15461), (300, 15491), (348, 15596), (370, 15656), (378, 15677), (381, 15686), (388, 15710), (459, 15836), (465, 15851), (468, 15857), (484, 15893), (486, 15896), (492, 15908), (494, 15914), (511, 15962), (515, 15974), (521, 15980), (564, 16040), (568, 16052), (583, 16088), (587, 16100), (614, 16175), (618, 16184), (625, 16202), (627, 16208), (638, 16238), (710, 16343), (717, 16352), (720, 16355), (737, 16391), (761, 16469), (791, 16568), (799, 16589), (810, 16622), (826, 16652), (836, 16682), (841, 16691), (844, 16697), (860, 16712), (861, 16715), (866, 16739), (877, 16769), (882, 16781), (887, 16811), (900, 16853),

Gene: Jalammah\_21 Start: 17444, Stop: 19090, Start Num: 195

Candidate Starts for Jalammah\_21:

(172, 17408), (Start: 195 @17444 has 45 MA's), (244, 17546), (272, 17624), (274, 17627), (308, 17723), (329, 17762), (349, 17822), (357, 17843), (377, 17897), (382, 17912), (494, 18083), (506, 18113), (594, 18296), (601, 18320), (626, 18371), (658, 18464), (664, 18476), (694, 18521), (702, 18536), (757, 18668), (758, 18671), (788, 18770), (795, 18788), (813, 18839), (843, 18905), (872, 18968), (877, 18980),

Gene: Jambalaya\_31 Start: 25640, Stop: 27406, Start Num: 97

Candidate Starts for Jambalaya\_31:

(80, 25598), (Start: 97 @25640 has 73 MA's), (Start: 121 @25676 has 1 MA's), (Start: 148 @25709 has 14 MA's), (264, 25919), (265, 25922), (277, 25952), (298, 26018), (306, 26042), (311, 26051), (331, 26084), (386, 26237), (406, 26276), (445, 26327), (451, 26339), (458, 26357), (460, 26369), (465, 26381), (472, 26396), (487, 26426), (489, 26429), (499, 26450), (547, 26522), (568, 26570), (613, 26681), (632, 26714), (647, 26753), (649, 26756), (670, 26828), (707, 26894), (715, 26906), (793, 27077), (797, 27089), (799, 27095), (810, 27128), (824, 27155), (832, 27182), (860, 27236), (891, 27353), (897, 27374), (909, 27401),

Gene: James\_16 Start: 14804, Stop: 16513, Start Num: 123

Candidate Starts for James\_16:

(Start: 123 @14804 has 215 MA's), (193, 14891), (Start: 227 @14936 has 2 MA's), (233, 14960), (251, 15017), (271, 15065), (274, 15071), (281, 15089), (300, 15119), (348, 15224), (367, 15278), (370, 15284), (373, 15293), (381, 15314), (388, 15338), (402, 15374), (403, 15380), (418, 15413), (420, 15416), (424, 15425), (443, 15440), (448, 15446), (459, 15464), (465, 15479), (468, 15485), (475,

15503), (477, 15506), (484, 15521), (492, 15536), (494, 15542), (511, 15590), (515, 15602), (521, 15608), (564, 15668), (568, 15680), (583, 15716), (587, 15728), (614, 15803), (618, 15812), (625, 15830), (627, 15836), (638, 15866), (710, 15971), (720, 15983), (737, 16019), (761, 16097), (799, 16217), (810, 16250), (826, 16280), (829, 16292), (836, 16310), (839, 16316), (841, 16319), (844, 16325), (860, 16340), (861, 16343), (865, 16364), (866, 16367), (882, 16409), (887, 16439), (900, 16481), (901, 16487),

Gene: Jamie19\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Jamie19\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Jamzy\_21 Start: 15100, Stop: 16788, Start Num: 144

Candidate Starts for Jamzy\_21:

(14, 14440), (28, 14623), (113, 15070), (Start: 133 @15097 has 8 MA's), (Start: 144 @15100 has 603 MA's), (236, 15241), (277, 15340), (290, 15385), (365, 15568), (377, 15598), (390, 15640), (406, 15670), (436, 15700), (442, 15712), (444, 15715), (481, 15805), (508, 15871), (513, 15886), (546, 15922), (553, 15937), (561, 15955), (579, 15994), (581, 16000), (610, 16084), (634, 16120), (635, 16123), (636, 16126), (643, 16141), (650, 16159), (651, 16162), (668, 16216), (747, 16345), (750, 16357), (754, 16372), (766, 16384), (791, 16456), (793, 16459), (794, 16462), (829, 16558), (862, 16627), (863, 16636), (900, 16765), (902, 16774), (907, 16780),

Gene: Jane\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Jane\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (197, 16739), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: JangDynasty\_56 Start: 33561, Stop: 35297, Start Num: 107

Candidate Starts for JangDynasty\_56:

(Start: 100 @33552 has 2 MA's), (Start: 107 @33561 has 25 MA's), (174, 33651), (240, 33768), (251, 33804), (259, 33825), (271, 33852), (274, 33858), (286, 33888), (302, 33912), (332, 33963), (381, 34101), (383, 34107), (400, 34158), (402, 34161), (407, 34179), (459, 34230), (468, 34251), (470, 34254), (492, 34302), (494, 34308), (511, 34356), (513, 34362), (515, 34368), (555, 34428), (564, 34452), (565, 34455), (583, 34500), (588, 34515), (591, 34524), (594, 34533), (608, 34578), (618, 34596), (631, 34629), (720, 34767), (729, 34788), (754, 34854), (762, 34884), (779, 34938), (791, 34980), (799, 35001), (805, 35022), (810, 35034), (821, 35055), (844, 35109), (880, 35187), (887, 35223), (893, 35244), (901, 35271),

Gene: Jacob\_16 Start: 14812, Stop: 16521, Start Num: 123

Candidate Starts for Jacob\_16:

(Start: 123 @14812 has 215 MA's), (193, 14899), (Start: 227 @14944 has 2 MA's), (233, 14968), (271, 15073), (274, 15079), (281, 15097), (300, 15127), (348, 15232), (367, 15286), (370, 15292), (373, 15301), (381, 15322), (388, 15346), (402, 15382), (403, 15388), (418, 15421), (420, 15424), (424,

15433), (443, 15448), (448, 15454), (459, 15472), (465, 15487), (468, 15493), (475, 15511), (477, 15514), (484, 15529), (492, 15544), (494, 15550), (511, 15598), (515, 15610), (521, 15616), (564, 15676), (568, 15688), (583, 15724), (587, 15736), (614, 15811), (618, 15820), (625, 15838), (627, 15844), (638, 15874), (710, 15979), (720, 15991), (737, 16027), (761, 16105), (799, 16225), (810, 16258), (826, 16288), (829, 16300), (836, 16318), (839, 16324), (841, 16327), (844, 16333), (860, 16348), (861, 16351), (865, 16372), (866, 16375), (882, 16417), (887, 16447), (900, 16489), (901, 16495),

Gene: Jarvi\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Jarvi\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Jasper\_28 Start: 20943, Stop: 22745, Start Num: 146

Candidate Starts for Jasper\_28:

(Start: 146 @20943 has 223 MA's), (Start: 161 @20964 has 4 MA's), (Start: 190 @21006 has 1 MA's), (216, 21051), (306, 21267), (332, 21312), (338, 21321), (349, 21360), (368, 21411), (369, 21414), (467, 21609), (500, 21678), (583, 21879), (584, 21882), (591, 21903), (635, 21999), (636, 22002), (638, 22008), (665, 22077), (668, 22095), (670, 22104), (677, 22134), (731, 22230), (746, 22263), (750, 22278), (793, 22419), (813, 22476), (862, 22587),

Gene: JasperJr\_19 Start: 16654, Stop: 18300, Start Num: 195

Candidate Starts for JasperJr\_19:

(172, 16618), (Start: 195 @16654 has 45 MA's), (244, 16756), (272, 16834), (274, 16837), (308, 16933), (329, 16972), (357, 17053), (377, 17107), (382, 17122), (494, 17293), (506, 17323), (594, 17506), (601, 17530), (602, 17533), (626, 17581), (658, 17674), (664, 17686), (694, 17731), (702, 17746), (757, 17878), (758, 17881), (788, 17980), (795, 17998), (813, 18049), (843, 18115), (872, 18178), (877, 18190),

Gene: Jayhawk\_23 Start: 17155, Stop: 18921, Start Num: 114

Candidate Starts for Jayhawk\_23:

(Start: 114 @17155 has 139 MA's), (140, 17185), (236, 17344), (248, 17377), (258, 17407), (272, 17440), (278, 17452), (316, 17542), (337, 17584), (360, 17656), (362, 17665), (378, 17704), (392, 17749), (400, 17770), (403, 17773), (438, 17827), (448, 17845), (465, 17887), (468, 17893), (481, 17920), (564, 18058), (572, 18076), (587, 18118), (593, 18136), (603, 18166), (618, 18193), (655, 18298), (748, 18457), (757, 18493), (768, 18523), (772, 18532), (793, 18607), (810, 18658), (863, 18757), (890, 18853), (901, 18892), (902, 18895), (913, 18913),

Gene: Jaykayelowell\_27 Start: 19823, Stop: 21601, Start Num: 144

Candidate Starts for Jaykayelowell\_27:

(Start: 123 @19799 has 215 MA's), (Start: 144 @19823 has 603 MA's), (Start: 190 @19880 has 1 MA's), (222, 19934), (230, 19949), (236, 19967), (272, 20051), (277, 20063), (278, 20066), (306, 20141), (315, 20156), (338, 20195), (378, 20312), (417, 20399), (463, 20480), (489, 20528), (500, 20552), (532, 20639), (553, 20684), (584, 20756), (591, 20777), (597, 20795), (636, 20876), (668, 20969), (670, 20978), (675, 21002), (677, 21008), (687, 21032), (731, 21086), (742, 21107), (756, 21158), (763, 21182), (782, 21236), (813, 21332), (860, 21437), (863, 21452), (894, 21560), (900, 21578),

Gene: JeTaime\_26 Start: 20631, Stop: 22226, Start Num: 191

Candidate Starts for JeTaime\_26:

(Start: 129 @20547 has 79 MA's), (Start: 191 @20631 has 45 MA's), (Start: 235 @20709 has 1 MA's), (268, 20796), (274, 20811), (300, 20859), (324, 20898), (356, 20985), (368, 21018), (381, 21054), (390, 21084), (392, 21090), (422, 21159), (461, 21189), (466, 21201), (468, 21204), (494, 21261), (565, 21393), (567, 21399), (592, 21465), (594, 21471), (601, 21495), (618, 21543), (627, 21567), (631, 21576), (658, 21651), (717, 21702), (725, 21717), (782, 21879), (788, 21906), (799, 21936), (843, 22041), (880, 22119), (887, 22155), (890, 22164), (900, 22197), (907, 22212),

Gene: Jebeks\_19 Start: 16370, Stop: 18106, Start Num: 117

Candidate Starts for Jebeks\_19:

(Start: 101 @16346 has 2 MA's), (Start: 117 @16370 has 59 MA's), (Start: 166 @16430 has 1 MA's), (178, 16451), (180, 16454), (246, 16574), (258, 16613), (272, 16646), (282, 16670), (344, 16790), (356, 16829), (358, 16835), (386, 16919), (388, 16925), (392, 16937), (402, 16961), (410, 16988), (422, 17006), (452, 17045), (459, 17051), (470, 17075), (494, 17129), (500, 17141), (503, 17150), (529, 17210), (573, 17288), (587, 17327), (598, 17360), (618, 17426), (624, 17441), (627, 17450), (636, 17474), (647, 17504), (653, 17516), (735, 17618), (740, 17630), (742, 17633), (745, 17639), (747, 17648), (779, 17756), (805, 17840), (853, 17939), (890, 18047), (907, 18095),

Gene: Jeckyll\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Jeckyll\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Jeeves\_28 Start: 19427, Stop: 21226, Start Num: 144

Candidate Starts for Jeeves\_28:

(Start: 141 @19424 has 14 MA's), (Start: 144 @19427 has 603 MA's), (Start: 235 @19562 has 1 MA's), (265, 19631), (278, 19664), (286, 19694), (305, 19736), (306, 19739), (341, 19799), (378, 19910), (392, 19955), (395, 19964), (417, 19997), (460, 20072), (463, 20078), (467, 20081), (495, 20141), (535, 20243), (547, 20270), (576, 20330), (584, 20354), (597, 20393), (636, 20474), (707, 20672), (750, 20759), (752, 20765), (781, 20858), (784, 20873), (860, 21062), (862, 21068),

Gene: Jeffabunny\_31 Start: 19997, Stop: 21769, Start Num: 144

Candidate Starts for Jeffabunny\_31:

(94, 19931), (Start: 123 @19973 has 215 MA's), (Start: 144 @19997 has 603 MA's), (278, 20234), (305, 20306), (306, 20309), (315, 20324), (338, 20363), (341, 20369), (378, 20480), (380, 20486), (392, 20525), (417, 20567), (448, 20606), (463, 20648), (467, 20651), (532, 20807), (592, 20948), (597, 20963), (677, 21176), (742, 21275), (750, 21302), (765, 21353), (770, 21362), (781, 21401), (784, 21416), (813, 21500), (860, 21605), (862, 21611), (900, 21746),

Gene: JenCasNa\_29 Start: 20378, Stop: 22174, Start Num: 144

Candidate Starts for JenCasNa\_29:

(Start: 144 @20378 has 603 MA's), (Start: 190 @20435 has 1 MA's), (197, 20450), (219, 20483), (230, 20504), (Start: 235 @20519 has 1 MA's), (272, 20606), (277, 20618), (278, 20621), (306, 20696), (315, 20711), (336, 20747), (417, 20954), (481, 21068), (500, 21107), (532, 21194), (583, 21308), (591, 21332), (597, 21350), (636, 21431), (665, 21506), (668, 21524), (675, 21557), (677, 21563), (695, 21602), (729, 21656), (731, 21659), (742, 21680), (758, 21737), (773, 21779), (813, 21905), (860, 22010), (862, 22016), (900, 22151),

Gene: JeppNRM\_30 Start: 20458, Stop: 22254, Start Num: 144



Candidate Starts for JeppNRM\_30:

(Start: 144 @20458 has 603 MA's), (Start: 190 @20515 has 1 MA's), (197, 20530), (230, 20584), (Start: 235 @20599 has 1 MA's), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (417, 21034), (500, 21187), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (695, 21682), (729, 21736), (731, 21739), (742, 21760), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Jerm\_30 Start: 20633, Stop: 22405, Start Num: 144

Candidate Starts for Jerm\_30:

(Start: 123 @20609 has 215 MA's), (Start: 144 @20633 has 603 MA's), (219, 20732), (251, 20816), (277, 20867), (278, 20870), (305, 20942), (306, 20945), (338, 20999), (349, 21038), (378, 21116), (417, 21203), (463, 21284), (467, 21287), (546, 21473), (584, 21560), (631, 21665), (636, 21680), (675, 21806), (677, 21812), (713, 21860), (750, 21938), (752, 21944), (770, 21998), (781, 22037), (784, 22052), (813, 22136), (862, 22247),

Gene: Jerm2\_28 Start: 21333, Stop: 23135, Start Num: 146

Candidate Starts for Jerm2\_28:

(Start: 146 @21333 has 223 MA's), (Start: 161 @21354 has 4 MA's), (Start: 190 @21396 has 1 MA's), (216, 21441), (306, 21657), (332, 21702), (338, 21711), (349, 21750), (368, 21801), (369, 21804), (467, 21999), (500, 22068), (583, 22269), (584, 22272), (591, 22293), (635, 22389), (636, 22392), (638, 22398), (665, 22467), (668, 22485), (670, 22494), (677, 22524), (731, 22620), (746, 22653), (750, 22668), (793, 22809), (813, 22866), (862, 22977),

Gene: Jester\_23 Start: 16278, Stop: 17918, Start Num: 155

Candidate Starts for Jester\_23:

(Start: 155 @16278 has 4 MA's), (Start: 168 @16293 has 32 MA's), (196, 16335), (211, 16362), (232, 16398), (286, 16539), (306, 16584), (361, 16713), (378, 16755), (384, 16773), (386, 16782), (394, 16806), (406, 16824), (436, 16854), (444, 16869), (445, 16872), (460, 16911), (467, 16920), (505, 17004), (546, 17058), (553, 17073), (576, 17121), (584, 17145), (635, 17259), (665, 17337), (672, 17376), (675, 17388), (678, 17397), (713, 17418), (750, 17496), (807, 17643), (854, 17742), (860, 17757), (907, 17910),

Gene: JetBlade\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for JetBlade\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: JewelBug\_31 Start: 19981, Stop: 21753, Start Num: 144

Candidate Starts for JewelBug\_31:

(94, 19915), (Start: 123 @19957 has 215 MA's), (Start: 144 @19981 has 603 MA's), (236, 20119), (263, 20179), (278, 20218), (305, 20290), (306, 20293), (318, 20311), (338, 20347), (341, 20353), (378, 20464), (380, 20470), (392, 20509), (417, 20551), (448, 20590), (463, 20632), (467, 20635), (495, 20695), (592, 20932), (597, 20947), (636, 21028), (667, 21115), (677, 21160), (750, 21286), (765, 21337), (770, 21346), (781, 21385), (782, 21388), (784, 21400), (813, 21484), (860, 21589), (862, 21595), (900, 21730),

Gene: Jiawan\_29 Start: 21785, Stop: 23575, Start Num: 144

Candidate Starts for Jiawan\_29:

(Start: 141 @21782 has 14 MA's), (Start: 144 @21785 has 603 MA's), (277, 22019), (278, 22022), (305, 22094), (306, 22097), (315, 22112), (338, 22151), (341, 22157), (378, 22268), (417, 22355), (463, 22436), (467, 22439), (546, 22625), (576, 22688), (584, 22712), (586, 22718), (597, 22751), (636, 22832), (675, 22958), (693, 23000), (731, 23060), (746, 23093), (750, 23108), (781, 23207), (782, 23210), (784, 23222), (813, 23306), (842, 23372), (860, 23411), (862, 23417), (873, 23462), (890, 23519), (891, 23522),

Gene: Jifall16\_40 Start: 30479, Stop: 32092, Start Num: 170

Candidate Starts for Jifall16\_40:

(Start: 170 @30479 has 87 MA's), (Start: 194 @30515 has 1 MA's), (202, 30533), (236, 30593), (340, 30833), (343, 30845), (347, 30860), (372, 30926), (377, 30941), (386, 30965), (387, 30968), (432, 31052), (449, 31082), (450, 31085), (493, 31142), (510, 31190), (511, 31193), (518, 31214), (571, 31319), (592, 31364), (607, 31406), (673, 31580), (683, 31610), (688, 31616), (775, 31724), (776, 31727), (799, 31802), (887, 32021), (906, 32078),

Gene: Jinglebell\_15 Start: 15041, Stop: 16750, Start Num: 123

Candidate Starts for Jinglebell\_15:

(Start: 123 @15041 has 215 MA's), (193, 15128), (209, 15149), (Start: 227 @15173 has 2 MA's), (233, 15197), (240, 15218), (271, 15302), (274, 15308), (281, 15326), (300, 15356), (348, 15461), (367, 15515), (370, 15521), (377, 15539), (378, 15542), (381, 15551), (388, 15575), (418, 15650), (424, 15662), (443, 15677), (448, 15683), (459, 15701), (465, 15716), (468, 15722), (480, 15749), (484, 15758), (492, 15773), (494, 15779), (511, 15827), (515, 15839), (521, 15845), (564, 15905), (568, 15917), (583, 15953), (587, 15965), (594, 15986), (614, 16040), (618, 16049), (625, 16067), (627, 16073), (638, 16103), (710, 16208), (717, 16217), (720, 16220), (737, 16256), (751, 16295), (761, 16334), (799, 16454), (810, 16487), (826, 16517), (836, 16547), (841, 16556), (844, 16562), (860, 16577), (861, 16580), (865, 16601), (866, 16604), (880, 16640), (882, 16646), (887, 16676), (900, 16718),

Gene: Job42\_19 Start: 16488, Stop: 18197, Start Num: 123

Candidate Starts for Job42\_19:

(Start: 123 @16488 has 215 MA's), (193, 16575), (Start: 227 @16620 has 2 MA's), (233, 16644), (271, 16749), (274, 16755), (281, 16773), (300, 16803), (348, 16908), (370, 16968), (378, 16989), (381, 16998), (388, 17022), (459, 17148), (465, 17163), (468, 17169), (484, 17205), (486, 17208), (492, 17220), (494, 17226), (511, 17274), (515, 17286), (521, 17292), (564, 17352), (568, 17364), (583, 17400), (587, 17412), (614, 17487), (618, 17496), (625, 17514), (627, 17520), (638, 17550), (710, 17655), (717, 17664), (720, 17667), (737, 17703), (761, 17781), (791, 17880), (799, 17901), (810, 17934), (826, 17964), (836, 17994), (841, 18003), (844, 18009), (860, 18024), (861, 18027), (865, 18048), (866, 18051), (877, 18081), (882, 18093), (900, 18165),

Gene: Jobu08\_29 Start: 20451, Stop: 22247, Start Num: 144

Candidate Starts for Jobu08\_29:

(Start: 144 @20451 has 603 MA's), (Start: 190 @20508 has 1 MA's), (197, 20523), (219, 20556), (230, 20577), (Start: 235 @20592 has 1 MA's), (272, 20679), (277, 20691), (278, 20694), (306, 20769), (315, 20784), (336, 20820), (417, 21027), (500, 21180), (532, 21267), (583, 21381), (591, 21405), (597, 21423), (636, 21504), (665, 21579), (668, 21597), (675, 21630), (677, 21636), (695, 21675), (729, 21729), (731, 21732), (742, 21753), (758, 21810), (813, 21978), (860, 22083), (862, 22089), (900, 22224),

Gene: JoeyJr\_16 Start: 14976, Stop: 16685, Start Num: 123

Candidate Starts for JoeyJr\_16:

(Start: 123 @14976 has 215 MA's), (193, 15063), (Start: 227 @15108 has 2 MA's), (233, 15132), (271, 15237), (274, 15243), (281, 15261), (300, 15291), (348, 15396), (370, 15456), (378, 15477), (381,

15486), (388, 15510), (459, 15636), (465, 15651), (468, 15657), (484, 15693), (486, 15696), (492, 15708), (494, 15714), (511, 15762), (515, 15774), (521, 15780), (564, 15840), (568, 15852), (583, 15888), (587, 15900), (614, 15975), (618, 15984), (625, 16002), (627, 16008), (638, 16038), (710, 16143), (717, 16152), (720, 16155), (737, 16191), (761, 16269), (791, 16368), (799, 16389), (810, 16422), (826, 16452), (836, 16482), (841, 16491), (844, 16497), (860, 16512), (861, 16515), (865, 16536), (866, 16539), (882, 16581), (887, 16611), (900, 16653),

Gene: Jojo24\_18 Start: 14985, Stop: 16601, Start Num: 153

Candidate Starts for Jojo24\_18:

(Start: 153 @14985 has 11 MA's), (219, 15084), (231, 15108), (277, 15219), (278, 15222), (281, 15240), (284, 15249), (322, 15315), (328, 15330), (332, 15339), (336, 15345), (366, 15435), (385, 15489), (389, 15498), (448, 15588), (499, 15699), (544, 15771), (547, 15777), (551, 15786), (560, 15804), (599, 15894), (604, 15909), (647, 15993), (653, 16008), (657, 16026), (664, 16038), (679, 16104), (735, 16152), (740, 16164), (746, 16176), (752, 16197), (755, 16209), (769, 16224), (782, 16254), (791, 16290), (863, 16443), (873, 16479), (891, 16542), (897, 16563), (907, 16587), (911, 16593),

Gene: Jolene\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Jolene\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Jolie2\_18 Start: 15988, Stop: 17715, Start Num: 143

Candidate Starts for Jolie2\_18:

(Start: 132 @15976 has 45 MA's), (Start: 137 @15982 has 2 MA's), (143, 15988), (197, 16066), (230, 16120), (248, 16171), (258, 16201), (269, 16225), (300, 16303), (309, 16327), (334, 16372), (368, 16471), (436, 16627), (448, 16648), (451, 16657), (465, 16690), (468, 16696), (487, 16735), (501, 16765), (564, 16861), (618, 17002), (641, 17059), (655, 17107), (665, 17134), (698, 17182), (700, 17185), (724, 17224), (777, 17350), (799, 17422), (863, 17554), (891, 17653), (904, 17695),

Gene: JonJames\_47 Start: 32980, Stop: 34674, Start Num: 141

Candidate Starts for JonJames\_47:

(Start: 141 @32980 has 14 MA's), (188, 33046), (Start: 191 @33052 has 45 MA's), (228, 33109), (282, 33268), (287, 33280), (349, 33406), (366, 33454), (465, 33604), (490, 33655), (494, 33667), (498, 33673), (568, 33814), (576, 33829), (629, 33988), (666, 34096), (756, 34225), (758, 34231), (760, 34240), (782, 34303), (793, 34342), (796, 34351), (813, 34399), (848, 34474), (876, 34534), (888, 34582), (896, 34609), (898, 34618), (900, 34621),

Gene: Jonghyun\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Jonghyun\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: JoongJeon\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for JoongJeon\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: JorRay\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for JorRay\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Jordennis\_31 Start: 19942, Stop: 21738, Start Num: 123

Candidate Starts for Jordennis\_31:

(94, 19900), (Start: 123 @19942 has 215 MA's), (Start: 144 @19966 has 603 MA's), (263, 20164), (278, 20203), (305, 20275), (306, 20278), (318, 20296), (338, 20332), (341, 20338), (378, 20449), (380, 20455), (417, 20536), (448, 20575), (463, 20617), (467, 20620), (495, 20680), (592, 20917), (597, 20932), (636, 21013), (667, 21100), (677, 21145), (750, 21271), (765, 21322), (770, 21331), (781, 21370), (782, 21373), (784, 21385), (813, 21469), (860, 21574), (862, 21580), (900, 21715),

Gene: Jorgensen\_27 Start: 20997, Stop: 22799, Start Num: 146

Candidate Starts for Jorgensen\_27:

(Start: 146 @20997 has 223 MA's), (Start: 161 @21018 has 4 MA's), (Start: 190 @21060 has 1 MA's), (216, 21105), (306, 21321), (332, 21366), (338, 21375), (349, 21414), (368, 21465), (369, 21468), (467, 21663), (500, 21732), (583, 21933), (584, 21936), (591, 21957), (635, 22053), (636, 22056), (638, 22062), (665, 22131), (668, 22149), (670, 22158), (677, 22188), (731, 22284), (746, 22317), (750, 22332), (793, 22473), (813, 22530), (862, 22641),

Gene: Joselito\_28 Start: 20755, Stop: 22554, Start Num: 144

Candidate Starts for Joselito\_28:

(94, 20689), (Start: 123 @20731 has 215 MA's), (Start: 144 @20755 has 603 MA's), (183, 20797), (236, 20893), (242, 20908), (277, 20989), (278, 20992), (306, 21067), (315, 21082), (338, 21121), (341, 21127), (356, 21178), (378, 21238), (380, 21244), (417, 21325), (467, 21409), (518, 21535), (526, 21553), (540, 21580), (597, 21721), (631, 21787), (635, 21799), (636, 21802), (703, 21991), (721, 22018), (726, 22027), (736, 22048), (737, 22051), (746, 22072), (750, 22087), (756, 22111), (781, 22186), (784, 22201), (813, 22285), (860, 22390), (862, 22396), (877, 22450), (909, 22549),

Gene: JoshKayV\_30 Start: 20603, Stop: 22375, Start Num: 144

Candidate Starts for JoshKayV\_30:

(Start: 123 @20579 has 215 MA's), (Start: 144 @20603 has 603 MA's), (219, 20702), (251, 20786), (277, 20837), (278, 20840), (305, 20912), (306, 20915), (338, 20969), (349, 21008), (378, 21086), (417, 21173), (463, 21254), (467, 21257), (584, 21530), (631, 21635), (636, 21650), (675, 21776), (677, 21782), (713, 21830), (721, 21839), (731, 21860), (746, 21893), (750, 21908), (752, 21914), (770, 21968), (781, 22007), (784, 22022), (813, 22106), (862, 22217),

Gene: Journey\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Journey\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Journey13\_26 Start: 19324, Stop: 21123, Start Num: 144

Candidate Starts for Journey13\_26:

(94, 19258), (Start: 123 @19300 has 215 MA's), (Start: 144 @19324 has 603 MA's), (219, 19423), (236, 19462), (277, 19558), (278, 19561), (305, 19633), (306, 19636), (315, 19651), (338, 19690), (341, 19696), (378, 19807), (380, 19813), (384, 19825), (417, 19894), (454, 19951), (463, 19975), (467, 19978), (518, 20104), (535, 20140), (597, 20290), (631, 20356), (636, 20371), (674, 20494), (703, 20560), (721, 20587), (731, 20608), (736, 20617), (746, 20641), (750, 20656), (756, 20680), (781, 20755), (784, 20770), (860, 20959), (862, 20965), (873, 21010),

Gene: Jovo\_24 Start: 19845, Stop: 21644, Start Num: 144

Candidate Starts for Jovo\_24:

(Start: 144 @19845 has 603 MA's), (236, 19983), (278, 20082), (306, 20157), (336, 20208), (360, 20280), (365, 20295), (378, 20328), (380, 20334), (432, 20427), (481, 20529), (495, 20559), (499, 20565), (532, 20655), (546, 20685), (579, 20757), (583, 20769), (584, 20772), (597, 20811), (602, 20829), (635, 20889), (636, 20892), (656, 20943), (668, 20985), (729, 21126), (749, 21168), (862, 21486), (900, 21621),

Gene: Joy99\_23 Start: 17117, Stop: 18883, Start Num: 114

Candidate Starts for Joy99\_23:

(Start: 114 @17117 has 139 MA's), (140, 17147), (236, 17306), (248, 17339), (258, 17369), (272, 17402), (278, 17414), (316, 17504), (337, 17546), (360, 17618), (362, 17627), (378, 17666), (392, 17711), (400, 17732), (403, 17735), (438, 17789), (448, 17807), (465, 17849), (468, 17855), (481, 17882), (564, 18020), (572, 18038), (587, 18080), (593, 18098), (603, 18128), (618, 18155), (655, 18260), (748, 18419), (757, 18455), (768, 18485), (772, 18494), (793, 18569), (810, 18620), (890, 18815), (901, 18854), (902, 18857), (913, 18875),

Gene: Jsquared\_27 Start: 19089, Stop: 20879, Start Num: 144

Candidate Starts for Jsquared\_27:

(94, 19023), (Start: 123 @19065 has 215 MA's), (Start: 144 @19089 has 603 MA's), (236, 19227), (242, 19242), (277, 19323), (278, 19326), (305, 19398), (306, 19401), (338, 19455), (341, 19461), (345, 19479), (365, 19539), (378, 19572), (380, 19578), (392, 19617), (417, 19659), (463, 19740), (467, 19743), (495, 19803), (532, 19899), (546, 19929), (583, 20013), (597, 20055), (619, 20106), (636, 20136), (675, 20262), (707, 20325), (746, 20397), (750, 20412), (756, 20436), (781, 20511), (784, 20526), (813, 20610), (860, 20715), (862, 20721), (865, 20739), (873, 20766), (877, 20775),

Gene: JuJu\_19 Start: 16575, Stop: 18221, Start Num: 195

Candidate Starts for JuJu\_19:

(172, 16539), (Start: 195 @16575 has 45 MA's), (244, 16677), (272, 16755), (308, 16854), (329, 16893), (357, 16974), (377, 17028), (382, 17043), (460, 17139), (494, 17214), (506, 17244), (594, 17427), (601, 17451), (658, 17595), (664, 17607), (694, 17652), (702, 17667), (757, 17799), (758, 17802), (788, 17901), (795, 17919), (839, 18030), (843, 18036), (872, 18099), (877, 18111),

Gene: Juice456\_18 Start: 15928, Stop: 17637, Start Num: 123

Candidate Starts for Juice456\_18:

(Start: 123 @15928 has 215 MA's), (193, 16015), (Start: 227 @16060 has 2 MA's), (233, 16084), (271, 16189), (274, 16195), (281, 16213), (300, 16243), (348, 16348), (350, 16354), (370, 16408), (373, 16417), (378, 16429), (381, 16438), (388, 16462), (424, 16549), (443, 16564), (459, 16588), (465, 16603), (468, 16609), (484, 16645), (486, 16648), (492, 16660), (494, 16666), (511, 16714), (515, 16726), (521, 16732), (564, 16792), (568, 16804), (583, 16840), (587, 16852), (594, 16873), (614, 16927), (618, 16936), (625, 16954), (627, 16960), (638, 16990), (710, 17095), (717, 17104), (720, 17107), (737, 17143), (758, 17209), (761, 17221), (791, 17320), (799, 17341), (810, 17374), (826, 17404), (836, 17434), (841, 17443), (844, 17449), (860, 17464), (861, 17467), (866, 17491), (877, 17521), (882, 17533), (887, 17563), (900, 17605),

Gene: Juicebox\_19 Start: 17730, Stop: 19400, Start Num: 154

Candidate Starts for Juicebox\_19:

(18, 17085), (25, 17160), (26, 17184), (51, 17439), (54, 17457), (73, 17586), (147, 17718), (Start: 154 @17730 has 1 MA's), (Start: 190 @17781 has 1 MA's), (216, 17826), (265, 17943), (354, 18159), (372, 18204), (375, 18213), (472, 18405), (499, 18459), (546, 18531), (635, 18732), (636, 18735), (645, 18762), (647, 18765), (659, 18801), (662, 18807), (668, 18831), (672, 18852), (674, 18861), (677, 18870), (678, 18873), (754, 18990), (788, 19065), (791, 19074), (865, 19260), (866, 19263), (880, 19302), (889, 19341), (909, 19395),

Gene: JuliaChild\_29 Start: 21585, Stop: 23387, Start Num: 146

Candidate Starts for JuliaChild\_29:

(Start: 146 @21585 has 223 MA's), (Start: 161 @21606 has 4 MA's), (Start: 190 @21648 has 1 MA's), (216, 21693), (306, 21909), (332, 21954), (338, 21963), (349, 22002), (368, 22053), (369, 22056), (467, 22251), (500, 22320), (583, 22521), (584, 22524), (591, 22545), (635, 22641), (636, 22644), (638, 22650), (665, 22719), (668, 22737), (670, 22746), (677, 22776), (731, 22872), (746, 22905), (750, 22920), (793, 23061), (813, 23118), (862, 23229),

Gene: Juliette\_24 Start: 18520, Stop: 20310, Start Num: 112

Candidate Starts for Juliette\_24:

(Start: 93 @18484 has 1 MA's), (Start: 109 @18514 has 26 MA's), (Start: 112 @18520 has 41 MA's), (Start: 114 @18523 has 139 MA's), (Start: 137 @18538 has 2 MA's), (Start: 168 @18580 has 32 MA's), (197, 18628), (Start: 227 @18667 has 2 MA's), (230, 18682), (236, 18700), (248, 18733), (258, 18763), (278, 18808), (282, 18826), (316, 18898), (321, 18904), (334, 18934), (336, 18937), (356, 19000), (360, 19012), (412, 19147), (423, 19165), (444, 19195), (448, 19201), (454, 19219), (468, 19249), (487, 19288), (564, 19414), (588, 19477), (655, 19678), (670, 19732), (708, 19777), (734, 19822), (748, 19846), (756, 19879), (768, 19912), (788, 19984), (793, 19996), (810, 20047), (813, 20053), (865, 20155), (901, 20281), (913, 20302),

Gene: Jung\_19 Start: 16311, Stop: 18047, Start Num: 117

Candidate Starts for Jung\_19:

(Start: 101 @16287 has 2 MA's), (Start: 117 @16311 has 59 MA's), (Start: 166 @16371 has 1 MA's), (178, 16392), (180, 16395), (246, 16515), (258, 16554), (272, 16587), (282, 16611), (344, 16731), (356, 16770), (358, 16776), (386, 16860), (388, 16866), (392, 16878), (402, 16902), (410, 16929), (422, 16947), (452, 16986), (459, 16992), (470, 17016), (494, 17070), (500, 17082), (503, 17091), (529, 17151), (573, 17229), (587, 17268), (598, 17301), (618, 17367), (627, 17391), (636, 17415), (647, 17445), (735, 17559), (740, 17571), (742, 17574), (745, 17580), (747, 17589), (779, 17697), (805, 17781), (853, 17880), (890, 17988), (907, 18036),

Gene: Juniormint\_19 Start: 16411, Stop: 18147, Start Num: 117

Candidate Starts for Juniormint\_19:

(Start: 101 @16387 has 2 MA's), (Start: 117 @16411 has 59 MA's), (Start: 166 @16471 has 1 MA's), (178, 16492), (180, 16495), (246, 16615), (258, 16654), (272, 16687), (282, 16711), (344, 16831), (356, 16870), (358, 16876), (386, 16960), (388, 16966), (392, 16978), (402, 17002), (410, 17029),

(422, 17047), (452, 17086), (459, 17092), (470, 17116), (494, 17170), (500, 17182), (503, 17191), (529, 17251), (573, 17329), (587, 17368), (598, 17401), (618, 17467), (624, 17482), (627, 17491), (636, 17515), (647, 17545), (653, 17557), (735, 17659), (740, 17671), (742, 17674), (745, 17680), (747, 17689), (779, 17797), (805, 17881), (853, 17980), (890, 18088), (907, 18136),

Gene: Juniper1\_16 Start: 14801, Stop: 16510, Start Num: 123

Candidate Starts for Juniper1\_16:

(Start: 123 @14801 has 215 MA's), (193, 14888), (209, 14909), (Start: 227 @14933 has 2 MA's), (233, 14957), (240, 14978), (271, 15062), (274, 15068), (281, 15086), (300, 15116), (339, 15188), (348, 15221), (367, 15275), (370, 15281), (377, 15299), (378, 15302), (381, 15311), (388, 15335), (403, 15377), (418, 15410), (424, 15422), (443, 15437), (448, 15443), (459, 15461), (465, 15476), (468, 15482), (484, 15518), (486, 15521), (492, 15533), (494, 15539), (511, 15587), (515, 15599), (521, 15605), (564, 15665), (568, 15677), (583, 15713), (587, 15725), (594, 15746), (614, 15800), (618, 15809), (625, 15827), (627, 15833), (638, 15863), (710, 15968), (717, 15977), (720, 15980), (737, 16016), (751, 16055), (761, 16094), (791, 16193), (799, 16214), (810, 16247), (826, 16277), (836, 16307), (839, 16313), (841, 16316), (844, 16322), (860, 16337), (861, 16340), (865, 16361), (866, 16364), (882, 16406), (900, 16478),

Gene: JustASigh\_18 Start: 16356, Stop: 18098, Start Num: 112

Candidate Starts for JustASigh\_18:

(1, 15306), (2, 15348), (3, 15354), (5, 15468), (11, 15660), (13, 15693), (19, 15771), (29, 15906), (92, 16320), (Start: 112 @16356 has 41 MA's), (184, 16446), (201, 16476), (Start: 227 @16509 has 2 MA's), (266, 16623), (302, 16722), (360, 16863), (365, 16878), (444, 17034), (448, 17040), (449, 17043), (481, 17115), (489, 17130), (496, 17145), (514, 17196), (563, 17244), (629, 17412), (723, 17604), (788, 17772), (802, 17811), (826, 17865), (836, 17895), (863, 17934), (873, 17970), (878, 17982), (893, 18042),

Gene: KADY\_30 Start: 20463, Stop: 22259, Start Num: 144

Candidate Starts for KADY\_30:

(Start: 144 @20463 has 603 MA's), (Start: 190 @20520 has 1 MA's), (197, 20535), (219, 20568), (230, 20589), (Start: 235 @20604 has 1 MA's), (272, 20691), (277, 20703), (278, 20706), (306, 20781), (315, 20796), (336, 20832), (417, 21039), (481, 21153), (500, 21192), (532, 21279), (583, 21393), (591, 21417), (597, 21435), (636, 21516), (665, 21591), (668, 21609), (675, 21642), (677, 21648), (695, 21687), (729, 21741), (731, 21744), (742, 21765), (758, 21822), (813, 21990), (860, 22095), (862, 22101), (900, 22236),

Gene: KBG\_28 Start: 21996, Stop: 23798, Start Num: 146

Candidate Starts for KBG\_28:

(Start: 146 @21996 has 223 MA's), (Start: 161 @22017 has 4 MA's), (Start: 190 @22059 has 1 MA's), (216, 22104), (306, 22320), (332, 22365), (338, 22374), (368, 22464), (369, 22467), (467, 22662), (500, 22731), (579, 22920), (583, 22932), (584, 22935), (591, 22956), (635, 23052), (636, 23055), (638, 23061), (665, 23130), (668, 23148), (670, 23157), (677, 23187), (731, 23283), (746, 23316), (750, 23331), (793, 23472), (813, 23529), (862, 23640), (909, 23793),

Gene: KFPoly\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for KFPoly\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (890, 21549), (894, 21564), (900, 21582),

Gene: KSSJEB\_27 Start: 20890, Stop: 22692, Start Num: 146

Candidate Starts for KSSJEB\_27:

(Start: 146 @20890 has 223 MA's), (Start: 161 @20911 has 4 MA's), (Start: 190 @20953 has 1 MA's), (216, 20998), (306, 21214), (332, 21259), (338, 21268), (349, 21307), (368, 21358), (369, 21361), (467, 21556), (500, 21625), (583, 21826), (584, 21829), (591, 21850), (635, 21946), (636, 21949), (638, 21955), (665, 22024), (668, 22042), (670, 22051), (677, 22081), (731, 22177), (746, 22210), (750, 22225), (793, 22366), (813, 22423), (862, 22534),

Gene: Kabluna\_44 Start: 29561, Stop: 31177, Start Num: 170

Candidate Starts for Kabluna\_44:

(Start: 170 @29561 has 87 MA's), (Start: 177 @29573 has 1 MA's), (236, 29675), (265, 29759), (347, 29942), (372, 30008), (377, 30023), (386, 30047), (432, 30134), (449, 30164), (450, 30167), (493, 30224), (518, 30296), (571, 30401), (607, 30488), (635, 30536), (673, 30662), (688, 30698), (776, 30809), (799, 30884), (877, 31061), (887, 31103), (906, 31160),

Gene: Kachowdy\_27 Start: 19960, Stop: 21759, Start Num: 144

Candidate Starts for Kachowdy\_27:

(Start: 144 @19960 has 603 MA's), (Start: 190 @20020 has 1 MA's), (230, 20089), (272, 20191), (277, 20203), (278, 20206), (306, 20281), (315, 20296), (318, 20299), (338, 20335), (384, 20470), (417, 20539), (481, 20653), (532, 20779), (583, 20893), (591, 20917), (595, 20929), (597, 20935), (636, 21016), (665, 21091), (668, 21109), (670, 21118), (675, 21142), (677, 21148), (682, 21163), (707, 21205), (726, 21232), (729, 21241), (731, 21244), (742, 21265), (746, 21277), (813, 21490), (860, 21595), (862, 21601), (900, 21736),

Gene: Kalah2\_37 Start: 27936, Stop: 29669, Start Num: 124

Candidate Starts for Kalah2\_37:

(Start: 124 @27936 has 30 MA's), (Start: 191 @28026 has 45 MA's), (222, 28074), (233, 28104), (282, 28233), (301, 28263), (346, 28362), (358, 28398), (368, 28425), (392, 28497), (395, 28506), (403, 28527), (448, 28596), (468, 28635), (470, 28638), (475, 28653), (494, 28692), (511, 28740), (515, 28752), (521, 28758), (552, 28806), (558, 28815), (565, 28836), (573, 28854), (590, 28902), (625, 29004), (647, 29064), (653, 29076), (725, 29160), (731, 29172), (735, 29178), (740, 29190), (742, 29193), (753, 29232), (758, 29250), (772, 29286), (773, 29292), (799, 29379), (834, 29469), (863, 29511), (868, 29529), (878, 29559), (888, 29601), (907, 29655),

Gene: Kalb97\_30 Start: 20459, Stop: 22255, Start Num: 144

Candidate Starts for Kalb97\_30:

(Start: 144 @20459 has 603 MA's), (Start: 190 @20516 has 1 MA's), (197, 20531), (230, 20585), (Start: 235 @20600 has 1 MA's), (272, 20687), (277, 20699), (278, 20702), (306, 20777), (315, 20792), (417, 21035), (500, 21188), (532, 21275), (576, 21368), (583, 21389), (591, 21413), (595, 21425), (597, 21431), (636, 21512), (665, 21587), (668, 21605), (670, 21614), (675, 21638), (677, 21644), (682, 21659), (695, 21683), (729, 21737), (731, 21740), (742, 21761), (860, 22091), (862, 22097), (900, 22232),

Gene: Kalnoky\_30 Start: 20460, Stop: 22256, Start Num: 144

Candidate Starts for Kalnoky\_30:

(Start: 144 @20460 has 603 MA's), (Start: 190 @20517 has 1 MA's), (197, 20532), (230, 20586), (Start: 235 @20601 has 1 MA's), (272, 20688), (277, 20700), (278, 20703), (306, 20778), (315, 20793), (417, 21036), (500, 21189), (532, 21276), (583, 21390), (591, 21414), (595, 21426), (597, 21432), (636, 21513), (665, 21588), (668, 21606), (670, 21615), (675, 21639), (677, 21645), (695, 21684), (729, 21738), (731, 21741), (742, 21762), (813, 21987), (860, 22092), (862, 22098), (900, 22233),



Gene: Kalpine\_31 Start: 21962, Stop: 23758, Start Num: 123

Candidate Starts for Kalpine\_31:

(Start: 123 @21962 has 215 MA's), (Start: 144 @21986 has 603 MA's), (277, 22220), (278, 22223), (305, 22295), (306, 22298), (338, 22352), (341, 22358), (349, 22391), (378, 22469), (417, 22556), (463, 22637), (467, 22640), (481, 22670), (583, 22910), (584, 22913), (597, 22952), (631, 23018), (636, 23033), (677, 23165), (713, 23213), (731, 23243), (746, 23276), (750, 23291), (752, 23297), (770, 23351), (784, 23405), (813, 23489), (842, 23555), (849, 23567), (860, 23594), (862, 23600),

Gene: Kamaru\_20 Start: 16421, Stop: 18118, Start Num: 144

Candidate Starts for Kamaru\_20:

(113, 16382), (Start: 144 @16421 has 603 MA's), (Start: 150 @16433 has 4 MA's), (180, 16472), (202, 16511), (219, 16532), (240, 16580), (243, 16589), (263, 16631), (277, 16667), (295, 16724), (316, 16772), (331, 16799), (382, 16940), (406, 16997), (414, 17015), (432, 17024), (436, 17030), (458, 17078), (469, 17108), (485, 17144), (489, 17150), (499, 17171), (500, 17174), (517, 17225), (547, 17252), (549, 17255), (561, 17282), (574, 17309), (599, 17381), (618, 17420), (649, 17474), (664, 17516), (683, 17591), (736, 17654), (747, 17681), (749, 17684), (752, 17699), (788, 17783), (791, 17792), (793, 17795), (795, 17801), (799, 17813), (801, 17816), (811, 17846), (814, 17852), (824, 17873), (825, 17876), (849, 17930), (862, 17960), (863, 17969), (879, 18020), (887, 18053), (891, 18065), (896, 18083),

Gene: Kamashten\_34 Start: 30813, Stop: 32576, Start Num: 97

Candidate Starts for Kamashten\_34:

(90, 30795), (Start: 97 @30813 has 73 MA's), (Start: 121 @30849 has 1 MA's), (219, 30987), (262, 31083), (265, 31092), (288, 31161), (306, 31212), (332, 31257), (341, 31272), (368, 31353), (384, 31398), (386, 31407), (406, 31446), (445, 31497), (448, 31500), (458, 31527), (461, 31542), (472, 31566), (487, 31596), (551, 31701), (597, 31818), (607, 31836), (613, 31851), (631, 31881), (635, 31893), (636, 31896), (647, 31923), (793, 32247), (794, 32250), (810, 32298), (824, 32325), (832, 32352), (860, 32406), (866, 32433), (902, 32562),

Gene: Kamy\_27 Start: 19825, Stop: 21603, Start Num: 144

Candidate Starts for Kamy\_27:

(Start: 123 @19801 has 215 MA's), (Start: 144 @19825 has 603 MA's), (Start: 190 @19882 has 1 MA's), (222, 19936), (230, 19951), (236, 19969), (272, 20053), (277, 20065), (278, 20068), (306, 20143), (315, 20158), (338, 20197), (378, 20314), (417, 20401), (463, 20482), (489, 20530), (500, 20554), (532, 20641), (553, 20686), (584, 20758), (591, 20779), (597, 20797), (636, 20878), (668, 20971), (670, 20980), (675, 21004), (677, 21010), (687, 21034), (731, 21088), (742, 21109), (756, 21160), (763, 21184), (782, 21238), (813, 21334), (860, 21439), (863, 21454), (894, 21562), (900, 21580),

Gene: Kanely\_28 Start: 21700, Stop: 23502, Start Num: 146

Candidate Starts for Kanely\_28:

(Start: 146 @21700 has 223 MA's), (Start: 161 @21721 has 4 MA's), (Start: 190 @21763 has 1 MA's), (216, 21808), (306, 22024), (332, 22069), (338, 22078), (349, 22117), (368, 22168), (369, 22171), (467, 22366), (500, 22435), (583, 22636), (584, 22639), (591, 22660), (635, 22756), (636, 22759), (638, 22765), (665, 22834), (668, 22852), (670, 22861), (677, 22891), (731, 22987), (746, 23020), (750, 23035), (793, 23176), (813, 23233), (862, 23344),

Gene: Kanye\_26 Start: 20732, Stop: 22411, Start Num: 129

Candidate Starts for Kanye\_26:

(Start: 129 @20732 has 79 MA's), (Start: 191 @20816 has 45 MA's), (Start: 235 @20894 has 1 MA's), (268, 20981), (274, 20996), (300, 21044), (324, 21083), (356, 21170), (368, 21203), (381, 21239), (390, 21269), (392, 21275), (422, 21344), (461, 21374), (466, 21386), (468, 21389), (494, 21446), (565, 21578), (567, 21584), (592, 21650), (594, 21656), (601, 21680), (618, 21728), (627, 21752),

(631, 21761), (658, 21836), (717, 21887), (725, 21902), (782, 22064), (788, 22091), (799, 22121), (843, 22226), (880, 22304), (887, 22340), (890, 22349), (900, 22382), (907, 22397),

Gene: KappaFarmDelta\_19 Start: 16818, Stop: 18464, Start Num: 195

Candidate Starts for KappaFarmDelta\_19:

(172, 16782), (Start: 195 @16818 has 45 MA's), (244, 16920), (272, 16998), (308, 17097), (329, 17136), (345, 17181), (357, 17217), (377, 17271), (382, 17286), (392, 17319), (413, 17367), (415, 17370), (494, 17457), (506, 17487), (594, 17670), (601, 17694), (658, 17838), (664, 17850), (702, 17910), (757, 18042), (758, 18045), (788, 18144), (795, 18162), (813, 18213), (839, 18273), (843, 18279), (872, 18342), (877, 18354),

Gene: Kareem\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Kareem\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Karhdo\_16 Start: 14934, Stop: 16643, Start Num: 123

Candidate Starts for Karhdo\_16:

(Start: 123 @14934 has 215 MA's), (193, 15021), (Start: 227 @15066 has 2 MA's), (233, 15090), (251, 15147), (271, 15195), (274, 15201), (281, 15219), (300, 15249), (348, 15354), (367, 15408), (370, 15414), (373, 15423), (378, 15435), (381, 15444), (388, 15468), (402, 15504), (403, 15510), (407, 15522), (418, 15543), (420, 15546), (424, 15555), (443, 15570), (448, 15576), (459, 15594), (465, 15609), (468, 15615), (475, 15633), (477, 15636), (484, 15651), (492, 15666), (494, 15672), (506, 15702), (511, 15720), (515, 15732), (521, 15738), (564, 15798), (568, 15810), (583, 15846), (587, 15858), (594, 15879), (614, 15933), (618, 15942), (627, 15966), (638, 15996), (710, 16101), (720, 16113), (737, 16149), (751, 16188), (761, 16227), (791, 16326), (799, 16347), (810, 16380), (826, 16410), (836, 16440), (841, 16449), (844, 16455), (860, 16470), (861, 16473), (865, 16494), (866, 16497), (882, 16539), (887, 16569), (900, 16611), (901, 16617),

Gene: Kari\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Kari\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Kasen3\_18 Start: 16641, Stop: 18404, Start Num: 109

Candidate Starts for Kasen3\_18:

(Start: 109 @16641 has 26 MA's), (Start: 132 @16650 has 45 MA's), (Start: 137 @16656 has 2 MA's), (143, 16662), (230, 16794), (248, 16845), (258, 16875), (269, 16899), (309, 17001), (331, 17040), (334, 17046), (341, 17061), (353, 17106), (395, 17226), (425, 17283), (448, 17322), (468, 17370), (481, 17397), (487, 17409), (522, 17490), (564, 17535), (641, 17733), (649, 17763), (655, 17781), (665, 17808), (716, 17892), (730, 17910), (743, 17925), (756, 17973), (760, 17988), (782, 18051), (799, 18108), (813, 18147), (831, 18189), (863, 18240), (890, 18336), (913, 18396),

Gene: KashFlow\_28 Start: 23344, Stop: 25077, Start Num: 124

Candidate Starts for KashFlow\_28:

(Start: 124 @23344 has 30 MA's), (Start: 191 @23434 has 45 MA's), (193, 23437), (243, 23539), (268, 23605), (282, 23641), (301, 23671), (306, 23686), (346, 23770), (358, 23806), (368, 23833), (382, 23872), (392, 23905), (395, 23914), (420, 23971), (451, 24013), (490, 24088), (494, 24100), (515, 24160), (552, 24214), (565, 24244), (573, 24262), (577, 24271), (588, 24304), (592, 24316), (594, 24322), (606, 24361), (627, 24418), (725, 24568), (735, 24586), (750, 24628), (756, 24652), (757, 24655), (761, 24670), (773, 24700), (782, 24730), (799, 24787), (868, 24937), (902, 25057), (907, 25063),

Gene: Katalie136\_27 Start: 19826, Stop: 21625, Start Num: 144

Candidate Starts for Katalie136\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 190 @19886 has 1 MA's), (230, 19955), (263, 20033), (272, 20057), (277, 20069), (278, 20072), (292, 20108), (306, 20147), (338, 20201), (369, 20294), (378, 20318), (417, 20405), (481, 20519), (500, 20558), (532, 20645), (553, 20690), (583, 20759), (591, 20783), (595, 20795), (636, 20882), (665, 20957), (668, 20975), (670, 20984), (675, 21008), (677, 21014), (682, 21029), (703, 21062), (729, 21107), (731, 21110), (742, 21131), (813, 21356), (849, 21434), (860, 21461), (862, 21467), (900, 21602),

Gene: KatherineG\_30 Start: 19215, Stop: 21002, Start Num: 144

Candidate Starts for KatherineG\_30:

(94, 19149), (Start: 123 @19191 has 215 MA's), (Start: 144 @19215 has 603 MA's), (236, 19353), (262, 19410), (278, 19452), (292, 19488), (306, 19527), (343, 19596), (349, 19620), (369, 19674), (448, 19824), (467, 19869), (481, 19899), (499, 19935), (515, 19986), (530, 20022), (553, 20070), (580, 20130), (635, 20259), (665, 20337), (750, 20538), (752, 20544), (782, 20640), (845, 20805), (880, 20904),

Gene: KayGee\_18 Start: 15418, Stop: 17112, Start Num: 144

Candidate Starts for KayGee\_18:

(Start: 133 @15415 has 8 MA's), (Start: 144 @15418 has 603 MA's), (214, 15517), (236, 15559), (336, 15799), (365, 15886), (374, 15907), (377, 15916), (385, 15943), (406, 15988), (436, 16021), (444, 16036), (454, 16060), (465, 16093), (481, 16126), (487, 16138), (509, 16195), (539, 16225), (546, 16243), (560, 16273), (574, 16303), (596, 16366), (617, 16417), (636, 16453), (643, 16468), (650, 16486), (668, 16543), (670, 16552), (747, 16672), (750, 16684), (777, 16732), (791, 16783), (793, 16786), (799, 16804), (829, 16882), (842, 16909), (862, 16951), (902, 17098), (907, 17104),

Gene: Kazan\_31 Start: 19982, Stop: 21754, Start Num: 144

Candidate Starts for Kazan\_31:

(94, 19916), (Start: 123 @19958 has 215 MA's), (Start: 144 @19982 has 603 MA's), (263, 20180), (278, 20219), (305, 20291), (306, 20294), (318, 20312), (338, 20348), (341, 20354), (378, 20465), (380, 20471), (392, 20510), (417, 20552), (448, 20591), (463, 20633), (467, 20636), (495, 20696), (592, 20933), (597, 20948), (636, 21029), (677, 21161), (750, 21287), (765, 21338), (770, 21347), (781, 21386), (782, 21389), (784, 21401), (813, 21485), (860, 21590), (862, 21596), (900, 21731),

Gene: Keelan\_51 Start: 27923, Stop: 29611, Start Num: 135

Candidate Starts for Keelan\_51:

(Start: 135 @27923 has 7 MA's), (219, 28037), (292, 28223), (316, 28277), (378, 28433), (434, 28535), (458, 28583), (481, 28640), (579, 28817), (598, 28874), (600, 28883), (635, 28946), (668, 29042), (670, 29051), (711, 29108), (750, 29183), (754, 29198), (791, 29282), (824, 29363), (825, 29366), (829, 29381), (862, 29450), (897, 29579),

Gene: Keitabear\_35 Start: 32178, Stop: 33941, Start Num: 97

Candidate Starts for Keitabear\_35:

(90, 32160), (Start: 97 @32178 has 73 MA's), (Start: 121 @32214 has 1 MA's), (219, 32352), (262, 32448), (265, 32457), (288, 32526), (306, 32577), (332, 32622), (341, 32637), (368, 32718), (384, 32763), (386, 32772), (445, 32862), (458, 32892), (461, 32907), (472, 32931), (487, 32961), (551, 33066), (597, 33183), (607, 33201), (613, 33216), (635, 33258), (636, 33261), (647, 33288), (788, 33600), (793, 33612), (794, 33615), (810, 33663), (824, 33690), (832, 33717), (860, 33771), (891, 33888), (909, 33936),

Gene: Kenmech\_30 Start: 22406, Stop: 24208, Start Num: 146

Candidate Starts for Kenmech\_30:

(Start: 146 @22406 has 223 MA's), (Start: 161 @22427 has 4 MA's), (Start: 190 @22469 has 1 MA's), (216, 22514), (306, 22730), (332, 22775), (338, 22784), (349, 22823), (368, 22874), (369, 22877), (467, 23072), (500, 23141), (583, 23342), (584, 23345), (591, 23366), (635, 23462), (636, 23465), (638, 23471), (665, 23540), (668, 23558), (670, 23567), (677, 23597), (731, 23693), (746, 23726), (750, 23741), (793, 23882), (813, 23939), (862, 24050),

Gene: Kenna\_19 Start: 16428, Stop: 18125, Start Num: 144

Candidate Starts for Kenna\_19:

(113, 16389), (Start: 144 @16428 has 603 MA's), (Start: 150 @16440 has 4 MA's), (180, 16479), (202, 16518), (219, 16539), (240, 16587), (243, 16596), (263, 16638), (277, 16674), (295, 16731), (316, 16779), (331, 16806), (382, 16947), (406, 17004), (414, 17022), (432, 17031), (436, 17037), (469, 17115), (485, 17151), (489, 17157), (499, 17178), (500, 17181), (517, 17232), (547, 17259), (549, 17262), (561, 17289), (574, 17316), (599, 17388), (618, 17427), (649, 17481), (664, 17523), (683, 17598), (736, 17661), (747, 17688), (749, 17691), (752, 17706), (788, 17790), (791, 17799), (793, 17802), (795, 17808), (799, 17820), (801, 17823), (811, 17853), (814, 17859), (824, 17880), (825, 17883), (849, 17937), (862, 17967), (863, 17976), (879, 18027), (887, 18060), (891, 18072), (896, 18090),

Gene: Kenuha5\_16 Start: 14929, Stop: 16638, Start Num: 123

Candidate Starts for Kenuha5\_16:

(Start: 123 @14929 has 215 MA's), (193, 15016), (Start: 227 @15061 has 2 MA's), (233, 15085), (271, 15190), (274, 15196), (281, 15214), (300, 15244), (348, 15349), (370, 15409), (378, 15430), (381, 15439), (388, 15463), (403, 15505), (418, 15538), (424, 15550), (443, 15565), (448, 15571), (459, 15589), (465, 15604), (468, 15610), (484, 15646), (486, 15649), (492, 15661), (494, 15667), (499, 15676), (511, 15715), (515, 15727), (521, 15733), (564, 15793), (568, 15805), (583, 15841), (587, 15853), (614, 15928), (618, 15937), (625, 15955), (627, 15961), (638, 15991), (710, 16096), (717, 16105), (720, 16108), (737, 16144), (761, 16222), (799, 16342), (826, 16405), (836, 16435), (841, 16444), (844, 16450), (860, 16465), (861, 16468), (866, 16492), (877, 16522), (882, 16534), (900, 16606),

Gene: Kerberos\_31 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for Kerberos\_31:

(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (242, 20202), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474), (784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: Keshu\_22 Start: 17579, Stop: 19342, Start Num: 114

Candidate Starts for Keshu\_22:

(Start: 109 @17570 has 26 MA's), (Start: 114 @17579 has 139 MA's), (196, 17681), (230, 17738), (248, 17789), (258, 17819), (269, 17843), (360, 18074), (362, 18083), (368, 18095), (400, 18188), (403, 18191), (448, 18263), (451, 18272), (465, 18305), (468, 18311), (487, 18350), (503, 18386),

(564, 18476), (588, 18539), (622, 18626), (655, 18719), (698, 18794), (748, 18875), (760, 18923), (771, 18947), (778, 18974), (795, 19031), (810, 19076), (863, 19178), (871, 19205), (887, 19265), (890, 19274), (896, 19295), (901, 19313), (904, 19319), (913, 19334),

Gene: Kevin1\_18 Start: 14957, Stop: 16666, Start Num: 126

Candidate Starts for Kevin1\_18:

(Start: 126 @14957 has 42 MA's), (Start: 150 @14984 has 4 MA's), (Start: 227 @15089 has 2 MA's), (229, 15101), (241, 15137), (258, 15188), (268, 15209), (271, 15218), (274, 15224), (282, 15245), (287, 15257), (367, 15431), (370, 15437), (377, 15455), (381, 15467), (382, 15470), (388, 15491), (418, 15566), (443, 15593), (459, 15617), (460, 15620), (465, 15632), (484, 15674), (492, 15689), (494, 15695), (499, 15704), (511, 15743), (547, 15797), (564, 15821), (587, 15881), (608, 15947), (614, 15956), (618, 15965), (637, 16016), (638, 16019), (710, 16124), (737, 16172), (758, 16238), (781, 16310), (836, 16463), (841, 16472), (860, 16493), (863, 16508), (866, 16520), (880, 16556), (882, 16562),

Gene: Kewpiedoll\_34 Start: 30220, Stop: 31983, Start Num: 97

Candidate Starts for Kewpiedoll\_34:

(90, 30202), (Start: 97 @30220 has 73 MA's), (Start: 121 @30256 has 1 MA's), (219, 30394), (262, 30490), (265, 30499), (288, 30568), (306, 30619), (332, 30664), (341, 30679), (368, 30760), (384, 30805), (386, 30814), (445, 30904), (458, 30934), (461, 30949), (472, 30973), (487, 31003), (551, 31108), (597, 31225), (607, 31243), (613, 31258), (631, 31288), (635, 31300), (636, 31303), (647, 31330), (793, 31654), (794, 31657), (810, 31705), (824, 31732), (832, 31759), (860, 31813), (866, 31840), (902, 31969),

Gene: Keziacharles14\_28 Start: 19842, Stop: 21632, Start Num: 144

Candidate Starts for Keziacharles14\_28:

(Start: 141 @19839 has 14 MA's), (Start: 144 @19842 has 603 MA's), (243, 19998), (278, 20079), (305, 20151), (306, 20154), (315, 20169), (338, 20208), (341, 20214), (356, 20265), (365, 20292), (368, 20298), (378, 20325), (380, 20331), (395, 20379), (417, 20412), (463, 20493), (467, 20496), (495, 20556), (546, 20682), (576, 20745), (619, 20859), (636, 20889), (644, 20907), (703, 21069), (731, 21117), (746, 21150), (750, 21165), (756, 21189), (781, 21264), (784, 21279), (813, 21363), (851, 21444), (860, 21468), (873, 21519), (890, 21576),

Gene: KiSi\_22 Start: 16322, Stop: 18085, Start Num: 112

Candidate Starts for KiSi\_22:

(Start: 93 @16286 has 1 MA's), (Start: 109 @16316 has 26 MA's), (Start: 112 @16322 has 41 MA's), (140, 16349), (159, 16376), (230, 16490), (248, 16541), (272, 16604), (316, 16706), (321, 16712), (347, 16784), (360, 16820), (362, 16829), (378, 16868), (393, 16916), (400, 16934), (423, 16973), (424, 16976), (438, 16991), (444, 17003), (448, 17009), (465, 17051), (468, 17057), (481, 17084), (564, 17222), (572, 17240), (577, 17252), (603, 17330), (636, 17402), (641, 17414), (655, 17462), (698, 17537), (748, 17621), (756, 17654), (758, 17660), (768, 17687), (793, 17771), (795, 17777), (810, 17822), (813, 17828), (863, 17921), (890, 18017), (913, 18077),

Gene: KidneyBean\_41 Start: 30603, Stop: 32216, Start Num: 170

Candidate Starts for KidneyBean\_41:

(Start: 170 @30603 has 87 MA's), (Start: 194 @30639 has 1 MA's), (202, 30657), (236, 30717), (340, 30957), (343, 30969), (347, 30984), (372, 31050), (377, 31065), (386, 31089), (387, 31092), (432, 31176), (449, 31206), (450, 31209), (493, 31266), (510, 31314), (511, 31317), (518, 31338), (571, 31443), (592, 31488), (607, 31530), (673, 31704), (683, 31734), (688, 31740), (775, 31848), (776, 31851), (799, 31926), (887, 32145), (906, 32202),

Gene: Kiko\_20 Start: 16705, Stop: 18399, Start Num: 149

Candidate Starts for Kiko\_20:

(113, 16663), (Start: 121 @16675 has 1 MA's), (Start: 149 @16705 has 8 MA's), (240, 16858), (265, 16915), (272, 16933), (277, 16945), (281, 16966), (311, 17044), (359, 17152), (368, 17176), (377, 17200), (406, 17272), (445, 17323), (485, 17419), (500, 17449), (537, 17503), (540, 17509), (561, 17557), (613, 17683), (668, 17818), (669, 17824), (670, 17827), (705, 17893), (752, 17980), (793, 18076), (794, 18079), (799, 18094), (824, 18154), (864, 18253), (865, 18259), (891, 18346), (907, 18391),

Gene: KilKor\_19 Start: 16273, Stop: 18009, Start Num: 117

Candidate Starts for KilKor\_19:

(Start: 101 @16249 has 2 MA's), (Start: 117 @16273 has 59 MA's), (Start: 166 @16333 has 1 MA's), (178, 16354), (180, 16357), (246, 16477), (258, 16516), (272, 16549), (282, 16573), (344, 16693), (356, 16732), (358, 16738), (386, 16822), (388, 16828), (392, 16840), (402, 16864), (410, 16891), (422, 16909), (452, 16948), (459, 16954), (470, 16978), (494, 17032), (500, 17044), (503, 17053), (529, 17113), (573, 17191), (587, 17230), (598, 17263), (618, 17329), (627, 17353), (636, 17377), (647, 17407), (735, 17521), (740, 17533), (745, 17542), (747, 17551), (779, 17659), (805, 17743), (853, 17842), (890, 17950), (907, 17998),

Gene: Killigrew\_25 Start: 20612, Stop: 22414, Start Num: 146

Candidate Starts for Killigrew\_25:

(Start: 146 @20612 has 223 MA's), (Start: 161 @20633 has 4 MA's), (Start: 190 @20675 has 1 MA's), (216, 20720), (306, 20936), (332, 20981), (338, 20990), (368, 21080), (369, 21083), (467, 21278), (500, 21347), (583, 21548), (584, 21551), (591, 21572), (635, 21668), (636, 21671), (638, 21677), (665, 21746), (668, 21764), (670, 21773), (677, 21803), (731, 21899), (746, 21932), (750, 21947), (793, 22088), (813, 22145), (862, 22256), (909, 22409),

Gene: Kimberlium\_18 Start: 15928, Stop: 17637, Start Num: 123

Candidate Starts for Kimberlium\_18:

(Start: 123 @15928 has 215 MA's), (Start: 227 @16060 has 2 MA's), (233, 16084), (271, 16189), (274, 16195), (281, 16213), (300, 16243), (348, 16348), (350, 16354), (370, 16408), (373, 16417), (378, 16429), (381, 16438), (388, 16462), (424, 16549), (443, 16564), (459, 16588), (465, 16603), (468, 16609), (484, 16645), (486, 16648), (492, 16660), (494, 16666), (511, 16714), (515, 16726), (521, 16732), (564, 16792), (568, 16804), (583, 16840), (587, 16852), (594, 16873), (614, 16927), (618, 16936), (625, 16954), (627, 16960), (638, 16990), (710, 17095), (717, 17104), (720, 17107), (737, 17143), (758, 17209), (761, 17221), (791, 17320), (799, 17341), (810, 17374), (826, 17404), (836, 17434), (841, 17443), (844, 17449), (860, 17464), (861, 17467), (866, 17491), (877, 17521), (882, 17533), (887, 17563), (900, 17605),

Gene: Kimchi\_26 Start: 19739, Stop: 21418, Start Num: 129

Candidate Starts for Kimchi\_26:

(Start: 129 @19739 has 79 MA's), (Start: 191 @19823 has 45 MA's), (Start: 235 @19901 has 1 MA's), (268, 19988), (274, 20003), (300, 20051), (324, 20090), (356, 20177), (368, 20210), (381, 20246), (390, 20276), (392, 20282), (422, 20351), (461, 20381), (466, 20393), (468, 20396), (494, 20453), (565, 20585), (567, 20591), (592, 20657), (594, 20663), (601, 20687), (618, 20735), (627, 20759), (631, 20768), (658, 20843), (717, 20894), (725, 20909), (782, 21071), (788, 21098), (799, 21128), (843, 21233), (880, 21311), (887, 21347), (890, 21356), (900, 21389), (907, 21404),

Gene: Kimchi1738\_31 Start: 27570, Stop: 29168, Start Num: 171

Candidate Starts for Kimchi1738\_31:

(Start: 171 @27570 has 40 MA's), (239, 27669), (263, 27738), (278, 27777), (338, 27912), (358, 27972), (436, 28125), (442, 28137), (448, 28146), (449, 28149), (486, 28194), (493, 28209), (498, 28218), (501, 28227), (518, 28281), (528, 28299), (557, 28353), (653, 28569), (678, 28662), (762, 28770), (784, 28824), (808, 28899), (867, 29028), (905, 29154),

Gene: KimmyK\_33 Start: 26575, Stop: 28341, Start Num: 97

Candidate Starts for KimmyK\_33:

(80, 26533), (Start: 97 @26575 has 73 MA's), (Start: 121 @26611 has 1 MA's), (Start: 148 @26644 has 14 MA's), (264, 26854), (265, 26857), (277, 26887), (298, 26953), (306, 26977), (311, 26986), (331, 27019), (386, 27172), (406, 27211), (445, 27262), (451, 27274), (458, 27292), (460, 27304), (465, 27316), (472, 27331), (487, 27361), (489, 27364), (499, 27385), (547, 27457), (568, 27505), (613, 27616), (632, 27649), (647, 27688), (649, 27691), (670, 27763), (707, 27829), (715, 27841), (793, 28012), (794, 28015), (810, 28063), (824, 28090), (832, 28117), (860, 28171), (891, 28288), (897, 28309), (909, 28336),

Gene: Kimona\_24 Start: 17863, Stop: 19656, Start Num: 144

Candidate Starts for Kimona\_24:

(Start: 144 @17863 has 603 MA's), (Start: 167 @17884 has 1 MA's), (230, 17986), (231, 17989), (236, 18004), (277, 18100), (278, 18103), (306, 18178), (315, 18193), (338, 18232), (368, 18322), (384, 18367), (417, 18436), (467, 18520), (481, 18550), (495, 18580), (499, 18586), (505, 18604), (532, 18676), (553, 18721), (583, 18790), (591, 18814), (595, 18826), (597, 18832), (636, 18913), (668, 19006), (670, 19015), (677, 19045), (682, 19060), (729, 19138), (731, 19141), (742, 19162), (790, 19324), (813, 19387), (859, 19489), (862, 19498), (887, 19591), (892, 19609), (909, 19651),

Gene: Kinbote\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Kinbote\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: KingCyrus\_30 Start: 20600, Stop: 22372, Start Num: 144

Candidate Starts for KingCyrus\_30:

(Start: 123 @20576 has 215 MA's), (Start: 144 @20600 has 603 MA's), (219, 20699), (251, 20783), (277, 20834), (278, 20837), (305, 20909), (306, 20912), (338, 20966), (349, 21005), (365, 21050), (378, 21083), (417, 21170), (463, 21251), (467, 21254), (584, 21527), (631, 21632), (636, 21647), (675, 21773), (677, 21779), (713, 21827), (721, 21836), (731, 21857), (746, 21890), (750, 21905), (752, 21911), (770, 21965), (781, 22004), (784, 22019), (813, 22103), (862, 22214),

Gene: KingMidas\_17 Start: 16108, Stop: 17817, Start Num: 123

Candidate Starts for KingMidas\_17:

(Start: 123 @16108 has 215 MA's), (193, 16195), (Start: 227 @16240 has 2 MA's), (233, 16264), (271, 16369), (274, 16375), (281, 16393), (300, 16423), (348, 16528), (370, 16588), (373, 16597), (381, 16618), (388, 16642), (402, 16678), (403, 16684), (418, 16717), (420, 16720), (424, 16729), (443, 16744), (448, 16750), (459, 16768), (465, 16783), (468, 16789), (475, 16807), (477, 16810), (484, 16825), (486, 16828), (492, 16840), (494, 16846), (511, 16894), (515, 16906), (521, 16912), (564, 16972), (568, 16984), (583, 17020), (587, 17032), (614, 17107), (618, 17116), (625, 17134), (627, 17140), (638, 17170), (710, 17275), (717, 17284), (720, 17287), (737, 17323), (761, 17401), (791, 17500), (799, 17521), (810, 17554), (826, 17584), (829, 17596), (836, 17614), (839, 17620), (841, 17623), (844, 17629), (860, 17644), (861, 17647), (865, 17668), (866, 17671), (882, 17713), (900, 17785), (901, 17791),

Gene: Kingmustik0402\_27 Start: 19819, Stop: 21597, Start Num: 144

Candidate Starts for Kingmustik0402\_27:

(Start: 123 @19795 has 215 MA's), (Start: 144 @19819 has 603 MA's), (Start: 190 @19876 has 1 MA's), (222, 19930), (230, 19945), (236, 19963), (272, 20047), (277, 20059), (278, 20062), (306, 20137), (315, 20152), (338, 20191), (378, 20308), (417, 20395), (463, 20476), (489, 20524), (500, 20548), (532, 20635), (553, 20680), (584, 20752), (591, 20773), (597, 20791), (636, 20872), (668, 20965), (670, 20974), (675, 20998), (677, 21004), (687, 21028), (731, 21082), (742, 21103), (756, 21154), (763, 21178), (782, 21232), (813, 21328), (860, 21433), (863, 21448), (894, 21556), (900, 21574),

Gene: Kingsley\_17 Start: 14662, Stop: 16371, Start Num: 123

Candidate Starts for Kingsley\_17:

(Start: 123 @14662 has 215 MA's), (193, 14749), (Start: 227 @14794 has 2 MA's), (233, 14818), (271, 14923), (274, 14929), (281, 14947), (300, 14977), (348, 15082), (370, 15142), (378, 15163), (381, 15172), (388, 15196), (459, 15322), (465, 15337), (468, 15343), (484, 15379), (486, 15382), (492, 15394), (494, 15400), (511, 15448), (515, 15460), (521, 15466), (564, 15526), (568, 15538), (583, 15574), (587, 15586), (614, 15661), (618, 15670), (625, 15688), (627, 15694), (638, 15724), (710, 15829), (717, 15838), (720, 15841), (737, 15877), (761, 15955), (791, 16054), (799, 16075), (810, 16108), (826, 16138), (836, 16168), (841, 16177), (844, 16183), (860, 16198), (861, 16201), (866, 16225), (877, 16255), (882, 16267), (887, 16297), (900, 16339),

Gene: Kinmap\_29 Start: 19779, Stop: 21569, Start Num: 144

Candidate Starts for Kinmap\_29:

(Start: 144 @19779 has 603 MA's), (277, 20013), (278, 20016), (305, 20088), (306, 20091), (338, 20145), (417, 20349), (463, 20430), (500, 20502), (532, 20589), (584, 20706), (595, 20739), (636, 20826), (726, 21042), (731, 21054), (750, 21102), (781, 21201), (813, 21300), (849, 21378), (862, 21411), (865, 21429), (877, 21465), (900, 21546),

Gene: Kipper29\_31 Start: 19976, Stop: 21748, Start Num: 144

Candidate Starts for Kipper29\_31:

(94, 19910), (Start: 123 @19952 has 215 MA's), (Start: 144 @19976 has 603 MA's), (263, 20174), (278, 20213), (305, 20285), (306, 20288), (318, 20306), (338, 20342), (341, 20348), (378, 20459), (380, 20465), (392, 20504), (417, 20546), (448, 20585), (463, 20627), (467, 20630), (495, 20690), (592, 20927), (597, 20942), (636, 21023), (677, 21155), (750, 21281), (765, 21332), (770, 21341), (781, 21380), (782, 21383), (784, 21395), (813, 21479), (860, 21584), (862, 21590), (900, 21725),

Gene: Kita\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Kita\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: KittenMittens\_26 Start: 17889, Stop: 19667, Start Num: 144

Candidate Starts for KittenMittens\_26:

(Start: 123 @17865 has 215 MA's), (Start: 144 @17889 has 603 MA's), (Start: 190 @17946 has 1 MA's), (197, 17961), (230, 18015), (277, 18129), (278, 18132), (306, 18207), (330, 18246), (378, 18378), (417, 18465), (460, 18540), (481, 18579), (500, 18618), (532, 18705), (553, 18750), (583, 18819), (591, 18843), (595, 18855), (597, 18861), (668, 19035), (670, 19044), (675, 19068), (677, 19074), (682, 19089), (713, 19122), (742, 19173), (758, 19230), (759, 19236), (813, 19398), (860, 19503), (862, 19509), (863, 19518), (900, 19644),

Gene: Klein\_37 Start: 26895, Stop: 28893, Start Num: 124

Candidate Starts for Klein\_37:



(Start: 124 @26895 has 30 MA's), (Start: 191 @26985 has 45 MA's), (222, 27033), (233, 27063), (243, 27090), (282, 27192), (301, 27222), (346, 27321), (358, 27357), (360, 27363), (368, 27384), (392, 27456), (395, 27465), (403, 27486), (468, 27594), (470, 27597), (475, 27612), (494, 27651), (511, 27699), (515, 27711), (521, 27717), (552, 27765), (558, 27774), (565, 27795), (573, 27813), (590, 27861), (625, 27963), (653, 28035), (667, 28080), (669, 28092), (684, 28227), (685, 28233), (686, 28257), (696, 28329), (708, 28356), (800, 28605),

Gene: Koduck\_28 Start: 19329, Stop: 21119, Start Num: 144

Candidate Starts for Koduck\_28:

(94, 19263), (Start: 123 @19305 has 215 MA's), (Start: 144 @19329 has 603 MA's), (192, 19383), (242, 19482), (263, 19527), (277, 19563), (278, 19566), (305, 19638), (306, 19641), (338, 19695), (341, 19701), (365, 19779), (378, 19812), (380, 19818), (392, 19857), (417, 19899), (463, 19980), (467, 19983), (546, 20169), (583, 20253), (597, 20295), (619, 20346), (636, 20376), (675, 20502), (736, 20613), (737, 20616), (746, 20637), (750, 20652), (756, 20676), (781, 20751), (784, 20766), (813, 20850), (860, 20955), (862, 20961), (865, 20979), (873, 21006), (877, 21015),

Gene: Koella\_16 Start: 14774, Stop: 16483, Start Num: 123

Candidate Starts for Koella\_16:

(Start: 123 @14774 has 215 MA's), (193, 14861), (Start: 227 @14906 has 2 MA's), (233, 14930), (271, 15035), (274, 15041), (281, 15059), (300, 15089), (348, 15194), (370, 15254), (378, 15275), (381, 15284), (388, 15308), (459, 15434), (465, 15449), (468, 15455), (484, 15491), (486, 15494), (492, 15506), (494, 15512), (511, 15560), (515, 15572), (521, 15578), (564, 15638), (568, 15650), (583, 15686), (587, 15698), (614, 15773), (618, 15782), (625, 15800), (627, 15806), (638, 15836), (710, 15941), (717, 15950), (720, 15953), (737, 15989), (761, 16067), (791, 16166), (799, 16187), (810, 16220), (826, 16250), (836, 16280), (841, 16289), (844, 16295), (860, 16310), (861, 16313), (866, 16337), (877, 16367), (882, 16379), (887, 16409), (900, 16451),

Gene: Koko\_31 Start: 20314, Stop: 22086, Start Num: 144

Candidate Starts for Koko\_31:

(94, 20248), (Start: 123 @20290 has 215 MA's), (Start: 144 @20314 has 603 MA's), (278, 20551), (305, 20623), (306, 20626), (315, 20641), (338, 20680), (341, 20686), (378, 20797), (380, 20803), (392, 20842), (417, 20884), (448, 20923), (463, 20965), (467, 20968), (532, 21124), (592, 21265), (597, 21280), (677, 21493), (742, 21592), (750, 21619), (765, 21670), (770, 21679), (781, 21718), (784, 21733), (813, 21817), (860, 21922), (862, 21928), (900, 22063),

Gene: Koreni\_26 Start: 19473, Stop: 21251, Start Num: 144

Candidate Starts for Koreni\_26:

(Start: 123 @19449 has 215 MA's), (Start: 144 @19473 has 603 MA's), (Start: 190 @19530 has 1 MA's), (222, 19584), (230, 19599), (236, 19617), (272, 19701), (277, 19713), (278, 19716), (306, 19791), (315, 19806), (338, 19845), (378, 19962), (417, 20049), (463, 20130), (489, 20178), (500, 20202), (532, 20289), (553, 20334), (584, 20406), (591, 20427), (597, 20445), (636, 20526), (668, 20619), (670, 20628), (675, 20652), (677, 20658), (687, 20682), (731, 20736), (742, 20757), (756, 20808), (763, 20832), (782, 20886), (813, 20982), (860, 21087), (863, 21102), (894, 21210), (900, 21228),

Gene: Kostya\_24 Start: 19745, Stop: 21424, Start Num: 129

Candidate Starts for Kostya\_24:

(Start: 129 @19745 has 79 MA's), (Start: 191 @19829 has 45 MA's), (Start: 235 @19907 has 1 MA's), (268, 19994), (274, 20009), (300, 20057), (324, 20096), (356, 20183), (368, 20216), (381, 20252), (390, 20282), (392, 20288), (422, 20357), (461, 20387), (466, 20399), (468, 20402), (494, 20459), (565, 20591), (567, 20597), (592, 20663), (594, 20669), (601, 20693), (618, 20741), (627, 20765), (631, 20774), (658, 20849), (717, 20900), (725, 20915), (782, 21077), (788, 21104), (799, 21134), (843, 21239), (880, 21317), (887, 21353), (890, 21362), (900, 21395), (907, 21410),

Gene: Krakatau\_17 Start: 15504, Stop: 17213, Start Num: 123

Candidate Starts for Krakatau\_17:

(Start: 123 @15504 has 215 MA's), (193, 15591), (Start: 227 @15636 has 2 MA's), (233, 15660), (271, 15765), (274, 15771), (281, 15789), (300, 15819), (348, 15924), (370, 15984), (378, 16005), (381, 16014), (388, 16038), (459, 16164), (465, 16179), (468, 16185), (484, 16221), (486, 16224), (492, 16236), (494, 16242), (511, 16290), (515, 16302), (521, 16308), (564, 16368), (568, 16380), (583, 16416), (587, 16428), (614, 16503), (618, 16512), (625, 16530), (627, 16536), (638, 16566), (710, 16671), (717, 16680), (720, 16683), (737, 16719), (761, 16797), (791, 16896), (799, 16917), (810, 16950), (826, 16980), (836, 17010), (841, 17019), (844, 17025), (860, 17040), (861, 17043), (866, 17067), (877, 17097), (882, 17109), (887, 17139), (900, 17181),

Gene: Kratak\_27 Start: 19822, Stop: 21600, Start Num: 144

Candidate Starts for Kratak\_27:

(Start: 123 @19798 has 215 MA's), (Start: 144 @19822 has 603 MA's), (Start: 190 @19879 has 1 MA's), (222, 19933), (230, 19948), (236, 19966), (272, 20050), (277, 20062), (278, 20065), (306, 20140), (315, 20155), (338, 20194), (378, 20311), (417, 20398), (463, 20479), (489, 20527), (500, 20551), (532, 20638), (553, 20683), (584, 20755), (591, 20776), (597, 20794), (636, 20875), (668, 20968), (670, 20977), (675, 21001), (677, 21007), (687, 21031), (731, 21085), (742, 21106), (756, 21157), (763, 21181), (813, 21331), (860, 21436), (863, 21451), (894, 21559), (900, 21577),

Gene: Kratio\_20 Start: 17226, Stop: 18998, Start Num: 117

Candidate Starts for Kratio\_20:

(Start: 117 @17226 has 59 MA's), (Start: 123 @17232 has 215 MA's), (143, 17256), (Start: 168 @17289 has 32 MA's), (197, 17337), (230, 17391), (248, 17442), (272, 17505), (321, 17613), (360, 17721), (400, 17835), (403, 17838), (424, 17877), (438, 17892), (444, 17904), (448, 17910), (463, 17946), (465, 17952), (468, 17958), (487, 17997), (499, 18021), (564, 18123), (588, 18186), (655, 18366), (708, 18465), (750, 18543), (756, 18567), (758, 18573), (771, 18606), (793, 18684), (795, 18690), (865, 18843), (895, 18948), (896, 18951), (901, 18969),

Gene: Kraw\_25 Start: 18546, Stop: 20333, Start Num: 114

Candidate Starts for Kraw\_25:

(Start: 93 @18507 has 1 MA's), (Start: 109 @18537 has 26 MA's), (Start: 112 @18543 has 41 MA's), (Start: 114 @18546 has 139 MA's), (Start: 137 @18561 has 2 MA's), (Start: 168 @18603 has 32 MA's), (197, 18651), (Start: 227 @18690 has 2 MA's), (230, 18705), (236, 18723), (248, 18756), (258, 18786), (278, 18831), (282, 18849), (316, 18921), (321, 18927), (334, 18957), (336, 18960), (356, 19023), (360, 19035), (412, 19170), (423, 19188), (444, 19218), (448, 19224), (454, 19242), (468, 19272), (487, 19311), (564, 19437), (588, 19500), (655, 19701), (670, 19755), (708, 19800), (734, 19845), (748, 19869), (756, 19902), (768, 19935), (788, 20007), (793, 20019), (810, 20070), (813, 20076), (865, 20178), (901, 20304), (913, 20325),

Gene: Kremtemulon\_27 Start: 19875, Stop: 21653, Start Num: 144

Candidate Starts for Kremtemulon\_27:

(Start: 123 @19851 has 215 MA's), (Start: 144 @19875 has 603 MA's), (Start: 190 @19932 has 1 MA's), (222, 19986), (230, 20001), (236, 20019), (272, 20103), (277, 20115), (278, 20118), (306, 20193), (315, 20208), (338, 20247), (378, 20364), (417, 20451), (463, 20532), (489, 20580), (500, 20604), (532, 20691), (553, 20736), (584, 20808), (591, 20829), (597, 20847), (636, 20928), (668, 21021), (670, 21030), (675, 21054), (677, 21060), (687, 21084), (731, 21138), (742, 21159), (756, 21210), (763, 21234), (782, 21288), (813, 21384), (860, 21489), (863, 21504), (894, 21612), (900, 21630),

Gene: Krili\_55 Start: 32985, Stop: 34721, Start Num: 107

Candidate Starts for Krili\_55:

(Start: 100 @32976 has 2 MA's), (Start: 107 @32985 has 25 MA's), (174, 33075), (240, 33192), (251, 33228), (259, 33249), (271, 33276), (274, 33282), (286, 33312), (302, 33336), (332, 33387), (381, 33525), (383, 33531), (400, 33582), (402, 33585), (407, 33603), (459, 33654), (468, 33675), (470, 33678), (492, 33726), (494, 33732), (511, 33780), (513, 33786), (515, 33792), (555, 33852), (564, 33876), (565, 33879), (583, 33924), (588, 33939), (591, 33948), (594, 33957), (608, 34002), (618, 34020), (631, 34053), (720, 34191), (729, 34212), (754, 34278), (762, 34308), (779, 34362), (791, 34404), (799, 34425), (805, 34446), (810, 34458), (821, 34479), (844, 34533), (880, 34611), (887, 34647), (893, 34668), (901, 34695),

Gene: Krishelle\_23 Start: 16620, Stop: 18245, Start Num: 168

Candidate Starts for Krishelle\_23:

(Start: 155 @16605 has 4 MA's), (Start: 168 @16620 has 32 MA's), (196, 16662), (211, 16689), (232, 16725), (286, 16866), (306, 16911), (361, 17040), (378, 17082), (384, 17100), (386, 17109), (394, 17133), (406, 17151), (436, 17181), (444, 17196), (445, 17199), (460, 17238), (467, 17247), (505, 17331), (546, 17385), (553, 17400), (576, 17448), (584, 17472), (635, 17586), (665, 17664), (672, 17703), (675, 17715), (678, 17724), (713, 17745), (750, 17823), (807, 17970), (854, 18069), (860, 18084), (907, 18237),

Gene: KristaRAM\_17 Start: 15479, Stop: 17188, Start Num: 123

Candidate Starts for KristaRAM\_17:

(Start: 123 @15479 has 215 MA's), (Start: 227 @15611 has 2 MA's), (233, 15635), (271, 15740), (274, 15746), (281, 15764), (300, 15794), (348, 15899), (370, 15959), (378, 15980), (381, 15989), (388, 16013), (459, 16139), (465, 16154), (468, 16160), (484, 16196), (486, 16199), (492, 16211), (494, 16217), (511, 16265), (515, 16277), (521, 16283), (564, 16343), (568, 16355), (583, 16391), (587, 16403), (614, 16478), (618, 16487), (625, 16505), (627, 16511), (638, 16541), (710, 16646), (717, 16655), (720, 16658), (737, 16694), (761, 16772), (791, 16871), (799, 16892), (810, 16925), (826, 16955), (836, 16985), (841, 16994), (844, 17000), (860, 17015), (861, 17018), (866, 17042), (877, 17072), (882, 17084), (887, 17114), (900, 17156),

Gene: Kristoff\_28 Start: 19986, Stop: 21764, Start Num: 144

Candidate Starts for Kristoff\_28:

(Start: 144 @19986 has 603 MA's), (Start: 190 @20043 has 1 MA's), (197, 20058), (219, 20091), (230, 20112), (272, 20214), (277, 20226), (278, 20229), (306, 20304), (315, 20319), (338, 20358), (378, 20475), (384, 20493), (417, 20562), (460, 20637), (481, 20676), (500, 20715), (532, 20802), (553, 20847), (576, 20895), (583, 20916), (591, 20940), (595, 20952), (597, 20958), (636, 21039), (668, 21132), (670, 21141), (675, 21165), (677, 21171), (682, 21186), (713, 21219), (742, 21270), (749, 21288), (793, 21438), (813, 21495), (825, 21519), (827, 21525), (860, 21600), (862, 21606), (863, 21615), (880, 21666), (900, 21741),

Gene: Kroos\_35 Start: 30392, Stop: 32155, Start Num: 97

Candidate Starts for Kroos\_35:

(Start: 97 @30392 has 73 MA's), (Start: 121 @30428 has 1 MA's), (211, 30557), (219, 30566), (231, 30590), (262, 30662), (265, 30671), (288, 30740), (306, 30791), (332, 30836), (341, 30851), (345, 30869), (368, 30932), (384, 30977), (386, 30986), (458, 31106), (461, 31121), (465, 31130), (472, 31145), (487, 31175), (597, 31397), (607, 31415), (613, 31430), (635, 31472), (636, 31475), (647, 31502), (688, 31622), (749, 31715), (793, 31826), (794, 31829), (810, 31877), (824, 31904), (832, 31931), (860, 31985),

Gene: Krueger\_22 Start: 16300, Stop: 18075, Start Num: 109

Candidate Starts for Krueger\_22:

(Start: 109 @16300 has 26 MA's), (Start: 114 @16309 has 139 MA's), (140, 16339), (Start: 227 @16465 has 2 MA's), (230, 16480), (248, 16531), (258, 16561), (278, 16606), (316, 16696), (334, 16732), (362, 16819), (395, 16912), (400, 16924), (403, 16927), (444, 16993), (448, 16999), (465,

17041), (468, 17047), (526, 17173), (572, 17230), (618, 17347), (636, 17392), (641, 17404), (655, 17452), (698, 17527), (708, 17551), (757, 17647), (793, 17761), (810, 17812), (813, 17818), (863, 17911), (901, 18046), (902, 18049), (913, 18067),

Gene: Ksquared\_19 Start: 16407, Stop: 18143, Start Num: 117

Candidate Starts for Ksquared\_19:

(Start: 101 @16383 has 2 MA's), (Start: 117 @16407 has 59 MA's), (Start: 166 @16467 has 1 MA's), (178, 16488), (180, 16491), (246, 16611), (258, 16650), (272, 16683), (282, 16707), (344, 16827), (356, 16866), (358, 16872), (386, 16956), (388, 16962), (392, 16974), (402, 16998), (410, 17025), (422, 17043), (452, 17082), (459, 17088), (470, 17112), (494, 17166), (500, 17178), (503, 17187), (529, 17247), (573, 17325), (587, 17364), (598, 17397), (618, 17463), (624, 17478), (627, 17487), (636, 17511), (647, 17541), (653, 17553), (735, 17655), (740, 17667), (742, 17670), (745, 17676), (747, 17685), (779, 17793), (805, 17877), (853, 17976), (890, 18084), (907, 18132),

Gene: Kugel\_28 Start: 21273, Stop: 23075, Start Num: 146

Candidate Starts for Kugel\_28:

(Start: 146 @21273 has 223 MA's), (Start: 161 @21294 has 4 MA's), (Start: 190 @21336 has 1 MA's), (216, 21381), (306, 21597), (332, 21642), (338, 21651), (349, 21690), (368, 21741), (369, 21744), (467, 21939), (500, 22008), (583, 22209), (584, 22212), (591, 22233), (635, 22329), (636, 22332), (638, 22338), (665, 22407), (668, 22425), (670, 22434), (677, 22464), (731, 22560), (746, 22593), (750, 22608), (793, 22749), (813, 22806), (862, 22917),

Gene: Kurt\_41 Start: 30840, Stop: 32453, Start Num: 170

Candidate Starts for Kurt\_41:

(Start: 170 @30840 has 87 MA's), (Start: 194 @30876 has 1 MA's), (202, 30894), (236, 30954), (340, 31194), (343, 31206), (347, 31221), (372, 31287), (377, 31302), (386, 31326), (387, 31329), (432, 31413), (449, 31443), (450, 31446), (493, 31503), (510, 31551), (511, 31554), (518, 31575), (571, 31680), (592, 31725), (607, 31767), (673, 31941), (683, 31971), (688, 31977), (775, 32085), (776, 32088), (799, 32163), (887, 32382), (906, 32439),

Gene: Kuwabara\_19 Start: 15987, Stop: 17696, Start Num: 111

Candidate Starts for Kuwabara\_19:

(Start: 111 @15987 has 24 MA's), (Start: 118 @15999 has 8 MA's), (Start: 121 @16002 has 1 MA's), (290, 16299), (311, 16350), (319, 16359), (332, 16377), (347, 16419), (349, 16425), (359, 16455), (365, 16473), (384, 16524), (385, 16530), (395, 16560), (433, 16602), (445, 16623), (449, 16629), (458, 16653), (481, 16704), (482, 16707), (497, 16737), (579, 16887), (591, 16923), (647, 17049), (668, 17115), (739, 17238), (747, 17259), (750, 17271), (752, 17277), (754, 17286), (755, 17289), (783, 17343), (793, 17373), (818, 17442), (860, 17529), (862, 17535), (876, 17586), (887, 17631), (900, 17673), (909, 17691),

Gene: Kwekel\_32 Start: 27487, Stop: 29106, Start Num: 163

Candidate Starts for Kwekel\_32:

(Start: 163 @27487 has 10 MA's), (Start: 167 @27493 has 1 MA's), (178, 27508), (219, 27571), (272, 27694), (277, 27706), (298, 27763), (341, 27841), (382, 27964), (449, 28078), (460, 28108), (481, 28150), (508, 28213), (547, 28261), (551, 28270), (583, 28333), (596, 28369), (664, 28534), (665, 28537), (670, 28564), (711, 28615), (746, 28672), (747, 28675), (764, 28711), (769, 28720), (786, 28777), (788, 28783), (790, 28789), (806, 28837), (810, 28846), (813, 28852), (815, 28855), (835, 28894), (842, 28906), (863, 28951), (883, 29020), (896, 29068), (900, 29080), (907, 29095),

Gene: Kwobi\_35 Start: 30378, Stop: 32141, Start Num: 97

Candidate Starts for Kwobi\_35:

(Start: 97 @30378 has 73 MA's), (Start: 121 @30414 has 1 MA's), (211, 30543), (219, 30552), (231, 30576), (262, 30648), (265, 30657), (288, 30726), (306, 30777), (332, 30822), (341, 30837), (345,

30855), (368, 30918), (384, 30963), (386, 30972), (458, 31092), (461, 31107), (465, 31116), (472, 31131), (487, 31161), (597, 31383), (607, 31401), (613, 31416), (635, 31458), (636, 31461), (647, 31488), (688, 31608), (749, 31701), (793, 31812), (794, 31815), (810, 31863), (824, 31890), (832, 31917), (860, 31971),

Gene: KyMonks1A\_29 Start: 21439, Stop: 23241, Start Num: 146

Candidate Starts for KyMonks1A\_29:

(Start: 146 @21439 has 223 MA's), (Start: 161 @21460 has 4 MA's), (Start: 190 @21502 has 1 MA's), (216, 21547), (306, 21763), (332, 21808), (338, 21817), (349, 21856), (368, 21907), (369, 21910), (467, 22105), (500, 22174), (583, 22375), (584, 22378), (591, 22399), (635, 22495), (636, 22498), (638, 22504), (665, 22573), (668, 22591), (670, 22600), (677, 22630), (731, 22726), (746, 22759), (750, 22774), (793, 22915), (813, 22972), (862, 23083),

Gene: Kyee\_27 Start: 19828, Stop: 21606, Start Num: 144

Candidate Starts for Kyee\_27:

(Start: 123 @19804 has 215 MA's), (Start: 144 @19828 has 603 MA's), (Start: 190 @19885 has 1 MA's), (222, 19939), (230, 19954), (236, 19972), (272, 20056), (277, 20068), (278, 20071), (306, 20146), (315, 20161), (338, 20200), (378, 20317), (417, 20404), (463, 20485), (489, 20533), (500, 20557), (532, 20644), (553, 20689), (584, 20761), (591, 20782), (597, 20800), (636, 20881), (668, 20974), (670, 20983), (675, 21007), (677, 21013), (687, 21037), (731, 21091), (742, 21112), (756, 21163), (763, 21187), (813, 21337), (860, 21442), (863, 21457), (894, 21565), (900, 21583),

Gene: Kykar\_25 Start: 20786, Stop: 22588, Start Num: 146

Candidate Starts for Kykar\_25:

(Start: 146 @20786 has 223 MA's), (Start: 161 @20807 has 4 MA's), (Start: 190 @20849 has 1 MA's), (216, 20894), (306, 21110), (332, 21155), (338, 21164), (349, 21203), (368, 21254), (369, 21257), (467, 21452), (500, 21521), (583, 21722), (584, 21725), (591, 21746), (635, 21842), (636, 21845), (638, 21851), (665, 21920), (668, 21938), (670, 21947), (677, 21977), (731, 22073), (746, 22106), (750, 22121), (793, 22262), (813, 22319), (862, 22430), (909, 22583),

Gene: L5\_28 Start: 19340, Stop: 21130, Start Num: 144

Candidate Starts for L5\_28:

(94, 19274), (Start: 123 @19316 has 215 MA's), (Start: 144 @19340 has 603 MA's), (192, 19394), (242, 19493), (263, 19538), (277, 19574), (278, 19577), (305, 19649), (306, 19652), (338, 19706), (341, 19712), (365, 19790), (378, 19823), (380, 19829), (392, 19868), (417, 19910), (463, 19991), (467, 19994), (546, 20180), (583, 20264), (597, 20306), (619, 20357), (636, 20387), (675, 20513), (736, 20624), (737, 20627), (746, 20648), (750, 20663), (756, 20687), (781, 20762), (784, 20777), (813, 20861), (860, 20966), (862, 20972), (865, 20990), (873, 21017), (877, 21026),

Gene: LBerry\_29 Start: 20379, Stop: 22175, Start Num: 144

Candidate Starts for LBerry\_29:

(Start: 144 @20379 has 603 MA's), (Start: 190 @20436 has 1 MA's), (197, 20451), (219, 20484), (230, 20505), (Start: 235 @20520 has 1 MA's), (272, 20607), (277, 20619), (278, 20622), (306, 20697), (315, 20712), (336, 20748), (417, 20955), (481, 21069), (500, 21108), (532, 21195), (583, 21309), (591, 21333), (597, 21351), (636, 21432), (665, 21507), (668, 21525), (675, 21558), (677, 21564), (695, 21603), (729, 21657), (731, 21660), (742, 21681), (758, 21738), (813, 21906), (860, 22011), (862, 22017), (900, 22152),

Gene: LHTSCC\_28 Start: 20138, Stop: 21919, Start Num: 144

Candidate Starts for LHTSCC\_28:

(Start: 123 @20114 has 215 MA's), (Start: 144 @20138 has 603 MA's), (Start: 148 @20144 has 14 MA's), (Start: 190 @20198 has 1 MA's), (197, 20213), (230, 20267), (236, 20285), (272, 20369), (277, 20381), (278, 20384), (306, 20459), (315, 20474), (338, 20513), (378, 20630), (417, 20717), (463,

20798), (489, 20846), (500, 20870), (532, 20957), (553, 21002), (584, 21074), (591, 21095), (597, 21113), (636, 21194), (665, 21269), (668, 21287), (670, 21296), (675, 21320), (677, 21326), (687, 21350), (726, 21392), (731, 21404), (742, 21425), (756, 21476), (763, 21500), (782, 21554), (813, 21650), (860, 21755), (863, 21770), (894, 21878), (900, 21896),

Gene: LadyBird\_28 Start: 20171, Stop: 21943, Start Num: 144

Candidate Starts for LadyBird\_28:

(Start: 123 @20147 has 215 MA's), (Start: 144 @20171 has 603 MA's), (219, 20270), (277, 20405), (278, 20408), (305, 20480), (306, 20483), (338, 20537), (341, 20543), (349, 20576), (378, 20654), (417, 20741), (463, 20822), (467, 20825), (584, 21098), (631, 21203), (636, 21218), (675, 21344), (677, 21350), (713, 21398), (746, 21461), (750, 21476), (752, 21482), (759, 21512), (770, 21536), (781, 21575), (784, 21590), (813, 21674),

Gene: Lamberg\_17 Start: 14694, Stop: 16403, Start Num: 171

Candidate Starts for Lamberg\_17:

(Start: 171 @14694 has 40 MA's), (237, 14811), (259, 14883), (287, 14961), (347, 15084), (355, 15105), (377, 15174), (378, 15177), (397, 15234), (440, 15309), (462, 15363), (500, 15444), (519, 15504), (607, 15669), (618, 15687), (624, 15702), (637, 15726), (665, 15798), (666, 15801), (669, 15822), (788, 16056), (794, 16071), (807, 16113), (847, 16206), (849, 16209), (865, 16257), (874, 16287), (890, 16344),

Gene: Lambert1\_28 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for Lambert1\_28:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481, 21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729, 21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Lamina13\_27 Start: 20710, Stop: 22512, Start Num: 146

Candidate Starts for Lamina13\_27:

(Start: 146 @20710 has 223 MA's), (Start: 161 @20731 has 4 MA's), (Start: 190 @20773 has 1 MA's), (216, 20818), (306, 21034), (332, 21079), (338, 21088), (349, 21127), (368, 21178), (369, 21181), (406, 21274), (467, 21376), (500, 21445), (579, 21634), (583, 21646), (584, 21649), (591, 21670), (635, 21766), (636, 21769), (638, 21775), (665, 21844), (668, 21862), (670, 21871), (677, 21901), (731, 21997), (746, 22030), (750, 22045), (793, 22186), (813, 22243), (862, 22354),

Gene: Landor\_29 Start: 21788, Stop: 23560, Start Num: 144

Candidate Starts for Landor\_29:

(Start: 123 @21764 has 215 MA's), (Start: 144 @21788 has 603 MA's), (Start: 235 @21923 has 1 MA's), (242, 21941), (277, 22022), (278, 22025), (305, 22097), (306, 22100), (356, 22211), (365, 22238), (378, 22271), (392, 22316), (417, 22358), (467, 22442), (532, 22598), (547, 22631), (631, 22820), (636, 22835), (675, 22961), (677, 22967), (746, 23078), (750, 23093), (752, 23099), (770, 23153), (781, 23192), (784, 23207), (813, 23291), (860, 23396), (862, 23402), (865, 23420), (873, 23447),

Gene: Langerak\_19 Start: 16369, Stop: 18105, Start Num: 117

Candidate Starts for Langerak\_19:

(Start: 101 @16345 has 2 MA's), (Start: 117 @16369 has 59 MA's), (Start: 166 @16429 has 1 MA's), (178, 16450), (180, 16453), (246, 16573), (258, 16612), (272, 16645), (282, 16669), (344, 16789), (356, 16828), (358, 16834), (386, 16918), (388, 16924), (392, 16936), (402, 16960), (410, 16987), (422, 17005), (452, 17044), (459, 17050), (470, 17074), (494, 17128), (500, 17140), (503, 17149),

(529, 17209), (573, 17287), (587, 17326), (598, 17359), (618, 17425), (624, 17440), (627, 17449), (636, 17473), (647, 17503), (653, 17515), (735, 17617), (740, 17629), (742, 17632), (745, 17638), (747, 17647), (779, 17755), (805, 17839), (853, 17938), (890, 18046), (907, 18094),

Gene: LappelDuVide\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for LappelDuVide\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Larenn\_29 Start: 20468, Stop: 22240, Start Num: 144

Candidate Starts for Larenn\_29:

(Start: 123 @20444 has 215 MA's), (Start: 144 @20468 has 603 MA's), (Start: 235 @20603 has 1 MA's), (242, 20621), (277, 20702), (278, 20705), (286, 20735), (305, 20777), (306, 20780), (338, 20834), (341, 20840), (360, 20903), (365, 20918), (378, 20951), (388, 20984), (417, 21038), (463, 21119), (467, 21122), (481, 21152), (584, 21395), (631, 21500), (636, 21515), (677, 21647), (746, 21758), (750, 21773), (752, 21779), (770, 21833), (781, 21872), (784, 21887), (795, 21920), (862, 22082), (877, 22136),

Gene: LarryKay\_29 Start: 20465, Stop: 22261, Start Num: 144

Candidate Starts for LarryKay\_29:

(Start: 144 @20465 has 603 MA's), (Start: 190 @20522 has 1 MA's), (197, 20537), (219, 20570), (230, 20591), (Start: 235 @20606 has 1 MA's), (272, 20693), (277, 20705), (278, 20708), (306, 20783), (315, 20798), (336, 20834), (417, 21041), (481, 21155), (500, 21194), (532, 21281), (583, 21395), (591, 21419), (597, 21437), (636, 21518), (665, 21593), (668, 21611), (675, 21644), (677, 21650), (695, 21689), (729, 21743), (731, 21746), (742, 21767), (758, 21824), (813, 21992), (860, 22097), (862, 22103), (900, 22238),

Gene: LastHope\_23 Start: 16451, Stop: 18217, Start Num: 114

Candidate Starts for LastHope\_23:

(Start: 114 @16451 has 139 MA's), (140, 16481), (236, 16640), (248, 16673), (258, 16703), (278, 16748), (282, 16766), (316, 16838), (360, 16952), (362, 16961), (378, 17000), (393, 17048), (400, 17066), (403, 17069), (438, 17123), (448, 17141), (465, 17183), (468, 17189), (481, 17216), (499, 17252), (564, 17354), (572, 17372), (593, 17432), (603, 17462), (618, 17489), (655, 17594), (748, 17753), (757, 17789), (768, 17819), (793, 17903), (810, 17954), (863, 18053), (865, 18062), (880, 18104), (901, 18188), (902, 18191), (913, 18209),

Gene: LastJedi\_16 Start: 14805, Stop: 16514, Start Num: 123

Candidate Starts for LastJedi\_16:

(Start: 123 @14805 has 215 MA's), (193, 14892), (Start: 227 @14937 has 2 MA's), (233, 14961), (271, 15066), (274, 15072), (281, 15090), (300, 15120), (348, 15225), (370, 15285), (378, 15306), (381, 15315), (388, 15339), (459, 15465), (465, 15480), (468, 15486), (484, 15522), (486, 15525), (492, 15537), (494, 15543), (511, 15591), (515, 15603), (521, 15609), (564, 15669), (568, 15681), (583, 15717), (587, 15729), (614, 15804), (618, 15813), (625, 15831), (627, 15837), (638, 15867), (710, 15972), (717, 15981), (720, 15984), (737, 16020), (761, 16098), (791, 16197), (799, 16218), (810, 16251), (826, 16281), (836, 16311), (841, 16320), (844, 16326), (860, 16341), (861, 16344), (866, 16368), (877, 16398), (882, 16410), (887, 16440), (900, 16482),

Gene: LastResort\_30 Start: 19096, Stop: 20883, Start Num: 144

Candidate Starts for LastResort\_30:

(94, 19030), (Start: 123 @19072 has 215 MA's), (Start: 144 @19096 has 603 MA's), (236, 19234), (262, 19291), (278, 19333), (292, 19369), (306, 19408), (343, 19477), (349, 19501), (369, 19555), (448, 19705), (467, 19750), (481, 19780), (499, 19816), (515, 19867), (530, 19903), (553, 19951), (580, 20011), (635, 20140), (665, 20218), (750, 20419), (752, 20425), (782, 20521), (845, 20686), (880, 20785),

Gene: LaterM\_23 Start: 17116, Stop: 18882, Start Num: 114

Candidate Starts for LaterM\_23:

(Start: 114 @17116 has 139 MA's), (140, 17146), (236, 17305), (248, 17338), (258, 17368), (272, 17401), (278, 17413), (316, 17503), (334, 17539), (337, 17545), (360, 17617), (362, 17626), (378, 17665), (392, 17710), (400, 17731), (403, 17734), (448, 17806), (465, 17848), (468, 17854), (481, 17881), (499, 17917), (522, 17974), (564, 18019), (572, 18037), (593, 18097), (603, 18127), (618, 18154), (655, 18259), (704, 18349), (748, 18418), (757, 18454), (768, 18484), (772, 18493), (793, 18568), (810, 18619), (863, 18718), (880, 18769), (901, 18853), (902, 18856), (913, 18874),

Gene: Latretium\_17 Start: 15486, Stop: 17195, Start Num: 123

Candidate Starts for Latretium\_17:

(Start: 123 @15486 has 215 MA's), (193, 15573), (209, 15594), (Start: 227 @15618 has 2 MA's), (233, 15642), (240, 15663), (271, 15747), (274, 15753), (281, 15771), (300, 15801), (348, 15906), (370, 15966), (373, 15975), (378, 15987), (381, 15996), (386, 16014), (388, 16020), (403, 16062), (418, 16095), (424, 16107), (443, 16122), (448, 16128), (459, 16146), (465, 16161), (468, 16167), (477, 16188), (486, 16206), (492, 16218), (494, 16224), (511, 16272), (515, 16284), (521, 16290), (564, 16350), (568, 16362), (583, 16398), (587, 16410), (614, 16485), (618, 16494), (625, 16512), (627, 16518), (638, 16548), (710, 16653), (717, 16662), (720, 16665), (737, 16701), (761, 16779), (791, 16878), (799, 16899), (810, 16932), (826, 16962), (836, 16992), (841, 17001), (844, 17007), (860, 17022), (861, 17025), (866, 17049), (877, 17079), (882, 17091), (887, 17121), (900, 17163),

Gene: Lauer\_17 Start: 15467, Stop: 17161, Start Num: 144

Candidate Starts for Lauer\_17:

(Start: 133 @15464 has 8 MA's), (Start: 144 @15467 has 603 MA's), (214, 15566), (236, 15608), (336, 15848), (365, 15935), (374, 15956), (377, 15965), (385, 15992), (406, 16037), (436, 16070), (444, 16085), (454, 16109), (465, 16142), (481, 16175), (487, 16187), (509, 16244), (539, 16274), (546, 16292), (560, 16322), (574, 16352), (596, 16415), (617, 16466), (636, 16502), (643, 16517), (650, 16535), (668, 16592), (670, 16601), (747, 16721), (750, 16733), (777, 16781), (791, 16832), (793, 16835), (799, 16853), (829, 16931), (842, 16958), (862, 17000), (902, 17147), (907, 17153),

Gene: LeMond\_22 Start: 16387, Stop: 18156, Start Num: 109

Candidate Starts for LeMond\_22:

(Start: 93 @16357 has 1 MA's), (Start: 109 @16387 has 26 MA's), (Start: 112 @16393 has 41 MA's), (140, 16420), (159, 16447), (230, 16561), (248, 16612), (272, 16675), (316, 16777), (321, 16783), (347, 16855), (360, 16891), (362, 16900), (378, 16939), (393, 16987), (400, 17005), (423, 17044), (424, 17047), (438, 17062), (444, 17074), (448, 17080), (465, 17122), (468, 17128), (481, 17155), (564, 17293), (572, 17311), (577, 17323), (603, 17401), (636, 17473), (641, 17485), (655, 17533), (698, 17608), (748, 17692), (756, 17725), (758, 17731), (768, 17758), (793, 17842), (795, 17848), (810, 17893), (813, 17899), (863, 17992), (890, 18088), (913, 18148),

Gene: Lederberg\_17 Start: 16305, Stop: 18002, Start Num: 118

Candidate Starts for Lederberg\_17:

(Start: 118 @16305 has 8 MA's), (136, 16326), (196, 16410), (211, 16437), (216, 16443), (275, 16575), (295, 16626), (306, 16659), (310, 16668), (368, 16803), (380, 16836), (385, 16854), (411, 16908), (448, 16953), (472, 17010), (478, 17022), (497, 17061), (535, 17112), (540, 17121), (549, 17142), (579, 17208), (610, 17298), (661, 17406), (673, 17460), (675, 17466), (681, 17484), (752,



17580), (766, 17601), (784, 17646), (845, 17805), (855, 17820), (861, 17835), (863, 17847), (907, 17991),

Gene: Lemur\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Lemur\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Lemuria\_19 Start: 16718, Stop: 18526, Start Num: 86

Candidate Starts for Lemuria\_19:

(Start: 86 @16718 has 1 MA's), (197, 16865), (230, 16919), (248, 16970), (269, 17024), (300, 17102), (334, 17171), (337, 17177), (448, 17447), (451, 17456), (465, 17489), (468, 17495), (487, 17534), (501, 17564), (524, 17618), (564, 17660), (618, 17801), (655, 17906), (665, 17933), (691, 17969), (698, 17981), (756, 18098), (777, 18161), (782, 18176), (787, 18200), (810, 18266), (863, 18365), (904, 18506),

Gene: Lennon\_35 Start: 31965, Stop: 33728, Start Num: 97

Candidate Starts for Lennon\_35:

(90, 31947), (Start: 97 @31965 has 73 MA's), (Start: 121 @32001 has 1 MA's), (219, 32139), (262, 32235), (265, 32244), (288, 32313), (306, 32364), (332, 32409), (341, 32424), (368, 32505), (384, 32550), (386, 32559), (445, 32649), (458, 32679), (461, 32694), (472, 32718), (487, 32748), (551, 32853), (597, 32970), (607, 32988), (613, 33003), (631, 33033), (635, 33045), (636, 33048), (647, 33075), (793, 33399), (794, 33402), (810, 33450), (824, 33477), (832, 33504), (860, 33558), (866, 33585), (909, 33723),

Gene: LeoAvram\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for LeoAvram\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (530, 20637), (532, 20640), (553, 20685), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Leogania\_30 Start: 22330, Stop: 24102, Start Num: 144

Candidate Starts for Leogania\_30:

(Start: 123 @22306 has 215 MA's), (Start: 144 @22330 has 603 MA's), (Start: 235 @22465 has 1 MA's), (242, 22483), (277, 22564), (278, 22567), (305, 22639), (306, 22642), (338, 22696), (378, 22813), (388, 22846), (417, 22900), (455, 22960), (463, 22981), (467, 22984), (546, 23170), (584, 23257), (597, 23296), (636, 23377), (675, 23503), (677, 23509), (687, 23533), (713, 23557), (746, 23620), (750, 23635), (752, 23641), (770, 23695), (781, 23734), (784, 23749), (851, 23914), (862, 23944),

Gene: Leonard\_33 Start: 29137, Stop: 30762, Start Num: 160

Candidate Starts for Leonard\_33:

(Start: 116 @29080 has 1 MA's), (Start: 160 @29137 has 17 MA's), (169, 29149), (Start: 191 @29182 has 45 MA's), (Start: 195 @29191 has 45 MA's), (200, 29203), (222, 29233), (236, 29266), (272, 29350), (277, 29362), (307, 29437), (341, 29497), (348, 29527), (449, 29734), (460, 29764), (481,

29806), (482, 29809), (508, 29869), (547, 29917), (583, 29989), (595, 30022), (596, 30025), (609, 30064), (635, 30103), (664, 30190), (665, 30193), (711, 30271), (747, 30331), (769, 30376), (795, 30457), (815, 30511), (863, 30607), (900, 30736), (907, 30751),

Gene: Leozinho\_17 Start: 14652, Stop: 16361, Start Num: 123

Candidate Starts for Leozinho\_17:

(Start: 123 @14652 has 215 MA's), (193, 14739), (Start: 227 @14784 has 2 MA's), (233, 14808), (271, 14913), (274, 14919), (281, 14937), (300, 14967), (348, 15072), (370, 15132), (378, 15153), (381, 15162), (386, 15180), (388, 15186), (459, 15312), (465, 15327), (468, 15333), (484, 15369), (486, 15372), (492, 15384), (494, 15390), (511, 15438), (515, 15450), (521, 15456), (564, 15516), (568, 15528), (583, 15564), (587, 15576), (614, 15651), (618, 15660), (625, 15678), (627, 15684), (638, 15714), (710, 15819), (717, 15828), (720, 15831), (737, 15867), (761, 15945), (791, 16044), (799, 16065), (810, 16098), (826, 16128), (836, 16158), (841, 16167), (844, 16173), (860, 16188), (861, 16191), (866, 16215), (877, 16245), (882, 16257), (887, 16287), (900, 16329),

Gene: Leperchaun\_16 Start: 14796, Stop: 16505, Start Num: 123

Candidate Starts for Leperchaun\_16:

(Start: 123 @14796 has 215 MA's), (193, 14883), (Start: 227 @14928 has 2 MA's), (233, 14952), (271, 15057), (274, 15063), (281, 15081), (300, 15111), (348, 15216), (367, 15270), (370, 15276), (378, 15297), (381, 15306), (388, 15330), (459, 15456), (465, 15471), (468, 15477), (484, 15513), (486, 15516), (492, 15528), (494, 15534), (511, 15582), (515, 15594), (521, 15600), (564, 15660), (568, 15672), (583, 15708), (587, 15720), (614, 15795), (618, 15804), (625, 15822), (627, 15828), (638, 15858), (710, 15963), (720, 15975), (737, 16011), (761, 16089), (799, 16209), (810, 16242), (826, 16272), (829, 16284), (836, 16302), (841, 16311), (844, 16317), (860, 16332), (861, 16335), (866, 16359), (882, 16401), (887, 16431), (900, 16473),

Gene: Leroy\_20 Start: 16435, Stop: 18132, Start Num: 144

Candidate Starts for Leroy\_20:

(113, 16396), (Start: 144 @16435 has 603 MA's), (Start: 150 @16447 has 4 MA's), (Start: 153 @16450 has 11 MA's), (180, 16486), (202, 16525), (219, 16546), (239, 16588), (240, 16594), (241, 16597), (246, 16609), (263, 16645), (277, 16681), (295, 16738), (316, 16786), (331, 16813), (368, 16915), (382, 16954), (406, 17011), (414, 17029), (432, 17038), (436, 17044), (458, 17092), (469, 17122), (485, 17158), (489, 17164), (499, 17185), (500, 17188), (517, 17239), (547, 17266), (549, 17269), (561, 17296), (574, 17323), (599, 17395), (618, 17434), (649, 17488), (670, 17560), (683, 17605), (747, 17695), (752, 17713), (788, 17797), (791, 17806), (793, 17809), (795, 17815), (801, 17830), (811, 17860), (814, 17866), (824, 17887), (825, 17890), (849, 17944), (862, 17974), (863, 17983), (879, 18034), (887, 18067), (891, 18079), (896, 18097),

Gene: Lesedi\_26 Start: 20868, Stop: 22670, Start Num: 146

Candidate Starts for Lesedi\_26:

(Start: 146 @20868 has 223 MA's), (Start: 161 @20889 has 4 MA's), (Start: 190 @20931 has 1 MA's), (216, 20976), (306, 21192), (332, 21237), (338, 21246), (349, 21285), (368, 21336), (369, 21339), (467, 21534), (500, 21603), (583, 21804), (584, 21807), (591, 21828), (635, 21924), (636, 21927), (638, 21933), (665, 22002), (668, 22020), (670, 22029), (677, 22059), (731, 22155), (746, 22188), (750, 22203), (793, 22344), (813, 22401), (862, 22512),

Gene: Leston\_21 Start: 17625, Stop: 19397, Start Num: 117

Candidate Starts for Leston\_21:

(Start: 117 @17625 has 59 MA's), (Start: 123 @17631 has 215 MA's), (143, 17655), (Start: 168 @17688 has 32 MA's), (197, 17736), (230, 17790), (248, 17841), (272, 17904), (321, 18012), (360, 18120), (400, 18234), (403, 18237), (438, 18291), (444, 18303), (448, 18309), (465, 18351), (468, 18357), (487, 18396), (499, 18420), (564, 18522), (588, 18585), (602, 18630), (655, 18765), (708, 18864), (750, 18942), (756, 18966), (758, 18972), (762, 18987), (793, 19083), (795, 19089), (865,

19242), (895, 19347), (896, 19350), (901, 19368),

Gene: Lev2\_24 Start: 19477, Stop: 21276, Start Num: 144

Candidate Starts for Lev2\_24:

(Start: 144 @19477 has 603 MA's), (222, 19582), (236, 19615), (278, 19714), (306, 19789), (315, 19804), (336, 19840), (360, 19912), (365, 19927), (378, 19960), (380, 19966), (495, 20191), (499, 20197), (532, 20287), (580, 20392), (583, 20401), (597, 20443), (602, 20461), (635, 20521), (636, 20524), (665, 20599), (668, 20617), (729, 20758), (746, 20794), (813, 21007), (859, 21109), (862, 21118), (893, 21232), (900, 21253), (902, 21262),

Gene: Leviathan\_30 Start: 20689, Stop: 22461, Start Num: 144

Candidate Starts for Leviathan\_30:

(Start: 123 @20665 has 215 MA's), (Start: 144 @20689 has 603 MA's), (197, 20755), (219, 20788), (251, 20872), (277, 20923), (278, 20926), (305, 20998), (306, 21001), (338, 21055), (349, 21094), (378, 21172), (417, 21259), (463, 21340), (467, 21343), (546, 21529), (584, 21616), (631, 21721), (636, 21736), (675, 21862), (677, 21868), (713, 21916), (750, 21994), (752, 22000), (770, 22054), (781, 22093), (784, 22108), (813, 22192), (862, 22303),

Gene: Licorice\_29 Start: 22097, Stop: 23899, Start Num: 146

Candidate Starts for Licorice\_29:

(Start: 146 @22097 has 223 MA's), (Start: 161 @22118 has 4 MA's), (Start: 190 @22160 has 1 MA's), (216, 22205), (306, 22421), (332, 22466), (338, 22475), (349, 22514), (368, 22565), (369, 22568), (467, 22763), (500, 22832), (583, 23033), (584, 23036), (591, 23057), (635, 23153), (636, 23156), (638, 23162), (665, 23231), (668, 23249), (670, 23258), (677, 23288), (731, 23384), (746, 23417), (750, 23432), (793, 23573), (813, 23630), (862, 23741), (909, 23894),

Gene: Liefie\_18 Start: 16648, Stop: 18402, Start Num: 132

Candidate Starts for Liefie\_18:

(Start: 109 @16639 has 26 MA's), (Start: 132 @16648 has 45 MA's), (Start: 137 @16654 has 2 MA's), (143, 16660), (197, 16738), (230, 16792), (248, 16843), (258, 16873), (269, 16897), (309, 16999), (331, 17038), (334, 17044), (341, 17059), (353, 17104), (395, 17224), (425, 17281), (448, 17320), (468, 17368), (481, 17395), (487, 17407), (522, 17488), (564, 17533), (641, 17731), (649, 17761), (655, 17779), (665, 17806), (716, 17890), (730, 17908), (743, 17923), (756, 17971), (760, 17986), (782, 18049), (799, 18106), (813, 18145), (831, 18187), (863, 18238), (890, 18334), (913, 18394),

Gene: LilBib\_28 Start: 22310, Stop: 24112, Start Num: 146

Candidate Starts for LilBib\_28:

(Start: 146 @22310 has 223 MA's), (Start: 161 @22331 has 4 MA's), (Start: 190 @22373 has 1 MA's), (216, 22418), (306, 22634), (332, 22679), (338, 22688), (349, 22727), (368, 22778), (369, 22781), (467, 22976), (500, 23045), (583, 23246), (584, 23249), (591, 23270), (635, 23366), (636, 23369), (638, 23375), (665, 23444), (668, 23462), (670, 23471), (677, 23501), (731, 23597), (746, 23630), (750, 23645), (758, 23675), (793, 23786), (813, 23843), (862, 23954),

Gene: LilHam\_32 Start: 28981, Stop: 30744, Start Num: 97

Candidate Starts for LilHam\_32:

(Start: 97 @28981 has 73 MA's), (Start: 121 @29017 has 1 MA's), (211, 29146), (219, 29155), (262, 29251), (265, 29260), (288, 29329), (306, 29380), (311, 29389), (332, 29425), (341, 29440), (345, 29458), (368, 29521), (384, 29566), (386, 29575), (454, 29686), (458, 29695), (461, 29710), (472, 29734), (487, 29764), (597, 29986), (607, 30004), (613, 30019), (635, 30061), (647, 30091), (688, 30211), (749, 30304), (793, 30415), (794, 30418), (810, 30466), (824, 30493), (832, 30520), (860, 30574),

Gene: LilHazelnut\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for LilHazelnut\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: LilMoolah\_16 Start: 14938, Stop: 16647, Start Num: 123

Candidate Starts for LilMoolah\_16:

(Start: 123 @14938 has 215 MA's), (193, 15025), (Start: 227 @15070 has 2 MA's), (233, 15094), (251, 15151), (271, 15199), (274, 15205), (281, 15223), (300, 15253), (348, 15358), (367, 15412), (370, 15418), (373, 15427), (381, 15448), (388, 15472), (402, 15508), (403, 15514), (418, 15547), (420, 15550), (424, 15559), (443, 15574), (448, 15580), (459, 15598), (465, 15613), (468, 15619), (475, 15637), (477, 15640), (484, 15655), (492, 15670), (494, 15676), (511, 15724), (515, 15736), (521, 15742), (564, 15802), (568, 15814), (583, 15850), (587, 15862), (614, 15937), (618, 15946), (625, 15964), (627, 15970), (638, 16000), (710, 16105), (720, 16117), (737, 16153), (761, 16231), (799, 16351), (810, 16384), (826, 16414), (829, 16426), (836, 16444), (839, 16450), (841, 16453), (844, 16459), (860, 16474), (861, 16477), (865, 16498), (866, 16501), (882, 16543), (887, 16573), (900, 16615), (901, 16621),

Gene: LilPharaoh\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for LilPharaoh\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499, 17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: LilSpotty\_18 Start: 14614, Stop: 16329, Start Num: 121

Candidate Starts for LilSpotty\_18:

(113, 14602), (Start: 121 @14614 has 1 MA's), (280, 14896), (295, 14944), (349, 15070), (379, 15151), (431, 15241), (436, 15250), (467, 15325), (481, 15355), (482, 15358), (487, 15367), (546, 15460), (560, 15490), (597, 15586), (598, 15589), (632, 15652), (637, 15667), (655, 15712), (668, 15757), (670, 15766), (726, 15838), (752, 15904), (793, 16000), (794, 16003), (813, 16057), (824, 16078), (825, 16081), (862, 16165), (867, 16189), (885, 16252), (897, 16297), (900, 16306),

Gene: LilTurb\_30 Start: 20692, Stop: 22464, Start Num: 144

Candidate Starts for LilTurb\_30:

(Start: 123 @20668 has 215 MA's), (Start: 144 @20692 has 603 MA's), (219, 20791), (251, 20875), (277, 20926), (278, 20929), (305, 21001), (306, 21004), (338, 21058), (349, 21097), (378, 21175), (417, 21262), (463, 21343), (467, 21346), (546, 21532), (584, 21619), (631, 21724), (636, 21739), (675, 21865), (677, 21871), (713, 21919), (750, 21997), (752, 22003), (770, 22057), (781, 22096), (784, 22111), (813, 22195), (862, 22306),

Gene: Lilac\_26 Start: 19243, Stop: 20922, Start Num: 129

Candidate Starts for Lilac\_26:

(Start: 129 @19243 has 79 MA's), (Start: 191 @19327 has 45 MA's), (Start: 235 @19405 has 1 MA's), (268, 19492), (274, 19507), (300, 19555), (324, 19594), (356, 19681), (368, 19714), (381, 19750), (390, 19780), (392, 19786), (422, 19855), (461, 19885), (466, 19897), (468, 19900), (494, 19957),

(565, 20089), (567, 20095), (592, 20161), (594, 20167), (601, 20191), (618, 20239), (627, 20263), (631, 20272), (658, 20347), (717, 20398), (725, 20413), (782, 20575), (788, 20602), (799, 20632), (843, 20737), (880, 20815), (887, 20851), (890, 20860), (900, 20893), (907, 20908),

Gene: Lilas\_20 Start: 17715, Stop: 19421, Start Num: 111

Candidate Starts for Lilas\_20:

(Start: 95 @17691 has 1 MA's), (Start: 111 @17715 has 24 MA's), (152, 17763), (192, 17820), (217, 17862), (303, 18051), (365, 18198), (368, 18204), (384, 18249), (459, 18387), (497, 18462), (635, 18744), (644, 18765), (668, 18840), (715, 18927), (739, 18963), (750, 18996), (752, 19002), (783, 19068), (793, 19098), (860, 19254), (862, 19260), (865, 19278), (897, 19389),

Gene: Lilbeanie\_30 Start: 24430, Stop: 26055, Start Num: 157

Candidate Starts for Lilbeanie\_30:

(Start: 157 @24430 has 4 MA's), (Start: 163 @24436 has 10 MA's), (188, 24469), (203, 24502), (236, 24559), (312, 24739), (348, 24820), (382, 24913), (384, 24919), (386, 24928), (449, 25027), (453, 25039), (460, 25057), (481, 25099), (508, 25162), (549, 25213), (551, 25219), (609, 25357), (635, 25396), (636, 25399), (653, 25453), (655, 25459), (665, 25486), (670, 25513), (675, 25537), (711, 25564), (752, 25642), (769, 25669), (797, 25756), (806, 25786), (842, 25855), (859, 25882), (880, 25951), (881, 25954), (884, 25972), (895, 26014), (907, 26044),

Gene: Lilbunny\_31 Start: 19971, Stop: 21743, Start Num: 144

Candidate Starts for Lilbunny\_31:

(94, 19905), (Start: 123 @19947 has 215 MA's), (Start: 144 @19971 has 603 MA's), (278, 20208), (305, 20280), (306, 20283), (315, 20298), (338, 20337), (341, 20343), (378, 20454), (380, 20460), (392, 20499), (417, 20541), (448, 20580), (463, 20622), (467, 20625), (532, 20781), (592, 20922), (597, 20937), (677, 21150), (742, 21249), (750, 21276), (765, 21327), (770, 21336), (781, 21375), (784, 21390), (813, 21474), (860, 21579), (862, 21585), (900, 21720),

Gene: Lilith\_29 Start: 20372, Stop: 22168, Start Num: 144

Candidate Starts for Lilith\_29:

(Start: 144 @20372 has 603 MA's), (Start: 190 @20429 has 1 MA's), (197, 20444), (219, 20477), (230, 20498), (Start: 235 @20513 has 1 MA's), (272, 20600), (277, 20612), (278, 20615), (306, 20690), (315, 20705), (336, 20741), (417, 20948), (481, 21062), (500, 21101), (532, 21188), (583, 21302), (591, 21326), (597, 21344), (636, 21425), (665, 21500), (668, 21518), (675, 21551), (677, 21557), (695, 21596), (729, 21650), (731, 21653), (742, 21674), (758, 21731), (813, 21899), (860, 22004), (862, 22010), (900, 22145),

Gene: Lilizi\_26 Start: 19451, Stop: 21130, Start Num: 129

Candidate Starts for Lilizi\_26:

(Start: 129 @19451 has 79 MA's), (Start: 191 @19535 has 45 MA's), (Start: 235 @19613 has 1 MA's), (268, 19700), (274, 19715), (300, 19763), (324, 19802), (356, 19889), (368, 19922), (381, 19958), (390, 19988), (392, 19994), (422, 20063), (461, 20093), (466, 20105), (468, 20108), (494, 20165), (565, 20297), (567, 20303), (592, 20369), (594, 20375), (601, 20399), (618, 20447), (627, 20471), (631, 20480), (658, 20555), (717, 20606), (725, 20621), (782, 20783), (788, 20810), (799, 20840), (843, 20945), (880, 21023), (887, 21059), (890, 21068), (900, 21101), (907, 21116),

Gene: Lilleskat\_28 Start: 21749, Stop: 23539, Start Num: 144

Candidate Starts for Lilleskat\_28:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986), (305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319), (463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715), (636, 22796), (675, 22922), (693, 22964), (731, 23024), (746, 23057), (750, 23072), (781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381), (873, 23426),

(890, 23483), (891, 23486),

Gene: Lillie\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Lillie\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Lilpickle\_23 Start: 18953, Stop: 20632, Start Num: 129

Candidate Starts for Lilpickle\_23:

(Start: 129 @18953 has 79 MA's), (Start: 191 @19037 has 45 MA's), (Start: 235 @19115 has 1 MA's), (268, 19202), (274, 19217), (300, 19265), (324, 19304), (356, 19391), (368, 19424), (381, 19460), (390, 19490), (392, 19496), (422, 19565), (461, 19595), (466, 19607), (468, 19610), (494, 19667), (565, 19799), (567, 19805), (592, 19871), (594, 19877), (601, 19901), (618, 19949), (627, 19973), (631, 19982), (658, 20057), (717, 20108), (725, 20123), (782, 20285), (788, 20312), (799, 20342), (843, 20447), (880, 20525), (887, 20561), (890, 20570), (900, 20603), (907, 20618),

Gene: LindNT\_23 Start: 17122, Stop: 18888, Start Num: 114

Candidate Starts for LindNT\_23:

(Start: 114 @17122 has 139 MA's), (140, 17152), (236, 17311), (248, 17344), (258, 17374), (272, 17407), (278, 17419), (316, 17509), (337, 17551), (357, 17614), (360, 17623), (362, 17632), (378, 17671), (392, 17716), (400, 17737), (403, 17740), (448, 17812), (465, 17854), (468, 17860), (481, 17887), (564, 18025), (572, 18043), (587, 18085), (593, 18103), (603, 18133), (618, 18160), (655, 18265), (748, 18424), (757, 18460), (768, 18490), (772, 18499), (793, 18574), (810, 18625), (890, 18820), (901, 18859), (902, 18862), (913, 18880),

Gene: LitninMcQueen\_20 Start: 16422, Stop: 18119, Start Num: 144

Candidate Starts for LitninMcQueen\_20:

(113, 16383), (Start: 144 @16422 has 603 MA's), (Start: 150 @16434 has 4 MA's), (180, 16473), (202, 16512), (219, 16533), (240, 16581), (243, 16590), (263, 16632), (277, 16668), (295, 16725), (316, 16773), (331, 16800), (382, 16941), (406, 16998), (414, 17016), (432, 17025), (436, 17031), (469, 17109), (485, 17145), (489, 17151), (499, 17172), (500, 17175), (517, 17226), (547, 17253), (549, 17256), (561, 17283), (574, 17310), (599, 17382), (618, 17421), (649, 17475), (664, 17517), (683, 17592), (736, 17655), (747, 17682), (749, 17685), (752, 17700), (788, 17784), (791, 17793), (793, 17796), (795, 17802), (799, 17814), (801, 17817), (811, 17847), (814, 17853), (824, 17874), (825, 17877), (849, 17931), (862, 17961), (863, 17970), (879, 18021), (887, 18054), (891, 18066), (896, 18084),

Gene: LittleB\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for LittleB\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: LittleCherry\_24 Start: 19659, Stop: 21455, Start Num: 144

Candidate Starts for LittleCherry\_24:

(Start: 144 @19659 has 603 MA's), (222, 19764), (236, 19797), (278, 19896), (306, 19971), (315, 19986), (336, 20022), (360, 20094), (365, 20109), (380, 20148), (388, 20175), (395, 20196), (430, 20235), (481, 20343), (495, 20373), (499, 20379), (553, 20514), (579, 20571), (580, 20574), (583, 20583), (597, 20625), (602, 20643), (635, 20703), (636, 20706), (668, 20799), (670, 20808), (675, 20832), (729, 20940), (746, 20976), (813, 21186), (859, 21288), (862, 21297), (893, 21411), (900, 21432), (902, 21441),

Gene: LittleE\_37 Start: 28308, Stop: 30041, Start Num: 124

Candidate Starts for LittleE\_37:

(Start: 124 @28308 has 30 MA's), (Start: 191 @28398 has 45 MA's), (193, 28401), (243, 28503), (268, 28569), (282, 28605), (301, 28635), (306, 28650), (346, 28734), (358, 28770), (368, 28797), (382, 28836), (392, 28869), (395, 28878), (420, 28935), (451, 28977), (490, 29052), (494, 29064), (515, 29124), (552, 29178), (565, 29208), (573, 29226), (577, 29235), (588, 29268), (592, 29280), (594, 29286), (606, 29325), (627, 29382), (725, 29532), (735, 29550), (750, 29592), (756, 29616), (757, 29619), (761, 29634), (773, 29664), (782, 29694), (799, 29751), (868, 29901), (902, 30021), (907, 30027),

Gene: LittleGuy\_27 Start: 19770, Stop: 21548, Start Num: 144

Candidate Starts for LittleGuy\_27:

(Start: 123 @19746 has 215 MA's), (Start: 144 @19770 has 603 MA's), (Start: 190 @19827 has 1 MA's), (222, 19881), (230, 19896), (236, 19914), (272, 19998), (277, 20010), (278, 20013), (306, 20088), (315, 20103), (338, 20142), (378, 20259), (417, 20346), (463, 20427), (489, 20475), (500, 20499), (532, 20586), (553, 20631), (584, 20703), (591, 20724), (597, 20742), (636, 20823), (668, 20916), (670, 20925), (675, 20949), (677, 20955), (687, 20979), (731, 21033), (742, 21054), (756, 21105), (763, 21129), (782, 21183), (813, 21279), (860, 21384), (863, 21399), (894, 21507), (900, 21525),

Gene: LittleShirley\_17 Start: 14625, Stop: 16334, Start Num: 123

Candidate Starts for LittleShirley\_17:

(Start: 123 @14625 has 215 MA's), (193, 14712), (209, 14733), (Start: 227 @14757 has 2 MA's), (233, 14781), (240, 14802), (271, 14886), (274, 14892), (281, 14910), (300, 14940), (348, 15045), (370, 15105), (378, 15126), (381, 15135), (388, 15159), (418, 15234), (420, 15237), (424, 15246), (443, 15261), (448, 15267), (459, 15285), (465, 15300), (468, 15306), (477, 15327), (484, 15342), (492, 15357), (494, 15363), (511, 15411), (515, 15423), (521, 15429), (564, 15489), (568, 15501), (583, 15537), (587, 15549), (614, 15624), (618, 15633), (625, 15651), (627, 15657), (638, 15687), (710, 15792), (720, 15804), (737, 15840), (761, 15918), (799, 16038), (810, 16071), (826, 16101), (829, 16113), (836, 16131), (839, 16137), (841, 16140), (844, 16146), (860, 16161), (861, 16164), (865, 16185), (866, 16188), (882, 16230), (887, 16260), (900, 16302), (901, 16308),

Gene: Lizziana\_16 Start: 14813, Stop: 16522, Start Num: 123

Candidate Starts for Lizziana\_16:

(Start: 123 @14813 has 215 MA's), (193, 14900), (Start: 227 @14945 has 2 MA's), (233, 14969), (271, 15074), (274, 15080), (281, 15098), (300, 15128), (348, 15233), (367, 15287), (370, 15293), (373, 15302), (381, 15323), (388, 15347), (402, 15383), (403, 15389), (418, 15422), (420, 15425), (424, 15434), (443, 15449), (448, 15455), (459, 15473), (465, 15488), (468, 15494), (475, 15512), (477, 15515), (484, 15530), (492, 15545), (494, 15551), (511, 15599), (515, 15611), (521, 15617), (564, 15677), (568, 15689), (583, 15725), (587, 15737), (614, 15812), (618, 15821), (625, 15839), (627, 15845), (638, 15875), (710, 15980), (720, 15992), (737, 16028), (761, 16106), (799, 16226), (810, 16259), (826, 16289), (829, 16301), (836, 16319), (839, 16325), (841, 16328), (844, 16334), (860, 16349), (861, 16352), (865, 16373), (866, 16376), (882, 16418), (887, 16448), (900, 16490), (901, 16496),

Gene: Llama\_16 Start: 15041, Stop: 16750, Start Num: 123

Candidate Starts for Llama\_16:

(Start: 123 @15041 has 215 MA's), (193, 15128), (209, 15149), (Start: 227 @15173 has 2 MA's), (233, 15197), (240, 15218), (271, 15302), (274, 15308), (281, 15326), (300, 15356), (348, 15461), (367, 15515), (370, 15521), (377, 15539), (378, 15542), (381, 15551), (388, 15575), (418, 15650), (424, 15662), (443, 15677), (448, 15683), (459, 15701), (465, 15716), (468, 15722), (480, 15749), (484, 15758), (492, 15773), (494, 15779), (511, 15827), (515, 15839), (521, 15845), (564, 15905), (568, 15917), (583, 15953), (587, 15965), (594, 15986), (614, 16040), (618, 16049), (625, 16067), (627, 16073), (638, 16103), (710, 16208), (717, 16217), (720, 16220), (737, 16256), (751, 16295), (761, 16334), (799, 16454), (810, 16487), (826, 16517), (836, 16547), (841, 16556), (844, 16562), (860, 16577), (861, 16580), (865, 16601), (866, 16604), (880, 16640), (882, 16646), (887, 16676), (900, 16718),

Gene: Llij\_16 Start: 14790, Stop: 16499, Start Num: 123

Candidate Starts for Llij\_16:

(Start: 123 @14790 has 215 MA's), (193, 14877), (Start: 227 @14922 has 2 MA's), (233, 14946), (251, 15003), (271, 15051), (274, 15057), (281, 15075), (300, 15105), (331, 15159), (348, 15210), (367, 15264), (370, 15270), (373, 15279), (381, 15300), (388, 15324), (402, 15360), (403, 15366), (418, 15399), (420, 15402), (424, 15411), (443, 15426), (448, 15432), (459, 15450), (465, 15465), (468, 15471), (475, 15489), (477, 15492), (484, 15507), (492, 15522), (494, 15528), (511, 15576), (515, 15588), (521, 15594), (564, 15654), (568, 15666), (583, 15702), (587, 15714), (614, 15789), (618, 15798), (625, 15816), (627, 15822), (638, 15852), (710, 15957), (720, 15969), (737, 16005), (761, 16083), (799, 16203), (810, 16236), (826, 16266), (829, 16278), (836, 16296), (839, 16302), (841, 16305), (844, 16311), (860, 16326), (861, 16329), (865, 16350), (866, 16353), (882, 16395), (887, 16425), (900, 16467), (901, 16473),

Gene: Llorens\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Llorens\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: LochMonster\_27 Start: 19802, Stop: 21580, Start Num: 144

Candidate Starts for LochMonster\_27:

(Start: 123 @19778 has 215 MA's), (Start: 144 @19802 has 603 MA's), (Start: 190 @19859 has 1 MA's), (222, 19913), (230, 19928), (236, 19946), (272, 20030), (277, 20042), (278, 20045), (306, 20120), (315, 20135), (338, 20174), (378, 20291), (417, 20378), (463, 20459), (489, 20507), (500, 20531), (532, 20618), (553, 20663), (584, 20735), (591, 20756), (597, 20774), (668, 20948), (670, 20957), (675, 20981), (677, 20987), (687, 21011), (731, 21065), (742, 21086), (756, 21137), (763, 21161), (782, 21215), (813, 21311), (860, 21416), (863, 21431), (894, 21539), (900, 21557),

Gene: Lockley\_27 Start: 21053, Stop: 22855, Start Num: 146

Candidate Starts for Lockley\_27:

(Start: 146 @21053 has 223 MA's), (Start: 161 @21074 has 4 MA's), (Start: 190 @21116 has 1 MA's), (216, 21161), (306, 21377), (332, 21422), (338, 21431), (368, 21521), (369, 21524), (467, 21719), (500, 21788), (519, 21848), (579, 21977), (583, 21989), (584, 21992), (591, 22013), (635, 22109), (636, 22112), (638, 22118), (665, 22187), (668, 22205), (670, 22214), (677, 22244), (731, 22340), (746, 22373), (750, 22388), (793, 22529), (813, 22586), (862, 22697),

Gene: Lokk\_31 Start: 21813, Stop: 23609, Start Num: 123

Candidate Starts for Lokk\_31:



(Start: 123 @21813 has 215 MA's), (Start: 144 @21837 has 603 MA's), (251, 22020), (277, 22071), (278, 22074), (305, 22146), (306, 22149), (338, 22203), (349, 22242), (378, 22320), (417, 22407), (463, 22488), (467, 22491), (487, 22533), (546, 22677), (584, 22764), (597, 22803), (636, 22884), (677, 23016), (746, 23127), (750, 23142), (752, 23148), (770, 23202), (781, 23241), (784, 23256), (795, 23289), (813, 23340), (849, 23418), (860, 23445), (862, 23451), (877, 23505),

Gene: Lollipop1437\_46 Start: 31458, Stop: 33080, Start Num: 170

Candidate Starts for Lollipop1437\_46:

(Start: 170 @31458 has 87 MA's), (236, 31575), (340, 31815), (343, 31827), (347, 31842), (372, 31908), (377, 31923), (432, 32034), (449, 32064), (450, 32067), (493, 32124), (518, 32196), (560, 32280), (571, 32301), (607, 32388), (635, 32436), (673, 32562), (674, 32565), (688, 32598), (749, 32655), (799, 32784), (812, 32823), (866, 32928), (885, 32991), (887, 33003), (891, 33015), (893, 33024), (906, 33060),

Gene: LoneWolf\_29 Start: 21342, Stop: 23132, Start Num: 144

Candidate Starts for LoneWolf\_29:

(Start: 144 @21342 has 603 MA's), (277, 21576), (278, 21579), (305, 21651), (306, 21654), (315, 21669), (338, 21708), (341, 21714), (349, 21747), (356, 21765), (378, 21825), (388, 21858), (417, 21912), (463, 21993), (467, 21996), (518, 22122), (546, 22182), (576, 22245), (584, 22269), (636, 22389), (675, 22515), (681, 22533), (693, 22557), (731, 22617), (746, 22650), (750, 22665), (781, 22764), (782, 22767), (784, 22779), (813, 22863), (842, 22929), (860, 22968), (862, 22974), (873, 23019), (890, 23076), (891, 23079),

Gene: LonelyBoi\_20 Start: 17718, Stop: 19424, Start Num: 111

Candidate Starts for LonelyBoi\_20:

(Start: 95 @17694 has 1 MA's), (Start: 111 @17718 has 24 MA's), (192, 17823), (217, 17865), (251, 17940), (303, 18054), (365, 18201), (368, 18207), (384, 18252), (459, 18390), (497, 18465), (635, 18747), (644, 18768), (668, 18843), (715, 18930), (739, 18966), (750, 18999), (752, 19005), (783, 19071), (793, 19101), (862, 19263), (865, 19281), (897, 19392),

Gene: Looper\_31 Start: 19093, Stop: 20880, Start Num: 144

Candidate Starts for Looper\_31:

(94, 19027), (Start: 123 @19069 has 215 MA's), (Start: 144 @19093 has 603 MA's), (236, 19231), (262, 19288), (278, 19330), (292, 19366), (306, 19405), (343, 19474), (349, 19498), (369, 19552), (448, 19702), (467, 19747), (481, 19777), (499, 19813), (515, 19864), (530, 19900), (553, 19948), (580, 20008), (635, 20137), (665, 20215), (750, 20416), (752, 20422), (782, 20518), (845, 20683), (880, 20782),

Gene: Lopton\_28 Start: 22455, Stop: 24257, Start Num: 146

Candidate Starts for Lopton\_28:

(Start: 146 @22455 has 223 MA's), (Start: 161 @22476 has 4 MA's), (Start: 190 @22518 has 1 MA's), (216, 22563), (306, 22779), (332, 22824), (338, 22833), (349, 22872), (368, 22923), (369, 22926), (467, 23121), (500, 23190), (583, 23391), (584, 23394), (591, 23415), (635, 23511), (636, 23514), (638, 23520), (665, 23589), (668, 23607), (670, 23616), (677, 23646), (731, 23742), (746, 23775), (750, 23790), (793, 23931), (813, 23988), (862, 24099),

Gene: LordFarquaad\_17 Start: 14751, Stop: 16460, Start Num: 171

Candidate Starts for LordFarquaad\_17:

(83, 14616), (Start: 171 @14751 has 40 MA's), (259, 14940), (262, 14943), (287, 15018), (315, 15072), (347, 15141), (351, 15153), (377, 15231), (378, 15234), (440, 15366), (462, 15420), (485, 15471), (500, 15501), (519, 15561), (525, 15573), (554, 15609), (607, 15726), (618, 15744), (637, 15783), (669, 15879), (736, 15987), (847, 16263), (849, 16266), (865, 16314), (874, 16344),

Gene: Lorde\_17 Start: 14628, Stop: 16337, Start Num: 123

Candidate Starts for Lorde\_17:

(Start: 123 @14628 has 215 MA's), (193, 14715), (Start: 227 @14760 has 2 MA's), (233, 14784), (251, 14841), (271, 14889), (274, 14895), (281, 14913), (300, 14943), (348, 15048), (367, 15102), (370, 15108), (373, 15117), (378, 15129), (381, 15138), (388, 15162), (402, 15198), (403, 15204), (407, 15216), (418, 15237), (420, 15240), (424, 15249), (443, 15264), (448, 15270), (459, 15288), (465, 15303), (468, 15309), (475, 15327), (477, 15330), (484, 15345), (492, 15360), (494, 15366), (506, 15396), (511, 15414), (515, 15426), (521, 15432), (564, 15492), (568, 15504), (583, 15540), (587, 15552), (594, 15573), (614, 15627), (618, 15636), (627, 15660), (638, 15690), (710, 15795), (720, 15807), (737, 15843), (751, 15882), (761, 15921), (791, 16020), (799, 16041), (810, 16074), (826, 16104), (836, 16134), (841, 16143), (844, 16149), (860, 16164), (861, 16167), (865, 16188), (866, 16191), (882, 16233), (887, 16263), (900, 16305), (901, 16311),

Gene: Lorenzo\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Lorenzo\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Loser\_31 Start: 21942, Stop: 23714, Start Num: 144

Candidate Starts for Loser\_31:

(Start: 123 @21918 has 215 MA's), (Start: 144 @21942 has 603 MA's), (251, 22125), (277, 22176), (278, 22179), (305, 22251), (306, 22254), (338, 22308), (341, 22314), (349, 22347), (378, 22425), (380, 22431), (384, 22443), (417, 22512), (460, 22587), (463, 22593), (467, 22596), (487, 22638), (583, 22866), (584, 22869), (597, 22908), (631, 22974), (636, 22989), (677, 23121), (713, 23169), (742, 23220), (746, 23232), (750, 23247), (752, 23253), (770, 23307), (784, 23361), (813, 23445), (842, 23511), (860, 23550), (862, 23556),

Gene: Louie6\_29 Start: 20466, Stop: 22262, Start Num: 144

Candidate Starts for Louie6\_29:

(Start: 144 @20466 has 603 MA's), (Start: 190 @20523 has 1 MA's), (197, 20538), (219, 20571), (230, 20592), (Start: 235 @20607 has 1 MA's), (272, 20694), (277, 20706), (278, 20709), (306, 20784), (315, 20799), (336, 20835), (417, 21042), (481, 21156), (500, 21195), (532, 21282), (583, 21396), (591, 21420), (597, 21438), (636, 21519), (665, 21594), (668, 21612), (675, 21645), (677, 21651), (695, 21690), (729, 21744), (731, 21747), (742, 21768), (758, 21825), (813, 21993), (860, 22098), (862, 22104), (900, 22239),

Gene: LouisV14\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for LouisV14\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Love\_38 Start: 31747, Stop: 33510, Start Num: 97

Candidate Starts for Love\_38:

(90, 31729), (Start: 97 @31747 has 73 MA's), (Start: 121 @31783 has 1 MA's), (219, 31921), (262, 32017), (265, 32026), (288, 32095), (306, 32146), (332, 32191), (341, 32206), (368, 32287), (384, 32332), (386, 32341), (445, 32431), (458, 32461), (461, 32476), (472, 32500), (487, 32530), (551, 32635), (597, 32752), (607, 32770), (613, 32785), (631, 32815), (635, 32827), (636, 32830), (647, 32857), (793, 33181), (794, 33184), (810, 33232), (824, 33259), (832, 33286), (860, 33340), (865, 33364), (866, 33367), (891, 33457), (909, 33505),

Gene: Lozinak\_48 Start: 29612, Stop: 31303, Start Num: 146

Candidate Starts for Lozinak\_48:

(Start: 146 @29612 has 223 MA's), (188, 29672), (206, 29705), (Start: 227 @29735 has 2 MA's), (228, 29738), (282, 29897), (286, 29906), (349, 30035), (366, 30083), (494, 30296), (498, 30302), (506, 30326), (576, 30455), (583, 30476), (594, 30509), (658, 30707), (758, 30860), (788, 30959), (793, 30971), (796, 30980), (829, 31064), (888, 31211), (898, 31247),

Gene: Lton\_17 Start: 14723, Stop: 16432, Start Num: 171

Candidate Starts for Lton\_17:

(83, 14588), (Start: 171 @14723 has 40 MA's), (259, 14912), (262, 14915), (287, 14990), (315, 15044), (347, 15113), (377, 15203), (378, 15206), (440, 15338), (462, 15392), (500, 15473), (519, 15533), (521, 15539), (572, 15620), (607, 15698), (618, 15716), (637, 15755), (665, 15827), (666, 15830), (669, 15851), (788, 16085), (794, 16100), (807, 16142), (847, 16235), (849, 16238), (865, 16286), (874, 16316),

Gene: Luchador\_30 Start: 20622, Stop: 22421, Start Num: 144

Candidate Starts for Luchador\_30:

(Start: 141 @20619 has 14 MA's), (Start: 144 @20622 has 603 MA's), (Start: 235 @20757 has 1 MA's), (265, 20826), (278, 20859), (305, 20931), (306, 20934), (318, 20952), (341, 20994), (378, 21105), (392, 21150), (395, 21159), (417, 21192), (460, 21267), (463, 21273), (467, 21276), (495, 21336), (535, 21438), (576, 21525), (584, 21549), (597, 21588), (636, 21669), (707, 21867), (750, 21954), (752, 21960), (781, 22053), (860, 22257), (862, 22263),

Gene: Lucivia\_28 Start: 20804, Stop: 22603, Start Num: 144

Candidate Starts for Lucivia\_28:

(94, 20738), (Start: 123 @20780 has 215 MA's), (Start: 144 @20804 has 603 MA's), (183, 20846), (236, 20942), (242, 20957), (277, 21038), (278, 21041), (306, 21116), (315, 21131), (338, 21170), (341, 21176), (356, 21227), (378, 21287), (380, 21293), (417, 21374), (467, 21458), (518, 21584), (526, 21602), (540, 21629), (597, 21770), (631, 21836), (635, 21848), (636, 21851), (703, 22040), (721, 22067), (726, 22076), (736, 22097), (737, 22100), (746, 22121), (750, 22136), (756, 22160), (781, 22235), (784, 22250), (813, 22334), (860, 22439), (862, 22445), (877, 22499), (909, 22598),

Gene: Lucky10\_18 Start: 15185, Stop: 16897, Start Num: 111

Candidate Starts for Lucky10\_18:

(Start: 111 @15185 has 24 MA's), (152, 15239), (219, 15341), (251, 15413), (290, 15494), (311, 15545), (332, 15578), (349, 15626), (365, 15674), (369, 15683), (384, 15725), (395, 15761), (433, 15803), (445, 15824), (449, 15830), (458, 15854), (481, 15905), (482, 15908), (497, 15938), (647, 16250), (668, 16316), (674, 16346), (739, 16439), (747, 16460), (750, 16472), (752, 16478), (753, 16484), (755, 16490), (783, 16544), (793, 16574), (818, 16643), (860, 16730), (862, 16736), (867, 16760), (876, 16787),

Gene: Lucky2013\_34 Start: 25206, Stop: 26939, Start Num: 124

Candidate Starts for Lucky2013\_34:

(Start: 124 @25206 has 30 MA's), (Start: 191 @25296 has 45 MA's), (193, 25299), (243, 25401), (268, 25467), (282, 25503), (301, 25533), (306, 25548), (346, 25632), (358, 25668), (368, 25695), (382, 25734), (392, 25767), (395, 25776), (420, 25833), (451, 25875), (490, 25950), (494, 25962), (515,

26022), (552, 26076), (565, 26106), (573, 26124), (577, 26133), (588, 26166), (592, 26178), (594, 26184), (606, 26223), (627, 26280), (725, 26430), (735, 26448), (750, 26490), (756, 26514), (757, 26517), (761, 26532), (773, 26562), (782, 26592), (799, 26649), (868, 26799), (907, 26925),

Gene: Lucyedi\_29 Start: 20875, Stop: 22665, Start Num: 144

Candidate Starts for Lucyedi\_29:

(94, 20809), (Start: 123 @20851 has 215 MA's), (Start: 144 @20875 has 603 MA's), (242, 21028), (277, 21109), (278, 21112), (305, 21184), (306, 21187), (318, 21205), (330, 21226), (338, 21241), (341, 21247), (378, 21358), (388, 21391), (417, 21445), (463, 21526), (467, 21529), (546, 21715), (576, 21778), (584, 21802), (597, 21841), (636, 21922), (675, 22048), (707, 22111), (750, 22198), (781, 22297), (795, 22345), (813, 22396), (860, 22501), (862, 22507), (877, 22561),

Gene: LugYA\_31 Start: 20379, Stop: 22175, Start Num: 144

Candidate Starts for LugYA\_31:

(Start: 144 @20379 has 603 MA's), (Start: 190 @20436 has 1 MA's), (197, 20451), (219, 20484), (230, 20505), (Start: 235 @20520 has 1 MA's), (272, 20607), (277, 20619), (278, 20622), (306, 20697), (315, 20712), (336, 20748), (417, 20955), (481, 21069), (500, 21108), (532, 21195), (583, 21309), (591, 21333), (597, 21351), (636, 21432), (665, 21507), (668, 21525), (675, 21558), (677, 21564), (695, 21603), (729, 21657), (731, 21660), (742, 21681), (758, 21738), (813, 21906), (860, 22011), (862, 22017), (900, 22152),

Gene: Luke\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Luke\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Luna22\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Luna22\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: LunaStella\_18 Start: 15370, Stop: 17073, Start Num: 129

Candidate Starts for LunaStella\_18:

(Start: 110 @15346 has 1 MA's), (Start: 114 @15352 has 139 MA's), (Start: 117 @15358 has 59 MA's), (Start: 129 @15370 has 79 MA's), (134, 15376), (Start: 227 @15496 has 2 MA's), (233, 15520), (241, 15544), (271, 15625), (274, 15631), (281, 15649), (300, 15679), (373, 15853), (381, 15874), (382, 15877), (393, 15913), (407, 15952), (448, 16006), (459, 16024), (460, 16027), (465, 16039), (468, 16045), (484, 16081), (494, 16102), (502, 16120), (511, 16150), (515, 16162), (521, 16168), (564, 16228), (583, 16276), (599, 16321), (614, 16363), (618, 16372), (627, 16396), (638, 16426), (653, 16471), (710, 16531), (717, 16540), (720, 16543), (737, 16579), (762, 16660), (803, 16789), (810, 16810), (826, 16840), (836, 16870), (841, 16879), (844, 16885), (860, 16900), (861, 16903),

(907, 17056),

Gene: Lunahalos\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Lunahalos\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Lunsford\_28 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Lunsford\_28:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Lutum\_20 Start: 16428, Stop: 18125, Start Num: 144

Candidate Starts for Lutum\_20:

(113, 16389), (Start: 144 @16428 has 603 MA's), (Start: 150 @16440 has 4 MA's), (180, 16479), (202, 16518), (219, 16539), (240, 16587), (243, 16596), (263, 16638), (277, 16674), (295, 16731), (316, 16779), (331, 16806), (382, 16947), (406, 17004), (414, 17022), (432, 17031), (436, 17037), (469, 17115), (485, 17151), (489, 17157), (499, 17178), (500, 17181), (517, 17232), (547, 17259), (549, 17262), (561, 17289), (574, 17316), (599, 17388), (618, 17427), (649, 17481), (664, 17523), (683, 17598), (736, 17661), (747, 17688), (749, 17691), (752, 17706), (788, 17790), (791, 17799), (793, 17802), (795, 17808), (799, 17820), (801, 17823), (811, 17853), (814, 17859), (824, 17880), (825, 17883), (849, 17937), (862, 17967), (863, 17976), (879, 18027), (887, 18060), (891, 18072), (896, 18090),

Gene: Lysidious\_20 Start: 17174, Stop: 18820, Start Num: 195

Candidate Starts for Lysidious\_20:

(172, 17138), (Start: 195 @17174 has 45 MA's), (244, 17276), (272, 17354), (274, 17357), (308, 17453), (329, 17492), (349, 17552), (357, 17573), (377, 17627), (382, 17642), (494, 17813), (506, 17843), (594, 18026), (601, 18050), (626, 18101), (658, 18194), (664, 18206), (694, 18251), (702, 18266), (757, 18398), (758, 18401), (788, 18500), (795, 18518), (813, 18569), (843, 18635), (872, 18698), (877, 18710),

Gene: MA5\_27 Start: 19523, Stop: 21322, Start Num: 144

Candidate Starts for MA5\_27:

(Start: 144 @19523 has 603 MA's), (Start: 190 @19583 has 1 MA's), (230, 19652), (236, 19670), (272, 19754), (277, 19766), (278, 19769), (306, 19844), (315, 19859), (318, 19862), (338, 19898), (384, 20033), (417, 20102), (481, 20216), (532, 20342), (583, 20456), (584, 20459), (591, 20480), (597, 20498), (636, 20579), (665, 20654), (668, 20672), (670, 20681), (675, 20705), (677, 20711), (682, 20726), (703, 20759), (729, 20804), (731, 20807), (742, 20828), (746, 20840), (813, 21053), (825, 21077), (860, 21158), (862, 21164), (900, 21299),

Gene: MAnor\_18 Start: 15425, Stop: 17119, Start Num: 144

Candidate Starts for MAnor\_18:

(Start: 133 @15422 has 8 MA's), (Start: 144 @15425 has 603 MA's), (214, 15524), (222, 15536), (236, 15566), (243, 15587), (288, 15704), (336, 15806), (365, 15893), (377, 15923), (385, 15950), (406, 15995), (417, 16013), (436, 16028), (444, 16043), (465, 16100), (481, 16133), (487, 16145), (501, 16175), (539, 16232), (546, 16250), (560, 16280), (574, 16310), (596, 16373), (617, 16424), (636, 16460), (643, 16475), (650, 16493), (668, 16550), (747, 16679), (750, 16691), (791, 16790), (793, 16793), (799, 16811), (829, 16889), (842, 16916), (862, 16958), (902, 17105), (907, 17111),

Gene: MISSy\_23 Start: 19258, Stop: 20937, Start Num: 129

Candidate Starts for MISSy\_23:

(Start: 129 @19258 has 79 MA's), (Start: 191 @19342 has 45 MA's), (Start: 235 @19420 has 1 MA's), (268, 19507), (274, 19522), (300, 19570), (324, 19609), (356, 19696), (368, 19729), (381, 19765), (390, 19795), (392, 19801), (422, 19870), (461, 19900), (466, 19912), (468, 19915), (494, 19972), (565, 20104), (567, 20110), (592, 20176), (594, 20182), (601, 20206), (618, 20254), (627, 20278), (631, 20287), (658, 20362), (717, 20413), (725, 20428), (782, 20590), (788, 20617), (799, 20647), (843, 20752), (880, 20830), (887, 20866), (890, 20875), (900, 20908), (907, 20923),

Gene: MK4\_27 Start: 19826, Stop: 21625, Start Num: 144

Candidate Starts for MK4\_27:

(Start: 144 @19826 has 603 MA's), (Start: 190 @19886 has 1 MA's), (230, 19955), (272, 20057), (277, 20069), (278, 20072), (306, 20147), (315, 20162), (318, 20165), (338, 20201), (384, 20336), (417, 20405), (481, 20519), (532, 20645), (583, 20759), (584, 20762), (591, 20783), (597, 20801), (636, 20882), (665, 20957), (668, 20975), (670, 20984), (675, 21008), (677, 21014), (682, 21029), (695, 21053), (729, 21107), (731, 21110), (742, 21131), (746, 21143), (813, 21356), (825, 21380), (860, 21461), (862, 21467), (900, 21602),

Gene: MPhalcon\_23 Start: 19252, Stop: 20931, Start Num: 129

Candidate Starts for MPhalcon\_23:

(Start: 129 @19252 has 79 MA's), (Start: 191 @19336 has 45 MA's), (Start: 235 @19414 has 1 MA's), (268, 19501), (274, 19516), (300, 19564), (324, 19603), (356, 19690), (368, 19723), (381, 19759), (390, 19789), (392, 19795), (422, 19864), (461, 19894), (466, 19906), (468, 19909), (494, 19966), (565, 20098), (567, 20104), (592, 20170), (594, 20176), (601, 20200), (618, 20248), (627, 20272), (631, 20281), (658, 20356), (717, 20407), (725, 20422), (782, 20584), (788, 20611), (799, 20641), (843, 20746), (880, 20824), (887, 20860), (890, 20869), (900, 20902), (907, 20917),

Gene: MPlant7149\_26 Start: 20687, Stop: 22489, Start Num: 146

Candidate Starts for MPlant7149\_26:

(Start: 146 @20687 has 223 MA's), (Start: 161 @20708 has 4 MA's), (Start: 190 @20750 has 1 MA's), (216, 20795), (306, 21011), (332, 21056), (338, 21065), (349, 21104), (368, 21155), (369, 21158), (467, 21353), (500, 21422), (583, 21623), (584, 21626), (591, 21647), (635, 21743), (636, 21746), (638, 21752), (665, 21821), (668, 21839), (670, 21848), (677, 21878), (731, 21974), (746, 22007), (750, 22022), (793, 22163), (813, 22220), (862, 22331),

Gene: MScarn\_20 Start: 15365, Stop: 17062, Start Num: 144

Candidate Starts for MScarn\_20:

(113, 15335), (Start: 133 @15362 has 8 MA's), (Start: 144 @15365 has 603 MA's), (264, 15575), (332, 15743), (336, 15749), (356, 15809), (374, 15857), (377, 15866), (385, 15893), (395, 15923), (406, 15938), (436, 15971), (442, 15983), (458, 16019), (481, 16076), (487, 16088), (553, 16208), (562, 16229), (574, 16253), (636, 16403), (643, 16418), (650, 16436), (668, 16493), (747, 16622), (750, 16634), (755, 16652), (766, 16661), (791, 16733), (793, 16736), (795, 16742), (799, 16754), (842, 16859), (847, 16868), (862, 16901),

Gene: MaCh\_28 Start: 20746, Stop: 22545, Start Num: 144

Candidate Starts for MaCh\_28:

(94, 20680), (Start: 123 @20722 has 215 MA's), (Start: 144 @20746 has 603 MA's), (183, 20788), (236, 20884), (242, 20899), (277, 20980), (278, 20983), (305, 21055), (306, 21058), (315, 21073), (338, 21112), (341, 21118), (378, 21229), (380, 21235), (417, 21316), (467, 21400), (518, 21526), (526, 21544), (540, 21571), (597, 21712), (631, 21778), (635, 21790), (636, 21793), (674, 21916), (703, 21982), (721, 22009), (736, 22039), (737, 22042), (746, 22063), (750, 22078), (756, 22102), (781, 22177), (784, 22192), (813, 22276), (860, 22381), (862, 22387), (877, 22441), (909, 22540),

Gene: MaVan\_20 Start: 16710, Stop: 18404, Start Num: 144

Candidate Starts for MaVan\_20:

(47, 16386), (Start: 144 @16710 has 603 MA's), (289, 16995), (290, 16998), (306, 17043), (316, 17058), (349, 17136), (365, 17181), (406, 17283), (436, 17316), (442, 17328), (444, 17331), (465, 17388), (481, 17421), (489, 17436), (513, 17502), (549, 17544), (553, 17553), (574, 17598), (596, 17661), (635, 17742), (643, 17760), (647, 17769), (650, 17778), (668, 17835), (670, 17844), (750, 17976), (766, 18003), (777, 18024), (791, 18075), (793, 18078), (829, 18174), (842, 18201), (847, 18210), (849, 18213), (862, 18243), (865, 18261), (881, 18306), (907, 18396),

Gene: Mabel\_28 Start: 20807, Stop: 22606, Start Num: 144

Candidate Starts for Mabel\_28:

(94, 20741), (Start: 123 @20783 has 215 MA's), (Start: 144 @20807 has 603 MA's), (183, 20849), (236, 20945), (242, 20960), (277, 21041), (278, 21044), (306, 21119), (315, 21134), (338, 21173), (341, 21179), (378, 21290), (380, 21296), (417, 21377), (467, 21461), (518, 21587), (526, 21605), (540, 21632), (597, 21773), (631, 21839), (635, 21851), (636, 21854), (674, 21977), (703, 22043), (721, 22070), (726, 22079), (736, 22100), (737, 22103), (746, 22124), (750, 22139), (756, 22163), (781, 22238), (784, 22253), (813, 22337), (860, 22442), (862, 22448), (877, 22502), (909, 22601),

Gene: MacGully\_50 Start: 31627, Stop: 33198, Start Num: 173

Candidate Starts for MacGully\_50:

(Start: 173 @31627 has 7 MA's), (179, 31636), (219, 31690), (226, 31702), (236, 31717), (306, 31900), (326, 31933), (343, 31969), (348, 31987), (361, 32026), (372, 32050), (377, 32065), (417, 32149), (442, 32182), (450, 32197), (493, 32254), (498, 32263), (511, 32305), (513, 32311), (518, 32326), (534, 32356), (571, 32431), (592, 32476), (644, 32584), (673, 32689), (675, 32695), (709, 32728), (822, 32971), (863, 33043), (867, 33058), (891, 33142), (896, 33160), (903, 33184),

Gene: MacnCheese\_23 Start: 17821, Stop: 19584, Start Num: 114

Candidate Starts for MacnCheese\_23:

(Start: 109 @17812 has 26 MA's), (Start: 114 @17821 has 139 MA's), (196, 17923), (230, 17980), (248, 18031), (258, 18061), (269, 18085), (282, 18130), (362, 18325), (369, 18340), (392, 18409), (395, 18418), (400, 18430), (403, 18433), (448, 18505), (465, 18547), (468, 18553), (487, 18592), (503, 18628), (588, 18781), (622, 18868), (655, 18961), (698, 19036), (714, 19069), (741, 19099), (748, 19117), (760, 19165), (771, 19189), (778, 19216), (795, 19273), (810, 19318), (850, 19402), (863, 19420), (887, 19507), (890, 19516), (896, 19537), (901, 19555), (904, 19561), (913, 19576),

Gene: Maco6\_19 Start: 15263, Stop: 17113, Start Num: 89

Candidate Starts for Maco6\_19:

(78, 15227), (Start: 89 @15263 has 4 MA's), (140, 15341), (181, 15401), (Start: 227 @15467 has 2 MA's), (242, 15518), (248, 15533), (249, 15536), (372, 15842), (390, 15899), (393, 15908), (412, 15947), (413, 15950), (436, 16013), (448, 16034), (474, 16097), (479, 16106), (487, 16121), (499, 16145), (567, 16256), (583, 16295), (590, 16316), (601, 16352), (602, 16355), (622, 16397), (629, 16412), (632, 16418), (773, 16727), (775, 16736), (777, 16742), (781, 16754), (788, 16784), (795, 16802), (797, 16808), (850, 16928), (874, 16985), (898, 17072), (901, 17081),

Gene: MadKillah\_57 Start: 33254, Stop: 34990, Start Num: 107

Candidate Starts for MadKillah\_57:

(Start: 100 @33245 has 2 MA's), (Start: 107 @33254 has 25 MA's), (174, 33344), (240, 33461), (251, 33497), (259, 33518), (271, 33545), (274, 33551), (286, 33581), (302, 33605), (332, 33656), (381, 33794), (383, 33800), (400, 33851), (402, 33854), (407, 33872), (459, 33923), (468, 33944), (470, 33947), (492, 33995), (494, 34001), (511, 34049), (513, 34055), (515, 34061), (555, 34121), (564, 34145), (565, 34148), (583, 34193), (588, 34208), (591, 34217), (594, 34226), (608, 34271), (618, 34289), (631, 34322), (720, 34460), (729, 34481), (754, 34547), (762, 34577), (779, 34631), (791, 34673), (799, 34694), (805, 34715), (810, 34727), (821, 34748), (844, 34802), (880, 34880), (887, 34916), (893, 34937), (901, 34964),

Gene: MadMarie\_29 Start: 20381, Stop: 22177, Start Num: 144

Candidate Starts for MadMarie\_29:

(Start: 144 @20381 has 603 MA's), (Start: 190 @20438 has 1 MA's), (197, 20453), (230, 20507), (Start: 235 @20522 has 1 MA's), (272, 20609), (277, 20621), (278, 20624), (306, 20699), (315, 20714), (336, 20750), (417, 20957), (500, 21110), (532, 21197), (583, 21311), (591, 21335), (597, 21353), (636, 21434), (665, 21509), (668, 21527), (675, 21560), (677, 21566), (695, 21605), (729, 21659), (731, 21662), (742, 21683), (758, 21740), (813, 21908), (860, 22013), (862, 22019), (900, 22154),

Gene: MadamMonkfish\_24 Start: 19164, Stop: 20843, Start Num: 129

Candidate Starts for MadamMonkfish\_24:

(Start: 129 @19164 has 79 MA's), (Start: 191 @19248 has 45 MA's), (Start: 235 @19326 has 1 MA's), (268, 19413), (274, 19428), (300, 19476), (324, 19515), (356, 19602), (368, 19635), (381, 19671), (390, 19701), (392, 19707), (422, 19776), (461, 19806), (466, 19818), (468, 19821), (494, 19878), (565, 20010), (567, 20016), (592, 20082), (594, 20088), (601, 20112), (618, 20160), (627, 20184), (631, 20193), (658, 20268), (717, 20319), (725, 20334), (782, 20496), (788, 20523), (799, 20553), (843, 20658), (880, 20736), (887, 20772), (890, 20781), (900, 20814), (907, 20829),

Gene: Madeline\_19 Start: 18062, Stop: 19660, Start Num: 170

Candidate Starts for Madeline\_19:

(Start: 170 @18062 has 87 MA's), (295, 18311), (298, 18320), (306, 18338), (307, 18341), (340, 18395), (363, 18470), (385, 18539), (388, 18548), (392, 18560), (397, 18572), (415, 18611), (435, 18638), (440, 18647), (441, 18650), (500, 18680), (501, 18683), (519, 18740), (554, 18806), (591, 18884), (603, 18917), (618, 18941), (636, 18977), (669, 19079), (687, 19136), (732, 19181), (736, 19187), (751, 19226), (849, 19466), (874, 19544),

Gene: Madiba\_17 Start: 14680, Stop: 16389, Start Num: 123

Candidate Starts for Madiba\_17:

(Start: 123 @14680 has 215 MA's), (193, 14767), (Start: 227 @14812 has 2 MA's), (233, 14836), (271, 14941), (274, 14947), (281, 14965), (300, 14995), (348, 15100), (370, 15160), (378, 15181), (381, 15190), (388, 15214), (418, 15289), (424, 15301), (443, 15316), (448, 15322), (459, 15340), (465, 15355), (468, 15361), (477, 15382), (484, 15397), (486, 15400), (492, 15412), (494, 15418), (499, 15427), (511, 15466), (515, 15478), (521, 15484), (564, 15544), (568, 15556), (583, 15592), (587, 15604), (614, 15679), (618, 15688), (627, 15712), (638, 15742), (710, 15847), (720, 15859), (737, 15895), (750, 15931), (751, 15934), (761, 15973), (799, 16093), (810, 16126), (826, 16156), (836, 16186), (841, 16195), (844, 16201), (860, 16216), (861, 16219), (865, 16240), (866, 16243), (882, 16285), (887, 16315), (900, 16357),

Gene: MagicMan\_19 Start: 16962, Stop: 18692, Start Num: 138

Candidate Starts for MagicMan\_19:

(72, 16845), (113, 16929), (Start: 121 @16941 has 1 MA's), (Start: 138 @16962 has 5 MA's), (243, 17133), (272, 17199), (281, 17232), (289, 17253), (368, 17445), (392, 17517), (414, 17559), (445, 17595), (458, 17625), (465, 17649), (485, 17691), (499, 17718), (537, 17775), (540, 17781), (579, 17868), (737, 18228), (747, 18252), (752, 18270), (793, 18366), (863, 18540), (864, 18543), (867,



18555), (888, 18630), (896, 18657),

Gene: Magnar\_27 Start: 20858, Stop: 22639, Start Num: 161

Candidate Starts for Magnar\_27:

(Start: 146 @20837 has 223 MA's), (Start: 161 @20858 has 4 MA's), (Start: 190 @20900 has 1 MA's), (216, 20945), (306, 21161), (332, 21206), (338, 21215), (349, 21254), (368, 21305), (369, 21308), (467, 21503), (500, 21572), (583, 21773), (584, 21776), (591, 21797), (635, 21893), (636, 21896), (638, 21902), (665, 21971), (668, 21989), (670, 21998), (677, 22028), (731, 22124), (746, 22157), (750, 22172), (793, 22313), (813, 22370), (862, 22481), (909, 22634),

Gene: Magnito\_26 Start: 20589, Stop: 22391, Start Num: 146

Candidate Starts for Magnito\_26:

(Start: 146 @20589 has 223 MA's), (Start: 161 @20610 has 4 MA's), (Start: 190 @20652 has 1 MA's), (216, 20697), (306, 20913), (332, 20958), (338, 20967), (349, 21006), (368, 21057), (369, 21060), (467, 21255), (500, 21324), (583, 21525), (584, 21528), (591, 21549), (635, 21645), (636, 21648), (638, 21654), (668, 21741), (670, 21750), (677, 21780), (731, 21876), (746, 21909), (750, 21924), (793, 22065), (813, 22122), (862, 22233),

Gene: Magsby\_18 Start: 14986, Stop: 16695, Start Num: 126

Candidate Starts for Magsby\_18:

(Start: 126 @14986 has 42 MA's), (Start: 150 @15013 has 4 MA's), (Start: 227 @15118 has 2 MA's), (229, 15130), (241, 15166), (258, 15217), (271, 15247), (274, 15253), (284, 15280), (287, 15286), (348, 15406), (367, 15460), (370, 15466), (377, 15484), (381, 15496), (382, 15499), (388, 15520), (403, 15562), (418, 15595), (459, 15646), (465, 15661), (484, 15703), (492, 15718), (494, 15724), (511, 15772), (525, 15796), (547, 15826), (564, 15850), (587, 15910), (591, 15922), (608, 15976), (614, 15985), (637, 16045), (638, 16048), (710, 16153), (717, 16162), (737, 16201), (781, 16339), (834, 16489), (836, 16492), (841, 16501), (860, 16522), (866, 16549), (880, 16585), (907, 16678),

Gene: Mahavrat\_16 Start: 14801, Stop: 16510, Start Num: 123

Candidate Starts for Mahavrat\_16:

(Start: 123 @14801 has 215 MA's), (193, 14888), (Start: 227 @14933 has 2 MA's), (233, 14957), (271, 15062), (274, 15068), (281, 15086), (300, 15116), (348, 15221), (367, 15275), (370, 15281), (378, 15302), (381, 15311), (388, 15335), (403, 15377), (418, 15410), (424, 15422), (443, 15437), (448, 15443), (459, 15461), (465, 15476), (468, 15482), (477, 15503), (484, 15518), (492, 15533), (494, 15539), (511, 15587), (515, 15599), (521, 15605), (564, 15665), (583, 15713), (587, 15725), (594, 15746), (614, 15800), (618, 15809), (627, 15833), (638, 15863), (710, 15968), (720, 15980), (737, 16016), (761, 16094), (826, 16277), (836, 16307), (841, 16316), (844, 16322), (860, 16337), (861, 16340), (865, 16361), (882, 16406), (900, 16478), (901, 16484),

Gene: Mahdia\_18 Start: 14818, Stop: 16428, Start Num: 153

Candidate Starts for Mahdia\_18:

(Start: 153 @14818 has 11 MA's), (Start: 163 @14827 has 10 MA's), (185, 14860), (216, 14911), (219, 14914), (292, 15091), (321, 15142), (366, 15265), (417, 15382), (449, 15421), (467, 15463), (501, 15535), (512, 15568), (535, 15580), (547, 15607), (553, 15619), (575, 15655), (576, 15658), (583, 15679), (599, 15724), (635, 15793), (636, 15796), (653, 15838), (657, 15856), (664, 15868), (735, 15982), (742, 15997), (746, 16006), (755, 16039), (769, 16054), (860, 16258), (863, 16273), (880, 16324), (891, 16372),

Gene: Mainiac\_29 Start: 20372, Stop: 22168, Start Num: 144

Candidate Starts for Mainiac\_29:

(Start: 144 @20372 has 603 MA's), (Start: 190 @20429 has 1 MA's), (197, 20444), (230, 20498), (Start: 235 @20513 has 1 MA's), (272, 20600), (277, 20612), (278, 20615), (306, 20690), (315, 20705), (336, 20741), (417, 20948), (500, 21101), (532, 21188), (583, 21302), (591, 21326), (597,

21344), (636, 21425), (665, 21500), (668, 21518), (675, 21551), (677, 21557), (695, 21596), (729, 21650), (731, 21653), (742, 21674), (758, 21731), (813, 21899), (860, 22004), (862, 22010), (900, 22145),

Gene: Majeke\_19 Start: 16391, Stop: 18127, Start Num: 117

Candidate Starts for Majeke\_19:

(Start: 117 @16391 has 59 MA's), (178, 16472), (180, 16475), (220, 16526), (243, 16589), (246, 16595), (258, 16634), (272, 16667), (282, 16691), (344, 16811), (347, 16826), (356, 16850), (358, 16856), (386, 16940), (402, 16982), (418, 17021), (422, 17027), (452, 17066), (459, 17072), (470, 17096), (494, 17150), (503, 17171), (529, 17231), (573, 17309), (587, 17348), (598, 17381), (618, 17447), (627, 17471), (636, 17495), (647, 17525), (653, 17537), (735, 17639), (740, 17651), (742, 17654), (745, 17660), (747, 17669), (779, 17777), (805, 17861), (853, 17960), (877, 18017), (890, 18068), (907, 18116),

Gene: MajorMajor\_27 Start: 19074, Stop: 20864, Start Num: 144

Candidate Starts for MajorMajor\_27:

(94, 19008), (Start: 123 @19050 has 215 MA's), (Start: 144 @19074 has 603 MA's), (236, 19212), (242, 19227), (277, 19308), (278, 19311), (305, 19383), (306, 19386), (338, 19440), (341, 19446), (345, 19464), (365, 19524), (378, 19557), (380, 19563), (392, 19602), (417, 19644), (463, 19725), (467, 19728), (495, 19788), (546, 19914), (583, 19998), (597, 20040), (619, 20091), (636, 20121), (675, 20247), (707, 20310), (746, 20382), (750, 20397), (756, 20421), (781, 20496), (784, 20511), (813, 20595), (860, 20700), (862, 20706), (865, 20724), (873, 20751), (877, 20760),

Gene: Makemake\_27 Start: 22305, Stop: 24107, Start Num: 146

Candidate Starts for Makemake\_27:

(Start: 146 @22305 has 223 MA's), (Start: 161 @22326 has 4 MA's), (Start: 190 @22368 has 1 MA's), (216, 22413), (306, 22629), (332, 22674), (338, 22683), (349, 22722), (368, 22773), (369, 22776), (467, 22971), (500, 23040), (583, 23241), (584, 23244), (591, 23265), (635, 23361), (636, 23364), (638, 23370), (665, 23439), (668, 23457), (670, 23466), (677, 23496), (731, 23592), (746, 23625), (750, 23640), (793, 23781), (813, 23838), (862, 23949),

Gene: Malachai\_20 Start: 17128, Stop: 18774, Start Num: 195

Candidate Starts for Malachai\_20:

(172, 17092), (Start: 195 @17128 has 45 MA's), (244, 17230), (272, 17308), (308, 17407), (329, 17446), (357, 17527), (377, 17581), (382, 17596), (494, 17767), (506, 17797), (594, 17980), (601, 18004), (626, 18055), (658, 18148), (664, 18160), (694, 18205), (702, 18220), (757, 18352), (758, 18355), (788, 18454), (795, 18472), (813, 18523), (843, 18589), (872, 18652), (877, 18664),

Gene: MalagasyRose\_24 Start: 16589, Stop: 18388, Start Num: 91

Candidate Starts for MalagasyRose\_24:

(Start: 91 @16589 has 2 MA's), (120, 16640), (125, 16646), (127, 16649), (199, 16739), (208, 16748), (223, 16769), (230, 16790), (272, 16904), (287, 16943), (295, 16958), (297, 16961), (330, 17030), (355, 17102), (365, 17132), (369, 17141), (380, 17171), (382, 17177), (384, 17183), (392, 17210), (403, 17234), (438, 17282), (451, 17309), (483, 17381), (526, 17474), (541, 17486), (563, 17519), (564, 17522), (587, 17582), (602, 17630), (603, 17633), (640, 17714), (665, 17792), (670, 17819), (691, 17828), (760, 17969), (768, 17987), (810, 18122), (813, 18128), (838, 18185), (863, 18221), (887, 18308), (901, 18356), (913, 18377),

Gene: Malec\_29 Start: 20473, Stop: 22245, Start Num: 144

Candidate Starts for Malec\_29:

(Start: 123 @20449 has 215 MA's), (Start: 144 @20473 has 603 MA's), (Start: 235 @20608 has 1 MA's), (242, 20626), (277, 20707), (278, 20710), (286, 20740), (305, 20782), (306, 20785), (338, 20839), (341, 20845), (360, 20908), (365, 20923), (378, 20956), (388, 20989), (417, 21043), (463,

21124), (467, 21127), (481, 21157), (584, 21400), (631, 21505), (636, 21520), (677, 21652), (746, 21763), (750, 21778), (752, 21784), (770, 21838), (781, 21877), (784, 21892), (795, 21925), (862, 22087), (877, 22141),

Gene: Malibo\_20 Start: 16515, Stop: 18137, Start Num: 155

Candidate Starts for Malibo\_20:

(147, 16500), (Start: 155 @16515 has 4 MA's), (188, 16560), (219, 16611), (272, 16734), (274, 16737), (328, 16857), (348, 16911), (352, 16923), (362, 16953), (366, 16962), (375, 16983), (385, 17016), (395, 17043), (448, 17112), (454, 17130), (467, 17157), (474, 17175), (476, 17178), (482, 17190), (501, 17229), (505, 17241), (544, 17292), (547, 17298), (585, 17376), (653, 17529), (664, 17559), (665, 17562), (670, 17589), (679, 17625), (731, 17667), (755, 17730), (769, 17745), (782, 17775), (791, 17811), (795, 17820), (837, 17919), (863, 17967), (890, 18063), (898, 18093), (907, 18111),

Gene: Maliketh\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Maliketh\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Malinsilva\_31 Start: 20371, Stop: 22167, Start Num: 144

Candidate Starts for Malinsilva\_31:

(Start: 144 @20371 has 603 MA's), (Start: 190 @20428 has 1 MA's), (197, 20443), (219, 20476), (230, 20497), (Start: 235 @20512 has 1 MA's), (272, 20599), (277, 20611), (278, 20614), (306, 20689), (315, 20704), (336, 20740), (417, 20947), (481, 21061), (500, 21100), (532, 21187), (583, 21301), (591, 21325), (597, 21343), (636, 21424), (665, 21499), (668, 21517), (675, 21550), (677, 21556), (695, 21595), (729, 21649), (731, 21652), (742, 21673), (758, 21730), (813, 21898), (860, 22003), (862, 22009), (900, 22144),

Gene: Malisha\_21 Start: 18200, Stop: 19897, Start Num: 144

Candidate Starts for Malisha\_21:

(113, 18161), (Start: 144 @18200 has 603 MA's), (Start: 150 @18212 has 4 MA's), (Start: 153 @18215 has 11 MA's), (202, 18290), (219, 18311), (232, 18338), (239, 18353), (240, 18359), (241, 18362), (246, 18374), (263, 18410), (272, 18434), (277, 18446), (295, 18503), (302, 18524), (316, 18551), (331, 18578), (345, 18614), (382, 18719), (406, 18776), (414, 18794), (432, 18803), (436, 18809), (458, 18857), (469, 18887), (485, 18923), (489, 18929), (499, 18950), (500, 18953), (547, 19031), (549, 19034), (561, 19061), (574, 19088), (599, 19160), (618, 19199), (649, 19253), (670, 19325), (683, 19370), (736, 19433), (747, 19460), (749, 19463), (752, 19478), (788, 19562), (791, 19571), (793, 19574), (795, 19580), (801, 19595), (811, 19625), (814, 19631), (824, 19652), (825, 19655), (849, 19709), (862, 19739), (863, 19748), (879, 19799), (887, 19832), (891, 19844), (896, 19862),

Gene: Malithi\_19 Start: 16310, Stop: 18046, Start Num: 117

Candidate Starts for Malithi\_19:

(Start: 101 @16286 has 2 MA's), (Start: 117 @16310 has 59 MA's), (Start: 166 @16370 has 1 MA's), (178, 16391), (180, 16394), (246, 16514), (258, 16553), (272, 16586), (282, 16610), (344, 16730), (356, 16769), (358, 16775), (386, 16859), (388, 16865), (392, 16877), (402, 16901), (410, 16928), (422, 16946), (452, 16985), (459, 16991), (470, 17015), (494, 17069), (500, 17081), (503, 17090), (529, 17150), (573, 17228), (587, 17267), (598, 17300), (618, 17366), (624, 17381), (627, 17390), (636, 17414), (647, 17444), (653, 17456), (735, 17558), (740, 17570), (742, 17573), (745, 17579),

(747, 17588), (779, 17696), (805, 17780), (853, 17879), (890, 17987), (907, 18035),

Gene: Malthus\_25 Start: 18546, Stop: 20333, Start Num: 114

Candidate Starts for Malthus\_25:

(Start: 93 @18507 has 1 MA's), (Start: 109 @18537 has 26 MA's), (Start: 112 @18543 has 41 MA's), (Start: 114 @18546 has 139 MA's), (Start: 137 @18561 has 2 MA's), (Start: 168 @18603 has 32 MA's), (197, 18651), (Start: 227 @18690 has 2 MA's), (230, 18705), (236, 18723), (248, 18756), (258, 18786), (278, 18831), (282, 18849), (316, 18921), (321, 18927), (334, 18957), (336, 18960), (356, 19023), (360, 19035), (412, 19170), (423, 19188), (444, 19218), (448, 19224), (454, 19242), (468, 19272), (487, 19311), (564, 19437), (588, 19500), (655, 19701), (670, 19755), (708, 19800), (734, 19845), (748, 19869), (756, 19902), (768, 19935), (788, 20007), (793, 20019), (810, 20070), (813, 20076), (865, 20178), (901, 20304), (913, 20325),

Gene: Maminiaina\_29 Start: 21290, Stop: 23080, Start Num: 144

Candidate Starts for Maminiaina\_29:

(Start: 123 @21266 has 215 MA's), (Start: 144 @21290 has 603 MA's), (277, 21524), (278, 21527), (305, 21599), (306, 21602), (315, 21617), (338, 21656), (341, 21662), (365, 21740), (378, 21773), (417, 21860), (463, 21941), (467, 21944), (518, 22070), (576, 22193), (580, 22205), (584, 22217), (586, 22223), (597, 22256), (636, 22337), (675, 22463), (703, 22517), (706, 22523), (731, 22565), (736, 22574), (746, 22598), (750, 22613), (756, 22637), (770, 22673), (781, 22712), (784, 22727), (813, 22811), (860, 22916), (862, 22922), (873, 22967), (890, 23024),

Gene: Manasvini\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Manasvini\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: Manatee\_28 Start: 20835, Stop: 22637, Start Num: 146

Candidate Starts for Manatee\_28:

(Start: 146 @20835 has 223 MA's), (Start: 161 @20856 has 4 MA's), (Start: 190 @20898 has 1 MA's), (216, 20943), (306, 21159), (332, 21204), (338, 21213), (349, 21252), (368, 21303), (369, 21306), (467, 21501), (500, 21570), (583, 21771), (584, 21774), (591, 21795), (635, 21891), (636, 21894), (638, 21900), (665, 21969), (668, 21987), (670, 21996), (677, 22026), (731, 22122), (746, 22155), (750, 22170), (793, 22311), (813, 22368), (862, 22479), (909, 22632),

Gene: Manda\_25 Start: 20231, Stop: 21910, Start Num: 129

Candidate Starts for Manda\_25:

(Start: 129 @20231 has 79 MA's), (Start: 191 @20315 has 45 MA's), (Start: 235 @20393 has 1 MA's), (268, 20480), (274, 20495), (300, 20543), (324, 20582), (356, 20669), (368, 20702), (381, 20738), (390, 20768), (392, 20774), (422, 20843), (461, 20873), (466, 20885), (468, 20888), (494, 20945), (565, 21077), (567, 21083), (592, 21149), (594, 21155), (601, 21179), (618, 21227), (627, 21251), (631, 21260), (658, 21335), (717, 21386), (725, 21401), (782, 21563), (788, 21590), (799, 21620), (843, 21725), (880, 21803), (887, 21839), (890, 21848), (900, 21881), (907, 21896),

Gene: Mandlovu\_16 Start: 14904, Stop: 16613, Start Num: 123

Candidate Starts for Mandlovu\_16:

(Start: 123 @14904 has 215 MA's), (193, 14991), (Start: 227 @15036 has 2 MA's), (233, 15060), (271, 15165), (274, 15171), (281, 15189), (300, 15219), (348, 15324), (370, 15384), (378, 15405), (381, 15414), (388, 15438), (459, 15564), (465, 15579), (468, 15585), (484, 15621), (486, 15624), (492, 15636), (494, 15642), (511, 15690), (515, 15702), (521, 15708), (564, 15768), (568, 15780), (583,

15816), (587, 15828), (614, 15903), (618, 15912), (625, 15930), (627, 15936), (638, 15966), (710, 16071), (717, 16080), (720, 16083), (737, 16119), (761, 16197), (791, 16296), (799, 16317), (810, 16350), (826, 16380), (836, 16410), (841, 16419), (844, 16425), (860, 16440), (861, 16443), (866, 16467), (877, 16497), (882, 16509), (887, 16539), (900, 16581),

Gene: Mangethe\_19 Start: 16391, Stop: 18127, Start Num: 117

Candidate Starts for Mangethe\_19:

(Start: 117 @16391 has 59 MA's), (178, 16472), (180, 16475), (220, 16526), (243, 16589), (246, 16595), (258, 16634), (272, 16667), (282, 16691), (344, 16811), (347, 16826), (356, 16850), (358, 16856), (386, 16940), (402, 16982), (418, 17021), (422, 17027), (452, 17066), (459, 17072), (470, 17096), (494, 17150), (503, 17171), (529, 17231), (573, 17309), (587, 17348), (598, 17381), (618, 17447), (627, 17471), (636, 17495), (647, 17525), (653, 17537), (735, 17639), (740, 17651), (742, 17654), (745, 17660), (747, 17669), (779, 17777), (805, 17861), (853, 17960), (877, 18017), (890, 18068), (907, 18116),

Gene: Mantra\_16 Start: 14903, Stop: 16612, Start Num: 123

Candidate Starts for Mantra\_16:

(Start: 123 @14903 has 215 MA's), (193, 14990), (Start: 227 @15035 has 2 MA's), (233, 15059), (251, 15116), (271, 15164), (274, 15170), (281, 15188), (300, 15218), (348, 15323), (367, 15377), (370, 15383), (373, 15392), (381, 15413), (388, 15437), (402, 15473), (403, 15479), (418, 15512), (420, 15515), (424, 15524), (443, 15539), (448, 15545), (459, 15563), (465, 15578), (468, 15584), (475, 15602), (477, 15605), (484, 15620), (492, 15635), (494, 15641), (511, 15689), (515, 15701), (521, 15707), (564, 15767), (568, 15779), (583, 15815), (587, 15827), (614, 15902), (618, 15911), (625, 15929), (627, 15935), (638, 15965), (710, 16070), (720, 16082), (737, 16118), (761, 16196), (799, 16316), (810, 16349), (826, 16379), (829, 16391), (836, 16409), (839, 16415), (841, 16418), (844, 16424), (860, 16439), (861, 16442), (865, 16463), (866, 16466), (882, 16508), (887, 16538), (900, 16580), (901, 16586),

Gene: Manu\_30 Start: 20460, Stop: 22256, Start Num: 144

Candidate Starts for Manu\_30:

(Start: 144 @20460 has 603 MA's), (Start: 190 @20517 has 1 MA's), (197, 20532), (230, 20586), (Start: 235 @20601 has 1 MA's), (272, 20688), (277, 20700), (278, 20703), (306, 20778), (315, 20793), (417, 21036), (500, 21189), (532, 21276), (576, 21369), (583, 21390), (591, 21414), (595, 21426), (597, 21432), (636, 21513), (665, 21588), (668, 21606), (670, 21615), (675, 21639), (677, 21645), (682, 21660), (695, 21684), (729, 21738), (731, 21741), (742, 21762), (860, 22092), (862, 22098), (900, 22233),

Gene: MarQuardt\_29 Start: 20380, Stop: 22176, Start Num: 144

Candidate Starts for MarQuardt\_29:

(Start: 144 @20380 has 603 MA's), (Start: 190 @20437 has 1 MA's), (197, 20452), (219, 20485), (230, 20506), (Start: 235 @20521 has 1 MA's), (272, 20608), (277, 20620), (278, 20623), (306, 20698), (315, 20713), (336, 20749), (417, 20956), (481, 21070), (500, 21109), (532, 21196), (583, 21310), (591, 21334), (597, 21352), (636, 21433), (665, 21508), (668, 21526), (675, 21559), (677, 21565), (695, 21604), (729, 21658), (731, 21661), (742, 21682), (758, 21739), (813, 21907), (860, 22012), (862, 22018), (900, 22153),

Gene: Maravista\_16 Start: 14752, Stop: 16461, Start Num: 123

Candidate Starts for Maravista\_16:

(Start: 123 @14752 has 215 MA's), (193, 14839), (Start: 227 @14884 has 2 MA's), (233, 14908), (271, 15013), (274, 15019), (281, 15037), (300, 15067), (348, 15172), (370, 15232), (378, 15253), (381, 15262), (386, 15280), (388, 15286), (459, 15412), (465, 15427), (468, 15433), (484, 15469), (486, 15472), (492, 15484), (494, 15490), (511, 15538), (515, 15550), (521, 15556), (564, 15616), (568, 15628), (583, 15664), (587, 15676), (614, 15751), (618, 15760), (625, 15778), (627, 15784), (638,

15814), (710, 15919), (717, 15928), (720, 15931), (737, 15967), (761, 16045), (791, 16144), (799, 16165), (810, 16198), (826, 16228), (836, 16258), (841, 16267), (844, 16273), (860, 16288), (861, 16291), (866, 16315), (877, 16345), (882, 16357), (887, 16387), (900, 16429),

Gene: Marcell\_27 Start: 21325, Stop: 23127, Start Num: 146

Candidate Starts for Marcell\_27:

(Start: 146 @21325 has 223 MA's), (Start: 161 @21346 has 4 MA's), (Start: 190 @21388 has 1 MA's), (216, 21433), (306, 21649), (332, 21694), (338, 21703), (349, 21742), (368, 21793), (369, 21796), (467, 21991), (500, 22060), (583, 22261), (584, 22264), (591, 22285), (635, 22381), (636, 22384), (638, 22390), (665, 22459), (668, 22477), (670, 22486), (677, 22516), (731, 22612), (746, 22645), (750, 22660), (793, 22801), (813, 22858), (862, 22969), (909, 23122),

Gene: Marchesa\_27 Start: 19958, Stop: 21757, Start Num: 144

Candidate Starts for Marchesa\_27:

(Start: 144 @19958 has 603 MA's), (Start: 190 @20018 has 1 MA's), (230, 20087), (272, 20189), (277, 20201), (278, 20204), (306, 20279), (315, 20294), (318, 20297), (338, 20333), (384, 20468), (417, 20537), (481, 20651), (532, 20777), (583, 20891), (591, 20915), (595, 20927), (597, 20933), (636, 21014), (665, 21089), (668, 21107), (670, 21116), (675, 21140), (677, 21146), (682, 21161), (707, 21203), (726, 21230), (729, 21239), (731, 21242), (742, 21263), (746, 21275), (813, 21488), (860, 21593), (862, 21599), (900, 21734),

Gene: Marchy\_26 Start: 20630, Stop: 22432, Start Num: 146

Candidate Starts for Marchy\_26:

(Start: 146 @20630 has 223 MA's), (Start: 161 @20651 has 4 MA's), (Start: 190 @20693 has 1 MA's), (216, 20738), (306, 20954), (332, 20999), (338, 21008), (349, 21047), (368, 21098), (369, 21101), (467, 21296), (500, 21365), (583, 21566), (584, 21569), (591, 21590), (635, 21686), (636, 21689), (638, 21695), (665, 21764), (668, 21782), (670, 21791), (677, 21821), (731, 21917), (746, 21950), (750, 21965), (793, 22106), (813, 22163), (862, 22274),

Gene: Marcoliusprime\_19 Start: 15013, Stop: 16782, Start Num: 112

Candidate Starts for Marcoliusprime\_19:

(Start: 93 @14977 has 1 MA's), (Start: 109 @15007 has 26 MA's), (Start: 112 @15013 has 41 MA's), (Start: 135 @15028 has 7 MA's), (Start: 168 @15070 has 32 MA's), (197, 15118), (Start: 227 @15157 has 2 MA's), (230, 15172), (248, 15223), (258, 15253), (272, 15286), (278, 15298), (282, 15316), (316, 15388), (321, 15394), (356, 15490), (360, 15502), (395, 15604), (403, 15619), (423, 15655), (448, 15691), (468, 15739), (487, 15778), (499, 15802), (503, 15814), (564, 15904), (567, 15913), (655, 16159), (670, 16213), (714, 16267), (768, 16381), (772, 16390), (793, 16465), (810, 16516), (813, 16522), (852, 16603), (863, 16618), (881, 16672), (901, 16753), (913, 16774),

Gene: Mareelih\_99 Start: 59450, Stop: 61078, Start Num: 150

Candidate Starts for Mareelih\_99:

(Start: 150 @59450 has 4 MA's), (Start: 166 @59465 has 1 MA's), (Start: 167 @59468 has 1 MA's), (188, 59495), (222, 59552), (237, 59588), (250, 59621), (265, 59651), (267, 59654), (292, 59723), (296, 59729), (365, 59894), (381, 59936), (384, 59945), (386, 59954), (390, 59966), (460, 60086), (547, 60239), (579, 60299), (643, 60446), (647, 60467), (653, 60482), (673, 60560), (675, 60566), (755, 60683), (769, 60698), (788, 60755), (799, 60785), (810, 60818), (867, 60938), (907, 61067),

Gene: Margaret\_21 Start: 15469, Stop: 17157, Start Num: 144

Candidate Starts for Margaret\_21:

(113, 15439), (Start: 133 @15466 has 8 MA's), (Start: 144 @15469 has 603 MA's), (202, 15553), (264, 15676), (277, 15709), (290, 15754), (356, 15910), (365, 15937), (377, 15967), (406, 16039), (436, 16069), (442, 16081), (454, 16108), (481, 16174), (513, 16255), (549, 16297), (553, 16306), (561, 16324), (581, 16369), (610, 16453), (634, 16489), (635, 16492), (636, 16495), (638, 16501), (643,

16510), (650, 16528), (668, 16585), (747, 16714), (750, 16726), (754, 16741), (766, 16753), (791, 16825), (793, 16828), (794, 16831), (799, 16846), (829, 16927), (862, 16996), (863, 17005), (900, 17134), (907, 17149),

Gene: Marge\_28 Start: 21725, Stop: 23527, Start Num: 146

Candidate Starts for Marge\_28:

(Start: 146 @21725 has 223 MA's), (Start: 161 @21746 has 4 MA's), (Start: 190 @21788 has 1 MA's), (216, 21833), (306, 22049), (332, 22094), (338, 22103), (349, 22142), (368, 22193), (369, 22196), (406, 22289), (467, 22391), (500, 22460), (583, 22661), (584, 22664), (591, 22685), (635, 22781), (636, 22784), (638, 22790), (665, 22859), (668, 22877), (670, 22886), (677, 22916), (731, 23012), (746, 23045), (750, 23060), (793, 23201), (813, 23258), (862, 23369), (909, 23522),

Gene: Margo\_28 Start: 20481, Stop: 22280, Start Num: 144

Candidate Starts for Margo\_28:

(Start: 144 @20481 has 603 MA's), (Start: 190 @20541 has 1 MA's), (230, 20610), (272, 20712), (277, 20724), (278, 20727), (306, 20802), (315, 20817), (338, 20856), (384, 20991), (417, 21060), (481, 21174), (532, 21300), (583, 21414), (591, 21438), (595, 21450), (597, 21456), (636, 21537), (665, 21612), (668, 21630), (670, 21639), (675, 21663), (677, 21669), (682, 21684), (703, 21717), (729, 21762), (731, 21765), (742, 21786), (782, 21915), (813, 22011), (860, 22116), (862, 22122), (900, 22257),

Gene: Maridalia\_18 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Maridalia\_18:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: Marie\_29 Start: 20378, Stop: 22174, Start Num: 144

Candidate Starts for Marie\_29:

(Start: 144 @20378 has 603 MA's), (Start: 190 @20435 has 1 MA's), (197, 20450), (219, 20483), (230, 20504), (Start: 235 @20519 has 1 MA's), (272, 20606), (277, 20618), (278, 20621), (306, 20696), (315, 20711), (336, 20747), (417, 20954), (481, 21068), (500, 21107), (532, 21194), (583, 21308), (591, 21332), (597, 21350), (636, 21431), (665, 21506), (668, 21524), (675, 21557), (677, 21563), (695, 21602), (729, 21656), (731, 21659), (742, 21680), (758, 21737), (813, 21905), (860, 22010), (862, 22016), (900, 22151),

Gene: Marietta\_43 Start: 27926, Stop: 29506, Start Num: 194

Candidate Starts for Marietta\_43:

(Start: 170 @27890 has 87 MA's), (Start: 177 @27902 has 1 MA's), (Start: 194 @27926 has 1 MA's), (236, 28004), (306, 28187), (340, 28244), (343, 28256), (347, 28271), (372, 28337), (377, 28352), (386, 28376), (432, 28463), (436, 28469), (449, 28493), (493, 28553), (505, 28583), (511, 28604), (560, 28709), (571, 28730), (607, 28817), (635, 28865), (673, 28991), (688, 29027), (791, 29192), (798, 29210), (809, 29246), (885, 29420), (887, 29432), (906, 29489),

Gene: Marius\_30 Start: 20460, Stop: 22256, Start Num: 144

Candidate Starts for Marius\_30:

(Start: 144 @20460 has 603 MA's), (Start: 190 @20517 has 1 MA's), (197, 20532), (230, 20586), (Start: 235 @20601 has 1 MA's), (272, 20688), (277, 20700), (278, 20703), (306, 20778), (315, 20793), (417, 21036), (500, 21189), (532, 21276), (583, 21390), (591, 21414), (595, 21426), (597, 21432), (636, 21513), (665, 21588), (668, 21606), (670, 21615), (675, 21639), (677, 21645), (695, 21684), (729, 21738), (731, 21741), (742, 21762), (860, 22092), (862, 22098), (900, 22233),

Gene: MarkPhew\_23 Start: 16287, Stop: 18053, Start Num: 114

Candidate Starts for MarkPhew\_23:

(Start: 93 @16248 has 1 MA's), (Start: 109 @16278 has 26 MA's), (Start: 114 @16287 has 139 MA's), (140, 16317), (230, 16458), (248, 16509), (272, 16572), (316, 16674), (321, 16680), (334, 16710), (362, 16797), (378, 16836), (393, 16884), (400, 16902), (423, 16941), (424, 16944), (438, 16959), (444, 16971), (448, 16977), (454, 16995), (465, 17019), (468, 17025), (481, 17052), (564, 17190), (572, 17208), (636, 17370), (641, 17382), (655, 17430), (698, 17505), (714, 17538), (719, 17544), (748, 17589), (756, 17622), (758, 17628), (768, 17655), (793, 17739), (810, 17790), (863, 17889), (890, 17985), (913, 18045),

Gene: Marker\_17 Start: 14655, Stop: 16364, Start Num: 123

Candidate Starts for Marker\_17:

(Start: 123 @14655 has 215 MA's), (193, 14742), (Start: 227 @14787 has 2 MA's), (233, 14811), (271, 14916), (274, 14922), (281, 14940), (300, 14970), (348, 15075), (370, 15135), (378, 15156), (381, 15165), (388, 15189), (418, 15264), (459, 15315), (465, 15330), (468, 15336), (484, 15372), (486, 15375), (492, 15387), (494, 15393), (511, 15441), (515, 15453), (521, 15459), (564, 15519), (568, 15531), (583, 15567), (587, 15579), (614, 15654), (618, 15663), (625, 15681), (627, 15687), (638, 15717), (710, 15822), (720, 15834), (737, 15870), (761, 15948), (791, 16047), (799, 16068), (810, 16101), (826, 16131), (836, 16161), (841, 16170), (844, 16176), (860, 16191), (861, 16194), (866, 16218), (882, 16260), (900, 16332),

Gene: Marmie\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Marmie\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Maroc7\_26 Start: 20829, Stop: 22631, Start Num: 146

Candidate Starts for Maroc7\_26:

(Start: 146 @20829 has 223 MA's), (Start: 161 @20850 has 4 MA's), (Start: 190 @20892 has 1 MA's), (216, 20937), (306, 21153), (332, 21198), (338, 21207), (349, 21246), (368, 21297), (369, 21300), (467, 21495), (500, 21564), (583, 21765), (584, 21768), (591, 21789), (635, 21885), (636, 21888), (638, 21894), (665, 21963), (668, 21981), (670, 21990), (677, 22020), (731, 22116), (746, 22149), (750, 22164), (793, 22305), (813, 22362), (862, 22473),

Gene: Marsha\_27 Start: 21951, Stop: 23753, Start Num: 146

Candidate Starts for Marsha\_27:

(Start: 146 @21951 has 223 MA's), (Start: 161 @21972 has 4 MA's), (Start: 190 @22014 has 1 MA's), (216, 22059), (306, 22275), (332, 22320), (338, 22329), (349, 22368), (368, 22419), (369, 22422), (406, 22515), (467, 22617), (500, 22686), (583, 22887), (584, 22890), (591, 22911), (635, 23007), (636, 23010), (638, 23016), (665, 23085), (668, 23103), (670, 23112), (677, 23142), (731, 23238), (746, 23271), (750, 23286), (793, 23427), (813, 23484), (862, 23595),

Gene: Marshawn\_24 Start: 16905, Stop: 18671, Start Num: 114

Candidate Starts for Marshawn\_24:

(Start: 93 @16866 has 1 MA's), (Start: 109 @16896 has 26 MA's), (Start: 114 @16905 has 139 MA's), (Start: 117 @16911 has 59 MA's), (140, 16935), (Start: 227 @17061 has 2 MA's), (230, 17076), (236, 17094), (258, 17157), (272, 17190), (278, 17202), (282, 17220), (316, 17292), (347, 17370), (362, 17415), (368, 17427), (378, 17454), (400, 17520), (423, 17559), (424, 17562), (438, 17577), (444,



17589), (448, 17595), (465, 17637), (468, 17643), (564, 17808), (572, 17826), (593, 17886), (603, 17916), (618, 17943), (628, 17967), (636, 17988), (641, 18000), (655, 18048), (698, 18123), (719, 18162), (756, 18240), (758, 18246), (762, 18261), (768, 18273), (772, 18282), (793, 18357), (810, 18408), (863, 18507), (896, 18624), (901, 18642), (913, 18663),

Gene: Marshmallow\_24 Start: 19829, Stop: 21424, Start Num: 191

Candidate Starts for Marshmallow\_24:

(Start: 129 @19745 has 79 MA's), (Start: 191 @19829 has 45 MA's), (Start: 235 @19907 has 1 MA's), (268, 19994), (274, 20009), (300, 20057), (324, 20096), (356, 20183), (368, 20216), (381, 20252), (390, 20282), (392, 20288), (422, 20357), (461, 20387), (466, 20399), (468, 20402), (494, 20459), (565, 20591), (567, 20597), (592, 20663), (594, 20669), (601, 20693), (618, 20741), (627, 20765), (631, 20774), (658, 20849), (717, 20900), (725, 20915), (782, 21077), (788, 21104), (799, 21134), (843, 21239), (880, 21317), (887, 21353), (890, 21362), (900, 21395), (907, 21410),

Gene: Marteena\_20 Start: 17566, Stop: 19272, Start Num: 111

Candidate Starts for Marteena\_20:

(Start: 95 @17542 has 1 MA's), (Start: 111 @17566 has 24 MA's), (192, 17671), (217, 17713), (251, 17788), (303, 17902), (365, 18049), (368, 18055), (384, 18100), (459, 18238), (497, 18313), (635, 18595), (644, 18616), (668, 18691), (715, 18778), (739, 18814), (750, 18847), (752, 18853), (783, 18919), (793, 18949), (860, 19105), (862, 19111), (865, 19129), (897, 19240),

Gene: Martik\_16 Start: 14813, Stop: 16522, Start Num: 123

Candidate Starts for Martik\_16:

(Start: 123 @14813 has 215 MA's), (193, 14900), (Start: 227 @14945 has 2 MA's), (233, 14969), (271, 15074), (274, 15080), (281, 15098), (300, 15128), (348, 15233), (367, 15287), (370, 15293), (373, 15302), (381, 15323), (388, 15347), (402, 15383), (403, 15389), (418, 15422), (420, 15425), (424, 15434), (443, 15449), (448, 15455), (459, 15473), (465, 15488), (468, 15494), (475, 15512), (477, 15515), (484, 15530), (492, 15545), (494, 15551), (511, 15599), (515, 15611), (521, 15617), (564, 15677), (568, 15689), (583, 15725), (587, 15737), (614, 15812), (618, 15821), (625, 15839), (627, 15845), (638, 15875), (710, 15980), (720, 15992), (737, 16028), (761, 16106), (799, 16226), (810, 16259), (826, 16289), (829, 16301), (836, 16319), (839, 16325), (841, 16328), (844, 16334), (860, 16349), (861, 16352), (865, 16373), (866, 16376), (882, 16418), (887, 16448), (900, 16490), (901, 16496),

Gene: MaryBeth\_27 Start: 21259, Stop: 23061, Start Num: 146

Candidate Starts for MaryBeth\_27:

(Start: 146 @21259 has 223 MA's), (Start: 161 @21280 has 4 MA's), (Start: 190 @21322 has 1 MA's), (216, 21367), (306, 21583), (332, 21628), (338, 21637), (368, 21727), (369, 21730), (406, 21823), (467, 21925), (500, 21994), (579, 22183), (583, 22195), (584, 22198), (591, 22219), (635, 22315), (636, 22318), (638, 22324), (665, 22393), (668, 22411), (670, 22420), (677, 22450), (731, 22546), (746, 22579), (750, 22594), (793, 22735), (813, 22792), (862, 22903),

Gene: MarysWell\_23 Start: 19695, Stop: 21503, Start Num: 132

Candidate Starts for MarysWell\_23:

(Start: 132 @19695 has 45 MA's), (Start: 144 @19707 has 603 MA's), (222, 19812), (236, 19845), (278, 19944), (306, 20019), (315, 20034), (336, 20070), (360, 20142), (365, 20157), (380, 20196), (388, 20223), (430, 20283), (481, 20391), (495, 20421), (499, 20427), (553, 20562), (579, 20619), (580, 20622), (583, 20631), (597, 20673), (602, 20691), (635, 20751), (636, 20754), (668, 20847), (670, 20856), (675, 20880), (729, 20988), (746, 21024), (813, 21234), (859, 21336), (862, 21345), (893, 21459), (900, 21480), (902, 21489),

Gene: Maselop\_45 Start: 31376, Stop: 32950, Start Num: 173

Candidate Starts for Maselop\_45:

(Start: 173 @31376 has 7 MA's), (179, 31385), (219, 31439), (231, 31463), (236, 31466), (348, 31736), (372, 31799), (377, 31814), (442, 31931), (450, 31946), (493, 32003), (498, 32012), (511, 32054), (518, 32075), (534, 32105), (561, 32162), (596, 32237), (644, 32333), (673, 32438), (674, 32441), (683, 32468), (752, 32546), (776, 32585), (829, 32741), (867, 32807),

Gene: Matteo\_17 Start: 14694, Stop: 16403, Start Num: 171

Candidate Starts for Matteo\_17:

(70, 14523), (83, 14559), (Start: 171 @14694 has 40 MA's), (237, 14811), (259, 14883), (262, 14886), (276, 14922), (287, 14961), (347, 15084), (355, 15105), (377, 15174), (378, 15177), (440, 15309), (462, 15363), (500, 15444), (519, 15504), (521, 15510), (607, 15669), (618, 15687), (624, 15702), (637, 15726), (665, 15798), (666, 15801), (669, 15822), (788, 16056), (794, 16071), (807, 16113), (847, 16206), (849, 16209), (865, 16257), (874, 16287), (880, 16299),

Gene: Mattes\_16 Start: 14804, Stop: 16513, Start Num: 123

Candidate Starts for Mattes\_16:

(Start: 123 @14804 has 215 MA's), (193, 14891), (Start: 227 @14936 has 2 MA's), (233, 14960), (251, 15017), (271, 15065), (274, 15071), (281, 15089), (300, 15119), (348, 15224), (367, 15278), (370, 15284), (373, 15293), (381, 15314), (388, 15338), (402, 15374), (403, 15380), (418, 15413), (420, 15416), (424, 15425), (443, 15440), (448, 15446), (459, 15464), (465, 15479), (468, 15485), (475, 15503), (477, 15506), (484, 15521), (492, 15536), (494, 15542), (511, 15590), (515, 15602), (521, 15608), (564, 15668), (568, 15680), (583, 15716), (587, 15728), (614, 15803), (618, 15812), (625, 15830), (627, 15836), (638, 15866), (710, 15971), (720, 15983), (737, 16019), (761, 16097), (799, 16217), (810, 16250), (826, 16280), (829, 16292), (836, 16310), (839, 16316), (841, 16319), (844, 16325), (860, 16340), (861, 16343), (865, 16364), (866, 16367), (882, 16409), (887, 16439), (900, 16481), (901, 16487),

Gene: Maverick\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Maverick\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Maxo\_27 Start: 19825, Stop: 21603, Start Num: 144

Candidate Starts for Maxo\_27:

(Start: 123 @19801 has 215 MA's), (Start: 144 @19825 has 603 MA's), (Start: 190 @19882 has 1 MA's), (222, 19936), (230, 19951), (236, 19969), (272, 20053), (277, 20065), (278, 20068), (306, 20143), (315, 20158), (338, 20197), (378, 20314), (417, 20401), (463, 20482), (489, 20530), (500, 20554), (532, 20641), (553, 20686), (584, 20758), (591, 20779), (597, 20797), (636, 20878), (668, 20971), (670, 20980), (675, 21004), (677, 21010), (687, 21034), (731, 21088), (742, 21109), (756, 21160), (763, 21184), (782, 21238), (813, 21334), (860, 21439), (863, 21454), (894, 21562), (900, 21580),

Gene: Maxxinista\_25 Start: 19297, Stop: 20892, Start Num: 191

Candidate Starts for Maxxinista\_25:

(Start: 129 @19213 has 79 MA's), (Start: 191 @19297 has 45 MA's), (Start: 235 @19375 has 1 MA's), (268, 19462), (274, 19477), (300, 19525), (324, 19564), (356, 19651), (368, 19684), (381, 19720), (390, 19750), (392, 19756), (422, 19825), (461, 19855), (466, 19867), (468, 19870), (494, 19927), (565, 20059), (567, 20065), (592, 20131), (594, 20137), (601, 20161), (618, 20209), (627, 20233), (631, 20242), (658, 20317), (717, 20368), (725, 20383), (782, 20545), (788, 20572), (799, 20602),

(843, 20707), (880, 20785), (887, 20821), (890, 20830), (900, 20863), (907, 20878),

Gene: Mayweather\_19 Start: 16040, Stop: 17734, Start Num: 144

Candidate Starts for Mayweather\_19:

(Start: 133 @16037 has 8 MA's), (Start: 144 @16040 has 603 MA's), (214, 16139), (236, 16181), (243, 16202), (288, 16319), (336, 16421), (365, 16508), (377, 16538), (385, 16565), (406, 16610), (417, 16628), (436, 16643), (444, 16658), (465, 16715), (481, 16748), (487, 16760), (501, 16790), (539, 16847), (546, 16865), (560, 16895), (574, 16925), (580, 16940), (596, 16988), (617, 17039), (636, 17075), (643, 17090), (650, 17108), (668, 17165), (747, 17294), (750, 17306), (791, 17405), (793, 17408), (799, 17426), (824, 17486), (829, 17504), (842, 17531), (862, 17573), (902, 17720), (907, 17726),

Gene: Mazhar510\_27 Start: 19828, Stop: 21606, Start Num: 144

Candidate Starts for Mazhar510\_27:

(Start: 123 @19804 has 215 MA's), (Start: 144 @19828 has 603 MA's), (Start: 190 @19885 has 1 MA's), (222, 19939), (230, 19954), (236, 19972), (272, 20056), (277, 20068), (278, 20071), (306, 20146), (315, 20161), (338, 20200), (378, 20317), (417, 20404), (463, 20485), (489, 20533), (500, 20557), (532, 20644), (553, 20689), (584, 20761), (591, 20782), (597, 20800), (636, 20881), (668, 20974), (670, 20983), (675, 21007), (677, 21013), (687, 21037), (731, 21091), (742, 21112), (756, 21163), (763, 21187), (782, 21241), (813, 21337), (860, 21442), (863, 21457), (894, 21565), (900, 21583),

Gene: Mbo4\_17 Start: 15757, Stop: 17310, Start Num: 170

Candidate Starts for Mbo4\_17:

(83, 15625), (Start: 170 @15757 has 87 MA's), (307, 16027), (331, 16066), (369, 16177), (441, 16333), (525, 16435), (554, 16471), (571, 16507), (607, 16594), (618, 16612), (633, 16639), (652, 16690), (781, 16933), (874, 17194), (881, 17209), (893, 17263),

Gene: McFly\_31 Start: 19976, Stop: 21748, Start Num: 144

Candidate Starts for McFly\_31:

(94, 19910), (Start: 123 @19952 has 215 MA's), (Start: 144 @19976 has 603 MA's), (263, 20174), (278, 20213), (305, 20285), (306, 20288), (318, 20306), (338, 20342), (341, 20348), (378, 20459), (380, 20465), (392, 20504), (417, 20546), (448, 20585), (463, 20627), (467, 20630), (495, 20690), (592, 20927), (597, 20942), (636, 21023), (677, 21155), (750, 21281), (765, 21332), (770, 21341), (781, 21380), (782, 21383), (784, 21395), (813, 21479), (860, 21584), (862, 21590), (900, 21725),

Gene: McGuire\_28 Start: 21127, Stop: 22929, Start Num: 146

Candidate Starts for McGuire\_28:

(Start: 146 @21127 has 223 MA's), (Start: 161 @21148 has 4 MA's), (Start: 190 @21190 has 1 MA's), (216, 21235), (306, 21451), (332, 21496), (338, 21505), (368, 21595), (369, 21598), (406, 21691), (467, 21793), (500, 21862), (583, 22063), (584, 22066), (591, 22087), (635, 22183), (636, 22186), (638, 22192), (665, 22261), (668, 22279), (670, 22288), (677, 22318), (731, 22414), (746, 22447), (750, 22462), (793, 22603), (813, 22660), (862, 22771), (909, 22924),

Gene: McKinley\_37 Start: 31773, Stop: 33536, Start Num: 97

Candidate Starts for McKinley\_37:

(90, 31755), (Start: 97 @31773 has 73 MA's), (Start: 121 @31809 has 1 MA's), (219, 31947), (262, 32043), (265, 32052), (288, 32121), (306, 32172), (332, 32217), (341, 32232), (368, 32313), (384, 32358), (386, 32367), (445, 32457), (458, 32487), (461, 32502), (472, 32526), (487, 32556), (551, 32661), (597, 32778), (607, 32796), (613, 32811), (631, 32841), (635, 32853), (636, 32856), (647, 32883), (793, 33207), (794, 33210), (810, 33258), (824, 33285), (832, 33312), (860, 33366), (866, 33393), (909, 33531),

Gene: McMater\_23 Start: 16514, Stop: 18280, Start Num: 114

Candidate Starts for McMater\_23:

(Start: 109 @16505 has 26 MA's), (Start: 114 @16514 has 139 MA's), (Start: 117 @16520 has 59 MA's), (140, 16544), (Start: 168 @16583 has 32 MA's), (Start: 227 @16670 has 2 MA's), (230, 16685), (236, 16703), (248, 16736), (316, 16901), (334, 16937), (360, 17015), (362, 17024), (400, 17129), (403, 17132), (424, 17171), (444, 17198), (448, 17204), (465, 17246), (468, 17252), (481, 17279), (564, 17417), (572, 17435), (603, 17525), (618, 17552), (632, 17585), (655, 17657), (670, 17711), (704, 17747), (719, 17771), (748, 17816), (756, 17849), (760, 17864), (768, 17882), (772, 17891), (793, 17966), (810, 18017), (813, 18023), (865, 18125), (901, 18251), (902, 18254), (913, 18272),

Gene: Mcklovin\_20 Start: 20071, Stop: 21651, Start Num: 170

Candidate Starts for Mcklovin\_20:

(88, 19954), (Start: 170 @20071 has 87 MA's), (298, 20329), (307, 20350), (340, 20404), (351, 20443), (369, 20500), (377, 20521), (501, 20692), (507, 20710), (514, 20734), (521, 20755), (554, 20797), (592, 20878), (636, 20968), (669, 21070), (670, 21073), (687, 21127), (751, 21217), (863, 21496), (865, 21505), (874, 21535),

Gene: Mdavu\_19 Start: 16685, Stop: 18451, Start Num: 114

Candidate Starts for Mdavu\_19:

(Start: 114 @16685 has 139 MA's), (Start: 117 @16691 has 59 MA's), (140, 16715), (Start: 227 @16841 has 2 MA's), (230, 16856), (236, 16874), (258, 16937), (316, 17072), (321, 17078), (360, 17186), (362, 17195), (400, 17300), (444, 17369), (448, 17375), (463, 17411), (468, 17423), (499, 17486), (564, 17588), (572, 17606), (587, 17648), (588, 17651), (632, 17756), (655, 17828), (714, 17936), (719, 17942), (748, 17987), (762, 18041), (772, 18062), (793, 18137), (810, 18188), (863, 18287), (867, 18302), (880, 18338), (890, 18383), (901, 18422), (902, 18425), (913, 18443),

Gene: MeaningOfLife\_23 Start: 17124, Stop: 18890, Start Num: 114

Candidate Starts for MeaningOfLife\_23:

(Start: 114 @17124 has 139 MA's), (140, 17154), (236, 17313), (248, 17346), (258, 17376), (272, 17409), (278, 17421), (316, 17511), (337, 17553), (360, 17625), (362, 17634), (378, 17673), (392, 17718), (400, 17739), (403, 17742), (438, 17796), (448, 17814), (465, 17856), (468, 17862), (481, 17889), (564, 18027), (572, 18045), (587, 18087), (593, 18105), (603, 18135), (618, 18162), (655, 18267), (748, 18426), (757, 18462), (768, 18492), (772, 18501), (793, 18576), (810, 18627), (890, 18822), (901, 18861), (902, 18864), (913, 18882),

Gene: Medusa\_27 Start: 19828, Stop: 21606, Start Num: 144

Candidate Starts for Medusa\_27:

(Start: 123 @19804 has 215 MA's), (Start: 144 @19828 has 603 MA's), (Start: 190 @19885 has 1 MA's), (222, 19939), (230, 19954), (236, 19972), (272, 20056), (277, 20068), (278, 20071), (306, 20146), (315, 20161), (338, 20200), (378, 20317), (417, 20404), (463, 20485), (489, 20533), (500, 20557), (532, 20644), (553, 20689), (584, 20761), (591, 20782), (597, 20800), (636, 20881), (668, 20974), (670, 20983), (675, 21007), (677, 21013), (687, 21037), (731, 21091), (742, 21112), (756, 21163), (763, 21187), (782, 21241), (813, 21337), (860, 21442), (863, 21457), (894, 21565), (900, 21583),

Gene: MeeZee\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for MeeZee\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900,

21582),

Gene: Megiddo\_19 Start: 16273, Stop: 18009, Start Num: 117

Candidate Starts for Megiddo\_19:

(Start: 101 @16249 has 2 MA's), (Start: 117 @16273 has 59 MA's), (Start: 166 @16333 has 1 MA's), (178, 16354), (180, 16357), (246, 16477), (258, 16516), (272, 16549), (282, 16573), (344, 16693), (356, 16732), (358, 16738), (386, 16822), (388, 16828), (392, 16840), (402, 16864), (410, 16891), (422, 16909), (452, 16948), (459, 16954), (470, 16978), (494, 17032), (500, 17044), (503, 17053), (529, 17113), (573, 17191), (587, 17230), (598, 17263), (618, 17329), (627, 17353), (636, 17377), (647, 17407), (735, 17521), (740, 17533), (745, 17542), (747, 17551), (779, 17659), (805, 17743), (853, 17842), (890, 17950), (907, 17998),

Gene: Megsy\_23 Start: 17125, Stop: 18891, Start Num: 114

Candidate Starts for Megsy\_23:

(Start: 114 @17125 has 139 MA's), (140, 17155), (236, 17314), (248, 17347), (258, 17377), (272, 17410), (278, 17422), (316, 17512), (337, 17554), (357, 17617), (360, 17626), (362, 17635), (378, 17674), (392, 17719), (400, 17740), (403, 17743), (448, 17815), (465, 17857), (468, 17863), (481, 17890), (564, 18028), (572, 18046), (587, 18088), (593, 18106), (603, 18136), (618, 18163), (655, 18268), (748, 18427), (757, 18463), (768, 18493), (772, 18502), (793, 18577), (810, 18628), (890, 18823), (901, 18862), (902, 18865), (913, 18883),

Gene: MelBins\_34 Start: 29286, Stop: 30911, Start Num: 160

Candidate Starts for MelBins\_34:

(Start: 160 @29286 has 17 MA's), (169, 29298), (Start: 191 @29331 has 45 MA's), (Start: 195 @29340 has 45 MA's), (200, 29352), (222, 29382), (236, 29415), (272, 29499), (277, 29511), (307, 29586), (341, 29646), (348, 29676), (449, 29883), (460, 29913), (482, 29958), (489, 29970), (508, 30018), (547, 30066), (583, 30138), (595, 30171), (596, 30174), (609, 30213), (635, 30252), (664, 30339), (665, 30342), (711, 30420), (747, 30480), (769, 30525), (795, 30606), (815, 30660), (860, 30741), (863, 30756), (900, 30885), (907, 30900),

Gene: Melba\_19 Start: 16650, Stop: 18296, Start Num: 195

Candidate Starts for Melba\_19:

(172, 16614), (Start: 195 @16650 has 45 MA's), (244, 16752), (272, 16830), (274, 16833), (308, 16929), (329, 16968), (357, 17049), (377, 17103), (382, 17118), (494, 17289), (506, 17319), (594, 17502), (601, 17526), (602, 17529), (626, 17577), (658, 17670), (664, 17682), (694, 17727), (702, 17742), (757, 17874), (758, 17877), (788, 17976), (795, 17994), (813, 18045), (843, 18111), (872, 18174), (877, 18186),

Gene: Melissauren88\_16 Start: 14837, Stop: 16546, Start Num: 123

Candidate Starts for Melissauren88\_16:

(Start: 123 @14837 has 215 MA's), (193, 14924), (Start: 227 @14969 has 2 MA's), (233, 14993), (271, 15098), (274, 15104), (281, 15122), (300, 15152), (348, 15257), (370, 15317), (378, 15338), (381, 15347), (386, 15365), (388, 15371), (459, 15497), (465, 15512), (468, 15518), (484, 15554), (486, 15557), (492, 15569), (494, 15575), (511, 15623), (515, 15635), (521, 15641), (564, 15701), (568, 15713), (583, 15749), (587, 15761), (614, 15836), (618, 15845), (625, 15863), (627, 15869), (638, 15899), (710, 16004), (717, 16013), (720, 16016), (737, 16052), (761, 16130), (791, 16229), (799, 16250), (810, 16283), (826, 16313), (836, 16343), (841, 16352), (844, 16358), (860, 16373), (861, 16376), (866, 16400), (877, 16430), (882, 16442), (887, 16472), (900, 16514),

Gene: Mellie\_18 Start: 16411, Stop: 18057, Start Num: 195

Candidate Starts for Mellie\_18:

(172, 16375), (Start: 195 @16411 has 45 MA's), (244, 16513), (272, 16591), (274, 16594), (308, 16690), (329, 16729), (349, 16789), (357, 16810), (377, 16864), (382, 16879), (460, 16975), (494,

17050), (506, 17080), (594, 17263), (601, 17287), (626, 17338), (658, 17431), (664, 17443), (694, 17488), (702, 17503), (757, 17635), (758, 17638), (788, 17737), (795, 17755), (813, 17806), (839, 17866), (843, 17872), (872, 17935), (877, 17947),

Gene: Melville\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Melville\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Melvin\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Melvin\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: MerCougar\_42 Start: 30743, Stop: 32359, Start Num: 170

Candidate Starts for MerCougar\_42:

(Start: 170 @30743 has 87 MA's), (236, 30857), (265, 30941), (347, 31124), (372, 31190), (377, 31205), (386, 31229), (387, 31232), (432, 31316), (449, 31346), (490, 31397), (493, 31406), (501, 31424), (510, 31454), (518, 31478), (560, 31562), (571, 31583), (593, 31631), (607, 31670), (635, 31718), (673, 31844), (688, 31880), (776, 31991), (795, 32054), (799, 32066), (877, 32243), (887, 32285), (906, 32342),

Gene: Mercurio\_20 Start: 17337, Stop: 19148, Start Num: 85

Candidate Starts for Mercurio\_20:

(15, 16770), (68, 17289), (75, 17307), (Start: 85 @17337 has 1 MA's), (197, 17487), (230, 17541), (248, 17592), (258, 17622), (269, 17646), (300, 17724), (337, 17799), (448, 18069), (451, 18078), (468, 18117), (487, 18156), (501, 18186), (524, 18240), (564, 18282), (618, 18423), (655, 18528), (665, 18555), (724, 18648), (756, 18720), (777, 18783), (782, 18798), (787, 18822), (810, 18888), (863, 18987), (890, 19083), (904, 19128),

Gene: MetalQZJ\_27 Start: 21259, Stop: 23061, Start Num: 146

Candidate Starts for MetalQZJ\_27:

(Start: 146 @21259 has 223 MA's), (Start: 161 @21280 has 4 MA's), (Start: 190 @21322 has 1 MA's), (216, 21367), (306, 21583), (332, 21628), (338, 21637), (368, 21727), (369, 21730), (406, 21823), (467, 21925), (500, 21994), (579, 22183), (583, 22195), (584, 22198), (591, 22219), (635, 22315), (636, 22318), (638, 22324), (665, 22393), (668, 22411), (670, 22420), (677, 22450), (731, 22546), (746, 22579), (750, 22594), (793, 22735), (813, 22792), (862, 22903),

Gene: Methuselah\_28 Start: 20462, Stop: 22258, Start Num: 144

Candidate Starts for Methuselah\_28:

(Start: 144 @20462 has 603 MA's), (Start: 190 @20519 has 1 MA's), (197, 20534), (219, 20567), (230, 20588), (Start: 235 @20603 has 1 MA's), (272, 20690), (277, 20702), (278, 20705), (306, 20780), (315, 20795), (336, 20831), (417, 21038), (481, 21152), (500, 21191), (532, 21278), (583, 21392),

(591, 21416), (597, 21434), (636, 21515), (665, 21590), (668, 21608), (675, 21641), (677, 21647), (695, 21686), (729, 21740), (731, 21743), (742, 21764), (758, 21821), (813, 21989), (860, 22094), (862, 22100), (900, 22235),

Gene: Meyran\_21 Start: 18916, Stop: 20562, Start Num: 157

Candidate Starts for Meyran\_21:

(63, 18715), (77, 18775), (Start: 121 @18868 has 1 MA's), (Start: 149 @18904 has 8 MA's), (Start: 157 @18916 has 4 MA's), (230, 19030), (232, 19036), (249, 19084), (284, 19180), (287, 19186), (337, 19297), (341, 19306), (347, 19333), (349, 19339), (350, 19342), (358, 19363), (444, 19534), (445, 19537), (474, 19603), (482, 19618), (555, 19702), (559, 19711), (576, 19753), (583, 19774), (599, 19822), (602, 19834), (610, 19861), (641, 19930), (662, 19999), (670, 20032), (716, 20089), (757, 20140), (780, 20209), (795, 20260), (806, 20296), (813, 20311), (838, 20368), (843, 20377), (865, 20416), (878, 20455), (881, 20461),

Gene: MiaZeal\_34 Start: 24890, Stop: 26623, Start Num: 124

Candidate Starts for MiaZeal\_34:

(Start: 124 @24890 has 30 MA's), (Start: 191 @24980 has 45 MA's), (193, 24983), (233, 25058), (243, 25085), (268, 25151), (282, 25187), (301, 25217), (306, 25232), (346, 25316), (358, 25352), (368, 25379), (382, 25418), (392, 25451), (395, 25460), (420, 25517), (451, 25559), (490, 25634), (494, 25646), (515, 25706), (552, 25760), (565, 25790), (573, 25808), (577, 25817), (588, 25850), (592, 25862), (594, 25868), (606, 25907), (627, 25964), (725, 26114), (735, 26132), (750, 26174), (756, 26198), (757, 26201), (761, 26216), (773, 26246), (782, 26276), (799, 26333), (868, 26483), (902, 26603), (907, 26609),

Gene: Micasa\_24 Start: 19633, Stop: 21429, Start Num: 144

Candidate Starts for Micasa\_24:

(Start: 144 @19633 has 603 MA's), (222, 19738), (236, 19771), (278, 19870), (306, 19945), (315, 19960), (336, 19996), (360, 20068), (365, 20083), (380, 20122), (495, 20347), (499, 20353), (553, 20488), (579, 20545), (580, 20548), (583, 20557), (597, 20599), (602, 20617), (635, 20677), (636, 20680), (668, 20773), (670, 20782), (675, 20806), (729, 20914), (746, 20950), (813, 21160), (859, 21262), (862, 21271), (900, 21406), (902, 21415),

Gene: MichaelScott\_20 Start: 17703, Stop: 19283, Start Num: 170

Candidate Starts for MichaelScott\_20:

(88, 17586), (Start: 170 @17703 has 87 MA's), (298, 17961), (307, 17982), (340, 18036), (351, 18075), (369, 18132), (377, 18153), (501, 18324), (507, 18342), (514, 18366), (521, 18387), (554, 18429), (592, 18510), (636, 18600), (653, 18645), (669, 18702), (670, 18705), (687, 18759), (751, 18849), (863, 19128), (865, 19137), (874, 19167),

Gene: MichelleMyBell\_18 Start: 14987, Stop: 16696, Start Num: 126

Candidate Starts for MichelleMyBell\_18:

(Start: 126 @14987 has 42 MA's), (Start: 150 @15014 has 4 MA's), (Start: 227 @15119 has 2 MA's), (229, 15131), (241, 15167), (258, 15218), (268, 15239), (271, 15248), (274, 15254), (282, 15275), (287, 15287), (367, 15461), (370, 15467), (377, 15485), (381, 15497), (382, 15500), (388, 15521), (418, 15596), (443, 15623), (459, 15647), (460, 15650), (465, 15662), (484, 15704), (492, 15719), (494, 15725), (499, 15734), (511, 15773), (547, 15827), (564, 15851), (587, 15911), (608, 15977), (614, 15986), (618, 15995), (637, 16046), (638, 16049), (710, 16154), (737, 16202), (750, 16238), (758, 16268), (781, 16340), (836, 16493), (841, 16502), (860, 16523), (863, 16538), (866, 16550), (880, 16586), (882, 16592),

Gene: Michley\_27 Start: 21004, Stop: 22806, Start Num: 146

Candidate Starts for Michley\_27:

(Start: 146 @21004 has 223 MA's), (Start: 161 @21025 has 4 MA's), (Start: 190 @21067 has 1 MA's), (216, 21112), (306, 21328), (332, 21373), (338, 21382), (349, 21421), (368, 21472), (369, 21475), (467, 21670), (500, 21739), (583, 21940), (584, 21943), (591, 21964), (635, 22060), (636, 22063), (638, 22069), (665, 22138), (668, 22156), (670, 22165), (677, 22195), (731, 22291), (746, 22324), (750, 22339), (793, 22480), (813, 22537), (862, 22648),

Gene: Microwolf\_29 Start: 20380, Stop: 22176, Start Num: 144

Candidate Starts for Microwolf\_29:

(Start: 144 @20380 has 603 MA's), (Start: 190 @20437 has 1 MA's), (197, 20452), (219, 20485), (230, 20506), (Start: 235 @20521 has 1 MA's), (272, 20608), (277, 20620), (278, 20623), (306, 20698), (315, 20713), (336, 20749), (417, 20956), (481, 21070), (500, 21109), (532, 21196), (583, 21310), (591, 21334), (597, 21352), (636, 21433), (665, 21508), (668, 21526), (675, 21559), (677, 21565), (695, 21604), (729, 21658), (731, 21661), (742, 21682), (758, 21739), (813, 21907), (860, 22012), (862, 22018), (900, 22153),

Gene: MiculUcigas\_28 Start: 20213, Stop: 21985, Start Num: 144

Candidate Starts for MiculUcigas\_28:

(Start: 123 @20189 has 215 MA's), (Start: 144 @20213 has 603 MA's), (Start: 235 @20348 has 1 MA's), (277, 20447), (278, 20450), (305, 20522), (306, 20525), (338, 20579), (341, 20585), (360, 20648), (378, 20696), (388, 20729), (417, 20783), (463, 20864), (467, 20867), (481, 20897), (546, 21053), (584, 21140), (636, 21260), (674, 21383), (675, 21386), (677, 21392), (713, 21440), (746, 21503), (750, 21518), (752, 21524), (770, 21578), (781, 21617), (784, 21632), (795, 21665), (860, 21821), (862, 21827), (877, 21881),

Gene: Midas2\_24 Start: 19707, Stop: 21503, Start Num: 144

Candidate Starts for Midas2\_24:

(Start: 132 @19695 has 45 MA's), (Start: 144 @19707 has 603 MA's), (222, 19812), (236, 19845), (278, 19944), (306, 20019), (315, 20034), (336, 20070), (360, 20142), (365, 20157), (380, 20196), (495, 20421), (499, 20427), (553, 20562), (579, 20619), (580, 20622), (583, 20631), (597, 20673), (602, 20691), (635, 20751), (636, 20754), (668, 20847), (670, 20856), (675, 20880), (729, 20988), (746, 21024), (813, 21234), (859, 21336), (862, 21345), (900, 21480), (902, 21489),

Gene: Miko\_31 Start: 21807, Stop: 23579, Start Num: 144

Candidate Starts for Miko\_31:

(Start: 123 @21783 has 215 MA's), (Start: 144 @21807 has 603 MA's), (251, 21990), (277, 22041), (278, 22044), (305, 22116), (306, 22119), (338, 22173), (378, 22290), (417, 22377), (455, 22437), (463, 22458), (467, 22461), (487, 22503), (546, 22647), (584, 22734), (597, 22773), (636, 22854), (677, 22986), (746, 23097), (750, 23112), (752, 23118), (770, 23172), (781, 23211), (784, 23226), (795, 23259), (813, 23310), (849, 23388), (860, 23415), (862, 23421), (877, 23475),

Gene: MilanaBonita\_17 Start: 15476, Stop: 17185, Start Num: 123

Candidate Starts for MilanaBonita\_17:

(Start: 123 @15476 has 215 MA's), (193, 15563), (Start: 227 @15608 has 2 MA's), (233, 15632), (271, 15737), (274, 15743), (281, 15761), (300, 15791), (348, 15896), (370, 15956), (378, 15977), (381, 15986), (388, 16010), (459, 16136), (465, 16151), (468, 16157), (484, 16193), (486, 16196), (492, 16208), (494, 16214), (511, 16262), (515, 16274), (521, 16280), (564, 16340), (568, 16352), (583, 16388), (587, 16400), (614, 16475), (618, 16484), (625, 16502), (627, 16508), (638, 16538), (710, 16643), (717, 16652), (720, 16655), (729, 16676), (737, 16691), (758, 16757), (761, 16769), (791, 16868), (799, 16889), (810, 16922), (826, 16952), (836, 16982), (841, 16991), (844, 16997), (860, 17012), (861, 17015), (866, 17039), (877, 17069), (882, 17081), (887, 17111), (900, 17153),

Gene: Milcery\_24 Start: 19663, Stop: 21459, Start Num: 144

Candidate Starts for Milcery\_24:



(Start: 144 @19663 has 603 MA's), (222, 19768), (236, 19801), (278, 19900), (306, 19975), (315, 19990), (336, 20026), (360, 20098), (365, 20113), (380, 20152), (388, 20179), (395, 20200), (430, 20239), (495, 20377), (499, 20383), (553, 20518), (579, 20575), (580, 20578), (583, 20587), (597, 20629), (602, 20647), (635, 20707), (636, 20710), (668, 20803), (670, 20812), (675, 20836), (729, 20944), (746, 20980), (813, 21190), (859, 21292), (862, 21301), (893, 21415), (900, 21436), (902, 21445),

Gene: MilleniumForce\_17 Start: 15620, Stop: 17329, Start Num: 123

Candidate Starts for MilleniumForce\_17:

(Start: 123 @15620 has 215 MA's), (193, 15707), (Start: 227 @15752 has 2 MA's), (233, 15776), (271, 15881), (274, 15887), (281, 15905), (300, 15935), (348, 16040), (370, 16100), (378, 16121), (381, 16130), (388, 16154), (459, 16280), (465, 16295), (468, 16301), (484, 16337), (486, 16340), (492, 16352), (494, 16358), (511, 16406), (515, 16418), (521, 16424), (564, 16484), (568, 16496), (583, 16532), (587, 16544), (614, 16619), (618, 16628), (625, 16646), (627, 16652), (638, 16682), (710, 16787), (717, 16796), (720, 16799), (737, 16835), (761, 16913), (791, 17012), (799, 17033), (810, 17066), (826, 17096), (836, 17126), (841, 17135), (844, 17141), (860, 17156), (861, 17159), (866, 17183), (877, 17213), (882, 17225), (887, 17255), (900, 17297),

Gene: Millski\_26 Start: 19830, Stop: 21608, Start Num: 144

Candidate Starts for Millski\_26:

(Start: 123 @19806 has 215 MA's), (Start: 144 @19830 has 603 MA's), (Start: 190 @19887 has 1 MA's), (222, 19941), (230, 19956), (236, 19974), (272, 20058), (277, 20070), (278, 20073), (306, 20148), (315, 20163), (338, 20202), (378, 20319), (417, 20406), (463, 20487), (489, 20535), (500, 20559), (532, 20646), (553, 20691), (584, 20763), (591, 20784), (597, 20802), (636, 20883), (668, 20976), (670, 20985), (675, 21009), (677, 21015), (687, 21039), (731, 21093), (742, 21114), (756, 21165), (763, 21189), (782, 21243), (813, 21339), (860, 21444), (863, 21459), (894, 21567), (900, 21585),

Gene: Milly\_19 Start: 15013, Stop: 16782, Start Num: 112

Candidate Starts for Milly\_19:

(Start: 93 @14977 has 1 MA's), (Start: 109 @15007 has 26 MA's), (Start: 112 @15013 has 41 MA's), (Start: 135 @15028 has 7 MA's), (Start: 168 @15070 has 32 MA's), (197, 15118), (Start: 227 @15157 has 2 MA's), (230, 15172), (248, 15223), (258, 15253), (272, 15286), (278, 15298), (282, 15316), (316, 15388), (321, 15394), (356, 15490), (360, 15502), (395, 15604), (403, 15619), (423, 15655), (448, 15691), (468, 15739), (487, 15778), (499, 15802), (503, 15814), (564, 15904), (567, 15913), (655, 16159), (670, 16213), (714, 16267), (768, 16381), (772, 16390), (793, 16465), (810, 16516), (813, 16522), (852, 16603), (863, 16618), (881, 16672), (901, 16753), (913, 16774),

Gene: Mindy\_24 Start: 19608, Stop: 21203, Start Num: 191

Candidate Starts for Mindy\_24:

(Start: 129 @19524 has 79 MA's), (Start: 191 @19608 has 45 MA's), (Start: 235 @19686 has 1 MA's), (268, 19773), (274, 19788), (300, 19836), (324, 19875), (356, 19962), (368, 19995), (381, 20031), (390, 20061), (392, 20067), (422, 20136), (461, 20166), (466, 20178), (468, 20181), (494, 20238), (565, 20370), (567, 20376), (592, 20442), (594, 20448), (601, 20472), (618, 20520), (627, 20544), (631, 20553), (658, 20628), (717, 20679), (725, 20694), (782, 20856), (788, 20883), (799, 20913), (843, 21018), (880, 21096), (887, 21132), (890, 21141), (900, 21174), (907, 21189),

Gene: MinecraftSteve\_31 Start: 19215, Stop: 21002, Start Num: 144

Candidate Starts for MinecraftSteve\_31:

(94, 19149), (Start: 123 @19191 has 215 MA's), (Start: 144 @19215 has 603 MA's), (236, 19353), (262, 19410), (278, 19452), (292, 19488), (306, 19527), (343, 19596), (349, 19620), (369, 19674), (448, 19824), (467, 19869), (481, 19899), (499, 19935), (515, 19986), (530, 20022), (553, 20070), (580, 20130), (635, 20259), (665, 20337), (750, 20538), (752, 20544), (782, 20640), (845, 20805),

(880, 20904),

Gene: Minerva\_37 Start: 28330, Stop: 30328, Start Num: 124

Candidate Starts for Minerva\_37:

(Start: 124 @28330 has 30 MA's), (Start: 191 @28420 has 45 MA's), (222, 28468), (233, 28498), (243, 28525), (282, 28627), (301, 28657), (346, 28756), (358, 28792), (360, 28798), (368, 28819), (392, 28891), (395, 28900), (403, 28921), (468, 29029), (470, 29032), (475, 29047), (494, 29086), (511, 29134), (515, 29146), (521, 29152), (552, 29200), (558, 29209), (565, 29230), (573, 29248), (590, 29296), (625, 29398), (653, 29470), (667, 29515), (669, 29527), (684, 29662), (685, 29668), (686, 29692), (696, 29764), (708, 29791), (800, 30040),

Gene: MinionDave\_17 Start: 15489, Stop: 17198, Start Num: 123

Candidate Starts for MinionDave\_17:

(Start: 123 @15489 has 215 MA's), (193, 15576), (Start: 227 @15621 has 2 MA's), (233, 15645), (271, 15750), (274, 15756), (281, 15774), (300, 15804), (348, 15909), (370, 15969), (378, 15990), (381, 15999), (388, 16023), (459, 16149), (465, 16164), (468, 16170), (484, 16206), (486, 16209), (492, 16221), (494, 16227), (511, 16275), (515, 16287), (521, 16293), (564, 16353), (568, 16365), (583, 16401), (587, 16413), (614, 16488), (618, 16497), (625, 16515), (627, 16521), (638, 16551), (710, 16656), (717, 16665), (720, 16668), (737, 16704), (761, 16782), (791, 16881), (799, 16902), (810, 16935), (826, 16965), (836, 16995), (841, 17004), (844, 17010), (860, 17025), (861, 17028), (866, 17052), (877, 17082), (882, 17094), (887, 17124), (900, 17166),

Gene: Miniwave\_24 Start: 19943, Stop: 21622, Start Num: 129

Candidate Starts for Miniwave\_24:

(Start: 129 @19943 has 79 MA's), (Start: 191 @20027 has 45 MA's), (Start: 235 @20105 has 1 MA's), (268, 20192), (274, 20207), (300, 20255), (324, 20294), (356, 20381), (368, 20414), (381, 20450), (390, 20480), (392, 20486), (422, 20555), (461, 20585), (466, 20597), (468, 20600), (494, 20657), (565, 20789), (567, 20795), (592, 20861), (594, 20867), (601, 20891), (618, 20939), (627, 20963), (631, 20972), (658, 21047), (717, 21098), (725, 21113), (782, 21275), (788, 21302), (799, 21332), (843, 21437), (880, 21515), (887, 21551), (890, 21560), (900, 21593), (907, 21608),

Gene: Minnie\_17 Start: 15349, Stop: 17058, Start Num: 123

Candidate Starts for Minnie\_17:

(Start: 123 @15349 has 215 MA's), (193, 15436), (Start: 227 @15481 has 2 MA's), (233, 15505), (271, 15610), (274, 15616), (281, 15634), (300, 15664), (348, 15769), (367, 15823), (370, 15829), (378, 15850), (381, 15859), (388, 15883), (459, 16009), (465, 16024), (468, 16030), (484, 16066), (486, 16069), (492, 16081), (494, 16087), (511, 16135), (515, 16147), (521, 16153), (564, 16213), (568, 16225), (583, 16261), (587, 16273), (614, 16348), (618, 16357), (625, 16375), (627, 16381), (638, 16411), (710, 16516), (717, 16525), (720, 16528), (737, 16564), (761, 16642), (791, 16741), (799, 16762), (810, 16795), (826, 16825), (836, 16855), (841, 16864), (844, 16870), (860, 16885), (861, 16888), (866, 16912), (877, 16942), (882, 16954), (887, 16984), (900, 17026),

Gene: MintFen\_19 Start: 16650, Stop: 18296, Start Num: 195

Candidate Starts for MintFen\_19:

(172, 16614), (Start: 195 @16650 has 45 MA's), (244, 16752), (272, 16830), (274, 16833), (308, 16929), (329, 16968), (357, 17049), (377, 17103), (382, 17118), (494, 17289), (506, 17319), (594, 17502), (601, 17526), (602, 17529), (626, 17577), (658, 17670), (664, 17682), (694, 17727), (702, 17742), (757, 17874), (758, 17877), (788, 17976), (795, 17994), (813, 18045), (843, 18111), (872, 18174), (877, 18186),

Gene: Miramae\_27 Start: 19775, Stop: 21568, Start Num: 148

Candidate Starts for Miramae\_27:

(66, 19619), (82, 19664), (Start: 123 @19745 has 215 MA's), (Start: 144 @19769 has 603 MA's), (Start: 148 @19775 has 14 MA's), (Start: 190 @19829 has 1 MA's), (230, 19898), (263, 19976), (272, 20000), (277, 20012), (278, 20015), (306, 20090), (315, 20105), (338, 20144), (369, 20237), (378, 20261), (417, 20348), (481, 20462), (532, 20588), (553, 20633), (583, 20702), (591, 20726), (595, 20738), (636, 20825), (665, 20900), (668, 20918), (675, 20951), (677, 20957), (682, 20972), (729, 21050), (731, 21053), (742, 21074), (813, 21299), (860, 21404), (862, 21410), (900, 21545), (909, 21563),

Gene: Miryou\_21 Start: 17480, Stop: 19252, Start Num: 117

Candidate Starts for Miryou\_21:

(Start: 117 @17480 has 59 MA's), (Start: 123 @17486 has 215 MA's), (143, 17510), (Start: 168 @17543 has 32 MA's), (197, 17591), (230, 17645), (248, 17696), (272, 17759), (321, 17867), (360, 17975), (400, 18089), (403, 18092), (424, 18131), (438, 18146), (444, 18158), (448, 18164), (465, 18206), (468, 18212), (487, 18251), (499, 18275), (564, 18377), (588, 18440), (602, 18485), (655, 18620), (708, 18719), (750, 18797), (756, 18821), (762, 18842), (768, 18854), (771, 18860), (793, 18938), (795, 18944), (865, 19097), (895, 19202), (896, 19205), (901, 19223),

Gene: Misfit\_24 Start: 19833, Stop: 21512, Start Num: 129

Candidate Starts for Misfit\_24:

(Start: 129 @19833 has 79 MA's), (Start: 191 @19917 has 45 MA's), (Start: 235 @19995 has 1 MA's), (268, 20082), (274, 20097), (300, 20145), (324, 20184), (356, 20271), (368, 20304), (381, 20340), (390, 20370), (392, 20376), (422, 20445), (461, 20475), (466, 20487), (468, 20490), (494, 20547), (565, 20679), (567, 20685), (592, 20751), (594, 20757), (601, 20781), (618, 20829), (627, 20853), (631, 20862), (658, 20937), (717, 20988), (725, 21003), (782, 21165), (788, 21192), (799, 21222), (843, 21327), (880, 21405), (887, 21441), (890, 21450), (900, 21483), (907, 21498),

Gene: Misha28\_17 Start: 14677, Stop: 16386, Start Num: 123

Candidate Starts for Misha28\_17:

(Start: 123 @14677 has 215 MA's), (193, 14764), (Start: 227 @14809 has 2 MA's), (233, 14833), (271, 14938), (274, 14944), (281, 14962), (284, 14971), (300, 14992), (348, 15097), (370, 15157), (373, 15166), (378, 15178), (381, 15187), (388, 15211), (402, 15247), (403, 15253), (407, 15265), (418, 15286), (420, 15289), (424, 15298), (443, 15313), (448, 15319), (459, 15337), (465, 15352), (468, 15358), (475, 15376), (477, 15379), (484, 15394), (492, 15409), (494, 15415), (511, 15463), (515, 15475), (521, 15481), (564, 15541), (568, 15553), (573, 15562), (583, 15589), (587, 15601), (594, 15622), (614, 15676), (618, 15685), (627, 15709), (638, 15739), (710, 15844), (720, 15856), (737, 15892), (761, 15970), (791, 16069), (799, 16090), (810, 16123), (826, 16153), (836, 16183), (839, 16189), (841, 16192), (844, 16198), (860, 16213), (861, 16216), (865, 16237), (882, 16282), (900, 16354), (901, 16360),

Gene: Miskis\_50 Start: 29375, Stop: 31066, Start Num: 146

Candidate Starts for Miskis\_50:

(Start: 146 @29375 has 223 MA's), (188, 29435), (206, 29468), (Start: 227 @29498 has 2 MA's), (228, 29501), (271, 29627), (282, 29660), (286, 29669), (349, 29798), (366, 29846), (494, 30059), (498, 30065), (506, 30089), (576, 30218), (583, 30239), (594, 30272), (658, 30470), (758, 30623), (788, 30722), (793, 30734), (796, 30743), (829, 30827), (888, 30974), (898, 31010), (902, 31022),

Gene: Misomonster\_31 Start: 20462, Stop: 22258, Start Num: 144

Candidate Starts for Misomonster\_31:

(Start: 144 @20462 has 603 MA's), (Start: 190 @20519 has 1 MA's), (197, 20534), (219, 20567), (230, 20588), (Start: 235 @20603 has 1 MA's), (272, 20690), (277, 20702), (278, 20705), (306, 20780), (315, 20795), (336, 20831), (417, 21038), (481, 21152), (500, 21191), (532, 21278), (583, 21392), (591, 21416), (597, 21434), (636, 21515), (665, 21590), (668, 21608), (675, 21641), (677, 21647), (695, 21686), (729, 21740), (731, 21743), (742, 21764), (758, 21821), (813, 21989), (860, 22094),

(862, 22100), (900, 22235),

Gene: MissDaisy\_24 Start: 18385, Stop: 20172, Start Num: 112

Candidate Starts for MissDaisy\_24:

(Start: 93 @18349 has 1 MA's), (Start: 109 @18379 has 26 MA's), (Start: 112 @18385 has 41 MA's), (Start: 114 @18388 has 139 MA's), (Start: 168 @18442 has 32 MA's), (197, 18490), (Start: 227 @18529 has 2 MA's), (230, 18544), (236, 18562), (248, 18595), (258, 18625), (278, 18670), (282, 18688), (316, 18760), (321, 18766), (334, 18796), (356, 18862), (360, 18874), (412, 19009), (444, 19057), (448, 19063), (454, 19081), (468, 19111), (487, 19150), (564, 19276), (587, 19336), (588, 19339), (594, 19357), (599, 19372), (655, 19540), (670, 19594), (708, 19639), (734, 19684), (748, 19708), (756, 19741), (768, 19774), (772, 19783), (788, 19846), (793, 19858), (810, 19909), (813, 19915), (865, 20017), (901, 20143), (913, 20164),

Gene: MissRona\_21 Start: 16962, Stop: 18611, Start Num: 195

Candidate Starts for MissRona\_21:

(172, 16926), (Start: 195 @16962 has 45 MA's), (200, 16971), (244, 17067), (272, 17145), (299, 17217), (308, 17244), (329, 17283), (357, 17364), (377, 17418), (494, 17604), (506, 17634), (563, 17733), (594, 17817), (601, 17841), (626, 17892), (658, 17985), (664, 17997), (694, 18042), (702, 18057), (757, 18189), (758, 18192), (788, 18291), (795, 18309), (813, 18360), (839, 18420), (843, 18426), (877, 18501),

Gene: MissWhite\_28 Start: 19278, Stop: 21071, Start Num: 144

Candidate Starts for MissWhite\_28:

(94, 19212), (Start: 123 @19254 has 215 MA's), (Start: 144 @19278 has 603 MA's), (219, 19377), (236, 19416), (277, 19512), (278, 19515), (305, 19587), (306, 19590), (315, 19605), (338, 19644), (341, 19650), (378, 19761), (380, 19767), (417, 19848), (454, 19905), (463, 19929), (467, 19932), (518, 20058), (535, 20094), (583, 20202), (597, 20244), (631, 20310), (636, 20325), (711, 20523), (731, 20556), (736, 20565), (746, 20589), (750, 20604), (756, 20628), (781, 20703), (784, 20718), (860, 20907), (862, 20913), (873, 20958),

Gene: MisterCuddles\_16 Start: 14774, Stop: 16483, Start Num: 123

Candidate Starts for MisterCuddles\_16:

(Start: 123 @14774 has 215 MA's), (193, 14861), (Start: 227 @14906 has 2 MA's), (233, 14930), (271, 15035), (274, 15041), (281, 15059), (300, 15089), (348, 15194), (367, 15248), (370, 15254), (373, 15263), (378, 15275), (381, 15284), (388, 15308), (402, 15344), (403, 15350), (407, 15362), (418, 15383), (420, 15386), (424, 15395), (443, 15410), (448, 15416), (459, 15434), (465, 15449), (468, 15455), (475, 15473), (477, 15476), (484, 15491), (492, 15506), (494, 15512), (506, 15542), (511, 15560), (515, 15572), (521, 15578), (564, 15638), (568, 15650), (583, 15686), (587, 15698), (594, 15719), (614, 15773), (618, 15782), (627, 15806), (638, 15836), (710, 15941), (720, 15953), (737, 15989), (751, 16028), (761, 16067), (791, 16166), (799, 16187), (810, 16220), (826, 16250), (836, 16280), (841, 16289), (844, 16295), (860, 16310), (861, 16313), (865, 16334), (866, 16337), (882, 16379), (887, 16409), (900, 16451), (901, 16457),

Gene: Mitti\_24 Start: 18546, Stop: 20333, Start Num: 114

Candidate Starts for Mitti\_24:

(Start: 93 @18507 has 1 MA's), (Start: 109 @18537 has 26 MA's), (Start: 112 @18543 has 41 MA's), (Start: 114 @18546 has 139 MA's), (Start: 168 @18603 has 32 MA's), (197, 18651), (Start: 227 @18690 has 2 MA's), (230, 18705), (236, 18723), (248, 18756), (258, 18786), (278, 18831), (282, 18849), (316, 18921), (321, 18927), (334, 18957), (356, 19023), (360, 19035), (412, 19170), (444, 19218), (448, 19224), (454, 19242), (468, 19272), (487, 19311), (564, 19437), (587, 19497), (588, 19500), (594, 19518), (599, 19533), (655, 19701), (670, 19755), (708, 19800), (734, 19845), (748, 19869), (756, 19902), (768, 19935), (788, 20007), (793, 20019), (810, 20070), (813, 20076), (865, 20178), (901, 20304), (913, 20325),

Gene: Mkhuseleli\_28 Start: 21152, Stop: 22954, Start Num: 146

Candidate Starts for Mkhuseleli\_28:

(Start: 146 @21152 has 223 MA's), (Start: 161 @21173 has 4 MA's), (Start: 190 @21215 has 1 MA's), (216, 21260), (306, 21476), (332, 21521), (338, 21530), (349, 21569), (368, 21620), (369, 21623), (388, 21680), (467, 21818), (500, 21887), (583, 22088), (584, 22091), (591, 22112), (635, 22208), (636, 22211), (638, 22217), (665, 22286), (668, 22304), (670, 22313), (677, 22343), (731, 22439), (746, 22472), (750, 22487), (758, 22517), (793, 22628), (813, 22685), (862, 22796),

Gene: Mocha12\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Mocha12\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: ModicumRichard\_19 Start: 16548, Stop: 18212, Start Num: 151

Candidate Starts for ModicumRichard\_19:

(Start: 141 @16533 has 14 MA's), (Start: 151 @16548 has 5 MA's), (Start: 155 @16554 has 4 MA's), (176, 16584), (183, 16593), (295, 16827), (306, 16860), (334, 16908), (360, 16983), (377, 17028), (417, 17118), (436, 17133), (459, 17187), (463, 17196), (481, 17229), (497, 17262), (500, 17268), (610, 17502), (619, 17514), (635, 17541), (646, 17574), (661, 17613), (665, 17622), (682, 17694), (718, 17709), (731, 17733), (750, 17781), (787, 17868), (795, 17889), (820, 17955), (849, 18021), (865, 18069), (891, 18159), (909, 18207),

Gene: Modragons\_16 Start: 15041, Stop: 16750, Start Num: 123

Candidate Starts for Modragons\_16:

(Start: 123 @15041 has 215 MA's), (193, 15128), (209, 15149), (Start: 227 @15173 has 2 MA's), (233, 15197), (240, 15218), (271, 15302), (274, 15308), (281, 15326), (300, 15356), (348, 15461), (367, 15515), (370, 15521), (377, 15539), (378, 15542), (381, 15551), (388, 15575), (418, 15650), (424, 15662), (443, 15677), (448, 15683), (459, 15701), (465, 15716), (468, 15722), (480, 15749), (484, 15758), (492, 15773), (494, 15779), (511, 15827), (515, 15839), (521, 15845), (564, 15905), (568, 15917), (583, 15953), (587, 15965), (594, 15986), (614, 16040), (618, 16049), (625, 16067), (627, 16073), (638, 16103), (710, 16208), (717, 16217), (720, 16220), (737, 16256), (751, 16295), (761, 16334), (799, 16454), (810, 16487), (826, 16517), (836, 16547), (841, 16556), (844, 16562), (860, 16577), (861, 16580), (865, 16601), (866, 16604), (880, 16640), (882, 16646), (887, 16676), (900, 16718),

Gene: Moldemort\_25 Start: 19488, Stop: 21167, Start Num: 129

Candidate Starts for Moldemort\_25:

(Start: 129 @19488 has 79 MA's), (Start: 191 @19572 has 45 MA's), (Start: 235 @19650 has 1 MA's), (268, 19737), (274, 19752), (300, 19800), (324, 19839), (356, 19926), (368, 19959), (381, 19995), (390, 20025), (392, 20031), (422, 20100), (461, 20130), (466, 20142), (468, 20145), (494, 20202), (565, 20334), (567, 20340), (592, 20406), (594, 20412), (601, 20436), (618, 20484), (627, 20508), (631, 20517), (658, 20592), (717, 20643), (725, 20658), (782, 20820), (788, 20847), (799, 20877), (843, 20982), (880, 21060), (887, 21096), (890, 21105), (900, 21138), (907, 21153),

Gene: Molly\_28 Start: 20868, Stop: 22670, Start Num: 146

Candidate Starts for Molly\_28:

(Start: 146 @20868 has 223 MA's), (Start: 161 @20889 has 4 MA's), (Start: 190 @20931 has 1 MA's), (216, 20976), (306, 21192), (332, 21237), (338, 21246), (349, 21285), (368, 21336), (369, 21339), (467, 21534), (500, 21603), (583, 21804), (584, 21807), (591, 21828), (635, 21924), (636, 21927),

(638, 21933), (665, 22002), (668, 22020), (670, 22029), (677, 22059), (731, 22155), (746, 22188), (750, 22203), (793, 22344), (813, 22401), (862, 22512),

Gene: Mollymur\_31 Start: 28168, Stop: 30066, Start Num: 145

Candidate Starts for Mollymur\_31:

(Start: 145 @28168 has 1 MA's), (Start: 148 @28171 has 14 MA's), (Start: 160 @28189 has 17 MA's), (188, 28228), (327, 28531), (349, 28588), (366, 28636), (395, 28720), (426, 28858), (427, 28864), (446, 28930), (494, 29062), (498, 29068), (598, 29287), (599, 29290), (641, 29410), (658, 29470), (717, 29521), (725, 29536), (788, 29722), (793, 29734), (813, 29791), (910, 30034), (914, 30058),

Gene: Monet\_29 Start: 22353, Stop: 24155, Start Num: 146

Candidate Starts for Monet\_29:

(Start: 146 @22353 has 223 MA's), (Start: 161 @22374 has 4 MA's), (Start: 190 @22416 has 1 MA's), (216, 22461), (306, 22677), (332, 22722), (338, 22731), (349, 22770), (368, 22821), (369, 22824), (406, 22917), (467, 23019), (500, 23088), (583, 23289), (584, 23292), (591, 23313), (635, 23409), (636, 23412), (638, 23418), (665, 23487), (668, 23505), (670, 23514), (677, 23544), (731, 23640), (746, 23673), (750, 23688), (793, 23829), (813, 23886), (862, 23997),

Gene: MoneyMay\_29 Start: 20378, Stop: 22174, Start Num: 144

Candidate Starts for MoneyMay\_29:

(Start: 144 @20378 has 603 MA's), (Start: 190 @20435 has 1 MA's), (197, 20450), (219, 20483), (230, 20504), (Start: 235 @20519 has 1 MA's), (272, 20606), (277, 20618), (278, 20621), (306, 20696), (315, 20711), (336, 20747), (417, 20954), (481, 21068), (500, 21107), (532, 21194), (583, 21308), (591, 21332), (597, 21350), (636, 21431), (665, 21506), (668, 21524), (675, 21557), (677, 21563), (695, 21602), (729, 21656), (731, 21659), (742, 21680), (758, 21737), (813, 21905), (860, 22010), (862, 22016), (900, 22151),

Gene: MooMoo\_16 Start: 14544, Stop: 16277, Start Num: 128

Candidate Starts for MooMoo\_16:

(105, 14511), (108, 14514), (Start: 128 @14544 has 1 MA's), (209, 14646), (241, 14718), (250, 14742), (381, 15048), (407, 15126), (459, 15198), (465, 15213), (468, 15219), (470, 15222), (486, 15258), (494, 15276), (511, 15324), (515, 15336), (592, 15477), (614, 15537), (618, 15546), (627, 15570), (636, 15594), (637, 15597), (638, 15600), (649, 15633), (729, 15738), (773, 15861), (775, 15870), (788, 15921), (791, 15930), (813, 15990), (829, 16032), (833, 16044), (859, 16101), (860, 16104), (878, 16164),

Gene: Moonbeam\_17 Start: 15298, Stop: 17007, Start Num: 123

Candidate Starts for Moonbeam\_17:

(Start: 123 @15298 has 215 MA's), (193, 15385), (Start: 227 @15430 has 2 MA's), (233, 15454), (271, 15559), (274, 15565), (281, 15583), (300, 15613), (348, 15718), (370, 15778), (378, 15799), (381, 15808), (388, 15832), (459, 15958), (465, 15973), (468, 15979), (484, 16015), (486, 16018), (492, 16030), (494, 16036), (511, 16084), (515, 16096), (521, 16102), (564, 16162), (568, 16174), (583, 16210), (587, 16222), (614, 16297), (618, 16306), (625, 16324), (627, 16330), (638, 16360), (710, 16465), (717, 16474), (720, 16477), (737, 16513), (761, 16591), (791, 16690), (799, 16711), (810, 16744), (826, 16774), (836, 16804), (841, 16813), (844, 16819), (860, 16834), (861, 16837), (866, 16861), (877, 16891), (882, 16903), (887, 16933), (900, 16975),

Gene: MoontowerMania\_34 Start: 30587, Stop: 32350, Start Num: 97

Candidate Starts for MoontowerMania\_34:

(90, 30569), (Start: 97 @30587 has 73 MA's), (Start: 121 @30623 has 1 MA's), (219, 30761), (262, 30857), (265, 30866), (288, 30935), (306, 30986), (332, 31031), (341, 31046), (368, 31127), (384, 31172), (386, 31181), (445, 31271), (458, 31301), (461, 31316), (472, 31340), (487, 31370), (551, 31475), (597, 31592), (607, 31610), (613, 31625), (631, 31655), (635, 31667), (636, 31670), (647,

31697), (793, 32021), (794, 32024), (810, 32072), (824, 32099), (832, 32126), (860, 32180), (866, 32207), (902, 32336),

Gene: Moose\_26 Start: 21094, Stop: 22896, Start Num: 146

Candidate Starts for Moose\_26:

(Start: 146 @21094 has 223 MA's), (Start: 161 @21115 has 4 MA's), (Start: 190 @21157 has 1 MA's), (216, 21202), (306, 21418), (332, 21463), (338, 21472), (349, 21511), (368, 21562), (369, 21565), (467, 21760), (500, 21829), (583, 22030), (584, 22033), (591, 22054), (635, 22150), (636, 22153), (638, 22159), (665, 22228), (668, 22246), (670, 22255), (677, 22285), (731, 22381), (746, 22414), (750, 22429), (758, 22459), (793, 22570), (813, 22627), (862, 22738),

Gene: Moosehead\_17 Start: 14663, Stop: 16372, Start Num: 171

Candidate Starts for Moosehead\_17:

(83, 14528), (88, 14543), (Start: 171 @14663 has 40 MA's), (197, 14705), (237, 14780), (259, 14852), (262, 14855), (287, 14930), (340, 15026), (347, 15053), (351, 15065), (377, 15143), (378, 15146), (392, 15191), (462, 15332), (500, 15413), (519, 15473), (521, 15479), (554, 15521), (592, 15602), (596, 15614), (607, 15638), (618, 15656), (624, 15671), (637, 15695), (669, 15791), (670, 15794), (788, 16025), (794, 16040), (847, 16175), (849, 16178), (865, 16226), (874, 16256), (885, 16292),

Gene: Morgana\_19 Start: 16541, Stop: 18205, Start Num: 151

Candidate Starts for Morgana\_19:

(69, 16391), (Start: 121 @16502 has 1 MA's), (Start: 141 @16526 has 14 MA's), (Start: 151 @16541 has 5 MA's), (Start: 155 @16547 has 4 MA's), (176, 16577), (183, 16586), (295, 16820), (306, 16853), (334, 16901), (360, 16976), (368, 16997), (377, 17021), (380, 17030), (388, 17057), (436, 17126), (459, 17180), (463, 17189), (481, 17222), (497, 17255), (500, 17261), (619, 17507), (635, 17534), (646, 17567), (661, 17606), (665, 17615), (682, 17687), (718, 17702), (731, 17726), (750, 17774), (787, 17861), (795, 17882), (820, 17948), (849, 18014), (865, 18062), (891, 18152),

Gene: Mori\_56 Start: 33516, Stop: 35252, Start Num: 107

Candidate Starts for Mori\_56:

(Start: 100 @33507 has 2 MA's), (Start: 107 @33516 has 25 MA's), (174, 33606), (240, 33723), (251, 33759), (259, 33780), (271, 33807), (274, 33813), (286, 33843), (302, 33867), (332, 33918), (381, 34056), (383, 34062), (400, 34113), (402, 34116), (407, 34134), (459, 34185), (468, 34206), (470, 34209), (492, 34257), (494, 34263), (511, 34311), (513, 34317), (515, 34323), (555, 34383), (564, 34407), (565, 34410), (583, 34455), (588, 34470), (591, 34479), (594, 34488), (608, 34533), (618, 34551), (631, 34584), (720, 34722), (729, 34743), (754, 34809), (762, 34839), (779, 34893), (791, 34935), (799, 34956), (805, 34977), (810, 34989), (821, 35010), (844, 35064), (880, 35142), (887, 35178), (893, 35199), (901, 35226),

Gene: Morkie\_18 Start: 15153, Stop: 16865, Start Num: 111

Candidate Starts for Morkie\_18:

(Start: 111 @15153 has 24 MA's), (Start: 118 @15165 has 8 MA's), (152, 15207), (219, 15309), (251, 15381), (290, 15462), (311, 15513), (332, 15546), (347, 15588), (349, 15594), (365, 15642), (384, 15693), (395, 15729), (433, 15771), (445, 15792), (449, 15798), (458, 15822), (481, 15873), (482, 15876), (497, 15906), (647, 16218), (668, 16284), (674, 16314), (739, 16407), (747, 16428), (750, 16440), (752, 16446), (753, 16452), (755, 16458), (783, 16512), (793, 16542), (818, 16611), (860, 16698), (862, 16704), (867, 16728), (876, 16755),

Gene: Morpher26\_27 Start: 19826, Stop: 21625, Start Num: 144

Candidate Starts for Morpher26\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 190 @19886 has 1 MA's), (230, 19955), (263, 20033), (272, 20057), (277, 20069), (278, 20072), (292, 20108), (306, 20147), (338, 20201), (369, 20294), (378, 20318), (417, 20405), (481, 20519), (500, 20558), (532,

20645), (553, 20690), (583, 20759), (591, 20783), (595, 20795), (636, 20882), (665, 20957), (668, 20975), (670, 20984), (675, 21008), (677, 21014), (682, 21029), (703, 21062), (729, 21107), (731, 21110), (742, 21131), (813, 21356), (849, 21434), (860, 21461), (862, 21467), (900, 21602),

Gene: Morrissey\_19 Start: 16044, Stop: 17648, Start Num: 163

Candidate Starts for Morrissey\_19:

(Start: 153 @16032 has 11 MA's), (Start: 163 @16044 has 10 MA's), (185, 16077), (219, 16131), (292, 16308), (366, 16482), (417, 16599), (449, 16638), (467, 16680), (501, 16752), (512, 16785), (553, 16839), (576, 16878), (583, 16899), (636, 17016), (653, 17058), (657, 17076), (664, 17088), (670, 17118), (735, 17202), (742, 17217), (746, 17226), (769, 17274), (862, 17484), (891, 17592),

Gene: Morrow\_27 Start: 19830, Stop: 21608, Start Num: 144

Candidate Starts for Morrow\_27:

(Start: 123 @19806 has 215 MA's), (Start: 144 @19830 has 603 MA's), (Start: 190 @19887 has 1 MA's), (222, 19941), (230, 19956), (236, 19974), (272, 20058), (277, 20070), (278, 20073), (306, 20148), (315, 20163), (338, 20202), (378, 20319), (417, 20406), (463, 20487), (489, 20535), (500, 20559), (532, 20646), (553, 20691), (584, 20763), (591, 20784), (597, 20802), (636, 20883), (668, 20976), (670, 20985), (675, 21009), (677, 21015), (687, 21039), (731, 21093), (742, 21114), (756, 21165), (763, 21189), (782, 21243), (813, 21339), (860, 21444), (863, 21459), (894, 21567), (900, 21585),

Gene: MortyNRick\_19 Start: 16293, Stop: 18002, Start Num: 111

Candidate Starts for MortyNRick\_19:

(Start: 111 @16293 has 24 MA's), (Start: 118 @16305 has 8 MA's), (Start: 121 @16308 has 1 MA's), (Start: 194 @16410 has 1 MA's), (216, 16446), (243, 16512), (311, 16656), (319, 16665), (332, 16683), (347, 16725), (349, 16731), (358, 16755), (365, 16779), (384, 16830), (385, 16836), (395, 16866), (433, 16908), (445, 16929), (449, 16935), (458, 16959), (481, 17010), (482, 17013), (497, 17043), (579, 17193), (591, 17229), (647, 17355), (668, 17421), (670, 17430), (672, 17442), (674, 17451), (739, 17544), (747, 17565), (750, 17577), (752, 17583), (753, 17589), (755, 17595), (783, 17649), (793, 17679), (818, 17748), (860, 17835), (862, 17841), (876, 17892), (900, 17979), (909, 17997),

Gene: Mosby\_23 Start: 19337, Stop: 20932, Start Num: 191

Candidate Starts for Mosby\_23:

(Start: 129 @19253 has 79 MA's), (Start: 191 @19337 has 45 MA's), (Start: 235 @19415 has 1 MA's), (268, 19502), (274, 19517), (300, 19565), (324, 19604), (356, 19691), (368, 19724), (381, 19760), (390, 19790), (392, 19796), (422, 19865), (461, 19895), (466, 19907), (468, 19910), (494, 19967), (565, 20099), (567, 20105), (592, 20171), (594, 20177), (601, 20201), (618, 20249), (627, 20273), (631, 20282), (658, 20357), (717, 20408), (725, 20423), (782, 20585), (788, 20612), (799, 20642), (843, 20747), (880, 20825), (887, 20861), (890, 20870), (900, 20903), (907, 20918),

Gene: Mova\_17 Start: 14657, Stop: 16366, Start Num: 123

Candidate Starts for Mova\_17:

(Start: 123 @14657 has 215 MA's), (193, 14744), (Start: 227 @14789 has 2 MA's), (233, 14813), (271, 14918), (274, 14924), (281, 14942), (300, 14972), (348, 15077), (370, 15137), (378, 15158), (381, 15167), (388, 15191), (418, 15266), (459, 15317), (465, 15332), (468, 15338), (484, 15374), (486, 15377), (492, 15389), (494, 15395), (511, 15443), (515, 15455), (521, 15461), (564, 15521), (568, 15533), (583, 15569), (587, 15581), (614, 15656), (618, 15665), (625, 15683), (627, 15689), (638, 15719), (710, 15824), (717, 15833), (720, 15836), (737, 15872), (761, 15950), (791, 16049), (799, 16070), (810, 16103), (826, 16133), (836, 16163), (841, 16172), (844, 16178), (860, 16193), (861, 16196), (866, 16220), (877, 16250), (882, 16262), (887, 16292), (900, 16334),

Gene: Mowgli\_18 Start: 16649, Stop: 18403, Start Num: 132



Candidate Starts for Mowgli\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Mozy\_17 Start: 14705, Stop: 16414, Start Num: 123

Candidate Starts for Mozy\_17:

(Start: 123 @14705 has 215 MA's), (209, 14813), (Start: 227 @14837 has 2 MA's), (233, 14861), (240, 14882), (251, 14918), (258, 14936), (259, 14939), (274, 14972), (281, 14990), (300, 15020), (348, 15125), (370, 15185), (378, 15206), (381, 15215), (388, 15239), (403, 15281), (418, 15314), (448, 15347), (459, 15365), (465, 15380), (468, 15386), (484, 15422), (486, 15425), (492, 15437), (494, 15443), (506, 15473), (511, 15491), (515, 15503), (521, 15509), (564, 15569), (583, 15617), (587, 15629), (614, 15704), (618, 15713), (627, 15737), (638, 15767), (710, 15872), (720, 15884), (737, 15920), (751, 15959), (761, 15998), (799, 16118), (810, 16151), (826, 16181), (836, 16211), (839, 16217), (841, 16220), (844, 16226), (860, 16241), (861, 16244), (865, 16265), (866, 16268), (882, 16310), (887, 16340), (900, 16382),

Gene: MrGordo\_27 Start: 20817, Stop: 22619, Start Num: 146

Candidate Starts for MrGordo\_27:

(Start: 146 @20817 has 223 MA's), (Start: 161 @20838 has 4 MA's), (Start: 190 @20880 has 1 MA's), (216, 20925), (306, 21141), (332, 21186), (338, 21195), (349, 21234), (368, 21285), (369, 21288), (467, 21483), (500, 21552), (583, 21753), (584, 21756), (591, 21777), (635, 21873), (636, 21876), (638, 21882), (668, 21969), (677, 22008), (731, 22104), (746, 22137), (750, 22152), (793, 22293), (813, 22350), (862, 22461),

Gene: Mryolo\_26 Start: 20854, Stop: 22656, Start Num: 146

Candidate Starts for Mryolo\_26:

(Start: 146 @20854 has 223 MA's), (Start: 161 @20875 has 4 MA's), (Start: 190 @20917 has 1 MA's), (216, 20962), (306, 21178), (332, 21223), (338, 21232), (349, 21271), (368, 21322), (369, 21325), (467, 21520), (500, 21589), (583, 21790), (584, 21793), (591, 21814), (635, 21910), (636, 21913), (638, 21919), (665, 21988), (668, 22006), (670, 22015), (677, 22045), (731, 22141), (746, 22174), (750, 22189), (793, 22330), (813, 22387), (862, 22498),

Gene: Ms6\_16 Start: 14816, Stop: 16525, Start Num: 123

Candidate Starts for Ms6\_16:

(Start: 123 @14816 has 215 MA's), (193, 14903), (Start: 227 @14948 has 2 MA's), (233, 14972), (271, 15077), (274, 15083), (281, 15101), (300, 15131), (348, 15236), (370, 15296), (378, 15317), (381, 15326), (388, 15350), (459, 15476), (465, 15491), (468, 15497), (484, 15533), (486, 15536), (492, 15548), (494, 15554), (511, 15602), (515, 15614), (521, 15620), (564, 15680), (568, 15692), (583, 15728), (587, 15740), (614, 15815), (618, 15824), (625, 15842), (627, 15848), (638, 15878), (710, 15983), (717, 15992), (720, 15995), (737, 16031), (761, 16109), (791, 16208), (799, 16229), (810, 16262), (826, 16292), (836, 16322), (841, 16331), (844, 16337), (860, 16352), (861, 16355), (866, 16379), (877, 16409), (882, 16421), (887, 16451), (900, 16493),

Gene: MuchMore\_31 Start: 20371, Stop: 22167, Start Num: 144

Candidate Starts for MuchMore\_31:

(Start: 144 @20371 has 603 MA's), (Start: 190 @20428 has 1 MA's), (197, 20443), (219, 20476), (230, 20497), (Start: 235 @20512 has 1 MA's), (272, 20599), (277, 20611), (278, 20614), (306, 20689), (315, 20704), (336, 20740), (417, 20947), (481, 21061), (500, 21100), (532, 21187), (583, 21301), (591, 21325), (597, 21343), (636, 21424), (665, 21499), (668, 21517), (675, 21550), (677, 21556),

(695, 21595), (729, 21649), (731, 21652), (742, 21673), (758, 21730), (813, 21898), (860, 22003), (862, 22009), (900, 22144),

Gene: Muddy\_21 Start: 16213, Stop: 18063, Start Num: 89

Candidate Starts for Muddy\_21:

(78, 16177), (Start: 89 @16213 has 4 MA's), (140, 16291), (181, 16351), (Start: 227 @16417 has 2 MA's), (242, 16468), (248, 16483), (249, 16486), (372, 16792), (390, 16849), (393, 16858), (412, 16897), (413, 16900), (436, 16963), (448, 16984), (474, 17047), (479, 17056), (487, 17071), (499, 17095), (567, 17206), (583, 17245), (590, 17266), (601, 17302), (602, 17305), (622, 17347), (629, 17362), (632, 17368), (773, 17677), (775, 17686), (777, 17692), (781, 17704), (788, 17734), (797, 17758), (850, 17878), (874, 17935), (898, 18022), (901, 18031),

Gene: Mufasa\_19 Start: 15033, Stop: 16802, Start Num: 112

Candidate Starts for Mufasa\_19:

(Start: 93 @14997 has 1 MA's), (Start: 109 @15027 has 26 MA's), (Start: 112 @15033 has 41 MA's), (Start: 135 @15048 has 7 MA's), (Start: 168 @15090 has 32 MA's), (197, 15138), (Start: 227 @15177 has 2 MA's), (230, 15192), (248, 15243), (258, 15273), (272, 15306), (278, 15318), (282, 15336), (316, 15408), (321, 15414), (356, 15510), (360, 15522), (393, 15618), (448, 15711), (454, 15729), (465, 15753), (468, 15759), (487, 15798), (499, 15822), (503, 15834), (564, 15924), (567, 15933), (588, 15987), (598, 16017), (640, 16128), (655, 16179), (714, 16287), (768, 16401), (772, 16410), (793, 16485), (810, 16536), (813, 16542), (863, 16638), (881, 16692), (901, 16773), (913, 16794),

Gene: Mulch\_22 Start: 17344, Stop: 19050, Start Num: 162

Candidate Starts for Mulch\_22:

(Start: 101 @17269 has 2 MA's), (Start: 162 @17344 has 16 MA's), (Start: 227 @17437 has 2 MA's), (230, 17452), (232, 17458), (256, 17533), (283, 17605), (336, 17716), (349, 17761), (356, 17779), (360, 17791), (444, 17962), (449, 17971), (451, 17977), (465, 18010), (496, 18073), (514, 18124), (541, 18148), (563, 18172), (591, 18247), (603, 18286), (653, 18418), (714, 18532), (756, 18619), (792, 18733), (795, 18742), (836, 18847), (878, 18934), (913, 19042),

Gene: MulchExplorer\_19 Start: 15928, Stop: 17637, Start Num: 123

Candidate Starts for MulchExplorer\_19:

(Start: 123 @15928 has 215 MA's), (193, 16015), (Start: 227 @16060 has 2 MA's), (233, 16084), (271, 16189), (274, 16195), (281, 16213), (300, 16243), (348, 16348), (350, 16354), (370, 16408), (373, 16417), (378, 16429), (381, 16438), (388, 16462), (424, 16549), (443, 16564), (459, 16588), (465, 16603), (468, 16609), (484, 16645), (486, 16648), (492, 16660), (494, 16666), (511, 16714), (515, 16726), (521, 16732), (564, 16792), (568, 16804), (583, 16840), (587, 16852), (594, 16873), (614, 16927), (618, 16936), (625, 16954), (627, 16960), (638, 16990), (710, 17095), (717, 17104), (720, 17107), (737, 17143), (758, 17209), (761, 17221), (791, 17320), (799, 17341), (810, 17374), (826, 17404), (836, 17434), (841, 17443), (844, 17449), (860, 17464), (861, 17467), (866, 17491), (877, 17521), (882, 17533), (887, 17563), (900, 17605),

Gene: MulchSalad\_16 Start: 14726, Stop: 16435, Start Num: 123

Candidate Starts for MulchSalad\_16:

(Start: 123 @14726 has 215 MA's), (193, 14813), (209, 14834), (Start: 227 @14858 has 2 MA's), (233, 14882), (271, 14987), (274, 14993), (281, 15011), (284, 15020), (300, 15041), (348, 15146), (367, 15200), (370, 15206), (378, 15227), (381, 15236), (388, 15260), (459, 15386), (465, 15401), (468, 15407), (477, 15428), (484, 15443), (486, 15446), (492, 15458), (494, 15464), (511, 15512), (515, 15524), (521, 15530), (564, 15590), (568, 15602), (583, 15638), (587, 15650), (614, 15725), (618, 15734), (625, 15752), (627, 15758), (638, 15788), (710, 15893), (717, 15902), (720, 15905), (737, 15941), (761, 16019), (791, 16118), (799, 16139), (810, 16172), (826, 16202), (836, 16232), (841, 16241), (844, 16247), (860, 16262), (861, 16265), (865, 16286), (866, 16289), (882, 16331), (900, 16403),

Gene: Mulciber\_28 Start: 20749, Stop: 22548, Start Num: 144

Candidate Starts for Mulciber\_28:

(94, 20683), (Start: 123 @20725 has 215 MA's), (Start: 144 @20749 has 603 MA's), (183, 20791), (236, 20887), (242, 20902), (277, 20983), (278, 20986), (306, 21061), (315, 21076), (338, 21115), (341, 21121), (356, 21172), (378, 21232), (380, 21238), (417, 21319), (467, 21403), (518, 21529), (526, 21547), (540, 21574), (597, 21715), (631, 21781), (635, 21793), (636, 21796), (703, 21985), (721, 22012), (726, 22021), (736, 22042), (737, 22045), (746, 22066), (750, 22081), (756, 22105), (781, 22180), (784, 22195), (813, 22279), (860, 22384), (862, 22390), (877, 22444), (909, 22543),

Gene: Mule\_27 Start: 21163, Stop: 22965, Start Num: 146

Candidate Starts for Mule\_27:

(Start: 146 @21163 has 223 MA's), (Start: 161 @21184 has 4 MA's), (Start: 190 @21226 has 1 MA's), (216, 21271), (306, 21487), (332, 21532), (338, 21541), (349, 21580), (368, 21631), (369, 21634), (467, 21829), (500, 21898), (583, 22099), (584, 22102), (591, 22123), (635, 22219), (636, 22222), (638, 22228), (665, 22297), (668, 22315), (670, 22324), (677, 22354), (731, 22450), (746, 22483), (750, 22498), (793, 22639), (813, 22696), (862, 22807),

Gene: Munch\_28 Start: 20755, Stop: 22554, Start Num: 144

Candidate Starts for Munch\_28:

(94, 20689), (Start: 123 @20731 has 215 MA's), (Start: 144 @20755 has 603 MA's), (183, 20797), (236, 20893), (242, 20908), (277, 20989), (278, 20992), (306, 21067), (315, 21082), (338, 21121), (341, 21127), (356, 21178), (378, 21238), (380, 21244), (417, 21325), (467, 21409), (518, 21535), (526, 21553), (540, 21580), (597, 21721), (631, 21787), (635, 21799), (636, 21802), (703, 21991), (721, 22018), (726, 22027), (736, 22048), (737, 22051), (746, 22072), (750, 22087), (756, 22111), (781, 22186), (784, 22201), (813, 22285), (860, 22390), (862, 22396), (877, 22450), (909, 22549),

Gene: Mundrea\_27 Start: 19791, Stop: 21590, Start Num: 144

Candidate Starts for Mundrea\_27:

(Start: 123 @19767 has 215 MA's), (Start: 144 @19791 has 603 MA's), (Start: 148 @19797 has 14 MA's), (Start: 190 @19851 has 1 MA's), (230, 19920), (263, 19998), (272, 20022), (278, 20037), (306, 20112), (315, 20127), (338, 20166), (369, 20259), (378, 20283), (417, 20370), (481, 20484), (500, 20523), (532, 20610), (553, 20655), (583, 20724), (591, 20748), (595, 20760), (636, 20847), (665, 20922), (668, 20940), (670, 20949), (675, 20973), (677, 20979), (682, 20994), (703, 21027), (729, 21072), (731, 21075), (742, 21096), (813, 21321), (860, 21426), (862, 21432), (890, 21534), (900, 21567),

Gene: MunkgeeRoachy\_18 Start: 15780, Stop: 17477, Start Num: 144

Candidate Starts for MunkgeeRoachy\_18:

(Start: 133 @15777 has 8 MA's), (Start: 144 @15780 has 603 MA's), (264, 15990), (298, 16089), (306, 16113), (336, 16164), (365, 16251), (377, 16281), (382, 16296), (385, 16308), (436, 16386), (442, 16398), (454, 16425), (465, 16458), (481, 16491), (487, 16503), (505, 16545), (574, 16668), (599, 16740), (636, 16818), (643, 16833), (650, 16851), (668, 16908), (731, 17001), (747, 17037), (750, 17049), (752, 17055), (755, 17067), (766, 17076), (791, 17148), (793, 17151), (795, 17157), (799, 17169), (824, 17229), (842, 17274), (847, 17283), (862, 17316), (882, 17382),

Gene: Murai\_57 Start: 33688, Stop: 35433, Start Num: 100

Candidate Starts for Murai\_57:

(Start: 100 @33688 has 2 MA's), (Start: 107 @33697 has 25 MA's), (174, 33787), (240, 33904), (251, 33940), (259, 33961), (271, 33988), (274, 33994), (286, 34024), (302, 34048), (332, 34099), (381, 34237), (383, 34243), (400, 34294), (402, 34297), (407, 34315), (459, 34366), (468, 34387), (470, 34390), (492, 34438), (494, 34444), (511, 34492), (513, 34498), (515, 34504), (555, 34564), (564, 34588), (565, 34591), (583, 34636), (588, 34651), (591, 34660), (594, 34669), (608, 34714), (618,

34732), (631, 34765), (720, 34903), (729, 34924), (754, 34990), (762, 35020), (779, 35074), (791, 35116), (799, 35137), (805, 35158), (810, 35170), (821, 35191), (844, 35245), (880, 35323), (887, 35359), (893, 35380), (901, 35407),

Gene: Murica\_23 Start: 19814, Stop: 21409, Start Num: 191

Candidate Starts for Murica\_23:

(Start: 129 @19730 has 79 MA's), (Start: 191 @19814 has 45 MA's), (Start: 235 @19892 has 1 MA's), (268, 19979), (274, 19994), (300, 20042), (324, 20081), (356, 20168), (368, 20201), (381, 20237), (390, 20267), (392, 20273), (422, 20342), (461, 20372), (466, 20384), (468, 20387), (494, 20444), (565, 20576), (567, 20582), (592, 20648), (594, 20654), (601, 20678), (618, 20726), (627, 20750), (631, 20759), (658, 20834), (717, 20885), (725, 20900), (782, 21062), (788, 21089), (799, 21119), (843, 21224), (880, 21302), (887, 21338), (890, 21347), (900, 21380), (907, 21395),

Gene: Murp\_19 Start: 16718, Stop: 18364, Start Num: 195

Candidate Starts for Murp\_19:

(172, 16682), (Start: 195 @16718 has 45 MA's), (244, 16820), (272, 16898), (308, 16997), (329, 17036), (357, 17117), (377, 17171), (382, 17186), (392, 17219), (413, 17267), (415, 17270), (494, 17357), (506, 17387), (594, 17570), (601, 17594), (639, 17678), (658, 17738), (664, 17750), (702, 17810), (758, 17945), (788, 18044), (795, 18062), (813, 18113), (839, 18173), (843, 18179), (872, 18242), (877, 18254),

Gene: Murphy\_25 Start: 19809, Stop: 21404, Start Num: 191

Candidate Starts for Murphy\_25:

(Start: 129 @19725 has 79 MA's), (Start: 191 @19809 has 45 MA's), (Start: 235 @19887 has 1 MA's), (268, 19974), (274, 19989), (300, 20037), (324, 20076), (356, 20163), (368, 20196), (381, 20232), (390, 20262), (392, 20268), (422, 20337), (461, 20367), (466, 20379), (468, 20382), (494, 20439), (565, 20571), (567, 20577), (592, 20643), (594, 20649), (601, 20673), (618, 20721), (627, 20745), (631, 20754), (658, 20829), (717, 20880), (725, 20895), (782, 21057), (788, 21084), (799, 21114), (843, 21219), (880, 21297), (887, 21333), (890, 21342), (900, 21375), (907, 21390),

Gene: Murucutumbu\_23 Start: 17106, Stop: 18872, Start Num: 114

Candidate Starts for Murucutumbu\_23:

(Start: 114 @17106 has 139 MA's), (140, 17136), (236, 17295), (248, 17328), (258, 17358), (272, 17391), (278, 17403), (316, 17493), (334, 17529), (337, 17535), (360, 17607), (362, 17616), (378, 17655), (392, 17700), (400, 17721), (403, 17724), (448, 17796), (465, 17838), (468, 17844), (481, 17871), (499, 17907), (564, 18009), (572, 18027), (593, 18087), (603, 18117), (618, 18144), (655, 18249), (704, 18339), (748, 18408), (757, 18444), (768, 18474), (793, 18558), (810, 18609), (863, 18708), (880, 18759), (901, 18843), (902, 18846), (913, 18864),

Gene: Museum\_29 Start: 21173, Stop: 22975, Start Num: 146

Candidate Starts for Museum\_29:

(Start: 146 @21173 has 223 MA's), (Start: 161 @21194 has 4 MA's), (Start: 190 @21236 has 1 MA's), (216, 21281), (306, 21497), (332, 21542), (338, 21551), (349, 21590), (368, 21641), (369, 21644), (406, 21737), (467, 21839), (500, 21908), (583, 22109), (584, 22112), (591, 22133), (635, 22229), (636, 22232), (638, 22238), (665, 22307), (668, 22325), (670, 22334), (677, 22364), (731, 22460), (746, 22493), (750, 22508), (793, 22649), (813, 22706), (862, 22817),

Gene: Mutaforma13\_16 Start: 14853, Stop: 16562, Start Num: 123

Candidate Starts for Mutaforma13\_16:

(Start: 123 @14853 has 215 MA's), (193, 14940), (Start: 227 @14985 has 2 MA's), (233, 15009), (271, 15114), (274, 15120), (281, 15138), (300, 15168), (348, 15273), (370, 15333), (378, 15354), (381, 15363), (386, 15381), (388, 15387), (418, 15462), (420, 15465), (459, 15513), (465, 15528), (468, 15534), (484, 15570), (486, 15573), (492, 15585), (494, 15591), (511, 15639), (515, 15651), (521,

15657), (564, 15717), (568, 15729), (583, 15765), (587, 15777), (614, 15852), (618, 15861), (625, 15879), (627, 15885), (638, 15915), (710, 16020), (717, 16029), (720, 16032), (737, 16068), (761, 16146), (791, 16245), (799, 16266), (810, 16299), (826, 16329), (836, 16359), (841, 16368), (844, 16374), (860, 16389), (861, 16392), (866, 16416), (877, 16446), (882, 16458), (887, 16488), (900, 16530),

Gene: Mutzi\_33 Start: 26290, Stop: 28056, Start Num: 97

Candidate Starts for Mutzi\_33:

(80, 26248), (90, 26278), (Start: 97 @26290 has 73 MA's), (Start: 121 @26326 has 1 MA's), (Start: 148 @26359 has 14 MA's), (264, 26569), (265, 26572), (277, 26602), (298, 26668), (306, 26692), (311, 26701), (331, 26734), (371, 26839), (386, 26887), (392, 26905), (406, 26926), (445, 26977), (451, 26989), (458, 27007), (460, 27019), (465, 27031), (472, 27046), (487, 27076), (489, 27079), (499, 27100), (547, 27172), (568, 27220), (587, 27268), (591, 27280), (613, 27331), (632, 27364), (649, 27406), (670, 27478), (707, 27544), (715, 27556), (778, 27676), (793, 27727), (794, 27730), (810, 27778), (824, 27805), (825, 27808), (832, 27832), (860, 27886), (891, 28003), (897, 28024), (909, 28051),

Gene: Mynx\_23 Start: 17171, Stop: 18937, Start Num: 114

Candidate Starts for Mynx\_23:

(Start: 114 @17171 has 139 MA's), (140, 17201), (236, 17360), (248, 17393), (258, 17423), (272, 17456), (278, 17468), (316, 17558), (337, 17600), (360, 17672), (362, 17681), (378, 17720), (392, 17765), (400, 17786), (403, 17789), (438, 17843), (448, 17861), (465, 17903), (468, 17909), (481, 17936), (515, 18023), (564, 18074), (572, 18092), (587, 18134), (593, 18152), (603, 18182), (618, 18209), (655, 18314), (748, 18473), (757, 18509), (768, 18539), (772, 18548), (793, 18623), (810, 18674), (890, 18869), (901, 18908), (902, 18911), (913, 18929),

Gene: MyraDee\_25 Start: 18055, Stop: 19854, Start Num: 146

Candidate Starts for MyraDee\_25:

(Start: 123 @18028 has 215 MA's), (Start: 146 @18055 has 223 MA's), (198, 18136), (222, 18172), (236, 18205), (277, 18301), (278, 18304), (292, 18340), (306, 18379), (315, 18394), (368, 18523), (378, 18550), (388, 18583), (417, 18637), (481, 18751), (489, 18766), (521, 18853), (523, 18856), (553, 18919), (583, 18988), (597, 19030), (636, 19111), (665, 19186), (668, 19204), (675, 19237), (677, 19243), (682, 19258), (695, 19282), (731, 19339), (736, 19348), (746, 19372), (750, 19387), (793, 19528), (860, 19690), (862, 19696), (863, 19705), (902, 19840),

Gene: Myrale\_24 Start: 19616, Stop: 21295, Start Num: 129

Candidate Starts for Myrale\_24:

(Start: 129 @19616 has 79 MA's), (Start: 191 @19700 has 45 MA's), (Start: 235 @19778 has 1 MA's), (268, 19865), (274, 19880), (300, 19928), (324, 19967), (356, 20054), (368, 20087), (381, 20123), (390, 20153), (392, 20159), (422, 20228), (461, 20258), (466, 20270), (468, 20273), (494, 20330), (565, 20462), (567, 20468), (592, 20534), (594, 20540), (601, 20564), (618, 20612), (627, 20636), (631, 20645), (658, 20720), (717, 20771), (725, 20786), (782, 20948), (788, 20975), (799, 21005), (843, 21110), (880, 21188), (887, 21224), (890, 21233), (900, 21266), (907, 21281),

Gene: Myxus\_30 Start: 21746, Stop: 23539, Start Num: 141

Candidate Starts for Myxus\_30:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986), (305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319), (463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715), (636, 22796), (675, 22922), (693, 22964), (695, 22967), (731, 23024), (746, 23057), (750, 23072), (781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381), (873, 23426), (890, 23483), (891, 23486),

Gene: NEHalo\_27 Start: 20911, Stop: 22713, Start Num: 146

Candidate Starts for NEHalo\_27:

(Start: 146 @20911 has 223 MA's), (Start: 161 @20932 has 4 MA's), (Start: 190 @20974 has 1 MA's), (216, 21019), (306, 21235), (332, 21280), (338, 21289), (368, 21379), (369, 21382), (406, 21475), (467, 21577), (500, 21646), (583, 21847), (584, 21850), (591, 21871), (635, 21967), (636, 21970), (638, 21976), (665, 22045), (668, 22063), (670, 22072), (677, 22102), (731, 22198), (746, 22231), (750, 22246), (793, 22387), (813, 22444), (862, 22555),

Gene: NaSiaTalie\_28 Start: 20211, Stop: 21983, Start Num: 144

Candidate Starts for NaSiaTalie\_28:

(Start: 123 @20187 has 215 MA's), (Start: 144 @20211 has 603 MA's), (Start: 235 @20346 has 1 MA's), (242, 20364), (277, 20445), (278, 20448), (305, 20520), (306, 20523), (338, 20577), (341, 20583), (360, 20646), (378, 20694), (388, 20727), (417, 20781), (463, 20862), (467, 20865), (481, 20895), (546, 21051), (584, 21138), (636, 21258), (674, 21381), (675, 21384), (677, 21390), (713, 21438), (746, 21501), (750, 21516), (752, 21522), (770, 21576), (781, 21615), (784, 21630), (795, 21663), (810, 21708), (860, 21819), (862, 21825), (877, 21879),

Gene: Naca\_24 Start: 19512, Stop: 21311, Start Num: 144

Candidate Starts for Naca\_24:

(Start: 144 @19512 has 603 MA's), (278, 19749), (306, 19824), (315, 19839), (336, 19875), (360, 19947), (365, 19962), (378, 19995), (380, 20001), (481, 20196), (495, 20226), (499, 20232), (532, 20322), (553, 20367), (583, 20436), (597, 20478), (602, 20496), (635, 20556), (636, 20559), (668, 20652), (729, 20793), (746, 20829), (859, 21144), (862, 21153), (900, 21288),

Gene: Nadeem\_22 Start: 17344, Stop: 19050, Start Num: 162

Candidate Starts for Nadeem\_22:

(Start: 101 @17269 has 2 MA's), (Start: 162 @17344 has 16 MA's), (Start: 227 @17437 has 2 MA's), (230, 17452), (232, 17458), (256, 17533), (283, 17605), (336, 17716), (349, 17761), (356, 17779), (360, 17791), (444, 17962), (449, 17971), (451, 17977), (465, 18010), (496, 18073), (514, 18124), (541, 18148), (563, 18172), (591, 18247), (603, 18286), (653, 18418), (714, 18532), (756, 18619), (792, 18733), (795, 18742), (836, 18847), (878, 18934), (913, 19042),

Gene: NadineRae\_41 Start: 27143, Stop: 28759, Start Num: 170

Candidate Starts for NadineRae\_41:

(Start: 170 @27143 has 87 MA's), (Start: 177 @27155 has 1 MA's), (Start: 194 @27179 has 1 MA's), (236, 27257), (306, 27440), (340, 27497), (343, 27509), (347, 27524), (372, 27590), (377, 27605), (386, 27629), (432, 27716), (436, 27722), (449, 27746), (493, 27806), (505, 27836), (511, 27857), (560, 27962), (571, 27983), (607, 28070), (635, 28118), (673, 28244), (688, 28280), (791, 28445), (798, 28463), (809, 28499), (885, 28673), (887, 28685), (906, 28742),

Gene: Naiad\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Naiad\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Naira\_28 Start: 22770, Stop: 24572, Start Num: 146

Candidate Starts for Naira\_28:

(Start: 146 @22770 has 223 MA's), (Start: 161 @22791 has 4 MA's), (Start: 190 @22833 has 1 MA's), (216, 22878), (306, 23094), (332, 23139), (338, 23148), (349, 23187), (368, 23238), (369, 23241), (467, 23436), (500, 23505), (519, 23565), (583, 23706), (584, 23709), (591, 23730), (635, 23826),

(636, 23829), (638, 23835), (665, 23904), (668, 23922), (670, 23931), (677, 23961), (731, 24057), (746, 24090), (750, 24105), (793, 24246), (813, 24303), (862, 24414),

Gene: Naji\_31 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for Naji\_31:

(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (699, 21273), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474), (784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: Nala\_24 Start: 19856, Stop: 21451, Start Num: 191

Candidate Starts for Nala\_24:

(Start: 129 @19772 has 79 MA's), (Start: 191 @19856 has 45 MA's), (Start: 235 @19934 has 1 MA's), (268, 20021), (274, 20036), (300, 20084), (324, 20123), (356, 20210), (368, 20243), (381, 20279), (390, 20309), (392, 20315), (422, 20384), (461, 20414), (466, 20426), (468, 20429), (494, 20486), (565, 20618), (567, 20624), (592, 20690), (594, 20696), (601, 20720), (618, 20768), (627, 20792), (631, 20801), (658, 20876), (717, 20927), (725, 20942), (782, 21104), (788, 21131), (799, 21161), (843, 21266), (880, 21344), (887, 21380), (890, 21389), (900, 21422), (907, 21437),

Gene: Nancinator\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Nancinator\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: NancyRae\_22 Start: 17350, Stop: 19056, Start Num: 162

Candidate Starts for NancyRae\_22:

(Start: 101 @17275 has 2 MA's), (Start: 162 @17350 has 16 MA's), (Start: 227 @17443 has 2 MA's), (230, 17458), (232, 17464), (256, 17539), (283, 17611), (336, 17722), (349, 17767), (356, 17785), (360, 17797), (444, 17968), (449, 17977), (451, 17983), (465, 18016), (496, 18079), (514, 18130), (541, 18154), (563, 18178), (591, 18253), (599, 18277), (603, 18292), (653, 18424), (714, 18538), (756, 18625), (792, 18739), (795, 18748), (836, 18853), (878, 18940), (913, 19048),

Gene: NatB6\_41 Start: 29876, Stop: 31489, Start Num: 170

Candidate Starts for NatB6\_41:

(Start: 170 @29876 has 87 MA's), (Start: 194 @29912 has 1 MA's), (202, 29930), (236, 29990), (340, 30230), (343, 30242), (347, 30257), (372, 30323), (377, 30338), (386, 30362), (387, 30365), (432, 30449), (449, 30479), (450, 30482), (493, 30539), (510, 30587), (511, 30590), (518, 30611), (571, 30716), (592, 30761), (607, 30803), (673, 30977), (683, 31007), (688, 31013), (775, 31121), (776, 31124), (799, 31199), (887, 31418), (906, 31475),

Gene: Natkenzie\_35 Start: 30775, Stop: 32376, Start Num: 178

Candidate Starts for Natkenzie\_35:

(Start: 160 @30754 has 17 MA's), (178, 30775), (188, 30787), (219, 30838), (246, 30901), (277, 30973), (312, 31060), (341, 31111), (348, 31141), (378, 31222), (386, 31249), (449, 31348), (460, 31378), (464, 31387), (481, 31420), (482, 31423), (483, 31426), (489, 31435), (508, 31483), (547, 31531), (551, 31540), (596, 31639), (609, 31678), (619, 31690), (665, 31807), (672, 31846), (711, 31885), (746, 31942), (764, 31981), (769, 31990), (786, 32047), (790, 32059), (810, 32116), (813, 32122), (824, 32143), (842, 32176), (863, 32221), (900, 32350), (902, 32359),

Gene: Natosaleda\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Natosaleda\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Nazo\_18 Start: 16129, Stop: 17865, Start Num: 117

Candidate Starts for Nazo\_18:

(Start: 117 @16129 has 59 MA's), (180, 16213), (243, 16327), (246, 16333), (251, 16354), (258, 16372), (272, 16405), (282, 16429), (356, 16588), (358, 16594), (396, 16708), (422, 16765), (452, 16804), (459, 16810), (470, 16834), (494, 16888), (500, 16900), (503, 16909), (529, 16969), (560, 17014), (573, 17047), (587, 17086), (598, 17119), (601, 17131), (618, 17185), (636, 17233), (647, 17263), (653, 17275), (735, 17377), (740, 17389), (742, 17392), (745, 17398), (747, 17407), (779, 17515), (805, 17599), (853, 17698), (877, 17755), (907, 17854),

Gene: NearlyHeadless\_24 Start: 18670, Stop: 20460, Start Num: 144

Candidate Starts for NearlyHeadless\_24:

(Start: 123 @18646 has 215 MA's), (Start: 144 @18670 has 603 MA's), (214, 18763), (236, 18808), (278, 18907), (292, 18943), (306, 18982), (315, 18997), (336, 19033), (378, 19153), (380, 19159), (448, 19279), (505, 19408), (532, 19480), (583, 19594), (668, 19810), (675, 19843), (731, 19945), (746, 19978), (750, 19993), (758, 20023), (859, 20293), (862, 20302), (863, 20311), (896, 20425),

Gene: Nebkiss\_17 Start: 15060, Stop: 16949, Start Num: 99

Candidate Starts for Nebkiss\_17:

(Start: 99 @15060 has 2 MA's), (106, 15069), (119, 15090), (Start: 175 @15159 has 1 MA's), (189, 15177), (197, 15195), (230, 15249), (242, 15285), (248, 15300), (249, 15303), (272, 15363), (309, 15456), (334, 15501), (337, 15507), (340, 15513), (345, 15534), (348, 15546), (365, 15594), (380, 15633), (381, 15636), (382, 15639), (393, 15675), (400, 15693), (415, 15720), (421, 15729), (448, 15768), (454, 15786), (476, 15834), (497, 15876), (515, 15930), (517, 15936), (519, 15942), (532, 15972), (550, 16011), (552, 16020), (563, 16044), (565, 16050), (598, 16140), (602, 16155), (629, 16221), (641, 16251), (655, 16299), (664, 16323), (665, 16326), (670, 16353), (719, 16413), (727, 16434), (738, 16455), (754, 16503), (757, 16515), (773, 16560), (788, 16620), (826, 16716), (828, 16722), (836, 16746), (843, 16758), (850, 16767), (863, 16785), (880, 16836), (891, 16884), (893, 16893), (896, 16902), (898, 16911), (900, 16914), (913, 16941),

Gene: Nebs\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Nebs\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Nebulosus\_30 Start: 19093, Stop: 20880, Start Num: 144

Candidate Starts for Nebulosus\_30:

(94, 19027), (Start: 123 @19069 has 215 MA's), (Start: 144 @19093 has 603 MA's), (236, 19231), (262, 19288), (278, 19330), (292, 19366), (306, 19405), (343, 19474), (349, 19498), (369, 19552), (448, 19702), (467, 19747), (481, 19777), (499, 19813), (515, 19864), (530, 19900), (553, 19948),



(580, 20008), (635, 20137), (665, 20215), (750, 20416), (752, 20422), (782, 20518), (845, 20683), (880, 20782),

Gene: Necropolis\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Necropolis\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Nedarya\_29 Start: 19739, Stop: 21496, Start Num: 144

Candidate Starts for Nedarya\_29:

(94, 19673), (Start: 123 @19715 has 215 MA's), (Start: 132 @19727 has 45 MA's), (Start: 144 @19739 has 603 MA's), (198, 19808), (262, 19934), (278, 19976), (292, 20012), (306, 20051), (315, 20066), (343, 20120), (349, 20144), (357, 20165), (384, 20240), (467, 20393), (481, 20423), (489, 20438), (499, 20459), (553, 20564), (580, 20624), (635, 20753), (749, 21023), (771, 21095), (813, 21227), (842, 21293), (845, 21299), (849, 21305), (860, 21332), (890, 21440),

Gene: Neeharika16\_31 Start: 19969, Stop: 21741, Start Num: 144

Candidate Starts for Neeharika16\_31:

(94, 19903), (Start: 123 @19945 has 215 MA's), (Start: 144 @19969 has 603 MA's), (263, 20167), (278, 20206), (305, 20278), (306, 20281), (318, 20299), (338, 20335), (341, 20341), (378, 20452), (380, 20458), (392, 20497), (417, 20539), (448, 20578), (463, 20620), (467, 20623), (495, 20683), (592, 20920), (597, 20935), (636, 21016), (677, 21148), (750, 21274), (765, 21325), (770, 21334), (781, 21373), (782, 21376), (784, 21388), (813, 21472), (860, 21577), (862, 21583), (900, 21718),

Gene: NelitzaMV\_24 Start: 19899, Stop: 21494, Start Num: 191

Candidate Starts for NelitzaMV\_24:

(Start: 129 @19815 has 79 MA's), (Start: 191 @19899 has 45 MA's), (Start: 235 @19977 has 1 MA's), (268, 20064), (274, 20079), (300, 20127), (324, 20166), (356, 20253), (368, 20286), (381, 20322), (390, 20352), (392, 20358), (422, 20427), (461, 20457), (466, 20469), (468, 20472), (494, 20529), (565, 20661), (567, 20667), (592, 20733), (594, 20739), (601, 20763), (618, 20811), (627, 20835), (631, 20844), (658, 20919), (717, 20970), (725, 20985), (782, 21147), (788, 21174), (799, 21204), (843, 21309), (880, 21387), (887, 21423), (890, 21432), (900, 21465), (907, 21480),

Gene: Nemo27\_27 Start: 19826, Stop: 21604, Start Num: 144

Candidate Starts for Nemo27\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 190 @19883 has 1 MA's), (222, 19937), (230, 19952), (236, 19970), (272, 20054), (277, 20066), (278, 20069), (306, 20144), (315, 20159), (338, 20198), (378, 20315), (417, 20402), (463, 20483), (489, 20531), (500, 20555), (532, 20642), (553, 20687), (584, 20759), (591, 20780), (597, 20798), (636, 20879), (668, 20972), (670, 20981), (675, 21005), (677, 21011), (687, 21035), (731, 21089), (742, 21110), (756, 21161), (763, 21185), (782, 21239), (813, 21335), (860, 21440), (863, 21455), (894, 21563), (900, 21581),

Gene: Nenae\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Nenae\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388,

15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Neobush\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Neobush\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: Nergal\_22 Start: 17111, Stop: 18910, Start Num: 91

Candidate Starts for Nergal\_22:

(Start: 91 @17111 has 2 MA's), (96, 17126), (125, 17168), (127, 17171), (197, 17258), (223, 17291), (282, 17453), (330, 17552), (355, 17624), (365, 17654), (380, 17693), (392, 17732), (403, 17756), (483, 17903), (501, 17939), (524, 17993), (563, 18041), (587, 18104), (665, 18314), (691, 18350), (760, 18491), (772, 18518), (795, 18599), (824, 18671), (838, 18707), (850, 18725), (888, 18833), (897, 18863), (901, 18878),

Gene: Nerujay\_28 Start: 21579, Stop: 23381, Start Num: 146

Candidate Starts for Nerujay\_28:

(Start: 146 @21579 has 223 MA's), (Start: 161 @21600 has 4 MA's), (Start: 190 @21642 has 1 MA's), (216, 21687), (306, 21903), (332, 21948), (338, 21957), (349, 21996), (368, 22047), (369, 22050), (467, 22245), (500, 22314), (583, 22515), (584, 22518), (591, 22539), (635, 22635), (636, 22638), (638, 22644), (665, 22713), (668, 22731), (670, 22740), (677, 22770), (731, 22866), (746, 22899), (750, 22914), (793, 23055), (813, 23112), (862, 23223),

Gene: Nettuno\_17 Start: 14697, Stop: 16406, Start Num: 171

Candidate Starts for Nettuno\_17:

(Start: 171 @14697 has 40 MA's), (237, 14814), (259, 14886), (287, 14964), (347, 15087), (355, 15108), (377, 15177), (378, 15180), (397, 15237), (440, 15312), (462, 15366), (500, 15447), (519, 15507), (521, 15513), (607, 15672), (618, 15690), (624, 15705), (637, 15729), (665, 15801), (666, 15804), (669, 15825), (788, 16059), (794, 16074), (807, 16116), (847, 16209), (849, 16212), (865, 16260), (874, 16290), (890, 16347),

Gene: Newrala\_31 Start: 19969, Stop: 21741, Start Num: 144

Candidate Starts for Newrala\_31:

(94, 19903), (Start: 123 @19945 has 215 MA's), (Start: 144 @19969 has 603 MA's), (263, 20167), (278, 20206), (305, 20278), (306, 20281), (318, 20299), (338, 20335), (341, 20341), (378, 20452), (380, 20458), (392, 20497), (417, 20539), (448, 20578), (463, 20620), (467, 20623), (495, 20683), (592, 20920), (597, 20935), (636, 21016), (677, 21148), (750, 21274), (765, 21325), (770, 21334), (781, 21373), (782, 21376), (784, 21388), (813, 21472), (860, 21577), (862, 21583), (900, 21718),

Gene: Nhonho\_27 Start: 21330, Stop: 23132, Start Num: 146

Candidate Starts for Nhonho\_27:

(Start: 146 @21330 has 223 MA's), (Start: 161 @21351 has 4 MA's), (Start: 190 @21393 has 1 MA's), (216, 21438), (306, 21654), (332, 21699), (338, 21708), (349, 21747), (368, 21798), (369, 21801), (406, 21894), (467, 21996), (500, 22065), (583, 22266), (584, 22269), (591, 22290), (635, 22386), (636, 22389), (638, 22395), (665, 22464), (668, 22482), (670, 22491), (677, 22521), (731, 22617), (746, 22650), (750, 22665), (793, 22806), (813, 22863), (862, 22974), (909, 23127),

Gene: Nibb\_22 Start: 16431, Stop: 18197, Start Num: 114

Candidate Starts for Nibb\_22:

(Start: 93 @16392 has 1 MA's), (Start: 109 @16422 has 26 MA's), (Start: 114 @16431 has 139 MA's), (140, 16461), (Start: 227 @16587 has 2 MA's), (230, 16602), (248, 16653), (272, 16716), (316, 16818), (321, 16824), (334, 16854), (360, 16932), (362, 16941), (378, 16980), (393, 17028), (400, 17046), (423, 17085), (424, 17088), (438, 17103), (448, 17121), (454, 17139), (465, 17163), (468, 17169), (481, 17196), (505, 17250), (564, 17334), (572, 17352), (636, 17514), (641, 17526), (655, 17574), (698, 17649), (719, 17688), (748, 17733), (756, 17766), (758, 17772), (768, 17799), (793, 17883), (810, 17934), (813, 17940), (863, 18033), (865, 18042), (890, 18129), (913, 18189),

Gene: Nibbles\_20 Start: 16710, Stop: 18404, Start Num: 144

Candidate Starts for Nibbles\_20:

(47, 16386), (Start: 144 @16710 has 603 MA's), (289, 16995), (290, 16998), (306, 17043), (316, 17058), (349, 17136), (365, 17181), (406, 17283), (436, 17316), (442, 17328), (444, 17331), (465, 17388), (481, 17421), (489, 17436), (513, 17502), (549, 17544), (553, 17553), (574, 17598), (596, 17661), (635, 17742), (643, 17760), (647, 17769), (650, 17778), (668, 17835), (670, 17844), (750, 17976), (766, 18003), (777, 18024), (791, 18075), (793, 18078), (829, 18174), (842, 18201), (847, 18210), (849, 18213), (862, 18243), (865, 18261), (881, 18306), (907, 18396),

Gene: NicoleTera\_32 Start: 22012, Stop: 23784, Start Num: 144

Candidate Starts for NicoleTera\_32:

(Start: 123 @21988 has 215 MA's), (Start: 144 @22012 has 603 MA's), (251, 22195), (277, 22246), (278, 22249), (305, 22321), (306, 22324), (338, 22378), (341, 22384), (349, 22417), (378, 22495), (417, 22582), (463, 22663), (467, 22666), (584, 22939), (597, 22978), (635, 23056), (636, 23059), (677, 23191), (713, 23239), (731, 23269), (746, 23302), (750, 23317), (754, 23332), (759, 23353), (770, 23377), (781, 23416), (784, 23431), (795, 23464), (813, 23515), (860, 23620), (862, 23626), (877, 23680),

Gene: NiebruSaylor\_55 Start: 32904, Stop: 34640, Start Num: 107

Candidate Starts for NiebruSaylor\_55:

(Start: 100 @32895 has 2 MA's), (Start: 107 @32904 has 25 MA's), (174, 32994), (240, 33111), (251, 33147), (259, 33168), (271, 33195), (274, 33201), (286, 33231), (302, 33255), (332, 33306), (381, 33444), (383, 33450), (400, 33501), (402, 33504), (407, 33522), (459, 33573), (468, 33594), (470, 33597), (492, 33645), (494, 33651), (511, 33699), (513, 33705), (515, 33711), (555, 33771), (564, 33795), (565, 33798), (583, 33843), (588, 33858), (591, 33867), (594, 33876), (608, 33921), (618, 33939), (631, 33972), (720, 34110), (729, 34131), (754, 34197), (762, 34227), (779, 34281), (791, 34323), (799, 34344), (805, 34365), (810, 34377), (821, 34398), (844, 34452), (880, 34530), (887, 34566), (893, 34587), (901, 34614),

Gene: Nikao\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for Nikao\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499, 17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: Niklas\_23 Start: 16517, Stop: 18283, Start Num: 114

Candidate Starts for Niklas\_23:

(Start: 109 @16508 has 26 MA's), (Start: 114 @16517 has 139 MA's), (Start: 117 @16523 has 59 MA's), (140, 16547), (Start: 168 @16586 has 32 MA's), (Start: 227 @16673 has 2 MA's), (230, 16688),

(236, 16706), (248, 16739), (316, 16904), (334, 16940), (360, 17018), (362, 17027), (400, 17132), (403, 17135), (424, 17174), (444, 17201), (448, 17207), (465, 17249), (468, 17255), (481, 17282), (564, 17420), (572, 17438), (603, 17528), (618, 17555), (632, 17588), (655, 17660), (670, 17714), (704, 17750), (719, 17774), (748, 17819), (756, 17852), (760, 17867), (768, 17885), (772, 17894), (793, 17969), (810, 18020), (813, 18026), (865, 18128), (901, 18254), (902, 18257), (913, 18275),

Gene: Nimbo\_16 Start: 14808, Stop: 16517, Start Num: 123

Candidate Starts for Nimbo\_16:

(Start: 123 @14808 has 215 MA's), (193, 14895), (Start: 227 @14940 has 2 MA's), (233, 14964), (271, 15069), (274, 15075), (281, 15093), (300, 15123), (348, 15228), (370, 15288), (378, 15309), (381, 15318), (388, 15342), (459, 15468), (465, 15483), (468, 15489), (484, 15525), (486, 15528), (492, 15540), (494, 15546), (511, 15594), (515, 15606), (521, 15612), (564, 15672), (568, 15684), (583, 15720), (587, 15732), (614, 15807), (618, 15816), (625, 15834), (627, 15840), (638, 15870), (710, 15975), (717, 15984), (720, 15987), (737, 16023), (761, 16101), (791, 16200), (799, 16221), (810, 16254), (826, 16284), (836, 16314), (841, 16323), (844, 16329), (860, 16344), (861, 16347), (865, 16368), (866, 16371), (882, 16413), (887, 16443), (900, 16485),

Gene: Nimrod\_24 Start: 19991, Stop: 21670, Start Num: 129

Candidate Starts for Nimrod\_24:

(Start: 129 @19991 has 79 MA's), (Start: 191 @20075 has 45 MA's), (Start: 235 @20153 has 1 MA's), (268, 20240), (274, 20255), (300, 20303), (324, 20342), (356, 20429), (368, 20462), (381, 20498), (390, 20528), (392, 20534), (422, 20603), (461, 20633), (466, 20645), (468, 20648), (494, 20705), (565, 20837), (567, 20843), (592, 20909), (594, 20915), (601, 20939), (618, 20987), (627, 21011), (631, 21020), (658, 21095), (717, 21146), (725, 21161), (782, 21323), (788, 21350), (799, 21380), (843, 21485), (880, 21563), (887, 21599), (890, 21608), (900, 21641), (907, 21656),

Gene: Nina\_19 Start: 16774, Stop: 18471, Start Num: 144

Candidate Starts for Nina\_19:

(Start: 133 @16771 has 8 MA's), (Start: 144 @16774 has 603 MA's), (264, 16984), (306, 17107), (336, 17158), (365, 17245), (369, 17254), (377, 17275), (382, 17290), (385, 17302), (436, 17380), (442, 17392), (454, 17419), (465, 17452), (481, 17485), (487, 17497), (505, 17539), (574, 17662), (599, 17734), (636, 17812), (643, 17827), (650, 17845), (668, 17902), (731, 17995), (747, 18031), (750, 18043), (752, 18049), (755, 18061), (766, 18070), (791, 18142), (793, 18145), (795, 18151), (799, 18163), (824, 18223), (842, 18268), (847, 18277), (862, 18310), (882, 18376),

Gene: Nitzel\_17 Start: 15550, Stop: 17259, Start Num: 124

Candidate Starts for Nitzel\_17:

(Start: 124 @15550 has 30 MA's), (Start: 227 @15682 has 2 MA's), (233, 15706), (236, 15715), (259, 15784), (274, 15817), (281, 15835), (284, 15844), (348, 15970), (370, 16030), (378, 16051), (381, 16060), (388, 16084), (403, 16126), (418, 16159), (420, 16162), (424, 16171), (443, 16186), (448, 16192), (459, 16210), (465, 16225), (468, 16231), (484, 16267), (486, 16270), (492, 16282), (494, 16288), (499, 16297), (511, 16336), (515, 16348), (583, 16462), (587, 16474), (599, 16507), (614, 16549), (618, 16558), (625, 16576), (627, 16582), (710, 16717), (720, 16729), (737, 16765), (761, 16843), (826, 17026), (834, 17053), (836, 17056), (841, 17065), (844, 17071), (860, 17086), (865, 17110), (866, 17113), (869, 17122), (882, 17155), (900, 17227),

Gene: Nivrat\_16 Start: 14812, Stop: 16521, Start Num: 123

Candidate Starts for Nivrat\_16:

(Start: 123 @14812 has 215 MA's), (193, 14899), (Start: 227 @14944 has 2 MA's), (233, 14968), (271, 15073), (274, 15079), (281, 15097), (300, 15127), (348, 15232), (367, 15286), (370, 15292), (373, 15301), (381, 15322), (388, 15346), (402, 15382), (403, 15388), (418, 15421), (420, 15424), (424, 15433), (443, 15448), (448, 15454), (459, 15472), (465, 15487), (468, 15493), (475, 15511), (477, 15514), (484, 15529), (492, 15544), (494, 15550), (511, 15598), (515, 15610), (521, 15616), (564,

15676), (568, 15688), (583, 15724), (587, 15736), (614, 15811), (618, 15820), (625, 15838), (627, 15844), (638, 15874), (710, 15979), (720, 15991), (737, 16027), (761, 16105), (799, 16225), (810, 16258), (826, 16288), (829, 16300), (836, 16318), (839, 16324), (841, 16327), (844, 16333), (860, 16348), (861, 16351), (865, 16372), (866, 16375), (882, 16417), (887, 16447), (900, 16489), (901, 16495),

Gene: Niza\_29 Start: 22150, Stop: 23952, Start Num: 146

Candidate Starts for Niza\_29:

(Start: 146 @22150 has 223 MA's), (Start: 161 @22171 has 4 MA's), (Start: 190 @22213 has 1 MA's), (216, 22258), (306, 22474), (332, 22519), (338, 22528), (349, 22567), (368, 22618), (369, 22621), (467, 22816), (500, 22885), (519, 22945), (583, 23086), (584, 23089), (591, 23110), (635, 23206), (636, 23209), (638, 23215), (665, 23284), (668, 23302), (670, 23311), (677, 23341), (731, 23437), (746, 23470), (750, 23485), (793, 23626), (813, 23683), (862, 23794),

Gene: NoShow\_18 Start: 15497, Stop: 17335, Start Num: 89

Candidate Starts for NoShow\_18:

(Start: 89 @15497 has 4 MA's), (Start: 175 @15614 has 1 MA's), (Start: 227 @15689 has 2 MA's), (230, 15704), (249, 15758), (268, 15806), (342, 15977), (368, 16055), (369, 16058), (378, 16082), (386, 16109), (418, 16178), (420, 16181), (428, 16229), (444, 16259), (448, 16265), (454, 16283), (455, 16286), (468, 16313), (474, 16328), (499, 16376), (503, 16388), (563, 16475), (568, 16490), (598, 16571), (622, 16628), (632, 16649), (640, 16670), (722, 16838), (771, 16940), (773, 16949), (781, 16976), (788, 17006), (810, 17069), (813, 17075), (863, 17168), (898, 17294), (901, 17303),

Gene: NoSleep\_25 Start: 19485, Stop: 21164, Start Num: 129

Candidate Starts for NoSleep\_25:

(Start: 129 @19485 has 79 MA's), (Start: 191 @19569 has 45 MA's), (Start: 235 @19647 has 1 MA's), (268, 19734), (274, 19749), (300, 19797), (324, 19836), (356, 19923), (368, 19956), (381, 19992), (390, 20022), (392, 20028), (422, 20097), (461, 20127), (466, 20139), (468, 20142), (494, 20199), (565, 20331), (567, 20337), (592, 20403), (594, 20409), (601, 20433), (618, 20481), (627, 20505), (631, 20514), (658, 20589), (717, 20640), (725, 20655), (782, 20817), (788, 20844), (799, 20874), (843, 20979), (880, 21057), (887, 21093), (890, 21102), (900, 21135), (907, 21150),

Gene: Nodigi\_20 Start: 15752, Stop: 17443, Start Num: 133

Candidate Starts for Nodigi\_20:

(28, 15278), (41, 15389), (113, 15725), (Start: 133 @15752 has 8 MA's), (Start: 144 @15755 has 603 MA's), (202, 15839), (236, 15896), (277, 15995), (292, 16046), (365, 16223), (377, 16253), (385, 16280), (392, 16301), (395, 16310), (406, 16325), (436, 16355), (442, 16367), (445, 16373), (448, 16376), (453, 16391), (481, 16460), (513, 16541), (549, 16583), (553, 16592), (561, 16610), (581, 16655), (610, 16739), (634, 16775), (635, 16778), (636, 16781), (643, 16796), (650, 16814), (668, 16871), (675, 16904), (747, 17000), (750, 17012), (752, 17018), (754, 17027), (766, 17039), (791, 17111), (793, 17114), (794, 17117), (799, 17132), (847, 17249), (862, 17282), (863, 17291), (900, 17420), (907, 17435),

Gene: Noella\_28 Start: 20456, Stop: 22255, Start Num: 144

Candidate Starts for Noella\_28:

(Start: 144 @20456 has 603 MA's), (Start: 190 @20516 has 1 MA's), (230, 20585), (272, 20687), (277, 20699), (278, 20702), (306, 20777), (315, 20792), (338, 20831), (384, 20966), (417, 21035), (481, 21149), (532, 21275), (583, 21389), (591, 21413), (595, 21425), (597, 21431), (636, 21512), (665, 21587), (668, 21605), (670, 21614), (675, 21638), (677, 21644), (682, 21659), (703, 21692), (729, 21737), (731, 21740), (742, 21761), (782, 21890), (813, 21986), (860, 22091), (862, 22097), (900, 22232),

Gene: Noelle\_27 Start: 19888, Stop: 21681, Start Num: 148

Candidate Starts for Noelle\_27:

(Start: 123 @19858 has 215 MA's), (Start: 144 @19882 has 603 MA's), (Start: 148 @19888 has 14 MA's), (Start: 190 @19942 has 1 MA's), (230, 20011), (Start: 235 @20026 has 1 MA's), (263, 20089), (272, 20113), (277, 20125), (278, 20128), (306, 20203), (315, 20218), (369, 20350), (378, 20374), (417, 20461), (481, 20575), (500, 20614), (532, 20701), (553, 20746), (583, 20815), (591, 20839), (597, 20857), (636, 20938), (665, 21013), (668, 21031), (675, 21064), (677, 21070), (682, 21085), (695, 21109), (729, 21163), (731, 21166), (742, 21187), (813, 21412), (860, 21517), (862, 21523), (900, 21658),

Gene: Norbert\_27 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for Norbert\_27:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481, 21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729, 21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Nordenberg\_29 Start: 29943, Stop: 31706, Start Num: 97

Candidate Starts for Nordenberg\_29:

(90, 29925), (Start: 97 @29943 has 73 MA's), (Start: 121 @29979 has 1 MA's), (219, 30117), (262, 30213), (265, 30222), (288, 30291), (306, 30342), (332, 30387), (341, 30402), (368, 30483), (384, 30528), (386, 30537), (445, 30627), (458, 30657), (461, 30672), (472, 30696), (487, 30726), (551, 30831), (597, 30948), (607, 30966), (613, 30981), (631, 31011), (635, 31023), (636, 31026), (647, 31053), (793, 31377), (794, 31380), (810, 31428), (824, 31455), (832, 31482), (860, 31536), (865, 31560), (866, 31563), (891, 31653), (909, 31701),

Gene: NormanBulbieJr\_16 Start: 14800, Stop: 16509, Start Num: 123

Candidate Starts for NormanBulbieJr\_16:

(Start: 123 @14800 has 215 MA's), (193, 14887), (Start: 227 @14932 has 2 MA's), (233, 14956), (271, 15061), (274, 15067), (281, 15085), (300, 15115), (348, 15220), (370, 15280), (378, 15301), (381, 15310), (388, 15334), (459, 15460), (465, 15475), (468, 15481), (484, 15517), (486, 15520), (492, 15532), (494, 15538), (511, 15586), (515, 15598), (521, 15604), (564, 15664), (568, 15676), (583, 15712), (587, 15724), (614, 15799), (618, 15808), (625, 15826), (627, 15832), (638, 15862), (710, 15967), (720, 15979), (737, 16015), (761, 16093), (791, 16192), (799, 16213), (810, 16246), (826, 16276), (829, 16288), (836, 16306), (839, 16312), (841, 16315), (844, 16321), (860, 16336), (861, 16339), (865, 16360), (866, 16363), (882, 16405), (887, 16435), (900, 16477), (901, 16483),

Gene: NorthStar\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for NorthStar\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Norvs\_49 Start: 29614, Stop: 31305, Start Num: 146

Candidate Starts for Norvs\_49:

(Start: 146 @29614 has 223 MA's), (188, 29674), (206, 29707), (Start: 227 @29737 has 2 MA's), (228, 29740), (282, 29899), (286, 29908), (349, 30037), (366, 30085), (494, 30298), (498, 30304), (506, 30328), (576, 30457), (583, 30478), (594, 30511), (658, 30709), (758, 30862), (788, 30961), (793,

30973), (796, 30982), (829, 31066), (888, 31213), (898, 31249),

Gene: Norz\_29 Start: 21986, Stop: 23788, Start Num: 146

Candidate Starts for Norz\_29:

(Start: 146 @21986 has 223 MA's), (Start: 161 @22007 has 4 MA's), (Start: 190 @22049 has 1 MA's), (216, 22094), (306, 22310), (332, 22355), (338, 22364), (349, 22403), (368, 22454), (369, 22457), (467, 22652), (500, 22721), (583, 22922), (584, 22925), (591, 22946), (635, 23042), (636, 23045), (638, 23051), (665, 23120), (668, 23138), (670, 23147), (677, 23177), (731, 23273), (746, 23306), (750, 23321), (793, 23462), (813, 23519), (862, 23630),

Gene: NosilaM\_44 Start: 30458, Stop: 32074, Start Num: 170

Candidate Starts for NosilaM\_44:

(Start: 170 @30458 has 87 MA's), (236, 30572), (265, 30656), (347, 30839), (372, 30905), (377, 30920), (386, 30944), (432, 31031), (449, 31061), (450, 31064), (493, 31121), (518, 31193), (571, 31298), (607, 31385), (635, 31433), (673, 31559), (688, 31595), (776, 31706), (799, 31781), (877, 31958), (887, 32000), (906, 32057),

Gene: NotAPhaseMom\_27 Start: 19831, Stop: 21609, Start Num: 144

Candidate Starts for NotAPhaseMom\_27:

(Start: 123 @19807 has 215 MA's), (Start: 144 @19831 has 603 MA's), (Start: 190 @19888 has 1 MA's), (222, 19942), (230, 19957), (236, 19975), (272, 20059), (277, 20071), (278, 20074), (306, 20149), (315, 20164), (338, 20203), (378, 20320), (417, 20407), (463, 20488), (489, 20536), (500, 20560), (532, 20647), (553, 20692), (584, 20764), (591, 20785), (597, 20803), (636, 20884), (668, 20977), (670, 20986), (675, 21010), (677, 21016), (687, 21040), (731, 21094), (742, 21115), (756, 21166), (763, 21190), (782, 21244), (813, 21340), (860, 21445), (863, 21460), (894, 21568), (900, 21586),

Gene: NothingSpecial\_30 Start: 22209, Stop: 23981, Start Num: 144

Candidate Starts for NothingSpecial\_30:

(94, 22143), (Start: 123 @22185 has 215 MA's), (Start: 144 @22209 has 603 MA's), (Start: 235 @22344 has 1 MA's), (242, 22362), (277, 22443), (278, 22446), (305, 22518), (306, 22521), (338, 22575), (341, 22581), (378, 22692), (395, 22746), (417, 22779), (463, 22860), (467, 22863), (525, 23004), (532, 23019), (540, 23034), (584, 23136), (636, 23256), (677, 23388), (687, 23412), (742, 23487), (746, 23499), (750, 23514), (752, 23520), (781, 23613), (784, 23628), (813, 23712), (860, 23817), (862, 23823), (877, 23877),

Gene: NovumRegina\_41 Start: 30206, Stop: 31819, Start Num: 170

Candidate Starts for NovumRegina\_41:

(Start: 170 @30206 has 87 MA's), (Start: 194 @30242 has 1 MA's), (202, 30260), (236, 30320), (340, 30560), (343, 30572), (347, 30587), (372, 30653), (377, 30668), (386, 30692), (387, 30695), (432, 30779), (449, 30809), (450, 30812), (493, 30869), (510, 30917), (511, 30920), (518, 30941), (571, 31046), (592, 31091), (607, 31133), (673, 31307), (683, 31337), (688, 31343), (775, 31451), (776, 31454), (799, 31529), (887, 31748), (906, 31805),

Gene: Nubi\_31 Start: 25863, Stop: 27629, Start Num: 97

Candidate Starts for Nubi\_31:

(80, 25821), (Start: 97 @25863 has 73 MA's), (Start: 121 @25899 has 1 MA's), (Start: 148 @25932 has 14 MA's), (264, 26142), (265, 26145), (277, 26175), (298, 26241), (306, 26265), (311, 26274), (331, 26307), (386, 26460), (406, 26499), (445, 26550), (451, 26562), (458, 26580), (460, 26592), (465, 26604), (472, 26619), (487, 26649), (489, 26652), (499, 26673), (547, 26745), (568, 26793), (613, 26904), (632, 26937), (647, 26976), (649, 26979), (670, 27051), (707, 27117), (715, 27129), (793, 27300), (794, 27303), (810, 27351), (824, 27378), (832, 27405), (835, 27411), (860, 27459), (891, 27576), (897, 27597), (909, 27624),

Gene: Nutello\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for Nutello\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499, 17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: Nyceirae\_23 Start: 18768, Stop: 20426, Start Num: 149

Candidate Starts for Nyceirae\_23:

(77, 18639), (Start: 121 @18732 has 1 MA's), (Start: 149 @18768 has 8 MA's), (Start: 157 @18780 has 4 MA's), (230, 18894), (240, 18924), (261, 18978), (284, 19044), (287, 19050), (337, 19161), (341, 19170), (347, 19197), (349, 19203), (350, 19206), (358, 19227), (387, 19311), (444, 19398), (445, 19401), (474, 19467), (482, 19482), (506, 19536), (555, 19566), (559, 19575), (576, 19617), (583, 19638), (599, 19686), (602, 19698), (610, 19725), (641, 19794), (662, 19863), (670, 19896), (716, 19953), (757, 20004), (780, 20073), (806, 20160), (813, 20175), (838, 20232), (843, 20241), (865, 20280), (878, 20319), (881, 20325),

Gene: Nymphadora\_19 Start: 17764, Stop: 19362, Start Num: 170

Candidate Starts for Nymphadora\_19:

(Start: 170 @17764 has 87 MA's), (298, 18022), (306, 18040), (307, 18043), (340, 18097), (363, 18172), (385, 18241), (388, 18250), (392, 18262), (415, 18313), (435, 18340), (440, 18349), (441, 18352), (501, 18385), (519, 18442), (554, 18508), (603, 18619), (618, 18643), (636, 18679), (669, 18781), (687, 18838), (751, 18928), (849, 19168), (874, 19246),

Gene: Nyxis\_27 Start: 19770, Stop: 21548, Start Num: 144

Candidate Starts for Nyxis\_27:

(Start: 123 @19746 has 215 MA's), (Start: 144 @19770 has 603 MA's), (Start: 190 @19827 has 1 MA's), (222, 19881), (230, 19896), (236, 19914), (272, 19998), (277, 20010), (278, 20013), (306, 20088), (315, 20103), (338, 20142), (378, 20259), (417, 20346), (463, 20427), (489, 20475), (500, 20499), (532, 20586), (553, 20631), (584, 20703), (591, 20724), (597, 20742), (636, 20823), (668, 20916), (670, 20925), (675, 20949), (677, 20955), (687, 20979), (731, 21033), (742, 21054), (756, 21105), (763, 21129), (813, 21279), (860, 21384), (863, 21399), (894, 21507), (900, 21525),

Gene: OBUpride\_22 Start: 17400, Stop: 19142, Start Num: 112

Candidate Starts for OBUpride\_22:

(Start: 112 @17400 has 41 MA's), (Start: 117 @17409 has 59 MA's), (152, 17451), (189, 17502), (201, 17526), (212, 17538), (Start: 227 @17559 has 2 MA's), (230, 17574), (236, 17592), (249, 17625), (255, 17652), (282, 17724), (325, 17814), (355, 17898), (358, 17907), (365, 17928), (388, 17994), (398, 18021), (416, 18054), (438, 18072), (449, 18093), (454, 18108), (455, 18111), (487, 18177), (489, 18180), (514, 18246), (527, 18258), (541, 18267), (555, 18270), (588, 18357), (605, 18411), (628, 18456), (631, 18462), (654, 18534), (665, 18564), (670, 18591), (704, 18627), (708, 18636), (756, 18714), (802, 18858), (807, 18876), (813, 18888), (822, 18903), (824, 18906), (831, 18927), (836, 18939), (865, 18987), (876, 19020), (896, 19095), (901, 19113), (913, 19134),

Gene: ODay\_25 Start: 18641, Stop: 20350, Start Num: 111

Candidate Starts for ODay\_25:

(Start: 111 @18641 has 24 MA's), (Start: 118 @18653 has 8 MA's), (Start: 121 @18656 has 1 MA's), (152, 18695), (243, 18860), (290, 18953), (311, 19004), (319, 19013), (332, 19031), (347, 19073), (349, 19079), (358, 19103), (359, 19109), (365, 19127), (384, 19178), (385, 19184), (395, 19214), (433, 19256), (445, 19277), (449, 19283), (458, 19307), (481, 19358), (482, 19361), (497, 19391),



(500, 19397), (579, 19541), (647, 19703), (668, 19769), (670, 19778), (674, 19799), (739, 19892), (747, 19913), (750, 19925), (752, 19931), (754, 19940), (755, 19943), (783, 19997), (793, 20027), (818, 20096), (860, 20183), (862, 20189), (876, 20240), (887, 20285), (900, 20327), (909, 20345),

Gene: OKCentral2016\_27 Start: 19492, Stop: 21270, Start Num: 144

Candidate Starts for OKCentral2016\_27:

(Start: 123 @19468 has 215 MA's), (Start: 144 @19492 has 603 MA's), (Start: 190 @19549 has 1 MA's), (197, 19564), (230, 19618), (272, 19720), (277, 19732), (278, 19735), (306, 19810), (315, 19825), (338, 19864), (378, 19981), (384, 19999), (417, 20068), (460, 20143), (481, 20182), (500, 20221), (532, 20308), (546, 20338), (553, 20353), (576, 20401), (591, 20446), (595, 20458), (597, 20464), (635, 20542), (636, 20545), (668, 20638), (670, 20647), (675, 20671), (677, 20677), (682, 20692), (713, 20725), (742, 20776), (749, 20794), (758, 20833), (759, 20839), (793, 20944), (813, 21001), (825, 21025), (827, 21031), (860, 21106), (862, 21112), (863, 21121), (900, 21247),

Gene: OKaNui\_28 Start: 19880, Stop: 21658, Start Num: 144

Candidate Starts for OKaNui\_28:

(Start: 123 @19856 has 215 MA's), (Start: 144 @19880 has 603 MA's), (Start: 190 @19937 has 1 MA's), (222, 19991), (230, 20006), (236, 20024), (272, 20108), (277, 20120), (278, 20123), (306, 20198), (315, 20213), (338, 20252), (378, 20369), (417, 20456), (463, 20537), (489, 20585), (500, 20609), (532, 20696), (553, 20741), (584, 20813), (591, 20834), (597, 20852), (636, 20933), (668, 21026), (670, 21035), (675, 21059), (677, 21065), (687, 21089), (731, 21143), (742, 21164), (756, 21215), (763, 21239), (782, 21293), (813, 21389), (860, 21494), (863, 21509), (894, 21617), (900, 21635),

Gene: ObLaDi\_19 Start: 16527, Stop: 18191, Start Num: 151

Candidate Starts for ObLaDi\_19:

(Start: 141 @16512 has 14 MA's), (Start: 151 @16527 has 5 MA's), (Start: 155 @16533 has 4 MA's), (176, 16563), (183, 16572), (295, 16806), (306, 16839), (334, 16887), (360, 16962), (377, 17007), (417, 17097), (436, 17112), (459, 17166), (463, 17175), (481, 17208), (497, 17241), (500, 17247), (610, 17481), (619, 17493), (635, 17520), (646, 17553), (661, 17592), (665, 17601), (682, 17673), (718, 17688), (731, 17712), (750, 17760), (787, 17847), (795, 17868), (820, 17934), (849, 18000), (865, 18048), (891, 18138), (909, 18186),

Gene: Obama12\_28 Start: 20140, Stop: 21921, Start Num: 144

Candidate Starts for Obama12\_28:

(Start: 123 @20116 has 215 MA's), (Start: 144 @20140 has 603 MA's), (Start: 148 @20146 has 14 MA's), (Start: 190 @20200 has 1 MA's), (197, 20215), (230, 20269), (236, 20287), (272, 20371), (277, 20383), (278, 20386), (306, 20461), (315, 20476), (338, 20515), (378, 20632), (417, 20719), (463, 20800), (489, 20848), (500, 20872), (532, 20959), (553, 21004), (584, 21076), (591, 21097), (597, 21115), (636, 21196), (665, 21271), (668, 21289), (670, 21298), (675, 21322), (677, 21328), (687, 21352), (726, 21394), (731, 21406), (742, 21427), (756, 21478), (763, 21502), (782, 21556), (813, 21652), (860, 21757), (863, 21772), (894, 21880), (900, 21898),

Gene: Obliviate\_18 Start: 16440, Stop: 18086, Start Num: 195

Candidate Starts for Obliviate\_18:

(172, 16404), (Start: 195 @16440 has 45 MA's), (244, 16542), (272, 16620), (274, 16623), (308, 16719), (329, 16758), (349, 16818), (357, 16839), (377, 16893), (382, 16908), (494, 17079), (506, 17109), (594, 17292), (601, 17316), (626, 17367), (658, 17460), (664, 17472), (694, 17517), (702, 17532), (757, 17664), (758, 17667), (788, 17766), (795, 17784), (813, 17835), (843, 17901), (872, 17964), (877, 17976),

Gene: Ochi17\_16 Start: 15041, Stop: 16750, Start Num: 123

Candidate Starts for Ochi17\_16:

(Start: 123 @15041 has 215 MA's), (193, 15128), (209, 15149), (Start: 227 @15173 has 2 MA's), (233, 15197), (240, 15218), (271, 15302), (274, 15308), (281, 15326), (300, 15356), (348, 15461), (367, 15515), (370, 15521), (377, 15539), (378, 15542), (381, 15551), (388, 15575), (418, 15650), (424, 15662), (443, 15677), (448, 15683), (459, 15701), (465, 15716), (468, 15722), (480, 15749), (484, 15758), (492, 15773), (494, 15779), (511, 15827), (515, 15839), (521, 15845), (564, 15905), (568, 15917), (583, 15953), (587, 15965), (594, 15986), (614, 16040), (618, 16049), (625, 16067), (627, 16073), (638, 16103), (710, 16208), (717, 16217), (720, 16220), (737, 16256), (751, 16295), (761, 16334), (799, 16454), (810, 16487), (826, 16517), (836, 16547), (841, 16556), (844, 16562), (860, 16577), (861, 16580), (865, 16601), (866, 16604), (880, 16640), (882, 16646), (887, 16676), (900, 16718),

Gene: OctaviousRex\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for OctaviousRex\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Odette\_36 Start: 26877, Stop: 28610, Start Num: 124

Candidate Starts for Odette\_36:

(Start: 124 @26877 has 30 MA's), (Start: 191 @26967 has 45 MA's), (222, 27015), (233, 27045), (243, 27072), (282, 27174), (301, 27204), (346, 27303), (358, 27339), (360, 27345), (368, 27366), (392, 27438), (395, 27447), (403, 27468), (448, 27537), (468, 27576), (470, 27579), (475, 27594), (494, 27633), (511, 27681), (515, 27693), (521, 27699), (552, 27747), (558, 27756), (565, 27777), (573, 27795), (590, 27843), (625, 27945), (647, 28005), (653, 28017), (725, 28101), (731, 28113), (735, 28119), (740, 28131), (742, 28134), (753, 28173), (758, 28191), (772, 28227), (773, 28233), (799, 28320), (834, 28410), (863, 28452), (868, 28470), (878, 28500), (888, 28542), (907, 28596),

Gene: Odin\_27 Start: 18961, Stop: 20751, Start Num: 144

Candidate Starts for Odin\_27:

(94, 18895), (Start: 123 @18937 has 215 MA's), (Start: 144 @18961 has 603 MA's), (242, 19114), (277, 19195), (278, 19198), (305, 19270), (306, 19273), (315, 19288), (338, 19327), (341, 19333), (378, 19444), (380, 19450), (388, 19477), (417, 19531), (463, 19612), (532, 19771), (546, 19801), (597, 19927), (619, 19978), (636, 20008), (675, 20134), (701, 20188), (721, 20215), (726, 20224), (731, 20236), (746, 20269), (750, 20284), (756, 20308), (781, 20383), (782, 20386), (784, 20398), (813, 20482), (860, 20587), (873, 20638), (877, 20647), (900, 20728),

Gene: OfUltron\_16 Start: 15041, Stop: 16750, Start Num: 123

Candidate Starts for OfUltron\_16:

(Start: 123 @15041 has 215 MA's), (193, 15128), (209, 15149), (Start: 227 @15173 has 2 MA's), (233, 15197), (240, 15218), (271, 15302), (274, 15308), (281, 15326), (300, 15356), (348, 15461), (367, 15515), (370, 15521), (377, 15539), (378, 15542), (381, 15551), (388, 15575), (418, 15650), (424, 15662), (443, 15677), (448, 15683), (459, 15701), (465, 15716), (468, 15722), (480, 15749), (484, 15758), (492, 15773), (494, 15779), (511, 15827), (515, 15839), (521, 15845), (564, 15905), (568, 15917), (583, 15953), (587, 15965), (594, 15986), (614, 16040), (618, 16049), (625, 16067), (627, 16073), (638, 16103), (710, 16208), (717, 16217), (720, 16220), (737, 16256), (751, 16295), (761, 16334), (799, 16454), (810, 16487), (826, 16517), (836, 16547), (841, 16556), (844, 16562), (860, 16577), (861, 16580), (865, 16601), (866, 16604), (880, 16640), (882, 16646), (887, 16676), (900, 16718),

Gene: Ogopogo\_19 Start: 15066, Stop: 16775, Start Num: 123

Candidate Starts for Ogo\_pogo\_19:

(Start: 123 @15066 has 215 MA's), (193, 15153), (209, 15174), (Start: 227 @15198 has 2 MA's), (233, 15222), (240, 15243), (271, 15327), (274, 15333), (281, 15351), (300, 15381), (348, 15486), (367, 15540), (370, 15546), (373, 15555), (378, 15567), (381, 15576), (388, 15600), (403, 15642), (418, 15675), (448, 15708), (459, 15726), (465, 15741), (468, 15747), (484, 15783), (492, 15798), (494, 15804), (511, 15852), (515, 15864), (521, 15870), (564, 15930), (583, 15978), (587, 15990), (614, 16065), (618, 16074), (625, 16092), (627, 16098), (638, 16128), (710, 16233), (720, 16245), (737, 16281), (799, 16479), (810, 16512), (826, 16542), (829, 16554), (836, 16572), (841, 16581), (844, 16587), (860, 16602), (861, 16605), (865, 16626), (866, 16629), (882, 16671), (887, 16701), (900, 16743), (901, 16749),

Gene: Ohfah\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Ohfah\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Ohgeesy\_19 Start: 17387, Stop: 18985, Start Num: 170

Candidate Starts for Ohgeesy\_19:

(Start: 170 @17387 has 87 MA's), (295, 17636), (298, 17645), (306, 17663), (307, 17666), (340, 17720), (363, 17795), (385, 17864), (388, 17873), (392, 17885), (397, 17897), (415, 17936), (435, 17963), (440, 17972), (441, 17975), (501, 18008), (519, 18065), (554, 18131), (603, 18242), (636, 18302), (669, 18404), (687, 18461), (751, 18551), (849, 18791), (874, 18869),

Gene: Ohno789\_27 Start: 20972, Stop: 22774, Start Num: 146

Candidate Starts for Ohno789\_27:

(Start: 146 @20972 has 223 MA's), (Start: 161 @20993 has 4 MA's), (Start: 190 @21035 has 1 MA's), (216, 21080), (306, 21296), (332, 21341), (338, 21350), (349, 21389), (368, 21440), (369, 21443), (467, 21638), (500, 21707), (583, 21908), (584, 21911), (591, 21932), (635, 22028), (636, 22031), (638, 22037), (665, 22106), (668, 22124), (670, 22133), (677, 22163), (731, 22259), (746, 22292), (750, 22307), (793, 22448), (813, 22505), (862, 22616),

Gene: OkiRoe\_21 Start: 17496, Stop: 19268, Start Num: 117

Candidate Starts for OkiRoe\_21:

(Start: 117 @17496 has 59 MA's), (Start: 123 @17502 has 215 MA's), (143, 17526), (Start: 168 @17559 has 32 MA's), (197, 17607), (230, 17661), (248, 17712), (272, 17775), (321, 17883), (360, 17991), (400, 18105), (403, 18108), (424, 18147), (444, 18174), (448, 18180), (465, 18222), (468, 18228), (487, 18267), (499, 18291), (564, 18393), (588, 18456), (602, 18501), (655, 18636), (708, 18735), (750, 18813), (756, 18837), (762, 18858), (793, 18954), (795, 18960), (865, 19113), (895, 19218), (896, 19221), (901, 19239),

Gene: Oksu\_17 Start: 14871, Stop: 16580, Start Num: 123

Candidate Starts for Oksu\_17:

(Start: 123 @14871 has 215 MA's), (193, 14958), (Start: 227 @15003 has 2 MA's), (233, 15027), (271, 15132), (274, 15138), (281, 15156), (300, 15186), (348, 15291), (370, 15351), (378, 15372), (381, 15381), (388, 15405), (418, 15480), (459, 15531), (465, 15546), (468, 15552), (484, 15588), (492, 15603), (494, 15609), (511, 15657), (515, 15669), (521, 15675), (564, 15735), (568, 15747), (583, 15783), (587, 15795), (594, 15816), (614, 15870), (618, 15879), (625, 15897), (627, 15903), (638, 15933), (710, 16038), (717, 16047), (720, 16050), (737, 16086), (761, 16164), (791, 16263), (799, 16284), (810, 16317), (826, 16347), (836, 16377), (841, 16386), (844, 16392), (860, 16407), (861,

16410), (865, 16431), (866, 16434), (880, 16470), (882, 16476), (900, 16548),

Gene: OlanP\_29 Start: 20640, Stop: 22436, Start Num: 144

Candidate Starts for OlanP\_29:

(Start: 144 @20640 has 603 MA's), (Start: 190 @20697 has 1 MA's), (197, 20712), (230, 20766), (Start: 235 @20781 has 1 MA's), (272, 20868), (277, 20880), (278, 20883), (306, 20958), (315, 20973), (417, 21216), (500, 21369), (532, 21456), (583, 21570), (591, 21594), (597, 21612), (636, 21693), (665, 21768), (668, 21786), (670, 21795), (675, 21819), (677, 21825), (682, 21840), (695, 21864), (729, 21918), (731, 21921), (742, 21942), (862, 22278), (900, 22413),

Gene: OldBen\_16 Start: 14778, Stop: 16487, Start Num: 123

Candidate Starts for OldBen\_16:

(Start: 123 @14778 has 215 MA's), (193, 14865), (Start: 227 @14910 has 2 MA's), (233, 14934), (271, 15039), (274, 15045), (281, 15063), (284, 15072), (300, 15093), (348, 15198), (370, 15258), (378, 15279), (381, 15288), (388, 15312), (459, 15438), (465, 15453), (468, 15459), (484, 15495), (486, 15498), (492, 15510), (494, 15516), (511, 15564), (515, 15576), (521, 15582), (564, 15642), (568, 15654), (583, 15690), (587, 15702), (614, 15777), (618, 15786), (625, 15804), (627, 15810), (638, 15840), (710, 15945), (717, 15954), (720, 15957), (737, 15993), (761, 16071), (791, 16170), (799, 16191), (810, 16224), (826, 16254), (836, 16284), (841, 16293), (844, 16299), (860, 16314), (861, 16317), (865, 16338), (866, 16341), (882, 16383), (887, 16413), (900, 16455),

Gene: Olga\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Olga\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Ollie\_29 Start: 20249, Stop: 22045, Start Num: 144

Candidate Starts for Ollie\_29:

(Start: 144 @20249 has 603 MA's), (Start: 190 @20306 has 1 MA's), (197, 20321), (219, 20354), (230, 20375), (Start: 235 @20390 has 1 MA's), (272, 20477), (277, 20489), (278, 20492), (306, 20567), (315, 20582), (336, 20618), (417, 20825), (481, 20939), (500, 20978), (532, 21065), (583, 21179), (591, 21203), (597, 21221), (636, 21302), (665, 21377), (668, 21395), (675, 21428), (677, 21434), (695, 21473), (729, 21527), (731, 21530), (742, 21551), (758, 21608), (813, 21776), (860, 21881), (862, 21887), (900, 22022),

Gene: OlympiaSaint\_16 Start: 15002, Stop: 16711, Start Num: 123

Candidate Starts for OlympiaSaint\_16:

(Start: 123 @15002 has 215 MA's), (193, 15089), (Start: 227 @15134 has 2 MA's), (233, 15158), (271, 15263), (274, 15269), (281, 15287), (300, 15317), (348, 15422), (370, 15482), (378, 15503), (381, 15512), (388, 15536), (418, 15611), (420, 15614), (459, 15662), (465, 15677), (468, 15683), (484, 15719), (486, 15722), (492, 15734), (494, 15740), (511, 15788), (515, 15800), (521, 15806), (564, 15866), (568, 15878), (583, 15914), (587, 15926), (614, 16001), (618, 16010), (625, 16028), (627, 16034), (638, 16064), (710, 16169), (720, 16181), (737, 16217), (761, 16295), (799, 16415), (810, 16448), (826, 16478), (836, 16508), (841, 16517), (844, 16523), (860, 16538), (861, 16541), (866, 16565), (877, 16595), (882, 16607), (887, 16637), (900, 16679),

Gene: Omega\_36 Start: 28767, Stop: 30500, Start Num: 124

Candidate Starts for Omega\_36:

(Start: 124 @28767 has 30 MA's), (Start: 191 @28857 has 45 MA's), (193, 28860), (233, 28935), (243, 28962), (268, 29028), (282, 29064), (301, 29094), (306, 29109), (346, 29193), (358, 29229), (368, 29256), (382, 29295), (392, 29328), (395, 29337), (420, 29394), (451, 29436), (490, 29511), (494, 29523), (515, 29583), (521, 29589), (552, 29637), (565, 29667), (573, 29685), (577, 29694), (588, 29727), (592, 29739), (594, 29745), (606, 29784), (627, 29841), (725, 29991), (735, 30009), (750, 30051), (756, 30075), (757, 30078), (761, 30093), (773, 30123), (782, 30153), (799, 30210), (868, 30360), (902, 30480), (907, 30486),

Gene: OmniCritical\_24 Start: 18531, Stop: 20318, Start Num: 114

Candidate Starts for OmniCritical\_24:

(Start: 93 @18492 has 1 MA's), (Start: 109 @18522 has 26 MA's), (Start: 112 @18528 has 41 MA's), (Start: 114 @18531 has 139 MA's), (Start: 168 @18588 has 32 MA's), (197, 18636), (Start: 227 @18675 has 2 MA's), (230, 18690), (236, 18708), (248, 18741), (258, 18771), (278, 18816), (282, 18834), (316, 18906), (321, 18912), (334, 18942), (356, 19008), (360, 19020), (412, 19155), (444, 19203), (448, 19209), (454, 19227), (468, 19257), (487, 19296), (564, 19422), (587, 19482), (588, 19485), (594, 19503), (599, 19518), (655, 19686), (670, 19740), (708, 19785), (734, 19830), (748, 19854), (756, 19887), (768, 19920), (788, 19992), (793, 20004), (810, 20055), (813, 20061), (865, 20163), (901, 20289), (913, 20310),

Gene: OneDirection\_17 Start: 14664, Stop: 16373, Start Num: 171

Candidate Starts for OneDirection\_17:

(83, 14529), (Start: 171 @14664 has 40 MA's), (259, 14853), (262, 14856), (287, 14931), (315, 14985), (347, 15054), (377, 15144), (378, 15147), (440, 15279), (462, 15333), (500, 15414), (519, 15474), (521, 15480), (572, 15561), (607, 15639), (618, 15657), (637, 15696), (665, 15768), (666, 15771), (669, 15792), (788, 16026), (794, 16041), (807, 16083), (847, 16176), (849, 16179), (865, 16227), (874, 16257),

Gene: OneUp\_42 Start: 27048, Stop: 28739, Start Num: 146

Candidate Starts for OneUp\_42:

(Start: 146 @27048 has 223 MA's), (188, 27108), (206, 27141), (255, 27264), (281, 27330), (306, 27378), (347, 27465), (349, 27471), (366, 27519), (368, 27522), (383, 27564), (465, 27669), (490, 27720), (494, 27732), (498, 27738), (587, 27924), (653, 28122), (658, 28140), (710, 28182), (736, 28227), (739, 28233), (758, 28293), (793, 28404), (880, 28605), (888, 28644), (898, 28680),

Gene: Onglai\_29 Start: 20083, Stop: 21873, Start Num: 144

Candidate Starts for Onglai\_29:

(Start: 141 @20080 has 14 MA's), (Start: 144 @20083 has 603 MA's), (277, 20317), (278, 20320), (305, 20392), (306, 20395), (315, 20410), (338, 20449), (341, 20455), (378, 20566), (417, 20653), (463, 20734), (467, 20737), (546, 20923), (576, 20986), (584, 21010), (586, 21016), (597, 21049), (636, 21130), (675, 21256), (693, 21298), (731, 21358), (746, 21391), (750, 21406), (781, 21505), (782, 21508), (784, 21520), (813, 21604), (842, 21670), (860, 21709), (862, 21715), (873, 21760), (890, 21817), (891, 21820),

Gene: Oofda\_31 Start: 19067, Stop: 20854, Start Num: 144

Candidate Starts for Oofda\_31:

(94, 19001), (Start: 123 @19043 has 215 MA's), (Start: 144 @19067 has 603 MA's), (236, 19205), (262, 19262), (278, 19304), (292, 19340), (306, 19379), (343, 19448), (349, 19472), (369, 19526), (448, 19676), (467, 19721), (481, 19751), (499, 19787), (515, 19838), (530, 19874), (553, 19922), (580, 19982), (635, 20111), (665, 20189), (750, 20390), (752, 20396), (782, 20492), (845, 20657), (880, 20756),

Gene: Oogway\_26 Start: 21094, Stop: 22896, Start Num: 146

Candidate Starts for Oogway\_26:

(Start: 146 @21094 has 223 MA's), (Start: 161 @21115 has 4 MA's), (Start: 190 @21157 has 1 MA's), (216, 21202), (306, 21418), (332, 21463), (338, 21472), (349, 21511), (368, 21562), (369, 21565), (467, 21760), (500, 21829), (583, 22030), (584, 22033), (591, 22054), (635, 22150), (636, 22153), (638, 22159), (665, 22228), (668, 22246), (670, 22255), (677, 22285), (731, 22381), (746, 22414), (750, 22429), (793, 22570), (813, 22627), (862, 22738), (909, 22891),

Gene: Opie\_19 Start: 16985, Stop: 18715, Start Num: 138

Candidate Starts for Opie\_19:

(72, 16868), (113, 16952), (Start: 121 @16964 has 1 MA's), (Start: 138 @16985 has 5 MA's), (281, 17255), (316, 17339), (368, 17468), (392, 17540), (414, 17582), (445, 17618), (458, 17648), (465, 17672), (485, 17714), (499, 17741), (537, 17798), (540, 17804), (579, 17891), (737, 18251), (747, 18275), (752, 18293), (793, 18389), (849, 18524), (863, 18563), (864, 18566), (888, 18653), (896, 18680),

Gene: Optimus\_35 Start: 27884, Stop: 29882, Start Num: 124

Candidate Starts for Optimus\_35:

(Start: 124 @27884 has 30 MA's), (Start: 191 @27974 has 45 MA's), (222, 28022), (233, 28052), (282, 28181), (301, 28211), (327, 28262), (346, 28310), (358, 28346), (368, 28373), (392, 28445), (395, 28454), (403, 28475), (448, 28544), (468, 28583), (470, 28586), (475, 28601), (494, 28640), (511, 28688), (515, 28700), (521, 28706), (552, 28754), (558, 28763), (565, 28784), (573, 28802), (590, 28850), (625, 28952), (653, 29024), (667, 29069), (669, 29081), (684, 29216), (685, 29222), (686, 29246), (696, 29318), (708, 29345), (800, 29594),

Gene: Orange\_28 Start: 20755, Stop: 22554, Start Num: 144

Candidate Starts for Orange\_28:

(94, 20689), (Start: 123 @20731 has 215 MA's), (Start: 144 @20755 has 603 MA's), (183, 20797), (236, 20893), (242, 20908), (277, 20989), (278, 20992), (306, 21067), (315, 21082), (338, 21121), (341, 21127), (356, 21178), (378, 21238), (380, 21244), (417, 21325), (467, 21409), (518, 21535), (526, 21553), (540, 21580), (597, 21721), (631, 21787), (635, 21799), (636, 21802), (703, 21991), (721, 22018), (726, 22027), (736, 22048), (737, 22051), (746, 22072), (750, 22087), (756, 22111), (781, 22186), (784, 22201), (813, 22285), (860, 22390), (862, 22396), (877, 22450), (909, 22549),

Gene: Oregano\_20 Start: 17368, Stop: 18948, Start Num: 170

Candidate Starts for Oregano\_20:

(88, 17251), (Start: 170 @17368 has 87 MA's), (298, 17626), (307, 17647), (340, 17701), (351, 17740), (369, 17797), (377, 17818), (501, 17989), (507, 18007), (514, 18031), (521, 18052), (554, 18094), (592, 18175), (636, 18265), (669, 18367), (670, 18370), (687, 18424), (751, 18514), (863, 18793), (865, 18802), (874, 18832),

Gene: OrionPax\_25 Start: 19491, Stop: 21170, Start Num: 129

Candidate Starts for OrionPax\_25:

(Start: 129 @19491 has 79 MA's), (Start: 191 @19575 has 45 MA's), (Start: 235 @19653 has 1 MA's), (268, 19740), (274, 19755), (300, 19803), (324, 19842), (356, 19929), (368, 19962), (381, 19998), (390, 20028), (392, 20034), (422, 20103), (461, 20133), (466, 20145), (468, 20148), (494, 20205), (565, 20337), (567, 20343), (592, 20409), (594, 20415), (601, 20439), (618, 20487), (627, 20511), (631, 20520), (658, 20595), (717, 20646), (725, 20661), (782, 20823), (788, 20850), (799, 20880), (843, 20985), (880, 21063), (887, 21099), (890, 21108), (900, 21141), (907, 21156),

Gene: Orla\_20 Start: 15759, Stop: 17447, Start Num: 144

Candidate Starts for Orla\_20:

(113, 15729), (Start: 133 @15756 has 8 MA's), (Start: 144 @15759 has 603 MA's), (236, 15900), (277, 15999), (292, 16050), (302, 16077), (365, 16227), (377, 16257), (385, 16284), (392, 16305), (395, 16314), (406, 16329), (436, 16359), (442, 16371), (445, 16377), (448, 16380), (453, 16395), (481,

16464), (489, 16479), (513, 16545), (549, 16587), (553, 16596), (561, 16614), (581, 16659), (610, 16743), (634, 16779), (635, 16782), (636, 16785), (643, 16800), (650, 16818), (668, 16875), (675, 16908), (747, 17004), (750, 17016), (752, 17022), (754, 17031), (766, 17043), (791, 17115), (793, 17118), (794, 17121), (799, 17136), (842, 17244), (847, 17253), (862, 17286), (863, 17295), (900, 17424), (907, 17439),

Gene: Oscar\_22 Start: 16394, Stop: 18157, Start Num: 112

Candidate Starts for Oscar\_22:

(Start: 93 @16358 has 1 MA's), (Start: 109 @16388 has 26 MA's), (Start: 112 @16394 has 41 MA's), (140, 16421), (159, 16448), (230, 16562), (248, 16613), (272, 16676), (316, 16778), (321, 16784), (347, 16856), (360, 16892), (362, 16901), (378, 16940), (393, 16988), (400, 17006), (423, 17045), (438, 17063), (444, 17075), (448, 17081), (465, 17123), (468, 17129), (481, 17156), (564, 17294), (572, 17312), (577, 17324), (603, 17402), (636, 17474), (641, 17486), (655, 17534), (698, 17609), (748, 17693), (756, 17726), (758, 17732), (768, 17759), (793, 17843), (795, 17849), (810, 17894), (813, 17900), (863, 17993), (890, 18089), (913, 18149),

Gene: Outis\_42 Start: 30437, Stop: 32053, Start Num: 170

Candidate Starts for Outis\_42:

(Start: 170 @30437 has 87 MA's), (236, 30551), (347, 30818), (372, 30884), (377, 30899), (386, 30923), (387, 30926), (432, 31010), (449, 31040), (455, 31058), (490, 31091), (493, 31100), (501, 31118), (510, 31148), (518, 31172), (560, 31256), (571, 31277), (593, 31325), (607, 31364), (635, 31412), (673, 31538), (688, 31574), (776, 31685), (799, 31760), (877, 31937), (887, 31979), (906, 32036),

Gene: Ovechkin\_16 Start: 14836, Stop: 16545, Start Num: 123

Candidate Starts for Ovechkin\_16:

(Start: 123 @14836 has 215 MA's), (193, 14923), (Start: 227 @14968 has 2 MA's), (233, 14992), (271, 15097), (274, 15103), (281, 15121), (300, 15151), (348, 15256), (370, 15316), (378, 15337), (381, 15346), (388, 15370), (459, 15496), (465, 15511), (468, 15517), (484, 15553), (486, 15556), (492, 15568), (494, 15574), (511, 15622), (515, 15634), (521, 15640), (564, 15700), (568, 15712), (583, 15748), (587, 15760), (614, 15835), (618, 15844), (625, 15862), (627, 15868), (638, 15898), (710, 16003), (717, 16012), (720, 16015), (737, 16051), (761, 16129), (791, 16228), (799, 16249), (810, 16282), (826, 16312), (836, 16342), (841, 16351), (844, 16357), (860, 16372), (861, 16375), (866, 16399), (877, 16429), (882, 16441), (887, 16471), (900, 16513),

Gene: OwlsT2W\_18 Start: 15174, Stop: 16883, Start Num: 123

Candidate Starts for OwlsT2W\_18:

(Start: 123 @15174 has 215 MA's), (193, 15261), (Start: 227 @15306 has 2 MA's), (233, 15330), (271, 15435), (274, 15441), (281, 15459), (300, 15489), (348, 15594), (370, 15654), (373, 15663), (377, 15672), (378, 15675), (381, 15684), (388, 15708), (418, 15783), (420, 15786), (459, 15834), (465, 15849), (468, 15855), (484, 15891), (486, 15894), (492, 15906), (494, 15912), (511, 15960), (515, 15972), (521, 15978), (564, 16038), (568, 16050), (583, 16086), (587, 16098), (614, 16173), (618, 16182), (625, 16200), (627, 16206), (638, 16236), (710, 16341), (717, 16350), (720, 16353), (737, 16389), (758, 16455), (761, 16467), (791, 16566), (799, 16587), (810, 16620), (826, 16650), (836, 16680), (841, 16689), (844, 16695), (860, 16710), (861, 16713), (866, 16737), (877, 16767), (882, 16779), (887, 16809), (900, 16851),

Gene: P1201\_47 Start: 34468, Stop: 36096, Start Num: 170

Candidate Starts for P1201\_47:

(Start: 170 @34468 has 87 MA's), (278, 34690), (306, 34771), (320, 34792), (378, 34936), (442, 35071), (493, 35143), (498, 35152), (538, 35251), (545, 35266), (588, 35359), (659, 35524), (670, 35563), (747, 35668), (762, 35701), (781, 35740), (803, 35812), (822, 35866), (830, 35890), (842, 35899), (873, 35980), (899, 36070),

Gene: P28Green\_29 Start: 20380, Stop: 22176, Start Num: 144

Candidate Starts for P28Green\_29:

(Start: 144 @20380 has 603 MA's), (Start: 190 @20437 has 1 MA's), (197, 20452), (230, 20506), (Start: 235 @20521 has 1 MA's), (272, 20608), (277, 20620), (278, 20623), (306, 20698), (315, 20713), (336, 20749), (417, 20956), (500, 21109), (532, 21196), (583, 21310), (591, 21334), (597, 21352), (636, 21433), (665, 21508), (668, 21526), (675, 21559), (677, 21565), (695, 21604), (729, 21658), (731, 21661), (742, 21682), (758, 21739), (813, 21907), (860, 22012), (862, 22018), (900, 22153),

Gene: P3MA\_19 Start: 14376, Stop: 16133, Start Num: 114

Candidate Starts for P3MA\_19:

(98, 14352), (Start: 114 @14376 has 139 MA's), (189, 14469), (272, 14658), (316, 14760), (368, 14895), (371, 14901), (378, 14922), (384, 14940), (395, 14976), (406, 15000), (455, 15078), (464, 15096), (474, 15120), (495, 15162), (499, 15168), (500, 15171), (564, 15270), (603, 15381), (632, 15441), (655, 15513), (708, 15612), (714, 15621), (748, 15669), (770, 15738), (793, 15819), (799, 15837), (803, 15849), (810, 15870), (824, 15897), (831, 15918), (838, 15933), (865, 15978), (869, 15990), (874, 16008), (891, 16065),

Gene: PCoral7\_19 Start: 16740, Stop: 18389, Start Num: 195

Candidate Starts for PCoral7\_19:

(4, 15693), (6, 15738), (7, 15762), (8, 15768), (9, 15876), (11, 15924), (16, 15996), (22, 16071), (34, 16209), (36, 16239), (38, 16245), (50, 16377), (56, 16434), (57, 16443), (Start: 99 @16602 has 2 MA's), (172, 16704), (Start: 195 @16740 has 45 MA's), (244, 16845), (272, 16923), (293, 16983), (299, 16995), (300, 16998), (377, 17196), (382, 17211), (415, 17295), (460, 17307), (464, 17316), (465, 17319), (473, 17340), (494, 17382), (506, 17412), (594, 17595), (601, 17619), (626, 17670), (639, 17703), (658, 17763), (664, 17775), (692, 17817), (702, 17835), (758, 17970), (788, 18069), (795, 18087), (813, 18138), (839, 18198), (843, 18204), (877, 18279),

Gene: PGHhamlin\_31 Start: 20371, Stop: 22167, Start Num: 144

Candidate Starts for PGHhamlin\_31:

(Start: 144 @20371 has 603 MA's), (Start: 190 @20428 has 1 MA's), (197, 20443), (219, 20476), (230, 20497), (Start: 235 @20512 has 1 MA's), (272, 20599), (277, 20611), (278, 20614), (306, 20689), (315, 20704), (336, 20740), (417, 20947), (481, 21061), (500, 21100), (532, 21187), (583, 21301), (591, 21325), (597, 21343), (636, 21424), (665, 21499), (668, 21517), (675, 21550), (677, 21556), (695, 21595), (729, 21649), (731, 21652), (742, 21673), (758, 21730), (813, 21898), (860, 22003), (862, 22009), (900, 22144),

Gene: PHappiness\_16 Start: 14786, Stop: 16495, Start Num: 123

Candidate Starts for PHappiness\_16:

(Start: 123 @14786 has 215 MA's), (193, 14873), (Start: 227 @14918 has 2 MA's), (233, 14942), (271, 15047), (274, 15053), (281, 15071), (300, 15101), (348, 15206), (370, 15266), (378, 15287), (381, 15296), (388, 15320), (459, 15446), (465, 15461), (468, 15467), (484, 15503), (486, 15506), (492, 15518), (494, 15524), (511, 15572), (515, 15584), (521, 15590), (564, 15650), (568, 15662), (583, 15698), (587, 15710), (614, 15785), (618, 15794), (625, 15812), (627, 15818), (638, 15848), (710, 15953), (717, 15962), (720, 15965), (737, 16001), (761, 16079), (791, 16178), (799, 16199), (810, 16232), (826, 16262), (836, 16292), (841, 16301), (844, 16307), (860, 16322), (861, 16325), (865, 16346), (866, 16349), (882, 16391), (887, 16421), (900, 16463),

Gene: PMC\_16 Start: 14790, Stop: 16499, Start Num: 123

Candidate Starts for PMC\_16:

(Start: 123 @14790 has 215 MA's), (193, 14877), (Start: 227 @14922 has 2 MA's), (233, 14946), (251, 15003), (271, 15051), (274, 15057), (281, 15075), (300, 15105), (331, 15159), (348, 15210), (367,



15264), (370, 15270), (373, 15279), (381, 15300), (388, 15324), (402, 15360), (403, 15366), (418, 15399), (420, 15402), (424, 15411), (443, 15426), (448, 15432), (459, 15450), (465, 15465), (468, 15471), (475, 15489), (477, 15492), (484, 15507), (492, 15522), (494, 15528), (511, 15576), (515, 15588), (521, 15594), (564, 15654), (568, 15666), (583, 15702), (587, 15714), (614, 15789), (618, 15798), (625, 15816), (627, 15822), (638, 15852), (710, 15957), (720, 15969), (737, 16005), (761, 16083), (799, 16203), (810, 16236), (826, 16266), (829, 16278), (836, 16296), (839, 16302), (841, 16305), (844, 16311), (860, 16326), (861, 16329), (865, 16350), (866, 16353), (882, 16395), (887, 16425), (900, 16467), (901, 16473),

Gene: PP\_37 Start: 25826, Stop: 27616, Start Num: 144

Candidate Starts for PP\_37:

(21, 25235), (30, 25340), (31, 25346), (40, 25436), (45, 25478), (49, 25508), (66, 25676), (94, 25760), (Start: 123 @25802 has 215 MA's), (Start: 144 @25826 has 603 MA's), (Start: 161 @25835 has 4 MA's), (219, 25925), (Start: 235 @25961 has 1 MA's), (242, 25979), (277, 26060), (278, 26063), (306, 26138), (338, 26192), (380, 26315), (388, 26342), (417, 26396), (460, 26471), (463, 26477), (467, 26480), (518, 26606), (584, 26753), (597, 26792), (675, 26999), (682, 27020), (695, 27044), (726, 27089), (729, 27098), (731, 27101), (746, 27134), (750, 27149), (756, 27173), (759, 27185), (781, 27248), (782, 27251), (813, 27347), (824, 27368), (849, 27425), (860, 27452), (862, 27458), (865, 27476), (873, 27503), (877, 27512), (900, 27593),

Gene: PSonyx\_17 Start: 17526, Stop: 19172, Start Num: 166

Candidate Starts for PSonyx\_17:

(Start: 166 @17526 has 1 MA's), (278, 17751), (295, 17793), (380, 18003), (382, 18009), (444, 18114), (472, 18180), (497, 18231), (547, 18306), (636, 18510), (646, 18537), (664, 18582), (676, 18639), (795, 18852), (891, 19116), (897, 19137), (909, 19164),

Gene: PSullivan\_29 Start: 21585, Stop: 23387, Start Num: 146

Candidate Starts for PSullivan\_29:

(Start: 146 @21585 has 223 MA's), (Start: 161 @21606 has 4 MA's), (Start: 190 @21648 has 1 MA's), (216, 21693), (306, 21909), (332, 21954), (338, 21963), (349, 22002), (368, 22053), (369, 22056), (467, 22251), (500, 22320), (583, 22521), (584, 22524), (591, 22545), (635, 22641), (636, 22644), (638, 22650), (665, 22719), (668, 22737), (670, 22746), (677, 22776), (731, 22872), (746, 22905), (750, 22920), (793, 23061), (813, 23118), (862, 23229),

Gene: Pacc40\_16 Start: 14976, Stop: 16685, Start Num: 123

Candidate Starts for Pacc40\_16:

(Start: 123 @14976 has 215 MA's), (193, 15063), (Start: 227 @15108 has 2 MA's), (233, 15132), (271, 15237), (274, 15243), (281, 15261), (300, 15291), (348, 15396), (370, 15456), (378, 15477), (381, 15486), (388, 15510), (459, 15636), (465, 15651), (468, 15657), (484, 15693), (486, 15696), (492, 15708), (494, 15714), (511, 15762), (515, 15774), (521, 15780), (564, 15840), (568, 15852), (583, 15888), (587, 15900), (614, 15975), (618, 15984), (625, 16002), (627, 16008), (638, 16038), (710, 16143), (717, 16152), (720, 16155), (737, 16191), (761, 16269), (791, 16368), (799, 16389), (810, 16422), (826, 16452), (836, 16482), (841, 16491), (844, 16497), (860, 16512), (861, 16515), (865, 16536), (866, 16539), (882, 16581), (887, 16611), (900, 16653),

Gene: Pace1224\_18 Start: 16851, Stop: 18575, Start Num: 135

Candidate Starts for Pace1224\_18:

(Start: 135 @16851 has 7 MA's), (197, 16923), (258, 17058), (287, 17133), (309, 17184), (321, 17199), (334, 17229), (337, 17235), (353, 17289), (395, 17409), (448, 17505), (451, 17514), (468, 17553), (487, 17592), (503, 17628), (522, 17673), (564, 17718), (618, 17859), (641, 17916), (655, 17964), (665, 17991), (691, 18027), (698, 18039), (730, 18081), (756, 18144), (787, 18246), (810, 18312), (885, 18486), (904, 18552),

Gene: PacerPaul\_27 Start: 21373, Stop: 23175, Start Num: 146

Candidate Starts for PacerPaul\_27:

(Start: 146 @21373 has 223 MA's), (Start: 161 @21394 has 4 MA's), (Start: 190 @21436 has 1 MA's), (216, 21481), (306, 21697), (332, 21742), (338, 21751), (368, 21841), (369, 21844), (467, 22039), (500, 22108), (579, 22297), (583, 22309), (584, 22312), (591, 22333), (635, 22429), (636, 22432), (638, 22438), (665, 22507), (668, 22525), (670, 22534), (677, 22564), (731, 22660), (746, 22693), (750, 22708), (793, 22849), (813, 22906), (862, 23017), (909, 23170),

Gene: PackMan\_30 Start: 21746, Stop: 23539, Start Num: 141

Candidate Starts for PackMan\_30:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986), (305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319), (463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715), (636, 22796), (675, 22922), (693, 22964), (695, 22967), (731, 23024), (746, 23057), (750, 23072), (781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381), (873, 23426), (890, 23483), (891, 23486),

Gene: Padfoot\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Padfoot\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Padpat\_23 Start: 17148, Stop: 18914, Start Num: 114

Candidate Starts for Padpat\_23:

(Start: 114 @17148 has 139 MA's), (140, 17178), (236, 17337), (248, 17370), (258, 17400), (272, 17433), (278, 17445), (316, 17535), (337, 17577), (360, 17649), (362, 17658), (378, 17697), (392, 17742), (400, 17763), (403, 17766), (438, 17820), (448, 17838), (465, 17880), (468, 17886), (481, 17913), (564, 18051), (572, 18069), (587, 18111), (593, 18129), (603, 18159), (618, 18186), (655, 18291), (748, 18450), (757, 18486), (768, 18516), (772, 18525), (793, 18600), (810, 18651), (890, 18846), (901, 18885), (902, 18888), (913, 18906),

Gene: PainterBoy\_29 Start: 20875, Stop: 22665, Start Num: 144

Candidate Starts for PainterBoy\_29:

(Start: 123 @20851 has 215 MA's), (Start: 144 @20875 has 603 MA's), (242, 21028), (277, 21109), (278, 21112), (305, 21184), (306, 21187), (318, 21205), (330, 21226), (338, 21241), (341, 21247), (356, 21298), (378, 21358), (388, 21391), (417, 21445), (463, 21526), (467, 21529), (546, 21715), (584, 21802), (597, 21841), (636, 21922), (675, 22048), (707, 22111), (729, 22147), (750, 22198), (781, 22297), (795, 22345), (813, 22396), (860, 22501), (862, 22507), (877, 22561),

Gene: Paito\_18 Start: 16782, Stop: 18536, Start Num: 132

Candidate Starts for Paito\_18:

(24, 16239), (Start: 109 @16773 has 26 MA's), (Start: 132 @16782 has 45 MA's), (Start: 137 @16788 has 2 MA's), (143, 16794), (197, 16872), (230, 16926), (248, 16977), (258, 17007), (269, 17031), (309, 17133), (331, 17172), (334, 17178), (341, 17193), (353, 17238), (393, 17352), (395, 17358), (425, 17415), (448, 17454), (465, 17496), (468, 17502), (487, 17541), (522, 17622), (564, 17667), (582, 17712), (640, 17862), (641, 17865), (649, 17895), (655, 17913), (665, 17940), (716, 18024), (724, 18033), (730, 18042), (743, 18057), (756, 18105), (760, 18120), (782, 18183), (799, 18240), (813, 18279), (831, 18321), (863, 18372), (890, 18468), (913, 18528),

Gene: Palestino\_26 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Palestino\_26:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Palpatine\_24 Start: 19847, Stop: 21442, Start Num: 191

Candidate Starts for Palpatine\_24:

(Start: 129 @19763 has 79 MA's), (Start: 191 @19847 has 45 MA's), (Start: 235 @19925 has 1 MA's), (268, 20012), (274, 20027), (300, 20075), (324, 20114), (356, 20201), (368, 20234), (381, 20270), (390, 20300), (392, 20306), (422, 20375), (461, 20405), (466, 20417), (468, 20420), (494, 20477), (565, 20609), (567, 20615), (592, 20681), (594, 20687), (601, 20711), (618, 20759), (627, 20783), (631, 20792), (658, 20867), (717, 20918), (725, 20933), (782, 21095), (788, 21122), (799, 21152), (843, 21257), (880, 21335), (887, 21371), (890, 21380), (900, 21413), (907, 21428),

Gene: Panamaxus\_27 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for Panamaxus\_27:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481, 21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729, 21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Panchino\_18 Start: 14966, Stop: 16675, Start Num: 126

Candidate Starts for Panchino\_18:

(Start: 126 @14966 has 42 MA's), (Start: 150 @14993 has 4 MA's), (178, 15032), (Start: 227 @15098 has 2 MA's), (229, 15110), (241, 15146), (250, 15170), (258, 15197), (268, 15218), (271, 15227), (274, 15233), (287, 15266), (367, 15440), (370, 15446), (373, 15455), (377, 15464), (381, 15476), (388, 15500), (403, 15542), (418, 15575), (459, 15626), (460, 15629), (465, 15641), (484, 15683), (492, 15698), (494, 15704), (511, 15752), (547, 15806), (564, 15830), (591, 15902), (608, 15956), (614, 15965), (618, 15974), (627, 15998), (637, 16025), (638, 16028), (710, 16133), (717, 16142), (737, 16181), (762, 16262), (781, 16319), (791, 16358), (836, 16472), (860, 16502), (861, 16505), (866, 16529), (880, 16565),

Gene: PantheRoc\_19 Start: 17095, Stop: 18693, Start Num: 170

Candidate Starts for PantheRoc\_19:

(Start: 170 @17095 has 87 MA's), (298, 17353), (306, 17371), (307, 17374), (340, 17428), (363, 17503), (385, 17572), (388, 17581), (392, 17593), (397, 17605), (415, 17644), (435, 17671), (440, 17680), (441, 17683), (501, 17716), (519, 17773), (554, 17839), (603, 17950), (636, 18010), (669, 18112), (687, 18169), (751, 18259), (849, 18499), (874, 18577),

Gene: Paola\_21 Start: 17495, Stop: 19267, Start Num: 117

Candidate Starts for Paola\_21:

(Start: 117 @17495 has 59 MA's), (Start: 123 @17501 has 215 MA's), (143, 17525), (Start: 168 @17558 has 32 MA's), (197, 17606), (230, 17660), (248, 17711), (272, 17774), (321, 17882), (360, 17990), (400, 18104), (403, 18107), (424, 18146), (438, 18161), (444, 18173), (448, 18179), (465, 18221), (468, 18227), (487, 18266), (499, 18290), (564, 18392), (588, 18455), (602, 18500), (655, 18635), (708, 18734), (750, 18812), (756, 18836), (758, 18842), (762, 18857), (793, 18953), (795,

18959), (865, 19112), (895, 19217), (896, 19220), (901, 19238),

Gene: Paperbeatsrock\_26 Start: 20726, Stop: 22405, Start Num: 129

Candidate Starts for Paperbeatsrock\_26:

(Start: 129 @20726 has 79 MA's), (Start: 191 @20810 has 45 MA's), (Start: 235 @20888 has 1 MA's), (268, 20975), (274, 20990), (300, 21038), (324, 21077), (356, 21164), (368, 21197), (381, 21233), (390, 21263), (392, 21269), (422, 21338), (461, 21368), (466, 21380), (468, 21383), (494, 21440), (565, 21572), (567, 21578), (592, 21644), (594, 21650), (601, 21674), (618, 21722), (627, 21746), (631, 21755), (658, 21830), (717, 21881), (725, 21896), (782, 22058), (788, 22085), (799, 22115), (843, 22220), (880, 22298), (887, 22334), (890, 22343), (900, 22376), (907, 22391),

Gene: Papez\_29 Start: 22831, Stop: 24612, Start Num: 161

Candidate Starts for Papez\_29:

(Start: 146 @22810 has 223 MA's), (Start: 161 @22831 has 4 MA's), (Start: 190 @22873 has 1 MA's), (216, 22918), (306, 23134), (332, 23179), (338, 23188), (349, 23227), (368, 23278), (369, 23281), (467, 23476), (500, 23545), (583, 23746), (584, 23749), (591, 23770), (635, 23866), (636, 23869), (638, 23875), (665, 23944), (668, 23962), (670, 23971), (677, 24001), (731, 24097), (746, 24130), (750, 24145), (793, 24286), (813, 24343), (862, 24454),

Gene: Paphu\_26 Start: 20886, Stop: 22688, Start Num: 146

Candidate Starts for Paphu\_26:

(Start: 144 @20883 has 603 MA's), (Start: 146 @20886 has 223 MA's), (Start: 161 @20907 has 4 MA's), (Start: 190 @20949 has 1 MA's), (216, 20994), (306, 21210), (332, 21255), (338, 21264), (349, 21303), (368, 21354), (369, 21357), (467, 21552), (500, 21621), (583, 21822), (584, 21825), (591, 21846), (635, 21942), (636, 21945), (638, 21951), (665, 22020), (668, 22038), (670, 22047), (677, 22077), (731, 22173), (746, 22206), (750, 22221), (793, 22362), (813, 22419), (862, 22530), (909, 22683),

Gene: Parada\_22 Start: 17344, Stop: 19050, Start Num: 162

Candidate Starts for Parada\_22:

(Start: 101 @17269 has 2 MA's), (Start: 162 @17344 has 16 MA's), (Start: 227 @17437 has 2 MA's), (230, 17452), (232, 17458), (256, 17533), (283, 17605), (336, 17716), (349, 17761), (356, 17779), (360, 17791), (444, 17962), (449, 17971), (451, 17977), (465, 18010), (496, 18073), (514, 18124), (541, 18148), (563, 18172), (591, 18247), (603, 18286), (653, 18418), (714, 18532), (756, 18619), (792, 18733), (795, 18742), (836, 18847), (878, 18934), (913, 19042),

Gene: Paraselene\_26 Start: 21257, Stop: 23059, Start Num: 146

Candidate Starts for Paraselene\_26:

(Start: 146 @21257 has 223 MA's), (Start: 161 @21278 has 4 MA's), (Start: 190 @21320 has 1 MA's), (216, 21365), (306, 21581), (332, 21626), (338, 21635), (349, 21674), (368, 21725), (369, 21728), (467, 21923), (500, 21992), (583, 22193), (584, 22196), (591, 22217), (635, 22313), (636, 22316), (638, 22322), (665, 22391), (668, 22409), (670, 22418), (677, 22448), (731, 22544), (746, 22577), (750, 22592), (793, 22733), (813, 22790), (862, 22901),

Gene: Pari\_28 Start: 20846, Stop: 22648, Start Num: 146

Candidate Starts for Pari\_28:

(Start: 146 @20846 has 223 MA's), (Start: 161 @20867 has 4 MA's), (Start: 190 @20909 has 1 MA's), (216, 20954), (306, 21170), (332, 21215), (338, 21224), (368, 21314), (369, 21317), (406, 21410), (467, 21512), (500, 21581), (579, 21770), (583, 21782), (584, 21785), (591, 21806), (635, 21902), (636, 21905), (638, 21911), (665, 21980), (668, 21998), (670, 22007), (677, 22037), (731, 22133), (746, 22166), (750, 22181), (793, 22322), (813, 22379), (862, 22490), (909, 22643),

Gene: Paries\_37 Start: 31409, Stop: 33172, Start Num: 97

Candidate Starts for Paries\_37:

(90, 31391), (Start: 97 @31409 has 73 MA's), (Start: 121 @31445 has 1 MA's), (219, 31583), (262, 31679), (265, 31688), (288, 31757), (306, 31808), (332, 31853), (341, 31868), (368, 31949), (384, 31994), (386, 32003), (445, 32093), (458, 32123), (461, 32138), (472, 32162), (487, 32192), (551, 32297), (597, 32414), (607, 32432), (613, 32447), (631, 32477), (635, 32489), (636, 32492), (647, 32519), (791, 32840), (793, 32843), (794, 32846), (810, 32894), (824, 32921), (832, 32948), (860, 33002), (865, 33026), (866, 33029), (891, 33119), (909, 33167),

Gene: Parliament\_26 Start: 21181, Stop: 22983, Start Num: 146

Candidate Starts for Parliament\_26:

(Start: 146 @21181 has 223 MA's), (Start: 161 @21202 has 4 MA's), (Start: 190 @21244 has 1 MA's), (216, 21289), (306, 21505), (332, 21550), (338, 21559), (368, 21649), (369, 21652), (378, 21676), (406, 21745), (467, 21847), (500, 21916), (579, 22105), (583, 22117), (584, 22120), (591, 22141), (635, 22237), (636, 22240), (638, 22246), (665, 22315), (668, 22333), (670, 22342), (677, 22372), (731, 22468), (746, 22501), (750, 22516), (793, 22657), (813, 22714), (862, 22825),

Gene: Parmesanjohn\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Parmesanjohn\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Partridge\_23 Start: 16382, Stop: 18007, Start Num: 168

Candidate Starts for Partridge\_23:

(Start: 155 @16367 has 4 MA's), (Start: 168 @16382 has 32 MA's), (211, 16451), (232, 16487), (306, 16673), (361, 16802), (378, 16844), (384, 16862), (386, 16871), (394, 16895), (406, 16913), (436, 16943), (444, 16958), (445, 16961), (460, 17000), (467, 17009), (505, 17093), (576, 17210), (584, 17234), (635, 17348), (665, 17426), (672, 17465), (675, 17477), (678, 17486), (713, 17507), (750, 17585), (807, 17732), (854, 17831), (860, 17846), (907, 17999),

Gene: PascalRango\_26 Start: 20874, Stop: 22676, Start Num: 146

Candidate Starts for PascalRango\_26:

(Start: 146 @20874 has 223 MA's), (Start: 161 @20895 has 4 MA's), (Start: 190 @20937 has 1 MA's), (216, 20982), (306, 21198), (332, 21243), (338, 21252), (349, 21291), (368, 21342), (369, 21345), (406, 21438), (467, 21540), (500, 21609), (583, 21810), (584, 21813), (591, 21834), (635, 21930), (636, 21933), (638, 21939), (665, 22008), (668, 22026), (670, 22035), (677, 22065), (731, 22161), (746, 22194), (750, 22209), (793, 22350), (813, 22407), (862, 22518),

Gene: Pat3\_23 Start: 18472, Stop: 20151, Start Num: 129

Candidate Starts for Pat3\_23:

(Start: 129 @18472 has 79 MA's), (Start: 191 @18556 has 45 MA's), (Start: 235 @18634 has 1 MA's), (268, 18721), (274, 18736), (300, 18784), (324, 18823), (356, 18910), (368, 18943), (381, 18979), (390, 19009), (392, 19015), (422, 19084), (461, 19114), (466, 19126), (468, 19129), (494, 19186), (565, 19318), (567, 19324), (592, 19390), (594, 19396), (601, 19420), (618, 19468), (627, 19492), (631, 19501), (658, 19576), (717, 19627), (725, 19642), (782, 19804), (788, 19831), (799, 19861), (843, 19966), (880, 20044), (887, 20080), (890, 20089), (900, 20122), (907, 20137),

Gene: Patio\_44 Start: 30694, Stop: 32316, Start Num: 170

Candidate Starts for Patio\_44:

(Start: 170 @30694 has 87 MA's), (236, 30811), (263, 30889), (340, 31051), (343, 31063), (347, 31078), (372, 31144), (377, 31159), (432, 31270), (449, 31300), (450, 31303), (493, 31360), (510, 31408), (518, 31432), (571, 31537), (607, 31624), (635, 31672), (673, 31798), (674, 31801), (688, 31834), (733, 31861), (749, 31891), (799, 32020), (812, 32059), (866, 32164), (885, 32227), (887, 32239), (891, 32251), (893, 32260), (906, 32296),

Gene: Patt\_24 Start: 18364, Stop: 20151, Start Num: 114

Candidate Starts for Patt\_24:

(Start: 93 @18325 has 1 MA's), (Start: 109 @18355 has 26 MA's), (Start: 112 @18361 has 41 MA's), (Start: 114 @18364 has 139 MA's), (Start: 168 @18421 has 32 MA's), (197, 18469), (Start: 227 @18508 has 2 MA's), (230, 18523), (236, 18541), (248, 18574), (258, 18604), (278, 18649), (282, 18667), (316, 18739), (321, 18745), (334, 18775), (336, 18778), (356, 18841), (360, 18853), (412, 18988), (444, 19036), (448, 19042), (454, 19060), (468, 19090), (487, 19129), (564, 19255), (587, 19315), (588, 19318), (599, 19351), (655, 19519), (670, 19573), (708, 19618), (734, 19663), (748, 19687), (756, 19720), (768, 19753), (772, 19762), (788, 19825), (793, 19837), (810, 19888), (813, 19894), (865, 19996), (901, 20122), (913, 20143),

Gene: PattyP\_29 Start: 21382, Stop: 23184, Start Num: 146

Candidate Starts for PattyP\_29:

(Start: 146 @21382 has 223 MA's), (Start: 161 @21403 has 4 MA's), (Start: 190 @21445 has 1 MA's), (216, 21490), (306, 21706), (332, 21751), (338, 21760), (349, 21799), (368, 21850), (369, 21853), (467, 22048), (500, 22117), (583, 22318), (584, 22321), (591, 22342), (635, 22438), (636, 22441), (638, 22447), (665, 22516), (668, 22534), (670, 22543), (677, 22573), (731, 22669), (746, 22702), (750, 22717), (793, 22858), (813, 22915), (862, 23026),

Gene: Pawn\_30 Start: 20460, Stop: 22256, Start Num: 144

Candidate Starts for Pawn\_30:

(Start: 144 @20460 has 603 MA's), (Start: 190 @20517 has 1 MA's), (197, 20532), (230, 20586), (Start: 235 @20601 has 1 MA's), (272, 20688), (277, 20700), (278, 20703), (306, 20778), (315, 20793), (417, 21036), (500, 21189), (532, 21276), (576, 21369), (583, 21390), (591, 21414), (595, 21426), (597, 21432), (636, 21513), (665, 21588), (668, 21606), (670, 21615), (675, 21639), (677, 21645), (682, 21660), (695, 21684), (729, 21738), (731, 21741), (742, 21762), (860, 22092), (862, 22098), (900, 22233),

Gene: Payneful\_27 Start: 20630, Stop: 22432, Start Num: 146

Candidate Starts for Payneful\_27:

(Start: 146 @20630 has 223 MA's), (Start: 161 @20651 has 4 MA's), (Start: 190 @20693 has 1 MA's), (216, 20738), (306, 20954), (332, 20999), (338, 21008), (349, 21047), (368, 21098), (369, 21101), (467, 21296), (500, 21365), (583, 21566), (584, 21569), (591, 21590), (635, 21686), (636, 21689), (638, 21695), (665, 21764), (668, 21782), (670, 21791), (677, 21821), (731, 21917), (746, 21950), (750, 21965), (793, 22106), (813, 22163), (862, 22274),

Gene: PeaceMeal1\_26 Start: 17890, Stop: 19668, Start Num: 144

Candidate Starts for PeaceMeal1\_26:

(Start: 123 @17866 has 215 MA's), (Start: 144 @17890 has 603 MA's), (Start: 190 @17947 has 1 MA's), (197, 17962), (230, 18016), (277, 18130), (278, 18133), (306, 18208), (330, 18247), (378, 18379), (417, 18466), (460, 18541), (481, 18580), (500, 18619), (532, 18706), (553, 18751), (583, 18820), (591, 18844), (595, 18856), (597, 18862), (668, 19036), (670, 19045), (675, 19069), (677, 19075), (682, 19090), (713, 19123), (742, 19174), (758, 19231), (759, 19237), (813, 19399), (860, 19504), (862, 19510), (863, 19519), (900, 19645),

Gene: Peaches\_27 Start: 19826, Stop: 21604, Start Num: 144

Candidate Starts for Peaches\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 190 @19883 has 1 MA's), (222, 19937), (230, 19952), (236, 19970), (272, 20054), (277, 20066), (278, 20069), (306, 20144), (315, 20159), (338, 20198), (378, 20315), (417, 20402), (463, 20483), (489, 20531), (500, 20555), (532, 20642), (553, 20687), (584, 20759), (591, 20780), (597, 20798), (636, 20879), (668, 20972), (670, 20981), (675, 21005), (677, 21011), (687, 21035), (731, 21089), (742, 21110), (756, 21161), (763, 21185), (782, 21239), (813, 21335), (860, 21440), (863, 21455), (894, 21563), (900, 21581),

Gene: Peanam\_23 Start: 16514, Stop: 18280, Start Num: 114

Candidate Starts for Peanam\_23:

(Start: 109 @16505 has 26 MA's), (Start: 114 @16514 has 139 MA's), (Start: 117 @16520 has 59 MA's), (140, 16544), (Start: 168 @16583 has 32 MA's), (Start: 227 @16670 has 2 MA's), (230, 16685), (236, 16703), (248, 16736), (258, 16766), (316, 16901), (334, 16937), (360, 17015), (362, 17024), (400, 17129), (403, 17132), (424, 17171), (444, 17198), (448, 17204), (465, 17246), (468, 17252), (481, 17279), (564, 17417), (572, 17435), (603, 17525), (618, 17552), (632, 17585), (655, 17657), (670, 17711), (704, 17747), (719, 17771), (748, 17816), (756, 17849), (760, 17864), (768, 17882), (772, 17891), (793, 17966), (810, 18017), (813, 18023), (865, 18125), (901, 18251), (902, 18254), (913, 18272),

Gene: Peeb\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Peeb\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (197, 16739), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Peel\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Peel\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Pelly\_28 Start: 21801, Stop: 23603, Start Num: 146

Candidate Starts for Pelly\_28:

(Start: 146 @21801 has 223 MA's), (Start: 161 @21822 has 4 MA's), (Start: 190 @21864 has 1 MA's), (216, 21909), (306, 22125), (332, 22170), (338, 22179), (349, 22218), (368, 22269), (369, 22272), (467, 22467), (500, 22536), (583, 22737), (584, 22740), (591, 22761), (635, 22857), (636, 22860), (638, 22866), (665, 22935), (668, 22953), (670, 22962), (677, 22992), (731, 23088), (746, 23121), (750, 23136), (758, 23166), (793, 23277), (813, 23334), (862, 23445),

Gene: Pembroke\_29 Start: 20380, Stop: 22176, Start Num: 144

Candidate Starts for Pembroke\_29:

(Start: 144 @20380 has 603 MA's), (Start: 190 @20437 has 1 MA's), (197, 20452), (219, 20485), (230, 20506), (Start: 235 @20521 has 1 MA's), (272, 20608), (277, 20620), (278, 20623), (306, 20698), (315, 20713), (336, 20749), (417, 20956), (481, 21070), (500, 21109), (532, 21196), (583, 21310), (591, 21334), (597, 21352), (636, 21433), (665, 21508), (668, 21526), (675, 21559), (677, 21565), (695, 21604), (729, 21658), (731, 21661), (742, 21682), (758, 21739), (813, 21907), (860, 22012), (862, 22018), (900, 22153),

Gene: Penny1\_29 Start: 20379, Stop: 22175, Start Num: 144

Candidate Starts for Penny1\_29:

(Start: 144 @20379 has 603 MA's), (Start: 190 @20436 has 1 MA's), (197, 20451), (219, 20484), (230, 20505), (Start: 235 @20520 has 1 MA's), (272, 20607), (277, 20619), (278, 20622), (306, 20697), (315, 20712), (336, 20748), (417, 20955), (481, 21069), (500, 21108), (532, 21195), (583, 21309), (591, 21333), (597, 21351), (636, 21432), (665, 21507), (668, 21525), (675, 21558), (677, 21564), (695, 21603), (729, 21657), (731, 21660), (742, 21681), (758, 21738), (813, 21906), (860, 22011), (862, 22017), (900, 22152),

Gene: Pepe\_28 Start: 21983, Stop: 23785, Start Num: 146

Candidate Starts for Pepe\_28:

(Start: 146 @21983 has 223 MA's), (Start: 161 @22004 has 4 MA's), (Start: 190 @22046 has 1 MA's), (216, 22091), (306, 22307), (332, 22352), (338, 22361), (349, 22400), (368, 22451), (369, 22454), (467, 22649), (500, 22718), (583, 22919), (584, 22922), (591, 22943), (635, 23039), (636, 23042), (638, 23048), (665, 23117), (668, 23135), (670, 23144), (677, 23174), (731, 23270), (746, 23303), (750, 23318), (793, 23459), (813, 23516), (862, 23627),

Gene: Pepperoni\_17 Start: 15014, Stop: 16723, Start Num: 171

Candidate Starts for Pepperoni\_17:

(83, 14879), (Start: 171 @15014 has 40 MA's), (259, 15203), (262, 15206), (287, 15281), (315, 15335), (347, 15404), (377, 15494), (378, 15497), (440, 15629), (462, 15683), (500, 15764), (519, 15824), (521, 15830), (572, 15911), (607, 15989), (618, 16007), (637, 16046), (665, 16118), (666, 16121), (669, 16142), (788, 16376), (794, 16391), (807, 16433), (847, 16526), (849, 16529), (865, 16577), (874, 16607),

Gene: Periodt\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Periodt\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Periwinkle\_22 Start: 16893, Stop: 18590, Start Num: 144

Candidate Starts for Periwinkle\_22:

(113, 16854), (Start: 144 @16893 has 603 MA's), (Start: 150 @16905 has 4 MA's), (202, 16983), (219, 17004), (240, 17052), (243, 17061), (263, 17103), (277, 17139), (295, 17196), (302, 17217), (316, 17244), (331, 17271), (378, 17400), (406, 17469), (414, 17487), (432, 17496), (436, 17502), (458, 17550), (469, 17580), (485, 17616), (489, 17622), (499, 17643), (500, 17646), (517, 17697), (549, 17727), (561, 17754), (574, 17781), (599, 17853), (618, 17892), (649, 17946), (664, 17988), (683, 18063), (736, 18126), (747, 18153), (749, 18156), (752, 18171), (788, 18255), (791, 18264), (793, 18267), (795, 18273), (799, 18285), (801, 18288), (811, 18318), (814, 18324), (824, 18345), (825, 18348), (849, 18402), (862, 18432), (863, 18441), (879, 18492), (887, 18525), (891, 18537), (896, 18555),

Gene: Perplexer\_27 Start: 19823, Stop: 21622, Start Num: 144

Candidate Starts for Perplexer\_27:

(Start: 123 @19799 has 215 MA's), (Start: 144 @19823 has 603 MA's), (Start: 148 @19829 has 14 MA's), (Start: 190 @19883 has 1 MA's), (230, 19952), (263, 20030), (272, 20054), (278, 20069), (292, 20105), (306, 20144), (315, 20159), (369, 20291), (378, 20315), (417, 20402), (481, 20516), (500, 20555), (532, 20642), (553, 20687), (583, 20756), (591, 20780), (595, 20792), (636, 20879), (665,



20954), (668, 20972), (670, 20981), (675, 21005), (677, 21011), (682, 21026), (703, 21059), (729, 21104), (731, 21107), (742, 21128), (813, 21353), (849, 21431), (860, 21458), (862, 21464), (900, 21599),

Gene: Perseus\_28 Start: 21723, Stop: 23525, Start Num: 146

Candidate Starts for Perseus\_28:

(Start: 146 @21723 has 223 MA's), (Start: 161 @21744 has 4 MA's), (Start: 190 @21786 has 1 MA's), (216, 21831), (306, 22047), (332, 22092), (338, 22101), (349, 22140), (368, 22191), (369, 22194), (392, 22263), (467, 22389), (500, 22458), (583, 22659), (584, 22662), (591, 22683), (635, 22779), (636, 22782), (638, 22788), (665, 22857), (668, 22875), (670, 22884), (677, 22914), (731, 23010), (746, 23043), (750, 23058), (793, 23199), (813, 23256), (862, 23367), (909, 23520),

Gene: PeterPeter\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for PeterPeter\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (356, 20256), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Petersenfast\_27 Start: 20752, Stop: 22551, Start Num: 144

Candidate Starts for Petersenfast\_27:

(94, 20686), (Start: 123 @20728 has 215 MA's), (Start: 144 @20752 has 603 MA's), (183, 20794), (236, 20890), (242, 20905), (277, 20986), (278, 20989), (306, 21064), (315, 21079), (338, 21118), (341, 21124), (356, 21175), (378, 21235), (380, 21241), (417, 21322), (467, 21406), (518, 21532), (526, 21550), (540, 21577), (597, 21718), (631, 21784), (635, 21796), (636, 21799), (703, 21988), (721, 22015), (726, 22024), (736, 22045), (737, 22048), (746, 22069), (750, 22084), (756, 22108), (781, 22183), (784, 22198), (813, 22282), (860, 22387), (862, 22393), (877, 22447), (909, 22546),

Gene: Peterson\_30 Start: 23011, Stop: 24813, Start Num: 146

Candidate Starts for Peterson\_30:

(Start: 146 @23011 has 223 MA's), (Start: 161 @23032 has 4 MA's), (Start: 190 @23074 has 1 MA's), (216, 23119), (306, 23335), (332, 23380), (338, 23389), (349, 23428), (368, 23479), (369, 23482), (378, 23506), (467, 23677), (500, 23746), (579, 23935), (583, 23947), (584, 23950), (591, 23971), (635, 24067), (636, 24070), (638, 24076), (665, 24145), (668, 24163), (670, 24172), (677, 24202), (731, 24298), (746, 24331), (750, 24346), (793, 24487), (813, 24544), (862, 24655), (909, 24808),

Gene: PeteyPab\_33 Start: 29327, Stop: 30925, Start Num: 171

Candidate Starts for PeteyPab\_33:

(Start: 171 @29327 has 40 MA's), (239, 29426), (263, 29495), (278, 29534), (338, 29669), (358, 29729), (436, 29882), (442, 29894), (448, 29903), (449, 29906), (486, 29951), (493, 29966), (498, 29975), (501, 29984), (518, 30038), (528, 30056), (557, 30110), (653, 30326), (678, 30419), (762, 30527), (784, 30581), (808, 30656), (867, 30785), (905, 30911),

Gene: PetiteSangsue\_27 Start: 19826, Stop: 21625, Start Num: 144

Candidate Starts for PetiteSangsue\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 148 @19832 has 14 MA's), (Start: 190 @19886 has 1 MA's), (230, 19955), (272, 20057), (278, 20072), (292, 20108), (306, 20147), (315, 20162), (338, 20201), (369, 20294), (378, 20318), (417, 20405), (481, 20519), (500, 20558), (532, 20645), (553, 20690), (583, 20759), (591, 20783), (595, 20795), (636, 20882), (665, 20957), (668, 20975), (670, 20984), (675, 21008), (677, 21014), (682, 21029), (703, 21062), (729,

21107), (731, 21110), (742, 21131), (813, 21356), (849, 21434), (860, 21461), (862, 21467), (900, 21602),

Gene: Petp2012\_29 Start: 22053, Stop: 23855, Start Num: 146

Candidate Starts for Petp2012\_29:

(Start: 146 @22053 has 223 MA's), (Start: 161 @22074 has 4 MA's), (Start: 190 @22116 has 1 MA's), (216, 22161), (306, 22377), (332, 22422), (338, 22431), (349, 22470), (368, 22521), (369, 22524), (467, 22719), (500, 22788), (583, 22989), (584, 22992), (591, 23013), (635, 23109), (636, 23112), (638, 23118), (665, 23187), (668, 23205), (670, 23214), (677, 23244), (731, 23340), (746, 23373), (750, 23388), (793, 23529), (813, 23586), (862, 23697),

Gene: Petra\_21 Start: 17051, Stop: 18697, Start Num: 195

Candidate Starts for Petra\_21:

(172, 17015), (Start: 195 @17051 has 45 MA's), (244, 17153), (272, 17231), (299, 17303), (308, 17330), (329, 17369), (349, 17429), (357, 17450), (377, 17504), (382, 17519), (392, 17552), (413, 17600), (415, 17603), (494, 17690), (506, 17720), (594, 17903), (601, 17927), (639, 18011), (658, 18071), (664, 18083), (702, 18143), (758, 18278), (788, 18377), (795, 18395), (813, 18446), (839, 18506), (843, 18512), (872, 18575), (877, 18587),

Gene: Petra64142\_26 Start: 20290, Stop: 21885, Start Num: 191

Candidate Starts for Petra64142\_26:

(Start: 129 @20206 has 79 MA's), (Start: 191 @20290 has 45 MA's), (Start: 235 @20368 has 1 MA's), (268, 20455), (274, 20470), (300, 20518), (324, 20557), (356, 20644), (368, 20677), (381, 20713), (390, 20743), (392, 20749), (422, 20818), (461, 20848), (466, 20860), (468, 20863), (494, 20920), (565, 21052), (567, 21058), (592, 21124), (594, 21130), (601, 21154), (618, 21202), (627, 21226), (631, 21235), (658, 21310), (717, 21361), (725, 21376), (782, 21538), (788, 21565), (799, 21595), (843, 21700), (880, 21778), (887, 21814), (890, 21823), (900, 21856), (907, 21871),

Gene: Petruccio\_28 Start: 21511, Stop: 23313, Start Num: 146

Candidate Starts for Petruccio\_28:

(Start: 146 @21511 has 223 MA's), (Start: 161 @21532 has 4 MA's), (Start: 190 @21574 has 1 MA's), (216, 21619), (306, 21835), (332, 21880), (338, 21889), (349, 21928), (368, 21979), (369, 21982), (467, 22177), (500, 22246), (583, 22447), (584, 22450), (591, 22471), (635, 22567), (636, 22570), (665, 22645), (668, 22663), (670, 22672), (677, 22702), (731, 22798), (746, 22831), (750, 22846), (758, 22876), (793, 22987), (813, 23044), (862, 23155),

Gene: PetterN\_25 Start: 18946, Stop: 20745, Start Num: 144

Candidate Starts for PetterN\_25:

(Start: 144 @18946 has 603 MA's), (278, 19183), (306, 19258), (315, 19273), (336, 19309), (360, 19381), (365, 19396), (378, 19429), (380, 19435), (481, 19630), (495, 19660), (499, 19666), (532, 19756), (553, 19801), (583, 19870), (597, 19912), (602, 19930), (635, 19990), (636, 19993), (668, 20086), (729, 20227), (746, 20263), (749, 20269), (859, 20578), (862, 20587), (900, 20722),

Gene: Ph8s\_29 Start: 18919, Stop: 20709, Start Num: 144

Candidate Starts for Ph8s\_29:

(94, 18853), (Start: 123 @18895 has 215 MA's), (Start: 144 @18919 has 603 MA's), (185, 18964), (Start: 194 @18979 has 1 MA's), (242, 19072), (277, 19153), (278, 19156), (305, 19228), (306, 19231), (315, 19246), (338, 19285), (341, 19291), (378, 19402), (380, 19408), (388, 19435), (417, 19489), (463, 19570), (532, 19729), (546, 19759), (586, 19852), (597, 19885), (619, 19936), (636, 19966), (675, 20092), (721, 20173), (726, 20182), (746, 20227), (750, 20242), (756, 20266), (781, 20341), (782, 20344), (784, 20356), (813, 20440), (860, 20545), (877, 20605), (900, 20686),

Gene: Phabuloso\_20 Start: 16422, Stop: 18119, Start Num: 144

Candidate Starts for Phabuloso\_20:

(113, 16383), (Start: 144 @16422 has 603 MA's), (Start: 150 @16434 has 4 MA's), (180, 16473), (202, 16512), (219, 16533), (240, 16581), (243, 16590), (263, 16632), (277, 16668), (295, 16725), (316, 16773), (331, 16800), (382, 16941), (406, 16998), (414, 17016), (432, 17025), (436, 17031), (469, 17109), (485, 17145), (489, 17151), (499, 17172), (500, 17175), (517, 17226), (547, 17253), (549, 17256), (561, 17283), (574, 17310), (599, 17382), (618, 17421), (649, 17475), (664, 17517), (683, 17592), (736, 17655), (747, 17682), (749, 17685), (752, 17700), (788, 17784), (791, 17793), (793, 17796), (795, 17802), (799, 17814), (801, 17817), (811, 17847), (814, 17853), (824, 17874), (825, 17877), (849, 17931), (862, 17961), (863, 17970), (879, 18021), (887, 18054), (891, 18066), (896, 18084),

Gene: Phacado\_27 Start: 19826, Stop: 21604, Start Num: 144

Candidate Starts for Phacado\_27:

(Start: 123 @19802 has 215 MA's), (Start: 144 @19826 has 603 MA's), (Start: 190 @19883 has 1 MA's), (222, 19937), (230, 19952), (236, 19970), (272, 20054), (277, 20066), (278, 20069), (306, 20144), (315, 20159), (338, 20198), (378, 20315), (417, 20402), (463, 20483), (489, 20531), (500, 20555), (532, 20642), (553, 20687), (584, 20759), (591, 20780), (597, 20798), (636, 20879), (668, 20972), (670, 20981), (675, 21005), (677, 21011), (687, 21035), (731, 21089), (742, 21110), (756, 21161), (763, 21185), (782, 21239), (813, 21335), (860, 21440), (863, 21455), (894, 21563), (900, 21581),

Gene: Phaded\_31 Start: 22135, Stop: 23907, Start Num: 144

Candidate Starts for Phaded\_31:

(Start: 123 @22111 has 215 MA's), (Start: 144 @22135 has 603 MA's), (Start: 235 @22270 has 1 MA's), (242, 22288), (277, 22369), (278, 22372), (305, 22444), (306, 22447), (356, 22558), (365, 22585), (378, 22618), (392, 22663), (417, 22705), (467, 22789), (532, 22945), (547, 22978), (631, 23167), (636, 23182), (675, 23308), (677, 23314), (746, 23425), (750, 23440), (752, 23446), (756, 23464), (770, 23500), (781, 23539), (784, 23554), (813, 23638), (860, 23743), (862, 23749), (865, 23767), (873, 23794),

Gene: Phaeder\_30 Start: 21746, Stop: 23539, Start Num: 141

Candidate Starts for Phaeder\_30:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986), (305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319), (463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715), (636, 22796), (675, 22922), (693, 22964), (695, 22967), (731, 23024), (746, 23057), (750, 23072), (781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381), (873, 23426), (890, 23483), (891, 23486),

Gene: PhailMary\_22 Start: 16671, Stop: 18296, Start Num: 168

Candidate Starts for PhailMary\_22:

(Start: 155 @16656 has 4 MA's), (Start: 168 @16671 has 32 MA's), (211, 16740), (232, 16776), (306, 16962), (361, 17091), (378, 17133), (384, 17151), (386, 17160), (394, 17184), (406, 17202), (436, 17232), (444, 17247), (445, 17250), (460, 17289), (467, 17298), (505, 17382), (546, 17436), (553, 17451), (576, 17499), (584, 17523), (635, 17637), (665, 17715), (672, 17754), (675, 17766), (678, 17775), (713, 17796), (750, 17874), (807, 18021), (854, 18120), (860, 18135), (907, 18288),

Gene: Phaja\_24 Start: 20006, Stop: 21601, Start Num: 191

Candidate Starts for Phaja\_24:

(Start: 129 @19922 has 79 MA's), (Start: 191 @20006 has 45 MA's), (Start: 235 @20084 has 1 MA's), (268, 20171), (274, 20186), (300, 20234), (324, 20273), (356, 20360), (368, 20393), (381, 20429), (390, 20459), (392, 20465), (422, 20534), (461, 20564), (466, 20576), (468, 20579), (494, 20636), (565, 20768), (567, 20774), (592, 20840), (594, 20846), (601, 20870), (618, 20918), (627, 20942),

(631, 20951), (658, 21026), (717, 21077), (725, 21092), (782, 21254), (788, 21281), (799, 21311), (843, 21416), (880, 21494), (887, 21530), (890, 21539), (900, 21572), (907, 21587),

Gene: Phalconet\_16 Start: 14857, Stop: 16566, Start Num: 123

Candidate Starts for Phalconet\_16:

(Start: 123 @14857 has 215 MA's), (193, 14944), (Start: 227 @14989 has 2 MA's), (233, 15013), (271, 15118), (274, 15124), (281, 15142), (300, 15172), (348, 15277), (370, 15337), (378, 15358), (381, 15367), (388, 15391), (459, 15517), (465, 15532), (468, 15538), (484, 15574), (486, 15577), (492, 15589), (494, 15595), (511, 15643), (515, 15655), (521, 15661), (564, 15721), (568, 15733), (583, 15769), (587, 15781), (614, 15856), (618, 15865), (625, 15883), (627, 15889), (638, 15919), (710, 16024), (717, 16033), (720, 16036), (737, 16072), (761, 16150), (791, 16249), (799, 16270), (810, 16303), (836, 16363), (841, 16372), (844, 16378), (860, 16393), (861, 16396), (866, 16420), (877, 16450), (882, 16462), (887, 16492), (900, 16534),

Gene: Phalm\_19 Start: 16273, Stop: 18009, Start Num: 117

Candidate Starts for Phalm\_19:

(Start: 101 @16249 has 2 MA's), (Start: 117 @16273 has 59 MA's), (Start: 166 @16333 has 1 MA's), (178, 16354), (180, 16357), (246, 16477), (258, 16516), (272, 16549), (282, 16573), (344, 16693), (356, 16732), (358, 16738), (386, 16822), (388, 16828), (392, 16840), (402, 16864), (410, 16891), (422, 16909), (452, 16948), (459, 16954), (470, 16978), (494, 17032), (500, 17044), (503, 17053), (529, 17113), (573, 17191), (587, 17230), (598, 17263), (618, 17329), (627, 17353), (636, 17377), (647, 17407), (735, 17521), (740, 17533), (745, 17542), (747, 17551), (779, 17659), (805, 17743), (853, 17842), (890, 17950), (907, 17998),

Gene: PhancyPhin\_18 Start: 14990, Stop: 16699, Start Num: 126

Candidate Starts for PhancyPhin\_18:

(Start: 126 @14990 has 42 MA's), (Start: 150 @15017 has 4 MA's), (178, 15056), (Start: 227 @15122 has 2 MA's), (229, 15134), (241, 15170), (250, 15194), (258, 15221), (268, 15242), (271, 15251), (274, 15257), (287, 15290), (367, 15464), (370, 15470), (373, 15479), (377, 15488), (381, 15500), (388, 15524), (403, 15566), (418, 15599), (459, 15650), (460, 15653), (465, 15665), (484, 15707), (492, 15722), (494, 15728), (511, 15776), (547, 15830), (564, 15854), (591, 15926), (608, 15980), (614, 15989), (618, 15998), (627, 16022), (637, 16049), (638, 16052), (710, 16157), (717, 16166), (737, 16205), (762, 16286), (781, 16343), (791, 16382), (836, 16496), (860, 16526), (861, 16529), (866, 16553), (880, 16589),

Gene: Phanphagia\_16 Start: 14859, Stop: 16568, Start Num: 123

Candidate Starts for Phanphagia\_16:

(Start: 123 @14859 has 215 MA's), (193, 14946), (Start: 227 @14991 has 2 MA's), (233, 15015), (271, 15120), (274, 15126), (281, 15144), (300, 15174), (348, 15279), (370, 15339), (378, 15360), (381, 15369), (388, 15393), (418, 15468), (420, 15471), (459, 15519), (465, 15534), (468, 15540), (484, 15576), (486, 15579), (492, 15591), (494, 15597), (511, 15645), (515, 15657), (521, 15663), (564, 15723), (568, 15735), (583, 15771), (587, 15783), (614, 15858), (618, 15867), (625, 15885), (627, 15891), (638, 15921), (710, 16026), (717, 16035), (720, 16038), (737, 16074), (761, 16152), (791, 16251), (799, 16272), (810, 16305), (826, 16335), (836, 16365), (841, 16374), (844, 16380), (860, 16395), (861, 16398), (866, 16422), (877, 16452), (882, 16464), (887, 16494), (900, 16536),

Gene: Phantastic\_27 Start: 19872, Stop: 21668, Start Num: 144

Candidate Starts for Phantastic\_27:

(Start: 144 @19872 has 603 MA's), (Start: 190 @19929 has 1 MA's), (230, 19998), (272, 20100), (277, 20112), (278, 20115), (306, 20190), (338, 20244), (384, 20379), (417, 20448), (481, 20562), (532, 20688), (583, 20802), (591, 20826), (597, 20844), (636, 20925), (665, 21000), (668, 21018), (670, 21027), (677, 21057), (682, 21072), (695, 21096), (703, 21105), (729, 21150), (731, 21153), (742, 21174), (746, 21186), (813, 21399), (825, 21423), (860, 21504), (862, 21510), (900, 21645),

Gene: Pharaoh\_28 Start: 21256, Stop: 23046, Start Num: 144

Candidate Starts for Pharaoh\_28:

(Start: 123 @21232 has 215 MA's), (Start: 144 @21256 has 603 MA's), (242, 21409), (243, 21412), (277, 21490), (278, 21493), (286, 21523), (305, 21565), (306, 21568), (315, 21583), (338, 21622), (341, 21628), (356, 21679), (378, 21739), (388, 21772), (417, 21826), (463, 21907), (467, 21910), (526, 22054), (546, 22096), (597, 22222), (636, 22303), (675, 22429), (693, 22471), (731, 22531), (746, 22564), (750, 22579), (752, 22585), (770, 22639), (781, 22678), (784, 22693), (813, 22777), (862, 22888), (873, 22933), (900, 23023),

Gene: Pharb\_22 Start: 17427, Stop: 19190, Start Num: 114

Candidate Starts for Pharb\_22:

(Start: 109 @17418 has 26 MA's), (Start: 112 @17424 has 41 MA's), (Start: 114 @17427 has 139 MA's), (Start: 135 @17439 has 7 MA's), (196, 17529), (230, 17586), (248, 17637), (258, 17667), (269, 17691), (362, 17931), (368, 17943), (403, 18039), (438, 18093), (448, 18111), (468, 18159), (487, 18198), (503, 18234), (587, 18384), (588, 18387), (598, 18417), (622, 18474), (655, 18567), (670, 18621), (714, 18675), (741, 18705), (748, 18723), (760, 18771), (771, 18795), (778, 18822), (795, 18879), (810, 18924), (863, 19026), (890, 19122), (896, 19143), (901, 19161), (904, 19167), (913, 19182),

Gene: Pharsalus\_25 Start: 20526, Stop: 22205, Start Num: 129

Candidate Starts for Pharsalus\_25:

(Start: 129 @20526 has 79 MA's), (Start: 191 @20610 has 45 MA's), (Start: 235 @20688 has 1 MA's), (268, 20775), (274, 20790), (300, 20838), (324, 20877), (356, 20964), (368, 20997), (381, 21033), (390, 21063), (392, 21069), (422, 21138), (461, 21168), (466, 21180), (468, 21183), (494, 21240), (565, 21372), (567, 21378), (592, 21444), (594, 21450), (601, 21474), (618, 21522), (627, 21546), (631, 21555), (658, 21630), (717, 21681), (725, 21696), (782, 21858), (788, 21885), (799, 21915), (843, 22020), (880, 22098), (887, 22134), (890, 22143), (900, 22176), (907, 22191),

Gene: Phasih\_17 Start: 15342, Stop: 17051, Start Num: 123

Candidate Starts for Phasih\_17:

(Start: 123 @15342 has 215 MA's), (193, 15429), (Start: 227 @15474 has 2 MA's), (233, 15498), (271, 15603), (274, 15609), (281, 15627), (300, 15657), (348, 15762), (367, 15816), (370, 15822), (373, 15831), (378, 15843), (381, 15852), (388, 15876), (402, 15912), (403, 15918), (407, 15930), (418, 15951), (420, 15954), (424, 15963), (443, 15978), (448, 15984), (459, 16002), (465, 16017), (468, 16023), (475, 16041), (477, 16044), (484, 16059), (492, 16074), (494, 16080), (506, 16110), (511, 16128), (515, 16140), (521, 16146), (564, 16206), (568, 16218), (583, 16254), (587, 16266), (594, 16287), (614, 16341), (618, 16350), (627, 16374), (638, 16404), (710, 16509), (720, 16521), (737, 16557), (751, 16596), (761, 16635), (791, 16734), (799, 16755), (810, 16788), (826, 16818), (836, 16848), (841, 16857), (844, 16863), (860, 16878), (861, 16881), (865, 16902), (866, 16905), (882, 16947), (887, 16977), (900, 17019), (901, 17025),

Gene: PhatBacter\_24 Start: 19774, Stop: 21453, Start Num: 129

Candidate Starts for PhatBacter\_24:

(Start: 129 @19774 has 79 MA's), (Start: 191 @19858 has 45 MA's), (Start: 235 @19936 has 1 MA's), (268, 20023), (274, 20038), (300, 20086), (324, 20125), (356, 20212), (368, 20245), (381, 20281), (390, 20311), (392, 20317), (422, 20386), (461, 20416), (466, 20428), (468, 20431), (494, 20488), (565, 20620), (567, 20626), (592, 20692), (594, 20698), (601, 20722), (618, 20770), (627, 20794), (631, 20803), (658, 20878), (717, 20929), (725, 20944), (782, 21106), (788, 21133), (799, 21163), (843, 21268), (880, 21346), (887, 21382), (890, 21391), (900, 21424), (907, 21439),

Gene: Phatniss\_17 Start: 15310, Stop: 17019, Start Num: 123

Candidate Starts for Phatniss\_17:

(Start: 123 @15310 has 215 MA's), (193, 15397), (Start: 227 @15442 has 2 MA's), (233, 15466), (251, 15523), (271, 15571), (274, 15577), (281, 15595), (300, 15625), (348, 15730), (367, 15784), (370, 15790), (373, 15799), (378, 15811), (381, 15820), (388, 15844), (402, 15880), (403, 15886), (407, 15898), (418, 15919), (420, 15922), (424, 15931), (443, 15946), (448, 15952), (459, 15970), (465, 15985), (468, 15991), (475, 16009), (477, 16012), (484, 16027), (492, 16042), (494, 16048), (506, 16078), (511, 16096), (515, 16108), (521, 16114), (564, 16174), (568, 16186), (583, 16222), (587, 16234), (594, 16255), (614, 16309), (618, 16318), (627, 16342), (638, 16372), (710, 16477), (720, 16489), (737, 16525), (751, 16564), (761, 16603), (791, 16702), (799, 16723), (810, 16756), (826, 16786), (836, 16816), (841, 16825), (844, 16831), (860, 16846), (861, 16849), (865, 16870), (866, 16873), (882, 16915), (887, 16945), (900, 16987), (901, 16993),

Gene: Phauci\_26 Start: 25726, Stop: 27351, Start Num: 160

Candidate Starts for Phauci\_26:

(Start: 160 @25726 has 17 MA's), (169, 25738), (Start: 191 @25771 has 45 MA's), (Start: 195 @25780 has 45 MA's), (200, 25792), (222, 25822), (272, 25939), (277, 25951), (307, 26026), (341, 26086), (348, 26116), (449, 26323), (460, 26353), (482, 26398), (508, 26458), (547, 26506), (583, 26578), (595, 26611), (596, 26614), (609, 26653), (635, 26692), (664, 26779), (665, 26782), (711, 26860), (747, 26920), (769, 26965), (795, 27046), (815, 27100), (863, 27196), (900, 27325), (907, 27340),

Gene: Phaux\_23 Start: 19772, Stop: 21451, Start Num: 129

Candidate Starts for Phaux\_23:

(Start: 129 @19772 has 79 MA's), (Start: 191 @19856 has 45 MA's), (Start: 235 @19934 has 1 MA's), (268, 20021), (274, 20036), (300, 20084), (324, 20123), (356, 20210), (368, 20243), (381, 20279), (390, 20309), (392, 20315), (422, 20384), (461, 20414), (466, 20426), (468, 20429), (494, 20486), (565, 20618), (567, 20624), (592, 20690), (594, 20696), (601, 20720), (618, 20768), (627, 20792), (631, 20801), (658, 20876), (717, 20927), (725, 20942), (782, 21104), (788, 21131), (799, 21161), (843, 21266), (880, 21344), (887, 21380), (890, 21389), (900, 21422), (907, 21437),

Gene: Phayonce\_18 Start: 16079, Stop: 17815, Start Num: 117

Candidate Starts for Phayonce\_18:

(Start: 117 @16079 has 59 MA's), (178, 16160), (180, 16163), (220, 16214), (221, 16217), (Start: 227 @16226 has 2 MA's), (246, 16283), (258, 16322), (268, 16343), (272, 16355), (281, 16376), (282, 16379), (284, 16385), (344, 16499), (356, 16538), (358, 16544), (396, 16658), (418, 16709), (422, 16715), (452, 16754), (459, 16760), (470, 16784), (494, 16838), (500, 16850), (503, 16859), (529, 16919), (573, 16997), (587, 17036), (618, 17135), (627, 17159), (636, 17183), (647, 17213), (735, 17327), (740, 17339), (745, 17348), (747, 17357), (779, 17465), (834, 17618), (853, 17648), (900, 17789), (907, 17804),

Gene: Phegasus\_19 Start: 16391, Stop: 18127, Start Num: 117

Candidate Starts for Phegasus\_19:

(Start: 117 @16391 has 59 MA's), (178, 16472), (180, 16475), (220, 16526), (243, 16589), (246, 16595), (258, 16634), (272, 16667), (282, 16691), (344, 16811), (347, 16826), (356, 16850), (358, 16856), (386, 16940), (402, 16982), (418, 17021), (422, 17027), (452, 17066), (459, 17072), (470, 17096), (494, 17150), (503, 17171), (529, 17231), (573, 17309), (587, 17348), (598, 17381), (618, 17447), (627, 17471), (636, 17495), (647, 17525), (653, 17537), (735, 17639), (740, 17651), (742, 17654), (745, 17660), (747, 17669), (779, 17777), (805, 17861), (853, 17960), (877, 18017), (890, 18068), (907, 18116),

Gene: Phelipe\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Phelipe\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306,

20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: PhelpsODU\_22 Start: 16372, Stop: 18138, Start Num: 114

Candidate Starts for PhelpsODU\_22:

(Start: 109 @16363 has 26 MA's), (Start: 114 @16372 has 139 MA's), (140, 16402), (230, 16543), (236, 16561), (248, 16594), (258, 16624), (278, 16669), (316, 16759), (334, 16795), (362, 16882), (395, 16975), (400, 16987), (403, 16990), (412, 17008), (424, 17029), (438, 17044), (444, 17056), (448, 17062), (465, 17104), (468, 17110), (572, 17293), (593, 17353), (629, 17437), (636, 17455), (655, 17515), (698, 17590), (708, 17614), (748, 17674), (756, 17707), (757, 17710), (762, 17728), (772, 17749), (793, 17824), (810, 17875), (824, 17902), (863, 17974), (880, 18025), (901, 18109), (902, 18112), (913, 18130),

Gene: Phendrix\_87 Start: 52198, Stop: 53814, Start Num: 163

Candidate Starts for Phendrix\_87:

(Start: 163 @52198 has 10 MA's), (Start: 167 @52204 has 1 MA's), (222, 52288), (250, 52357), (265, 52387), (267, 52390), (278, 52420), (292, 52459), (365, 52630), (375, 52654), (381, 52672), (386, 52690), (396, 52720), (445, 52786), (448, 52789), (460, 52822), (489, 52879), (495, 52894), (497, 52897), (499, 52900), (546, 52972), (553, 52987), (560, 53002), (575, 53023), (580, 53038), (643, 53182), (647, 53203), (653, 53218), (673, 53296), (682, 53323), (711, 53329), (747, 53389), (769, 53434), (788, 53491), (791, 53500), (799, 53521), (813, 53560), (842, 53614), (863, 53659), (865, 53668),

Gene: PherrisBueller\_28 Start: 20966, Stop: 22768, Start Num: 146

Candidate Starts for PherrisBueller\_28:

(Start: 146 @20966 has 223 MA's), (Start: 161 @20987 has 4 MA's), (Start: 190 @21029 has 1 MA's), (216, 21074), (306, 21290), (332, 21335), (338, 21344), (349, 21383), (368, 21434), (369, 21437), (467, 21632), (500, 21701), (583, 21902), (584, 21905), (591, 21926), (635, 22022), (636, 22025), (638, 22031), (665, 22100), (668, 22118), (670, 22127), (677, 22157), (731, 22253), (746, 22286), (750, 22301), (793, 22442), (813, 22499), (862, 22610), (909, 22763),

Gene: PhesterPhotato\_16 Start: 14827, Stop: 16536, Start Num: 123

Candidate Starts for PhesterPhotato\_16:

(Start: 123 @14827 has 215 MA's), (193, 14914), (Start: 227 @14959 has 2 MA's), (233, 14983), (271, 15088), (274, 15094), (281, 15112), (300, 15142), (348, 15247), (370, 15307), (378, 15328), (381, 15337), (388, 15361), (459, 15487), (465, 15502), (468, 15508), (484, 15544), (486, 15547), (492, 15559), (494, 15565), (511, 15613), (515, 15625), (521, 15631), (564, 15691), (568, 15703), (583, 15739), (587, 15751), (614, 15826), (618, 15835), (625, 15853), (627, 15859), (638, 15889), (710, 15994), (717, 16003), (720, 16006), (737, 16042), (761, 16120), (791, 16219), (799, 16240), (810, 16273), (826, 16303), (836, 16333), (841, 16342), (844, 16348), (860, 16363), (861, 16366), (866, 16390), (877, 16420), (882, 16432), (887, 16462), (900, 16504),

Gene: Phighter1804\_27 Start: 19805, Stop: 21583, Start Num: 144

Candidate Starts for Phighter1804\_27:

(Start: 123 @19781 has 215 MA's), (Start: 144 @19805 has 603 MA's), (Start: 190 @19862 has 1 MA's), (222, 19916), (230, 19931), (236, 19949), (272, 20033), (277, 20045), (278, 20048), (306, 20123), (315, 20138), (338, 20177), (378, 20294), (417, 20381), (463, 20462), (489, 20510), (500, 20534), (532, 20621), (553, 20666), (584, 20738), (591, 20759), (597, 20777), (668, 20951), (670, 20960), (675, 20984), (677, 20990), (687, 21014), (731, 21068), (742, 21089), (756, 21140), (763, 21164), (782, 21218), (813, 21314), (860, 21419), (863, 21434), (894, 21542), (900, 21560),

Gene: Phillis\_24 Start: 18628, Stop: 20418, Start Num: 144

Candidate Starts for Phillis\_24:

(Start: 123 @18604 has 215 MA's), (Start: 144 @18628 has 603 MA's), (214, 18721), (236, 18766), (278, 18865), (292, 18901), (306, 18940), (315, 18955), (336, 18991), (378, 19111), (380, 19117), (448, 19237), (505, 19366), (532, 19438), (583, 19552), (668, 19768), (674, 19798), (675, 19801), (731, 19903), (746, 19936), (750, 19951), (758, 19981), (859, 20251), (862, 20260), (863, 20269), (896, 20383),

Gene: Philonius\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Philonius\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Philus\_16 Start: 14812, Stop: 16521, Start Num: 123

Candidate Starts for Philus\_16:

(Start: 123 @14812 has 215 MA's), (193, 14899), (Start: 227 @14944 has 2 MA's), (233, 14968), (251, 15025), (271, 15073), (274, 15079), (281, 15097), (300, 15127), (348, 15232), (367, 15286), (370, 15292), (373, 15301), (381, 15322), (388, 15346), (402, 15382), (403, 15388), (418, 15421), (420, 15424), (424, 15433), (443, 15448), (448, 15454), (459, 15472), (465, 15487), (468, 15493), (475, 15511), (477, 15514), (484, 15529), (492, 15544), (494, 15550), (511, 15598), (515, 15610), (521, 15616), (564, 15676), (568, 15688), (583, 15724), (587, 15736), (614, 15811), (618, 15820), (625, 15838), (627, 15844), (638, 15874), (710, 15979), (720, 15991), (737, 16027), (761, 16105), (799, 16225), (810, 16258), (826, 16288), (829, 16300), (836, 16318), (839, 16324), (841, 16327), (844, 16333), (860, 16348), (861, 16351), (865, 16372), (866, 16375), (882, 16417), (887, 16447), (900, 16489), (901, 16495),

Gene: Phinally\_33 Start: 29134, Stop: 30759, Start Num: 160

Candidate Starts for Phinally\_33:

(Start: 116 @29077 has 1 MA's), (Start: 160 @29134 has 17 MA's), (169, 29146), (Start: 191 @29179 has 45 MA's), (Start: 195 @29188 has 45 MA's), (200, 29200), (222, 29230), (236, 29263), (272, 29347), (277, 29359), (307, 29434), (341, 29494), (348, 29524), (449, 29731), (460, 29761), (481, 29803), (482, 29806), (508, 29866), (547, 29914), (583, 29986), (595, 30019), (596, 30022), (609, 30061), (635, 30100), (664, 30187), (665, 30190), (711, 30268), (747, 30328), (769, 30373), (795, 30454), (815, 30508), (863, 30604), (900, 30733), (907, 30748),

Gene: Phineas\_19 Start: 16382, Stop: 18118, Start Num: 117

Candidate Starts for Phineas\_19:

(Start: 101 @16358 has 2 MA's), (Start: 117 @16382 has 59 MA's), (Start: 166 @16442 has 1 MA's), (178, 16463), (180, 16466), (246, 16586), (258, 16625), (272, 16658), (282, 16682), (344, 16802), (356, 16841), (358, 16847), (386, 16931), (388, 16937), (392, 16949), (402, 16973), (410, 17000), (422, 17018), (452, 17057), (459, 17063), (470, 17087), (494, 17141), (500, 17153), (503, 17162), (529, 17222), (573, 17300), (587, 17339), (598, 17372), (618, 17438), (624, 17453), (627, 17462), (636, 17486), (647, 17516), (653, 17528), (735, 17630), (740, 17642), (742, 17645), (745, 17651), (747, 17660), (779, 17768), (805, 17852), (853, 17951), (890, 18059), (907, 18107),

Gene: PhinkBoden\_48 Start: 29995, Stop: 31686, Start Num: 146

Candidate Starts for PhinkBoden\_48:



(Start: 146 @29995 has 223 MA's), (188, 30055), (206, 30088), (228, 30121), (271, 30247), (282, 30280), (286, 30289), (349, 30418), (366, 30466), (494, 30679), (498, 30685), (506, 30709), (576, 30838), (583, 30859), (594, 30892), (658, 31090), (758, 31243), (788, 31342), (793, 31354), (796, 31363), (829, 31447), (888, 31594), (898, 31630), (902, 31642),

Gene: Phish\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Phish\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: PhishRPhriends\_28 Start: 19644, Stop: 21440, Start Num: 144

Candidate Starts for PhishRPhriends\_28:

(Start: 144 @19644 has 603 MA's), (Start: 190 @19701 has 1 MA's), (197, 19716), (230, 19770), (Start: 235 @19785 has 1 MA's), (272, 19872), (277, 19884), (278, 19887), (306, 19962), (315, 19977), (417, 20220), (500, 20373), (532, 20460), (576, 20553), (583, 20574), (591, 20598), (595, 20610), (597, 20616), (636, 20697), (665, 20772), (668, 20790), (670, 20799), (675, 20823), (677, 20829), (682, 20844), (695, 20868), (729, 20922), (731, 20925), (742, 20946), (860, 21276), (862, 21282), (900, 21417),

Gene: Phishy\_22 Start: 18770, Stop: 20428, Start Num: 149

Candidate Starts for Phishy\_22:

(63, 18581), (77, 18641), (Start: 121 @18734 has 1 MA's), (Start: 149 @18770 has 8 MA's), (Start: 157 @18782 has 4 MA's), (230, 18896), (232, 18902), (261, 18980), (284, 19046), (287, 19052), (337, 19163), (341, 19172), (347, 19199), (350, 19208), (358, 19229), (444, 19400), (445, 19403), (474, 19469), (482, 19484), (555, 19568), (559, 19577), (576, 19619), (583, 19640), (599, 19688), (602, 19700), (610, 19727), (641, 19796), (662, 19865), (670, 19898), (716, 19955), (757, 20006), (780, 20075), (806, 20162), (813, 20177), (838, 20234), (843, 20243), (878, 20321), (881, 20327),

Gene: Phistory\_21 Start: 17200, Stop: 18897, Start Num: 144

Candidate Starts for Phistory\_21:

(113, 17161), (Start: 144 @17200 has 603 MA's), (Start: 150 @17212 has 4 MA's), (Start: 153 @17215 has 11 MA's), (180, 17251), (202, 17290), (219, 17311), (239, 17353), (240, 17359), (241, 17362), (246, 17374), (263, 17410), (277, 17446), (295, 17503), (316, 17551), (331, 17578), (368, 17680), (382, 17719), (406, 17776), (414, 17794), (432, 17803), (436, 17809), (458, 17857), (469, 17887), (485, 17923), (489, 17929), (499, 17950), (500, 17953), (517, 18004), (547, 18031), (549, 18034), (561, 18061), (574, 18088), (599, 18160), (618, 18199), (649, 18253), (670, 18325), (683, 18370), (747, 18460), (752, 18478), (788, 18562), (791, 18571), (793, 18574), (795, 18580), (801, 18595), (811, 18625), (814, 18631), (824, 18652), (825, 18655), (849, 18709), (862, 18739), (863, 18748), (879, 18799), (887, 18832), (891, 18844), (896, 18862),

Gene: Phlei\_23 Start: 21753, Stop: 23534, Start Num: 144

Candidate Starts for Phlei\_23:

(Start: 144 @21753 has 603 MA's), (219, 21852), (222, 21858), (236, 21891), (263, 21951), (277, 21987), (278, 21990), (306, 22065), (384, 22254), (417, 22323), (463, 22404), (467, 22407), (495, 22467), (505, 22491), (546, 22587), (584, 22674), (597, 22713), (635, 22788), (711, 22986), (729, 23016), (731, 23019), (750, 23067), (773, 23139), (781, 23166), (813, 23265), (842, 23331), (849, 23343), (860, 23370), (862, 23376), (891, 23481),

Gene: Phlop\_31 Start: 25945, Stop: 27711, Start Num: 97

Candidate Starts for Phlop\_31:

(80, 25903), (Start: 97 @25945 has 73 MA's), (Start: 121 @25981 has 1 MA's), (Start: 148 @26014 has 14 MA's), (264, 26224), (265, 26227), (277, 26257), (298, 26323), (306, 26347), (311, 26356), (331, 26389), (386, 26542), (406, 26581), (445, 26632), (451, 26644), (458, 26662), (460, 26674), (465, 26686), (472, 26701), (487, 26731), (489, 26734), (499, 26755), (547, 26827), (568, 26875), (613, 26986), (632, 27019), (647, 27058), (649, 27061), (670, 27133), (707, 27199), (715, 27211), (793, 27382), (794, 27385), (810, 27433), (824, 27460), (832, 27487), (860, 27541), (891, 27658), (897, 27679), (909, 27706),

Gene: Phlorence\_24 Start: 19764, Stop: 21563, Start Num: 144

Candidate Starts for Phlorence\_24:

(Start: 144 @19764 has 603 MA's), (222, 19869), (236, 19902), (278, 20001), (306, 20076), (315, 20091), (336, 20127), (360, 20199), (365, 20214), (378, 20247), (380, 20253), (495, 20478), (499, 20484), (532, 20574), (580, 20679), (583, 20688), (597, 20730), (602, 20748), (635, 20808), (636, 20811), (665, 20886), (668, 20904), (729, 21045), (746, 21081), (813, 21294), (859, 21396), (862, 21405), (893, 21519), (900, 21540), (902, 21549),

Gene: Phloss\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Phloss\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Phoebe\_29 Start: 20377, Stop: 22173, Start Num: 144

Candidate Starts for Phoebe\_29:

(Start: 144 @20377 has 603 MA's), (Start: 190 @20434 has 1 MA's), (197, 20449), (219, 20482), (230, 20503), (Start: 235 @20518 has 1 MA's), (272, 20605), (277, 20617), (278, 20620), (306, 20695), (315, 20710), (336, 20746), (417, 20953), (481, 21067), (500, 21106), (532, 21193), (583, 21307), (591, 21331), (597, 21349), (636, 21430), (665, 21505), (668, 21523), (675, 21556), (677, 21562), (695, 21601), (729, 21655), (731, 21658), (742, 21679), (758, 21736), (813, 21904), (860, 22009), (862, 22015), (900, 22150),

Gene: Phoebus\_36 Start: 27621, Stop: 29619, Start Num: 124

Candidate Starts for Phoebus\_36:

(Start: 124 @27621 has 30 MA's), (Start: 191 @27711 has 45 MA's), (222, 27759), (233, 27789), (282, 27918), (301, 27948), (346, 28047), (358, 28083), (368, 28110), (392, 28182), (395, 28191), (403, 28212), (448, 28281), (468, 28320), (470, 28323), (475, 28338), (494, 28377), (511, 28425), (515, 28437), (521, 28443), (552, 28491), (558, 28500), (565, 28521), (573, 28539), (590, 28587), (625, 28689), (653, 28761), (667, 28806), (669, 28818), (684, 28953), (685, 28959), (686, 28983), (696, 29055), (708, 29082), (800, 29331),

Gene: Phomeo\_40 Start: 30475, Stop: 32088, Start Num: 170

Candidate Starts for Phomeo\_40:

(Start: 170 @30475 has 87 MA's), (Start: 194 @30511 has 1 MA's), (202, 30529), (236, 30589), (340, 30829), (343, 30841), (347, 30856), (372, 30922), (377, 30937), (386, 30961), (387, 30964), (432, 31048), (449, 31078), (450, 31081), (493, 31138), (510, 31186), (511, 31189), (518, 31210), (571, 31315), (592, 31360), (607, 31402), (673, 31576), (683, 31606), (688, 31612), (775, 31720), (776, 31723), (799, 31798), (887, 32017), (906, 32074),

Gene: Phonnegut\_30 Start: 21782, Stop: 23572, Start Num: 144

Candidate Starts for Phonnegut\_30:

(Start: 141 @21779 has 14 MA's), (Start: 144 @21782 has 603 MA's), (277, 22016), (278, 22019), (305, 22091), (306, 22094), (315, 22109), (338, 22148), (341, 22154), (378, 22265), (417, 22352), (463, 22433), (467, 22436), (546, 22622), (576, 22685), (584, 22709), (586, 22715), (597, 22748), (636, 22829), (675, 22955), (693, 22997), (731, 23057), (746, 23090), (750, 23105), (781, 23204), (782, 23207), (784, 23219), (813, 23303), (842, 23369), (860, 23408), (862, 23414), (873, 23459), (890, 23516), (891, 23519),

Gene: Phontbonne\_27 Start: 19771, Stop: 21549, Start Num: 144

Candidate Starts for Phontbonne\_27:

(Start: 123 @19747 has 215 MA's), (Start: 144 @19771 has 603 MA's), (Start: 190 @19828 has 1 MA's), (222, 19882), (230, 19897), (236, 19915), (272, 19999), (277, 20011), (278, 20014), (306, 20089), (315, 20104), (338, 20143), (378, 20260), (417, 20347), (463, 20428), (489, 20476), (500, 20500), (532, 20587), (553, 20632), (584, 20704), (591, 20725), (597, 20743), (636, 20824), (668, 20917), (670, 20926), (675, 20950), (677, 20956), (687, 20980), (731, 21034), (742, 21055), (756, 21106), (763, 21130), (813, 21280), (860, 21385), (863, 21400), (894, 21508), (900, 21526),

Gene: PhorbesPhlower\_18 Start: 15153, Stop: 16865, Start Num: 111

Candidate Starts for PhorbesPhlower\_18:

(Start: 111 @15153 has 24 MA's), (Start: 118 @15165 has 8 MA's), (152, 15207), (219, 15309), (251, 15381), (290, 15462), (311, 15513), (332, 15546), (347, 15588), (349, 15594), (365, 15642), (384, 15693), (395, 15729), (433, 15771), (445, 15792), (449, 15798), (458, 15822), (481, 15873), (482, 15876), (497, 15906), (647, 16218), (668, 16284), (674, 16314), (739, 16407), (747, 16428), (750, 16440), (752, 16446), (753, 16452), (755, 16458), (783, 16512), (793, 16542), (818, 16611), (860, 16698), (862, 16704), (867, 16728), (876, 16755),

Gene: Phoxy\_29 Start: 20463, Stop: 22259, Start Num: 144

Candidate Starts for Phoxy\_29:

(Start: 144 @20463 has 603 MA's), (Start: 190 @20520 has 1 MA's), (197, 20535), (219, 20568), (230, 20589), (Start: 235 @20604 has 1 MA's), (272, 20691), (277, 20703), (278, 20706), (306, 20781), (315, 20796), (336, 20832), (417, 21039), (481, 21153), (500, 21192), (532, 21279), (583, 21393), (591, 21417), (597, 21435), (636, 21516), (665, 21591), (668, 21609), (675, 21642), (677, 21648), (695, 21687), (729, 21741), (731, 21744), (742, 21765), (758, 21822), (813, 21990), (860, 22095), (862, 22101), (900, 22236),

Gene: Phrank\_22 Start: 16326, Stop: 18092, Start Num: 114

Candidate Starts for Phrank\_22:

(Start: 109 @16317 has 26 MA's), (Start: 114 @16326 has 139 MA's), (140, 16356), (Start: 227 @16482 has 2 MA's), (230, 16497), (236, 16515), (248, 16548), (258, 16578), (278, 16623), (316, 16713), (334, 16749), (360, 16827), (362, 16836), (392, 16920), (395, 16929), (400, 16941), (403, 16944), (424, 16983), (438, 16998), (448, 17016), (465, 17058), (468, 17064), (572, 17247), (593, 17307), (629, 17391), (636, 17409), (655, 17469), (698, 17544), (708, 17568), (748, 17628), (756, 17661), (757, 17664), (762, 17682), (772, 17703), (793, 17778), (810, 17829), (813, 17835), (824, 17856), (863, 17928), (880, 17979), (901, 18063), (902, 18066), (913, 18084),

Gene: Phrankenstein\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Phrankenstein\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Phrann\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Phrann\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Phranny\_30 Start: 20452, Stop: 22248, Start Num: 144

Candidate Starts for Phranny\_30:

(Start: 144 @20452 has 603 MA's), (Start: 190 @20509 has 1 MA's), (197, 20524), (230, 20578), (Start: 235 @20593 has 1 MA's), (272, 20680), (277, 20692), (278, 20695), (306, 20770), (315, 20785), (417, 21028), (500, 21181), (532, 21268), (576, 21361), (583, 21382), (591, 21406), (595, 21418), (597, 21424), (636, 21505), (665, 21580), (668, 21598), (670, 21607), (675, 21631), (677, 21637), (695, 21676), (729, 21730), (731, 21733), (742, 21754), (813, 21979), (860, 22084), (862, 22090), (900, 22225),

Gene: Phreak\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Phreak\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: PhriskyACE\_19 Start: 16822, Stop: 18402, Start Num: 170

Candidate Starts for PhriskyACE\_19:

(10, 16045), (23, 16201), (39, 16396), (43, 16432), (44, 16435), (52, 16519), (53, 16525), (69, 16651), (88, 16705), (Start: 170 @16822 has 87 MA's), (265, 16993), (298, 17080), (306, 17098), (307, 17101), (340, 17155), (351, 17194), (369, 17251), (377, 17272), (501, 17443), (507, 17461), (514, 17485), (521, 17506), (554, 17548), (592, 17629), (636, 17719), (669, 17821), (687, 17878), (751, 17968), (863, 18247), (865, 18256), (874, 18286),

Gene: PhrostedPhlake\_20 Start: 17026, Stop: 18672, Start Num: 195

Candidate Starts for PhrostedPhlake\_20:

(172, 16990), (Start: 195 @17026 has 45 MA's), (244, 17128), (254, 17164), (272, 17206), (293, 17266), (308, 17305), (329, 17344), (345, 17389), (349, 17404), (357, 17425), (377, 17479), (382, 17494), (494, 17665), (506, 17695), (594, 17878), (601, 17902), (658, 18046), (664, 18058), (702, 18118), (757, 18250), (758, 18253), (788, 18352), (795, 18370), (813, 18421), (839, 18481), (843, 18487), (872, 18550), (877, 18562),

Gene: PhrostyMug\_27 Start: 21160, Stop: 22962, Start Num: 146

Candidate Starts for PhrostyMug\_27:

(Start: 146 @21160 has 223 MA's), (Start: 161 @21181 has 4 MA's), (Start: 190 @21223 has 1 MA's), (216, 21268), (306, 21484), (332, 21529), (338, 21538), (349, 21577), (368, 21628), (369, 21631), (467, 21826), (500, 21895), (583, 22096), (584, 22099), (591, 22120), (635, 22216), (636, 22219), (638, 22225), (665, 22294), (668, 22312), (670, 22321), (677, 22351), (731, 22447), (746, 22480), (750, 22495), (793, 22636), (813, 22693), (862, 22804),

Gene: Phrux\_24 Start: 19487, Stop: 21166, Start Num: 129

Candidate Starts for Phrux\_24:

(Start: 129 @19487 has 79 MA's), (Start: 191 @19571 has 45 MA's), (Start: 235 @19649 has 1 MA's), (268, 19736), (274, 19751), (300, 19799), (324, 19838), (356, 19925), (368, 19958), (381, 19994), (390, 20024), (392, 20030), (422, 20099), (461, 20129), (466, 20141), (468, 20144), (494, 20201), (565, 20333), (567, 20339), (592, 20405), (594, 20411), (601, 20435), (618, 20483), (627, 20507), (631, 20516), (658, 20591), (717, 20642), (725, 20657), (782, 20819), (788, 20846), (799, 20876), (843, 20981), (880, 21059), (887, 21095), (890, 21104), (900, 21137), (907, 21152),

Gene: Piatt\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Piatt\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Pickett\_17 Start: 14682, Stop: 16391, Start Num: 171

Candidate Starts for Pickett\_17:

(83, 14547), (Start: 171 @14682 has 40 MA's), (237, 14799), (259, 14871), (262, 14874), (276, 14910), (287, 14949), (298, 14970), (347, 15072), (377, 15162), (378, 15165), (440, 15297), (462, 15351), (485, 15402), (500, 15432), (519, 15492), (525, 15504), (554, 15540), (572, 15579), (592, 15621), (607, 15657), (618, 15675), (624, 15690), (637, 15714), (665, 15786), (669, 15810), (736, 15918), (788, 16044), (794, 16059), (807, 16101), (847, 16194), (849, 16197), (865, 16245), (874, 16275), (882, 16293), (883, 16305), (893, 16344),

Gene: PickleBack\_24 Start: 19478, Stop: 21277, Start Num: 144

Candidate Starts for PickleBack\_24:

(Start: 144 @19478 has 603 MA's), (222, 19583), (236, 19616), (278, 19715), (306, 19790), (315, 19805), (336, 19841), (360, 19913), (365, 19928), (378, 19961), (380, 19967), (432, 20060), (481, 20162), (495, 20192), (499, 20198), (532, 20288), (546, 20318), (579, 20390), (583, 20402), (584, 20405), (597, 20444), (602, 20462), (635, 20522), (636, 20525), (656, 20576), (668, 20618), (729, 20759), (749, 20801), (862, 21119), (900, 21254),

Gene: Pimento\_23 Start: 17041, Stop: 18747, Start Num: 162

Candidate Starts for Pimento\_23:

(Start: 101 @16966 has 2 MA's), (Start: 162 @17041 has 16 MA's), (Start: 227 @17134 has 2 MA's), (230, 17149), (232, 17155), (256, 17230), (273, 17266), (283, 17302), (336, 17413), (349, 17458), (356, 17476), (360, 17488), (444, 17659), (449, 17668), (451, 17674), (465, 17707), (496, 17770), (514, 17821), (541, 17845), (563, 17869), (591, 17944), (603, 17983), (653, 18115), (714, 18229), (756, 18316), (792, 18430), (795, 18439), (836, 18544), (878, 18631), (913, 18739),

Gene: PinkCoffee\_33 Start: 26584, Stop: 28350, Start Num: 97

Candidate Starts for PinkCoffee\_33:

(80, 26542), (Start: 97 @26584 has 73 MA's), (Start: 121 @26620 has 1 MA's), (Start: 148 @26653 has 14 MA's), (264, 26863), (265, 26866), (277, 26896), (298, 26962), (306, 26986), (311, 26995), (331, 27028), (386, 27181), (406, 27220), (445, 27271), (451, 27283), (458, 27301), (460, 27313), (465, 27325), (472, 27340), (487, 27370), (489, 27373), (499, 27394), (547, 27466), (568, 27514), (613, 27625), (632, 27658), (649, 27700), (670, 27772), (707, 27838), (715, 27850), (793, 28021), (794, 28024), (810, 28072), (824, 28099), (832, 28126), (860, 28180), (891, 28297), (897, 28318), (909, 28345),

Gene: PinkPlastic\_26 Start: 20900, Stop: 22702, Start Num: 146

Candidate Starts for PinkPlastic\_26:

(Start: 146 @20900 has 223 MA's), (Start: 161 @20921 has 4 MA's), (Start: 190 @20963 has 1 MA's), (216, 21008), (306, 21224), (332, 21269), (338, 21278), (368, 21368), (369, 21371), (406, 21464), (467, 21566), (500, 21635), (583, 21836), (584, 21839), (591, 21860), (635, 21956), (636, 21959), (638, 21965), (665, 22034), (668, 22052), (670, 22061), (677, 22091), (731, 22187), (746, 22220), (750, 22235), (793, 22376), (813, 22433), (862, 22544),

Gene: PinkYoshi\_18 Start: 16631, Stop: 18394, Start Num: 109

Candidate Starts for PinkYoshi\_18:

(Start: 109 @16631 has 26 MA's), (Start: 132 @16640 has 45 MA's), (Start: 137 @16646 has 2 MA's), (143, 16652), (230, 16784), (248, 16835), (258, 16865), (269, 16889), (309, 16991), (331, 17030), (334, 17036), (341, 17051), (353, 17096), (395, 17216), (425, 17273), (448, 17312), (468, 17360), (481, 17387), (487, 17399), (522, 17480), (564, 17525), (641, 17723), (649, 17753), (655, 17771), (665, 17798), (716, 17882), (730, 17900), (743, 17915), (756, 17963), (760, 17978), (782, 18041), (799, 18098), (813, 18137), (831, 18179), (863, 18230), (890, 18326), (913, 18386),

Gene: Pinnie\_19 Start: 17358, Stop: 19082, Start Num: 132

Candidate Starts for Pinnie\_19:

(Start: 132 @17358 has 45 MA's), (228, 17478), (248, 17541), (255, 17568), (258, 17571), (309, 17697), (321, 17712), (331, 17736), (334, 17742), (337, 17748), (353, 17802), (395, 17922), (448, 18018), (451, 18027), (465, 18060), (468, 18066), (487, 18105), (564, 18231), (588, 18294), (641, 18423), (655, 18471), (665, 18498), (691, 18534), (716, 18582), (730, 18588), (767, 18681), (799, 18786), (829, 18861), (890, 19014), (902, 19056), (904, 19059),

Gene: Pinto\_30 Start: 21713, Stop: 23515, Start Num: 146

Candidate Starts for Pinto\_30:

(Start: 146 @21713 has 223 MA's), (Start: 161 @21734 has 4 MA's), (Start: 190 @21776 has 1 MA's), (216, 21821), (306, 22037), (332, 22082), (338, 22091), (368, 22181), (369, 22184), (467, 22379), (500, 22448), (583, 22649), (584, 22652), (591, 22673), (635, 22769), (636, 22772), (638, 22778), (665, 22847), (668, 22865), (670, 22874), (677, 22904), (731, 23000), (746, 23033), (750, 23048), (793, 23189), (813, 23246), (862, 23357),

Gene: Pioneer\_30 Start: 21782, Stop: 23572, Start Num: 144

Candidate Starts for Pioneer\_30:

(Start: 141 @21779 has 14 MA's), (Start: 144 @21782 has 603 MA's), (277, 22016), (278, 22019), (305, 22091), (306, 22094), (315, 22109), (338, 22148), (341, 22154), (378, 22265), (417, 22352), (463, 22433), (467, 22436), (546, 22622), (576, 22685), (584, 22709), (586, 22715), (597, 22748), (636, 22829), (675, 22955), (693, 22997), (731, 23057), (746, 23090), (750, 23105), (781, 23204), (782, 23207), (784, 23219), (813, 23303), (842, 23369), (860, 23408), (862, 23414), (873, 23459), (890, 23516), (891, 23519),

Gene: Pipcraft\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Pipcraft\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Piper2020\_17 Start: 14677, Stop: 16386, Start Num: 123

Candidate Starts for Piper2020\_17:

(Start: 123 @14677 has 215 MA's), (193, 14764), (Start: 227 @14809 has 2 MA's), (233, 14833), (271, 14938), (274, 14944), (281, 14962), (300, 14992), (348, 15097), (370, 15157), (373, 15166), (377, 15175), (378, 15178), (381, 15187), (388, 15211), (418, 15286), (424, 15298), (443, 15313), (448, 15319), (459, 15337), (465, 15352), (468, 15358), (475, 15376), (477, 15379), (484, 15394), (492, 15409), (494, 15415), (511, 15463), (515, 15475), (521, 15481), (564, 15541), (568, 15553), (583, 15589), (587, 15601), (594, 15622), (614, 15676), (618, 15685), (625, 15703), (627, 15709), (638, 15739), (710, 15844), (720, 15856), (737, 15892), (761, 15970), (791, 16069), (810, 16123), (826, 16153), (829, 16165), (836, 16183), (839, 16189), (841, 16192), (844, 16198), (860, 16213), (861, 16216), (865, 16237), (866, 16240), (877, 16270), (882, 16282), (900, 16354),

Gene: Pipp\_19 Start: 16644, Stop: 18290, Start Num: 195

Candidate Starts for Pipp\_19:

(172, 16608), (Start: 195 @16644 has 45 MA's), (244, 16746), (272, 16824), (308, 16923), (329, 16962), (357, 17043), (377, 17097), (382, 17112), (460, 17208), (494, 17283), (506, 17313), (594, 17496), (601, 17520), (626, 17571), (658, 17664), (664, 17676), (694, 17721), (702, 17736), (757, 17868), (758, 17871), (788, 17970), (795, 17988), (813, 18039), (839, 18099), (843, 18105), (872, 18168), (877, 18180),

Gene: Pippin\_29 Start: 21464, Stop: 23266, Start Num: 146

Candidate Starts for Pippin\_29:

(Start: 146 @21464 has 223 MA's), (Start: 161 @21485 has 4 MA's), (Start: 190 @21527 has 1 MA's), (216, 21572), (306, 21788), (332, 21833), (338, 21842), (349, 21881), (368, 21932), (369, 21935), (467, 22130), (500, 22199), (583, 22400), (584, 22403), (591, 22424), (635, 22520), (636, 22523), (638, 22529), (665, 22598), (668, 22616), (670, 22625), (677, 22655), (731, 22751), (746, 22784), (750, 22799), (793, 22940), (813, 22997), (862, 23108),

Gene: Pippy\_16 Start: 14798, Stop: 16507, Start Num: 123

Candidate Starts for Pippy\_16:

(Start: 123 @14798 has 215 MA's), (193, 14885), (Start: 227 @14930 has 2 MA's), (233, 14954), (271, 15059), (274, 15065), (281, 15083), (300, 15113), (348, 15218), (370, 15278), (378, 15299), (381, 15308), (388, 15332), (459, 15458), (465, 15473), (468, 15479), (484, 15515), (486, 15518), (492, 15530), (494, 15536), (511, 15584), (515, 15596), (521, 15602), (564, 15662), (568, 15674), (583, 15710), (587, 15722), (614, 15797), (618, 15806), (625, 15824), (627, 15830), (638, 15860), (710, 15965), (717, 15974), (720, 15977), (737, 16013), (761, 16091), (791, 16190), (799, 16211), (810, 16244), (826, 16274), (836, 16304), (841, 16313), (844, 16319), (860, 16334), (861, 16337), (866, 16361), (877, 16391), (882, 16403), (887, 16433), (900, 16475),

Gene: Pipsqueaks\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Pipsqueaks\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Piro94\_29 Start: 20672, Stop: 22444, Start Num: 144

Candidate Starts for Piro94\_29:

(Start: 123 @20648 has 215 MA's), (Start: 144 @20672 has 603 MA's), (Start: 235 @20807 has 1 MA's), (242, 20825), (277, 20906), (278, 20909), (305, 20981), (306, 20984), (338, 21038), (341,

21044), (360, 21107), (378, 21155), (388, 21188), (417, 21242), (463, 21323), (467, 21326), (481, 21356), (546, 21512), (584, 21599), (636, 21719), (674, 21842), (675, 21845), (677, 21851), (713, 21899), (746, 21962), (750, 21977), (752, 21983), (770, 22037), (781, 22076), (784, 22091), (795, 22124), (810, 22169), (860, 22280), (862, 22286), (877, 22340),

Gene: Pistachio\_28 Start: 19451, Stop: 21247, Start Num: 144

Candidate Starts for Pistachio\_28:

(Start: 144 @19451 has 603 MA's), (Start: 190 @19508 has 1 MA's), (230, 19577), (272, 19679), (277, 19691), (278, 19694), (306, 19769), (315, 19784), (338, 19823), (384, 19958), (417, 20027), (481, 20141), (532, 20267), (583, 20381), (591, 20405), (597, 20423), (636, 20504), (665, 20579), (668, 20597), (670, 20606), (675, 20630), (677, 20636), (682, 20651), (703, 20684), (729, 20729), (731, 20732), (742, 20753), (746, 20765), (749, 20771), (763, 20828), (813, 20978), (825, 21002), (860, 21083), (862, 21089), (900, 21224),

Gene: Pita2\_29 Start: 21585, Stop: 23387, Start Num: 146

Candidate Starts for Pita2\_29:

(Start: 146 @21585 has 223 MA's), (Start: 161 @21606 has 4 MA's), (Start: 190 @21648 has 1 MA's), (216, 21693), (306, 21909), (332, 21954), (338, 21963), (349, 22002), (368, 22053), (369, 22056), (467, 22251), (500, 22320), (583, 22521), (584, 22524), (591, 22545), (635, 22641), (636, 22644), (638, 22650), (665, 22719), (668, 22737), (670, 22746), (677, 22776), (731, 22872), (746, 22905), (750, 22920), (793, 23061), (813, 23118), (862, 23229),

Gene: Pixie\_22 Start: 17358, Stop: 19121, Start Num: 114

Candidate Starts for Pixie\_22:

(Start: 109 @17349 has 26 MA's), (Start: 114 @17358 has 139 MA's), (196, 17460), (230, 17517), (248, 17568), (258, 17598), (269, 17622), (360, 17853), (362, 17862), (368, 17874), (400, 17967), (403, 17970), (448, 18042), (451, 18051), (465, 18084), (468, 18090), (487, 18129), (503, 18165), (564, 18255), (588, 18318), (622, 18405), (655, 18498), (698, 18573), (748, 18654), (760, 18702), (771, 18726), (778, 18753), (795, 18810), (810, 18855), (863, 18957), (871, 18984), (887, 19044), (890, 19053), (896, 19074), (901, 19092), (904, 19098), (913, 19113),

Gene: Plagueis\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Plagueis\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Pleakley\_50 Start: 30683, Stop: 32302, Start Num: 170

Candidate Starts for Pleakley\_50:

(Start: 170 @30683 has 87 MA's), (179, 30698), (202, 30737), (236, 30797), (265, 30881), (347, 31064), (372, 31130), (377, 31145), (390, 31181), (432, 31256), (449, 31286), (450, 31289), (457, 31307), (493, 31346), (505, 31376), (596, 31580), (607, 31610), (635, 31658), (636, 31661), (673, 31784), (688, 31820), (799, 32006), (869, 32159), (885, 32213), (887, 32225), (891, 32237), (906, 32282),

Gene: Plumbus\_17 Start: 14635, Stop: 16344, Start Num: 123

Candidate Starts for Plumbus\_17:

(Start: 123 @14635 has 215 MA's), (193, 14722), (Start: 227 @14767 has 2 MA's), (233, 14791), (240, 14812), (271, 14896), (274, 14902), (281, 14920), (300, 14950), (348, 15055), (370, 15115), (378, 15136), (381, 15145), (388, 15169), (459, 15295), (465, 15310), (468, 15316), (484, 15352), (486,



15355), (492, 15367), (494, 15373), (511, 15421), (515, 15433), (521, 15439), (564, 15499), (568, 15511), (583, 15547), (587, 15559), (614, 15634), (618, 15643), (625, 15661), (627, 15667), (638, 15697), (710, 15802), (717, 15811), (720, 15814), (737, 15850), (761, 15928), (791, 16027), (799, 16048), (810, 16081), (826, 16111), (836, 16141), (841, 16150), (844, 16156), (860, 16171), (861, 16174), (866, 16198), (877, 16228), (882, 16240), (887, 16270), (900, 16312),

Gene: Pmask\_31 Start: 19970, Stop: 21742, Start Num: 144

Candidate Starts for Pmask\_31:

(94, 19904), (Start: 123 @19946 has 215 MA's), (Start: 144 @19970 has 603 MA's), (263, 20168), (278, 20207), (305, 20279), (306, 20282), (318, 20300), (338, 20336), (341, 20342), (378, 20453), (380, 20459), (392, 20498), (417, 20540), (448, 20579), (463, 20621), (467, 20624), (495, 20684), (592, 20921), (597, 20936), (636, 21017), (677, 21149), (750, 21275), (765, 21326), (770, 21335), (781, 21374), (782, 21377), (784, 21389), (813, 21473), (860, 21578), (862, 21584), (900, 21719),

Gene: Pocahontas\_28 Start: 20452, Stop: 22251, Start Num: 144

Candidate Starts for Pocahontas\_28:

(Start: 144 @20452 has 603 MA's), (Start: 190 @20512 has 1 MA's), (230, 20581), (272, 20683), (277, 20695), (278, 20698), (306, 20773), (315, 20788), (338, 20827), (384, 20962), (417, 21031), (481, 21145), (532, 21271), (583, 21385), (591, 21409), (595, 21421), (597, 21427), (636, 21508), (665, 21583), (668, 21601), (670, 21610), (675, 21634), (677, 21640), (682, 21655), (703, 21688), (729, 21733), (731, 21736), (742, 21757), (782, 21886), (813, 21982), (860, 22087), (862, 22093), (900, 22228),

Gene: Poenanya\_16 Start: 14940, Stop: 16649, Start Num: 123

Candidate Starts for Poenanya\_16:

(Start: 123 @14940 has 215 MA's), (193, 15027), (Start: 227 @15072 has 2 MA's), (233, 15096), (271, 15201), (274, 15207), (281, 15225), (300, 15255), (348, 15360), (370, 15420), (378, 15441), (381, 15450), (388, 15474), (418, 15549), (459, 15600), (465, 15615), (468, 15621), (484, 15657), (486, 15660), (492, 15672), (494, 15678), (511, 15726), (515, 15738), (521, 15744), (564, 15804), (568, 15816), (583, 15852), (587, 15864), (614, 15939), (618, 15948), (625, 15966), (627, 15972), (638, 16002), (710, 16107), (720, 16119), (737, 16155), (761, 16233), (791, 16332), (799, 16353), (810, 16386), (826, 16416), (836, 16446), (839, 16452), (841, 16455), (844, 16461), (860, 16476), (861, 16479), (865, 16500), (866, 16503), (882, 16545), (900, 16617), (901, 16623),

Gene: Pokerus\_22 Start: 17105, Stop: 18871, Start Num: 114

Candidate Starts for Pokerus\_22:

(Start: 114 @17105 has 139 MA's), (140, 17135), (236, 17294), (248, 17327), (258, 17357), (272, 17390), (316, 17492), (337, 17534), (360, 17606), (362, 17615), (378, 17654), (392, 17699), (400, 17720), (403, 17723), (438, 17777), (448, 17795), (465, 17837), (468, 17843), (481, 17870), (564, 18008), (572, 18026), (587, 18068), (593, 18086), (603, 18116), (618, 18143), (655, 18248), (748, 18407), (757, 18443), (768, 18473), (772, 18482), (793, 18557), (810, 18608), (890, 18803), (901, 18842), (902, 18845), (913, 18863),

Gene: Policronamos\_24 Start: 19858, Stop: 21453, Start Num: 191

Candidate Starts for Policronamos\_24:

(Start: 129 @19774 has 79 MA's), (Start: 191 @19858 has 45 MA's), (Start: 235 @19936 has 1 MA's), (268, 20023), (274, 20038), (300, 20086), (324, 20125), (356, 20212), (368, 20245), (381, 20281), (390, 20311), (392, 20317), (422, 20386), (461, 20416), (466, 20428), (468, 20431), (494, 20488), (565, 20620), (567, 20626), (592, 20692), (594, 20698), (601, 20722), (618, 20770), (627, 20794), (631, 20803), (658, 20878), (717, 20929), (725, 20944), (782, 21106), (788, 21133), (799, 21163), (843, 21268), (880, 21346), (887, 21382), (890, 21391), (900, 21424), (907, 21439),

Gene: Polka14\_17 Start: 15348, Stop: 17057, Start Num: 123

Candidate Starts for Polka14\_17:

(Start: 123 @15348 has 215 MA's), (193, 15435), (Start: 227 @15480 has 2 MA's), (233, 15504), (271, 15609), (274, 15615), (281, 15633), (300, 15663), (348, 15768), (370, 15828), (378, 15849), (381, 15858), (388, 15882), (459, 16008), (465, 16023), (468, 16029), (484, 16065), (486, 16068), (492, 16080), (494, 16086), (511, 16134), (515, 16146), (521, 16152), (564, 16212), (568, 16224), (583, 16260), (587, 16272), (594, 16293), (614, 16347), (618, 16356), (625, 16374), (627, 16380), (638, 16410), (710, 16515), (720, 16527), (737, 16563), (751, 16602), (761, 16641), (791, 16740), (799, 16761), (810, 16794), (826, 16824), (836, 16854), (839, 16860), (841, 16863), (844, 16869), (860, 16884), (861, 16887), (865, 16908), (866, 16911), (882, 16953), (887, 16983), (900, 17025),

Gene: Polkaroo\_19 Start: 16401, Stop: 18137, Start Num: 117

Candidate Starts for Polkaroo\_19:

(Start: 101 @16377 has 2 MA's), (Start: 117 @16401 has 59 MA's), (Start: 166 @16461 has 1 MA's), (178, 16482), (180, 16485), (246, 16605), (258, 16644), (272, 16677), (282, 16701), (344, 16821), (356, 16860), (358, 16866), (386, 16950), (388, 16956), (392, 16968), (402, 16992), (410, 17019), (422, 17037), (452, 17076), (459, 17082), (470, 17106), (494, 17160), (500, 17172), (503, 17181), (529, 17241), (573, 17319), (587, 17358), (598, 17391), (618, 17457), (624, 17472), (627, 17481), (636, 17505), (647, 17535), (653, 17547), (735, 17649), (740, 17661), (742, 17664), (745, 17670), (747, 17679), (779, 17787), (805, 17871), (853, 17970), (900, 18111), (907, 18126),

Gene: Pollux\_20 Start: 17566, Stop: 19272, Start Num: 111

Candidate Starts for Pollux\_20:

(Start: 95 @17542 has 1 MA's), (Start: 111 @17566 has 24 MA's), (192, 17671), (217, 17713), (251, 17788), (303, 17902), (365, 18049), (368, 18055), (384, 18100), (459, 18238), (497, 18313), (635, 18595), (644, 18616), (668, 18691), (715, 18778), (739, 18814), (750, 18847), (752, 18853), (783, 18919), (793, 18949), (860, 19105), (862, 19111), (865, 19129), (897, 19240),

Gene: Polly\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Polly\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: Polymorphads\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Polymorphads\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Polyzuki\_45 Start: 31365, Stop: 32939, Start Num: 173

Candidate Starts for Polyzuki\_45:

(Start: 173 @31365 has 7 MA's), (179, 31374), (219, 31428), (231, 31452), (236, 31455), (348, 31725), (372, 31788), (377, 31803), (442, 31920), (450, 31935), (493, 31992), (498, 32001), (511, 32043), (518, 32064), (534, 32094), (561, 32151), (596, 32226), (644, 32322), (673, 32427), (674, 32430), (683, 32457), (752, 32535), (776, 32574), (829, 32730), (867, 32796),

Gene: Pomar16\_31 Start: 20090, Stop: 21880, Start Num: 144

Candidate Starts for Pomar16\_31:

(94, 20024), (Start: 123 @20066 has 215 MA's), (Start: 144 @20090 has 603 MA's), (242, 20243), (277, 20324), (278, 20327), (305, 20399), (306, 20402), (315, 20417), (338, 20456), (341, 20462), (378, 20573), (384, 20591), (417, 20660), (463, 20741), (467, 20744), (532, 20900), (546, 20930), (636, 21137), (675, 21263), (731, 21365), (746, 21398), (750, 21413), (756, 21437), (781, 21512), (782, 21515), (784, 21527), (813, 21611), (849, 21689), (860, 21716), (862, 21722), (873, 21767), (877, 21776), (900, 21857),

Gene: Pons\_18 Start: 15412, Stop: 17109, Start Num: 133

Candidate Starts for Pons\_18:

(Start: 133 @15412 has 8 MA's), (Start: 144 @15415 has 603 MA's), (214, 15514), (236, 15556), (243, 15577), (288, 15694), (336, 15796), (365, 15883), (377, 15913), (385, 15940), (406, 15985), (417, 16003), (436, 16018), (444, 16033), (465, 16090), (481, 16123), (487, 16135), (501, 16165), (539, 16222), (546, 16240), (560, 16270), (574, 16300), (580, 16315), (596, 16363), (617, 16414), (636, 16450), (643, 16465), (650, 16483), (668, 16540), (747, 16669), (750, 16681), (791, 16780), (793, 16783), (799, 16801), (829, 16879), (842, 16906), (862, 16948), (902, 17095), (907, 17101),

Gene: Poompha\_26 Start: 17888, Stop: 19666, Start Num: 144

Candidate Starts for Poompha\_26:

(Start: 123 @17864 has 215 MA's), (Start: 144 @17888 has 603 MA's), (Start: 190 @17945 has 1 MA's), (197, 17960), (230, 18014), (277, 18128), (278, 18131), (306, 18206), (330, 18245), (378, 18377), (417, 18464), (460, 18539), (481, 18578), (500, 18617), (532, 18704), (553, 18749), (583, 18818), (591, 18842), (595, 18854), (597, 18860), (619, 18911), (668, 19034), (670, 19043), (675, 19067), (677, 19073), (682, 19088), (713, 19121), (742, 19172), (758, 19229), (759, 19235), (813, 19397), (860, 19502), (862, 19508), (863, 19517), (900, 19643),

Gene: PopTart\_16 Start: 14854, Stop: 16563, Start Num: 123

Candidate Starts for PopTart\_16:

(Start: 123 @14854 has 215 MA's), (193, 14941), (Start: 227 @14986 has 2 MA's), (233, 15010), (271, 15115), (274, 15121), (281, 15139), (300, 15169), (348, 15274), (370, 15334), (373, 15343), (377, 15352), (378, 15355), (381, 15364), (388, 15388), (459, 15514), (465, 15529), (468, 15535), (484, 15571), (486, 15574), (492, 15586), (494, 15592), (511, 15640), (515, 15652), (521, 15658), (564, 15718), (568, 15730), (583, 15766), (587, 15778), (614, 15853), (618, 15862), (625, 15880), (627, 15886), (638, 15916), (710, 16021), (717, 16030), (720, 16033), (737, 16069), (761, 16147), (791, 16246), (799, 16267), (810, 16300), (826, 16330), (836, 16360), (841, 16369), (844, 16375), (860, 16390), (861, 16393), (866, 16417), (877, 16447), (882, 16459), (887, 16489), (900, 16531),

Gene: Popcicle\_28 Start: 20452, Stop: 22251, Start Num: 144

Candidate Starts for Popcicle\_28:

(Start: 144 @20452 has 603 MA's), (Start: 190 @20512 has 1 MA's), (230, 20581), (272, 20683), (277, 20695), (278, 20698), (306, 20773), (315, 20788), (338, 20827), (384, 20962), (417, 21031), (481, 21145), (532, 21271), (583, 21385), (591, 21409), (595, 21421), (597, 21427), (636, 21508), (665, 21583), (668, 21601), (670, 21610), (675, 21634), (677, 21640), (682, 21655), (703, 21688), (729, 21733), (731, 21736), (742, 21757), (782, 21886), (813, 21982), (860, 22087), (862, 22093), (900, 22228),

Gene: Porcelain\_33 Start: 24890, Stop: 26623, Start Num: 124

Candidate Starts for Porcelain\_33:

(Start: 124 @24890 has 30 MA's), (Start: 191 @24980 has 45 MA's), (193, 24983), (233, 25058), (243, 25085), (268, 25151), (282, 25187), (301, 25217), (306, 25232), (346, 25316), (358, 25352), (368, 25379), (382, 25418), (392, 25451), (395, 25460), (420, 25517), (451, 25559), (490, 25634), (494, 25646), (515, 25706), (552, 25760), (565, 25790), (573, 25808), (577, 25817), (588, 25850), (592, 25862), (594, 25868), (606, 25907), (627, 25964), (725, 26114), (735, 26132), (750, 26174), (756,

26198), (757, 26201), (761, 26216), (773, 26246), (782, 26276), (799, 26333), (868, 26483), (902, 26603), (907, 26609),

Gene: Porky\_24 Start: 19667, Stop: 21262, Start Num: 191

Candidate Starts for Porky\_24:

(Start: 129 @19583 has 79 MA's), (Start: 191 @19667 has 45 MA's), (Start: 235 @19745 has 1 MA's), (268, 19832), (274, 19847), (300, 19895), (324, 19934), (356, 20021), (368, 20054), (381, 20090), (390, 20120), (392, 20126), (422, 20195), (461, 20225), (466, 20237), (468, 20240), (494, 20297), (565, 20429), (567, 20435), (592, 20501), (594, 20507), (601, 20531), (618, 20579), (627, 20603), (631, 20612), (658, 20687), (717, 20738), (725, 20753), (782, 20915), (788, 20942), (799, 20972), (843, 21077), (880, 21155), (887, 21191), (890, 21200), (900, 21233), (907, 21248),

Gene: Portcullis\_31 Start: 25894, Stop: 27660, Start Num: 97

Candidate Starts for Portcullis\_31:

(80, 25852), (Start: 97 @25894 has 73 MA's), (Start: 121 @25930 has 1 MA's), (Start: 148 @25963 has 14 MA's), (264, 26173), (265, 26176), (277, 26206), (298, 26272), (306, 26296), (311, 26305), (331, 26338), (386, 26491), (406, 26530), (445, 26581), (451, 26593), (458, 26611), (460, 26623), (465, 26635), (472, 26650), (487, 26680), (489, 26683), (499, 26704), (547, 26776), (568, 26824), (613, 26935), (632, 26968), (647, 27007), (649, 27010), (670, 27082), (707, 27148), (715, 27160), (793, 27331), (794, 27334), (810, 27382), (824, 27409), (832, 27436), (835, 27442), (860, 27490), (891, 27607), (897, 27628), (909, 27655),

Gene: Posh\_20 Start: 17530, Stop: 19236, Start Num: 111

Candidate Starts for Posh\_20:

(Start: 95 @17506 has 1 MA's), (Start: 111 @17530 has 24 MA's), (192, 17635), (217, 17677), (251, 17752), (303, 17866), (365, 18013), (368, 18019), (384, 18064), (459, 18202), (497, 18277), (635, 18559), (644, 18580), (668, 18655), (715, 18742), (739, 18778), (750, 18811), (752, 18817), (783, 18883), (793, 18913), (860, 19069), (862, 19075), (865, 19093), (897, 19204),

Gene: PotPie\_18 Start: 16277, Stop: 17974, Start Num: 133

Candidate Starts for PotPie\_18:

(Start: 133 @16277 has 8 MA's), (Start: 144 @16280 has 603 MA's), (214, 16379), (236, 16421), (336, 16661), (365, 16748), (374, 16769), (377, 16778), (385, 16805), (406, 16850), (436, 16883), (444, 16898), (454, 16922), (465, 16955), (481, 16988), (487, 17000), (509, 17057), (546, 17105), (560, 17135), (574, 17165), (580, 17180), (596, 17228), (617, 17279), (636, 17315), (643, 17330), (650, 17348), (668, 17405), (670, 17414), (747, 17534), (750, 17546), (777, 17594), (791, 17645), (793, 17648), (799, 17666), (829, 17744), (842, 17771), (862, 17813), (902, 17960), (907, 17966),

Gene: PotatoChip\_34 Start: 29329, Stop: 30927, Start Num: 171

Candidate Starts for PotatoChip\_34:

(Start: 171 @29329 has 40 MA's), (239, 29428), (263, 29497), (278, 29536), (338, 29671), (358, 29731), (436, 29884), (442, 29896), (448, 29905), (449, 29908), (486, 29953), (493, 29968), (498, 29977), (501, 29986), (518, 30040), (528, 30058), (557, 30112), (653, 30328), (678, 30421), (762, 30529), (784, 30583), (808, 30658), (867, 30787), (905, 30913),

Gene: PotatoSplit\_30 Start: 20379, Stop: 22175, Start Num: 144

Candidate Starts for PotatoSplit\_30:

(Start: 144 @20379 has 603 MA's), (Start: 190 @20436 has 1 MA's), (197, 20451), (219, 20484), (230, 20505), (Start: 235 @20520 has 1 MA's), (272, 20607), (277, 20619), (278, 20622), (306, 20697), (315, 20712), (336, 20748), (417, 20955), (481, 21069), (500, 21108), (532, 21195), (583, 21309), (591, 21333), (597, 21351), (636, 21432), (665, 21507), (668, 21525), (675, 21558), (677, 21564), (695, 21603), (729, 21657), (731, 21660), (742, 21681), (758, 21738), (813, 21906), (860, 22011), (862, 22017), (900, 22152),

Gene: Poushou\_19 Start: 17425, Stop: 19089, Start Num: 146

Candidate Starts for Poushou\_19:

(Start: 146 @17425 has 223 MA's), (169, 17458), (295, 17716), (332, 17794), (377, 17917), (380, 17926), (381, 17929), (384, 17938), (386, 17947), (467, 18088), (472, 18100), (499, 18154), (575, 18289), (587, 18322), (593, 18340), (597, 18352), (602, 18367), (635, 18427), (644, 18448), (646, 18457), (668, 18523), (675, 18556), (713, 18586), (718, 18592), (721, 18595), (750, 18664), (791, 18763), (795, 18772), (861, 18928), (863, 18940),

Gene: Power\_28 Start: 20118, Stop: 21890, Start Num: 144

Candidate Starts for Power\_28:

(94, 20052), (Start: 123 @20094 has 215 MA's), (Start: 144 @20118 has 603 MA's), (219, 20217), (251, 20301), (277, 20352), (278, 20355), (305, 20427), (306, 20430), (338, 20484), (349, 20523), (365, 20568), (378, 20601), (417, 20688), (463, 20769), (467, 20772), (584, 21045), (636, 21165), (675, 21291), (713, 21345), (746, 21408), (750, 21423), (752, 21429), (770, 21483), (781, 21522), (784, 21537), (813, 21621), (862, 21732), (900, 21867),

Gene: Powerball\_19 Start: 16819, Stop: 18399, Start Num: 170

Candidate Starts for Powerball\_19:

(Start: 170 @16819 has 87 MA's), (298, 17077), (307, 17098), (340, 17152), (345, 17170), (351, 17191), (369, 17248), (377, 17269), (501, 17440), (507, 17458), (514, 17482), (521, 17503), (554, 17545), (592, 17626), (636, 17716), (669, 17818), (670, 17821), (687, 17875), (863, 18244), (865, 18253), (867, 18259), (874, 18283), (880, 18295),

Gene: Priamo\_31 Start: 20019, Stop: 21791, Start Num: 144

Candidate Starts for Priamo\_31:

(94, 19953), (Start: 123 @19995 has 215 MA's), (Start: 144 @20019 has 603 MA's), (236, 20157), (263, 20217), (277, 20253), (278, 20256), (305, 20328), (306, 20331), (338, 20385), (341, 20391), (356, 20442), (378, 20502), (380, 20508), (392, 20547), (417, 20589), (448, 20628), (463, 20670), (467, 20673), (495, 20733), (592, 20970), (597, 20985), (636, 21066), (667, 21153), (677, 21198), (750, 21324), (770, 21384), (781, 21423), (782, 21426), (784, 21438), (813, 21522), (860, 21627), (862, 21633), (900, 21768),

Gene: PrincePatrick\_19 Start: 16814, Stop: 18463, Start Num: 195

Candidate Starts for PrincePatrick\_19:

(34, 16283), (36, 16313), (38, 16319), (50, 16451), (56, 16508), (57, 16517), (Start: 99 @16676 has 2 MA's), (172, 16778), (Start: 195 @16814 has 45 MA's), (244, 16919), (272, 16997), (293, 17057), (299, 17069), (300, 17072), (377, 17270), (382, 17285), (386, 17300), (415, 17369), (460, 17381), (464, 17390), (465, 17393), (473, 17414), (494, 17456), (506, 17486), (594, 17669), (601, 17693), (626, 17744), (658, 17837), (664, 17849), (692, 17891), (702, 17909), (758, 18044), (788, 18143), (795, 18161), (813, 18212), (839, 18272), (843, 18278), (877, 18353),

Gene: Priscilla\_16 Start: 14816, Stop: 16525, Start Num: 123

Candidate Starts for Priscilla\_16:

(Start: 123 @14816 has 215 MA's), (193, 14903), (Start: 227 @14948 has 2 MA's), (233, 14972), (271, 15077), (274, 15083), (281, 15101), (300, 15131), (348, 15236), (370, 15296), (378, 15317), (381, 15326), (388, 15350), (418, 15425), (420, 15428), (459, 15476), (465, 15491), (468, 15497), (484, 15533), (486, 15536), (492, 15548), (494, 15554), (511, 15602), (515, 15614), (521, 15620), (564, 15680), (568, 15692), (583, 15728), (587, 15740), (614, 15815), (618, 15824), (625, 15842), (627, 15848), (638, 15878), (710, 15983), (720, 15995), (737, 16031), (761, 16109), (799, 16229), (810, 16262), (826, 16292), (836, 16322), (841, 16331), (844, 16337), (860, 16352), (861, 16355), (866, 16379), (877, 16409), (882, 16421), (887, 16451), (900, 16493),

Gene: Prithvi\_23 Start: 17122, Stop: 18888, Start Num: 114

Candidate Starts for Prithvi\_23:

(Start: 114 @17122 has 139 MA's), (140, 17152), (236, 17311), (248, 17344), (258, 17374), (272, 17407), (278, 17419), (316, 17509), (337, 17551), (357, 17614), (360, 17623), (362, 17632), (378, 17671), (392, 17716), (400, 17737), (403, 17740), (448, 17812), (465, 17854), (468, 17860), (481, 17887), (564, 18025), (572, 18043), (587, 18085), (593, 18103), (603, 18133), (618, 18160), (655, 18265), (748, 18424), (757, 18460), (768, 18490), (772, 18499), (793, 18574), (810, 18625), (890, 18820), (901, 18859), (902, 18862), (913, 18880),

Gene: Priya\_30 Start: 21780, Stop: 23570, Start Num: 144

Candidate Starts for Priya\_30:

(Start: 141 @21777 has 14 MA's), (Start: 144 @21780 has 603 MA's), (277, 22014), (278, 22017), (305, 22089), (306, 22092), (315, 22107), (338, 22146), (341, 22152), (378, 22263), (417, 22350), (463, 22431), (467, 22434), (495, 22494), (546, 22620), (576, 22683), (584, 22707), (586, 22713), (597, 22746), (636, 22827), (675, 22953), (693, 22995), (695, 22998), (731, 23055), (746, 23088), (750, 23103), (781, 23202), (782, 23205), (784, 23217), (813, 23301), (842, 23367), (860, 23406), (862, 23412), (873, 23457), (890, 23514), (891, 23517),

Gene: ProMouse\_26 Start: 21605, Stop: 23407, Start Num: 146

Candidate Starts for ProMouse\_26:

(Start: 146 @21605 has 223 MA's), (Start: 161 @21626 has 4 MA's), (Start: 190 @21668 has 1 MA's), (216, 21713), (306, 21929), (332, 21974), (368, 22073), (369, 22076), (406, 22169), (467, 22271), (500, 22340), (579, 22529), (583, 22541), (584, 22544), (591, 22565), (635, 22661), (636, 22664), (638, 22670), (665, 22739), (668, 22757), (670, 22766), (677, 22796), (731, 22892), (746, 22925), (750, 22940), (793, 23081), (813, 23138), (862, 23249), (909, 23402),

Gene: PsychoKiller\_18 Start: 15729, Stop: 17429, Start Num: 133

Candidate Starts for PsychoKiller\_18:

(Start: 133 @15729 has 8 MA's), (Start: 144 @15732 has 603 MA's), (264, 15942), (306, 16065), (336, 16116), (365, 16203), (369, 16212), (377, 16233), (382, 16248), (385, 16260), (436, 16338), (442, 16350), (454, 16377), (465, 16410), (481, 16443), (487, 16455), (505, 16497), (574, 16620), (599, 16692), (636, 16770), (643, 16785), (650, 16803), (668, 16860), (731, 16953), (747, 16989), (750, 17001), (752, 17007), (755, 17019), (766, 17028), (791, 17100), (793, 17103), (795, 17109), (799, 17121), (824, 17181), (842, 17226), (847, 17235), (862, 17268), (882, 17334),

Gene: Pukovnik\_30 Start: 21690, Stop: 23462, Start Num: 144

Candidate Starts for Pukovnik\_30:

(Start: 123 @21666 has 215 MA's), (Start: 144 @21690 has 603 MA's), (Start: 235 @21825 has 1 MA's), (242, 21843), (277, 21924), (278, 21927), (305, 21999), (306, 22002), (341, 22062), (378, 22173), (417, 22260), (463, 22341), (467, 22344), (518, 22470), (532, 22500), (631, 22722), (636, 22737), (675, 22863), (677, 22869), (713, 22917), (746, 22980), (750, 22995), (752, 23001), (756, 23019), (770, 23055), (781, 23094), (784, 23109), (813, 23193), (849, 23271), (860, 23298), (862, 23304), (873, 23349),

Gene: PullumCavea\_31 Start: 25945, Stop: 27711, Start Num: 97

Candidate Starts for PullumCavea\_31:

(80, 25903), (Start: 97 @25945 has 73 MA's), (Start: 121 @25981 has 1 MA's), (Start: 148 @26014 has 14 MA's), (264, 26224), (265, 26227), (277, 26257), (298, 26323), (306, 26347), (311, 26356), (331, 26389), (386, 26542), (406, 26581), (445, 26632), (451, 26644), (458, 26662), (460, 26674), (465, 26686), (472, 26701), (487, 26731), (489, 26734), (499, 26755), (547, 26827), (568, 26875), (613, 26986), (632, 27019), (647, 27058), (649, 27061), (670, 27133), (707, 27199), (715, 27211), (793, 27382), (794, 27385), (810, 27433), (824, 27460), (832, 27487), (860, 27541), (891, 27658), (897, 27679), (909, 27706),

Gene: Pumbaa\_27 Start: 19802, Stop: 21580, Start Num: 144

Candidate Starts for Pumbaa\_27:

(Start: 123 @19778 has 215 MA's), (Start: 144 @19802 has 603 MA's), (178, 19844), (Start: 190 @19859 has 1 MA's), (222, 19913), (230, 19928), (236, 19946), (272, 20030), (277, 20042), (278, 20045), (306, 20120), (315, 20135), (338, 20174), (378, 20291), (417, 20378), (463, 20459), (489, 20507), (500, 20531), (532, 20618), (553, 20663), (584, 20735), (591, 20756), (597, 20774), (636, 20855), (668, 20948), (670, 20957), (675, 20981), (677, 20987), (687, 21011), (731, 21065), (742, 21086), (756, 21137), (763, 21161), (782, 21215), (813, 21311), (860, 21416), (863, 21431), (894, 21539), (900, 21557),

Gene: Pumpkin\_26 Start: 19910, Stop: 21505, Start Num: 191

Candidate Starts for Pumpkin\_26:

(Start: 129 @19826 has 79 MA's), (Start: 191 @19910 has 45 MA's), (Start: 235 @19988 has 1 MA's), (268, 20075), (274, 20090), (300, 20138), (324, 20177), (356, 20264), (368, 20297), (381, 20333), (390, 20363), (392, 20369), (422, 20438), (461, 20468), (466, 20480), (468, 20483), (494, 20540), (565, 20672), (567, 20678), (592, 20744), (594, 20750), (601, 20774), (618, 20822), (627, 20846), (631, 20855), (658, 20930), (717, 20981), (725, 20996), (782, 21158), (788, 21185), (799, 21215), (843, 21320), (880, 21398), (887, 21434), (890, 21443), (900, 21476), (907, 21491),

Gene: Puppies\_18 Start: 15139, Stop: 16755, Start Num: 153

Candidate Starts for Puppies\_18:

(Start: 153 @15139 has 11 MA's), (216, 15235), (284, 15403), (321, 15466), (366, 15589), (417, 15706), (464, 15784), (501, 15859), (512, 15892), (576, 15985), (583, 16006), (636, 16123), (653, 16165), (657, 16183), (664, 16195), (665, 16198), (731, 16303), (735, 16309), (742, 16324), (769, 16381), (863, 16600), (891, 16699),

Gene: Puppy\_28 Start: 19523, Stop: 21319, Start Num: 144

Candidate Starts for Puppy\_28:

(Start: 144 @19523 has 603 MA's), (Start: 190 @19580 has 1 MA's), (230, 19649), (272, 19751), (277, 19763), (278, 19766), (306, 19841), (315, 19856), (338, 19895), (384, 20030), (417, 20099), (481, 20213), (532, 20339), (591, 20477), (597, 20495), (636, 20576), (665, 20651), (668, 20669), (670, 20678), (675, 20702), (677, 20708), (682, 20723), (703, 20756), (729, 20801), (731, 20804), (742, 20825), (746, 20837), (763, 20900), (813, 21050), (860, 21155), (862, 21161), (900, 21296),

Gene: Purgamenstris\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Purgamenstris\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Purky\_18 Start: 15971, Stop: 17707, Start Num: 117

Candidate Starts for Purky\_18:

(Start: 117 @15971 has 59 MA's), (180, 16055), (220, 16106), (221, 16109), (246, 16175), (251, 16196), (258, 16214), (272, 16247), (282, 16271), (341, 16379), (344, 16391), (356, 16430), (358, 16436), (368, 16466), (377, 16490), (395, 16547), (396, 16550), (422, 16607), (452, 16646), (459, 16652), (470, 16676), (494, 16730), (503, 16751), (529, 16811), (573, 16889), (598, 16961), (618, 17027), (627, 17051), (636, 17075), (647, 17105), (653, 17117), (735, 17219), (740, 17231), (779,

17357), (805, 17441), (810, 17453), (834, 17510), (907, 17696),

Gene: PurpleHaze\_29 Start: 20459, Stop: 22255, Start Num: 144

Candidate Starts for PurpleHaze\_29:

(Start: 144 @20459 has 603 MA's), (Start: 190 @20516 has 1 MA's), (197, 20531), (230, 20585), (Start: 235 @20600 has 1 MA's), (272, 20687), (277, 20699), (278, 20702), (306, 20777), (315, 20792), (417, 21035), (500, 21188), (532, 21275), (576, 21368), (583, 21389), (591, 21413), (595, 21425), (597, 21431), (636, 21512), (665, 21587), (668, 21605), (670, 21614), (675, 21638), (677, 21644), (682, 21659), (695, 21683), (729, 21737), (731, 21740), (742, 21761), (860, 22091), (862, 22097), (900, 22232),

Gene: Pygmy\_18 Start: 16108, Stop: 17844, Start Num: 117

Candidate Starts for Pygmy\_18:

(Start: 101 @16084 has 2 MA's), (Start: 117 @16108 has 59 MA's), (Start: 166 @16168 has 1 MA's), (178, 16189), (180, 16192), (246, 16312), (258, 16351), (272, 16384), (282, 16408), (344, 16528), (356, 16567), (358, 16573), (386, 16657), (388, 16663), (392, 16675), (402, 16699), (410, 16726), (422, 16744), (452, 16783), (459, 16789), (470, 16813), (494, 16867), (500, 16879), (503, 16888), (529, 16948), (573, 17026), (587, 17065), (598, 17098), (618, 17164), (624, 17179), (627, 17188), (636, 17212), (647, 17242), (653, 17254), (735, 17356), (740, 17368), (742, 17371), (745, 17377), (747, 17386), (779, 17494), (805, 17578), (853, 17677), (890, 17785), (907, 17833),

Gene: Pytheas\_20 Start: 17676, Stop: 19382, Start Num: 111

Candidate Starts for Pytheas\_20:

(Start: 95 @17652 has 1 MA's), (Start: 111 @17676 has 24 MA's), (192, 17781), (217, 17823), (251, 17898), (303, 18012), (365, 18159), (368, 18165), (459, 18348), (497, 18423), (635, 18705), (644, 18726), (668, 18801), (739, 18924), (750, 18957), (752, 18963), (783, 19029), (793, 19059), (860, 19215), (862, 19221), (865, 19239), (897, 19350),

Gene: QTRlifeCrisis\_27 Start: 21720, Stop: 23522, Start Num: 146

Candidate Starts for QTRlifeCrisis\_27:

(Start: 146 @21720 has 223 MA's), (Start: 161 @21741 has 4 MA's), (Start: 190 @21783 has 1 MA's), (216, 21828), (306, 22044), (332, 22089), (338, 22098), (349, 22137), (368, 22188), (369, 22191), (467, 22386), (500, 22455), (583, 22656), (584, 22659), (591, 22680), (635, 22776), (636, 22779), (638, 22785), (665, 22854), (668, 22872), (670, 22881), (677, 22911), (731, 23007), (746, 23040), (750, 23055), (793, 23196), (813, 23253), (862, 23364),

Gene: Qobbit\_30 Start: 21776, Stop: 23569, Start Num: 141

Candidate Starts for Qobbit\_30:

(Start: 141 @21776 has 14 MA's), (Start: 144 @21779 has 603 MA's), (277, 22013), (278, 22016), (305, 22088), (306, 22091), (315, 22106), (338, 22145), (341, 22151), (378, 22262), (417, 22349), (463, 22430), (467, 22433), (546, 22619), (576, 22682), (584, 22706), (586, 22712), (597, 22745), (636, 22826), (675, 22952), (693, 22994), (731, 23054), (746, 23087), (750, 23102), (781, 23201), (782, 23204), (784, 23216), (813, 23300), (842, 23366), (860, 23405), (862, 23411), (873, 23456), (890, 23513), (891, 23516),

Gene: Quallification\_25 Start: 19952, Stop: 21631, Start Num: 129

Candidate Starts for Quallification\_25:

(Start: 129 @19952 has 79 MA's), (Start: 191 @20036 has 45 MA's), (Start: 235 @20114 has 1 MA's), (268, 20201), (274, 20216), (300, 20264), (324, 20303), (356, 20390), (368, 20423), (381, 20459), (390, 20489), (392, 20495), (422, 20564), (461, 20594), (466, 20606), (468, 20609), (494, 20666), (565, 20798), (567, 20804), (592, 20870), (594, 20876), (601, 20900), (618, 20948), (627, 20972), (631, 20981), (658, 21056), (717, 21107), (725, 21122), (782, 21284), (788, 21311), (799, 21341), (843, 21446), (880, 21524), (887, 21560), (890, 21569), (900, 21602), (907, 21617),



Gene: Quasar\_18 Start: 16341, Stop: 18038, Start Num: 144

Candidate Starts for Quasar\_18:

(Start: 133 @16338 has 8 MA's), (Start: 144 @16341 has 603 MA's), (264, 16551), (306, 16674), (336, 16725), (365, 16812), (369, 16821), (377, 16842), (382, 16857), (385, 16869), (436, 16947), (442, 16959), (454, 16986), (465, 17019), (481, 17052), (487, 17064), (574, 17229), (599, 17301), (636, 17379), (643, 17394), (650, 17412), (668, 17469), (731, 17562), (747, 17598), (750, 17610), (752, 17616), (755, 17628), (766, 17637), (791, 17709), (793, 17712), (795, 17718), (799, 17730), (824, 17790), (842, 17835), (847, 17844), (862, 17877), (882, 17943),

Gene: QueenB2\_28 Start: 20236, Stop: 22008, Start Num: 144

Candidate Starts for QueenB2\_28:

(94, 20170), (Start: 123 @20212 has 215 MA's), (Start: 144 @20236 has 603 MA's), (277, 20470), (278, 20473), (305, 20545), (306, 20548), (338, 20602), (349, 20641), (365, 20686), (378, 20719), (417, 20806), (463, 20887), (467, 20890), (584, 21163), (636, 21283), (675, 21409), (713, 21463), (721, 21472), (731, 21493), (746, 21526), (750, 21541), (752, 21547), (770, 21601), (781, 21640), (784, 21655), (813, 21739), (862, 21850),

Gene: QueenBeesly\_28 Start: 20118, Stop: 21890, Start Num: 144

Candidate Starts for QueenBeesly\_28:

(94, 20052), (Start: 123 @20094 has 215 MA's), (Start: 144 @20118 has 603 MA's), (219, 20217), (251, 20301), (277, 20352), (278, 20355), (305, 20427), (306, 20430), (338, 20484), (349, 20523), (365, 20568), (378, 20601), (417, 20688), (463, 20769), (467, 20772), (584, 21045), (636, 21165), (675, 21291), (713, 21345), (746, 21408), (750, 21423), (752, 21429), (770, 21483), (781, 21522), (784, 21537), (788, 21552), (813, 21621), (862, 21732), (900, 21867),

Gene: QueenHazel\_19 Start: 16491, Stop: 18224, Start Num: 131

Candidate Starts for QueenHazel\_19:

(65, 16344), (70, 16371), (71, 16374), (76, 16383), (Start: 111 @16464 has 24 MA's), (Start: 131 @16491 has 6 MA's), (206, 16590), (213, 16599), (241, 16665), (250, 16689), (272, 16749), (274, 16752), (284, 16779), (367, 16959), (377, 16983), (381, 16995), (388, 17019), (459, 17145), (465, 17160), (470, 17169), (486, 17205), (494, 17223), (515, 17283), (608, 17475), (614, 17484), (627, 17517), (717, 17661), (740, 17706), (773, 17808), (775, 17817), (779, 17835), (781, 17838), (813, 17937), (836, 17997), (846, 18015), (860, 18051), (863, 18066), (880, 18114), (897, 18183),

Gene: QuickMath\_17 Start: 16152, Stop: 17861, Start Num: 123

Candidate Starts for QuickMath\_17:

(Start: 123 @16152 has 215 MA's), (193, 16239), (Start: 227 @16284 has 2 MA's), (233, 16308), (271, 16413), (274, 16419), (281, 16437), (300, 16467), (348, 16572), (350, 16578), (370, 16632), (373, 16641), (378, 16653), (381, 16662), (388, 16686), (424, 16773), (443, 16788), (459, 16812), (465, 16827), (468, 16833), (484, 16869), (486, 16872), (492, 16884), (494, 16890), (511, 16938), (515, 16950), (521, 16956), (564, 17016), (568, 17028), (583, 17064), (587, 17076), (594, 17097), (614, 17151), (618, 17160), (625, 17178), (627, 17184), (638, 17214), (710, 17319), (717, 17328), (720, 17331), (737, 17367), (758, 17433), (761, 17445), (791, 17544), (799, 17565), (810, 17598), (826, 17628), (836, 17658), (841, 17667), (844, 17673), (860, 17688), (861, 17691), (866, 17715), (877, 17745), (882, 17757), (887, 17787), (900, 17829),

Gene: Quico\_17 Start: 14636, Stop: 16345, Start Num: 123

Candidate Starts for Quico\_17:

(Start: 123 @14636 has 215 MA's), (193, 14723), (Start: 227 @14768 has 2 MA's), (233, 14792), (271, 14897), (274, 14903), (281, 14921), (300, 14951), (348, 15056), (370, 15116), (378, 15137), (381, 15146), (388, 15170), (459, 15296), (465, 15311), (468, 15317), (475, 15335), (477, 15338), (484, 15353), (486, 15356), (492, 15368), (494, 15374), (499, 15383), (511, 15422), (515, 15434), (521,

15440), (564, 15500), (583, 15548), (587, 15560), (614, 15635), (618, 15644), (625, 15662), (627, 15668), (638, 15698), (710, 15803), (720, 15815), (737, 15851), (761, 15929), (791, 16028), (799, 16049), (810, 16082), (826, 16112), (836, 16142), (841, 16151), (844, 16157), (860, 16172), (861, 16175), (865, 16196), (866, 16199), (882, 16241), (887, 16271), (900, 16313),

Gene: QuincyRose\_22 Start: 17168, Stop: 18934, Start Num: 114

Candidate Starts for QuincyRose\_22:

(Start: 114 @17168 has 139 MA's), (140, 17198), (236, 17357), (248, 17390), (258, 17420), (272, 17453), (278, 17465), (316, 17555), (337, 17597), (360, 17669), (362, 17678), (378, 17717), (392, 17762), (400, 17783), (403, 17786), (438, 17840), (448, 17858), (465, 17900), (468, 17906), (481, 17933), (564, 18071), (572, 18089), (587, 18131), (593, 18149), (603, 18179), (618, 18206), (655, 18311), (748, 18470), (757, 18506), (772, 18545), (793, 18620), (810, 18671), (890, 18866), (901, 18905), (902, 18908), (913, 18926),

Gene: QuinnKiro\_27 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for QuinnKiro\_27:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481, 21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729, 21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Quokka\_26 Start: 19074, Stop: 20864, Start Num: 144

Candidate Starts for Quokka\_26:

(94, 19008), (Start: 123 @19050 has 215 MA's), (Start: 144 @19074 has 603 MA's), (236, 19212), (242, 19227), (277, 19308), (278, 19311), (305, 19383), (306, 19386), (338, 19440), (341, 19446), (345, 19464), (365, 19524), (378, 19557), (380, 19563), (392, 19602), (417, 19644), (463, 19725), (467, 19728), (495, 19788), (546, 19914), (583, 19998), (597, 20040), (619, 20091), (636, 20121), (675, 20247), (707, 20310), (746, 20382), (750, 20397), (756, 20421), (781, 20496), (784, 20511), (813, 20595), (860, 20700), (862, 20706), (865, 20724), (873, 20751), (877, 20760),

Gene: REQ2\_20 Start: 19089, Stop: 20663, Start Num: 164

Candidate Starts for REQ2\_20:

(Start: 164 @19089 has 1 MA's), (219, 19173), (236, 19212), (291, 19347), (332, 19428), (355, 19491), (444, 19671), (445, 19674), (448, 19677), (472, 19737), (495, 19785), (539, 19848), (547, 19866), (553, 19878), (569, 19902), (579, 19926), (583, 19938), (596, 19974), (653, 20073), (664, 20103), (665, 20106), (681, 20175), (721, 20196), (746, 20241), (751, 20259), (769, 20289), (786, 20340), (805, 20397), (825, 20439), (893, 20616),

Gene: REQ3\_50 Start: 32274, Stop: 33917, Start Num: 151

Candidate Starts for REQ3\_50:

(Start: 141 @32259 has 14 MA's), (Start: 151 @32274 has 5 MA's), (158, 32283), (262, 32466), (265, 32475), (286, 32538), (295, 32550), (306, 32583), (332, 32625), (336, 32631), (356, 32691), (365, 32718), (368, 32724), (384, 32769), (395, 32805), (414, 32835), (436, 32853), (459, 32904), (472, 32928), (495, 32976), (547, 33054), (603, 33195), (618, 33222), (632, 33243), (635, 33252), (668, 33348), (669, 33354), (677, 33387), (711, 33408), (773, 33522), (795, 33597), (893, 33873), (897, 33885), (902, 33903), (907, 33909),

Gene: RER2\_16 Start: 13221, Stop: 14846, Start Num: 168

Candidate Starts for RER2\_16:

(Start: 155 @13206 has 4 MA's), (Start: 168 @13221 has 32 MA's), (211, 13290), (232, 13326), (263, 13398), (306, 13512), (361, 13641), (378, 13683), (384, 13701), (386, 13710), (394, 13734), (406,

13752), (432, 13776), (436, 13782), (444, 13797), (445, 13800), (467, 13848), (576, 14049), (584, 14073), (635, 14187), (665, 14265), (672, 14304), (675, 14316), (713, 14346), (750, 14424), (807, 14571), (854, 14670), (860, 14685), (907, 14838),

Gene: RGL3\_16 Start: 13452, Stop: 15005, Start Num: 211

Candidate Starts for RGL3\_16:

(139, 13356), (Start: 155 @13368 has 4 MA's), (Start: 168 @13383 has 32 MA's), (211, 13452), (232, 13488), (244, 13521), (263, 13560), (286, 13629), (306, 13674), (315, 13689), (361, 13803), (365, 13812), (388, 13878), (394, 13896), (406, 13914), (436, 13944), (444, 13959), (445, 13962), (460, 14001), (467, 14010), (481, 14040), (553, 14160), (584, 14232), (597, 14271), (619, 14319), (635, 14346), (672, 14463), (675, 14475), (713, 14505), (750, 14583), (807, 14730), (835, 14796), (854, 14829), (860, 14844), (907, 14997),

Gene: Rabbs\_18 Start: 16648, Stop: 18411, Start Num: 109

Candidate Starts for Rabbs\_18:

(Start: 109 @16648 has 26 MA's), (Start: 132 @16657 has 45 MA's), (Start: 137 @16663 has 2 MA's), (143, 16669), (197, 16747), (230, 16801), (248, 16852), (258, 16882), (269, 16906), (309, 17008), (331, 17047), (334, 17053), (341, 17068), (395, 17233), (425, 17290), (448, 17329), (465, 17371), (468, 17377), (487, 17416), (542, 17515), (564, 17542), (649, 17770), (655, 17788), (665, 17815), (716, 17899), (730, 17917), (743, 17932), (760, 17995), (782, 18058), (787, 18082), (799, 18115), (813, 18154), (831, 18196), (890, 18343), (913, 18403),

Gene: Rachaly\_31 Start: 21834, Stop: 23606, Start Num: 144

Candidate Starts for Rachaly\_31:

(Start: 123 @21810 has 215 MA's), (Start: 144 @21834 has 603 MA's), (251, 22017), (277, 22068), (278, 22071), (305, 22143), (306, 22146), (338, 22200), (349, 22239), (378, 22317), (417, 22404), (463, 22485), (467, 22488), (487, 22530), (546, 22674), (576, 22737), (584, 22761), (597, 22800), (636, 22881), (677, 23013), (746, 23124), (750, 23139), (752, 23145), (759, 23175), (770, 23199), (781, 23238), (784, 23253), (795, 23286), (813, 23337), (849, 23415), (860, 23442), (862, 23448), (877, 23502),

Gene: Radiance\_16 Start: 14789, Stop: 16498, Start Num: 123

Candidate Starts for Radiance\_16:

(Start: 123 @14789 has 215 MA's), (193, 14876), (Start: 227 @14921 has 2 MA's), (233, 14945), (251, 15002), (271, 15050), (274, 15056), (281, 15074), (300, 15104), (348, 15209), (370, 15269), (373, 15278), (381, 15299), (388, 15323), (402, 15359), (403, 15365), (418, 15398), (420, 15401), (424, 15410), (443, 15425), (448, 15431), (459, 15449), (465, 15464), (468, 15470), (475, 15488), (477, 15491), (484, 15506), (486, 15509), (492, 15521), (494, 15527), (511, 15575), (515, 15587), (521, 15593), (564, 15653), (568, 15665), (583, 15701), (587, 15713), (614, 15788), (618, 15797), (625, 15815), (627, 15821), (638, 15851), (710, 15956), (717, 15965), (720, 15968), (737, 16004), (761, 16082), (791, 16181), (799, 16202), (810, 16235), (826, 16265), (836, 16295), (841, 16304), (844, 16310), (860, 16325), (861, 16328), (866, 16352), (877, 16382), (882, 16394), (887, 16424), (900, 16466),

Gene: Rahalelujah\_27 Start: 19606, Stop: 21396, Start Num: 144

Candidate Starts for Rahalelujah\_27:

(94, 19540), (130, 19591), (Start: 144 @19606 has 603 MA's), (216, 19702), (219, 19705), (264, 19807), (277, 19840), (278, 19843), (305, 19915), (306, 19918), (338, 19972), (341, 19978), (368, 20062), (378, 20089), (380, 20095), (382, 20101), (417, 20176), (463, 20257), (467, 20260), (495, 20320), (546, 20446), (576, 20509), (584, 20533), (595, 20566), (597, 20572), (636, 20653), (695, 20824), (731, 20881), (746, 20914), (750, 20929), (756, 20953), (770, 20989), (781, 21028), (784, 21043), (813, 21127), (842, 21193), (860, 21232), (862, 21238), (873, 21283),

Gene: Rajelicia\_27 Start: 20881, Stop: 22683, Start Num: 146

Candidate Starts for Rajelicia\_27:

(Start: 146 @20881 has 223 MA's), (Start: 161 @20902 has 4 MA's), (Start: 190 @20944 has 1 MA's), (216, 20989), (306, 21205), (332, 21250), (338, 21259), (368, 21349), (369, 21352), (406, 21445), (467, 21547), (500, 21616), (579, 21805), (583, 21817), (584, 21820), (591, 21841), (635, 21937), (636, 21940), (638, 21946), (665, 22015), (668, 22033), (670, 22042), (677, 22072), (731, 22168), (746, 22201), (750, 22216), (793, 22357), (813, 22414), (862, 22525),

Gene: Rakim\_25 Start: 19943, Stop: 21538, Start Num: 191

Candidate Starts for Rakim\_25:

(Start: 129 @19859 has 79 MA's), (Start: 191 @19943 has 45 MA's), (Start: 235 @20021 has 1 MA's), (268, 20108), (274, 20123), (300, 20171), (324, 20210), (356, 20297), (368, 20330), (381, 20366), (390, 20396), (392, 20402), (422, 20471), (461, 20501), (466, 20513), (468, 20516), (494, 20573), (565, 20705), (567, 20711), (592, 20777), (594, 20783), (601, 20807), (618, 20855), (627, 20879), (631, 20888), (658, 20963), (717, 21014), (725, 21029), (782, 21191), (788, 21218), (799, 21248), (843, 21353), (880, 21431), (887, 21467), (890, 21476), (900, 21509), (907, 21524),

Gene: Ramen\_23 Start: 17154, Stop: 18920, Start Num: 114

Candidate Starts for Ramen\_23:

(Start: 114 @17154 has 139 MA's), (140, 17184), (236, 17343), (248, 17376), (258, 17406), (272, 17439), (278, 17451), (316, 17541), (337, 17583), (360, 17655), (362, 17664), (378, 17703), (392, 17748), (400, 17769), (403, 17772), (438, 17826), (448, 17844), (465, 17886), (468, 17892), (481, 17919), (564, 18057), (572, 18075), (587, 18117), (593, 18135), (603, 18165), (618, 18192), (655, 18297), (748, 18456), (757, 18492), (768, 18522), (772, 18531), (793, 18606), (810, 18657), (890, 18852), (901, 18891), (902, 18894), (913, 18912),

Gene: Ramsey\_17 Start: 14835, Stop: 16544, Start Num: 123

Candidate Starts for Ramsey\_17:

(Start: 123 @14835 has 215 MA's), (193, 14922), (Start: 227 @14967 has 2 MA's), (233, 14991), (271, 15096), (274, 15102), (281, 15120), (300, 15150), (348, 15255), (370, 15315), (378, 15336), (381, 15345), (388, 15369), (418, 15444), (459, 15495), (465, 15510), (468, 15516), (484, 15552), (486, 15555), (492, 15567), (494, 15573), (511, 15621), (515, 15633), (521, 15639), (564, 15699), (568, 15711), (583, 15747), (587, 15759), (614, 15834), (618, 15843), (625, 15861), (627, 15867), (638, 15897), (710, 16002), (720, 16014), (737, 16050), (761, 16128), (791, 16227), (799, 16248), (810, 16281), (826, 16311), (836, 16341), (839, 16347), (841, 16350), (844, 16356), (860, 16371), (861, 16374), (865, 16395), (866, 16398), (882, 16440), (900, 16512), (901, 16518),

Gene: RanchParmCat\_21 Start: 15466, Stop: 17157, Start Num: 133

Candidate Starts for RanchParmCat\_21:

(47, 15154), (113, 15439), (Start: 133 @15466 has 8 MA's), (Start: 144 @15469 has 603 MA's), (202, 15553), (264, 15676), (277, 15709), (290, 15754), (356, 15910), (365, 15937), (377, 15967), (406, 16039), (436, 16069), (442, 16081), (454, 16108), (481, 16174), (513, 16255), (549, 16297), (553, 16306), (561, 16324), (581, 16369), (610, 16453), (634, 16489), (635, 16492), (636, 16495), (638, 16501), (643, 16510), (650, 16528), (668, 16585), (747, 16714), (750, 16726), (754, 16741), (766, 16753), (791, 16825), (793, 16828), (794, 16831), (799, 16846), (829, 16927), (862, 16996), (863, 17005), (900, 17134), (907, 17149),

Gene: Rapunzel97\_23 Start: 17155, Stop: 18921, Start Num: 114

Candidate Starts for Rapunzel97\_23:

(Start: 114 @17155 has 139 MA's), (140, 17185), (236, 17344), (248, 17377), (258, 17407), (272, 17440), (278, 17452), (316, 17542), (337, 17584), (360, 17656), (362, 17665), (378, 17704), (392, 17749), (400, 17770), (403, 17773), (438, 17827), (448, 17845), (465, 17887), (468, 17893), (481, 17920), (564, 18058), (572, 18076), (587, 18118), (593, 18136), (603, 18166), (618, 18193), (655,

18298), (748, 18457), (757, 18493), (768, 18523), (772, 18532), (793, 18607), (810, 18658), (863, 18757), (890, 18853), (901, 18892), (902, 18895), (913, 18913),

Gene: Rasputin\_23 Start: 16317, Stop: 17942, Start Num: 168

Candidate Starts for Rasputin\_23:

(Start: 155 @16302 has 4 MA's), (Start: 168 @16317 has 32 MA's), (211, 16386), (232, 16422), (306, 16608), (361, 16737), (378, 16779), (386, 16806), (394, 16830), (406, 16848), (436, 16878), (444, 16893), (467, 16944), (505, 17028), (576, 17145), (584, 17169), (635, 17283), (654, 17331), (665, 17361), (672, 17400), (675, 17412), (713, 17442), (750, 17520), (807, 17667), (818, 17691), (832, 17727), (854, 17766), (907, 17934),

Gene: RavenCo17\_17 Start: 15550, Stop: 17259, Start Num: 171

Candidate Starts for RavenCo17\_17:

(70, 15379), (83, 15415), (Start: 171 @15550 has 40 MA's), (237, 15667), (287, 15817), (340, 15913), (347, 15940), (377, 16030), (378, 16033), (382, 16045), (462, 16219), (511, 16336), (519, 16360), (554, 16408), (607, 16525), (637, 16582), (652, 16621), (669, 16678), (746, 16807), (847, 17062), (849, 17065), (865, 17113), (874, 17143),

Gene: RayTheFireFly\_19 Start: 17529, Stop: 19223, Start Num: 149

Candidate Starts for RayTheFireFly\_19:

(Start: 121 @17499 has 1 MA's), (Start: 149 @17529 has 8 MA's), (219, 17631), (240, 17682), (265, 17739), (281, 17790), (311, 17868), (316, 17874), (377, 18024), (445, 18147), (469, 18207), (485, 18243), (504, 18285), (537, 18327), (547, 18351), (561, 18381), (668, 18642), (705, 18717), (736, 18759), (752, 18804), (793, 18900), (794, 18903), (799, 18918), (864, 19077), (865, 19083), (891, 19170), (907, 19215),

Gene: Raymond7\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Raymond7\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592), (882, 16598),

Gene: ReMo\_30 Start: 19093, Stop: 20880, Start Num: 144

Candidate Starts for ReMo\_30:

(94, 19027), (Start: 123 @19069 has 215 MA's), (Start: 144 @19093 has 603 MA's), (236, 19231), (262, 19288), (278, 19330), (292, 19366), (306, 19405), (343, 19474), (349, 19498), (369, 19552), (448, 19702), (467, 19747), (481, 19777), (499, 19813), (515, 19864), (530, 19900), (553, 19948), (580, 20008), (635, 20137), (665, 20215), (750, 20416), (752, 20422), (782, 20518), (845, 20683), (880, 20782),

Gene: Reba\_30 Start: 20125, Stop: 21921, Start Num: 144

Candidate Starts for Reba\_30:

(Start: 144 @20125 has 603 MA's), (Start: 190 @20182 has 1 MA's), (197, 20197), (230, 20251), (Start: 235 @20266 has 1 MA's), (272, 20353), (277, 20365), (278, 20368), (306, 20443), (315, 20458), (417, 20701), (500, 20854), (532, 20941), (576, 21034), (583, 21055), (591, 21079), (595, 21091), (597, 21097), (636, 21178), (665, 21253), (668, 21271), (670, 21280), (675, 21304), (677, 21310), (695, 21349), (729, 21403), (731, 21406), (742, 21427), (813, 21652), (860, 21757), (862, 21763), (900, 21898),

Gene: Rebel\_18 Start: 14990, Stop: 16699, Start Num: 126

Candidate Starts for Rebel\_18:

(Start: 126 @14990 has 42 MA's), (Start: 150 @15017 has 4 MA's), (178, 15056), (Start: 227 @15122 has 2 MA's), (229, 15134), (241, 15170), (250, 15194), (258, 15221), (268, 15242), (271, 15251), (274, 15257), (287, 15290), (367, 15464), (370, 15470), (373, 15479), (377, 15488), (381, 15500), (388, 15524), (403, 15566), (418, 15599), (459, 15650), (460, 15653), (465, 15665), (484, 15707), (492, 15722), (494, 15728), (511, 15776), (547, 15830), (564, 15854), (591, 15926), (608, 15980), (614, 15989), (618, 15998), (627, 16022), (637, 16049), (638, 16052), (710, 16157), (717, 16166), (737, 16205), (762, 16286), (781, 16343), (791, 16382), (836, 16496), (860, 16526), (861, 16529), (866, 16553), (880, 16589),

Gene: Rebeuca\_28 Start: 19987, Stop: 21765, Start Num: 144

Candidate Starts for Rebeuca\_28:

(Start: 144 @19987 has 603 MA's), (Start: 190 @20044 has 1 MA's), (197, 20059), (219, 20092), (230, 20113), (272, 20215), (277, 20227), (278, 20230), (306, 20305), (315, 20320), (338, 20359), (378, 20476), (382, 20488), (384, 20494), (417, 20563), (453, 20617), (460, 20638), (481, 20677), (500, 20716), (532, 20803), (553, 20848), (576, 20896), (583, 20917), (591, 20941), (595, 20953), (597, 20959), (636, 21040), (668, 21133), (670, 21142), (675, 21166), (677, 21172), (682, 21187), (713, 21220), (742, 21271), (749, 21289), (793, 21439), (813, 21496), (825, 21520), (827, 21526), (860, 21601), (862, 21607), (863, 21616), (880, 21667), (900, 21742),

Gene: RedBaron\_19 Start: 15773, Stop: 17473, Start Num: 133

Candidate Starts for RedBaron\_19:

(113, 15746), (Start: 133 @15773 has 8 MA's), (Start: 144 @15776 has 603 MA's), (264, 15986), (306, 16109), (336, 16160), (365, 16247), (382, 16292), (385, 16304), (436, 16382), (442, 16394), (454, 16421), (465, 16454), (481, 16487), (487, 16499), (505, 16541), (574, 16664), (599, 16736), (636, 16814), (643, 16829), (650, 16847), (668, 16904), (731, 16997), (747, 17033), (750, 17045), (752, 17051), (755, 17063), (766, 17072), (791, 17144), (793, 17147), (795, 17153), (799, 17165), (824, 17225), (842, 17270), (847, 17279), (862, 17312), (882, 17378),

Gene: RedBird\_16 Start: 14766, Stop: 16475, Start Num: 123

Candidate Starts for RedBird\_16:

(Start: 123 @14766 has 215 MA's), (193, 14853), (Start: 227 @14898 has 2 MA's), (233, 14922), (271, 15027), (274, 15033), (281, 15051), (300, 15081), (348, 15186), (370, 15246), (378, 15267), (381, 15276), (388, 15300), (459, 15426), (465, 15441), (468, 15447), (484, 15483), (486, 15486), (492, 15498), (494, 15504), (511, 15552), (515, 15564), (521, 15570), (564, 15630), (568, 15642), (583, 15678), (587, 15690), (614, 15765), (618, 15774), (625, 15792), (627, 15798), (638, 15828), (710, 15933), (717, 15942), (720, 15945), (737, 15981), (761, 16059), (791, 16158), (799, 16179), (810, 16212), (826, 16242), (836, 16272), (841, 16281), (844, 16287), (860, 16302), (861, 16305), (866, 16329), (882, 16371), (887, 16401), (900, 16443),

Gene: RedRock\_31 Start: 22100, Stop: 23872, Start Num: 144

Candidate Starts for RedRock\_31:

(Start: 123 @22076 has 215 MA's), (Start: 144 @22100 has 603 MA's), (251, 22283), (278, 22337), (305, 22409), (306, 22412), (338, 22466), (341, 22472), (349, 22505), (378, 22583), (380, 22589), (384, 22601), (417, 22670), (460, 22745), (463, 22751), (467, 22754), (487, 22796), (547, 22943), (583, 23024), (584, 23027), (597, 23066), (631, 23132), (636, 23147), (677, 23279), (713, 23327), (742, 23378), (746, 23390), (750, 23405), (752, 23411), (770, 23465), (784, 23519), (813, 23603), (842, 23669), (860, 23708), (862, 23714),

Gene: Redi\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Redi\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Redno2\_35 Start: 27084, Stop: 29082, Start Num: 124

Candidate Starts for Redno2\_35:

(Start: 124 @27084 has 30 MA's), (Start: 191 @27174 has 45 MA's), (222, 27222), (233, 27252), (282, 27381), (301, 27411), (346, 27510), (358, 27546), (368, 27573), (392, 27645), (395, 27654), (403, 27675), (448, 27744), (468, 27783), (470, 27786), (475, 27801), (494, 27840), (511, 27888), (515, 27900), (521, 27906), (552, 27954), (558, 27963), (565, 27984), (573, 28002), (590, 28050), (625, 28152), (653, 28224), (667, 28269), (669, 28281), (684, 28416), (685, 28422), (686, 28446), (696, 28518), (708, 28545), (800, 28794),

Gene: Refuge\_31 Start: 23112, Stop: 24884, Start Num: 144

Candidate Starts for Refuge\_31:

(94, 23046), (Start: 123 @23088 has 215 MA's), (130, 23097), (Start: 144 @23112 has 603 MA's), (242, 23265), (277, 23346), (278, 23349), (305, 23421), (306, 23424), (338, 23478), (341, 23484), (378, 23595), (417, 23682), (463, 23763), (467, 23766), (597, 24078), (636, 24159), (643, 24174), (736, 24378), (746, 24402), (750, 24417), (752, 24423), (756, 24441), (758, 24447), (781, 24516), (784, 24531), (795, 24564), (813, 24615), (900, 24861),

Gene: Relief\_27 Start: 19825, Stop: 21603, Start Num: 144

Candidate Starts for Relief\_27:

(Start: 123 @19801 has 215 MA's), (Start: 144 @19825 has 603 MA's), (Start: 190 @19882 has 1 MA's), (222, 19936), (230, 19951), (236, 19969), (272, 20053), (277, 20065), (278, 20068), (306, 20143), (315, 20158), (338, 20197), (378, 20314), (417, 20401), (463, 20482), (489, 20530), (500, 20554), (532, 20641), (553, 20686), (584, 20758), (591, 20779), (597, 20797), (636, 20878), (668, 20971), (670, 20980), (675, 21004), (677, 21010), (687, 21034), (731, 21088), (742, 21109), (756, 21160), (763, 21184), (782, 21238), (813, 21334), (860, 21439), (863, 21454), (894, 21562), (900, 21580),

Gene: Rem711\_25 Start: 19029, Stop: 20768, Start Num: 112

Candidate Starts for Rem711\_25:

(Start: 112 @19029 has 41 MA's), (184, 19101), (244, 19221), (311, 19401), (342, 19464), (358, 19515), (365, 19536), (382, 19581), (448, 19698), (449, 19701), (487, 19785), (489, 19788), (496, 19803), (503, 19821), (670, 20205), (689, 20211), (763, 20364), (802, 20484), (807, 20502), (880, 20655), (901, 20739), (902, 20742), (913, 20760),

Gene: Remus\_30 Start: 19057, Stop: 20844, Start Num: 144

Candidate Starts for Remus\_30:

(94, 18991), (Start: 123 @19033 has 215 MA's), (Start: 144 @19057 has 603 MA's), (236, 19195), (262, 19252), (278, 19294), (292, 19330), (306, 19369), (343, 19438), (349, 19462), (369, 19516), (448, 19666), (467, 19711), (481, 19741), (499, 19777), (515, 19828), (530, 19864), (553, 19912), (580, 19972), (635, 20101), (665, 20179), (750, 20380), (752, 20386), (782, 20482), (845, 20647), (880, 20746),

Gene: Remy19\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Remy19\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's),  
(143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039),  
(334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369),  
(481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780),  
(665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050),  
(799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Renaissance\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Renaissance\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's),  
(143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039),  
(334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369),  
(481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780),  
(665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050),  
(799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Reptar3000\_24 Start: 18363, Stop: 20150, Start Num: 112

Candidate Starts for Reptar3000\_24:

(Start: 93 @18327 has 1 MA's), (Start: 109 @18357 has 26 MA's), (Start: 112 @18363 has 41 MA's),  
(Start: 114 @18366 has 139 MA's), (197, 18468), (Start: 227 @18507 has 2 MA's), (230, 18522), (236,  
18540), (248, 18573), (258, 18603), (278, 18648), (316, 18738), (321, 18744), (334, 18774), (356,  
18840), (360, 18852), (412, 18987), (444, 19035), (448, 19041), (468, 19089), (487, 19128), (575,  
19278), (588, 19317), (594, 19335), (602, 19362), (628, 19437), (655, 19518), (670, 19572), (708,  
19617), (728, 19653), (734, 19662), (756, 19719), (768, 19752), (772, 19761), (788, 19824), (793,  
19836), (810, 19887), (813, 19893), (863, 19986), (865, 19995), (901, 20121), (913, 20142),

Gene: ResDef\_28 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for ResDef\_28:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277,  
20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481,  
21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665,  
21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729,  
21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900,  
22231),

Gene: Retro23\_28 Start: 20266, Stop: 22038, Start Num: 144

Candidate Starts for Retro23\_28:

(Start: 123 @20242 has 215 MA's), (Start: 144 @20266 has 603 MA's), (277, 20500), (278, 20503),  
(305, 20575), (306, 20578), (338, 20632), (349, 20671), (365, 20716), (378, 20749), (417, 20836),  
(463, 20917), (467, 20920), (584, 21193), (636, 21313), (675, 21439), (713, 21493), (746, 21556),  
(750, 21571), (752, 21577), (770, 21631), (781, 21670), (784, 21685), (813, 21769), (862, 21880),  
(900, 22015),

Gene: RexFury\_23 Start: 16380, Stop: 18005, Start Num: 168

Candidate Starts for RexFury\_23:

(Start: 155 @16365 has 4 MA's), (Start: 168 @16380 has 32 MA's), (211, 16449), (232, 16485), (263,  
16557), (306, 16671), (361, 16800), (378, 16842), (384, 16860), (386, 16869), (394, 16893), (406,  
16911), (432, 16935), (436, 16941), (444, 16956), (445, 16959), (467, 17007), (576, 17208), (584,  
17232), (635, 17346), (665, 17424), (672, 17463), (675, 17475), (713, 17505), (750, 17583), (807,  
17730), (854, 17829), (860, 17844), (907, 17997),

Gene: Reyja\_19 Start: 15160, Stop: 16776, Start Num: 153

Candidate Starts for Reyja\_19:



(Start: 153 @15160 has 11 MA's), (219, 15259), (231, 15283), (277, 15394), (278, 15397), (281, 15415), (284, 15424), (322, 15490), (328, 15505), (332, 15514), (336, 15520), (360, 15592), (366, 15610), (385, 15664), (389, 15673), (417, 15727), (448, 15763), (449, 15766), (499, 15874), (544, 15946), (547, 15952), (551, 15961), (560, 15979), (599, 16069), (635, 16138), (653, 16183), (657, 16201), (664, 16213), (679, 16279), (735, 16327), (740, 16339), (746, 16351), (752, 16372), (755, 16384), (769, 16399), (782, 16429), (791, 16465), (873, 16654), (891, 16717), (897, 16738), (907, 16762),

Gene: Rhodalysa\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Rhodalysa\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: RhynO\_28 Start: 19944, Stop: 21722, Start Num: 144

Candidate Starts for RhynO\_28:

(Start: 144 @19944 has 603 MA's), (Start: 190 @20001 has 1 MA's), (197, 20016), (219, 20049), (230, 20070), (272, 20172), (277, 20184), (278, 20187), (306, 20262), (315, 20277), (338, 20316), (378, 20433), (384, 20451), (417, 20520), (453, 20574), (460, 20595), (481, 20634), (500, 20673), (532, 20760), (553, 20805), (576, 20853), (583, 20874), (591, 20898), (595, 20910), (597, 20916), (636, 20997), (668, 21090), (670, 21099), (675, 21123), (677, 21129), (682, 21144), (713, 21177), (742, 21228), (749, 21246), (759, 21291), (793, 21396), (813, 21453), (825, 21477), (827, 21483), (860, 21558), (862, 21564), (863, 21573), (880, 21624), (900, 21699),

Gene: Rhynn\_27 Start: 21169, Stop: 22971, Start Num: 146

Candidate Starts for Rhynn\_27:

(Start: 146 @21169 has 223 MA's), (Start: 161 @21190 has 4 MA's), (Start: 190 @21232 has 1 MA's), (216, 21277), (306, 21493), (332, 21538), (338, 21547), (349, 21586), (368, 21637), (369, 21640), (467, 21835), (500, 21904), (583, 22105), (584, 22108), (591, 22129), (635, 22225), (636, 22228), (638, 22234), (665, 22303), (668, 22321), (670, 22330), (677, 22360), (731, 22456), (746, 22489), (750, 22504), (793, 22645), (813, 22702), (862, 22813),

Gene: Rialto\_18 Start: 15316, Stop: 17025, Start Num: 123

Candidate Starts for Rialto\_18:

(Start: 123 @15316 has 215 MA's), (193, 15403), (209, 15424), (Start: 227 @15448 has 2 MA's), (233, 15472), (240, 15493), (271, 15577), (274, 15583), (281, 15601), (300, 15631), (348, 15736), (370, 15796), (378, 15817), (381, 15826), (388, 15850), (418, 15925), (420, 15928), (424, 15937), (443, 15952), (448, 15958), (459, 15976), (465, 15991), (468, 15997), (477, 16018), (484, 16033), (492, 16048), (494, 16054), (511, 16102), (515, 16114), (521, 16120), (564, 16180), (568, 16192), (583, 16228), (587, 16240), (614, 16315), (618, 16324), (625, 16342), (627, 16348), (638, 16378), (710, 16483), (720, 16495), (737, 16531), (761, 16609), (799, 16729), (810, 16762), (826, 16792), (829, 16804), (836, 16822), (839, 16828), (841, 16831), (844, 16837), (860, 16852), (861, 16855), (865, 16876), (866, 16879), (882, 16921), (887, 16951), (900, 16993), (901, 16999),

Gene: Ribeye\_35 Start: 30796, Stop: 32559, Start Num: 97

Candidate Starts for Ribeye\_35:

(Start: 97 @30796 has 73 MA's), (Start: 121 @30832 has 1 MA's), (211, 30961), (219, 30970), (262, 31066), (265, 31075), (288, 31144), (306, 31195), (332, 31240), (341, 31255), (345, 31273), (368, 31336), (384, 31381), (386, 31390), (458, 31510), (461, 31525), (472, 31549), (487, 31579), (597, 31801), (607, 31819), (613, 31834), (635, 31876), (647, 31906), (688, 32026), (749, 32119), (793, 32230), (794, 32233), (810, 32281), (824, 32308), (832, 32335), (860, 32389),

Gene: Richo\_23 Start: 16514, Stop: 18280, Start Num: 114

Candidate Starts for Richo\_23:

(Start: 109 @16505 has 26 MA's), (Start: 114 @16514 has 139 MA's), (Start: 117 @16520 has 59 MA's), (140, 16544), (Start: 168 @16583 has 32 MA's), (Start: 227 @16670 has 2 MA's), (230, 16685), (236, 16703), (248, 16736), (316, 16901), (334, 16937), (360, 17015), (362, 17024), (400, 17129), (403, 17132), (424, 17171), (444, 17198), (448, 17204), (465, 17246), (468, 17252), (481, 17279), (564, 17417), (572, 17435), (603, 17525), (618, 17552), (632, 17585), (655, 17657), (670, 17711), (704, 17747), (719, 17771), (748, 17816), (756, 17849), (760, 17864), (768, 17882), (772, 17891), (793, 17966), (810, 18017), (813, 18023), (865, 18125), (901, 18251), (902, 18254), (913, 18272),

Gene: RidgeCB\_27 Start: 20944, Stop: 22746, Start Num: 146

Candidate Starts for RidgeCB\_27:

(Start: 146 @20944 has 223 MA's), (Start: 161 @20965 has 4 MA's), (Start: 190 @21007 has 1 MA's), (216, 21052), (306, 21268), (332, 21313), (338, 21322), (349, 21361), (368, 21412), (369, 21415), (467, 21610), (500, 21679), (583, 21880), (584, 21883), (591, 21904), (635, 22000), (636, 22003), (638, 22009), (665, 22078), (668, 22096), (670, 22105), (677, 22135), (731, 22231), (746, 22264), (750, 22279), (793, 22420), (813, 22477), (862, 22588), (909, 22741),

Gene: Rifter\_31 Start: 19962, Stop: 21734, Start Num: 144

Candidate Starts for Rifter\_31:

(94, 19896), (Start: 123 @19938 has 215 MA's), (Start: 144 @19962 has 603 MA's), (278, 20199), (305, 20271), (306, 20274), (315, 20289), (338, 20328), (341, 20334), (378, 20445), (380, 20451), (392, 20490), (417, 20532), (448, 20571), (463, 20613), (467, 20616), (532, 20772), (592, 20913), (597, 20928), (677, 21141), (742, 21240), (750, 21267), (765, 21318), (770, 21327), (781, 21366), (784, 21381), (860, 21570), (862, 21576), (900, 21711),

Gene: Rimmer\_23 Start: 19312, Stop: 20991, Start Num: 129

Candidate Starts for Rimmer\_23:

(Start: 129 @19312 has 79 MA's), (Start: 191 @19396 has 45 MA's), (Start: 235 @19474 has 1 MA's), (268, 19561), (274, 19576), (300, 19624), (324, 19663), (356, 19750), (368, 19783), (381, 19819), (390, 19849), (392, 19855), (422, 19924), (461, 19954), (466, 19966), (468, 19969), (494, 20026), (565, 20158), (567, 20164), (592, 20230), (594, 20236), (601, 20260), (618, 20308), (627, 20332), (631, 20341), (658, 20416), (717, 20467), (725, 20482), (782, 20644), (788, 20671), (799, 20701), (843, 20806), (880, 20884), (887, 20920), (890, 20929), (900, 20962), (907, 20977),

Gene: Ringer\_27 Start: 21821, Stop: 23623, Start Num: 146

Candidate Starts for Ringer\_27:

(Start: 146 @21821 has 223 MA's), (Start: 161 @21842 has 4 MA's), (Start: 190 @21884 has 1 MA's), (216, 21929), (306, 22145), (332, 22190), (338, 22199), (349, 22238), (368, 22289), (369, 22292), (467, 22487), (500, 22556), (583, 22757), (584, 22760), (591, 22781), (635, 22877), (636, 22880), (638, 22886), (665, 22955), (668, 22973), (670, 22982), (677, 23012), (731, 23108), (746, 23141), (750, 23156), (793, 23297), (813, 23354), (862, 23465), (909, 23618),

Gene: Rita\_16 Start: 14819, Stop: 16528, Start Num: 123

Candidate Starts for Rita\_16:

(Start: 123 @14819 has 215 MA's), (193, 14906), (Start: 227 @14951 has 2 MA's), (233, 14975), (271, 15080), (274, 15086), (281, 15104), (284, 15113), (300, 15134), (348, 15239), (370, 15299), (378, 15320), (381, 15329), (388, 15353), (459, 15479), (465, 15494), (468, 15500), (484, 15536), (486, 15539), (492, 15551), (494, 15557), (511, 15605), (515, 15617), (521, 15623), (564, 15683), (568, 15695), (583, 15731), (587, 15743), (614, 15818), (618, 15827), (625, 15845), (627, 15851), (638, 15881), (710, 15986), (717, 15995), (720, 15998), (737, 16034), (761, 16112), (791, 16211), (799, 16232), (810, 16265), (826, 16295), (836, 16325), (841, 16334), (844, 16340), (860, 16355), (861,

16358), (866, 16382), (877, 16412), (882, 16424), (887, 16454), (900, 16496),

Gene: RitaG\_16 Start: 14948, Stop: 16657, Start Num: 123

Candidate Starts for RitaG\_16:

(Start: 123 @14948 has 215 MA's), (193, 15035), (Start: 227 @15080 has 2 MA's), (233, 15104), (271, 15209), (274, 15215), (281, 15233), (300, 15263), (348, 15368), (367, 15422), (370, 15428), (378, 15449), (381, 15458), (388, 15482), (459, 15608), (465, 15623), (468, 15629), (484, 15665), (486, 15668), (492, 15680), (494, 15686), (511, 15734), (515, 15746), (521, 15752), (564, 15812), (568, 15824), (583, 15860), (587, 15872), (614, 15947), (618, 15956), (625, 15974), (627, 15980), (638, 16010), (710, 16115), (720, 16127), (737, 16163), (761, 16241), (799, 16361), (810, 16394), (826, 16424), (829, 16436), (836, 16454), (841, 16463), (844, 16469), (860, 16484), (861, 16487), (866, 16511), (882, 16553), (887, 16583), (900, 16625),

Gene: RiverMonster\_24 Start: 19585, Stop: 21180, Start Num: 191

Candidate Starts for RiverMonster\_24:

(Start: 129 @19501 has 79 MA's), (Start: 191 @19585 has 45 MA's), (Start: 235 @19663 has 1 MA's), (268, 19750), (274, 19765), (300, 19813), (324, 19852), (356, 19939), (368, 19972), (381, 20008), (390, 20038), (392, 20044), (422, 20113), (461, 20143), (466, 20155), (468, 20158), (494, 20215), (565, 20347), (567, 20353), (592, 20419), (594, 20425), (601, 20449), (618, 20497), (627, 20521), (631, 20530), (658, 20605), (717, 20656), (725, 20671), (782, 20833), (788, 20860), (799, 20890), (843, 20995), (880, 21073), (887, 21109), (890, 21118), (900, 21151), (907, 21166),

Gene: RiverRaider\_35 Start: 29083, Stop: 30846, Start Num: 97

Candidate Starts for RiverRaider\_35:

(90, 29065), (Start: 97 @29083 has 73 MA's), (Start: 121 @29119 has 1 MA's), (211, 29248), (219, 29257), (262, 29353), (265, 29362), (288, 29431), (290, 29437), (306, 29482), (311, 29491), (332, 29527), (368, 29623), (384, 29668), (386, 29677), (458, 29797), (461, 29812), (465, 29821), (472, 29836), (487, 29866), (574, 30022), (607, 30106), (613, 30121), (631, 30151), (632, 30154), (636, 30166), (737, 30379), (749, 30406), (793, 30517), (794, 30520), (824, 30595), (832, 30622), (860, 30676), (900, 30823),

Gene: RoadKill\_30 Start: 27051, Stop: 28670, Start Num: 163

Candidate Starts for RoadKill\_30:

(Start: 163 @27051 has 10 MA's), (178, 27072), (219, 27135), (272, 27258), (277, 27270), (298, 27327), (341, 27405), (347, 27432), (382, 27528), (449, 27642), (460, 27672), (483, 27720), (508, 27777), (547, 27825), (551, 27834), (579, 27885), (596, 27933), (664, 28098), (670, 28128), (746, 28236), (747, 28239), (769, 28284), (786, 28341), (788, 28347), (790, 28353), (806, 28401), (810, 28410), (813, 28416), (815, 28419), (842, 28470), (863, 28515), (883, 28584), (896, 28632), (900, 28644),

Gene: Roary\_24 Start: 18619, Stop: 20409, Start Num: 144

Candidate Starts for Roary\_24:

(Start: 123 @18595 has 215 MA's), (Start: 144 @18619 has 603 MA's), (214, 18712), (236, 18757), (278, 18856), (292, 18892), (306, 18931), (315, 18946), (336, 18982), (378, 19102), (380, 19108), (448, 19228), (505, 19357), (532, 19429), (583, 19543), (668, 19759), (675, 19792), (731, 19894), (746, 19927), (750, 19942), (758, 19972), (859, 20242), (862, 20251), (863, 20260), (896, 20374),

Gene: Rockne\_16 Start: 14790, Stop: 16499, Start Num: 123

Candidate Starts for Rockne\_16:

(Start: 123 @14790 has 215 MA's), (193, 14877), (Start: 227 @14922 has 2 MA's), (233, 14946), (251, 15003), (271, 15051), (274, 15057), (281, 15075), (300, 15105), (331, 15159), (348, 15210), (367, 15264), (370, 15270), (373, 15279), (381, 15300), (388, 15324), (402, 15360), (403, 15366), (418, 15399), (420, 15402), (424, 15411), (443, 15426), (448, 15432), (459, 15450), (465, 15465), (468,

15471), (475, 15489), (477, 15492), (484, 15507), (492, 15522), (494, 15528), (511, 15576), (515, 15588), (521, 15594), (564, 15654), (568, 15666), (583, 15702), (587, 15714), (614, 15789), (618, 15798), (625, 15816), (627, 15822), (638, 15852), (710, 15957), (720, 15969), (737, 16005), (761, 16083), (799, 16203), (810, 16236), (826, 16266), (829, 16278), (836, 16296), (839, 16302), (841, 16305), (844, 16311), (860, 16326), (861, 16329), (865, 16350), (866, 16353), (882, 16395), (887, 16425), (900, 16467), (901, 16473),

Gene: Rockstar\_27 Start: 19834, Stop: 21633, Start Num: 144

Candidate Starts for Rockstar\_27:

(Start: 144 @19834 has 603 MA's), (Start: 190 @19894 has 1 MA's), (230, 19963), (272, 20065), (277, 20077), (278, 20080), (306, 20155), (315, 20170), (318, 20173), (338, 20209), (384, 20344), (417, 20413), (481, 20527), (532, 20653), (583, 20767), (584, 20770), (591, 20791), (597, 20809), (636, 20890), (665, 20965), (668, 20983), (670, 20992), (677, 21022), (682, 21037), (695, 21061), (703, 21070), (729, 21115), (731, 21118), (742, 21139), (746, 21151), (813, 21364), (825, 21388), (860, 21469), (862, 21475), (900, 21610),

Gene: RockyHorror\_17 Start: 14667, Stop: 16376, Start Num: 123

Candidate Starts for RockyHorror\_17:

(Start: 123 @14667 has 215 MA's), (193, 14754), (233, 14823), (240, 14844), (251, 14880), (271, 14928), (274, 14934), (281, 14952), (300, 14982), (348, 15087), (370, 15147), (373, 15156), (378, 15168), (381, 15177), (388, 15201), (418, 15276), (443, 15303), (448, 15309), (459, 15327), (465, 15342), (468, 15348), (484, 15384), (486, 15387), (492, 15399), (494, 15405), (511, 15453), (515, 15465), (521, 15471), (564, 15531), (568, 15543), (583, 15579), (587, 15591), (614, 15666), (618, 15675), (625, 15693), (627, 15699), (638, 15729), (710, 15834), (717, 15843), (720, 15846), (737, 15882), (761, 15960), (791, 16059), (799, 16080), (810, 16113), (826, 16143), (836, 16173), (841, 16182), (844, 16188), (860, 16203), (861, 16206), (866, 16230), (877, 16260), (882, 16272), (887, 16302), (900, 16344),

Gene: Rofo\_35 Start: 30807, Stop: 32570, Start Num: 97

Candidate Starts for Rofo\_35:

(90, 30789), (Start: 97 @30807 has 73 MA's), (Start: 121 @30843 has 1 MA's), (219, 30981), (262, 31077), (265, 31086), (288, 31155), (306, 31206), (332, 31251), (341, 31266), (368, 31347), (384, 31392), (386, 31401), (445, 31491), (458, 31521), (461, 31536), (472, 31560), (487, 31590), (551, 31695), (597, 31812), (607, 31830), (613, 31845), (631, 31875), (635, 31887), (636, 31890), (647, 31917), (793, 32241), (794, 32244), (810, 32292), (824, 32319), (832, 32346), (860, 32400), (865, 32424), (866, 32427), (891, 32517), (909, 32565),

Gene: RogerDodger\_34 Start: 26723, Stop: 28489, Start Num: 97

Candidate Starts for RogerDodger\_34:

(80, 26681), (Start: 97 @26723 has 73 MA's), (Start: 121 @26759 has 1 MA's), (Start: 148 @26792 has 14 MA's), (240, 26948), (264, 27002), (265, 27005), (277, 27035), (298, 27101), (306, 27125), (331, 27167), (386, 27320), (406, 27359), (445, 27410), (451, 27422), (458, 27440), (460, 27452), (465, 27464), (472, 27479), (487, 27509), (489, 27512), (499, 27533), (547, 27605), (568, 27653), (613, 27764), (632, 27797), (647, 27836), (649, 27839), (670, 27911), (707, 27977), (715, 27989), (793, 28160), (794, 28163), (810, 28211), (824, 28238), (832, 28265), (860, 28319), (891, 28436), (897, 28457), (909, 28484),

Gene: Rohr\_28 Start: 21366, Stop: 23168, Start Num: 146

Candidate Starts for Rohr\_28:

(Start: 146 @21366 has 223 MA's), (Start: 161 @21387 has 4 MA's), (Start: 190 @21429 has 1 MA's), (216, 21474), (306, 21690), (332, 21735), (338, 21744), (349, 21783), (368, 21834), (369, 21837), (467, 22032), (500, 22101), (583, 22302), (584, 22305), (591, 22326), (635, 22422), (636, 22425), (638, 22431), (665, 22500), (668, 22518), (670, 22527), (677, 22557), (731, 22653), (746, 22686),

(750, 22701), (793, 22842), (813, 22899), (862, 23010),

Gene: Roksolana\_31 Start: 19990, Stop: 21762, Start Num: 144

Candidate Starts for Roksolana\_31:

(94, 19924), (Start: 123 @19966 has 215 MA's), (Start: 144 @19990 has 603 MA's), (278, 20227), (305, 20299), (306, 20302), (315, 20317), (338, 20356), (341, 20362), (378, 20473), (380, 20479), (392, 20518), (417, 20560), (448, 20599), (463, 20641), (467, 20644), (532, 20800), (592, 20941), (597, 20956), (677, 21169), (742, 21268), (750, 21295), (765, 21346), (770, 21355), (781, 21394), (784, 21409), (813, 21493), (860, 21598), (862, 21604), (900, 21739),

Gene: Romney\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Romney\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Ronaldo\_56 Start: 28894, Stop: 30579, Start Num: 135

Candidate Starts for Ronaldo\_56:

(59, 28702), (60, 28711), (62, 28717), (87, 28819), (102, 28849), (Start: 135 @28894 has 7 MA's), (232, 29035), (292, 29194), (316, 29248), (378, 29404), (434, 29503), (458, 29551), (481, 29608), (489, 29623), (546, 29713), (600, 29851), (635, 29914), (668, 30010), (703, 30061), (705, 30064), (711, 30076), (750, 30151), (754, 30166), (791, 30250), (824, 30331), (867, 30442), (897, 30547), (902, 30565),

Gene: Roosevelt\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Roosevelt\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Rosa24\_26 Start: 19799, Stop: 21580, Start Num: 144

Candidate Starts for Rosa24\_26:

(Start: 123 @19775 has 215 MA's), (Start: 144 @19799 has 603 MA's), (Start: 148 @19805 has 14 MA's), (Start: 190 @19859 has 1 MA's), (197, 19874), (230, 19928), (236, 19946), (272, 20030), (277, 20042), (278, 20045), (306, 20120), (315, 20135), (338, 20174), (378, 20291), (417, 20378), (463, 20459), (489, 20507), (500, 20531), (532, 20618), (553, 20663), (584, 20735), (591, 20756), (597, 20774), (636, 20855), (668, 20948), (670, 20957), (675, 20981), (677, 20987), (687, 21011), (731, 21065), (742, 21086), (756, 21137), (763, 21161), (813, 21311), (860, 21416), (863, 21431), (894, 21539), (900, 21557),

Gene: Rosalind\_30 Start: 19215, Stop: 21002, Start Num: 144

Candidate Starts for Rosalind\_30:

(94, 19149), (Start: 123 @19191 has 215 MA's), (Start: 144 @19215 has 603 MA's), (236, 19353), (262, 19410), (278, 19452), (292, 19488), (306, 19527), (343, 19596), (349, 19620), (369, 19674), (448, 19824), (467, 19869), (481, 19899), (499, 19935), (515, 19986), (530, 20022), (553, 20070),

(580, 20130), (635, 20259), (665, 20337), (750, 20538), (752, 20544), (782, 20640), (845, 20805), (880, 20904),

Gene: Rosmarinus\_23 Start: 17176, Stop: 18942, Start Num: 114

Candidate Starts for Rosmarinus\_23:

(Start: 114 @17176 has 139 MA's), (140, 17206), (236, 17365), (248, 17398), (258, 17428), (272, 17461), (278, 17473), (316, 17563), (337, 17605), (360, 17677), (362, 17686), (378, 17725), (392, 17770), (400, 17791), (403, 17794), (438, 17848), (448, 17866), (465, 17908), (468, 17914), (481, 17941), (564, 18079), (572, 18097), (587, 18139), (593, 18157), (603, 18187), (618, 18214), (655, 18319), (748, 18478), (757, 18514), (768, 18544), (772, 18553), (793, 18628), (810, 18679), (890, 18874), (901, 18913), (902, 18916), (913, 18934),

Gene: Rowdy\_31 Start: 19855, Stop: 21633, Start Num: 144

Candidate Starts for Rowdy\_31:

(Start: 144 @19855 has 603 MA's), (Start: 190 @19912 has 1 MA's), (197, 19927), (219, 19960), (230, 19981), (272, 20083), (277, 20095), (278, 20098), (306, 20173), (315, 20188), (338, 20227), (378, 20344), (384, 20362), (417, 20431), (453, 20485), (460, 20506), (481, 20545), (500, 20584), (532, 20671), (553, 20716), (576, 20764), (583, 20785), (591, 20809), (595, 20821), (597, 20827), (636, 20908), (668, 21001), (670, 21010), (675, 21034), (677, 21040), (682, 21055), (713, 21088), (742, 21139), (749, 21157), (759, 21202), (813, 21364), (825, 21388), (827, 21394), (860, 21469), (862, 21475), (863, 21484), (880, 21535), (900, 21610),

Gene: Royals2015\_16 Start: 14826, Stop: 16535, Start Num: 123

Candidate Starts for Royals2015\_16:

(Start: 123 @14826 has 215 MA's), (193, 14913), (Start: 227 @14958 has 2 MA's), (233, 14982), (271, 15087), (274, 15093), (281, 15111), (300, 15141), (348, 15246), (370, 15306), (378, 15327), (381, 15336), (388, 15360), (459, 15486), (465, 15501), (468, 15507), (484, 15543), (486, 15546), (492, 15558), (494, 15564), (511, 15612), (515, 15624), (521, 15630), (564, 15690), (568, 15702), (583, 15738), (587, 15750), (614, 15825), (618, 15834), (625, 15852), (627, 15858), (638, 15888), (710, 15993), (717, 16002), (720, 16005), (737, 16041), (761, 16119), (791, 16218), (799, 16239), (810, 16272), (826, 16302), (836, 16332), (841, 16341), (844, 16347), (860, 16362), (861, 16365), (866, 16389), (877, 16419), (882, 16431), (887, 16461), (900, 16503),

Gene: Rubeelu\_18 Start: 14956, Stop: 16665, Start Num: 126

Candidate Starts for Rubeelu\_18:

(Start: 126 @14956 has 42 MA's), (Start: 150 @14983 has 4 MA's), (Start: 227 @15088 has 2 MA's), (229, 15100), (241, 15136), (258, 15187), (268, 15208), (271, 15217), (274, 15223), (282, 15244), (287, 15256), (367, 15430), (370, 15436), (377, 15454), (381, 15466), (382, 15469), (388, 15490), (418, 15565), (443, 15592), (459, 15616), (460, 15619), (465, 15631), (484, 15673), (492, 15688), (494, 15694), (499, 15703), (511, 15742), (547, 15796), (564, 15820), (587, 15880), (608, 15946), (614, 15955), (618, 15964), (637, 16015), (638, 16018), (710, 16123), (737, 16171), (758, 16237), (781, 16309), (836, 16462), (841, 16471), (860, 16492), (863, 16507), (866, 16519), (880, 16555), (882, 16561),

Gene: Rubeus\_28 Start: 21204, Stop: 23006, Start Num: 146

Candidate Starts for Rubeus\_28:

(Start: 146 @21204 has 223 MA's), (Start: 161 @21225 has 4 MA's), (Start: 190 @21267 has 1 MA's), (216, 21312), (306, 21528), (332, 21573), (338, 21582), (368, 21672), (369, 21675), (467, 21870), (500, 21939), (583, 22140), (584, 22143), (591, 22164), (635, 22260), (636, 22263), (638, 22269), (665, 22338), (668, 22356), (670, 22365), (677, 22395), (731, 22491), (746, 22524), (750, 22539), (793, 22680), (813, 22737), (862, 22848), (909, 23001),

Gene: Ruby\_16 Start: 14774, Stop: 16483, Start Num: 123

Candidate Starts for Ruby\_16:

(Start: 123 @14774 has 215 MA's), (193, 14861), (Start: 227 @14906 has 2 MA's), (233, 14930), (271, 15035), (274, 15041), (281, 15059), (300, 15089), (348, 15194), (367, 15248), (370, 15254), (373, 15263), (378, 15275), (381, 15284), (388, 15308), (402, 15344), (403, 15350), (407, 15362), (418, 15383), (420, 15386), (424, 15395), (443, 15410), (448, 15416), (459, 15434), (465, 15449), (468, 15455), (475, 15473), (477, 15476), (484, 15491), (492, 15506), (494, 15512), (506, 15542), (511, 15560), (515, 15572), (521, 15578), (564, 15638), (568, 15650), (583, 15686), (587, 15698), (594, 15719), (614, 15773), (618, 15782), (627, 15806), (638, 15836), (710, 15941), (720, 15953), (737, 15989), (751, 16028), (761, 16067), (791, 16166), (799, 16187), (810, 16220), (826, 16250), (836, 16280), (841, 16289), (844, 16295), (860, 16310), (861, 16313), (865, 16334), (866, 16337), (882, 16379), (887, 16409), (900, 16451), (901, 16457),

Gene: Rufus\_28 Start: 21506, Stop: 23308, Start Num: 146

Candidate Starts for Rufus\_28:

(Start: 146 @21506 has 223 MA's), (Start: 161 @21527 has 4 MA's), (Start: 190 @21569 has 1 MA's), (216, 21614), (306, 21830), (332, 21875), (338, 21884), (368, 21974), (369, 21977), (406, 22070), (467, 22172), (500, 22241), (579, 22430), (583, 22442), (584, 22445), (591, 22466), (635, 22562), (636, 22565), (638, 22571), (665, 22640), (668, 22658), (670, 22667), (677, 22697), (731, 22793), (746, 22826), (750, 22841), (793, 22982), (813, 23039), (862, 23150),

Gene: Ruin\_27 Start: 19823, Stop: 21601, Start Num: 144

Candidate Starts for Ruin\_27:

(Start: 123 @19799 has 215 MA's), (Start: 144 @19823 has 603 MA's), (Start: 190 @19880 has 1 MA's), (222, 19934), (230, 19949), (236, 19967), (272, 20051), (277, 20063), (278, 20066), (306, 20141), (315, 20156), (338, 20195), (378, 20312), (417, 20399), (463, 20480), (489, 20528), (500, 20552), (532, 20639), (553, 20684), (584, 20756), (591, 20777), (597, 20795), (636, 20876), (668, 20969), (670, 20978), (675, 21002), (677, 21008), (687, 21032), (731, 21086), (742, 21107), (756, 21158), (763, 21182), (782, 21236), (813, 21332), (860, 21437), (863, 21452), (894, 21560), (900, 21578),

Gene: Rummer\_29 Start: 20463, Stop: 22259, Start Num: 144

Candidate Starts for Rummer\_29:

(Start: 144 @20463 has 603 MA's), (Start: 190 @20520 has 1 MA's), (197, 20535), (219, 20568), (230, 20589), (Start: 235 @20604 has 1 MA's), (272, 20691), (277, 20703), (278, 20706), (306, 20781), (315, 20796), (336, 20832), (417, 21039), (481, 21153), (500, 21192), (532, 21279), (583, 21393), (591, 21417), (597, 21435), (636, 21516), (665, 21591), (668, 21609), (675, 21642), (677, 21648), (695, 21687), (729, 21741), (731, 21744), (742, 21765), (758, 21822), (813, 21990), (860, 22095), (862, 22101), (900, 22236),

Gene: Ruotula\_26 Start: 21710, Stop: 23512, Start Num: 146

Candidate Starts for Ruotula\_26:

(Start: 146 @21710 has 223 MA's), (Start: 161 @21731 has 4 MA's), (Start: 190 @21773 has 1 MA's), (216, 21818), (306, 22034), (332, 22079), (338, 22088), (349, 22127), (368, 22178), (369, 22181), (467, 22376), (500, 22445), (583, 22646), (584, 22649), (591, 22670), (635, 22766), (636, 22769), (638, 22775), (665, 22844), (668, 22862), (670, 22871), (677, 22901), (731, 22997), (746, 23030), (750, 23045), (793, 23186), (813, 23243), (862, 23354),

Gene: Rutherferd\_29 Start: 21775, Stop: 23577, Start Num: 146

Candidate Starts for Rutherferd\_29:

(Start: 146 @21775 has 223 MA's), (Start: 161 @21796 has 4 MA's), (Start: 190 @21838 has 1 MA's), (216, 21883), (306, 22099), (332, 22144), (338, 22153), (368, 22243), (369, 22246), (406, 22339), (467, 22441), (500, 22510), (583, 22711), (584, 22714), (591, 22735), (635, 22831), (636, 22834), (638, 22840), (668, 22927), (670, 22936), (677, 22966), (731, 23062), (746, 23095), (750, 23110),

(793, 23251), (813, 23308), (862, 23419),

Gene: Ruthiejr\_23 Start: 18254, Stop: 20041, Start Num: 114

Candidate Starts for Ruthiejr\_23:

(Start: 93 @18215 has 1 MA's), (Start: 109 @18245 has 26 MA's), (Start: 112 @18251 has 41 MA's), (Start: 114 @18254 has 139 MA's), (Start: 137 @18269 has 2 MA's), (Start: 168 @18311 has 32 MA's), (197, 18359), (Start: 227 @18398 has 2 MA's), (230, 18413), (236, 18431), (248, 18464), (258, 18494), (278, 18539), (282, 18557), (316, 18629), (321, 18635), (334, 18665), (336, 18668), (356, 18731), (360, 18743), (412, 18878), (423, 18896), (444, 18926), (448, 18932), (454, 18950), (468, 18980), (487, 19019), (564, 19145), (588, 19208), (655, 19409), (670, 19463), (708, 19508), (734, 19553), (748, 19577), (756, 19610), (768, 19643), (788, 19715), (793, 19727), (810, 19778), (813, 19784), (865, 19886), (901, 20012), (913, 20033),

Gene: Ruthy\_19 Start: 16329, Stop: 18023, Start Num: 171

Candidate Starts for Ruthy\_19:

(77, 16179), (142, 16293), (Start: 162 @16317 has 16 MA's), (Start: 171 @16329 has 40 MA's), (201, 16377), (256, 16506), (260, 16512), (283, 16578), (358, 16758), (360, 16764), (449, 16944), (451, 16950), (489, 17031), (563, 17145), (603, 17259), (618, 17292), (631, 17322), (632, 17325), (651, 17388), (653, 17391), (665, 17424), (756, 17592), (758, 17598), (789, 17697), (850, 17841), (913, 18015),

Gene: Ryadel\_60 Start: 34285, Stop: 36021, Start Num: 107

Candidate Starts for Ryadel\_60:

(Start: 100 @34276 has 2 MA's), (Start: 107 @34285 has 25 MA's), (174, 34375), (240, 34492), (251, 34528), (259, 34549), (271, 34576), (274, 34582), (286, 34612), (302, 34636), (332, 34687), (381, 34825), (383, 34831), (400, 34882), (402, 34885), (407, 34903), (459, 34954), (468, 34975), (470, 34978), (492, 35026), (494, 35032), (511, 35080), (513, 35086), (515, 35092), (555, 35152), (564, 35176), (565, 35179), (583, 35224), (588, 35239), (591, 35248), (594, 35257), (608, 35302), (618, 35320), (631, 35353), (720, 35491), (729, 35512), (754, 35578), (762, 35608), (779, 35662), (791, 35704), (799, 35725), (805, 35746), (810, 35758), (821, 35779), (844, 35833), (880, 35911), (887, 35947), (893, 35968), (901, 35995),

Gene: RyeScarlet\_31 Start: 21753, Stop: 23543, Start Num: 144

Candidate Starts for RyeScarlet\_31:

(Start: 141 @21750 has 14 MA's), (Start: 144 @21753 has 603 MA's), (277, 21987), (278, 21990), (305, 22062), (306, 22065), (315, 22080), (338, 22119), (341, 22125), (378, 22236), (417, 22323), (463, 22404), (467, 22407), (546, 22593), (576, 22656), (584, 22680), (586, 22686), (597, 22719), (636, 22800), (675, 22926), (693, 22968), (731, 23028), (746, 23061), (750, 23076), (781, 23175), (782, 23178), (784, 23190), (813, 23274), (842, 23340), (860, 23379), (862, 23385), (873, 23430), (890, 23487), (891, 23490),

Gene: SG4\_16 Start: 14957, Stop: 16666, Start Num: 123

Candidate Starts for SG4\_16:

(Start: 123 @14957 has 215 MA's), (193, 15044), (Start: 227 @15089 has 2 MA's), (233, 15113), (271, 15218), (274, 15224), (281, 15242), (300, 15272), (348, 15377), (370, 15437), (378, 15458), (381, 15467), (388, 15491), (459, 15617), (465, 15632), (468, 15638), (484, 15674), (486, 15677), (492, 15689), (494, 15695), (511, 15743), (515, 15755), (521, 15761), (564, 15821), (568, 15833), (583, 15869), (587, 15881), (614, 15956), (618, 15965), (625, 15983), (627, 15989), (638, 16019), (710, 16124), (717, 16133), (720, 16136), (737, 16172), (761, 16250), (791, 16349), (799, 16370), (810, 16403), (826, 16433), (836, 16463), (841, 16472), (844, 16478), (860, 16493), (861, 16496), (866, 16520), (877, 16550), (882, 16562), (887, 16592), (900, 16634),

Gene: STLscum\_28 Start: 21913, Stop: 23715, Start Num: 146



Candidate Starts for STLscum\_28:

(Start: 146 @21913 has 223 MA's), (Start: 161 @21934 has 4 MA's), (Start: 190 @21976 has 1 MA's), (216, 22021), (306, 22237), (332, 22282), (338, 22291), (368, 22381), (369, 22384), (406, 22477), (467, 22579), (500, 22648), (579, 22837), (583, 22849), (584, 22852), (591, 22873), (635, 22969), (636, 22972), (638, 22978), (665, 23047), (668, 23065), (670, 23074), (677, 23104), (731, 23200), (746, 23233), (750, 23248), (793, 23389), (813, 23446), (862, 23557),

Gene: Saal\_16 Start: 14790, Stop: 16499, Start Num: 123

Candidate Starts for Saal\_16:

(Start: 123 @14790 has 215 MA's), (193, 14877), (Start: 227 @14922 has 2 MA's), (233, 14946), (251, 15003), (271, 15051), (274, 15057), (281, 15075), (300, 15105), (348, 15210), (367, 15264), (370, 15270), (373, 15279), (381, 15300), (388, 15324), (402, 15360), (403, 15366), (418, 15399), (420, 15402), (424, 15411), (443, 15426), (448, 15432), (459, 15450), (465, 15465), (468, 15471), (475, 15489), (477, 15492), (484, 15507), (492, 15522), (494, 15528), (511, 15576), (515, 15588), (521, 15594), (564, 15654), (568, 15666), (583, 15702), (587, 15714), (614, 15789), (618, 15798), (625, 15816), (627, 15822), (638, 15852), (710, 15957), (720, 15969), (737, 16005), (761, 16083), (799, 16203), (810, 16236), (826, 16266), (829, 16278), (836, 16296), (839, 16302), (841, 16305), (844, 16311), (860, 16326), (861, 16329), (865, 16350), (866, 16353), (882, 16395), (887, 16425), (900, 16467), (901, 16473),

Gene: Sabertooth\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Sabertooth\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Sabia\_29 Start: 20372, Stop: 22168, Start Num: 144

Candidate Starts for Sabia\_29:

(Start: 144 @20372 has 603 MA's), (Start: 190 @20429 has 1 MA's), (197, 20444), (230, 20498), (Start: 235 @20513 has 1 MA's), (272, 20600), (277, 20612), (278, 20615), (306, 20690), (315, 20705), (336, 20741), (417, 20948), (500, 21101), (532, 21188), (583, 21302), (591, 21326), (597, 21344), (636, 21425), (665, 21500), (668, 21518), (675, 21551), (677, 21557), (695, 21596), (729, 21650), (731, 21653), (742, 21674), (758, 21731), (813, 21899), (860, 22004), (862, 22010), (900, 22145),

Gene: Sabinator\_29 Start: 20377, Stop: 22173, Start Num: 144

Candidate Starts for Sabinator\_29:

(Start: 144 @20377 has 603 MA's), (Start: 190 @20434 has 1 MA's), (197, 20449), (219, 20482), (230, 20503), (Start: 235 @20518 has 1 MA's), (272, 20605), (277, 20617), (278, 20620), (306, 20695), (315, 20710), (336, 20746), (417, 20953), (481, 21067), (500, 21106), (532, 21193), (583, 21307), (591, 21331), (597, 21349), (636, 21430), (665, 21505), (668, 21523), (675, 21556), (677, 21562), (695, 21601), (729, 21655), (731, 21658), (742, 21679), (758, 21736), (813, 21904), (860, 22009), (862, 22015), (900, 22150),

Gene: Sachima\_28 Start: 21749, Stop: 23539, Start Num: 144

Candidate Starts for Sachima\_28:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986), (305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319), (463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715),

(636, 22796), (675, 22922), (693, 22964), (731, 23024), (746, 23057), (750, 23072), (781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381), (873, 23426), (890, 23483), (891, 23486),

Gene: Sagefire\_28 Start: 21946, Stop: 23748, Start Num: 146

Candidate Starts for Sagefire\_28:

(Start: 146 @21946 has 223 MA's), (Start: 161 @21967 has 4 MA's), (Start: 190 @22009 has 1 MA's), (216, 22054), (306, 22270), (332, 22315), (338, 22324), (349, 22363), (368, 22414), (369, 22417), (467, 22612), (500, 22681), (583, 22882), (584, 22885), (591, 22906), (635, 23002), (636, 23005), (638, 23011), (665, 23080), (668, 23098), (670, 23107), (677, 23137), (731, 23233), (746, 23266), (750, 23281), (793, 23422), (813, 23479), (862, 23590),

Gene: Sahara\_17 Start: 14784, Stop: 16493, Start Num: 171

Candidate Starts for Sahara\_17:

(Start: 171 @14784 has 40 MA's), (237, 14901), (259, 14973), (262, 14976), (287, 15051), (306, 15090), (315, 15105), (340, 15147), (347, 15174), (377, 15264), (378, 15267), (440, 15399), (462, 15453), (500, 15534), (519, 15594), (521, 15600), (607, 15759), (618, 15777), (637, 15816), (665, 15888), (666, 15891), (669, 15912), (788, 16146), (794, 16161), (807, 16203), (840, 16284), (847, 16296), (849, 16299), (865, 16347), (874, 16377),

Gene: Saints25\_25 Start: 19407, Stop: 21086, Start Num: 129

Candidate Starts for Saints25\_25:

(Start: 129 @19407 has 79 MA's), (Start: 191 @19491 has 45 MA's), (Start: 235 @19569 has 1 MA's), (268, 19656), (274, 19671), (300, 19719), (324, 19758), (356, 19845), (368, 19878), (381, 19914), (390, 19944), (392, 19950), (422, 20019), (461, 20049), (466, 20061), (468, 20064), (494, 20121), (565, 20253), (567, 20259), (592, 20325), (594, 20331), (601, 20355), (618, 20403), (627, 20427), (631, 20436), (658, 20511), (717, 20562), (725, 20577), (782, 20739), (788, 20766), (799, 20796), (843, 20901), (880, 20979), (887, 21015), (890, 21024), (900, 21057), (907, 21072),

Gene: Saintus\_24 Start: 18634, Stop: 20424, Start Num: 144

Candidate Starts for Saintus\_24:

(Start: 123 @18610 has 215 MA's), (Start: 144 @18634 has 603 MA's), (214, 18727), (236, 18772), (278, 18871), (292, 18907), (306, 18946), (315, 18961), (336, 18997), (378, 19117), (380, 19123), (448, 19243), (505, 19372), (532, 19444), (583, 19558), (668, 19774), (675, 19807), (731, 19909), (746, 19942), (750, 19957), (758, 19987), (859, 20257), (862, 20266), (863, 20275), (896, 20389),

Gene: Salvador\_31 Start: 25859, Stop: 27625, Start Num: 97

Candidate Starts for Salvador\_31:

(80, 25817), (Start: 97 @25859 has 73 MA's), (Start: 121 @25895 has 1 MA's), (Start: 148 @25928 has 14 MA's), (240, 26084), (264, 26138), (265, 26141), (277, 26171), (298, 26237), (306, 26261), (311, 26270), (331, 26303), (386, 26456), (406, 26495), (445, 26546), (451, 26558), (458, 26576), (460, 26588), (465, 26600), (472, 26615), (487, 26645), (489, 26648), (499, 26669), (547, 26741), (568, 26789), (613, 26900), (632, 26933), (647, 26972), (649, 26975), (670, 27047), (707, 27113), (715, 27125), (793, 27296), (794, 27299), (810, 27347), (824, 27374), (832, 27401), (860, 27455), (891, 27572), (897, 27593), (909, 27620),

Gene: Salz\_28 Start: 20746, Stop: 22545, Start Num: 144

Candidate Starts for Salz\_28:

(94, 20680), (Start: 123 @20722 has 215 MA's), (Start: 144 @20746 has 603 MA's), (183, 20788), (236, 20884), (242, 20899), (277, 20980), (278, 20983), (306, 21058), (315, 21073), (338, 21112), (341, 21118), (356, 21169), (378, 21229), (380, 21235), (417, 21316), (467, 21400), (518, 21526), (526, 21544), (540, 21571), (597, 21712), (631, 21778), (635, 21790), (636, 21793), (703, 21982), (721, 22009), (726, 22018), (736, 22039), (737, 22042), (746, 22063), (750, 22078), (756, 22102),

(781, 22177), (784, 22192), (813, 22276), (860, 22381), (862, 22387), (877, 22441), (909, 22540),

Gene: SamScheppers\_22 Start: 18161, Stop: 19948, Start Num: 114

Candidate Starts for SamScheppers\_22:

(Start: 93 @18122 has 1 MA's), (Start: 109 @18152 has 26 MA's), (Start: 112 @18158 has 41 MA's), (Start: 114 @18161 has 139 MA's), (Start: 168 @18218 has 32 MA's), (197, 18266), (Start: 227 @18305 has 2 MA's), (230, 18320), (236, 18338), (248, 18371), (258, 18401), (278, 18446), (282, 18464), (316, 18536), (321, 18542), (334, 18572), (356, 18638), (360, 18650), (412, 18785), (444, 18833), (448, 18839), (454, 18857), (468, 18887), (487, 18926), (564, 19052), (587, 19112), (588, 19115), (594, 19133), (599, 19148), (655, 19316), (670, 19370), (708, 19415), (734, 19460), (748, 19484), (756, 19517), (768, 19550), (788, 19622), (793, 19634), (810, 19685), (813, 19691), (865, 19793), (901, 19919), (913, 19940),

Gene: SamW\_17 Start: 16284, Stop: 17981, Start Num: 118

Candidate Starts for SamW\_17:

(Start: 118 @16284 has 8 MA's), (136, 16305), (196, 16389), (211, 16416), (216, 16422), (275, 16554), (295, 16605), (306, 16638), (310, 16647), (368, 16782), (380, 16815), (385, 16833), (411, 16887), (448, 16932), (472, 16989), (478, 17001), (497, 17040), (535, 17091), (540, 17100), (549, 17121), (579, 17187), (610, 17277), (661, 17385), (673, 17439), (675, 17445), (681, 17463), (752, 17559), (766, 17580), (784, 17625), (845, 17784), (855, 17799), (861, 17814), (863, 17826), (907, 17970),

Gene: Samba\_19 Start: 16728, Stop: 18374, Start Num: 195

Candidate Starts for Samba\_19:

(172, 16692), (Start: 195 @16728 has 45 MA's), (244, 16830), (272, 16908), (274, 16911), (308, 17007), (329, 17046), (349, 17106), (357, 17127), (377, 17181), (382, 17196), (494, 17367), (506, 17397), (594, 17580), (601, 17604), (626, 17655), (658, 17748), (664, 17760), (694, 17805), (702, 17820), (757, 17952), (758, 17955), (788, 18054), (795, 18072), (813, 18123), (843, 18189), (872, 18252), (877, 18264),

Gene: Samman98\_20 Start: 17337, Stop: 18917, Start Num: 170

Candidate Starts for Samman98\_20:

(88, 17220), (Start: 170 @17337 has 87 MA's), (298, 17595), (307, 17616), (340, 17670), (351, 17709), (369, 17766), (377, 17787), (501, 17958), (507, 17976), (514, 18000), (521, 18021), (554, 18063), (592, 18144), (636, 18234), (653, 18279), (669, 18336), (670, 18339), (687, 18393), (751, 18483), (863, 18762), (865, 18771), (874, 18801),

Gene: Sampson\_35 Start: 30699, Stop: 32321, Start Num: 160

Candidate Starts for Sampson\_35:

(Start: 160 @30699 has 17 MA's), (178, 30720), (188, 30732), (219, 30783), (246, 30846), (277, 30918), (312, 31005), (341, 31056), (348, 31086), (378, 31167), (386, 31194), (449, 31293), (460, 31323), (464, 31332), (481, 31365), (482, 31368), (483, 31371), (489, 31380), (508, 31428), (547, 31476), (551, 31485), (596, 31584), (609, 31623), (619, 31635), (665, 31752), (672, 31791), (711, 31830), (746, 31887), (764, 31926), (769, 31935), (786, 31992), (790, 32004), (810, 32061), (813, 32067), (824, 32088), (842, 32121), (863, 32166), (900, 32295), (902, 32304),

Gene: SamuelLPlaqson\_23 Start: 17102, Stop: 18868, Start Num: 114

Candidate Starts for SamuelLPlaqson\_23:

(Start: 114 @17102 has 139 MA's), (140, 17132), (236, 17291), (248, 17324), (258, 17354), (272, 17387), (278, 17399), (316, 17489), (337, 17531), (360, 17603), (362, 17612), (378, 17651), (392, 17696), (403, 17720), (448, 17792), (465, 17834), (468, 17840), (481, 17867), (564, 18005), (572, 18023), (587, 18065), (603, 18113), (618, 18140), (655, 18245), (704, 18335), (757, 18440), (768, 18470), (772, 18479), (793, 18554), (810, 18605), (890, 18800), (901, 18839), (902, 18842), (913,

18860),

Gene: Sandaddy\_26 Start: 21059, Stop: 22861, Start Num: 146

Candidate Starts for Sandaddy\_26:

(Start: 146 @21059 has 223 MA's), (Start: 161 @21080 has 4 MA's), (Start: 190 @21122 has 1 MA's), (306, 21383), (332, 21428), (338, 21437), (349, 21476), (368, 21527), (369, 21530), (467, 21725), (500, 21794), (583, 21995), (584, 21998), (591, 22019), (635, 22115), (636, 22118), (638, 22124), (665, 22193), (668, 22211), (670, 22220), (677, 22250), (731, 22346), (746, 22379), (750, 22394), (793, 22535), (813, 22592), (862, 22703),

Gene: Sandalphon\_17 Start: 15361, Stop: 17070, Start Num: 123

Candidate Starts for Sandalphon\_17:

(Start: 123 @15361 has 215 MA's), (193, 15448), (Start: 227 @15493 has 2 MA's), (233, 15517), (251, 15574), (271, 15622), (274, 15628), (281, 15646), (300, 15676), (348, 15781), (367, 15835), (370, 15841), (373, 15850), (381, 15871), (388, 15895), (402, 15931), (403, 15937), (418, 15970), (420, 15973), (424, 15982), (443, 15997), (448, 16003), (459, 16021), (465, 16036), (468, 16042), (475, 16060), (477, 16063), (484, 16078), (492, 16093), (494, 16099), (511, 16147), (515, 16159), (521, 16165), (564, 16225), (568, 16237), (583, 16273), (587, 16285), (614, 16360), (618, 16369), (625, 16387), (627, 16393), (638, 16423), (710, 16528), (720, 16540), (737, 16576), (761, 16654), (799, 16774), (810, 16807), (826, 16837), (829, 16849), (836, 16867), (839, 16873), (841, 16876), (844, 16882), (860, 16897), (861, 16900), (865, 16921), (866, 16924), (882, 16966), (887, 16996), (900, 17038), (901, 17044),

Gene: Sanjuju\_33 Start: 30976, Stop: 32739, Start Num: 97

Candidate Starts for Sanjuju\_33:

(90, 30958), (Start: 97 @30976 has 73 MA's), (Start: 121 @31012 has 1 MA's), (219, 31150), (262, 31246), (265, 31255), (288, 31324), (306, 31375), (332, 31420), (341, 31435), (368, 31516), (384, 31561), (386, 31570), (445, 31660), (458, 31690), (461, 31705), (472, 31729), (487, 31759), (551, 31864), (597, 31981), (607, 31999), (613, 32014), (631, 32044), (635, 32056), (636, 32059), (647, 32086), (793, 32410), (794, 32413), (810, 32461), (824, 32488), (832, 32515), (860, 32569), (866, 32596), (902, 32725),

Gene: Santhid\_18 Start: 14993, Stop: 16609, Start Num: 153

Candidate Starts for Santhid\_18:

(Start: 153 @14993 has 11 MA's), (219, 15092), (231, 15116), (277, 15227), (278, 15230), (281, 15248), (284, 15257), (322, 15323), (328, 15338), (332, 15347), (336, 15353), (366, 15443), (385, 15497), (389, 15506), (448, 15596), (499, 15707), (544, 15779), (547, 15785), (551, 15794), (560, 15812), (599, 15902), (604, 15917), (647, 16001), (653, 16016), (657, 16034), (664, 16046), (679, 16112), (735, 16160), (740, 16172), (746, 16184), (752, 16205), (755, 16217), (769, 16232), (782, 16262), (791, 16298), (863, 16451), (873, 16487), (891, 16550), (897, 16571), (907, 16595), (911, 16601),

Gene: Sanya\_26 Start: 21743, Stop: 23545, Start Num: 146

Candidate Starts for Sanya\_26:

(Start: 146 @21743 has 223 MA's), (Start: 161 @21764 has 4 MA's), (Start: 190 @21806 has 1 MA's), (216, 21851), (306, 22067), (332, 22112), (338, 22121), (368, 22211), (369, 22214), (406, 22307), (467, 22409), (500, 22478), (583, 22679), (584, 22682), (591, 22703), (635, 22799), (636, 22802), (638, 22808), (665, 22877), (668, 22895), (670, 22904), (677, 22934), (731, 23030), (746, 23063), (750, 23078), (793, 23219), (813, 23276), (862, 23387),

Gene: Sapo\_16 Start: 14618, Stop: 16216, Start Num: 195

Candidate Starts for Sapo\_16:

(Start: 195 @14618 has 45 MA's), (300, 14873), (333, 14945), (341, 14963), (343, 14972), (347, 14990), (385, 15098), (386, 15101), (465, 15194), (494, 15257), (555, 15368), (556, 15371), (564, 15392), (592, 15467), (599, 15488), (601, 15497), (647, 15608), (664, 15653), (670, 15683), (694, 15698), (795, 15914), (805, 15947), (831, 16007), (836, 16019), (872, 16094), (882, 16118), (888, 16151),

Gene: SarFire\_27 Start: 21221, Stop: 23023, Start Num: 146

Candidate Starts for SarFire\_27:

(Start: 146 @21221 has 223 MA's), (Start: 161 @21242 has 4 MA's), (Start: 190 @21284 has 1 MA's), (216, 21329), (306, 21545), (332, 21590), (338, 21599), (368, 21689), (369, 21692), (406, 21785), (467, 21887), (500, 21956), (579, 22145), (583, 22157), (584, 22160), (591, 22181), (635, 22277), (636, 22280), (638, 22286), (665, 22355), (668, 22373), (670, 22382), (677, 22412), (731, 22508), (746, 22541), (750, 22556), (793, 22697), (813, 22754), (862, 22865), (909, 23018),

Gene: Sarma624\_17 Start: 14767, Stop: 16344, Start Num: 227

Candidate Starts for Sarma624\_17:

(Start: 123 @14635 has 215 MA's), (193, 14722), (Start: 227 @14767 has 2 MA's), (233, 14791), (271, 14896), (274, 14902), (281, 14920), (300, 14950), (348, 15055), (370, 15115), (378, 15136), (381, 15145), (388, 15169), (418, 15244), (420, 15247), (459, 15295), (465, 15310), (468, 15316), (484, 15352), (486, 15355), (492, 15367), (494, 15373), (511, 15421), (515, 15433), (521, 15439), (564, 15499), (568, 15511), (583, 15547), (587, 15559), (614, 15634), (618, 15643), (625, 15661), (627, 15667), (638, 15697), (710, 15802), (717, 15811), (720, 15814), (737, 15850), (761, 15928), (791, 16027), (799, 16048), (810, 16081), (826, 16111), (836, 16141), (841, 16150), (844, 16156), (860, 16171), (861, 16174), (866, 16198), (877, 16228), (882, 16240), (887, 16270), (900, 16312),

Gene: Saronaya\_34 Start: 29639, Stop: 31402, Start Num: 97

Candidate Starts for Saronaya\_34:

(Start: 97 @29639 has 73 MA's), (Start: 121 @29675 has 1 MA's), (211, 29804), (219, 29813), (262, 29909), (265, 29918), (288, 29987), (306, 30038), (311, 30047), (332, 30083), (341, 30098), (345, 30116), (368, 30179), (384, 30224), (386, 30233), (454, 30344), (458, 30353), (461, 30368), (472, 30392), (487, 30422), (597, 30644), (607, 30662), (613, 30677), (635, 30719), (647, 30749), (688, 30869), (749, 30962), (793, 31073), (794, 31076), (810, 31124), (824, 31151), (832, 31178), (860, 31232),

Gene: Sassafra\_16 Start: 14940, Stop: 16649, Start Num: 123

Candidate Starts for Sassafra\_16:

(Start: 123 @14940 has 215 MA's), (193, 15027), (Start: 227 @15072 has 2 MA's), (233, 15096), (271, 15201), (274, 15207), (281, 15225), (300, 15255), (348, 15360), (370, 15420), (378, 15441), (381, 15450), (388, 15474), (459, 15600), (465, 15615), (468, 15621), (484, 15657), (486, 15660), (492, 15672), (494, 15678), (511, 15726), (515, 15738), (521, 15744), (564, 15804), (568, 15816), (583, 15852), (587, 15864), (614, 15939), (618, 15948), (625, 15966), (627, 15972), (638, 16002), (710, 16107), (720, 16119), (737, 16155), (761, 16233), (791, 16332), (799, 16353), (810, 16386), (826, 16416), (836, 16446), (841, 16455), (844, 16461), (860, 16476), (861, 16479), (865, 16500), (866, 16503), (882, 16545), (887, 16575), (900, 16617),

Gene: Sassay\_23 Start: 19334, Stop: 20929, Start Num: 191

Candidate Starts for Sassay\_23:

(Start: 129 @19250 has 79 MA's), (Start: 191 @19334 has 45 MA's), (Start: 235 @19412 has 1 MA's), (268, 19499), (274, 19514), (300, 19562), (324, 19601), (356, 19688), (368, 19721), (381, 19757), (390, 19787), (392, 19793), (422, 19862), (461, 19892), (466, 19904), (468, 19907), (494, 19964), (565, 20096), (567, 20102), (592, 20168), (594, 20174), (601, 20198), (618, 20246), (627, 20270), (631, 20279), (658, 20354), (717, 20405), (725, 20420), (782, 20582), (788, 20609), (799, 20639), (843, 20744), (880, 20822), (887, 20858), (890, 20867), (900, 20900), (907, 20915),

Gene: SassyB\_16 Start: 14854, Stop: 16563, Start Num: 123

Candidate Starts for SassyB\_16:

(Start: 123 @14854 has 215 MA's), (193, 14941), (Start: 227 @14986 has 2 MA's), (233, 15010), (271, 15115), (274, 15121), (281, 15139), (300, 15169), (348, 15274), (370, 15334), (373, 15343), (377, 15352), (378, 15355), (381, 15364), (388, 15388), (459, 15514), (465, 15529), (468, 15535), (484, 15571), (486, 15574), (492, 15586), (494, 15592), (511, 15640), (515, 15652), (521, 15658), (564, 15718), (568, 15730), (583, 15766), (587, 15778), (614, 15853), (618, 15862), (625, 15880), (627, 15886), (638, 15916), (710, 16021), (717, 16030), (720, 16033), (737, 16069), (761, 16147), (791, 16246), (799, 16267), (810, 16300), (826, 16330), (836, 16360), (841, 16369), (844, 16375), (860, 16390), (861, 16393), (866, 16417), (877, 16447), (882, 16459), (887, 16489), (900, 16531),

Gene: SaturnRing\_27 Start: 19904, Stop: 21700, Start Num: 144

Candidate Starts for SaturnRing\_27:

(Start: 144 @19904 has 603 MA's), (Start: 190 @19961 has 1 MA's), (230, 20030), (272, 20132), (277, 20144), (278, 20147), (306, 20222), (315, 20237), (338, 20276), (384, 20411), (417, 20480), (481, 20594), (532, 20720), (583, 20834), (591, 20858), (597, 20876), (636, 20957), (665, 21032), (668, 21050), (670, 21059), (675, 21083), (677, 21089), (682, 21104), (703, 21137), (729, 21182), (731, 21185), (742, 21206), (746, 21218), (749, 21224), (763, 21281), (813, 21431), (825, 21455), (860, 21536), (862, 21542), (900, 21677),

Gene: Savage\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Savage\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Savbucketdawg\_31 Start: 25640, Stop: 27406, Start Num: 97

Candidate Starts for Savbucketdawg\_31:

(80, 25598), (Start: 97 @25640 has 73 MA's), (Start: 121 @25676 has 1 MA's), (Start: 148 @25709 has 14 MA's), (264, 25919), (265, 25922), (277, 25952), (298, 26018), (306, 26042), (311, 26051), (331, 26084), (386, 26237), (406, 26276), (445, 26327), (451, 26339), (458, 26357), (460, 26369), (465, 26381), (472, 26396), (487, 26426), (489, 26429), (499, 26450), (547, 26522), (568, 26570), (613, 26681), (632, 26714), (647, 26753), (649, 26756), (670, 26828), (707, 26894), (715, 26906), (793, 27077), (797, 27089), (799, 27095), (810, 27128), (824, 27155), (832, 27182), (860, 27236), (891, 27353), (897, 27374), (909, 27401),

Gene: Scamp\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Scamp\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Scarlett\_22 Start: 16390, Stop: 18159, Start Num: 109

Candidate Starts for Scarlett\_22:

(Start: 93 @16360 has 1 MA's), (Start: 109 @16390 has 26 MA's), (Start: 112 @16396 has 41 MA's), (140, 16423), (159, 16450), (230, 16564), (248, 16615), (272, 16678), (316, 16780), (321, 16786),

(347, 16858), (360, 16894), (362, 16903), (378, 16942), (393, 16990), (400, 17008), (423, 17047), (424, 17050), (438, 17065), (444, 17077), (448, 17083), (465, 17125), (468, 17131), (481, 17158), (564, 17296), (572, 17314), (577, 17326), (603, 17404), (636, 17476), (641, 17488), (655, 17536), (698, 17611), (748, 17695), (756, 17728), (758, 17734), (768, 17761), (793, 17845), (795, 17851), (810, 17896), (813, 17902), (863, 17995), (890, 18091), (913, 18151),

Gene: Schatzie\_34 Start: 26625, Stop: 28358, Start Num: 124

Candidate Starts for Schatzie\_34:

(Start: 124 @26625 has 30 MA's), (Start: 191 @26715 has 45 MA's), (222, 26763), (233, 26793), (243, 26820), (282, 26922), (301, 26952), (346, 27051), (358, 27087), (360, 27093), (368, 27114), (392, 27186), (395, 27195), (403, 27216), (448, 27285), (468, 27324), (470, 27327), (475, 27342), (494, 27381), (511, 27429), (515, 27441), (521, 27447), (552, 27495), (558, 27504), (565, 27525), (573, 27543), (590, 27591), (625, 27693), (647, 27753), (653, 27765), (725, 27849), (731, 27861), (735, 27867), (740, 27879), (742, 27882), (753, 27921), (758, 27939), (772, 27975), (773, 27981), (799, 28068), (834, 28158), (863, 28200), (868, 28218), (878, 28248), (888, 28290), (907, 28344),

Gene: Scherzo\_30 Start: 21782, Stop: 23572, Start Num: 144

Candidate Starts for Scherzo\_30:

(Start: 141 @21779 has 14 MA's), (Start: 144 @21782 has 603 MA's), (277, 22016), (278, 22019), (305, 22091), (306, 22094), (315, 22109), (338, 22148), (341, 22154), (378, 22265), (417, 22352), (463, 22433), (467, 22436), (546, 22622), (576, 22685), (584, 22709), (586, 22715), (597, 22748), (636, 22829), (675, 22955), (693, 22997), (731, 23057), (746, 23090), (750, 23105), (781, 23204), (782, 23207), (784, 23219), (813, 23303), (842, 23369), (860, 23408), (862, 23414), (873, 23459), (890, 23516), (891, 23519),

Gene: Schiebel\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Schiebel\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Schmidt\_20 Start: 14705, Stop: 16033, Start Num: 257

Candidate Starts for Schmidt\_20:

(238, 14639), (245, 14663), (Start: 257 @14705 has 11 MA's), (304, 14813), (317, 14834), (335, 14867), (349, 14909), (364, 14954), (383, 15011), (388, 15029), (447, 15134), (508, 15173), (531, 15227), (536, 15236), (548, 15245), (580, 15290), (618, 15365), (621, 15374), (633, 15392), (653, 15446), (666, 15482), (729, 15578), (802, 15746), (812, 15773), (819, 15788), (849, 15839), (863, 15878), (867, 15893), (874, 15917), (881, 15932), (884, 15950), (902, 16016),

Gene: Schnabeltier\_19 Start: 16963, Stop: 18693, Start Num: 138

Candidate Starts for Schnabeltier\_19:

(72, 16846), (113, 16930), (Start: 121 @16942 has 1 MA's), (Start: 138 @16963 has 5 MA's), (243, 17134), (272, 17200), (281, 17233), (289, 17254), (368, 17446), (392, 17518), (414, 17560), (445, 17596), (458, 17626), (465, 17650), (485, 17692), (499, 17719), (537, 17776), (540, 17782), (579, 17869), (737, 18229), (747, 18253), (752, 18271), (793, 18367), (863, 18541), (864, 18544), (867, 18556), (888, 18631), (896, 18658),

Gene: Schnauzer\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Schnauzer\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's),  
(229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289),  
(348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523),  
(403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727),  
(511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979),  
(614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342),  
(834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: SchoolBus\_56 Start: 33469, Stop: 35205, Start Num: 107

Candidate Starts for SchoolBus\_56:

(Start: 100 @33460 has 2 MA's), (Start: 107 @33469 has 25 MA's), (174, 33559), (240, 33676), (251,  
33712), (259, 33733), (271, 33760), (274, 33766), (286, 33796), (302, 33820), (332, 33871), (381,  
34009), (383, 34015), (400, 34066), (402, 34069), (407, 34087), (459, 34138), (468, 34159), (470,  
34162), (492, 34210), (494, 34216), (511, 34264), (513, 34270), (515, 34276), (555, 34336), (564,  
34360), (565, 34363), (583, 34408), (588, 34423), (591, 34432), (594, 34441), (608, 34486), (618,  
34504), (631, 34537), (720, 34675), (729, 34696), (754, 34762), (762, 34792), (779, 34846), (791,  
34888), (799, 34909), (805, 34930), (810, 34942), (821, 34963), (844, 35017), (880, 35095), (887,  
35131), (893, 35152), (901, 35179),

Gene: SchottB\_33 Start: 30654, Stop: 32417, Start Num: 97

Candidate Starts for SchottB\_33:

(Start: 97 @30654 has 73 MA's), (Start: 121 @30690 has 1 MA's), (211, 30819), (219, 30828), (262,  
30924), (265, 30933), (288, 31002), (306, 31053), (311, 31062), (332, 31098), (341, 31113), (345,  
31131), (368, 31194), (384, 31239), (386, 31248), (454, 31359), (458, 31368), (461, 31383), (472,  
31407), (487, 31437), (597, 31659), (607, 31677), (613, 31692), (635, 31734), (636, 31737), (647,  
31764), (688, 31884), (793, 32088), (794, 32091), (810, 32139), (824, 32166), (832, 32193), (860,  
32247),

Gene: Schuy\_57 Start: 33260, Stop: 34996, Start Num: 107

Candidate Starts for Schuy\_57:

(Start: 100 @33251 has 2 MA's), (Start: 107 @33260 has 25 MA's), (174, 33350), (240, 33467), (251,  
33503), (259, 33524), (271, 33551), (274, 33557), (286, 33587), (302, 33611), (332, 33662), (381,  
33800), (383, 33806), (400, 33857), (402, 33860), (407, 33878), (459, 33929), (468, 33950), (470,  
33953), (492, 34001), (494, 34007), (511, 34055), (513, 34061), (515, 34067), (555, 34127), (564,  
34151), (565, 34154), (583, 34199), (588, 34214), (591, 34223), (594, 34232), (608, 34277), (618,  
34295), (631, 34328), (720, 34466), (729, 34487), (754, 34553), (762, 34583), (779, 34637), (791,  
34679), (799, 34700), (805, 34721), (810, 34733), (821, 34754), (844, 34808), (880, 34886), (887,  
34922), (893, 34943), (901, 34970),

Gene: Scioto\_35 Start: 30775, Stop: 32376, Start Num: 178

Candidate Starts for Scioto\_35:

(Start: 160 @30754 has 17 MA's), (178, 30775), (188, 30787), (219, 30838), (246, 30901), (277,  
30973), (312, 31060), (341, 31111), (348, 31141), (378, 31222), (386, 31249), (449, 31348), (460,  
31378), (464, 31387), (481, 31420), (482, 31423), (483, 31426), (489, 31435), (508, 31483), (547,  
31531), (551, 31540), (596, 31639), (609, 31678), (619, 31690), (665, 31807), (672, 31846), (711,  
31885), (746, 31942), (764, 31981), (769, 31990), (786, 32047), (790, 32059), (810, 32116), (813,  
32122), (824, 32143), (842, 32176), (863, 32221), (900, 32350), (902, 32359),

Gene: Scitech\_18 Start: 14986, Stop: 16695, Start Num: 126

Candidate Starts for Scitech\_18:

(Start: 126 @14986 has 42 MA's), (Start: 150 @15013 has 4 MA's), (Start: 227 @15118 has 2 MA's),  
(229, 15130), (241, 15166), (258, 15217), (271, 15247), (274, 15253), (284, 15280), (287, 15286),  
(348, 15406), (367, 15460), (370, 15466), (377, 15484), (381, 15496), (382, 15499), (388, 15520),



(403, 15562), (418, 15595), (459, 15646), (465, 15661), (484, 15703), (492, 15718), (494, 15724), (511, 15772), (525, 15796), (547, 15826), (564, 15850), (587, 15910), (591, 15922), (608, 15976), (614, 15985), (637, 16045), (638, 16048), (710, 16153), (717, 16162), (737, 16201), (781, 16339), (834, 16489), (836, 16492), (841, 16501), (860, 16522), (866, 16549), (880, 16585), (907, 16678),

Gene: Scorpia\_25 Start: 18949, Stop: 20748, Start Num: 144

Candidate Starts for Scorpia\_25:

(Start: 144 @18949 has 603 MA's), (278, 19186), (306, 19261), (315, 19276), (336, 19312), (360, 19384), (365, 19399), (378, 19432), (380, 19438), (481, 19633), (495, 19663), (499, 19669), (532, 19759), (553, 19804), (583, 19873), (597, 19915), (602, 19933), (635, 19993), (636, 19996), (668, 20089), (729, 20230), (746, 20266), (859, 20581), (862, 20590), (900, 20725),

Gene: Scottish\_17 Start: 16108, Stop: 17817, Start Num: 123

Candidate Starts for Scottish\_17:

(Start: 123 @16108 has 215 MA's), (193, 16195), (Start: 227 @16240 has 2 MA's), (233, 16264), (271, 16369), (274, 16375), (281, 16393), (300, 16423), (348, 16528), (370, 16588), (373, 16597), (381, 16618), (388, 16642), (402, 16678), (403, 16684), (418, 16717), (420, 16720), (424, 16729), (443, 16744), (448, 16750), (459, 16768), (465, 16783), (468, 16789), (475, 16807), (477, 16810), (484, 16825), (486, 16828), (492, 16840), (494, 16846), (511, 16894), (515, 16906), (521, 16912), (564, 16972), (568, 16984), (583, 17020), (587, 17032), (614, 17107), (618, 17116), (625, 17134), (627, 17140), (638, 17170), (710, 17275), (717, 17284), (720, 17287), (737, 17323), (761, 17401), (791, 17500), (799, 17521), (810, 17554), (826, 17584), (829, 17596), (836, 17614), (839, 17620), (841, 17623), (844, 17629), (860, 17644), (861, 17647), (865, 17668), (866, 17671), (882, 17713), (900, 17785), (901, 17791),

Gene: Scout\_27 Start: 19207, Stop: 21006, Start Num: 144

Candidate Starts for Scout\_27:

(Start: 144 @19207 has 603 MA's), (Start: 190 @19267 has 1 MA's), (230, 19336), (272, 19438), (277, 19450), (278, 19453), (306, 19528), (315, 19543), (318, 19546), (338, 19582), (384, 19717), (417, 19786), (481, 19900), (532, 20026), (583, 20140), (591, 20164), (595, 20176), (597, 20182), (636, 20263), (665, 20338), (668, 20356), (670, 20365), (675, 20389), (677, 20395), (682, 20410), (707, 20452), (726, 20479), (729, 20488), (731, 20491), (742, 20512), (746, 20524), (813, 20737), (860, 20842), (862, 20848), (900, 20983),

Gene: Scowl\_28 Start: 21803, Stop: 23605, Start Num: 146

Candidate Starts for Scowl\_28:

(Start: 146 @21803 has 223 MA's), (Start: 161 @21824 has 4 MA's), (Start: 190 @21866 has 1 MA's), (216, 21911), (306, 22127), (332, 22172), (338, 22181), (349, 22220), (368, 22271), (369, 22274), (406, 22367), (467, 22469), (500, 22538), (583, 22739), (584, 22742), (591, 22763), (635, 22859), (636, 22862), (638, 22868), (665, 22937), (668, 22955), (670, 22964), (677, 22994), (731, 23090), (746, 23123), (750, 23138), (793, 23279), (813, 23336), (862, 23447),

Gene: Seabastian\_16 Start: 15041, Stop: 16750, Start Num: 123

Candidate Starts for Seabastian\_16:

(Start: 123 @15041 has 215 MA's), (193, 15128), (209, 15149), (Start: 227 @15173 has 2 MA's), (233, 15197), (240, 15218), (271, 15302), (274, 15308), (281, 15326), (300, 15356), (348, 15461), (367, 15515), (370, 15521), (377, 15539), (378, 15542), (381, 15551), (388, 15575), (418, 15650), (424, 15662), (443, 15677), (448, 15683), (459, 15701), (465, 15716), (468, 15722), (480, 15749), (484, 15758), (492, 15773), (494, 15779), (511, 15827), (515, 15839), (521, 15845), (564, 15905), (568, 15917), (583, 15953), (587, 15965), (594, 15986), (614, 16040), (618, 16049), (625, 16067), (627, 16073), (638, 16103), (710, 16208), (717, 16217), (720, 16220), (737, 16256), (751, 16295), (761, 16334), (799, 16454), (810, 16487), (826, 16517), (836, 16547), (841, 16556), (844, 16562), (860, 16577), (861, 16580), (865, 16601), (866, 16604), (880, 16640), (882, 16646), (887, 16676), (900,

16718),

Gene: Seabiscuit\_29 Start: 21127, Stop: 22929, Start Num: 146

Candidate Starts for Seabiscuit\_29:

(Start: 146 @21127 has 223 MA's), (Start: 161 @21148 has 4 MA's), (Start: 190 @21190 has 1 MA's), (216, 21235), (306, 21451), (332, 21496), (338, 21505), (349, 21544), (368, 21595), (369, 21598), (467, 21793), (500, 21862), (583, 22063), (584, 22066), (591, 22087), (635, 22183), (636, 22186), (638, 22192), (665, 22261), (668, 22279), (670, 22288), (677, 22318), (731, 22414), (746, 22447), (750, 22462), (793, 22603), (813, 22660), (862, 22771),

Gene: Seagreen\_17 Start: 14650, Stop: 16359, Start Num: 123

Candidate Starts for Seagreen\_17:

(Start: 123 @14650 has 215 MA's), (193, 14737), (Start: 227 @14782 has 2 MA's), (233, 14806), (240, 14827), (271, 14911), (274, 14917), (281, 14935), (300, 14965), (348, 15070), (370, 15130), (373, 15139), (377, 15148), (378, 15151), (381, 15160), (386, 15178), (388, 15184), (459, 15310), (465, 15325), (468, 15331), (484, 15367), (486, 15370), (492, 15382), (494, 15388), (511, 15436), (515, 15448), (521, 15454), (564, 15514), (568, 15526), (583, 15562), (587, 15574), (614, 15649), (618, 15658), (625, 15676), (627, 15682), (638, 15712), (710, 15817), (717, 15826), (720, 15829), (737, 15865), (758, 15931), (761, 15943), (791, 16042), (799, 16063), (810, 16096), (826, 16126), (836, 16156), (841, 16165), (844, 16171), (860, 16186), (861, 16189), (866, 16213), (877, 16243), (882, 16255), (887, 16285), (900, 16327),

Gene: Seanderson\_28 Start: 21601, Stop: 23403, Start Num: 146

Candidate Starts for Seanderson\_28:

(Start: 146 @21601 has 223 MA's), (Start: 161 @21622 has 4 MA's), (Start: 190 @21664 has 1 MA's), (216, 21709), (306, 21925), (332, 21970), (338, 21979), (349, 22018), (368, 22069), (369, 22072), (467, 22267), (500, 22336), (583, 22537), (584, 22540), (591, 22561), (635, 22657), (636, 22660), (638, 22666), (665, 22735), (668, 22753), (670, 22762), (677, 22792), (731, 22888), (746, 22921), (750, 22936), (758, 22966), (793, 23077), (813, 23134), (862, 23245),

Gene: Sedona\_35 Start: 31913, Stop: 33676, Start Num: 97

Candidate Starts for Sedona\_35:

(90, 31895), (Start: 97 @31913 has 73 MA's), (Start: 121 @31949 has 1 MA's), (219, 32087), (262, 32183), (265, 32192), (288, 32261), (306, 32312), (332, 32357), (341, 32372), (368, 32453), (384, 32498), (386, 32507), (445, 32597), (458, 32627), (461, 32642), (472, 32666), (487, 32696), (551, 32801), (597, 32918), (607, 32936), (613, 32951), (631, 32981), (635, 32993), (636, 32996), (647, 33023), (791, 33344), (793, 33347), (794, 33350), (810, 33398), (824, 33425), (832, 33452), (860, 33506), (865, 33530), (866, 33533), (891, 33623), (909, 33671),

Gene: Sekhmet\_20 Start: 17697, Stop: 19277, Start Num: 170

Candidate Starts for Sekhmet\_20:

(88, 17580), (Start: 170 @17697 has 87 MA's), (298, 17955), (307, 17976), (340, 18030), (351, 18069), (369, 18126), (377, 18147), (501, 18318), (507, 18336), (514, 18360), (521, 18381), (554, 18423), (592, 18504), (636, 18594), (669, 18696), (670, 18699), (687, 18753), (778, 18891), (823, 19023), (863, 19122), (865, 19131), (874, 19161),

Gene: SemperFi\_30 Start: 20535, Stop: 22307, Start Num: 144

Candidate Starts for SemperFi\_30:

(94, 20469), (Start: 123 @20511 has 215 MA's), (Start: 144 @20535 has 603 MA's), (219, 20634), (251, 20718), (277, 20769), (278, 20772), (305, 20844), (306, 20847), (338, 20901), (349, 20940), (365, 20985), (378, 21018), (417, 21105), (463, 21186), (467, 21189), (584, 21462), (675, 21708), (713, 21762), (746, 21825), (750, 21840), (752, 21846), (770, 21900), (781, 21939), (784, 21954), (813, 22038), (851, 22119), (862, 22149), (900, 22284),

Gene: Serenity\_27 Start: 19141, Stop: 20931, Start Num: 144

Candidate Starts for Serenity\_27:

(Start: 123 @19117 has 215 MA's), (Start: 144 @19141 has 603 MA's), (242, 19294), (277, 19375), (278, 19378), (305, 19450), (306, 19453), (338, 19507), (341, 19513), (345, 19531), (365, 19591), (378, 19624), (380, 19630), (392, 19669), (417, 19711), (463, 19792), (467, 19795), (495, 19855), (546, 19981), (583, 20065), (597, 20107), (619, 20158), (636, 20188), (675, 20314), (707, 20377), (746, 20449), (750, 20464), (756, 20488), (781, 20563), (784, 20578), (813, 20662), (860, 20767), (862, 20773), (865, 20791), (873, 20818), (877, 20827),

Gene: Severus\_26 Start: 17888, Stop: 19666, Start Num: 144

Candidate Starts for Severus\_26:

(Start: 123 @17864 has 215 MA's), (Start: 144 @17888 has 603 MA's), (Start: 190 @17945 has 1 MA's), (197, 17960), (230, 18014), (277, 18128), (278, 18131), (306, 18206), (330, 18245), (378, 18377), (417, 18464), (460, 18539), (481, 18578), (500, 18617), (532, 18704), (553, 18749), (583, 18818), (591, 18842), (595, 18854), (597, 18860), (668, 19034), (670, 19043), (675, 19067), (677, 19073), (682, 19088), (713, 19121), (742, 19172), (758, 19229), (759, 19235), (813, 19397), (860, 19502), (862, 19508), (863, 19517), (900, 19643),

Gene: SgtBeansprout\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for SgtBeansprout\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499, 17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: ShaboiShabazz\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for ShaboiShabazz\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Shadow1\_21 Start: 16214, Stop: 17980, Start Num: 114

Candidate Starts for Shadow1\_21:

(Start: 109 @16205 has 26 MA's), (Start: 114 @16214 has 139 MA's), (140, 16244), (Start: 227 @16370 has 2 MA's), (230, 16385), (236, 16403), (248, 16436), (258, 16466), (278, 16511), (316, 16601), (334, 16637), (362, 16724), (400, 16829), (403, 16832), (444, 16898), (448, 16904), (465, 16946), (468, 16952), (572, 17135), (593, 17195), (636, 17297), (641, 17309), (655, 17357), (698, 17432), (708, 17456), (748, 17516), (757, 17552), (768, 17582), (793, 17666), (810, 17717), (813, 17723), (863, 17816), (901, 17951), (902, 17954), (913, 17972),

Gene: Shaka\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Shaka\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (356, 20256), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756,

21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Sham4\_28 Start: 20752, Stop: 22551, Start Num: 144

Candidate Starts for Sham4\_28:

(94, 20686), (Start: 123 @20728 has 215 MA's), (Start: 144 @20752 has 603 MA's), (183, 20794), (236, 20890), (242, 20905), (277, 20986), (278, 20989), (306, 21064), (315, 21079), (338, 21118), (341, 21124), (356, 21175), (378, 21235), (380, 21241), (417, 21322), (467, 21406), (518, 21532), (526, 21550), (540, 21577), (597, 21718), (631, 21784), (635, 21796), (636, 21799), (703, 21988), (721, 22015), (726, 22024), (736, 22045), (737, 22048), (746, 22069), (750, 22084), (756, 22108), (781, 22183), (784, 22198), (813, 22282), (860, 22387), (862, 22393), (877, 22447), (909, 22546),

Gene: ShamWow\_24 Start: 19746, Stop: 21425, Start Num: 129

Candidate Starts for ShamWow\_24:

(Start: 129 @19746 has 79 MA's), (Start: 191 @19830 has 45 MA's), (Start: 235 @19908 has 1 MA's), (268, 19995), (274, 20010), (300, 20058), (324, 20097), (356, 20184), (368, 20217), (381, 20253), (390, 20283), (392, 20289), (422, 20358), (461, 20388), (466, 20400), (468, 20403), (494, 20460), (565, 20592), (567, 20598), (592, 20664), (594, 20670), (601, 20694), (618, 20742), (627, 20766), (631, 20775), (658, 20850), (717, 20901), (725, 20916), (782, 21078), (788, 21105), (799, 21135), (843, 21240), (880, 21318), (887, 21354), (890, 21363), (900, 21396), (907, 21411),

Gene: Shaobing\_23 Start: 16514, Stop: 18280, Start Num: 114

Candidate Starts for Shaobing\_23:

(Start: 109 @16505 has 26 MA's), (Start: 114 @16514 has 139 MA's), (Start: 117 @16520 has 59 MA's), (140, 16544), (Start: 168 @16583 has 32 MA's), (Start: 227 @16670 has 2 MA's), (230, 16685), (236, 16703), (248, 16736), (258, 16766), (316, 16901), (334, 16937), (360, 17015), (362, 17024), (400, 17129), (403, 17132), (424, 17171), (444, 17198), (448, 17204), (465, 17246), (468, 17252), (481, 17279), (564, 17417), (572, 17435), (603, 17525), (618, 17552), (632, 17585), (655, 17657), (670, 17711), (704, 17747), (719, 17771), (748, 17816), (756, 17849), (760, 17864), (768, 17882), (772, 17891), (793, 17966), (810, 18017), (813, 18023), (865, 18125), (901, 18251), (902, 18254), (913, 18272),

Gene: Shapes\_31 Start: 19855, Stop: 21633, Start Num: 144

Candidate Starts for Shapes\_31:

(Start: 144 @19855 has 603 MA's), (Start: 190 @19912 has 1 MA's), (197, 19927), (219, 19960), (230, 19981), (272, 20083), (277, 20095), (278, 20098), (306, 20173), (315, 20188), (338, 20227), (378, 20344), (384, 20362), (417, 20431), (453, 20485), (460, 20506), (481, 20545), (500, 20584), (532, 20671), (553, 20716), (576, 20764), (583, 20785), (591, 20809), (595, 20821), (597, 20827), (636, 20908), (668, 21001), (670, 21010), (675, 21034), (677, 21040), (682, 21055), (713, 21088), (742, 21139), (749, 21157), (759, 21202), (813, 21364), (825, 21388), (827, 21394), (860, 21469), (862, 21475), (863, 21484), (880, 21535), (900, 21610),

Gene: Shauna1\_16 Start: 14859, Stop: 16568, Start Num: 123

Candidate Starts for Shauna1\_16:

(Start: 123 @14859 has 215 MA's), (193, 14946), (Start: 227 @14991 has 2 MA's), (233, 15015), (271, 15120), (274, 15126), (281, 15144), (300, 15174), (348, 15279), (370, 15339), (378, 15360), (381, 15369), (388, 15393), (418, 15468), (420, 15471), (459, 15519), (465, 15534), (468, 15540), (484, 15576), (486, 15579), (492, 15591), (494, 15597), (511, 15645), (515, 15657), (521, 15663), (564, 15723), (568, 15735), (583, 15771), (587, 15783), (614, 15858), (618, 15867), (625, 15885), (627, 15891), (638, 15921), (710, 16026), (717, 16035), (720, 16038), (737, 16074), (761, 16152), (791, 16251), (799, 16272), (810, 16305), (826, 16335), (836, 16365), (841, 16374), (844, 16380), (860, 16395), (861, 16398), (866, 16422), (877, 16452), (882, 16464), (887, 16494), (900, 16536),

Gene: ShayRa\_31 Start: 19215, Stop: 21002, Start Num: 144

Candidate Starts for ShayRa\_31:

(94, 19149), (Start: 123 @19191 has 215 MA's), (Start: 144 @19215 has 603 MA's), (236, 19353), (262, 19410), (278, 19452), (292, 19488), (306, 19527), (343, 19596), (349, 19620), (369, 19674), (448, 19824), (467, 19869), (481, 19899), (499, 19935), (515, 19986), (530, 20022), (553, 20070), (580, 20130), (635, 20259), (665, 20337), (750, 20538), (752, 20544), (782, 20640), (845, 20805), (880, 20904),

Gene: SheaKeira\_28 Start: 19728, Stop: 21518, Start Num: 144

Candidate Starts for SheaKeira\_28:

(94, 19662), (Start: 123 @19704 has 215 MA's), (Start: 144 @19728 has 603 MA's), (277, 19962), (278, 19965), (305, 20037), (306, 20040), (315, 20055), (318, 20058), (338, 20094), (341, 20100), (368, 20184), (378, 20211), (380, 20217), (417, 20298), (460, 20373), (463, 20379), (467, 20382), (495, 20442), (500, 20451), (576, 20631), (597, 20694), (619, 20745), (636, 20775), (644, 20793), (675, 20901), (731, 21003), (736, 21012), (750, 21051), (756, 21075), (781, 21150), (784, 21165), (813, 21249), (860, 21354), (862, 21360), (890, 21462),

Gene: SheckWes\_17 Start: 15415, Stop: 17109, Start Num: 144

Candidate Starts for SheckWes\_17:

(Start: 133 @15412 has 8 MA's), (Start: 144 @15415 has 603 MA's), (214, 15514), (236, 15556), (243, 15577), (288, 15694), (336, 15796), (365, 15883), (377, 15913), (385, 15940), (406, 15985), (417, 16003), (436, 16018), (444, 16033), (465, 16090), (481, 16123), (487, 16135), (539, 16222), (546, 16240), (560, 16270), (574, 16300), (580, 16315), (596, 16363), (617, 16414), (636, 16450), (643, 16465), (650, 16483), (668, 16540), (747, 16669), (750, 16681), (791, 16780), (793, 16783), (799, 16801), (829, 16879), (842, 16906), (862, 16948), (902, 17095), (907, 17101),

Gene: ShedlockHolmes\_22 Start: 17576, Stop: 19339, Start Num: 114

Candidate Starts for ShedlockHolmes\_22:

(Start: 109 @17567 has 26 MA's), (Start: 114 @17576 has 139 MA's), (Start: 135 @17588 has 7 MA's), (196, 17678), (230, 17735), (248, 17786), (258, 17816), (269, 17840), (360, 18071), (362, 18080), (368, 18092), (395, 18173), (400, 18185), (403, 18188), (448, 18260), (451, 18269), (465, 18302), (468, 18308), (487, 18347), (503, 18383), (564, 18473), (588, 18536), (598, 18566), (622, 18623), (655, 18716), (741, 18854), (748, 18872), (760, 18920), (771, 18944), (778, 18971), (795, 19028), (810, 19073), (863, 19175), (887, 19262), (890, 19271), (896, 19292), (901, 19310), (904, 19316), (913, 19331),

Gene: Sheen\_29 Start: 22979, Stop: 24781, Start Num: 144

Candidate Starts for Sheen\_29:

(Start: 132 @22967 has 45 MA's), (Start: 144 @22979 has 603 MA's), (Start: 190 @23027 has 1 MA's), (198, 23045), (277, 23210), (278, 23213), (306, 23288), (315, 23303), (338, 23342), (380, 23465), (382, 23471), (392, 23504), (417, 23546), (495, 23690), (547, 23816), (583, 23897), (597, 23939), (615, 23987), (635, 24035), (636, 24038), (665, 24113), (668, 24131), (670, 24140), (675, 24164), (677, 24170), (729, 24263), (731, 24266), (746, 24299), (750, 24314), (793, 24455), (851, 24593), (860, 24617), (862, 24623), (891, 24728),

Gene: SheldonCooper\_28 Start: 20139, Stop: 21920, Start Num: 144

Candidate Starts for SheldonCooper\_28:

(Start: 123 @20115 has 215 MA's), (Start: 144 @20139 has 603 MA's), (Start: 148 @20145 has 14 MA's), (Start: 190 @20199 has 1 MA's), (197, 20214), (230, 20268), (236, 20286), (272, 20370), (277, 20382), (278, 20385), (306, 20460), (315, 20475), (338, 20514), (378, 20631), (417, 20718), (463, 20799), (489, 20847), (500, 20871), (532, 20958), (553, 21003), (584, 21075), (591, 21096), (597, 21114), (636, 21195), (665, 21270), (668, 21288), (670, 21297), (675, 21321), (677, 21327), (687, 21351), (726, 21393), (731, 21405), (742, 21426), (756, 21477), (763, 21501), (782, 21555), (813,

21651), (860, 21756), (863, 21771), (894, 21879), (900, 21897),

Gene: ShereKhan\_26 Start: 20729, Stop: 22408, Start Num: 129

Candidate Starts for ShereKhan\_26:

(Start: 129 @20729 has 79 MA's), (Start: 191 @20813 has 45 MA's), (Start: 235 @20891 has 1 MA's), (268, 20978), (274, 20993), (300, 21041), (324, 21080), (356, 21167), (368, 21200), (381, 21236), (390, 21266), (392, 21272), (422, 21341), (461, 21371), (466, 21383), (468, 21386), (494, 21443), (565, 21575), (567, 21581), (592, 21647), (594, 21653), (601, 21677), (618, 21725), (627, 21749), (631, 21758), (658, 21833), (717, 21884), (725, 21899), (782, 22061), (788, 22088), (799, 22118), (843, 22223), (880, 22301), (887, 22337), (890, 22346), (900, 22379), (907, 22394),

Gene: ShiLan\_16 Start: 14812, Stop: 16521, Start Num: 123

Candidate Starts for ShiLan\_16:

(Start: 123 @14812 has 215 MA's), (193, 14899), (Start: 227 @14944 has 2 MA's), (233, 14968), (271, 15073), (274, 15079), (281, 15097), (300, 15127), (348, 15232), (367, 15286), (370, 15292), (373, 15301), (381, 15322), (388, 15346), (402, 15382), (403, 15388), (418, 15421), (420, 15424), (424, 15433), (443, 15448), (448, 15454), (459, 15472), (465, 15487), (468, 15493), (475, 15511), (477, 15514), (484, 15529), (492, 15544), (494, 15550), (511, 15598), (515, 15610), (521, 15616), (564, 15676), (568, 15688), (583, 15724), (587, 15736), (614, 15811), (618, 15820), (625, 15838), (627, 15844), (638, 15874), (710, 15979), (720, 15991), (737, 16027), (761, 16105), (799, 16225), (810, 16258), (826, 16288), (829, 16300), (836, 16318), (839, 16324), (841, 16327), (844, 16333), (860, 16348), (861, 16351), (865, 16372), (866, 16375), (882, 16417), (887, 16447), (900, 16489), (901, 16495),

Gene: ShiaSurprise\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for ShiaSurprise\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Shida\_56 Start: 33167, Stop: 34903, Start Num: 107

Candidate Starts for Shida\_56:

(Start: 100 @33158 has 2 MA's), (Start: 107 @33167 has 25 MA's), (174, 33257), (240, 33374), (251, 33410), (259, 33431), (271, 33458), (274, 33464), (286, 33494), (302, 33518), (332, 33569), (381, 33707), (383, 33713), (400, 33764), (402, 33767), (407, 33785), (459, 33836), (468, 33857), (470, 33860), (492, 33908), (494, 33914), (511, 33962), (513, 33968), (515, 33974), (555, 34034), (564, 34058), (565, 34061), (583, 34106), (588, 34121), (591, 34130), (594, 34139), (608, 34184), (618, 34202), (631, 34235), (720, 34373), (729, 34394), (754, 34460), (762, 34490), (779, 34544), (791, 34586), (799, 34607), (805, 34628), (810, 34640), (821, 34661), (844, 34715), (880, 34793), (887, 34829), (893, 34850), (901, 34877),

Gene: Shinji\_31 Start: 25793, Stop: 27601, Start Num: 80

Candidate Starts for Shinji\_31:

(80, 25793), (Start: 97 @25835 has 73 MA's), (Start: 121 @25871 has 1 MA's), (Start: 148 @25904 has 14 MA's), (264, 26114), (265, 26117), (277, 26147), (298, 26213), (306, 26237), (311, 26246), (331, 26279), (386, 26432), (406, 26471), (445, 26522), (451, 26534), (458, 26552), (460, 26564), (465, 26576), (472, 26591), (487, 26621), (489, 26624), (499, 26645), (547, 26717), (568, 26765), (613, 26876), (632, 26909), (647, 26948), (649, 26951), (670, 27023), (707, 27089), (715, 27101), (793, 27272), (794, 27275), (810, 27323), (824, 27350), (832, 27377), (835, 27383), (860, 27431), (891, 27548), (897, 27569), (909, 27596),

Gene: Shipwreck\_18 Start: 16086, Stop: 17822, Start Num: 117

Candidate Starts for Shipwreck\_18:

(Start: 101 @16062 has 2 MA's), (Start: 117 @16086 has 59 MA's), (Start: 166 @16146 has 1 MA's),  
(178, 16167), (180, 16170), (246, 16290), (258, 16329), (272, 16362), (282, 16386), (344, 16506),  
(356, 16545), (358, 16551), (386, 16635), (388, 16641), (392, 16653), (402, 16677), (410, 16704),  
(422, 16722), (452, 16761), (459, 16767), (470, 16791), (494, 16845), (500, 16857), (503, 16866),  
(529, 16926), (573, 17004), (587, 17043), (598, 17076), (618, 17142), (624, 17157), (627, 17166),  
(636, 17190), (647, 17220), (653, 17232), (735, 17334), (740, 17346), (742, 17349), (745, 17355),  
(747, 17364), (779, 17472), (805, 17556), (853, 17655), (890, 17763), (907, 17811),

Gene: Shivanishola\_36 Start: 30875, Stop: 32638, Start Num: 97

Candidate Starts for Shivanishola\_36:

(90, 30857), (Start: 97 @30875 has 73 MA's), (Start: 121 @30911 has 1 MA's), (219, 31049), (262,  
31145), (265, 31154), (288, 31223), (306, 31274), (332, 31319), (341, 31334), (368, 31415), (384,  
31460), (386, 31469), (445, 31559), (458, 31589), (461, 31604), (472, 31628), (487, 31658), (551,  
31763), (597, 31880), (607, 31898), (613, 31913), (631, 31943), (635, 31955), (636, 31958), (647,  
31985), (793, 32309), (794, 32312), (810, 32360), (824, 32387), (832, 32414), (860, 32468), (866,  
32495), (902, 32624),

Gene: Shlim410\_20 Start: 17902, Stop: 19482, Start Num: 170

Candidate Starts for Shlim410\_20:

(88, 17785), (Start: 170 @17902 has 87 MA's), (298, 18160), (307, 18181), (340, 18235), (351,  
18274), (369, 18331), (377, 18352), (501, 18523), (507, 18541), (514, 18565), (521, 18586), (554,  
18628), (592, 18709), (636, 18799), (655, 18850), (669, 18901), (670, 18904), (687, 18958), (751,  
19048), (863, 19327), (865, 19336), (874, 19366),

Gene: ShortQueendom\_26 Start: 21062, Stop: 22843, Start Num: 161

Candidate Starts for ShortQueendom\_26:

(Start: 146 @21041 has 223 MA's), (Start: 161 @21062 has 4 MA's), (Start: 190 @21104 has 1 MA's),  
(216, 21149), (306, 21365), (332, 21410), (338, 21419), (349, 21458), (368, 21509), (369, 21512),  
(467, 21707), (500, 21776), (583, 21977), (584, 21980), (591, 22001), (635, 22097), (636, 22100),  
(638, 22106), (665, 22175), (668, 22193), (670, 22202), (677, 22232), (731, 22328), (746, 22361),  
(750, 22376), (793, 22517), (813, 22574), (862, 22685),

Gene: ShowerHandel\_16 Start: 14813, Stop: 16522, Start Num: 123

Candidate Starts for ShowerHandel\_16:

(Start: 123 @14813 has 215 MA's), (193, 14900), (Start: 227 @14945 has 2 MA's), (233, 14969), (271,  
15074), (274, 15080), (281, 15098), (300, 15128), (348, 15233), (367, 15287), (370, 15293), (373,  
15302), (381, 15323), (388, 15347), (402, 15383), (403, 15389), (418, 15422), (420, 15425), (424,  
15434), (443, 15449), (448, 15455), (459, 15473), (465, 15488), (468, 15494), (475, 15512), (477,  
15515), (484, 15530), (492, 15545), (494, 15551), (511, 15599), (515, 15611), (521, 15617), (564,  
15677), (568, 15689), (583, 15725), (587, 15737), (614, 15812), (618, 15821), (625, 15839), (627,  
15845), (638, 15875), (710, 15980), (720, 15992), (737, 16028), (761, 16106), (799, 16226), (810,  
16259), (826, 16289), (829, 16301), (836, 16319), (839, 16325), (841, 16328), (844, 16334), (860,  
16349), (861, 16352), (865, 16373), (866, 16376), (882, 16418), (887, 16448), (900, 16490), (901,  
16496),

Gene: ShrimpFriedEgg\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for ShrimpFriedEgg\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125  
has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274,  
15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388,

15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: ShroomBoi\_16 Start: 14841, Stop: 16550, Start Num: 123

Candidate Starts for ShroomBoi\_16:

(Start: 123 @14841 has 215 MA's), (193, 14928), (Start: 227 @14973 has 2 MA's), (233, 14997), (271, 15102), (274, 15108), (281, 15126), (300, 15156), (348, 15261), (370, 15321), (378, 15342), (381, 15351), (388, 15375), (459, 15501), (465, 15516), (468, 15522), (484, 15558), (486, 15561), (492, 15573), (494, 15579), (511, 15627), (515, 15639), (521, 15645), (564, 15705), (568, 15717), (583, 15753), (587, 15765), (614, 15840), (618, 15849), (625, 15867), (627, 15873), (638, 15903), (710, 16008), (717, 16017), (720, 16020), (737, 16056), (761, 16134), (791, 16233), (799, 16254), (810, 16287), (826, 16317), (836, 16347), (839, 16353), (841, 16356), (844, 16362), (860, 16377), (861, 16380), (865, 16401), (882, 16446), (887, 16476), (900, 16518), (901, 16524),

Gene: Shuman\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Shuman\_23:

(Start: 155 @16334 has 4 MA's), (Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (436, 16910), (444, 16925), (445, 16928), (460, 16967), (467, 16976), (505, 17060), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (678, 17453), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Shweta\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Shweta\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Shygu2\_27 Start: 19817, Stop: 21616, Start Num: 144

Candidate Starts for Shygu2\_27:

(Start: 123 @19793 has 215 MA's), (Start: 144 @19817 has 603 MA's), (Start: 148 @19823 has 14 MA's), (Start: 190 @19877 has 1 MA's), (230, 19946), (263, 20024), (272, 20048), (277, 20060), (278, 20063), (292, 20099), (306, 20138), (315, 20153), (338, 20192), (369, 20285), (378, 20309), (417, 20396), (500, 20549), (532, 20636), (553, 20681), (583, 20750), (591, 20774), (595, 20786), (636, 20873), (665, 20948), (668, 20966), (670, 20975), (675, 20999), (677, 21005), (682, 21020), (703, 21053), (729, 21098), (731, 21101), (742, 21122), (813, 21347), (849, 21425), (860, 21452), (862, 21458), (900, 21593),

Gene: SiSi\_16 Start: 14795, Stop: 16504, Start Num: 123

Candidate Starts for SiSi\_16:

(Start: 123 @14795 has 215 MA's), (193, 14882), (Start: 227 @14927 has 2 MA's), (233, 14951), (251, 15008), (271, 15056), (274, 15062), (281, 15080), (300, 15110), (348, 15215), (367, 15269), (370, 15275), (373, 15284), (378, 15296), (381, 15305), (388, 15329), (402, 15365), (403, 15371), (407, 15383), (418, 15404), (420, 15407), (424, 15416), (443, 15431), (448, 15437), (459, 15455), (465, 15470), (468, 15476), (475, 15494), (477, 15497), (484, 15512), (492, 15527), (494, 15533), (506,



15563), (511, 15581), (515, 15593), (521, 15599), (564, 15659), (568, 15671), (583, 15707), (587, 15719), (594, 15740), (614, 15794), (618, 15803), (627, 15827), (638, 15857), (710, 15962), (720, 15974), (737, 16010), (751, 16049), (761, 16088), (791, 16187), (799, 16208), (810, 16241), (826, 16271), (836, 16301), (841, 16310), (844, 16316), (860, 16331), (861, 16334), (865, 16355), (866, 16358), (882, 16400), (887, 16430), (900, 16472), (901, 16478),

Gene: Sibs6\_29 Start: 21686, Stop: 23488, Start Num: 146

Candidate Starts for Sibs6\_29:

(Start: 146 @21686 has 223 MA's), (Start: 161 @21707 has 4 MA's), (Start: 190 @21749 has 1 MA's), (216, 21794), (306, 22010), (332, 22055), (338, 22064), (349, 22103), (368, 22154), (369, 22157), (467, 22352), (500, 22421), (583, 22622), (584, 22625), (591, 22646), (635, 22742), (636, 22745), (638, 22751), (665, 22820), (668, 22838), (670, 22847), (677, 22877), (731, 22973), (746, 23006), (750, 23021), (793, 23162), (813, 23219), (862, 23330),

Gene: Sidious\_19 Start: 17289, Stop: 18887, Start Num: 170

Candidate Starts for Sidious\_19:

(53, 16992), (61, 17067), (64, 17088), (Start: 170 @17289 has 87 MA's), (248, 17409), (295, 17538), (298, 17547), (306, 17565), (307, 17568), (340, 17622), (385, 17766), (388, 17775), (415, 17838), (440, 17874), (441, 17877), (501, 17910), (519, 17967), (554, 18033), (603, 18144), (618, 18168), (636, 18204), (669, 18306), (687, 18363), (751, 18453), (849, 18693), (874, 18771),

Gene: Silvafighter\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Silvafighter\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Silvy\_18 Start: 14990, Stop: 16699, Start Num: 126

Candidate Starts for Silvy\_18:

(Start: 126 @14990 has 42 MA's), (Start: 150 @15017 has 4 MA's), (Start: 227 @15122 has 2 MA's), (229, 15134), (241, 15170), (258, 15221), (271, 15251), (274, 15257), (284, 15284), (287, 15290), (348, 15410), (367, 15464), (370, 15470), (377, 15488), (381, 15500), (382, 15503), (388, 15524), (403, 15566), (418, 15599), (459, 15650), (465, 15665), (484, 15707), (492, 15722), (494, 15728), (511, 15776), (525, 15800), (547, 15830), (564, 15854), (587, 15914), (591, 15926), (608, 15980), (614, 15989), (637, 16049), (638, 16052), (710, 16157), (717, 16166), (737, 16205), (781, 16343), (834, 16493), (836, 16496), (841, 16505), (860, 16526), (866, 16553), (880, 16589), (907, 16682),

Gene: Simpliphy\_25 Start: 19491, Stop: 21170, Start Num: 129

Candidate Starts for Simpliphy\_25:

(Start: 129 @19491 has 79 MA's), (Start: 191 @19575 has 45 MA's), (Start: 235 @19653 has 1 MA's), (268, 19740), (274, 19755), (300, 19803), (324, 19842), (356, 19929), (368, 19962), (381, 19998), (390, 20028), (392, 20034), (422, 20103), (461, 20133), (466, 20145), (468, 20148), (494, 20205), (565, 20337), (567, 20343), (592, 20409), (594, 20415), (601, 20439), (618, 20487), (627, 20511), (631, 20520), (658, 20595), (717, 20646), (725, 20661), (782, 20823), (788, 20850), (799, 20880), (843, 20985), (880, 21063), (887, 21099), (890, 21108), (900, 21141), (907, 21156),

Gene: SimranZ1\_17 Start: 14664, Stop: 16373, Start Num: 123

Candidate Starts for SimranZ1\_17:

(Start: 123 @14664 has 215 MA's), (193, 14751), (Start: 227 @14796 has 2 MA's), (233, 14820), (271, 14925), (274, 14931), (281, 14949), (300, 14979), (348, 15084), (370, 15144), (381, 15174), (388, 15198), (403, 15240), (418, 15273), (443, 15300), (459, 15324), (465, 15339), (468, 15345), (484, 15381), (486, 15384), (492, 15396), (494, 15402), (511, 15450), (515, 15462), (521, 15468), (564, 15528), (568, 15540), (583, 15576), (587, 15588), (594, 15609), (614, 15663), (618, 15672), (625, 15690), (627, 15696), (638, 15726), (710, 15831), (717, 15840), (720, 15843), (737, 15879), (751, 15918), (761, 15957), (791, 16056), (799, 16077), (810, 16110), (826, 16140), (836, 16170), (839, 16176), (841, 16179), (844, 16185), (860, 16200), (861, 16203), (866, 16227), (882, 16269), (900, 16341),

Gene: SirDuracell\_23 Start: 18412, Stop: 20091, Start Num: 129

Candidate Starts for SirDuracell\_23:

(Start: 129 @18412 has 79 MA's), (Start: 191 @18496 has 45 MA's), (Start: 235 @18574 has 1 MA's), (268, 18661), (274, 18676), (300, 18724), (324, 18763), (356, 18850), (368, 18883), (381, 18919), (390, 18949), (392, 18955), (422, 19024), (461, 19054), (466, 19066), (468, 19069), (494, 19126), (565, 19258), (567, 19264), (592, 19330), (594, 19336), (601, 19360), (618, 19408), (627, 19432), (631, 19441), (658, 19516), (717, 19567), (725, 19582), (782, 19744), (788, 19771), (799, 19801), (843, 19906), (880, 19984), (887, 20020), (890, 20029), (900, 20062), (907, 20077),

Gene: SirPhilip\_22 Start: 16001, Stop: 17767, Start Num: 114

Candidate Starts for SirPhilip\_22:

(Start: 93 @15962 has 1 MA's), (Start: 109 @15992 has 26 MA's), (Start: 114 @16001 has 139 MA's), (140, 16031), (159, 16058), (230, 16172), (236, 16190), (248, 16223), (258, 16253), (272, 16286), (316, 16388), (337, 16430), (362, 16511), (395, 16604), (400, 16616), (403, 16619), (423, 16655), (424, 16658), (438, 16673), (444, 16685), (448, 16691), (465, 16733), (468, 16739), (481, 16766), (499, 16802), (564, 16904), (572, 16922), (593, 16982), (603, 17012), (636, 17084), (641, 17096), (714, 17252), (748, 17303), (768, 17369), (772, 17378), (788, 17441), (793, 17453), (810, 17504), (863, 17603), (880, 17654), (902, 17741), (913, 17759),

Gene: Sitar\_35 Start: 31965, Stop: 33728, Start Num: 97

Candidate Starts for Sitar\_35:

(90, 31947), (Start: 97 @31965 has 73 MA's), (Start: 121 @32001 has 1 MA's), (219, 32139), (262, 32235), (265, 32244), (288, 32313), (306, 32364), (332, 32409), (341, 32424), (368, 32505), (384, 32550), (386, 32559), (445, 32649), (458, 32679), (461, 32694), (472, 32718), (487, 32748), (551, 32853), (597, 32970), (607, 32988), (613, 33003), (631, 33033), (635, 33045), (636, 33048), (647, 33075), (793, 33399), (794, 33402), (810, 33450), (824, 33477), (832, 33504), (860, 33558), (866, 33585), (909, 33723),

Gene: Sixama\_99 Start: 59417, Stop: 61093, Start Num: 116

Candidate Starts for Sixama\_99:

(Start: 116 @59417 has 1 MA's), (Start: 144 @59450 has 603 MA's), (236, 59600), (237, 59603), (250, 59636), (265, 59666), (267, 59669), (355, 59879), (365, 59909), (381, 59951), (385, 59966), (386, 59969), (445, 60065), (460, 60101), (643, 60461), (653, 60497), (679, 60593), (713, 60611), (731, 60635), (769, 60713), (867, 60953), (900, 61067), (907, 61082),

Gene: Sizemore\_18 Start: 16641, Stop: 18404, Start Num: 109

Candidate Starts for Sizemore\_18:

(Start: 109 @16641 has 26 MA's), (Start: 132 @16650 has 45 MA's), (Start: 137 @16656 has 2 MA's), (143, 16662), (230, 16794), (248, 16845), (258, 16875), (269, 16899), (309, 17001), (331, 17040), (334, 17046), (341, 17061), (353, 17106), (395, 17226), (425, 17283), (448, 17322), (468, 17370), (481, 17397), (487, 17409), (522, 17490), (564, 17535), (641, 17733), (649, 17763), (655, 17781), (665, 17808), (716, 17892), (730, 17910), (743, 17925), (756, 17973), (760, 17988), (782, 18051), (799, 18108), (813, 18147), (831, 18189), (863, 18240), (890, 18336), (913, 18396),

Gene: SketchMex\_17 Start: 15377, Stop: 17077, Start Num: 133

Candidate Starts for SketchMex\_17:

(113, 15350), (Start: 133 @15377 has 8 MA's), (Start: 144 @15380 has 603 MA's), (264, 15590), (332, 15758), (336, 15764), (374, 15872), (377, 15881), (385, 15908), (395, 15938), (406, 15953), (436, 15986), (442, 15998), (458, 16034), (481, 16091), (487, 16103), (574, 16268), (636, 16418), (643, 16433), (650, 16451), (668, 16508), (747, 16637), (750, 16649), (755, 16667), (766, 16676), (791, 16748), (793, 16751), (795, 16757), (799, 16769), (842, 16874), (847, 16883), (862, 16916),

Gene: SkiPole\_29 Start: 21425, Stop: 23227, Start Num: 146

Candidate Starts for SkiPole\_29:

(Start: 146 @21425 has 223 MA's), (Start: 161 @21446 has 4 MA's), (Start: 190 @21488 has 1 MA's), (216, 21533), (306, 21749), (332, 21794), (338, 21803), (368, 21893), (369, 21896), (406, 21989), (467, 22091), (500, 22160), (579, 22349), (583, 22361), (584, 22364), (591, 22385), (635, 22481), (636, 22484), (638, 22490), (665, 22559), (668, 22577), (670, 22586), (677, 22616), (731, 22712), (746, 22745), (750, 22760), (793, 22901), (813, 22958), (862, 23069), (909, 23222),

Gene: SkinnyPete\_18 Start: 14990, Stop: 16699, Start Num: 126

Candidate Starts for SkinnyPete\_18:

(Start: 126 @14990 has 42 MA's), (Start: 150 @15017 has 4 MA's), (178, 15056), (Start: 227 @15122 has 2 MA's), (229, 15134), (241, 15170), (250, 15194), (258, 15221), (268, 15242), (271, 15251), (274, 15257), (287, 15290), (367, 15464), (370, 15470), (373, 15479), (377, 15488), (381, 15500), (388, 15524), (403, 15566), (418, 15599), (459, 15650), (460, 15653), (465, 15665), (484, 15707), (492, 15722), (494, 15728), (511, 15776), (547, 15830), (564, 15854), (591, 15926), (608, 15980), (614, 15989), (618, 15998), (627, 16022), (637, 16049), (638, 16052), (710, 16157), (717, 16166), (737, 16205), (762, 16286), (781, 16343), (791, 16382), (836, 16496), (860, 16526), (861, 16529), (866, 16553), (880, 16589),

Gene: Skipitt\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for Skipitt\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Skysand\_43 Start: 30914, Stop: 32536, Start Num: 170

Candidate Starts for Skysand\_43:

(Start: 170 @30914 has 87 MA's), (236, 31031), (263, 31109), (340, 31271), (343, 31283), (347, 31298), (372, 31364), (377, 31379), (432, 31490), (449, 31520), (450, 31523), (493, 31580), (518, 31652), (560, 31736), (571, 31757), (607, 31844), (635, 31892), (673, 32018), (674, 32021), (688, 32054), (749, 32111), (799, 32240), (812, 32279), (866, 32384), (885, 32447), (887, 32459), (891, 32471), (893, 32480), (906, 32516),

Gene: Slagathor\_28 Start: 21029, Stop: 22831, Start Num: 146

Candidate Starts for Slagathor\_28:

(Start: 146 @21029 has 223 MA's), (Start: 161 @21050 has 4 MA's), (Start: 190 @21092 has 1 MA's), (216, 21137), (306, 21353), (332, 21398), (338, 21407), (349, 21446), (368, 21497), (369, 21500), (467, 21695), (500, 21764), (519, 21824), (525, 21836), (583, 21965), (584, 21968), (591, 21989), (635, 22085), (636, 22088), (638, 22094), (665, 22163), (668, 22181), (670, 22190), (677, 22220), (731, 22316), (746, 22349), (750, 22364), (793, 22505), (813, 22562), (862, 22673),

Gene: Slarp\_24 Start: 18633, Stop: 20420, Start Num: 114

Candidate Starts for Slarp\_24:

(Start: 93 @18594 has 1 MA's), (Start: 109 @18624 has 26 MA's), (Start: 112 @18630 has 41 MA's), (Start: 114 @18633 has 139 MA's), (Start: 168 @18690 has 32 MA's), (197, 18738), (Start: 227 @18777 has 2 MA's), (230, 18792), (236, 18810), (248, 18843), (258, 18873), (278, 18918), (282, 18936), (316, 19008), (321, 19014), (334, 19044), (356, 19110), (360, 19122), (412, 19257), (444, 19305), (448, 19311), (454, 19329), (468, 19359), (487, 19398), (564, 19524), (587, 19584), (588, 19587), (594, 19605), (599, 19620), (655, 19788), (670, 19842), (708, 19887), (734, 19932), (748, 19956), (756, 19989), (768, 20022), (788, 20094), (793, 20106), (810, 20157), (813, 20163), (865, 20265), (901, 20391), (913, 20412),

Gene: Sleepyhead\_18 Start: 15726, Stop: 17306, Start Num: 167

Candidate Starts for Sleepyhead\_18:

(Start: 167 @15726 has 1 MA's), (222, 15813), (249, 15879), (307, 16026), (318, 16041), (348, 16119), (358, 16146), (497, 16431), (505, 16452), (583, 16581), (585, 16587), (610, 16647), (634, 16674), (635, 16677), (649, 16710), (653, 16722), (664, 16752), (670, 16782), (674, 16803), (679, 16818), (769, 16938), (813, 17058), (818, 17070),

Gene: Slimphazie\_23 Start: 17155, Stop: 18921, Start Num: 114

Candidate Starts for Slimphazie\_23:

(Start: 114 @17155 has 139 MA's), (140, 17185), (236, 17344), (248, 17377), (258, 17407), (272, 17440), (278, 17452), (316, 17542), (337, 17584), (360, 17656), (362, 17665), (378, 17704), (392, 17749), (400, 17770), (403, 17773), (438, 17827), (448, 17845), (465, 17887), (468, 17893), (481, 17920), (564, 18058), (572, 18076), (587, 18118), (593, 18136), (603, 18166), (618, 18193), (655, 18298), (748, 18457), (757, 18493), (768, 18523), (772, 18532), (793, 18607), (810, 18658), (863, 18757), (890, 18853), (901, 18892), (902, 18895), (913, 18913),

Gene: Smairt\_28 Start: 21861, Stop: 23663, Start Num: 146

Candidate Starts for Smairt\_28:

(Start: 146 @21861 has 223 MA's), (Start: 161 @21882 has 4 MA's), (Start: 190 @21924 has 1 MA's), (216, 21969), (306, 22185), (332, 22230), (338, 22239), (368, 22329), (369, 22332), (467, 22527), (500, 22596), (579, 22785), (583, 22797), (584, 22800), (591, 22821), (635, 22917), (636, 22920), (638, 22926), (665, 22995), (668, 23013), (670, 23022), (677, 23052), (731, 23148), (746, 23181), (750, 23196), (793, 23337), (813, 23394), (862, 23505), (909, 23658),

Gene: Smeadley\_24 Start: 18652, Stop: 20442, Start Num: 144

Candidate Starts for Smeadley\_24:

(Start: 123 @18628 has 215 MA's), (Start: 144 @18652 has 603 MA's), (214, 18745), (236, 18790), (278, 18889), (292, 18925), (306, 18964), (315, 18979), (336, 19015), (378, 19135), (380, 19141), (448, 19261), (505, 19390), (532, 19462), (583, 19576), (668, 19792), (675, 19825), (731, 19927), (746, 19960), (750, 19975), (758, 20005), (859, 20275), (862, 20284), (863, 20293), (896, 20407),

Gene: Smeagan\_30 Start: 20692, Stop: 22464, Start Num: 144

Candidate Starts for Smeagan\_30:

(94, 20626), (Start: 123 @20668 has 215 MA's), (Start: 144 @20692 has 603 MA's), (219, 20791), (251, 20875), (272, 20914), (277, 20926), (278, 20929), (305, 21001), (306, 21004), (338, 21058), (349, 21097), (378, 21175), (417, 21262), (463, 21343), (467, 21346), (546, 21532), (584, 21619), (631, 21724), (636, 21739), (675, 21865), (677, 21871), (713, 21919), (750, 21997), (752, 22003), (770, 22057), (781, 22096), (784, 22111), (813, 22195), (851, 22276), (862, 22306),

Gene: Smeagol\_29 Start: 22440, Stop: 24242, Start Num: 146

Candidate Starts for Smeagol\_29:

(Start: 146 @22440 has 223 MA's), (Start: 161 @22461 has 4 MA's), (Start: 190 @22503 has 1 MA's), (216, 22548), (306, 22764), (332, 22809), (338, 22818), (349, 22857), (369, 22911), (467, 23106), (500, 23175), (583, 23376), (584, 23379), (591, 23400), (635, 23496), (636, 23499), (638, 23505), (665, 23574), (668, 23592), (670, 23601), (677, 23631), (731, 23727), (746, 23760), (750, 23775), (793, 23916), (813, 23973), (862, 24084), (909, 24237),

Gene: SmellyB\_31 Start: 19976, Stop: 21748, Start Num: 144

Candidate Starts for SmellyB\_31:

(94, 19910), (Start: 123 @19952 has 215 MA's), (Start: 144 @19976 has 603 MA's), (236, 20114), (263, 20174), (278, 20213), (305, 20285), (306, 20288), (318, 20306), (338, 20342), (341, 20348), (378, 20459), (380, 20465), (417, 20546), (448, 20585), (463, 20627), (467, 20630), (495, 20690), (592, 20927), (597, 20942), (636, 21023), (677, 21155), (750, 21281), (765, 21332), (770, 21341), (781, 21380), (782, 21383), (784, 21395), (813, 21479), (860, 21584), (862, 21590), (900, 21725),

Gene: SmokingBunny\_31 Start: 25850, Stop: 27616, Start Num: 97

Candidate Starts for SmokingBunny\_31:

(80, 25808), (Start: 97 @25850 has 73 MA's), (Start: 121 @25886 has 1 MA's), (Start: 148 @25919 has 14 MA's), (264, 26129), (265, 26132), (277, 26162), (298, 26228), (306, 26252), (311, 26261), (331, 26294), (386, 26447), (406, 26486), (445, 26537), (451, 26549), (458, 26567), (460, 26579), (465, 26591), (472, 26606), (487, 26636), (489, 26639), (499, 26660), (547, 26732), (568, 26780), (613, 26891), (632, 26924), (647, 26963), (649, 26966), (670, 27038), (707, 27104), (715, 27116), (793, 27287), (794, 27290), (810, 27338), (824, 27365), (832, 27392), (835, 27398), (860, 27446), (891, 27563), (897, 27584), (909, 27611),

Gene: Smooch\_59 Start: 35189, Stop: 36925, Start Num: 107

Candidate Starts for Smooch\_59:

(Start: 100 @35180 has 2 MA's), (Start: 107 @35189 has 25 MA's), (174, 35279), (240, 35396), (251, 35432), (259, 35453), (271, 35480), (274, 35486), (286, 35516), (302, 35540), (332, 35591), (381, 35729), (383, 35735), (400, 35786), (402, 35789), (407, 35807), (459, 35858), (468, 35879), (470, 35882), (492, 35930), (494, 35936), (511, 35984), (513, 35990), (515, 35996), (555, 36056), (564, 36080), (565, 36083), (583, 36128), (588, 36143), (591, 36152), (594, 36161), (608, 36206), (618, 36224), (631, 36257), (720, 36395), (729, 36416), (740, 36437), (754, 36482), (762, 36512), (779, 36566), (791, 36608), (799, 36629), (805, 36650), (810, 36662), (821, 36683), (844, 36737), (880, 36815), (887, 36851), (893, 36872), (901, 36899),

Gene: Smoothie\_49 Start: 29612, Stop: 31303, Start Num: 146

Candidate Starts for Smoothie\_49:

(Start: 146 @29612 has 223 MA's), (188, 29672), (206, 29705), (Start: 227 @29735 has 2 MA's), (228, 29738), (282, 29897), (286, 29906), (349, 30035), (366, 30083), (494, 30296), (498, 30302), (506, 30326), (576, 30455), (583, 30476), (594, 30509), (658, 30707), (758, 30860), (788, 30959), (793, 30971), (796, 30980), (829, 31064), (888, 31211), (898, 31247),

Gene: Smurph\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Smurph\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727), (511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: SnapTap\_28 Start: 20118, Stop: 21890, Start Num: 144

Candidate Starts for SnapTap\_28:

(94, 20052), (Start: 123 @20094 has 215 MA's), (Start: 144 @20118 has 603 MA's), (251, 20301), (277, 20352), (278, 20355), (305, 20427), (306, 20430), (338, 20484), (349, 20523), (365, 20568), (378, 20601), (417, 20688), (463, 20769), (467, 20772), (584, 21045), (636, 21165), (713, 21345), (746, 21408), (750, 21423), (752, 21429), (770, 21483), (781, 21522), (784, 21537), (813, 21621), (862, 21732), (900, 21867),

Gene: Snape\_28 Start: 20752, Stop: 22551, Start Num: 144

Candidate Starts for Snape\_28:

(94, 20686), (Start: 123 @20728 has 215 MA's), (Start: 144 @20752 has 603 MA's), (183, 20794), (236, 20890), (242, 20905), (277, 20986), (278, 20989), (306, 21064), (315, 21079), (338, 21118), (341, 21124), (356, 21175), (378, 21235), (380, 21241), (417, 21322), (467, 21406), (518, 21532), (526, 21550), (540, 21577), (597, 21718), (631, 21784), (635, 21796), (636, 21799), (703, 21988), (721, 22015), (726, 22024), (736, 22045), (737, 22048), (746, 22069), (750, 22084), (756, 22108), (781, 22183), (784, 22198), (813, 22282), (860, 22387), (862, 22393), (877, 22447), (909, 22546),

Gene: Snazzy\_26 Start: 21047, Stop: 22849, Start Num: 146

Candidate Starts for Snazzy\_26:

(Start: 146 @21047 has 223 MA's), (Start: 161 @21068 has 4 MA's), (Start: 190 @21110 has 1 MA's), (216, 21155), (306, 21371), (332, 21416), (338, 21425), (349, 21464), (368, 21515), (369, 21518), (467, 21713), (500, 21782), (583, 21983), (584, 21986), (591, 22007), (635, 22103), (636, 22106), (638, 22112), (665, 22181), (668, 22199), (670, 22208), (677, 22238), (731, 22334), (746, 22367), (750, 22382), (793, 22523), (813, 22580), (862, 22691), (909, 22844),

Gene: Sneeze\_18 Start: 16647, Stop: 18410, Start Num: 109

Candidate Starts for Sneeze\_18:

(Start: 109 @16647 has 26 MA's), (Start: 132 @16656 has 45 MA's), (Start: 137 @16662 has 2 MA's), (143, 16668), (197, 16746), (230, 16800), (248, 16851), (258, 16881), (269, 16905), (309, 17007), (331, 17046), (334, 17052), (341, 17067), (395, 17232), (425, 17289), (448, 17328), (465, 17370), (468, 17376), (487, 17415), (542, 17514), (564, 17541), (641, 17739), (649, 17769), (655, 17787), (665, 17814), (716, 17898), (730, 17916), (743, 17931), (756, 17979), (760, 17994), (782, 18057), (787, 18081), (799, 18114), (813, 18153), (831, 18195), (890, 18342), (913, 18402),

Gene: Snekmaggedon\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for Snekmaggedon\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Snickers\_29 Start: 20353, Stop: 22149, Start Num: 144

Candidate Starts for Snickers\_29:

(Start: 144 @20353 has 603 MA's), (Start: 190 @20410 has 1 MA's), (197, 20425), (230, 20479), (Start: 235 @20494 has 1 MA's), (272, 20581), (277, 20593), (278, 20596), (306, 20671), (315, 20686), (336, 20722), (417, 20929), (500, 21082), (532, 21169), (583, 21283), (591, 21307), (597, 21325), (636, 21406), (665, 21481), (668, 21499), (675, 21532), (677, 21538), (695, 21577), (729, 21631), (731, 21634), (742, 21655), (758, 21712), (813, 21880), (860, 21985), (862, 21991), (900, 22126), (909, 22144),

Gene: SoSeph\_21 Start: 17643, Stop: 19415, Start Num: 117

Candidate Starts for SoSeph\_21:

(Start: 117 @17643 has 59 MA's), (Start: 123 @17649 has 215 MA's), (143, 17673), (Start: 168 @17706 has 32 MA's), (197, 17754), (230, 17808), (248, 17859), (272, 17922), (321, 18030), (360, 18138), (400, 18252), (403, 18255), (424, 18294), (438, 18309), (444, 18321), (448, 18327), (463, 18363), (465, 18369), (468, 18375), (487, 18414), (499, 18438), (564, 18540), (588, 18603), (602, 18648), (655, 18783), (708, 18882), (750, 18960), (756, 18984), (762, 19005), (771, 19023), (793, 19101), (795, 19107), (865, 19260), (895, 19365), (896, 19368), (901, 19386),

Gene: SoYo\_29 Start: 20290, Stop: 22086, Start Num: 144

Candidate Starts for SoYo\_29:

(Start: 144 @20290 has 603 MA's), (Start: 190 @20347 has 1 MA's), (197, 20362), (219, 20395), (230, 20416), (Start: 235 @20431 has 1 MA's), (272, 20518), (277, 20530), (278, 20533), (306, 20608), (315, 20623), (336, 20659), (417, 20866), (481, 20980), (500, 21019), (532, 21106), (583, 21220), (591, 21244), (597, 21262), (636, 21343), (665, 21418), (668, 21436), (675, 21469), (677, 21475), (695, 21514), (729, 21568), (731, 21571), (742, 21592), (758, 21649), (813, 21817), (860, 21922), (862, 21928), (900, 22063),

Gene: SoilAssassin\_17 Start: 14751, Stop: 16460, Start Num: 171

Candidate Starts for SoilAssassin\_17:

(83, 14616), (Start: 171 @14751 has 40 MA's), (259, 14940), (262, 14943), (287, 15018), (315, 15072), (347, 15141), (351, 15153), (377, 15231), (378, 15234), (440, 15366), (462, 15420), (485, 15471), (500, 15501), (519, 15561), (525, 15573), (554, 15609), (607, 15726), (618, 15744), (637, 15783), (669, 15879), (736, 15987), (847, 16263), (849, 16266), (865, 16314), (874, 16344),

Gene: SoilDragon\_29 Start: 20067, Stop: 21863, Start Num: 144

Candidate Starts for SoilDragon\_29:

(Start: 144 @20067 has 603 MA's), (Start: 190 @20124 has 1 MA's), (197, 20139), (219, 20172), (230, 20193), (Start: 235 @20208 has 1 MA's), (272, 20295), (277, 20307), (278, 20310), (306, 20385), (315, 20400), (336, 20436), (417, 20643), (500, 20796), (532, 20883), (583, 20997), (591, 21021), (597, 21039), (636, 21120), (665, 21195), (668, 21213), (675, 21246), (677, 21252), (695, 21291), (729, 21345), (731, 21348), (742, 21369), (758, 21426), (813, 21594), (860, 21699), (862, 21705), (900, 21840),

Gene: Solon\_27 Start: 21712, Stop: 23514, Start Num: 146

Candidate Starts for Solon\_27:

(Start: 146 @21712 has 223 MA's), (Start: 161 @21733 has 4 MA's), (Start: 190 @21775 has 1 MA's), (216, 21820), (306, 22036), (332, 22081), (338, 22090), (349, 22129), (368, 22180), (369, 22183), (406, 22276), (467, 22378), (500, 22447), (583, 22648), (584, 22651), (591, 22672), (635, 22768), (636, 22771), (638, 22777), (665, 22846), (668, 22864), (670, 22873), (677, 22903), (731, 22999), (746, 23032), (750, 23047), (793, 23188), (813, 23245), (862, 23356),

Gene: Sonah\_19 Start: 16375, Stop: 18111, Start Num: 117

Candidate Starts for Sonah\_19:

(Start: 101 @16351 has 2 MA's), (Start: 117 @16375 has 59 MA's), (Start: 166 @16435 has 1 MA's), (178, 16456), (180, 16459), (246, 16579), (258, 16618), (272, 16651), (282, 16675), (344, 16795), (356, 16834), (358, 16840), (386, 16924), (388, 16930), (392, 16942), (402, 16966), (410, 16993), (422, 17011), (452, 17050), (459, 17056), (470, 17080), (494, 17134), (500, 17146), (503, 17155), (529, 17215), (573, 17293), (587, 17332), (598, 17365), (618, 17431), (624, 17446), (627, 17455), (636, 17479), (647, 17509), (653, 17521), (735, 17623), (740, 17635), (742, 17638), (745, 17644), (747, 17653), (779, 17761), (805, 17845), (853, 17944), (890, 18052), (907, 18100),

Gene: Sopespian\_18 Start: 15730, Stop: 17430, Start Num: 133

Candidate Starts for Sopespian\_18:

(Start: 133 @15730 has 8 MA's), (Start: 144 @15733 has 603 MA's), (264, 15943), (306, 16066), (336, 16117), (365, 16204), (369, 16213), (377, 16234), (382, 16249), (385, 16261), (436, 16339), (442, 16351), (454, 16378), (465, 16411), (481, 16444), (487, 16456), (505, 16498), (574, 16621), (599, 16693), (636, 16771), (643, 16786), (650, 16804), (668, 16861), (731, 16954), (747, 16990), (750, 17002), (752, 17008), (755, 17020), (766, 17029), (791, 17101), (793, 17104), (795, 17110), (799, 17122), (824, 17182), (842, 17227), (847, 17236), (862, 17269), (882, 17335),

Gene: SophKB\_24 Start: 19745, Stop: 21424, Start Num: 129

Candidate Starts for SophKB\_24:

(Start: 129 @19745 has 79 MA's), (Start: 191 @19829 has 45 MA's), (Start: 235 @19907 has 1 MA's), (268, 19994), (274, 20009), (300, 20057), (324, 20096), (356, 20183), (368, 20216), (381, 20252), (390, 20282), (392, 20288), (422, 20357), (461, 20387), (466, 20399), (468, 20402), (494, 20459), (565, 20591), (567, 20597), (592, 20663), (594, 20669), (601, 20693), (618, 20741), (627, 20765), (631, 20774), (658, 20849), (717, 20900), (725, 20915), (782, 21077), (788, 21104), (799, 21134), (843, 21239), (880, 21317), (887, 21353), (890, 21362), (900, 21395), (907, 21410),

Gene: SororFago\_28 Start: 19411, Stop: 21210, Start Num: 144

Candidate Starts for SororFago\_28:

(Start: 141 @19408 has 14 MA's), (Start: 144 @19411 has 603 MA's), (Start: 235 @19546 has 1 MA's), (265, 19615), (278, 19648), (286, 19678), (305, 19720), (306, 19723), (341, 19783), (378, 19894), (392, 19939), (417, 19981), (460, 20056), (463, 20062), (467, 20065), (495, 20125), (535, 20227), (576, 20314), (584, 20338), (636, 20458), (707, 20656), (750, 20743), (752, 20749), (781, 20842), (860, 21046), (862, 21052),

Gene: Sorpresa\_27 Start: 21059, Stop: 22861, Start Num: 146

Candidate Starts for Sorpresa\_27:

(Start: 146 @21059 has 223 MA's), (Start: 161 @21080 has 4 MA's), (Start: 190 @21122 has 1 MA's), (306, 21383), (332, 21428), (338, 21437), (349, 21476), (368, 21527), (369, 21530), (467, 21725), (500, 21794), (583, 21995), (584, 21998), (591, 22019), (635, 22115), (636, 22118), (638, 22124), (665, 22193), (668, 22211), (670, 22220), (677, 22250), (731, 22346), (746, 22379), (750, 22394), (793, 22535), (813, 22592), (862, 22703),

Gene: Soshari\_31 Start: 20462, Stop: 22258, Start Num: 144

Candidate Starts for Soshari\_31:

(Start: 144 @20462 has 603 MA's), (Start: 190 @20519 has 1 MA's), (197, 20534), (219, 20567), (230, 20588), (Start: 235 @20603 has 1 MA's), (272, 20690), (277, 20702), (278, 20705), (306, 20780), (315, 20795), (336, 20831), (417, 21038), (481, 21152), (500, 21191), (532, 21278), (583, 21392), (591, 21416), (597, 21434), (636, 21515), (665, 21590), (668, 21608), (675, 21641), (677, 21647), (695, 21686), (729, 21740), (731, 21743), (742, 21764), (758, 21821), (813, 21989), (860, 22094), (862, 22100), (900, 22235),

Gene: Sotrice96\_24 Start: 19701, Stop: 21380, Start Num: 129

Candidate Starts for Sotrice96\_24:

(Start: 129 @19701 has 79 MA's), (Start: 191 @19785 has 45 MA's), (Start: 235 @19863 has 1 MA's), (268, 19950), (274, 19965), (300, 20013), (324, 20052), (356, 20139), (368, 20172), (381, 20208), (390, 20238), (392, 20244), (422, 20313), (461, 20343), (466, 20355), (468, 20358), (494, 20415), (565, 20547), (567, 20553), (592, 20619), (594, 20625), (601, 20649), (618, 20697), (627, 20721), (631, 20730), (658, 20805), (717, 20856), (725, 20871), (782, 21033), (788, 21060), (799, 21090), (843, 21195), (880, 21273), (887, 21309), (890, 21318), (900, 21351), (907, 21366),

Gene: Soul22\_19 Start: 13742, Stop: 15406, Start Num: 148

Candidate Starts for Soul22\_19:



(Start: 148 @13742 has 14 MA's), (201, 13823), (222, 13853), (232, 13874), (237, 13886), (265, 13952), (280, 13991), (281, 14003), (290, 14027), (313, 14084), (316, 14087), (330, 14111), (332, 14117), (334, 14120), (349, 14165), (356, 14183), (369, 14219), (417, 14330), (448, 14366), (458, 14393), (460, 14405), (461, 14408), (481, 14450), (487, 14462), (499, 14486), (540, 14540), (583, 14639), (620, 14732), (636, 14759), (642, 14771), (664, 14816), (668, 14837), (670, 14846), (726, 14918), (793, 15080), (794, 15083), (795, 15086), (842, 15203), (862, 15245), (885, 15329), (897, 15374), (902, 15392),

Gene: Soups\_30 Start: 19215, Stop: 21002, Start Num: 144

Candidate Starts for Soups\_30:

(94, 19149), (Start: 123 @19191 has 215 MA's), (Start: 144 @19215 has 603 MA's), (236, 19353), (262, 19410), (278, 19452), (292, 19488), (306, 19527), (343, 19596), (349, 19620), (369, 19674), (448, 19824), (467, 19869), (481, 19899), (499, 19935), (515, 19986), (530, 20022), (553, 20070), (580, 20130), (635, 20259), (665, 20337), (750, 20538), (752, 20544), (782, 20640), (845, 20805), (880, 20904),

Gene: Sparkdehlily\_16 Start: 14836, Stop: 16545, Start Num: 123

Candidate Starts for Sparkdehlily\_16:

(Start: 123 @14836 has 215 MA's), (193, 14923), (Start: 227 @14968 has 2 MA's), (233, 14992), (251, 15049), (271, 15097), (274, 15103), (281, 15121), (300, 15151), (348, 15256), (367, 15310), (370, 15316), (373, 15325), (381, 15346), (388, 15370), (402, 15406), (403, 15412), (418, 15445), (420, 15448), (424, 15457), (443, 15472), (448, 15478), (459, 15496), (465, 15511), (468, 15517), (475, 15535), (477, 15538), (484, 15553), (492, 15568), (494, 15574), (511, 15622), (515, 15634), (521, 15640), (564, 15700), (568, 15712), (583, 15748), (587, 15760), (614, 15835), (618, 15844), (625, 15862), (627, 15868), (638, 15898), (710, 16003), (720, 16015), (737, 16051), (761, 16129), (799, 16249), (810, 16282), (826, 16312), (829, 16324), (836, 16342), (839, 16348), (841, 16351), (844, 16357), (860, 16372), (861, 16375), (865, 16396), (866, 16399), (882, 16441), (887, 16471), (900, 16513), (901, 16519),

Gene: Sparxx\_27 Start: 19825, Stop: 21603, Start Num: 144

Candidate Starts for Sparxx\_27:

(Start: 123 @19801 has 215 MA's), (Start: 144 @19825 has 603 MA's), (Start: 190 @19882 has 1 MA's), (222, 19936), (230, 19951), (236, 19969), (272, 20053), (277, 20065), (278, 20068), (306, 20143), (315, 20158), (338, 20197), (378, 20314), (417, 20401), (463, 20482), (489, 20530), (500, 20554), (532, 20641), (553, 20686), (584, 20758), (591, 20779), (597, 20797), (636, 20878), (668, 20971), (670, 20980), (675, 21004), (677, 21010), (687, 21034), (731, 21088), (742, 21109), (756, 21160), (763, 21184), (782, 21238), (813, 21334), (860, 21439), (863, 21454), (894, 21562), (900, 21580),

Gene: SpeedDemon\_320 Start: 28963, Stop: 30726, Start Num: 148

Candidate Starts for SpeedDemon\_320:

(72, 28831), (76, 28837), (Start: 148 @28963 has 14 MA's), (188, 29020), (255, 29173), (284, 29248), (349, 29380), (366, 29428), (395, 29512), (468, 29674), (470, 29677), (490, 29719), (494, 29731), (498, 29737), (521, 29797), (525, 29803), (587, 29923), (598, 29956), (612, 30004), (658, 30130), (725, 30196), (788, 30382), (793, 30394), (824, 30472), (848, 30526), (914, 30718),

Gene: Spike509\_29 Start: 20463, Stop: 22259, Start Num: 144

Candidate Starts for Spike509\_29:

(Start: 144 @20463 has 603 MA's), (Start: 190 @20520 has 1 MA's), (197, 20535), (219, 20568), (230, 20589), (Start: 235 @20604 has 1 MA's), (272, 20691), (277, 20703), (278, 20706), (306, 20781), (315, 20796), (336, 20832), (417, 21039), (481, 21153), (500, 21192), (532, 21279), (583, 21393), (591, 21417), (597, 21435), (636, 21516), (665, 21591), (668, 21609), (675, 21642), (677, 21648), (695, 21687), (729, 21741), (731, 21744), (742, 21765), (758, 21822), (813, 21990), (860, 22095),

(862, 22101), (900, 22236),

Gene: SpikeBT\_29 Start: 22017, Stop: 23819, Start Num: 146

Candidate Starts for SpikeBT\_29:

(Start: 146 @22017 has 223 MA's), (Start: 161 @22038 has 4 MA's), (Start: 190 @22080 has 1 MA's), (216, 22125), (306, 22341), (332, 22386), (338, 22395), (368, 22485), (369, 22488), (467, 22683), (500, 22752), (583, 22953), (584, 22956), (591, 22977), (635, 23073), (636, 23076), (638, 23082), (665, 23151), (668, 23169), (670, 23178), (677, 23208), (731, 23304), (746, 23337), (750, 23352), (793, 23493), (813, 23550), (862, 23661),

Gene: Spikelee\_17 Start: 14630, Stop: 16339, Start Num: 123

Candidate Starts for Spikelee\_17:

(Start: 123 @14630 has 215 MA's), (193, 14717), (Start: 227 @14762 has 2 MA's), (233, 14786), (271, 14891), (274, 14897), (281, 14915), (300, 14945), (348, 15050), (367, 15104), (370, 15110), (373, 15119), (381, 15140), (388, 15164), (402, 15200), (403, 15206), (418, 15239), (420, 15242), (424, 15251), (443, 15266), (448, 15272), (459, 15290), (465, 15305), (468, 15311), (475, 15329), (477, 15332), (484, 15347), (492, 15362), (494, 15368), (511, 15416), (515, 15428), (521, 15434), (564, 15494), (568, 15506), (583, 15542), (587, 15554), (614, 15629), (618, 15638), (625, 15656), (627, 15662), (638, 15692), (710, 15797), (720, 15809), (737, 15845), (761, 15923), (799, 16043), (810, 16076), (826, 16106), (829, 16118), (836, 16136), (839, 16142), (841, 16145), (844, 16151), (860, 16166), (861, 16169), (865, 16190), (866, 16193), (882, 16235), (887, 16265), (900, 16307), (901, 16313),

Gene: Spino\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Spino\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Splinter\_22 Start: 16480, Stop: 17808, Start Num: 257

Candidate Starts for Splinter\_22:

(Start: 257 @16480 has 11 MA's), (267, 16495), (333, 16639), (349, 16684), (364, 16729), (372, 16753), (382, 16783), (388, 16804), (391, 16813), (401, 16837), (406, 16846), (437, 16897), (447, 16909), (531, 17002), (536, 17011), (548, 17020), (580, 17065), (590, 17083), (636, 17176), (653, 17221), (671, 17290), (680, 17311), (749, 17392), (763, 17425), (799, 17512), (812, 17548), (819, 17563), (823, 17572), (849, 17614), (863, 17653), (881, 17707), (884, 17725), (899, 17782), (902, 17791),

Gene: Spock\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Spock\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: SpongeBob\_18 Start: 14993, Stop: 16702, Start Num: 126

Candidate Starts for SpongeBob\_18:

(Start: 126 @14993 has 42 MA's), (Start: 150 @15020 has 4 MA's), (178, 15059), (Start: 227 @15125 has 2 MA's), (229, 15137), (241, 15173), (250, 15197), (258, 15224), (268, 15245), (271, 15254), (274, 15260), (287, 15293), (367, 15467), (370, 15473), (373, 15482), (377, 15491), (381, 15503), (388, 15527), (403, 15569), (418, 15602), (459, 15653), (460, 15656), (465, 15668), (484, 15710), (492, 15725), (494, 15731), (511, 15779), (547, 15833), (564, 15857), (591, 15929), (608, 15983), (614, 15992), (618, 16001), (627, 16025), (637, 16052), (638, 16055), (710, 16160), (717, 16169), (737, 16208), (762, 16289), (781, 16346), (791, 16385), (836, 16499), (860, 16529), (861, 16532), (866, 16556), (880, 16592),

Gene: Spooky\_20 Start: 16409, Stop: 18106, Start Num: 144

Candidate Starts for Spooky\_20:

(113, 16370), (Start: 144 @16409 has 603 MA's), (Start: 150 @16421 has 4 MA's), (Start: 153 @16424 has 11 MA's), (Start: 190 @16472 has 1 MA's), (202, 16499), (219, 16520), (232, 16547), (239, 16562), (240, 16568), (241, 16571), (246, 16583), (263, 16619), (277, 16655), (295, 16712), (302, 16733), (316, 16760), (331, 16787), (406, 16985), (414, 17003), (432, 17012), (436, 17018), (458, 17066), (469, 17096), (485, 17132), (489, 17138), (499, 17159), (500, 17162), (547, 17240), (549, 17243), (561, 17270), (574, 17297), (599, 17369), (618, 17408), (649, 17462), (670, 17534), (683, 17579), (736, 17642), (747, 17669), (749, 17672), (752, 17687), (788, 17771), (791, 17780), (793, 17783), (795, 17789), (801, 17804), (811, 17834), (814, 17840), (824, 17861), (825, 17864), (849, 17918), (862, 17948), (863, 17957), (879, 18008), (887, 18041), (891, 18053), (896, 18071),

Gene: Spoonbill\_16 Start: 14813, Stop: 16522, Start Num: 123

Candidate Starts for Spoonbill\_16:

(Start: 123 @14813 has 215 MA's), (193, 14900), (Start: 227 @14945 has 2 MA's), (233, 14969), (271, 15074), (274, 15080), (281, 15098), (300, 15128), (348, 15233), (370, 15293), (378, 15314), (381, 15323), (388, 15347), (418, 15422), (420, 15425), (459, 15473), (465, 15488), (468, 15494), (484, 15530), (486, 15533), (492, 15545), (494, 15551), (511, 15599), (515, 15611), (521, 15617), (564, 15677), (568, 15689), (583, 15725), (587, 15737), (614, 15812), (618, 15821), (625, 15839), (627, 15845), (638, 15875), (710, 15980), (720, 15992), (737, 16028), (761, 16106), (799, 16226), (810, 16259), (826, 16289), (836, 16319), (841, 16328), (844, 16334), (860, 16349), (861, 16352), (866, 16376), (877, 16406), (882, 16418), (887, 16448), (900, 16490),

Gene: Spouty\_30 Start: 21779, Stop: 23569, Start Num: 144

Candidate Starts for Spouty\_30:

(Start: 141 @21776 has 14 MA's), (Start: 144 @21779 has 603 MA's), (277, 22013), (278, 22016), (305, 22088), (306, 22091), (315, 22106), (338, 22145), (341, 22151), (378, 22262), (417, 22349), (463, 22430), (467, 22433), (495, 22493), (546, 22619), (576, 22682), (584, 22706), (586, 22712), (597, 22745), (636, 22826), (675, 22952), (693, 22994), (695, 22997), (731, 23054), (746, 23087), (750, 23102), (781, 23201), (782, 23204), (784, 23216), (813, 23300), (842, 23366), (860, 23405), (862, 23411), (873, 23456), (890, 23513), (891, 23516),

Gene: Sproutie\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Sproutie\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Squee\_28 Start: 21966, Stop: 23768, Start Num: 146

Candidate Starts for Squee\_28:

(Start: 146 @21966 has 223 MA's), (Start: 161 @21987 has 4 MA's), (Start: 190 @22029 has 1 MA's), (216, 22074), (306, 22290), (332, 22335), (338, 22344), (349, 22383), (368, 22434), (369, 22437),

(467, 22632), (500, 22701), (519, 22761), (583, 22902), (584, 22905), (591, 22926), (635, 23022), (636, 23025), (638, 23031), (665, 23100), (668, 23118), (670, 23127), (677, 23157), (731, 23253), (746, 23286), (750, 23301), (793, 23442), (813, 23499), (862, 23610),

Gene: Squiddly\_22 Start: 17821, Stop: 19518, Start Num: 144

Candidate Starts for Squiddly\_22:

(113, 17782), (Start: 144 @17821 has 603 MA's), (Start: 150 @17833 has 4 MA's), (Start: 153 @17836 has 11 MA's), (202, 17911), (219, 17932), (232, 17959), (239, 17974), (240, 17980), (241, 17983), (246, 17995), (263, 18031), (272, 18055), (277, 18067), (295, 18124), (302, 18145), (316, 18172), (331, 18199), (345, 18235), (382, 18340), (406, 18397), (414, 18415), (432, 18424), (436, 18430), (458, 18478), (469, 18508), (485, 18544), (489, 18550), (499, 18571), (500, 18574), (547, 18652), (549, 18655), (561, 18682), (574, 18709), (599, 18781), (618, 18820), (649, 18874), (661, 18910), (670, 18946), (683, 18991), (736, 19054), (737, 19057), (747, 19081), (749, 19084), (752, 19099), (788, 19183), (791, 19192), (793, 19195), (795, 19201), (801, 19216), (811, 19246), (814, 19252), (824, 19273), (825, 19276), (849, 19330), (862, 19360), (863, 19369), (879, 19420), (887, 19453), (891, 19465), (896, 19483),

Gene: Squint\_33 Start: 25007, Stop: 26740, Start Num: 124

Candidate Starts for Squint\_33:

(Start: 124 @25007 has 30 MA's), (Start: 191 @25097 has 45 MA's), (193, 25100), (233, 25175), (243, 25202), (268, 25268), (282, 25304), (301, 25334), (306, 25349), (346, 25433), (358, 25469), (368, 25496), (382, 25535), (392, 25568), (395, 25577), (420, 25634), (451, 25676), (490, 25751), (494, 25763), (515, 25823), (552, 25877), (565, 25907), (573, 25925), (577, 25934), (588, 25967), (592, 25979), (594, 25985), (606, 26024), (627, 26081), (725, 26231), (735, 26249), (750, 26291), (756, 26315), (757, 26318), (761, 26333), (773, 26363), (782, 26393), (799, 26450), (868, 26600), (902, 26720), (907, 26726),

Gene: Squirty\_17 Start: 14712, Stop: 16421, Start Num: 123

Candidate Starts for Squirty\_17:

(Start: 123 @14712 has 215 MA's), (193, 14799), (Start: 227 @14844 has 2 MA's), (233, 14868), (271, 14973), (274, 14979), (281, 14997), (300, 15027), (348, 15132), (370, 15192), (378, 15213), (381, 15222), (388, 15246), (459, 15372), (465, 15387), (468, 15393), (484, 15429), (492, 15444), (494, 15450), (511, 15498), (515, 15510), (521, 15516), (564, 15576), (568, 15588), (583, 15624), (587, 15636), (614, 15711), (618, 15720), (625, 15738), (627, 15744), (638, 15774), (710, 15879), (717, 15888), (720, 15891), (737, 15927), (761, 16005), (791, 16104), (799, 16125), (810, 16158), (826, 16188), (836, 16218), (841, 16227), (844, 16233), (860, 16248), (861, 16251), (865, 16272), (866, 16275), (877, 16305), (882, 16317), (900, 16389),

Gene: StAB\_17 Start: 16311, Stop: 18008, Start Num: 118

Candidate Starts for StAB\_17:

(Start: 118 @16311 has 8 MA's), (136, 16332), (196, 16416), (211, 16443), (216, 16449), (275, 16581), (295, 16632), (306, 16665), (322, 16689), (368, 16809), (380, 16842), (385, 16860), (411, 16914), (448, 16959), (472, 17016), (478, 17028), (497, 17067), (540, 17127), (549, 17148), (553, 17157), (579, 17214), (610, 17304), (661, 17412), (673, 17466), (675, 17472), (681, 17490), (752, 17586), (766, 17607), (784, 17652), (845, 17811), (855, 17826), (861, 17841), (863, 17853), (907, 17997),

Gene: StAnnes\_16 Start: 14854, Stop: 16563, Start Num: 123

Candidate Starts for StAnnes\_16:

(Start: 123 @14854 has 215 MA's), (193, 14941), (Start: 227 @14986 has 2 MA's), (233, 15010), (271, 15115), (274, 15121), (281, 15139), (300, 15169), (348, 15274), (370, 15334), (378, 15355), (381, 15364), (388, 15388), (459, 15514), (465, 15529), (468, 15535), (484, 15571), (486, 15574), (492, 15586), (494, 15592), (511, 15640), (515, 15652), (521, 15658), (564, 15718), (568, 15730), (583,

15766), (587, 15778), (614, 15853), (618, 15862), (625, 15880), (627, 15886), (638, 15916), (710, 16021), (717, 16030), (720, 16033), (737, 16069), (761, 16147), (791, 16246), (799, 16267), (810, 16300), (826, 16330), (836, 16360), (841, 16369), (844, 16375), (860, 16390), (861, 16393), (866, 16417), (877, 16447), (882, 16459), (887, 16489), (900, 16531),

Gene: StCroix\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for StCroix\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Stagni\_29 Start: 20381, Stop: 22177, Start Num: 144

Candidate Starts for Stagni\_29:

(Start: 144 @20381 has 603 MA's), (Start: 190 @20438 has 1 MA's), (197, 20453), (230, 20507), (Start: 235 @20522 has 1 MA's), (272, 20609), (277, 20621), (278, 20624), (306, 20699), (315, 20714), (336, 20750), (417, 20957), (500, 21110), (532, 21197), (583, 21311), (591, 21335), (597, 21353), (636, 21434), (665, 21509), (668, 21527), (675, 21560), (677, 21566), (695, 21605), (729, 21659), (731, 21662), (742, 21683), (758, 21740), (813, 21908), (860, 22013), (862, 22019), (900, 22154),

Gene: Stank\_27 Start: 20336, Stop: 21931, Start Num: 191

Candidate Starts for Stank\_27:

(Start: 129 @20252 has 79 MA's), (Start: 191 @20336 has 45 MA's), (Start: 235 @20414 has 1 MA's), (268, 20501), (274, 20516), (300, 20564), (324, 20603), (356, 20690), (368, 20723), (381, 20759), (390, 20789), (392, 20795), (422, 20864), (461, 20894), (466, 20906), (468, 20909), (494, 20966), (565, 21098), (567, 21104), (592, 21170), (594, 21176), (601, 21200), (618, 21248), (627, 21272), (631, 21281), (658, 21356), (717, 21407), (725, 21422), (782, 21584), (788, 21611), (799, 21641), (843, 21746), (880, 21824), (887, 21860), (890, 21869), (900, 21902), (907, 21917),

Gene: Stap\_17 Start: 14836, Stop: 16545, Start Num: 123

Candidate Starts for Stap\_17:

(Start: 123 @14836 has 215 MA's), (193, 14923), (Start: 227 @14968 has 2 MA's), (233, 14992), (271, 15097), (274, 15103), (281, 15121), (300, 15151), (348, 15256), (370, 15316), (378, 15337), (381, 15346), (388, 15370), (418, 15445), (459, 15496), (465, 15511), (468, 15517), (484, 15553), (486, 15556), (492, 15568), (494, 15574), (511, 15622), (515, 15634), (521, 15640), (564, 15700), (568, 15712), (583, 15748), (587, 15760), (614, 15835), (618, 15844), (625, 15862), (627, 15868), (638, 15898), (710, 16003), (720, 16015), (737, 16051), (761, 16129), (791, 16228), (799, 16249), (810, 16282), (826, 16312), (836, 16342), (839, 16348), (841, 16351), (844, 16357), (860, 16372), (861, 16375), (865, 16396), (866, 16399), (882, 16441), (900, 16513), (901, 16519),

Gene: StarStruck\_42 Start: 30437, Stop: 32053, Start Num: 170

Candidate Starts for StarStruck\_42:

(Start: 170 @30437 has 87 MA's), (236, 30551), (347, 30818), (372, 30884), (377, 30899), (386, 30923), (387, 30926), (432, 31010), (449, 31040), (455, 31058), (490, 31091), (493, 31100), (501, 31118), (510, 31148), (518, 31172), (560, 31256), (571, 31277), (593, 31325), (607, 31364), (635, 31412), (673, 31538), (688, 31574), (776, 31685), (799, 31760), (877, 31937), (887, 31979), (906, 32036),

Gene: StarStuff\_31 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for StarStuff\_31:

(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (242, 20202), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474), (784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: Starcevich\_17 Start: 14598, Stop: 16307, Start Num: 123

Candidate Starts for Starcevich\_17:

(Start: 123 @14598 has 215 MA's), (193, 14685), (Start: 227 @14730 has 2 MA's), (233, 14754), (271, 14859), (274, 14865), (281, 14883), (300, 14913), (348, 15018), (370, 15078), (377, 15096), (378, 15099), (381, 15108), (388, 15132), (459, 15258), (465, 15273), (468, 15279), (484, 15315), (486, 15318), (492, 15330), (494, 15336), (511, 15384), (515, 15396), (521, 15402), (564, 15462), (568, 15474), (583, 15510), (587, 15522), (614, 15597), (618, 15606), (625, 15624), (627, 15630), (638, 15660), (710, 15765), (720, 15777), (737, 15813), (761, 15891), (799, 16011), (810, 16044), (826, 16074), (829, 16086), (836, 16104), (839, 16110), (841, 16113), (844, 16119), (860, 16134), (861, 16137), (865, 16158), (866, 16161), (882, 16203), (887, 16233), (900, 16275), (901, 16281),

Gene: Stargaze\_18 Start: 16978, Stop: 18702, Start Num: 132

Candidate Starts for Stargaze\_18:

(Start: 132 @16978 has 45 MA's), (228, 17098), (248, 17161), (258, 17191), (287, 17266), (309, 17317), (316, 17326), (321, 17332), (334, 17362), (337, 17368), (353, 17422), (377, 17485), (395, 17542), (448, 17638), (451, 17647), (468, 17686), (487, 17725), (503, 17761), (641, 18043), (655, 18091), (665, 18118), (691, 18154), (730, 18208), (799, 18406), (806, 18430), (810, 18439), (831, 18487), (890, 18634), (902, 18676), (904, 18679),

Gene: Stark\_25 Start: 19504, Stop: 21183, Start Num: 129

Candidate Starts for Stark\_25:

(Start: 129 @19504 has 79 MA's), (Start: 191 @19588 has 45 MA's), (Start: 235 @19666 has 1 MA's), (268, 19753), (274, 19768), (300, 19816), (324, 19855), (356, 19942), (368, 19975), (381, 20011), (390, 20041), (392, 20047), (422, 20116), (461, 20146), (466, 20158), (468, 20161), (494, 20218), (565, 20350), (567, 20356), (592, 20422), (594, 20428), (601, 20452), (618, 20500), (627, 20524), (631, 20533), (658, 20608), (717, 20659), (725, 20674), (782, 20836), (788, 20863), (799, 20893), (843, 20998), (880, 21076), (887, 21112), (890, 21121), (900, 21154), (907, 21169),

Gene: Stasia\_28 Start: 20265, Stop: 22046, Start Num: 144

Candidate Starts for Stasia\_28:

(Start: 123 @20241 has 215 MA's), (Start: 144 @20265 has 603 MA's), (Start: 190 @20325 has 1 MA's), (230, 20394), (Start: 235 @20409 has 1 MA's), (272, 20496), (277, 20508), (278, 20511), (286, 20541), (306, 20586), (315, 20601), (338, 20640), (378, 20757), (417, 20844), (463, 20925), (481, 20958), (489, 20973), (500, 20997), (532, 21084), (547, 21117), (584, 21201), (591, 21222), (597, 21240), (636, 21321), (668, 21414), (670, 21423), (675, 21447), (677, 21453), (682, 21468), (713, 21501), (731, 21531), (742, 21552), (756, 21603), (782, 21681), (788, 21708), (813, 21777), (825, 21801), (860, 21882), (863, 21897), (892, 21999), (900, 22023),

Gene: SteamedHams\_20 Start: 15398, Stop: 17095, Start Num: 144

Candidate Starts for SteamedHams\_20:

(Start: 133 @15395 has 8 MA's), (Start: 144 @15398 has 603 MA's), (214, 15500), (222, 15512), (264, 15608), (292, 15692), (336, 15782), (356, 15842), (365, 15869), (377, 15899), (378, 15902), (406, 15971), (436, 16004), (442, 16016), (444, 16019), (453, 16040), (454, 16043), (481, 16109), (487, 16121), (574, 16286), (636, 16436), (643, 16451), (650, 16469), (668, 16526), (750, 16667), (752, 16673), (755, 16685), (766, 16694), (791, 16766), (793, 16769), (795, 16775), (799, 16787), (842, 16892), (847, 16901), (862, 16934),

Gene: Steamy\_29 Start: 21239, Stop: 23029, Start Num: 144

Candidate Starts for Steamy\_29:

(94, 21173), (Start: 123 @21215 has 215 MA's), (Start: 144 @21239 has 603 MA's), (277, 21473), (278, 21476), (286, 21506), (305, 21548), (306, 21551), (318, 21569), (338, 21605), (341, 21611), (378, 21722), (388, 21755), (417, 21809), (463, 21890), (467, 21893), (515, 22010), (546, 22079), (595, 22199), (597, 22205), (636, 22286), (670, 22388), (675, 22412), (693, 22454), (731, 22514), (746, 22547), (750, 22562), (752, 22568), (758, 22592), (770, 22622), (781, 22661), (782, 22664), (784, 22676), (813, 22760), (873, 22916), (900, 23006),

Gene: StellaBean\_24 Start: 19745, Stop: 21424, Start Num: 129

Candidate Starts for StellaBean\_24:

(Start: 129 @19745 has 79 MA's), (Start: 191 @19829 has 45 MA's), (Start: 235 @19907 has 1 MA's), (268, 19994), (274, 20009), (300, 20057), (324, 20096), (356, 20183), (368, 20216), (381, 20252), (390, 20282), (392, 20288), (422, 20357), (461, 20387), (466, 20399), (468, 20402), (494, 20459), (565, 20591), (567, 20597), (592, 20663), (594, 20669), (601, 20693), (618, 20741), (627, 20765), (631, 20774), (658, 20849), (717, 20900), (725, 20915), (782, 21077), (788, 21104), (799, 21134), (843, 21239), (880, 21317), (887, 21353), (890, 21362), (900, 21395), (907, 21410),

Gene: StepMih\_29 Start: 20429, Stop: 22168, Start Num: 190

Candidate Starts for StepMih\_29:

(Start: 144 @20372 has 603 MA's), (Start: 190 @20429 has 1 MA's), (197, 20444), (230, 20498), (Start: 235 @20513 has 1 MA's), (272, 20600), (277, 20612), (278, 20615), (306, 20690), (315, 20705), (336, 20741), (417, 20948), (500, 21101), (532, 21188), (583, 21302), (591, 21326), (597, 21344), (636, 21425), (665, 21500), (668, 21518), (675, 21551), (677, 21557), (695, 21596), (729, 21650), (731, 21653), (742, 21674), (758, 21731), (813, 21899), (860, 22004), (862, 22010), (900, 22145),

Gene: Stephig9\_24 Start: 18633, Stop: 20423, Start Num: 144

Candidate Starts for Stephig9\_24:

(Start: 123 @18609 has 215 MA's), (Start: 144 @18633 has 603 MA's), (214, 18726), (236, 18771), (278, 18870), (292, 18906), (306, 18945), (315, 18960), (336, 18996), (378, 19116), (380, 19122), (448, 19242), (505, 19371), (532, 19443), (583, 19557), (668, 19773), (675, 19806), (731, 19908), (746, 19941), (750, 19956), (758, 19986), (859, 20256), (862, 20265), (863, 20274), (896, 20388),

Gene: StevieRay\_19 Start: 16376, Stop: 18112, Start Num: 117

Candidate Starts for StevieRay\_19:

(Start: 101 @16352 has 2 MA's), (Start: 117 @16376 has 59 MA's), (Start: 166 @16436 has 1 MA's), (178, 16457), (180, 16460), (246, 16580), (258, 16619), (272, 16652), (282, 16676), (344, 16796), (356, 16835), (358, 16841), (386, 16925), (388, 16931), (392, 16943), (402, 16967), (410, 16994), (422, 17012), (452, 17051), (459, 17057), (470, 17081), (494, 17135), (500, 17147), (503, 17156), (529, 17216), (573, 17294), (587, 17333), (598, 17366), (618, 17432), (624, 17447), (627, 17456), (636, 17480), (647, 17510), (653, 17522), (735, 17624), (740, 17636), (742, 17639), (745, 17645), (747, 17654), (779, 17762), (805, 17846), (853, 17945), (890, 18053), (907, 18101),

Gene: StewieG\_26 Start: 20923, Stop: 22704, Start Num: 161

Candidate Starts for StewieG\_26:

(Start: 146 @20902 has 223 MA's), (Start: 161 @20923 has 4 MA's), (Start: 190 @20965 has 1 MA's), (216, 21010), (306, 21226), (332, 21271), (338, 21280), (349, 21319), (368, 21370), (369, 21373), (467, 21568), (500, 21637), (583, 21838), (584, 21841), (591, 21862), (635, 21958), (636, 21961), (638, 21967), (665, 22036), (668, 22054), (670, 22063), (677, 22093), (731, 22189), (746, 22222), (750, 22237), (793, 22378), (813, 22435), (862, 22546),

Gene: Stickynote\_33 Start: 28749, Stop: 30347, Start Num: 171

Candidate Starts for Stickynote\_33:

(Start: 171 @28749 has 40 MA's), (263, 28917), (278, 28956), (338, 29091), (358, 29151), (436, 29304), (442, 29316), (448, 29325), (449, 29328), (486, 29373), (493, 29388), (498, 29397), (518, 29460), (528, 29478), (557, 29532), (653, 29748), (678, 29841), (762, 29949), (784, 30003), (808, 30078), (867, 30207), (905, 30333),

Gene: Stiles\_17 Start: 16089, Stop: 17786, Start Num: 118

Candidate Starts for Stiles\_17:

(Start: 118 @16089 has 8 MA's), (136, 16110), (196, 16194), (211, 16221), (216, 16227), (275, 16359), (295, 16410), (306, 16443), (322, 16467), (368, 16587), (380, 16620), (385, 16638), (411, 16692), (448, 16737), (472, 16794), (478, 16806), (497, 16845), (540, 16905), (549, 16926), (553, 16935), (579, 16992), (610, 17082), (661, 17190), (673, 17244), (675, 17250), (681, 17268), (752, 17364), (766, 17385), (784, 17430), (845, 17589), (855, 17604), (861, 17619), (863, 17631), (907, 17775),

Gene: Stink\_28 Start: 20106, Stop: 21905, Start Num: 144

Candidate Starts for Stink\_28:

(Start: 123 @20082 has 215 MA's), (Start: 144 @20106 has 603 MA's), (Start: 148 @20112 has 14 MA's), (Start: 190 @20166 has 1 MA's), (230, 20235), (263, 20313), (272, 20337), (277, 20349), (278, 20352), (306, 20427), (315, 20442), (338, 20481), (369, 20574), (378, 20598), (417, 20685), (481, 20799), (532, 20925), (553, 20970), (583, 21039), (591, 21063), (595, 21075), (636, 21162), (665, 21237), (668, 21255), (675, 21288), (677, 21294), (682, 21309), (729, 21387), (731, 21390), (742, 21411), (813, 21636), (849, 21714), (851, 21717), (860, 21741), (862, 21747), (900, 21882), (909, 21900),

Gene: Stinson\_23 Start: 17121, Stop: 18887, Start Num: 114

Candidate Starts for Stinson\_23:

(Start: 114 @17121 has 139 MA's), (140, 17151), (236, 17310), (248, 17343), (258, 17373), (272, 17406), (278, 17418), (316, 17508), (334, 17544), (337, 17550), (360, 17622), (362, 17631), (378, 17670), (392, 17715), (400, 17736), (403, 17739), (448, 17811), (465, 17853), (468, 17859), (481, 17886), (499, 17922), (522, 17979), (564, 18024), (572, 18042), (593, 18102), (603, 18132), (618, 18159), (655, 18264), (704, 18354), (748, 18423), (757, 18459), (768, 18489), (772, 18498), (793, 18573), (810, 18624), (863, 18723), (880, 18774), (901, 18858), (902, 18861), (913, 18879),

Gene: StolenFromERC\_26 Start: 19736, Stop: 21415, Start Num: 129

Candidate Starts for StolenFromERC\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: StorminNorm\_34 Start: 29521, Stop: 31284, Start Num: 97

Candidate Starts for StorminNorm\_34:

(Start: 97 @29521 has 73 MA's), (Start: 121 @29557 has 1 MA's), (211, 29686), (219, 29695), (262, 29791), (265, 29800), (288, 29869), (306, 29920), (332, 29965), (341, 29980), (345, 29998), (368, 30061), (384, 30106), (386, 30115), (454, 30226), (458, 30235), (461, 30250), (472, 30274), (487, 30304), (597, 30526), (607, 30544), (613, 30559), (635, 30601), (636, 30604), (647, 30631), (688, 30751), (736, 30814), (793, 30955), (794, 30958), (810, 31006), (824, 31033), (832, 31060), (860, 31114), (866, 31141),



Gene: StressBall\_19 Start: 16273, Stop: 18009, Start Num: 117

Candidate Starts for StressBall\_19:

(Start: 101 @16249 has 2 MA's), (Start: 117 @16273 has 59 MA's), (Start: 166 @16333 has 1 MA's), (178, 16354), (180, 16357), (246, 16477), (258, 16516), (272, 16549), (282, 16573), (344, 16693), (356, 16732), (358, 16738), (386, 16822), (388, 16828), (392, 16840), (402, 16864), (410, 16891), (422, 16909), (452, 16948), (459, 16954), (470, 16978), (494, 17032), (500, 17044), (503, 17053), (529, 17113), (573, 17191), (587, 17230), (598, 17263), (618, 17329), (627, 17353), (636, 17377), (647, 17407), (735, 17521), (740, 17533), (745, 17542), (747, 17551), (779, 17659), (805, 17743), (853, 17842), (890, 17950), (907, 17998),

Gene: Strobilo\_19 Start: 15016, Stop: 16785, Start Num: 112

Candidate Starts for Strobilo\_19:

(Start: 93 @14980 has 1 MA's), (Start: 109 @15010 has 26 MA's), (Start: 112 @15016 has 41 MA's), (Start: 135 @15031 has 7 MA's), (Start: 168 @15073 has 32 MA's), (197, 15121), (Start: 227 @15160 has 2 MA's), (230, 15175), (248, 15226), (258, 15256), (272, 15289), (278, 15301), (282, 15319), (316, 15391), (321, 15397), (356, 15493), (360, 15505), (395, 15607), (403, 15622), (423, 15658), (448, 15694), (468, 15742), (487, 15781), (499, 15805), (503, 15817), (564, 15907), (567, 15916), (640, 16111), (655, 16162), (670, 16216), (714, 16270), (768, 16384), (772, 16393), (793, 16468), (810, 16519), (813, 16525), (863, 16621), (881, 16675), (901, 16756), (913, 16777),

Gene: Strokeseat\_16 Start: 14904, Stop: 16613, Start Num: 123

Candidate Starts for Strokeseat\_16:

(Start: 123 @14904 has 215 MA's), (193, 14991), (Start: 227 @15036 has 2 MA's), (233, 15060), (271, 15165), (274, 15171), (281, 15189), (300, 15219), (348, 15324), (370, 15384), (378, 15405), (381, 15414), (388, 15438), (459, 15564), (465, 15579), (468, 15585), (484, 15621), (486, 15624), (492, 15636), (494, 15642), (511, 15690), (515, 15702), (521, 15708), (564, 15768), (568, 15780), (583, 15816), (587, 15828), (614, 15903), (618, 15912), (625, 15930), (627, 15936), (638, 15966), (710, 16071), (717, 16080), (720, 16083), (737, 16119), (761, 16197), (791, 16296), (799, 16317), (810, 16350), (826, 16380), (836, 16410), (841, 16419), (844, 16425), (860, 16440), (861, 16443), (866, 16467), (877, 16497), (882, 16509), (887, 16539), (900, 16581),

Gene: StrongArm\_26 Start: 22101, Stop: 23903, Start Num: 146

Candidate Starts for StrongArm\_26:

(Start: 146 @22101 has 223 MA's), (Start: 161 @22122 has 4 MA's), (Start: 190 @22164 has 1 MA's), (216, 22209), (306, 22425), (332, 22470), (338, 22479), (349, 22518), (368, 22569), (369, 22572), (467, 22767), (500, 22836), (583, 23037), (584, 23040), (591, 23061), (635, 23157), (636, 23160), (638, 23166), (665, 23235), (668, 23253), (670, 23262), (677, 23292), (731, 23388), (746, 23421), (750, 23436), (758, 23466), (793, 23577), (813, 23634), (862, 23745),

Gene: Strosahl\_30 Start: 19057, Stop: 20844, Start Num: 144

Candidate Starts for Strosahl\_30:

(94, 18991), (Start: 123 @19033 has 215 MA's), (Start: 144 @19057 has 603 MA's), (236, 19195), (262, 19252), (278, 19294), (292, 19330), (306, 19369), (343, 19438), (349, 19462), (369, 19516), (448, 19666), (467, 19711), (481, 19741), (499, 19777), (515, 19828), (530, 19864), (553, 19912), (580, 19972), (635, 20101), (665, 20179), (750, 20380), (752, 20386), (782, 20482), (845, 20647), (880, 20746),

Gene: Stultus\_33 Start: 29892, Stop: 31655, Start Num: 97

Candidate Starts for Stultus\_33:

(90, 29874), (Start: 97 @29892 has 73 MA's), (Start: 121 @29928 has 1 MA's), (219, 30066), (262, 30162), (265, 30171), (288, 30240), (306, 30291), (332, 30336), (341, 30351), (368, 30432), (384, 30477), (386, 30486), (445, 30576), (458, 30606), (461, 30621), (472, 30645), (487, 30675), (597, 30897), (607, 30915), (613, 30930), (631, 30960), (635, 30972), (636, 30975), (647, 31002), (793,

31326), (794, 31329), (810, 31377), (824, 31404), (832, 31431), (860, 31485), (866, 31512), (902, 31641),

Gene: Suerte\_18 Start: 16811, Stop: 18391, Start Num: 170

Candidate Starts for Suerte\_18:

(88, 16694), (Start: 170 @16811 has 87 MA's), (298, 17069), (307, 17090), (340, 17144), (351, 17183), (369, 17240), (377, 17261), (501, 17432), (507, 17450), (514, 17474), (521, 17495), (554, 17537), (592, 17618), (636, 17708), (653, 17753), (669, 17810), (670, 17813), (687, 17867), (751, 17957), (863, 18236), (865, 18245), (874, 18275),

Gene: Sukkupi\_43 Start: 29457, Stop: 31073, Start Num: 170

Candidate Starts for Sukkupi\_43:

(Start: 170 @29457 has 87 MA's), (Start: 175 @29466 has 1 MA's), (Start: 177 @29469 has 1 MA's), (Start: 194 @29493 has 1 MA's), (236, 29571), (306, 29754), (340, 29811), (343, 29823), (347, 29838), (372, 29904), (377, 29919), (386, 29943), (432, 30030), (436, 30036), (449, 30060), (493, 30120), (505, 30150), (511, 30171), (560, 30276), (571, 30297), (607, 30384), (635, 30432), (673, 30558), (688, 30594), (791, 30759), (798, 30777), (809, 30813), (885, 30987), (887, 30999), (906, 31056),

Gene: Sulley\_23 Start: 17121, Stop: 18887, Start Num: 114

Candidate Starts for Sulley\_23:

(Start: 114 @17121 has 139 MA's), (140, 17151), (236, 17310), (248, 17343), (258, 17373), (272, 17406), (278, 17418), (316, 17508), (337, 17550), (360, 17622), (362, 17631), (378, 17670), (392, 17715), (400, 17736), (403, 17739), (438, 17793), (448, 17811), (465, 17853), (468, 17859), (481, 17886), (564, 18024), (572, 18042), (587, 18084), (593, 18102), (603, 18132), (618, 18159), (655, 18264), (748, 18423), (757, 18459), (768, 18489), (772, 18498), (793, 18573), (810, 18624), (890, 18819), (901, 18858), (902, 18861), (913, 18879),

Gene: SummitAcademy\_17 Start: 15495, Stop: 17189, Start Num: 144

Candidate Starts for SummitAcademy\_17:

(Start: 133 @15492 has 8 MA's), (Start: 144 @15495 has 603 MA's), (214, 15594), (236, 15636), (336, 15876), (365, 15963), (374, 15984), (377, 15993), (385, 16020), (406, 16065), (436, 16098), (444, 16113), (454, 16137), (465, 16170), (481, 16203), (487, 16215), (509, 16272), (546, 16320), (560, 16350), (574, 16380), (580, 16395), (596, 16443), (617, 16494), (636, 16530), (643, 16545), (650, 16563), (668, 16620), (670, 16629), (747, 16749), (750, 16761), (777, 16809), (791, 16860), (793, 16863), (799, 16881), (829, 16959), (842, 16986), (862, 17028), (902, 17175), (907, 17181),

Gene: Sumter\_26 Start: 20650, Stop: 22452, Start Num: 146

Candidate Starts for Sumter\_26:

(Start: 146 @20650 has 223 MA's), (Start: 161 @20671 has 4 MA's), (Start: 190 @20713 has 1 MA's), (216, 20758), (306, 20974), (332, 21019), (338, 21028), (368, 21118), (369, 21121), (467, 21316), (500, 21385), (583, 21586), (584, 21589), (591, 21610), (635, 21706), (636, 21709), (638, 21715), (665, 21784), (668, 21802), (670, 21811), (677, 21841), (731, 21937), (746, 21970), (750, 21985), (793, 22126), (813, 22183), (862, 22294),

Gene: Sunflower1121\_21 Start: 16226, Stop: 17992, Start Num: 114

Candidate Starts for Sunflower1121\_21:

(Start: 109 @16217 has 26 MA's), (Start: 114 @16226 has 139 MA's), (140, 16256), (Start: 227 @16382 has 2 MA's), (230, 16397), (236, 16415), (248, 16448), (258, 16478), (278, 16523), (316, 16613), (334, 16649), (360, 16727), (362, 16736), (400, 16841), (403, 16844), (444, 16910), (448, 16916), (465, 16958), (468, 16964), (481, 16991), (572, 17147), (593, 17207), (636, 17309), (641, 17321), (655, 17369), (698, 17444), (708, 17468), (748, 17528), (757, 17564), (768, 17594), (793, 17678), (810, 17729), (813, 17735), (863, 17828), (901, 17963), (902, 17966), (913, 17984),

Gene: Sunhee\_27 Start: 19447, Stop: 21246, Start Num: 144

Candidate Starts for Sunhee\_27:

(Start: 141 @19444 has 14 MA's), (Start: 144 @19447 has 603 MA's), (242, 19600), (265, 19651), (278, 19684), (305, 19756), (306, 19759), (338, 19813), (341, 19819), (378, 19930), (380, 19936), (392, 19975), (395, 19984), (417, 20017), (460, 20092), (463, 20098), (467, 20101), (495, 20161), (535, 20263), (547, 20290), (576, 20350), (584, 20374), (597, 20413), (631, 20479), (636, 20494), (707, 20692), (726, 20719), (746, 20764), (750, 20779), (752, 20785), (781, 20878), (784, 20893), (860, 21082), (862, 21088), (863, 21097), (873, 21133), (901, 21229),

Gene: Sunshine924\_26 Start: 20656, Stop: 22458, Start Num: 146

Candidate Starts for Sunshine924\_26:

(Start: 146 @20656 has 223 MA's), (Start: 161 @20677 has 4 MA's), (Start: 190 @20719 has 1 MA's), (216, 20764), (306, 20980), (332, 21025), (338, 21034), (349, 21073), (368, 21124), (369, 21127), (467, 21322), (500, 21391), (583, 21592), (584, 21595), (591, 21616), (635, 21712), (636, 21715), (638, 21721), (665, 21790), (668, 21808), (670, 21817), (677, 21847), (731, 21943), (746, 21976), (750, 21991), (793, 22132), (813, 22189), (862, 22300), (909, 22453),

Gene: SuperAwesome\_31 Start: 19969, Stop: 21741, Start Num: 144

Candidate Starts for SuperAwesome\_31:

(94, 19903), (Start: 123 @19945 has 215 MA's), (Start: 144 @19969 has 603 MA's), (263, 20167), (278, 20206), (305, 20278), (306, 20281), (318, 20299), (338, 20335), (341, 20341), (378, 20452), (380, 20458), (392, 20497), (417, 20539), (448, 20578), (463, 20620), (467, 20623), (495, 20683), (592, 20920), (597, 20935), (636, 21016), (677, 21148), (750, 21274), (765, 21325), (770, 21334), (781, 21373), (782, 21376), (784, 21388), (813, 21472), (860, 21577), (862, 21583), (900, 21718),

Gene: SuperCallie99\_31 Start: 19968, Stop: 21740, Start Num: 144

Candidate Starts for SuperCallie99\_31:

(94, 19902), (Start: 123 @19944 has 215 MA's), (Start: 144 @19968 has 603 MA's), (263, 20166), (278, 20205), (305, 20277), (306, 20280), (318, 20298), (338, 20334), (341, 20340), (378, 20451), (380, 20457), (392, 20496), (417, 20538), (448, 20577), (463, 20619), (467, 20622), (495, 20682), (592, 20919), (597, 20934), (636, 21015), (677, 21147), (750, 21273), (765, 21324), (770, 21333), (781, 21372), (782, 21375), (784, 21387), (813, 21471), (860, 21576), (862, 21582), (900, 21717),

Gene: SuperGrey\_17 Start: 15480, Stop: 17189, Start Num: 123

Candidate Starts for SuperGrey\_17:

(Start: 123 @15480 has 215 MA's), (193, 15567), (Start: 227 @15612 has 2 MA's), (233, 15636), (271, 15741), (274, 15747), (281, 15765), (300, 15795), (348, 15900), (370, 15960), (378, 15981), (381, 15990), (388, 16014), (403, 16056), (418, 16089), (424, 16101), (443, 16116), (448, 16122), (459, 16140), (465, 16155), (468, 16161), (484, 16197), (486, 16200), (492, 16212), (494, 16218), (499, 16227), (511, 16266), (515, 16278), (521, 16284), (564, 16344), (568, 16356), (583, 16392), (587, 16404), (614, 16479), (618, 16488), (625, 16506), (627, 16512), (638, 16542), (710, 16647), (717, 16656), (720, 16659), (737, 16695), (761, 16773), (799, 16893), (826, 16956), (836, 16986), (841, 16995), (844, 17001), (860, 17016), (861, 17019), (866, 17043), (877, 17073), (882, 17085), (900, 17157),

Gene: SuperSulley\_42 Start: 30625, Stop: 32241, Start Num: 170

Candidate Starts for SuperSulley\_42:

(Start: 170 @30625 has 87 MA's), (Start: 177 @30637 has 1 MA's), (236, 30739), (265, 30823), (347, 31006), (372, 31072), (377, 31087), (386, 31111), (432, 31198), (449, 31228), (450, 31231), (493, 31288), (518, 31360), (571, 31465), (607, 31552), (635, 31600), (673, 31726), (688, 31762), (776, 31873), (799, 31948), (877, 32125), (887, 32167), (906, 32224),

Gene: Superchunk\_27 Start: 18835, Stop: 20625, Start Num: 144

Candidate Starts for Superchunk\_27:

(94, 18769), (Start: 123 @18811 has 215 MA's), (Start: 144 @18835 has 603 MA's), (Start: 161 @18844 has 4 MA's), (242, 18988), (277, 19069), (278, 19072), (305, 19144), (306, 19147), (315, 19162), (338, 19201), (341, 19207), (378, 19318), (380, 19324), (388, 19351), (417, 19405), (463, 19486), (467, 19489), (532, 19645), (546, 19675), (583, 19759), (597, 19801), (619, 19852), (636, 19882), (675, 20008), (701, 20062), (721, 20089), (726, 20098), (731, 20110), (746, 20143), (750, 20158), (756, 20182), (781, 20257), (782, 20260), (784, 20272), (813, 20356), (860, 20461), (873, 20512), (877, 20521), (900, 20602),

Gene: Superphikiman\_34 Start: 25162, Stop: 26805, Start Num: 191

Candidate Starts for Superphikiman\_34:

(Start: 124 @25072 has 30 MA's), (Start: 191 @25162 has 45 MA's), (193, 25165), (233, 25240), (243, 25267), (268, 25333), (282, 25369), (301, 25399), (306, 25414), (346, 25498), (358, 25534), (368, 25561), (382, 25600), (392, 25633), (395, 25642), (420, 25699), (451, 25741), (490, 25816), (494, 25828), (515, 25888), (552, 25942), (565, 25972), (573, 25990), (577, 25999), (588, 26032), (592, 26044), (594, 26050), (606, 26089), (627, 26146), (725, 26296), (735, 26314), (750, 26356), (756, 26380), (757, 26383), (761, 26398), (773, 26428), (782, 26458), (799, 26515), (868, 26665), (902, 26785), (907, 26791),

Gene: Survivors\_20 Start: 16559, Stop: 18253, Start Num: 144

Candidate Starts for Survivors\_20:

(47, 16235), (Start: 144 @16559 has 603 MA's), (289, 16844), (290, 16847), (306, 16892), (316, 16907), (349, 16985), (365, 17030), (406, 17132), (419, 17153), (436, 17165), (442, 17177), (444, 17180), (465, 17237), (481, 17270), (489, 17285), (513, 17351), (549, 17393), (553, 17402), (574, 17447), (596, 17510), (635, 17591), (643, 17609), (647, 17618), (650, 17627), (668, 17684), (670, 17693), (750, 17825), (766, 17852), (777, 17873), (791, 17924), (793, 17927), (829, 18023), (842, 18050), (847, 18059), (849, 18062), (862, 18092), (865, 18110), (881, 18155), (907, 18245),

Gene: Susceptit\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Susceptit\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: SwagPiggett\_16 Start: 14813, Stop: 16522, Start Num: 123

Candidate Starts for SwagPiggett\_16:

(Start: 123 @14813 has 215 MA's), (193, 14900), (Start: 227 @14945 has 2 MA's), (233, 14969), (251, 15026), (271, 15074), (274, 15080), (281, 15098), (300, 15128), (348, 15233), (367, 15287), (370, 15293), (373, 15302), (381, 15323), (388, 15347), (402, 15383), (403, 15389), (418, 15422), (420, 15425), (424, 15434), (443, 15449), (448, 15455), (459, 15473), (465, 15488), (468, 15494), (475, 15512), (477, 15515), (484, 15530), (492, 15545), (494, 15551), (511, 15599), (515, 15611), (521, 15617), (564, 15677), (568, 15689), (583, 15725), (587, 15737), (614, 15812), (618, 15821), (625, 15839), (627, 15845), (638, 15875), (710, 15980), (720, 15992), (737, 16028), (761, 16106), (799, 16226), (810, 16259), (826, 16289), (829, 16301), (836, 16319), (839, 16325), (841, 16328), (844, 16334), (860, 16349), (861, 16352), (865, 16373), (866, 16376), (882, 16418), (887, 16448), (900, 16490), (901, 16496),

Gene: Swann\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for Swann\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: SweatNTears\_20 Start: 15891, Stop: 17588, Start Num: 144

Candidate Starts for SweatNTears\_20:

(113, 15861), (Start: 133 @15888 has 8 MA's), (Start: 144 @15891 has 603 MA's), (264, 16101), (332, 16269), (336, 16275), (374, 16383), (385, 16419), (395, 16449), (406, 16464), (436, 16497), (442, 16509), (458, 16545), (481, 16602), (487, 16614), (553, 16734), (562, 16755), (574, 16779), (636, 16929), (643, 16944), (650, 16962), (668, 17019), (747, 17148), (750, 17160), (755, 17178), (766, 17187), (791, 17259), (793, 17262), (795, 17268), (799, 17280), (842, 17385), (847, 17394), (862, 17427), (896, 17553),

Gene: SweetiePie\_28 Start: 20118, Stop: 21890, Start Num: 144

Candidate Starts for SweetiePie\_28:

(94, 20052), (Start: 123 @20094 has 215 MA's), (Start: 144 @20118 has 603 MA's), (219, 20217), (251, 20301), (277, 20352), (278, 20355), (305, 20427), (306, 20430), (338, 20484), (349, 20523), (365, 20568), (378, 20601), (417, 20688), (463, 20769), (467, 20772), (584, 21045), (636, 21165), (675, 21291), (713, 21345), (746, 21408), (750, 21423), (752, 21429), (770, 21483), (781, 21522), (784, 21537), (813, 21621), (862, 21732), (900, 21867),

Gene: Sweets\_18 Start: 16635, Stop: 18398, Start Num: 109

Candidate Starts for Sweets\_18:

(Start: 109 @16635 has 26 MA's), (Start: 132 @16644 has 45 MA's), (Start: 137 @16650 has 2 MA's), (143, 16656), (230, 16788), (248, 16839), (258, 16869), (269, 16893), (309, 16995), (331, 17034), (334, 17040), (341, 17055), (353, 17100), (395, 17220), (425, 17277), (448, 17316), (468, 17364), (481, 17391), (487, 17403), (522, 17484), (564, 17529), (641, 17727), (649, 17757), (655, 17775), (665, 17802), (716, 17886), (730, 17904), (743, 17919), (756, 17967), (760, 17982), (782, 18045), (799, 18102), (813, 18141), (831, 18183), (863, 18234), (890, 18330), (913, 18390),

Gene: SwirlSquare\_30 Start: 18974, Stop: 20788, Start Num: 123

Candidate Starts for SwirlSquare\_30:

(94, 18932), (Start: 123 @18974 has 215 MA's), (Start: 144 @18998 has 603 MA's), (277, 19232), (278, 19235), (305, 19307), (306, 19310), (315, 19325), (380, 19487), (384, 19499), (417, 19568), (455, 19628), (463, 19649), (467, 19652), (532, 19808), (546, 19838), (583, 19922), (619, 20015), (636, 20045), (675, 20171), (731, 20273), (746, 20306), (750, 20321), (781, 20420), (782, 20423), (784, 20435), (813, 20519), (860, 20624), (877, 20684), (900, 20765),

Gene: Swirley\_24 Start: 19634, Stop: 21430, Start Num: 144

Candidate Starts for Swirley\_24:

(Start: 144 @19634 has 603 MA's), (222, 19739), (236, 19772), (278, 19871), (306, 19946), (315, 19961), (336, 19997), (360, 20069), (365, 20084), (380, 20123), (481, 20318), (495, 20348), (499, 20354), (553, 20489), (579, 20546), (580, 20549), (583, 20558), (597, 20600), (602, 20618), (635, 20678), (636, 20681), (668, 20774), (670, 20783), (675, 20807), (729, 20915), (746, 20951), (813, 21161), (859, 21263), (862, 21272), (893, 21386), (900, 21407), (902, 21416),

Gene: SwissCheese\_28 Start: 21594, Stop: 23396, Start Num: 146

Candidate Starts for SwissCheese\_28:

(Start: 146 @21594 has 223 MA's), (Start: 161 @21615 has 4 MA's), (Start: 190 @21657 has 1 MA's), (216, 21702), (306, 21918), (332, 21963), (338, 21972), (349, 22011), (368, 22062), (369, 22065), (467, 22260), (500, 22329), (583, 22530), (584, 22533), (591, 22554), (635, 22650), (636, 22653),

(638, 22659), (665, 22728), (668, 22746), (670, 22755), (677, 22785), (731, 22881), (746, 22914), (750, 22929), (758, 22959), (793, 23070), (813, 23127), (862, 23238),

Gene: Switzer\_28 Start: 21233, Stop: 23035, Start Num: 146

Candidate Starts for Switzer\_28:

(Start: 146 @21233 has 223 MA's), (Start: 161 @21254 has 4 MA's), (Start: 190 @21296 has 1 MA's), (216, 21341), (306, 21557), (332, 21602), (338, 21611), (349, 21650), (368, 21701), (369, 21704), (467, 21899), (500, 21968), (583, 22169), (584, 22172), (591, 22193), (635, 22289), (636, 22292), (638, 22298), (665, 22367), (668, 22385), (670, 22394), (677, 22424), (731, 22520), (746, 22553), (750, 22568), (793, 22709), (813, 22766), (862, 22877), (909, 23030),

Gene: Switzerland\_30 Start: 19208, Stop: 20995, Start Num: 144

Candidate Starts for Switzerland\_30:

(94, 19142), (Start: 123 @19184 has 215 MA's), (Start: 144 @19208 has 603 MA's), (236, 19346), (262, 19403), (278, 19445), (292, 19481), (306, 19520), (343, 19589), (349, 19613), (369, 19667), (448, 19817), (467, 19862), (481, 19892), (499, 19928), (515, 19979), (530, 20015), (553, 20063), (580, 20123), (635, 20252), (665, 20330), (750, 20531), (752, 20537), (782, 20633), (845, 20798), (880, 20897),

Gene: Swole\_29 Start: 21585, Stop: 23387, Start Num: 146

Candidate Starts for Swole\_29:

(Start: 146 @21585 has 223 MA's), (Start: 161 @21606 has 4 MA's), (Start: 190 @21648 has 1 MA's), (216, 21693), (306, 21909), (332, 21954), (338, 21963), (349, 22002), (368, 22053), (369, 22056), (467, 22251), (500, 22320), (583, 22521), (584, 22524), (591, 22545), (635, 22641), (636, 22644), (638, 22650), (665, 22719), (668, 22737), (670, 22746), (677, 22776), (731, 22872), (746, 22905), (750, 22920), (793, 23061), (813, 23118), (862, 23229),

Gene: SydNat\_24 Start: 19916, Stop: 21715, Start Num: 144

Candidate Starts for SydNat\_24:

(Start: 144 @19916 has 603 MA's), (236, 20054), (278, 20153), (306, 20228), (336, 20279), (360, 20351), (365, 20366), (378, 20399), (380, 20405), (432, 20498), (481, 20600), (495, 20630), (499, 20636), (532, 20726), (546, 20756), (583, 20840), (584, 20843), (597, 20882), (602, 20900), (635, 20960), (636, 20963), (668, 21056), (729, 21197), (749, 21239), (862, 21557), (900, 21692), (902, 21701),

Gene: Syra333\_22 Start: 16321, Stop: 18087, Start Num: 114

Candidate Starts for Syra333\_22:

(Start: 109 @16312 has 26 MA's), (Start: 114 @16321 has 139 MA's), (140, 16351), (159, 16378), (Start: 227 @16477 has 2 MA's), (230, 16492), (236, 16510), (248, 16543), (258, 16573), (278, 16618), (316, 16708), (334, 16744), (360, 16822), (362, 16831), (400, 16936), (403, 16939), (444, 17005), (448, 17011), (468, 17059), (474, 17074), (572, 17242), (593, 17302), (618, 17359), (636, 17404), (641, 17416), (655, 17464), (708, 17563), (748, 17623), (757, 17659), (793, 17773), (810, 17824), (813, 17830), (863, 17923), (901, 18058), (902, 18061), (913, 18079),

Gene: TBond007\_22 Start: 17357, Stop: 19120, Start Num: 114

Candidate Starts for TBond007\_22:

(Start: 109 @17348 has 26 MA's), (Start: 114 @17357 has 139 MA's), (196, 17459), (230, 17516), (248, 17567), (258, 17597), (269, 17621), (360, 17852), (362, 17861), (368, 17873), (400, 17966), (403, 17969), (448, 18041), (451, 18050), (465, 18083), (468, 18089), (487, 18128), (503, 18164), (564, 18254), (588, 18317), (622, 18404), (655, 18497), (698, 18572), (748, 18653), (760, 18701), (771, 18725), (778, 18752), (795, 18809), (810, 18854), (863, 18956), (871, 18983), (887, 19043), (890, 19052), (896, 19073), (901, 19091), (904, 19097), (913, 19112),

Gene: TBrady12\_26 Start: 19820, Stop: 21415, Start Num: 191

Candidate Starts for TBrady12\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: TChen\_17 Start: 15346, Stop: 17073, Start Num: 110

Candidate Starts for TChen\_17:

(Start: 110 @15346 has 1 MA's), (Start: 114 @15352 has 139 MA's), (Start: 117 @15358 has 59 MA's), (Start: 129 @15370 has 79 MA's), (134, 15376), (Start: 227 @15496 has 2 MA's), (233, 15520), (241, 15544), (271, 15625), (274, 15631), (281, 15649), (300, 15679), (373, 15853), (381, 15874), (382, 15877), (393, 15913), (407, 15952), (448, 16006), (459, 16024), (460, 16027), (465, 16039), (468, 16045), (484, 16081), (494, 16102), (502, 16120), (511, 16150), (515, 16162), (521, 16168), (564, 16228), (583, 16276), (599, 16321), (614, 16363), (618, 16372), (627, 16396), (638, 16426), (653, 16471), (710, 16531), (717, 16540), (720, 16543), (737, 16579), (762, 16660), (803, 16789), (810, 16810), (826, 16840), (836, 16870), (841, 16879), (844, 16885), (860, 16900), (861, 16903), (907, 17056),

Gene: TClif\_22 Start: 16354, Stop: 18120, Start Num: 114

Candidate Starts for TClif\_22:

(Start: 93 @16315 has 1 MA's), (Start: 109 @16345 has 26 MA's), (Start: 114 @16354 has 139 MA's), (140, 16384), (230, 16525), (258, 16606), (272, 16639), (278, 16651), (337, 16783), (360, 16855), (362, 16864), (369, 16879), (400, 16969), (403, 16972), (444, 17038), (448, 17044), (465, 17086), (468, 17092), (481, 17119), (564, 17257), (603, 17365), (636, 17437), (655, 17497), (708, 17596), (719, 17611), (757, 17692), (772, 17731), (793, 17806), (810, 17857), (913, 18112),

Gene: TDanisky\_16 Start: 14836, Stop: 16545, Start Num: 123

Candidate Starts for TDanisky\_16:

(Start: 123 @14836 has 215 MA's), (193, 14923), (Start: 227 @14968 has 2 MA's), (233, 14992), (251, 15049), (271, 15097), (274, 15103), (281, 15121), (300, 15151), (348, 15256), (367, 15310), (370, 15316), (373, 15325), (381, 15346), (388, 15370), (402, 15406), (403, 15412), (418, 15445), (420, 15448), (424, 15457), (443, 15472), (448, 15478), (459, 15496), (465, 15511), (468, 15517), (475, 15535), (477, 15538), (484, 15553), (492, 15568), (494, 15574), (511, 15622), (515, 15634), (521, 15640), (564, 15700), (568, 15712), (583, 15748), (587, 15760), (614, 15835), (618, 15844), (625, 15862), (627, 15868), (638, 15898), (710, 16003), (720, 16015), (737, 16051), (761, 16129), (799, 16249), (810, 16282), (826, 16312), (829, 16324), (836, 16342), (839, 16348), (841, 16351), (844, 16357), (860, 16372), (861, 16375), (865, 16396), (866, 16399), (882, 16441), (887, 16471), (900, 16513), (901, 16519),

Gene: TM4\_19 Start: 15094, Stop: 16851, Start Num: 112

Candidate Starts for TM4\_19:

(Start: 93 @15058 has 1 MA's), (Start: 109 @15088 has 26 MA's), (Start: 112 @15094 has 41 MA's), (Start: 135 @15109 has 7 MA's), (Start: 168 @15151 has 32 MA's), (197, 15199), (Start: 227 @15238 has 2 MA's), (230, 15253), (248, 15304), (249, 15307), (258, 15334), (272, 15367), (278, 15379), (316, 15469), (321, 15475), (360, 15583), (395, 15685), (400, 15697), (403, 15700), (423, 15736), (448, 15772), (454, 15790), (465, 15814), (468, 15820), (487, 15859), (499, 15883), (503, 15895), (564, 15985), (567, 15994), (588, 16048), (598, 16078), (640, 16189), (655, 16240), (704, 16330), (708, 16339), (714, 16348), (716, 16351), (748, 16384), (758, 16423), (768, 16450), (772, 16459), (793, 16534), (810, 16585), (813, 16591), (852, 16672), (863, 16687), (881, 16741), (901, 16822), (913, 16843),

Gene: TNguyen7\_27 Start: 19874, Stop: 21670, Start Num: 144

Candidate Starts for TNguyen7\_27:

(Start: 144 @19874 has 603 MA's), (Start: 190 @19931 has 1 MA's), (230, 20000), (272, 20102), (277, 20114), (278, 20117), (306, 20192), (315, 20207), (338, 20246), (384, 20381), (417, 20450), (481, 20564), (532, 20690), (583, 20804), (591, 20828), (597, 20846), (636, 20927), (665, 21002), (668, 21020), (670, 21029), (675, 21053), (677, 21059), (682, 21074), (703, 21107), (729, 21152), (731, 21155), (742, 21176), (746, 21188), (763, 21251), (813, 21401), (860, 21506), (862, 21512), (900, 21647),

Gene: TPA4\_19 Start: 17726, Stop: 19462, Start Num: 122

Candidate Starts for TPA4\_19:

(98, 17699), (122, 17726), (186, 17798), (223, 17852), (Start: 227 @17858 has 2 MA's), (236, 17891), (341, 18143), (361, 18212), (371, 18230), (386, 18278), (390, 18290), (393, 18299), (406, 18329), (432, 18359), (448, 18386), (454, 18404), (464, 18425), (474, 18449), (526, 18560), (563, 18596), (576, 18626), (628, 18761), (629, 18764), (641, 18794), (655, 18842), (664, 18866), (750, 19007), (781, 19106), (787, 19133), (788, 19136), (805, 19187), (810, 19199), (824, 19226), (838, 19262), (865, 19307), (877, 19343), (891, 19394), (912, 19451),

Gene: TWAMP\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for TWAMP\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: TZGordon\_24 Start: 16619, Stop: 17947, Start Num: 257

Candidate Starts for TZGordon\_24:

(Start: 257 @16619 has 11 MA's), (267, 16634), (317, 16748), (333, 16778), (349, 16823), (364, 16868), (383, 16925), (388, 16943), (391, 16952), (401, 16976), (405, 16982), (406, 16985), (437, 17036), (447, 17048), (509, 17090), (531, 17141), (536, 17150), (548, 17159), (580, 17204), (590, 17222), (636, 17315), (653, 17360), (671, 17429), (680, 17450), (746, 17525), (749, 17531), (763, 17564), (799, 17651), (812, 17687), (819, 17702), (823, 17711), (849, 17753), (881, 17846), (884, 17864), (899, 17921), (902, 17930),

Gene: Tachez\_23 Start: 17117, Stop: 18883, Start Num: 114

Candidate Starts for Tachez\_23:

(Start: 114 @17117 has 139 MA's), (140, 17147), (236, 17306), (248, 17339), (258, 17369), (272, 17402), (278, 17414), (316, 17504), (337, 17546), (360, 17618), (362, 17627), (378, 17666), (392, 17711), (400, 17732), (403, 17735), (438, 17789), (448, 17807), (465, 17849), (468, 17855), (481, 17882), (564, 18020), (572, 18038), (587, 18080), (593, 18098), (603, 18128), (618, 18155), (655, 18260), (748, 18419), (757, 18455), (768, 18485), (772, 18494), (793, 18569), (810, 18620), (863, 18719), (890, 18815), (901, 18854), (902, 18857), (913, 18875),

Gene: Taheera\_18 Start: 16666, Stop: 18420, Start Num: 132

Candidate Starts for Taheera\_18:

(55, 16453), (Start: 109 @16657 has 26 MA's), (Start: 132 @16666 has 45 MA's), (Start: 137 @16672 has 2 MA's), (143, 16678), (197, 16756), (230, 16810), (248, 16861), (258, 16891), (269, 16915), (309, 17017), (331, 17056), (334, 17062), (341, 17077), (395, 17242), (425, 17299), (448, 17338), (465, 17380), (468, 17386), (487, 17425), (542, 17524), (564, 17551), (582, 17596), (649, 17779), (655, 17797), (665, 17824), (716, 17908), (730, 17926), (743, 17941), (760, 18004), (782, 18067), (787, 18091), (799, 18124), (813, 18163), (831, 18205), (890, 18352), (913, 18412),



Gene: TaiwanKao\_24 Start: 17128, Stop: 18894, Start Num: 114

Candidate Starts for TaiwanKao\_24:

(Start: 114 @17128 has 139 MA's), (140, 17158), (236, 17317), (248, 17350), (258, 17380), (272, 17413), (278, 17425), (316, 17515), (337, 17557), (357, 17620), (360, 17629), (362, 17638), (378, 17677), (392, 17722), (400, 17743), (403, 17746), (448, 17818), (465, 17860), (468, 17866), (481, 17893), (564, 18031), (572, 18049), (587, 18091), (593, 18109), (603, 18139), (618, 18166), (655, 18271), (748, 18430), (757, 18466), (768, 18496), (772, 18505), (793, 18580), (810, 18631), (890, 18826), (901, 18865), (902, 18868), (913, 18886),

Gene: Taj\_16 Start: 14839, Stop: 16548, Start Num: 123

Candidate Starts for Taj\_16:

(Start: 123 @14839 has 215 MA's), (193, 14926), (Start: 227 @14971 has 2 MA's), (233, 14995), (271, 15100), (274, 15106), (281, 15124), (300, 15154), (348, 15259), (370, 15319), (377, 15337), (378, 15340), (381, 15349), (388, 15373), (459, 15499), (465, 15514), (468, 15520), (484, 15556), (486, 15559), (492, 15571), (494, 15577), (511, 15625), (515, 15637), (521, 15643), (564, 15703), (568, 15715), (583, 15751), (587, 15763), (614, 15838), (618, 15847), (625, 15865), (627, 15871), (638, 15901), (710, 16006), (717, 16015), (720, 16018), (737, 16054), (761, 16132), (791, 16231), (799, 16252), (810, 16285), (826, 16315), (836, 16345), (841, 16354), (844, 16360), (860, 16375), (861, 16378), (866, 16402), (877, 16432), (882, 16444), (887, 16474), (900, 16516),

Gene: Takoda\_23 Start: 16309, Stop: 17934, Start Num: 168

Candidate Starts for Takoda\_23:

(Start: 155 @16294 has 4 MA's), (Start: 168 @16309 has 32 MA's), (211, 16378), (232, 16414), (286, 16555), (306, 16600), (361, 16729), (378, 16771), (384, 16789), (386, 16798), (394, 16822), (406, 16840), (436, 16870), (444, 16885), (445, 16888), (460, 16927), (467, 16936), (576, 17137), (635, 17275), (665, 17353), (672, 17392), (675, 17404), (713, 17434), (750, 17512), (807, 17659), (854, 17758), (860, 17773), (907, 17926),

Gene: Tangent\_35 Start: 30329, Stop: 32092, Start Num: 97

Candidate Starts for Tangent\_35:

(90, 30311), (Start: 97 @30329 has 73 MA's), (Start: 121 @30365 has 1 MA's), (219, 30503), (262, 30599), (265, 30608), (288, 30677), (306, 30728), (332, 30773), (341, 30788), (368, 30869), (384, 30914), (386, 30923), (406, 30962), (445, 31013), (458, 31043), (461, 31058), (472, 31082), (487, 31112), (551, 31217), (597, 31334), (607, 31352), (613, 31367), (631, 31397), (635, 31409), (636, 31412), (647, 31439), (793, 31763), (794, 31766), (810, 31814), (824, 31841), (832, 31868), (860, 31922), (865, 31946), (866, 31949), (891, 32039), (909, 32087),

Gene: Tangerine\_34 Start: 29524, Stop: 31287, Start Num: 97

Candidate Starts for Tangerine\_34:

(Start: 97 @29524 has 73 MA's), (Start: 121 @29560 has 1 MA's), (211, 29689), (219, 29698), (262, 29794), (265, 29803), (288, 29872), (306, 29923), (311, 29932), (332, 29968), (341, 29983), (345, 30001), (368, 30064), (384, 30109), (386, 30118), (454, 30229), (458, 30238), (461, 30253), (472, 30277), (487, 30307), (597, 30529), (607, 30547), (613, 30562), (635, 30604), (647, 30634), (688, 30754), (749, 30847), (793, 30958), (794, 30961), (810, 31009), (824, 31036), (832, 31063), (860, 31117),

Gene: Tapioca\_18 Start: 14989, Stop: 16698, Start Num: 126

Candidate Starts for Tapioca\_18:

(Start: 126 @14989 has 42 MA's), (Start: 150 @15016 has 4 MA's), (Start: 227 @15121 has 2 MA's), (229, 15133), (241, 15169), (258, 15220), (271, 15250), (274, 15256), (284, 15283), (287, 15289), (348, 15409), (367, 15463), (370, 15469), (377, 15487), (381, 15499), (382, 15502), (388, 15523), (403, 15565), (418, 15598), (459, 15649), (465, 15664), (484, 15706), (492, 15721), (494, 15727),

(511, 15775), (525, 15799), (547, 15829), (564, 15853), (587, 15913), (591, 15925), (608, 15979), (614, 15988), (637, 16048), (638, 16051), (710, 16156), (717, 16165), (737, 16204), (781, 16342), (834, 16492), (836, 16495), (841, 16504), (860, 16525), (866, 16552), (880, 16588), (907, 16681),

Gene: Taquarus\_27 Start: 19830, Stop: 21608, Start Num: 144

Candidate Starts for Taquarus\_27:

(Start: 123 @19806 has 215 MA's), (Start: 144 @19830 has 603 MA's), (Start: 190 @19887 has 1 MA's), (222, 19941), (230, 19956), (236, 19974), (272, 20058), (277, 20070), (278, 20073), (306, 20148), (315, 20163), (338, 20202), (378, 20319), (417, 20406), (463, 20487), (489, 20535), (500, 20559), (532, 20646), (553, 20691), (584, 20763), (591, 20784), (597, 20802), (636, 20883), (668, 20976), (670, 20985), (675, 21009), (677, 21015), (687, 21039), (731, 21093), (742, 21114), (756, 21165), (763, 21189), (782, 21243), (813, 21339), (860, 21444), (863, 21459), (894, 21567), (900, 21585),

Gene: Taquito\_22 Start: 18239, Stop: 20029, Start Num: 112

Candidate Starts for Taquito\_22:

(Start: 93 @18203 has 1 MA's), (Start: 109 @18233 has 26 MA's), (Start: 112 @18239 has 41 MA's), (Start: 114 @18242 has 139 MA's), (Start: 168 @18299 has 32 MA's), (197, 18347), (Start: 227 @18386 has 2 MA's), (230, 18401), (236, 18419), (248, 18452), (258, 18482), (278, 18527), (282, 18545), (316, 18617), (321, 18623), (334, 18653), (356, 18719), (360, 18731), (412, 18866), (444, 18914), (448, 18920), (454, 18938), (468, 18968), (487, 19007), (564, 19133), (587, 19193), (588, 19196), (594, 19214), (599, 19229), (655, 19397), (670, 19451), (708, 19496), (734, 19541), (748, 19565), (756, 19598), (788, 19703), (793, 19715), (810, 19766), (813, 19772), (865, 19874), (901, 20000), (913, 20021),

Gene: Tardus\_36 Start: 30115, Stop: 31737, Start Num: 160

Candidate Starts for Tardus\_36:

(Start: 160 @30115 has 17 MA's), (178, 30136), (188, 30148), (219, 30199), (246, 30262), (277, 30334), (312, 30421), (341, 30472), (348, 30502), (378, 30583), (445, 30703), (449, 30709), (460, 30739), (464, 30748), (481, 30781), (482, 30784), (489, 30796), (508, 30844), (547, 30892), (551, 30901), (596, 31000), (609, 31039), (619, 31051), (665, 31168), (672, 31207), (711, 31246), (746, 31303), (764, 31342), (769, 31351), (786, 31408), (790, 31420), (810, 31477), (813, 31483), (824, 31504), (842, 31537), (863, 31582), (900, 31711), (902, 31720),

Gene: Target\_30 Start: 22616, Stop: 24418, Start Num: 146

Candidate Starts for Target\_30:

(Start: 146 @22616 has 223 MA's), (Start: 161 @22637 has 4 MA's), (Start: 190 @22679 has 1 MA's), (216, 22724), (306, 22940), (332, 22985), (338, 22994), (349, 23033), (368, 23084), (369, 23087), (467, 23282), (500, 23351), (583, 23552), (584, 23555), (591, 23576), (635, 23672), (636, 23675), (638, 23681), (665, 23750), (668, 23768), (670, 23777), (677, 23807), (731, 23903), (746, 23936), (750, 23951), (793, 24092), (813, 24149), (862, 24260),

Gene: Tarkin\_26 Start: 20735, Stop: 22414, Start Num: 129

Candidate Starts for Tarkin\_26:

(Start: 129 @20735 has 79 MA's), (Start: 191 @20819 has 45 MA's), (Start: 235 @20897 has 1 MA's), (268, 20984), (274, 20999), (300, 21047), (324, 21086), (356, 21173), (368, 21206), (381, 21242), (390, 21272), (392, 21278), (422, 21347), (461, 21377), (466, 21389), (468, 21392), (494, 21449), (565, 21581), (567, 21587), (592, 21653), (594, 21659), (601, 21683), (618, 21731), (627, 21755), (631, 21764), (658, 21839), (717, 21890), (725, 21905), (782, 22067), (788, 22094), (799, 22124), (843, 22229), (880, 22307), (887, 22343), (890, 22352), (900, 22385), (907, 22400),

Gene: TaronosaurusRx\_19 Start: 16979, Stop: 18709, Start Num: 138

Candidate Starts for TaronosaurusRx\_19:

(48, 16667), (72, 16862), (113, 16946), (Start: 121 @16958 has 1 MA's), (Start: 138 @16979 has 5 MA's), (272, 17216), (281, 17249), (368, 17462), (392, 17534), (414, 17576), (448, 17615), (458, 17642), (465, 17666), (485, 17708), (499, 17735), (500, 17738), (537, 17792), (540, 17798), (579, 17885), (690, 18176), (697, 18179), (737, 18245), (747, 18269), (752, 18287), (793, 18383), (799, 18401), (849, 18518), (863, 18557), (864, 18560), (867, 18572), (888, 18647), (896, 18674),

Gene: TarsusIV\_28 Start: 20208, Stop: 21980, Start Num: 144

Candidate Starts for TarsusIV\_28:

(94, 20142), (Start: 123 @20184 has 215 MA's), (Start: 144 @20208 has 603 MA's), (Start: 235 @20343 has 1 MA's), (242, 20361), (277, 20442), (278, 20445), (305, 20517), (306, 20520), (338, 20574), (378, 20691), (417, 20778), (463, 20859), (467, 20862), (546, 21048), (584, 21135), (597, 21174), (636, 21255), (675, 21381), (677, 21387), (750, 21513), (752, 21519), (781, 21612), (784, 21627), (813, 21711), (862, 21822), (877, 21876),

Gene: Tarynearal\_23 Start: 19656, Stop: 21452, Start Num: 144

Candidate Starts for Tarynearal\_23:

(Start: 144 @19656 has 603 MA's), (222, 19761), (236, 19794), (278, 19893), (306, 19968), (315, 19983), (336, 20019), (360, 20091), (365, 20106), (380, 20145), (388, 20172), (395, 20193), (430, 20232), (495, 20370), (499, 20376), (553, 20511), (579, 20568), (580, 20571), (583, 20580), (597, 20622), (602, 20640), (635, 20700), (636, 20703), (668, 20796), (670, 20805), (675, 20829), (729, 20937), (746, 20973), (813, 21183), (859, 21285), (862, 21294), (893, 21408), (900, 21429), (902, 21438),

Gene: Tarzan\_18 Start: 14963, Stop: 16579, Start Num: 153

Candidate Starts for Tarzan\_18:

(Start: 153 @14963 has 11 MA's), (219, 15062), (231, 15086), (277, 15197), (278, 15200), (281, 15218), (284, 15227), (322, 15293), (328, 15308), (332, 15317), (336, 15323), (360, 15395), (366, 15413), (385, 15467), (389, 15476), (417, 15530), (448, 15566), (449, 15569), (499, 15677), (544, 15749), (547, 15755), (551, 15764), (560, 15782), (599, 15872), (653, 15986), (657, 16004), (664, 16016), (679, 16082), (735, 16130), (740, 16142), (746, 16154), (752, 16175), (755, 16187), (769, 16202), (782, 16232), (791, 16268), (873, 16457), (891, 16520), (897, 16541), (907, 16565),

Gene: Tasp14\_28 Start: 21346, Stop: 23148, Start Num: 146

Candidate Starts for Tasp14\_28:

(Start: 146 @21346 has 223 MA's), (Start: 161 @21367 has 4 MA's), (Start: 190 @21409 has 1 MA's), (216, 21454), (306, 21670), (332, 21715), (338, 21724), (349, 21763), (368, 21814), (369, 21817), (406, 21910), (467, 22012), (500, 22081), (579, 22270), (583, 22282), (584, 22285), (591, 22306), (635, 22402), (636, 22405), (638, 22411), (665, 22480), (668, 22498), (670, 22507), (677, 22537), (731, 22633), (746, 22666), (750, 22681), (793, 22822), (813, 22879), (862, 22990),

Gene: Taurus\_29 Start: 20378, Stop: 22174, Start Num: 144

Candidate Starts for Taurus\_29:

(Start: 144 @20378 has 603 MA's), (Start: 190 @20435 has 1 MA's), (197, 20450), (219, 20483), (230, 20504), (Start: 235 @20519 has 1 MA's), (272, 20606), (277, 20618), (278, 20621), (306, 20696), (315, 20711), (336, 20747), (417, 20954), (481, 21068), (500, 21107), (532, 21194), (583, 21308), (591, 21332), (597, 21350), (636, 21431), (665, 21506), (668, 21524), (675, 21557), (677, 21563), (695, 21602), (729, 21656), (731, 21659), (742, 21680), (758, 21737), (813, 21905), (860, 22010), (862, 22016), (900, 22151),

Gene: Tayonia\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Tayonia\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440,

18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: TeardropMSU\_23 Start: 19653, Stop: 21332, Start Num: 129

Candidate Starts for TeardropMSU\_23:

(Start: 129 @19653 has 79 MA's), (Start: 191 @19737 has 45 MA's), (Start: 235 @19815 has 1 MA's), (268, 19902), (274, 19917), (300, 19965), (324, 20004), (356, 20091), (368, 20124), (381, 20160), (390, 20190), (392, 20196), (422, 20265), (461, 20295), (466, 20307), (468, 20310), (494, 20367), (565, 20499), (567, 20505), (592, 20571), (594, 20577), (601, 20601), (618, 20649), (627, 20673), (631, 20682), (658, 20757), (717, 20808), (725, 20823), (782, 20985), (788, 21012), (799, 21042), (843, 21147), (880, 21225), (887, 21261), (890, 21270), (900, 21303), (907, 21318),

Gene: Teaspoon\_25 Start: 19699, Stop: 21378, Start Num: 129

Candidate Starts for Teaspoon\_25:

(Start: 129 @19699 has 79 MA's), (Start: 191 @19783 has 45 MA's), (Start: 235 @19861 has 1 MA's), (268, 19948), (274, 19963), (300, 20011), (324, 20050), (356, 20137), (368, 20170), (381, 20206), (390, 20236), (392, 20242), (422, 20311), (461, 20341), (466, 20353), (468, 20356), (494, 20413), (565, 20545), (567, 20551), (592, 20617), (594, 20623), (601, 20647), (618, 20695), (627, 20719), (631, 20728), (658, 20803), (717, 20854), (725, 20869), (782, 21031), (788, 21058), (799, 21088), (843, 21193), (880, 21271), (887, 21307), (890, 21316), (900, 21349), (907, 21364),

Gene: Techage\_19 Start: 16376, Stop: 18112, Start Num: 117

Candidate Starts for Techage\_19:

(Start: 101 @16352 has 2 MA's), (Start: 117 @16376 has 59 MA's), (Start: 166 @16436 has 1 MA's), (178, 16457), (180, 16460), (246, 16580), (258, 16619), (272, 16652), (282, 16676), (344, 16796), (356, 16835), (358, 16841), (386, 16925), (388, 16931), (392, 16943), (402, 16967), (410, 16994), (422, 17012), (452, 17051), (459, 17057), (470, 17081), (494, 17135), (500, 17147), (503, 17156), (529, 17216), (573, 17294), (587, 17333), (598, 17366), (618, 17432), (624, 17447), (627, 17456), (636, 17480), (647, 17510), (653, 17522), (735, 17624), (740, 17636), (742, 17639), (745, 17645), (747, 17654), (779, 17762), (805, 17846), (853, 17945), (890, 18053), (907, 18101),

Gene: TelAviv\_53 Start: 33442, Stop: 35178, Start Num: 107

Candidate Starts for TelAviv\_53:

(Start: 100 @33433 has 2 MA's), (Start: 107 @33442 has 25 MA's), (174, 33532), (240, 33649), (251, 33685), (259, 33706), (271, 33733), (274, 33739), (302, 33793), (332, 33844), (381, 33982), (383, 33988), (400, 34039), (402, 34042), (407, 34060), (459, 34111), (468, 34132), (470, 34135), (492, 34183), (494, 34189), (511, 34237), (513, 34243), (515, 34249), (555, 34309), (564, 34333), (565, 34336), (583, 34381), (588, 34396), (591, 34405), (594, 34414), (608, 34459), (618, 34477), (631, 34510), (720, 34648), (729, 34669), (754, 34735), (762, 34765), (779, 34819), (791, 34861), (799, 34882), (805, 34903), (810, 34915), (821, 34936), (844, 34990), (880, 35068), (887, 35104), (893, 35125), (901, 35152),

Gene: Teodoridan\_25 Start: 20467, Stop: 22269, Start Num: 146

Candidate Starts for Teodoridan\_25:

(Start: 146 @20467 has 223 MA's), (Start: 161 @20488 has 4 MA's), (Start: 190 @20530 has 1 MA's), (216, 20575), (306, 20791), (332, 20836), (338, 20845), (349, 20884), (368, 20935), (369, 20938), (467, 21133), (500, 21202), (583, 21403), (584, 21406), (591, 21427), (635, 21523), (636, 21526), (638, 21532), (665, 21601), (668, 21619), (670, 21628), (677, 21658), (731, 21754), (746, 21787), (750, 21802), (793, 21943), (813, 22000), (862, 22111),

Gene: Terminus\_24 Start: 19833, Stop: 21512, Start Num: 129

Candidate Starts for Terminus\_24:

(Start: 129 @19833 has 79 MA's), (Start: 191 @19917 has 45 MA's), (Start: 235 @19995 has 1 MA's), (268, 20082), (274, 20097), (300, 20145), (324, 20184), (356, 20271), (368, 20304), (381, 20340), (390, 20370), (392, 20376), (422, 20445), (461, 20475), (466, 20487), (468, 20490), (494, 20547), (565, 20679), (567, 20685), (592, 20751), (594, 20757), (601, 20781), (618, 20829), (627, 20853), (631, 20862), (658, 20937), (717, 20988), (725, 21003), (782, 21165), (788, 21192), (799, 21222), (843, 21327), (880, 21405), (887, 21441), (890, 21450), (900, 21483), (907, 21498),

Gene: Terror\_18 Start: 16666, Stop: 18420, Start Num: 132

Candidate Starts for Terror\_18:

(55, 16453), (Start: 109 @16657 has 26 MA's), (Start: 132 @16666 has 45 MA's), (Start: 137 @16672 has 2 MA's), (143, 16678), (197, 16756), (230, 16810), (248, 16861), (258, 16891), (269, 16915), (309, 17017), (331, 17056), (334, 17062), (341, 17077), (395, 17242), (425, 17299), (448, 17338), (465, 17380), (468, 17386), (487, 17425), (542, 17524), (564, 17551), (582, 17596), (649, 17779), (655, 17797), (665, 17824), (716, 17908), (730, 17926), (743, 17941), (760, 18004), (782, 18067), (787, 18091), (799, 18124), (813, 18163), (831, 18205), (890, 18352), (913, 18412),

Gene: Texage\_27 Start: 20456, Stop: 22255, Start Num: 144

Candidate Starts for Texage\_27:

(Start: 144 @20456 has 603 MA's), (Start: 190 @20516 has 1 MA's), (230, 20585), (272, 20687), (277, 20699), (278, 20702), (306, 20777), (315, 20792), (338, 20831), (384, 20966), (417, 21035), (481, 21149), (532, 21275), (583, 21389), (591, 21413), (595, 21425), (597, 21431), (636, 21512), (665, 21587), (668, 21605), (670, 21614), (675, 21638), (677, 21644), (682, 21659), (703, 21692), (729, 21737), (731, 21740), (742, 21761), (782, 21890), (813, 21986), (860, 22091), (862, 22097), (900, 22232),

Gene: Thanksgivukkah\_27 Start: 19831, Stop: 21609, Start Num: 144

Candidate Starts for Thanksgivukkah\_27:

(Start: 123 @19807 has 215 MA's), (Start: 144 @19831 has 603 MA's), (Start: 190 @19888 has 1 MA's), (222, 19942), (230, 19957), (236, 19975), (272, 20059), (277, 20071), (278, 20074), (306, 20149), (315, 20164), (338, 20203), (378, 20320), (417, 20407), (463, 20488), (489, 20536), (500, 20560), (532, 20647), (553, 20692), (584, 20764), (591, 20785), (597, 20803), (636, 20884), (668, 20977), (670, 20986), (675, 21010), (677, 21016), (687, 21040), (731, 21094), (742, 21115), (756, 21166), (763, 21190), (813, 21340), (860, 21445), (863, 21460), (894, 21568), (900, 21586),

Gene: ThankyouJordi\_18 Start: 17806, Stop: 19404, Start Num: 170

Candidate Starts for ThankyouJordi\_18:

(53, 17509), (61, 17584), (64, 17605), (88, 17689), (Start: 170 @17806 has 87 MA's), (298, 18064), (306, 18082), (307, 18085), (340, 18139), (385, 18283), (392, 18304), (415, 18355), (440, 18391), (441, 18394), (501, 18427), (519, 18484), (603, 18661), (618, 18685), (636, 18721), (669, 18823), (687, 18880), (751, 18970), (849, 19210), (874, 19288),

Gene: Theia\_22 Start: 19674, Stop: 21470, Start Num: 144

Candidate Starts for Theia\_22:

(Start: 132 @19662 has 45 MA's), (Start: 144 @19674 has 603 MA's), (222, 19779), (236, 19812), (278, 19911), (306, 19986), (315, 20001), (336, 20037), (360, 20109), (365, 20124), (380, 20163), (481, 20358), (495, 20388), (499, 20394), (553, 20529), (579, 20586), (580, 20589), (583, 20598), (597, 20640), (602, 20658), (635, 20718), (636, 20721), (668, 20814), (670, 20823), (675, 20847), (729, 20955), (746, 20991), (813, 21201), (859, 21303), (862, 21312), (893, 21426), (900, 21447), (902, 21456),

Gene: TheloniousMonk\_29 Start: 22760, Stop: 24562, Start Num: 146

Candidate Starts for TheloniousMonk\_29:

(Start: 146 @22760 has 223 MA's), (Start: 161 @22781 has 4 MA's), (Start: 190 @22823 has 1 MA's), (216, 22868), (306, 23084), (332, 23129), (338, 23138), (349, 23177), (368, 23228), (369, 23231), (467, 23426), (500, 23495), (583, 23696), (584, 23699), (591, 23720), (635, 23816), (636, 23819), (638, 23825), (665, 23894), (668, 23912), (670, 23921), (677, 23951), (731, 24047), (746, 24080), (750, 24095), (793, 24236), (813, 24293), (862, 24404),

Gene: Thespis\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Thespis\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Thibault\_33 Start: 27746, Stop: 29479, Start Num: 124

Candidate Starts for Thibault\_33:

(Start: 124 @27746 has 30 MA's), (Start: 191 @27836 has 45 MA's), (222, 27884), (233, 27914), (243, 27941), (282, 28043), (301, 28073), (346, 28172), (358, 28208), (368, 28235), (382, 28274), (392, 28307), (395, 28316), (468, 28445), (470, 28448), (475, 28463), (494, 28502), (511, 28550), (515, 28562), (521, 28568), (558, 28625), (565, 28646), (573, 28664), (590, 28712), (625, 28814), (647, 28874), (653, 28886), (725, 28970), (731, 28982), (735, 28988), (740, 29000), (742, 29003), (753, 29042), (758, 29060), (772, 29096), (773, 29102), (799, 29189), (834, 29279), (863, 29321), (868, 29339), (878, 29369), (888, 29411), (907, 29465),

Gene: Thimann\_20 Start: 17295, Stop: 18875, Start Num: 170

Candidate Starts for Thimann\_20:

(88, 17178), (Start: 170 @17295 has 87 MA's), (298, 17553), (307, 17574), (340, 17628), (351, 17667), (369, 17724), (377, 17745), (501, 17916), (507, 17934), (514, 17958), (521, 17979), (554, 18021), (592, 18102), (636, 18192), (669, 18294), (670, 18297), (687, 18351), (751, 18441), (863, 18720), (865, 18729), (874, 18759),

Gene: Thing3\_34 Start: 30813, Stop: 32576, Start Num: 97

Candidate Starts for Thing3\_34:

(90, 30795), (Start: 97 @30813 has 73 MA's), (Start: 121 @30849 has 1 MA's), (219, 30987), (262, 31083), (265, 31092), (288, 31161), (306, 31212), (332, 31257), (341, 31272), (368, 31353), (384, 31398), (386, 31407), (406, 31446), (445, 31497), (448, 31500), (458, 31527), (461, 31542), (472, 31566), (487, 31596), (551, 31701), (597, 31818), (607, 31836), (613, 31851), (631, 31881), (635, 31893), (636, 31896), (647, 31923), (793, 32247), (794, 32250), (810, 32298), (824, 32325), (832, 32352), (860, 32406), (866, 32433), (902, 32562),

Gene: Thor\_27 Start: 21221, Stop: 23023, Start Num: 146

Candidate Starts for Thor\_27:

(Start: 146 @21221 has 223 MA's), (Start: 161 @21242 has 4 MA's), (Start: 190 @21284 has 1 MA's), (216, 21329), (306, 21545), (332, 21590), (338, 21599), (368, 21689), (369, 21692), (406, 21785), (467, 21887), (500, 21956), (579, 22145), (583, 22157), (584, 22160), (591, 22181), (635, 22277), (636, 22280), (638, 22286), (665, 22355), (668, 22373), (670, 22382), (677, 22412), (731, 22508), (746, 22541), (750, 22556), (793, 22697), (813, 22754), (862, 22865), (909, 23018),

Gene: ThreeRngTarjay\_35 Start: 27471, Stop: 29469, Start Num: 124

Candidate Starts for ThreeRngTarjay\_35:

(Start: 124 @27471 has 30 MA's), (Start: 191 @27561 has 45 MA's), (222, 27609), (233, 27639), (243, 27666), (282, 27768), (301, 27798), (346, 27897), (358, 27933), (360, 27939), (368, 27960), (392, 28032), (395, 28041), (403, 28062), (448, 28131), (468, 28170), (470, 28173), (475, 28188), (494, 28227), (511, 28275), (515, 28287), (521, 28293), (552, 28341), (558, 28350), (565, 28371), (573, 28389), (590, 28437), (625, 28539), (653, 28611), (667, 28656), (669, 28668), (684, 28803), (685, 28809), (686, 28833), (696, 28905), (708, 28932), (800, 29181),

Gene: Thresher\_25 Start: 20500, Stop: 22179, Start Num: 129

Candidate Starts for Thresher\_25:

(Start: 129 @20500 has 79 MA's), (Start: 191 @20584 has 45 MA's), (Start: 235 @20662 has 1 MA's), (268, 20749), (274, 20764), (300, 20812), (324, 20851), (356, 20938), (368, 20971), (381, 21007), (390, 21037), (392, 21043), (422, 21112), (461, 21142), (466, 21154), (468, 21157), (494, 21214), (565, 21346), (567, 21352), (592, 21418), (594, 21424), (601, 21448), (618, 21496), (627, 21520), (631, 21529), (658, 21604), (717, 21655), (725, 21670), (782, 21832), (788, 21859), (799, 21889), (843, 21994), (880, 22072), (887, 22108), (890, 22117), (900, 22150), (907, 22165),

Gene: ThulaThula\_18 Start: 16085, Stop: 17821, Start Num: 117

Candidate Starts for ThulaThula\_18:

(Start: 117 @16085 has 59 MA's), (178, 16166), (180, 16169), (220, 16220), (221, 16223), (Start: 227 @16232 has 2 MA's), (246, 16289), (258, 16328), (268, 16349), (272, 16361), (281, 16382), (282, 16385), (284, 16391), (344, 16505), (356, 16544), (358, 16550), (396, 16664), (418, 16715), (422, 16721), (452, 16760), (459, 16766), (470, 16790), (494, 16844), (500, 16856), (503, 16865), (529, 16925), (564, 16982), (573, 17003), (587, 17042), (598, 17075), (618, 17141), (627, 17165), (636, 17189), (647, 17219), (653, 17231), (735, 17333), (740, 17345), (742, 17348), (745, 17354), (747, 17363), (779, 17471), (805, 17555), (834, 17624), (853, 17654), (900, 17795), (907, 17810),

Gene: Thyatira\_21 Start: 17495, Stop: 19267, Start Num: 117

Candidate Starts for Thyatira\_21:

(Start: 117 @17495 has 59 MA's), (Start: 123 @17501 has 215 MA's), (143, 17525), (Start: 168 @17558 has 32 MA's), (197, 17606), (230, 17660), (248, 17711), (272, 17774), (321, 17882), (360, 17990), (400, 18104), (403, 18107), (424, 18146), (438, 18161), (444, 18173), (448, 18179), (465, 18221), (468, 18227), (487, 18266), (499, 18290), (564, 18392), (588, 18455), (602, 18500), (655, 18635), (708, 18734), (750, 18812), (756, 18836), (762, 18857), (768, 18869), (771, 18875), (793, 18953), (795, 18959), (865, 19112), (895, 19217), (896, 19220), (901, 19238),

Gene: Tiamoceli\_33 Start: 28384, Stop: 30003, Start Num: 163

Candidate Starts for Tiamoceli\_33:

(Start: 163 @28384 has 10 MA's), (178, 28405), (219, 28468), (272, 28591), (277, 28603), (298, 28660), (341, 28738), (382, 28861), (449, 28975), (460, 29005), (481, 29047), (508, 29110), (547, 29158), (551, 29167), (579, 29218), (596, 29266), (664, 29431), (670, 29461), (742, 29560), (746, 29569), (747, 29572), (769, 29617), (786, 29674), (788, 29680), (790, 29686), (806, 29734), (810, 29743), (813, 29749), (815, 29752), (842, 29803), (863, 29848), (883, 29917), (896, 29965), (900, 29977),

Gene: Tierra\_22 Start: 17047, Stop: 18813, Start Num: 114

Candidate Starts for Tierra\_22:

(Start: 109 @17038 has 26 MA's), (Start: 114 @17047 has 139 MA's), (140, 17077), (Start: 227 @17203 has 2 MA's), (230, 17218), (236, 17236), (248, 17269), (258, 17299), (278, 17344), (316, 17434), (334, 17470), (360, 17548), (362, 17557), (392, 17641), (395, 17650), (400, 17662), (403, 17665), (424, 17704), (438, 17719), (448, 17737), (465, 17779), (468, 17785), (572, 17968), (593, 18028), (629, 18112), (636, 18130), (655, 18190), (698, 18265), (708, 18289), (748, 18349), (756, 18382), (757, 18385), (762, 18403), (772, 18424), (793, 18499), (810, 18550), (813, 18556), (824, 18577), (863, 18649), (880, 18700), (901, 18784), (902, 18787), (913, 18805),

Gene: Tiffany\_29 Start: 20273, Stop: 22069, Start Num: 144

Candidate Starts for Tiffany\_29:

(Start: 144 @20273 has 603 MA's), (Start: 190 @20330 has 1 MA's), (197, 20345), (219, 20378), (230, 20399), (Start: 235 @20414 has 1 MA's), (272, 20501), (277, 20513), (278, 20516), (306, 20591), (315, 20606), (336, 20642), (417, 20849), (481, 20963), (500, 21002), (532, 21089), (583, 21203), (591, 21227), (597, 21245), (636, 21326), (665, 21401), (668, 21419), (675, 21452), (677, 21458), (695, 21497), (729, 21551), (731, 21554), (742, 21575), (758, 21632), (813, 21800), (860, 21905), (862, 21911), (900, 22046),

Gene: Tiger\_24 Start: 19558, Stop: 21354, Start Num: 144

Candidate Starts for Tiger\_24:

(Start: 144 @19558 has 603 MA's), (222, 19663), (236, 19696), (278, 19795), (306, 19870), (315, 19885), (336, 19921), (360, 19993), (365, 20008), (378, 20041), (380, 20047), (481, 20242), (495, 20272), (499, 20278), (553, 20413), (579, 20470), (580, 20473), (583, 20482), (597, 20524), (602, 20542), (635, 20602), (636, 20605), (668, 20698), (670, 20707), (675, 20731), (729, 20839), (746, 20875), (813, 21085), (859, 21187), (862, 21196), (893, 21310), (900, 21331), (902, 21340),

Gene: TillyBobJoe\_31 Start: 25649, Stop: 27415, Start Num: 97

Candidate Starts for TillyBobJoe\_31:

(80, 25607), (Start: 97 @25649 has 73 MA's), (Start: 121 @25685 has 1 MA's), (Start: 148 @25718 has 14 MA's), (264, 25928), (265, 25931), (277, 25961), (298, 26027), (306, 26051), (311, 26060), (331, 26093), (386, 26246), (406, 26285), (445, 26336), (451, 26348), (458, 26366), (460, 26378), (465, 26390), (472, 26405), (487, 26435), (489, 26438), (499, 26459), (547, 26531), (568, 26579), (613, 26690), (632, 26723), (649, 26765), (670, 26837), (707, 26903), (715, 26915), (793, 27086), (794, 27089), (810, 27137), (824, 27164), (832, 27191), (835, 27197), (860, 27245), (891, 27362), (897, 27383),

Gene: TimTam\_19 Start: 17764, Stop: 19362, Start Num: 170

Candidate Starts for TimTam\_19:

(Start: 170 @17764 has 87 MA's), (298, 18022), (306, 18040), (307, 18043), (340, 18097), (363, 18172), (385, 18241), (388, 18250), (392, 18262), (415, 18313), (435, 18340), (440, 18349), (441, 18352), (501, 18385), (519, 18442), (554, 18508), (603, 18619), (618, 18643), (636, 18679), (669, 18781), (687, 18838), (751, 18928), (849, 19168), (874, 19246),

Gene: Timothy\_28 Start: 20749, Stop: 22548, Start Num: 144

Candidate Starts for Timothy\_28:

(94, 20683), (Start: 123 @20725 has 215 MA's), (Start: 144 @20749 has 603 MA's), (183, 20791), (236, 20887), (242, 20902), (277, 20983), (278, 20986), (306, 21061), (315, 21076), (338, 21115), (341, 21121), (378, 21232), (380, 21238), (417, 21319), (467, 21403), (518, 21529), (526, 21547), (540, 21574), (597, 21715), (631, 21781), (635, 21793), (636, 21796), (703, 21985), (721, 22012), (726, 22021), (736, 22042), (737, 22045), (746, 22066), (750, 22081), (756, 22105), (781, 22180), (784, 22195), (813, 22279), (860, 22384), (862, 22390), (877, 22444), (909, 22543),

Gene: Timshel\_28 Start: 22851, Stop: 24653, Start Num: 144

Candidate Starts for Timshel\_28:

(94, 22785), (Start: 123 @22827 has 215 MA's), (Start: 132 @22839 has 45 MA's), (Start: 144 @22851 has 603 MA's), (198, 22917), (277, 23082), (278, 23085), (306, 23160), (315, 23175), (380, 23337), (382, 23343), (417, 23418), (495, 23562), (547, 23688), (553, 23700), (583, 23769), (597, 23811), (635, 23907), (636, 23910), (643, 23925), (665, 23985), (668, 24003), (670, 24012), (675, 24036), (677, 24042), (729, 24135), (731, 24138), (746, 24171), (750, 24186), (759, 24222), (761, 24228), (788, 24315), (791, 24324), (851, 24465), (862, 24495), (863, 24504), (891, 24600), (907, 24645),



Gene: TinaFeyge\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for TinaFeyge\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: TinaLin\_25 Start: 17451, Stop: 18779, Start Num: 257

Candidate Starts for TinaLin\_25:

(Start: 257 @17451 has 11 MA's), (268, 17469), (314, 17577), (353, 17667), (364, 17700), (383, 17757), (388, 17775), (391, 17784), (399, 17805), (405, 17814), (421, 17847), (447, 17880), (516, 17943), (531, 17973), (536, 17982), (548, 17991), (554, 18000), (621, 18120), (636, 18147), (653, 18192), (664, 18222), (670, 18252), (729, 18324), (746, 18357), (749, 18363), (819, 18534), (849, 18585), (877, 18669), (881, 18678), (884, 18696), (908, 18768),

Gene: TingHuaYa\_23 Start: 16454, Stop: 18220, Start Num: 114

Candidate Starts for TingHuaYa\_23:

(Start: 114 @16454 has 139 MA's), (140, 16484), (236, 16643), (248, 16676), (249, 16679), (258, 16706), (278, 16751), (282, 16769), (316, 16841), (360, 16955), (362, 16964), (378, 17003), (393, 17051), (400, 17069), (403, 17072), (438, 17126), (448, 17144), (465, 17186), (468, 17192), (481, 17219), (499, 17255), (564, 17357), (572, 17375), (593, 17435), (603, 17465), (618, 17492), (655, 17597), (757, 17792), (768, 17822), (793, 17906), (810, 17957), (863, 18056), (865, 18065), (880, 18107), (890, 18152), (901, 18191), (902, 18194), (913, 18212),

Gene: TiniBug\_23 Start: 17099, Stop: 18865, Start Num: 114

Candidate Starts for TiniBug\_23:

(Start: 114 @17099 has 139 MA's), (140, 17129), (248, 17321), (258, 17351), (272, 17384), (278, 17396), (316, 17486), (337, 17528), (360, 17600), (362, 17609), (378, 17648), (392, 17693), (403, 17717), (448, 17789), (465, 17831), (468, 17837), (481, 17864), (564, 18002), (572, 18020), (587, 18062), (603, 18110), (618, 18137), (655, 18242), (704, 18332), (757, 18437), (768, 18467), (772, 18476), (793, 18551), (810, 18602), (890, 18797), (901, 18836), (902, 18839), (913, 18857),

Gene: TinyDot\_19 Start: 15300, Stop: 16880, Start Num: 170

Candidate Starts for TinyDot\_19:

(Start: 170 @15300 has 87 MA's), (249, 15420), (307, 15579), (332, 15621), (347, 15663), (377, 15753), (390, 15795), (392, 15801), (500, 15921), (525, 15993), (566, 16056), (607, 16146), (660, 16263), (751, 16446), (798, 16560), (807, 16590), (826, 16632), (865, 16734), (870, 16749),

Gene: TinyTimmy\_28 Start: 20792, Stop: 22591, Start Num: 144

Candidate Starts for TinyTimmy\_28:

(94, 20726), (Start: 123 @20768 has 215 MA's), (Start: 144 @20792 has 603 MA's), (183, 20834), (236, 20930), (242, 20945), (277, 21026), (278, 21029), (306, 21104), (315, 21119), (338, 21158), (341, 21164), (356, 21215), (378, 21275), (380, 21281), (417, 21362), (467, 21446), (518, 21572), (526, 21590), (540, 21617), (597, 21758), (631, 21824), (635, 21836), (636, 21839), (674, 21962), (703, 22028), (721, 22055), (736, 22085), (737, 22088), (746, 22109), (750, 22124), (756, 22148), (781, 22223), (784, 22238), (813, 22322), (860, 22427), (862, 22433), (877, 22487), (909, 22586),

Gene: Tinybot\_26 Start: 19804, Stop: 21585, Start Num: 144

Candidate Starts for Tinybot\_26:

(Start: 123 @19780 has 215 MA's), (Start: 144 @19804 has 603 MA's), (Start: 148 @19810 has 14 MA's), (Start: 190 @19864 has 1 MA's), (197, 19879), (230, 19933), (236, 19951), (272, 20035), (277, 20047), (278, 20050), (306, 20125), (315, 20140), (338, 20179), (378, 20296), (417, 20383), (463, 20464), (489, 20512), (500, 20536), (532, 20623), (553, 20668), (584, 20740), (591, 20761), (597, 20779), (636, 20860), (668, 20953), (670, 20962), (675, 20986), (677, 20992), (687, 21016), (731, 21070), (742, 21091), (756, 21142), (763, 21166), (813, 21316), (860, 21421), (863, 21436), (894, 21544), (900, 21562),

Gene: TopsytheTRex\_27 Start: 19306, Stop: 21096, Start Num: 144

Candidate Starts for TopsytheTRex\_27:

(94, 19240), (Start: 123 @19282 has 215 MA's), (Start: 144 @19306 has 603 MA's), (242, 19459), (277, 19540), (278, 19543), (305, 19615), (306, 19618), (315, 19633), (338, 19672), (341, 19678), (365, 19756), (378, 19789), (380, 19795), (392, 19834), (417, 19876), (460, 19951), (463, 19957), (467, 19960), (495, 20020), (546, 20146), (583, 20230), (597, 20272), (619, 20323), (636, 20353), (675, 20479), (707, 20542), (746, 20614), (750, 20629), (756, 20653), (781, 20728), (784, 20743), (813, 20827), (860, 20932), (862, 20938), (873, 20983), (877, 20992),

Gene: Tiri\_23 Start: 17160, Stop: 18926, Start Num: 114

Candidate Starts for Tiri\_23:

(Start: 114 @17160 has 139 MA's), (140, 17190), (236, 17349), (248, 17382), (258, 17412), (272, 17445), (278, 17457), (316, 17547), (337, 17589), (360, 17661), (362, 17670), (378, 17709), (392, 17754), (400, 17775), (403, 17778), (438, 17832), (448, 17850), (465, 17892), (468, 17898), (481, 17925), (564, 18063), (572, 18081), (587, 18123), (593, 18141), (603, 18171), (618, 18198), (655, 18303), (748, 18462), (757, 18498), (768, 18528), (772, 18537), (793, 18612), (810, 18663), (890, 18858), (901, 18897), (902, 18900), (913, 18918),

Gene: TiroTheta9\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for TiroTheta9\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Toaka\_27 Start: 19911, Stop: 21698, Start Num: 144

Candidate Starts for Toaka\_27:

(94, 19845), (Start: 123 @19887 has 215 MA's), (Start: 144 @19911 has 603 MA's), (277, 20145), (278, 20148), (305, 20220), (306, 20223), (338, 20277), (341, 20283), (378, 20394), (380, 20400), (417, 20481), (463, 20562), (467, 20565), (495, 20625), (500, 20634), (576, 20814), (584, 20838), (597, 20877), (619, 20928), (636, 20958), (695, 21129), (731, 21186), (736, 21195), (750, 21234), (756, 21258), (781, 21333), (795, 21378), (813, 21429), (842, 21495), (860, 21534), (862, 21540), (873, 21585), (890, 21642),

Gene: Toast\_19 Start: 16740, Stop: 18389, Start Num: 195

Candidate Starts for Toast\_19:

(4, 15693), (6, 15738), (7, 15762), (8, 15768), (9, 15876), (11, 15924), (16, 15996), (22, 16071), (34, 16209), (36, 16239), (38, 16245), (50, 16377), (56, 16434), (57, 16443), (Start: 99 @16602 has 2 MA's), (172, 16704), (Start: 195 @16740 has 45 MA's), (244, 16845), (272, 16923), (293, 16983), (299, 16995), (300, 16998), (377, 17196), (382, 17211), (415, 17295), (460, 17307), (464, 17316), (465, 17319), (473, 17340), (494, 17382), (506, 17412), (594, 17595), (601, 17619), (626, 17670), (639, 17703), (658, 17763), (664, 17775), (692, 17817), (702, 17835), (758, 17970), (788, 18069), (795, 18087), (813, 18138), (839, 18198), (843, 18204), (877, 18279),

Gene: Todacoro\_28 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for Todacoro\_28:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481, 21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729, 21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Togo\_31 Start: 25850, Stop: 27616, Start Num: 97

Candidate Starts for Togo\_31:

(80, 25808), (Start: 97 @25850 has 73 MA's), (Start: 121 @25886 has 1 MA's), (Start: 148 @25919 has 14 MA's), (264, 26129), (265, 26132), (277, 26162), (298, 26228), (306, 26252), (311, 26261), (331, 26294), (386, 26447), (406, 26486), (445, 26537), (451, 26549), (458, 26567), (460, 26579), (465, 26591), (472, 26606), (487, 26636), (489, 26639), (499, 26660), (547, 26732), (568, 26780), (613, 26891), (632, 26924), (647, 26963), (649, 26966), (670, 27038), (707, 27104), (715, 27116), (793, 27287), (794, 27290), (810, 27338), (824, 27365), (832, 27392), (835, 27398), (860, 27446), (891, 27563), (897, 27584), (909, 27611),

Gene: Tolls\_20 Start: 15401, Stop: 17098, Start Num: 144

Candidate Starts for Tolls\_20:

(Start: 133 @15398 has 8 MA's), (Start: 144 @15401 has 603 MA's), (214, 15503), (222, 15515), (264, 15611), (292, 15695), (336, 15785), (356, 15845), (365, 15872), (377, 15902), (378, 15905), (406, 15974), (436, 16007), (442, 16019), (444, 16022), (453, 16043), (454, 16046), (481, 16112), (487, 16124), (574, 16289), (636, 16439), (643, 16454), (650, 16472), (668, 16529), (750, 16670), (752, 16676), (755, 16688), (766, 16697), (791, 16769), (793, 16772), (795, 16778), (799, 16790), (842, 16895), (847, 16904), (862, 16937),

Gene: TomBrady\_18 Start: 16650, Stop: 18404, Start Num: 132

Candidate Starts for TomBrady\_18:

(Start: 109 @16641 has 26 MA's), (Start: 132 @16650 has 45 MA's), (Start: 137 @16656 has 2 MA's), (143, 16662), (230, 16794), (248, 16845), (258, 16875), (269, 16899), (309, 17001), (331, 17040), (334, 17046), (341, 17061), (353, 17106), (395, 17226), (425, 17283), (448, 17322), (468, 17370), (481, 17397), (487, 17409), (522, 17490), (564, 17535), (641, 17733), (649, 17763), (655, 17781), (665, 17808), (716, 17892), (730, 17910), (743, 17925), (756, 17973), (760, 17988), (782, 18051), (799, 18108), (813, 18147), (831, 18189), (863, 18240), (890, 18336), (913, 18396),

Gene: Tomaszewski\_23 Start: 19346, Stop: 21025, Start Num: 129

Candidate Starts for Tomaszewski\_23:

(Start: 129 @19346 has 79 MA's), (Start: 191 @19430 has 45 MA's), (Start: 235 @19508 has 1 MA's), (268, 19595), (274, 19610), (300, 19658), (324, 19697), (356, 19784), (368, 19817), (381, 19853), (390, 19883), (392, 19889), (422, 19958), (461, 19988), (466, 20000), (468, 20003), (494, 20060), (565, 20192), (567, 20198), (592, 20264), (594, 20270), (601, 20294), (618, 20342), (627, 20366), (631, 20375), (658, 20450), (717, 20501), (725, 20516), (782, 20678), (788, 20705), (799, 20735), (843, 20840), (880, 20918), (887, 20954), (890, 20963), (900, 20996), (907, 21011),

Gene: Tomathan\_31 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for Tomathan\_31:

(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474),

(784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: ToneTone\_29 Start: 19903, Stop: 21675, Start Num: 144

Candidate Starts for ToneTone\_29:

(94, 19837), (Start: 123 @19879 has 215 MA's), (Start: 144 @19903 has 603 MA's), (278, 20140), (305, 20212), (306, 20215), (315, 20230), (338, 20269), (341, 20275), (378, 20386), (380, 20392), (392, 20431), (417, 20473), (448, 20512), (463, 20554), (467, 20557), (532, 20713), (592, 20854), (597, 20869), (677, 21082), (742, 21181), (750, 21208), (765, 21259), (770, 21268), (781, 21307), (784, 21322), (813, 21406), (860, 21511), (862, 21517), (900, 21652),

Gene: Toniann\_48 Start: 29557, Stop: 31248, Start Num: 146

Candidate Starts for Toniann\_48:

(Start: 146 @29557 has 223 MA's), (188, 29617), (206, 29650), (228, 29683), (271, 29809), (282, 29842), (286, 29851), (349, 29980), (366, 30028), (494, 30241), (498, 30247), (506, 30271), (576, 30400), (583, 30421), (594, 30454), (658, 30652), (758, 30805), (788, 30904), (793, 30916), (796, 30925), (829, 31009), (888, 31156), (898, 31192), (902, 31204),

Gene: TootsiePop\_17 Start: 14677, Stop: 16386, Start Num: 123

Candidate Starts for TootsiePop\_17:

(Start: 123 @14677 has 215 MA's), (193, 14764), (Start: 227 @14809 has 2 MA's), (233, 14833), (271, 14938), (274, 14944), (281, 14962), (284, 14971), (300, 14992), (348, 15097), (370, 15157), (373, 15166), (378, 15178), (381, 15187), (388, 15211), (402, 15247), (403, 15253), (407, 15265), (418, 15286), (420, 15289), (424, 15298), (443, 15313), (448, 15319), (459, 15337), (465, 15352), (468, 15358), (475, 15376), (477, 15379), (484, 15394), (492, 15409), (494, 15415), (511, 15463), (515, 15475), (521, 15481), (564, 15541), (568, 15553), (573, 15562), (583, 15589), (587, 15601), (594, 15622), (614, 15676), (618, 15685), (627, 15709), (638, 15739), (710, 15844), (720, 15856), (737, 15892), (761, 15970), (791, 16069), (799, 16090), (810, 16123), (826, 16153), (836, 16183), (839, 16189), (841, 16192), (844, 16198), (860, 16213), (861, 16216), (865, 16237), (882, 16282), (900, 16354), (901, 16360),

Gene: Tootsieroll\_17 Start: 14648, Stop: 16357, Start Num: 123

Candidate Starts for Tootsieroll\_17:

(Start: 123 @14648 has 215 MA's), (193, 14735), (Start: 227 @14780 has 2 MA's), (233, 14804), (251, 14861), (271, 14909), (274, 14915), (281, 14933), (300, 14963), (348, 15068), (370, 15128), (373, 15137), (381, 15158), (388, 15182), (402, 15218), (403, 15224), (418, 15257), (420, 15260), (424, 15269), (443, 15284), (448, 15290), (459, 15308), (465, 15323), (468, 15329), (475, 15347), (477, 15350), (484, 15365), (486, 15368), (492, 15380), (494, 15386), (511, 15434), (515, 15446), (521, 15452), (564, 15512), (568, 15524), (583, 15560), (587, 15572), (614, 15647), (618, 15656), (625, 15674), (627, 15680), (638, 15710), (710, 15815), (717, 15824), (720, 15827), (737, 15863), (761, 15941), (791, 16040), (799, 16061), (810, 16094), (826, 16124), (836, 16154), (841, 16163), (844, 16169), (860, 16184), (861, 16187), (866, 16211), (877, 16241), (882, 16253), (887, 16283), (900, 16325),

Gene: Topanga\_27 Start: 19924, Stop: 21702, Start Num: 144

Candidate Starts for Topanga\_27:

(Start: 144 @19924 has 603 MA's), (Start: 190 @19981 has 1 MA's), (197, 19996), (219, 20029), (230, 20050), (272, 20152), (277, 20164), (278, 20167), (306, 20242), (315, 20257), (338, 20296), (378, 20413), (384, 20431), (417, 20500), (460, 20575), (481, 20614), (500, 20653), (532, 20740), (553, 20785), (583, 20854), (591, 20878), (595, 20890), (597, 20896), (636, 20977), (668, 21070), (670, 21079), (675, 21103), (677, 21109), (682, 21124), (713, 21157), (742, 21208), (749, 21226), (788, 21364), (793, 21376), (813, 21433), (825, 21457), (827, 21463), (860, 21538), (862, 21544), (863, 21553), (880, 21604), (900, 21679),

Gene: Topgun\_27 Start: 20974, Stop: 22776, Start Num: 146

Candidate Starts for Topgun\_27:

(Start: 146 @20974 has 223 MA's), (Start: 161 @20995 has 4 MA's), (Start: 190 @21037 has 1 MA's), (216, 21082), (306, 21298), (332, 21343), (338, 21352), (368, 21442), (369, 21445), (467, 21640), (500, 21709), (579, 21898), (583, 21910), (584, 21913), (591, 21934), (635, 22030), (636, 22033), (638, 22039), (665, 22108), (668, 22126), (670, 22135), (677, 22165), (731, 22261), (746, 22294), (750, 22309), (758, 22339), (793, 22450), (813, 22507), (862, 22618),

Gene: Topper\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Topper\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: Toro\_30 Start: 22924, Stop: 24726, Start Num: 144

Candidate Starts for Toro\_30:

(Start: 132 @22912 has 45 MA's), (Start: 144 @22924 has 603 MA's), (Start: 190 @22972 has 1 MA's), (198, 22990), (277, 23155), (278, 23158), (306, 23233), (315, 23248), (338, 23287), (380, 23410), (382, 23416), (392, 23449), (417, 23491), (495, 23635), (547, 23761), (583, 23842), (597, 23884), (615, 23932), (635, 23980), (636, 23983), (665, 24058), (668, 24076), (670, 24085), (675, 24109), (677, 24115), (729, 24208), (731, 24211), (746, 24244), (750, 24259), (793, 24400), (851, 24538), (860, 24562), (862, 24568), (891, 24673),

Gene: Torres\_19 Start: 16697, Stop: 18463, Start Num: 114

Candidate Starts for Torres\_19:

(Start: 114 @16697 has 139 MA's), (Start: 117 @16703 has 59 MA's), (140, 16727), (Start: 227 @16853 has 2 MA's), (230, 16868), (236, 16886), (258, 16949), (316, 17084), (321, 17090), (360, 17198), (362, 17207), (400, 17312), (444, 17381), (448, 17387), (463, 17423), (468, 17435), (499, 17498), (564, 17600), (572, 17618), (587, 17660), (588, 17663), (632, 17768), (655, 17840), (714, 17948), (719, 17954), (748, 17999), (762, 18053), (772, 18074), (793, 18149), (810, 18200), (863, 18299), (867, 18314), (880, 18350), (890, 18395), (901, 18434), (902, 18437), (913, 18455),

Gene: Tortellini\_18 Start: 15988, Stop: 17724, Start Num: 117

Candidate Starts for Tortellini\_18:

(Start: 117 @15988 has 59 MA's), (180, 16072), (220, 16123), (221, 16126), (Start: 227 @16135 has 2 MA's), (246, 16192), (251, 16213), (272, 16264), (282, 16288), (286, 16297), (344, 16408), (356, 16447), (392, 16555), (396, 16567), (420, 16621), (422, 16624), (452, 16663), (459, 16669), (468, 16690), (470, 16693), (494, 16747), (503, 16768), (560, 16873), (573, 16906), (587, 16945), (598, 16978), (618, 17044), (627, 17068), (636, 17092), (647, 17122), (653, 17134), (735, 17236), (740, 17248), (745, 17257), (747, 17266), (777, 17365), (779, 17374), (805, 17458), (853, 17557), (900, 17698), (907, 17713),

Gene: Tote\_29 Start: 21585, Stop: 23387, Start Num: 146

Candidate Starts for Tote\_29:

(Start: 146 @21585 has 223 MA's), (Start: 161 @21606 has 4 MA's), (Start: 190 @21648 has 1 MA's), (216, 21693), (306, 21909), (332, 21954), (338, 21963), (349, 22002), (368, 22053), (369, 22056), (467, 22251), (500, 22320), (583, 22521), (584, 22524), (591, 22545), (635, 22641), (636, 22644), (638, 22650), (665, 22719), (668, 22737), (670, 22746), (677, 22776), (731, 22872), (746, 22905), (750, 22920), (793, 23061), (813, 23118), (862, 23229),

Gene: Totinger\_17 Start: 14596, Stop: 16305, Start Num: 123

Candidate Starts for Totinger\_17:

(Start: 123 @14596 has 215 MA's), (193, 14683), (Start: 227 @14728 has 2 MA's), (233, 14752), (271, 14857), (274, 14863), (281, 14881), (300, 14911), (348, 15016), (370, 15076), (377, 15094), (378, 15097), (381, 15106), (388, 15130), (459, 15256), (465, 15271), (468, 15277), (484, 15313), (486, 15316), (492, 15328), (494, 15334), (511, 15382), (515, 15394), (521, 15400), (564, 15460), (568, 15472), (583, 15508), (587, 15520), (614, 15595), (618, 15604), (625, 15622), (627, 15628), (638, 15658), (710, 15763), (720, 15775), (737, 15811), (761, 15889), (799, 16009), (810, 16042), (826, 16072), (829, 16084), (836, 16102), (839, 16108), (841, 16111), (844, 16117), (860, 16132), (861, 16135), (865, 16156), (866, 16159), (882, 16201), (887, 16231), (900, 16273), (901, 16279),

Gene: Toto\_24 Start: 19830, Stop: 21425, Start Num: 191

Candidate Starts for Toto\_24:

(Start: 129 @19746 has 79 MA's), (Start: 191 @19830 has 45 MA's), (Start: 235 @19908 has 1 MA's), (268, 19995), (274, 20010), (300, 20058), (324, 20097), (356, 20184), (368, 20217), (381, 20253), (390, 20283), (392, 20289), (422, 20358), (461, 20388), (466, 20400), (468, 20403), (494, 20460), (565, 20592), (567, 20598), (592, 20664), (594, 20670), (601, 20694), (618, 20742), (627, 20766), (631, 20775), (658, 20850), (717, 20901), (725, 20916), (782, 21078), (788, 21105), (799, 21135), (843, 21240), (880, 21318), (887, 21354), (890, 21363), (900, 21396), (907, 21411),

Gene: TouchMeNot\_19 Start: 17425, Stop: 19089, Start Num: 146

Candidate Starts for TouchMeNot\_19:

(Start: 146 @17425 has 223 MA's), (169, 17458), (295, 17716), (332, 17794), (377, 17917), (380, 17926), (381, 17929), (384, 17938), (386, 17947), (467, 18088), (472, 18100), (499, 18154), (575, 18289), (587, 18322), (593, 18340), (597, 18352), (602, 18367), (635, 18427), (644, 18448), (646, 18457), (668, 18523), (675, 18556), (713, 18586), (718, 18592), (721, 18595), (750, 18664), (791, 18763), (795, 18772), (861, 18928), (863, 18940),

Gene: Traaww1\_22 Start: 19391, Stop: 21070, Start Num: 129

Candidate Starts for Traaww1\_22:

(Start: 129 @19391 has 79 MA's), (Start: 191 @19475 has 45 MA's), (Start: 235 @19553 has 1 MA's), (268, 19640), (274, 19655), (300, 19703), (324, 19742), (356, 19829), (360, 19841), (368, 19862), (381, 19898), (390, 19928), (392, 19934), (422, 20003), (461, 20033), (466, 20045), (468, 20048), (494, 20105), (565, 20237), (567, 20243), (592, 20309), (594, 20315), (601, 20339), (618, 20387), (627, 20411), (631, 20420), (658, 20495), (717, 20546), (725, 20561), (782, 20723), (788, 20750), (799, 20780), (843, 20885), (880, 20963), (887, 20999), (890, 21008), (900, 21041), (907, 21056),

Gene: Tracker\_41 Start: 29603, Stop: 31216, Start Num: 170

Candidate Starts for Tracker\_41:

(Start: 170 @29603 has 87 MA's), (Start: 194 @29639 has 1 MA's), (202, 29657), (236, 29717), (340, 29957), (343, 29969), (347, 29984), (372, 30050), (377, 30065), (386, 30089), (387, 30092), (432, 30176), (449, 30206), (450, 30209), (490, 30257), (493, 30266), (510, 30314), (511, 30317), (518, 30338), (571, 30443), (592, 30488), (607, 30530), (673, 30704), (683, 30734), (688, 30740), (775, 30848), (776, 30851), (799, 30926), (887, 31145), (906, 31202),

Gene: Traft412\_29 Start: 22064, Stop: 23866, Start Num: 146

Candidate Starts for Traft412\_29:

(Start: 146 @22064 has 223 MA's), (Start: 161 @22085 has 4 MA's), (Start: 190 @22127 has 1 MA's), (216, 22172), (306, 22388), (332, 22433), (338, 22442), (349, 22481), (368, 22532), (369, 22535), (467, 22730), (500, 22799), (583, 23000), (584, 23003), (591, 23024), (635, 23120), (636, 23123), (638, 23129), (665, 23198), (668, 23216), (670, 23225), (677, 23255), (731, 23351), (746, 23384), (750, 23399), (793, 23540), (813, 23597), (862, 23708), (909, 23861),

Gene: Travvers\_31 Start: 20049, Stop: 21839, Start Num: 144

Candidate Starts for Travvers\_31:

(94, 19983), (Start: 123 @20025 has 215 MA's), (Start: 144 @20049 has 603 MA's), (277, 20283), (278, 20286), (305, 20358), (306, 20361), (315, 20376), (338, 20415), (341, 20421), (378, 20532), (384, 20550), (417, 20619), (463, 20700), (467, 20703), (532, 20859), (546, 20889), (636, 21096), (675, 21222), (731, 21324), (746, 21357), (750, 21372), (756, 21396), (781, 21471), (782, 21474), (784, 21486), (813, 21570), (849, 21648), (860, 21675), (862, 21681), (873, 21726), (877, 21735), (900, 21816),

Gene: Treddle\_29 Start: 22354, Stop: 24156, Start Num: 146

Candidate Starts for Treddle\_29:

(Start: 146 @22354 has 223 MA's), (Start: 161 @22375 has 4 MA's), (Start: 190 @22417 has 1 MA's), (216, 22462), (306, 22678), (332, 22723), (338, 22732), (349, 22771), (368, 22822), (369, 22825), (406, 22918), (467, 23020), (500, 23089), (583, 23290), (584, 23293), (591, 23314), (635, 23410), (636, 23413), (638, 23419), (665, 23488), (668, 23506), (670, 23515), (677, 23545), (731, 23641), (746, 23674), (750, 23689), (793, 23830), (813, 23887), (862, 23998),

Gene: TreyKay\_23 Start: 17122, Stop: 18888, Start Num: 114

Candidate Starts for TreyKay\_23:

(Start: 114 @17122 has 139 MA's), (140, 17152), (236, 17311), (248, 17344), (258, 17374), (272, 17407), (278, 17419), (316, 17509), (337, 17551), (357, 17614), (360, 17623), (362, 17632), (378, 17671), (392, 17716), (400, 17737), (403, 17740), (448, 17812), (465, 17854), (468, 17860), (481, 17887), (564, 18025), (572, 18043), (587, 18085), (593, 18103), (603, 18133), (618, 18160), (655, 18265), (748, 18424), (757, 18460), (768, 18490), (772, 18499), (793, 18574), (810, 18625), (890, 18820), (901, 18859), (902, 18862), (913, 18880),

Gene: TribelTrouble\_21 Start: 17403, Stop: 19166, Start Num: 114

Candidate Starts for TribelTrouble\_21:

(Start: 109 @17394 has 26 MA's), (Start: 114 @17403 has 139 MA's), (197, 17508), (230, 17562), (248, 17613), (258, 17643), (269, 17667), (360, 17898), (362, 17907), (368, 17919), (392, 17991), (393, 17994), (395, 18000), (400, 18012), (403, 18015), (448, 18087), (451, 18096), (465, 18129), (468, 18135), (487, 18174), (503, 18210), (588, 18363), (598, 18393), (622, 18450), (655, 18543), (670, 18597), (748, 18699), (756, 18732), (760, 18747), (771, 18771), (778, 18798), (795, 18855), (810, 18900), (863, 19002), (896, 19119), (901, 19137), (904, 19143), (913, 19158),

Gene: Trike\_25 Start: 17896, Stop: 19674, Start Num: 144

Candidate Starts for Trike\_25:

(Start: 123 @17872 has 215 MA's), (Start: 144 @17896 has 603 MA's), (Start: 190 @17953 has 1 MA's), (197, 17968), (230, 18022), (277, 18136), (278, 18139), (306, 18214), (330, 18253), (378, 18385), (417, 18472), (460, 18547), (481, 18586), (500, 18625), (532, 18712), (553, 18757), (583, 18826), (591, 18850), (595, 18862), (597, 18868), (668, 19042), (670, 19051), (675, 19075), (677, 19081), (682, 19096), (713, 19129), (742, 19180), (758, 19237), (759, 19243), (813, 19405), (860, 19510), (862, 19516), (863, 19525), (900, 19651),

Gene: Trine\_18 Start: 14775, Stop: 16385, Start Num: 153

Candidate Starts for Trine\_18:

(Start: 153 @14775 has 11 MA's), (233, 14901), (292, 15048), (366, 15222), (417, 15339), (467, 15420), (512, 15525), (553, 15576), (576, 15615), (583, 15636), (635, 15750), (636, 15753), (657, 15813), (664, 15825), (665, 15828), (670, 15855), (755, 15996), (769, 16011), (842, 16191), (862, 16221), (882, 16287), (891, 16329), (907, 16374),

Gene: Tripl3t\_28 Start: 21973, Stop: 23775, Start Num: 146

Candidate Starts for Trip13t\_28:

(Start: 146 @21973 has 223 MA's), (Start: 161 @21994 has 4 MA's), (Start: 190 @22036 has 1 MA's), (216, 22081), (306, 22297), (332, 22342), (338, 22351), (349, 22390), (368, 22441), (369, 22444), (467, 22639), (500, 22708), (583, 22909), (584, 22912), (591, 22933), (635, 23029), (636, 23032), (638, 23038), (665, 23107), (668, 23125), (670, 23134), (677, 23164), (731, 23260), (746, 23293), (750, 23308), (793, 23449), (813, 23506), (862, 23617),

Gene: Trixie\_31 Start: 21855, Stop: 23627, Start Num: 144

Candidate Starts for Trixie\_31:

(94, 21789), (Start: 123 @21831 has 215 MA's), (Start: 144 @21855 has 603 MA's), (251, 22038), (277, 22089), (278, 22092), (305, 22164), (306, 22167), (338, 22221), (341, 22227), (349, 22260), (365, 22305), (378, 22338), (417, 22425), (463, 22506), (467, 22509), (481, 22539), (546, 22695), (583, 22779), (584, 22782), (597, 22821), (631, 22887), (636, 22902), (677, 23034), (713, 23082), (731, 23112), (750, 23160), (752, 23166), (770, 23220), (784, 23274), (813, 23358), (842, 23424), (849, 23436), (860, 23463), (862, 23469),

Gene: Troje\_18 Start: 15362, Stop: 17059, Start Num: 144

Candidate Starts for Troje\_18:

(113, 15332), (Start: 133 @15359 has 8 MA's), (Start: 144 @15362 has 603 MA's), (264, 15572), (332, 15740), (336, 15746), (374, 15854), (385, 15890), (395, 15920), (406, 15935), (436, 15968), (442, 15980), (458, 16016), (481, 16073), (487, 16085), (553, 16205), (562, 16226), (574, 16250), (636, 16400), (643, 16415), (650, 16433), (668, 16490), (747, 16619), (750, 16631), (755, 16649), (766, 16658), (791, 16730), (793, 16733), (795, 16739), (799, 16751), (842, 16856), (847, 16865), (862, 16898), (896, 17024),

Gene: Trooper\_28 Start: 20008, Stop: 21780, Start Num: 144

Candidate Starts for Trooper\_28:

(94, 19942), (Start: 123 @19984 has 215 MA's), (Start: 144 @20008 has 603 MA's), (242, 20161), (277, 20242), (278, 20245), (305, 20317), (306, 20320), (338, 20374), (378, 20491), (417, 20578), (463, 20659), (467, 20662), (546, 20848), (584, 20935), (597, 20974), (636, 21055), (675, 21181), (677, 21187), (750, 21313), (752, 21319), (781, 21412), (784, 21427), (813, 21511), (862, 21622), (877, 21676),

Gene: Trouble\_28 Start: 21920, Stop: 23722, Start Num: 146

Candidate Starts for Trouble\_28:

(Start: 146 @21920 has 223 MA's), (Start: 161 @21941 has 4 MA's), (Start: 190 @21983 has 1 MA's), (216, 22028), (306, 22244), (332, 22289), (338, 22298), (349, 22337), (368, 22388), (369, 22391), (467, 22586), (500, 22655), (583, 22856), (584, 22859), (591, 22880), (635, 22976), (636, 22979), (638, 22985), (668, 23072), (670, 23081), (677, 23111), (731, 23207), (746, 23240), (750, 23255), (793, 23396), (813, 23453), (862, 23564),

Gene: Troy\_17 Start: 16284, Stop: 17981, Start Num: 118

Candidate Starts for Troy\_17:

(Start: 118 @16284 has 8 MA's), (136, 16305), (196, 16389), (211, 16416), (216, 16422), (275, 16554), (295, 16605), (306, 16638), (310, 16647), (368, 16782), (380, 16815), (385, 16833), (411, 16887), (448, 16932), (472, 16989), (478, 17001), (497, 17040), (535, 17091), (540, 17100), (549, 17121), (579, 17187), (610, 17277), (661, 17385), (673, 17439), (675, 17445), (681, 17463), (752, 17559), (766, 17580), (784, 17625), (845, 17784), (855, 17799), (861, 17814), (863, 17826), (907, 17970),

Gene: TroyPia\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for TroyPia\_27:



(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (388, 20349), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: TruffulaTree\_23 Start: 17151, Stop: 18917, Start Num: 114

Candidate Starts for TruffulaTree\_23:

(Start: 114 @17151 has 139 MA's), (140, 17181), (236, 17340), (248, 17373), (258, 17403), (272, 17436), (278, 17448), (316, 17538), (337, 17580), (360, 17652), (362, 17661), (378, 17700), (392, 17745), (400, 17766), (403, 17769), (438, 17823), (448, 17841), (465, 17883), (468, 17889), (481, 17916), (564, 18054), (572, 18072), (587, 18114), (593, 18132), (603, 18162), (618, 18189), (655, 18294), (748, 18453), (757, 18489), (768, 18519), (772, 18528), (793, 18603), (810, 18654), (863, 18753), (890, 18849), (901, 18888), (902, 18891), (913, 18909),

Gene: Trumpet\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Trumpet\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751, 18937), (849, 19177), (874, 19255),

Gene: Tubs\_30 Start: 21749, Stop: 23539, Start Num: 144

Candidate Starts for Tubs\_30:

(Start: 141 @21746 has 14 MA's), (Start: 144 @21749 has 603 MA's), (277, 21983), (278, 21986), (305, 22058), (306, 22061), (315, 22076), (338, 22115), (341, 22121), (378, 22232), (417, 22319), (463, 22400), (467, 22403), (546, 22589), (576, 22652), (584, 22676), (586, 22682), (597, 22715), (636, 22796), (675, 22922), (693, 22964), (695, 22967), (731, 23024), (746, 23057), (750, 23072), (781, 23171), (782, 23174), (784, 23186), (813, 23270), (842, 23336), (860, 23375), (862, 23381), (873, 23426), (890, 23483), (891, 23486),

Gene: Tucker\_31 Start: 19989, Stop: 21761, Start Num: 144

Candidate Starts for Tucker\_31:

(94, 19923), (Start: 123 @19965 has 215 MA's), (Start: 144 @19989 has 603 MA's), (278, 20226), (305, 20298), (306, 20301), (315, 20316), (338, 20355), (341, 20361), (378, 20472), (380, 20478), (392, 20517), (417, 20559), (448, 20598), (463, 20640), (467, 20643), (532, 20799), (592, 20940), (597, 20955), (677, 21168), (742, 21267), (750, 21294), (765, 21345), (770, 21354), (781, 21393), (784, 21408), (813, 21492), (860, 21597), (862, 21603), (900, 21738),

Gene: Tuco\_25 Start: 20261, Stop: 21940, Start Num: 129

Candidate Starts for Tuco\_25:

(Start: 129 @20261 has 79 MA's), (Start: 191 @20345 has 45 MA's), (Start: 235 @20423 has 1 MA's), (268, 20510), (274, 20525), (300, 20573), (324, 20612), (356, 20699), (368, 20732), (381, 20768), (390, 20798), (392, 20804), (422, 20873), (461, 20903), (466, 20915), (468, 20918), (494, 20975), (565, 21107), (567, 21113), (592, 21179), (594, 21185), (601, 21209), (618, 21257), (627, 21281), (631, 21290), (658, 21365), (717, 21416), (725, 21431), (782, 21593), (788, 21620), (799, 21650), (843, 21755), (880, 21833), (887, 21869), (890, 21878), (900, 21911), (907, 21926),

Gene: TuertoX\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for TuertoX\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Turbido\_30 Start: 20695, Stop: 22467, Start Num: 144

Candidate Starts for Turbido\_30:

(Start: 123 @20671 has 215 MA's), (Start: 144 @20695 has 603 MA's), (219, 20794), (251, 20878), (277, 20929), (278, 20932), (305, 21004), (306, 21007), (338, 21061), (349, 21100), (378, 21178), (417, 21265), (463, 21346), (467, 21349), (546, 21535), (584, 21622), (631, 21727), (636, 21742), (675, 21868), (677, 21874), (713, 21922), (750, 22000), (752, 22006), (770, 22060), (781, 22099), (784, 22114), (813, 22198), (862, 22309),

Gene: Turj99\_26 Start: 20860, Stop: 22662, Start Num: 146

Candidate Starts for Turj99\_26:

(Start: 146 @20860 has 223 MA's), (Start: 161 @20881 has 4 MA's), (Start: 190 @20923 has 1 MA's), (216, 20968), (306, 21184), (332, 21229), (338, 21238), (349, 21277), (368, 21328), (369, 21331), (467, 21526), (500, 21595), (583, 21796), (584, 21799), (591, 21820), (635, 21916), (636, 21919), (638, 21925), (668, 22012), (670, 22021), (677, 22051), (731, 22147), (746, 22180), (750, 22195), (793, 22336), (813, 22393), (862, 22504),

Gene: Turuncu\_45 Start: 30900, Stop: 32519, Start Num: 170

Candidate Starts for Turuncu\_45:

(Start: 170 @30900 has 87 MA's), (179, 30915), (Start: 194 @30936 has 1 MA's), (236, 31014), (282, 31152), (347, 31281), (358, 31311), (368, 31338), (372, 31347), (377, 31362), (432, 31473), (449, 31503), (450, 31506), (493, 31563), (593, 31788), (607, 31827), (635, 31875), (673, 32001), (688, 32037), (749, 32094), (776, 32148), (799, 32223), (863, 32355), (885, 32430), (887, 32442), (891, 32454), (893, 32463), (906, 32499),

Gene: Tweety\_16 Start: 14860, Stop: 16569, Start Num: 123

Candidate Starts for Tweety\_16:

(Start: 123 @14860 has 215 MA's), (193, 14947), (Start: 227 @14992 has 2 MA's), (233, 15016), (271, 15121), (274, 15127), (281, 15145), (300, 15175), (348, 15280), (370, 15340), (378, 15361), (381, 15370), (388, 15394), (459, 15520), (465, 15535), (468, 15541), (484, 15577), (486, 15580), (492, 15592), (494, 15598), (511, 15646), (515, 15658), (521, 15664), (564, 15724), (568, 15736), (583, 15772), (587, 15784), (614, 15859), (618, 15868), (625, 15886), (627, 15892), (638, 15922), (710, 16027), (717, 16036), (720, 16039), (737, 16075), (761, 16153), (791, 16252), (799, 16273), (810, 16306), (826, 16336), (836, 16366), (841, 16375), (844, 16381), (860, 16396), (861, 16399), (866, 16423), (877, 16453), (882, 16465), (887, 16495), (900, 16537),

Gene: Twigg\_24 Start: 19629, Stop: 21425, Start Num: 144

Candidate Starts for Twigg\_24:

(Start: 144 @19629 has 603 MA's), (222, 19734), (236, 19767), (278, 19866), (306, 19941), (315, 19956), (336, 19992), (360, 20064), (365, 20079), (380, 20118), (388, 20145), (430, 20205), (495, 20343), (499, 20349), (553, 20484), (579, 20541), (580, 20544), (583, 20553), (597, 20595), (602, 20613), (635, 20673), (636, 20676), (668, 20769), (670, 20778), (675, 20802), (729, 20910), (746, 20946), (813, 21156), (859, 21258), (862, 21267), (893, 21381), (900, 21402), (902, 21411),

Gene: Twinkle\_20 Start: 18961, Stop: 20541, Start Num: 170

Candidate Starts for Twinkle\_20:

(88, 18844), (Start: 170 @18961 has 87 MA's), (298, 19219), (307, 19240), (340, 19294), (351, 19333), (369, 19390), (377, 19411), (501, 19582), (507, 19600), (514, 19624), (521, 19645), (554,

19687), (592, 19768), (636, 19858), (655, 19909), (669, 19960), (670, 19963), (687, 20017), (751, 20107), (863, 20386), (865, 20395), (874, 20425),

Gene: Twister\_27 Start: 19820, Stop: 21598, Start Num: 144

Candidate Starts for Twister\_27:

(Start: 144 @19820 has 603 MA's), (Start: 190 @19877 has 1 MA's), (197, 19892), (219, 19925), (230, 19946), (272, 20048), (277, 20060), (278, 20063), (306, 20138), (315, 20153), (338, 20192), (378, 20309), (384, 20327), (417, 20396), (460, 20471), (481, 20510), (500, 20549), (532, 20636), (553, 20681), (583, 20750), (591, 20774), (595, 20786), (597, 20792), (636, 20873), (668, 20966), (670, 20975), (675, 20999), (677, 21005), (682, 21020), (713, 21053), (742, 21104), (749, 21122), (758, 21161), (788, 21260), (813, 21329), (825, 21353), (827, 21359), (860, 21434), (862, 21440), (863, 21449), (880, 21500), (900, 21575),

Gene: Twister6\_33 Start: 26286, Stop: 28052, Start Num: 97

Candidate Starts for Twister6\_33:

(80, 26244), (Start: 97 @26286 has 73 MA's), (Start: 121 @26322 has 1 MA's), (Start: 148 @26355 has 14 MA's), (264, 26565), (265, 26568), (277, 26598), (298, 26664), (306, 26688), (311, 26697), (331, 26730), (386, 26883), (406, 26922), (445, 26973), (451, 26985), (458, 27003), (460, 27015), (465, 27027), (472, 27042), (487, 27072), (489, 27075), (499, 27096), (547, 27168), (568, 27216), (613, 27327), (632, 27360), (647, 27399), (649, 27402), (670, 27474), (707, 27540), (715, 27552), (793, 27723), (797, 27735), (799, 27741), (810, 27774), (824, 27801), (832, 27828), (860, 27882), (891, 27999), (897, 28020), (909, 28047),

Gene: Twitch\_23 Start: 17188, Stop: 18954, Start Num: 114

Candidate Starts for Twitch\_23:

(Start: 114 @17188 has 139 MA's), (140, 17218), (236, 17377), (248, 17410), (258, 17440), (272, 17473), (278, 17485), (316, 17575), (337, 17617), (360, 17689), (362, 17698), (378, 17737), (392, 17782), (400, 17803), (403, 17806), (438, 17860), (448, 17878), (465, 17920), (468, 17926), (481, 17953), (564, 18091), (572, 18109), (587, 18151), (593, 18169), (603, 18199), (618, 18226), (655, 18331), (748, 18490), (757, 18526), (768, 18556), (772, 18565), (793, 18640), (810, 18691), (890, 18886), (901, 18925), (902, 18928), (913, 18946),

Gene: TwoPeat\_28 Start: 21384, Stop: 23186, Start Num: 146

Candidate Starts for TwoPeat\_28:

(Start: 146 @21384 has 223 MA's), (Start: 161 @21405 has 4 MA's), (Start: 190 @21447 has 1 MA's), (216, 21492), (306, 21708), (332, 21753), (338, 21762), (349, 21801), (368, 21852), (369, 21855), (467, 22050), (500, 22119), (583, 22320), (584, 22323), (591, 22344), (635, 22440), (636, 22443), (638, 22449), (665, 22518), (668, 22536), (670, 22545), (677, 22575), (731, 22671), (746, 22704), (750, 22719), (793, 22860), (813, 22917), (862, 23028),

Gene: Twonlo\_30 Start: 27002, Stop: 28621, Start Num: 163

Candidate Starts for Twonlo\_30:

(Start: 163 @27002 has 10 MA's), (178, 27023), (219, 27086), (272, 27209), (277, 27221), (298, 27278), (341, 27356), (382, 27479), (449, 27593), (460, 27623), (481, 27665), (508, 27728), (547, 27776), (551, 27785), (579, 27836), (596, 27884), (664, 28049), (670, 28079), (746, 28187), (747, 28190), (769, 28235), (786, 28292), (788, 28298), (790, 28304), (806, 28352), (810, 28361), (813, 28367), (815, 28370), (842, 28421), (863, 28466), (883, 28535), (896, 28583), (900, 28595),

Gene: Tycho\_34 Start: 29613, Stop: 31376, Start Num: 97

Candidate Starts for Tycho\_34:

(Start: 97 @29613 has 73 MA's), (Start: 121 @29649 has 1 MA's), (211, 29778), (219, 29787), (231, 29811), (262, 29883), (265, 29892), (288, 29961), (306, 30012), (332, 30057), (341, 30072), (345, 30090), (368, 30153), (384, 30198), (386, 30207), (458, 30327), (461, 30342), (465, 30351), (472,

30366), (487, 30396), (597, 30618), (607, 30636), (613, 30651), (635, 30693), (636, 30696), (647, 30723), (688, 30843), (749, 30936), (793, 31047), (794, 31050), (810, 31098), (824, 31125), (832, 31152), (860, 31206), (866, 31233),

Gene: TygerBlood\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for TygerBlood\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Typha\_24 Start: 19608, Stop: 21443, Start Num: 81

Candidate Starts for Typha\_24:

(Start: 81 @19608 has 4 MA's), (102, 19656), (Start: 109 @19665 has 26 MA's), (142, 19704), (Start: 168 @19734 has 32 MA's), (Start: 175 @19746 has 1 MA's), (197, 19782), (221, 19812), (Start: 227 @19821 has 2 MA's), (230, 19836), (248, 19887), (249, 19890), (286, 19989), (347, 20130), (365, 20181), (368, 20187), (382, 20226), (400, 20280), (448, 20349), (465, 20391), (482, 20427), (487, 20436), (520, 20514), (526, 20523), (543, 20553), (563, 20586), (564, 20589), (587, 20649), (595, 20673), (598, 20682), (628, 20751), (664, 20856), (665, 20859), (670, 20886), (775, 21069), (877, 21324), (901, 21414), (902, 21417), (904, 21420),

Gene: Typhonomachy\_19 Start: 15732, Stop: 17429, Start Num: 144

Candidate Starts for Typhonomachy\_19:

(Start: 133 @15729 has 8 MA's), (Start: 144 @15732 has 603 MA's), (264, 15942), (306, 16065), (336, 16116), (365, 16203), (369, 16212), (377, 16233), (382, 16248), (385, 16260), (436, 16338), (442, 16350), (454, 16377), (465, 16410), (481, 16443), (487, 16455), (505, 16497), (574, 16620), (599, 16692), (636, 16770), (643, 16785), (650, 16803), (668, 16860), (731, 16953), (747, 16989), (750, 17001), (752, 17007), (755, 17019), (766, 17028), (791, 17100), (793, 17103), (795, 17109), (799, 17121), (824, 17181), (842, 17226), (847, 17235), (862, 17268), (882, 17334),

Gene: U2\_27 Start: 21239, Stop: 23041, Start Num: 146

Candidate Starts for U2\_27:

(Start: 146 @21239 has 223 MA's), (Start: 161 @21260 has 4 MA's), (Start: 190 @21302 has 1 MA's), (216, 21347), (306, 21563), (332, 21608), (338, 21617), (368, 21707), (369, 21710), (406, 21803), (467, 21905), (500, 21974), (583, 22175), (584, 22178), (591, 22199), (635, 22295), (636, 22298), (638, 22304), (665, 22373), (668, 22391), (670, 22400), (677, 22430), (731, 22526), (746, 22559), (750, 22574), (793, 22715), (813, 22772), (862, 22883),

Gene: Ubuntu\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Ubuntu\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Ugenie5\_27 Start: 21782, Stop: 23572, Start Num: 144

Candidate Starts for Ugenie5\_27:

(Start: 141 @21779 has 14 MA's), (Start: 144 @21782 has 603 MA's), (277, 22016), (278, 22019), (305, 22091), (306, 22094), (315, 22109), (338, 22148), (341, 22154), (378, 22265), (417, 22352), (463, 22433), (467, 22436), (546, 22622), (576, 22685), (584, 22709), (586, 22715), (597, 22748), (636, 22829), (675, 22955), (693, 22997), (731, 23057), (746, 23090), (750, 23105), (781, 23204), (782, 23207), (784, 23219), (813, 23303), (842, 23369), (860, 23408), (862, 23414), (873, 23459), (890, 23516), (891, 23519),

Gene: UhSalsa\_23 Start: 16349, Stop: 17974, Start Num: 168

Candidate Starts for UhSalsa\_23:

(Start: 168 @16349 has 32 MA's), (211, 16418), (232, 16454), (263, 16526), (306, 16640), (361, 16769), (378, 16811), (384, 16829), (386, 16838), (394, 16862), (406, 16880), (432, 16904), (436, 16910), (444, 16925), (445, 16928), (467, 16976), (576, 17177), (584, 17201), (635, 17315), (665, 17393), (672, 17432), (675, 17444), (713, 17474), (750, 17552), (807, 17699), (854, 17798), (860, 17813), (907, 17966),

Gene: Ukulele\_24 Start: 19504, Stop: 21183, Start Num: 129

Candidate Starts for Ukulele\_24:

(Start: 129 @19504 has 79 MA's), (Start: 191 @19588 has 45 MA's), (Start: 235 @19666 has 1 MA's), (268, 19753), (274, 19768), (300, 19816), (324, 19855), (356, 19942), (368, 19975), (381, 20011), (390, 20041), (392, 20047), (422, 20116), (461, 20146), (466, 20158), (468, 20161), (494, 20218), (565, 20350), (567, 20356), (592, 20422), (594, 20428), (601, 20452), (618, 20500), (627, 20524), (631, 20533), (658, 20608), (717, 20659), (725, 20674), (782, 20836), (788, 20863), (799, 20893), (843, 20998), (880, 21076), (887, 21112), (890, 21121), (900, 21154), (907, 21169),

Gene: Ulysses\_26 Start: 19548, Stop: 21326, Start Num: 144

Candidate Starts for Ulysses\_26:

(Start: 123 @19524 has 215 MA's), (Start: 144 @19548 has 603 MA's), (Start: 190 @19605 has 1 MA's), (222, 19659), (230, 19674), (236, 19692), (272, 19776), (277, 19788), (278, 19791), (306, 19866), (315, 19881), (338, 19920), (378, 20037), (417, 20124), (463, 20205), (489, 20253), (500, 20277), (532, 20364), (553, 20409), (584, 20481), (591, 20502), (597, 20520), (636, 20601), (668, 20694), (670, 20703), (675, 20727), (677, 20733), (687, 20757), (731, 20811), (742, 20832), (756, 20883), (763, 20907), (782, 20961), (813, 21057), (860, 21162), (863, 21177), (894, 21285), (900, 21303),

Gene: UmaThurman\_19 Start: 16778, Stop: 18424, Start Num: 195

Candidate Starts for UmaThurman\_19:

(172, 16742), (Start: 195 @16778 has 45 MA's), (244, 16880), (270, 16952), (272, 16958), (274, 16961), (308, 17057), (329, 17096), (357, 17177), (377, 17231), (382, 17246), (460, 17342), (494, 17417), (506, 17447), (594, 17630), (601, 17654), (658, 17798), (664, 17810), (702, 17870), (757, 18002), (758, 18005), (788, 18104), (795, 18122), (813, 18173), (843, 18239), (872, 18302), (877, 18314),

Gene: UncleRicky\_17 Start: 14628, Stop: 16337, Start Num: 123

Candidate Starts for UncleRicky\_17:

(Start: 123 @14628 has 215 MA's), (193, 14715), (Start: 227 @14760 has 2 MA's), (233, 14784), (251, 14841), (271, 14889), (274, 14895), (281, 14913), (300, 14943), (348, 15048), (367, 15102), (370, 15108), (373, 15117), (378, 15129), (381, 15138), (388, 15162), (402, 15198), (403, 15204), (407, 15216), (418, 15237), (420, 15240), (424, 15249), (443, 15264), (448, 15270), (459, 15288), (465, 15303), (468, 15309), (475, 15327), (477, 15330), (484, 15345), (492, 15360), (494, 15366), (506, 15396), (511, 15414), (515, 15426), (521, 15432), (564, 15492), (568, 15504), (583, 15540), (587, 15552), (594, 15573), (614, 15627), (618, 15636), (627, 15660), (638, 15690), (710, 15795), (720, 15807), (737, 15843), (751, 15882), (761, 15921), (791, 16020), (799, 16041), (810, 16074), (826,

16104), (836, 16134), (841, 16143), (844, 16149), (860, 16164), (861, 16167), (865, 16188), (866, 16191), (882, 16233), (887, 16263), (900, 16305), (901, 16311),

Gene: Unicorn\_22 Start: 16372, Stop: 18138, Start Num: 114

Candidate Starts for Unicorn\_22:

(Start: 109 @16363 has 26 MA's), (Start: 114 @16372 has 139 MA's), (140, 16402), (230, 16543), (236, 16561), (248, 16594), (258, 16624), (278, 16669), (316, 16759), (334, 16795), (362, 16882), (395, 16975), (400, 16987), (403, 16990), (412, 17008), (424, 17029), (438, 17044), (444, 17056), (448, 17062), (465, 17104), (468, 17110), (572, 17293), (593, 17353), (629, 17437), (636, 17455), (655, 17515), (698, 17590), (708, 17614), (748, 17674), (756, 17707), (757, 17710), (762, 17728), (772, 17749), (793, 17824), (810, 17875), (824, 17902), (863, 17974), (880, 18025), (901, 18109), (902, 18112), (913, 18130),

Gene: UnionJack\_24 Start: 18683, Stop: 20482, Start Num: 144

Candidate Starts for UnionJack\_24:

(Start: 144 @18683 has 603 MA's), (222, 18788), (278, 18920), (292, 18956), (306, 18995), (315, 19010), (336, 19046), (360, 19118), (365, 19133), (378, 19166), (380, 19172), (481, 19367), (495, 19397), (499, 19403), (515, 19454), (553, 19538), (583, 19607), (597, 19649), (602, 19667), (635, 19727), (636, 19730), (665, 19805), (668, 19823), (729, 19964), (746, 20000), (859, 20315), (862, 20324),

Gene: Updawg\_30 Start: 20656, Stop: 22428, Start Num: 144

Candidate Starts for Updawg\_30:

(Start: 123 @20632 has 215 MA's), (Start: 144 @20656 has 603 MA's), (Start: 235 @20791 has 1 MA's), (277, 20890), (278, 20893), (305, 20965), (306, 20968), (338, 21022), (341, 21028), (360, 21091), (378, 21139), (388, 21172), (417, 21226), (463, 21307), (467, 21310), (481, 21340), (546, 21496), (584, 21583), (636, 21703), (674, 21826), (675, 21829), (677, 21835), (713, 21883), (746, 21946), (750, 21961), (752, 21967), (770, 22021), (781, 22060), (784, 22075), (795, 22108), (810, 22153), (860, 22264), (862, 22270), (877, 22324),

Gene: Upyo\_18 Start: 14948, Stop: 16558, Start Num: 153

Candidate Starts for Upyo\_18:

(Start: 95 @14867 has 1 MA's), (Start: 153 @14948 has 11 MA's), (Start: 163 @14957 has 10 MA's), (216, 15041), (233, 15074), (278, 15182), (292, 15221), (321, 15272), (336, 15305), (366, 15395), (378, 15425), (417, 15512), (464, 15590), (467, 15593), (501, 15665), (512, 15698), (553, 15749), (575, 15785), (583, 15809), (604, 15869), (635, 15923), (636, 15926), (653, 15968), (657, 15986), (664, 15998), (735, 16112), (755, 16169), (769, 16184), (891, 16502), (907, 16547),

Gene: Urkel\_23 Start: 17102, Stop: 18868, Start Num: 114

Candidate Starts for Urkel\_23:

(Start: 114 @17102 has 139 MA's), (140, 17132), (236, 17291), (248, 17324), (258, 17354), (272, 17387), (278, 17399), (316, 17489), (337, 17531), (360, 17603), (362, 17612), (378, 17651), (392, 17696), (403, 17720), (448, 17792), (465, 17834), (468, 17840), (481, 17867), (564, 18005), (572, 18023), (587, 18065), (603, 18113), (618, 18140), (655, 18245), (704, 18335), (757, 18440), (768, 18470), (772, 18479), (793, 18554), (810, 18605), (890, 18800), (901, 18839), (902, 18842), (913, 18860),

Gene: Utz\_19 Start: 16645, Stop: 18291, Start Num: 195

Candidate Starts for Utz\_19:

(172, 16609), (Start: 195 @16645 has 45 MA's), (244, 16747), (272, 16825), (274, 16828), (308, 16924), (329, 16963), (357, 17044), (377, 17098), (382, 17113), (494, 17284), (506, 17314), (594, 17497), (601, 17521), (602, 17524), (626, 17572), (658, 17665), (664, 17677), (694, 17722), (702, 17737), (757, 17869), (758, 17872), (788, 17971), (795, 17989), (813, 18040), (843, 18106), (872,

18169), (877, 18181),

Gene: VA6\_28 Start: 20204, Stop: 21994, Start Num: 144

Candidate Starts for VA6\_28:

(94, 20138), (Start: 123 @20180 has 215 MA's), (Start: 144 @20204 has 603 MA's), (277, 20438), (278, 20441), (305, 20513), (306, 20516), (315, 20531), (338, 20570), (341, 20576), (378, 20687), (384, 20705), (388, 20720), (417, 20774), (463, 20855), (467, 20858), (532, 21014), (546, 21044), (586, 21137), (636, 21251), (675, 21377), (746, 21512), (750, 21527), (756, 21551), (781, 21626), (782, 21629), (784, 21641), (813, 21725), (849, 21803), (860, 21830), (862, 21836), (873, 21881), (877, 21890), (900, 21971),

Gene: VC3\_31 Start: 20192, Stop: 21982, Start Num: 144

Candidate Starts for VC3\_31:

(94, 20126), (Start: 123 @20168 has 215 MA's), (Start: 144 @20192 has 603 MA's), (277, 20426), (278, 20429), (305, 20501), (306, 20504), (315, 20519), (338, 20558), (341, 20564), (378, 20675), (384, 20693), (388, 20708), (417, 20762), (463, 20843), (467, 20846), (532, 21002), (546, 21032), (586, 21125), (636, 21239), (675, 21365), (746, 21500), (750, 21515), (756, 21539), (781, 21614), (782, 21617), (784, 21629), (813, 21713), (849, 21791), (860, 21818), (862, 21824), (873, 21869), (877, 21878), (900, 21959),

Gene: VRedHorse\_16 Start: 14970, Stop: 16679, Start Num: 123

Candidate Starts for VRedHorse\_16:

(Start: 123 @14970 has 215 MA's), (193, 15057), (Start: 227 @15102 has 2 MA's), (233, 15126), (251, 15183), (271, 15231), (274, 15237), (281, 15255), (300, 15285), (348, 15390), (370, 15450), (373, 15459), (381, 15480), (388, 15504), (403, 15546), (418, 15579), (424, 15591), (443, 15606), (459, 15630), (465, 15645), (468, 15651), (484, 15687), (492, 15702), (494, 15708), (499, 15717), (511, 15756), (515, 15768), (521, 15774), (564, 15834), (583, 15882), (587, 15894), (594, 15915), (614, 15969), (618, 15978), (625, 15996), (627, 16002), (638, 16032), (710, 16137), (720, 16149), (737, 16185), (751, 16224), (761, 16263), (791, 16362), (799, 16383), (810, 16416), (826, 16446), (836, 16476), (839, 16482), (841, 16485), (844, 16491), (860, 16506), (861, 16509), (865, 16530), (882, 16575), (887, 16605), (900, 16647), (901, 16653),

Gene: Vagabond\_54 Start: 33305, Stop: 35041, Start Num: 107

Candidate Starts for Vagabond\_54:

(Start: 100 @33296 has 2 MA's), (Start: 107 @33305 has 25 MA's), (174, 33395), (240, 33512), (251, 33548), (259, 33569), (271, 33596), (274, 33602), (286, 33632), (302, 33656), (332, 33707), (381, 33845), (383, 33851), (400, 33902), (402, 33905), (407, 33923), (459, 33974), (468, 33995), (470, 33998), (492, 34046), (494, 34052), (511, 34100), (513, 34106), (515, 34112), (555, 34172), (564, 34196), (565, 34199), (583, 34244), (588, 34259), (591, 34268), (594, 34277), (608, 34322), (618, 34340), (631, 34373), (720, 34511), (729, 34532), (754, 34598), (762, 34628), (779, 34682), (791, 34724), (799, 34745), (805, 34766), (810, 34778), (821, 34799), (844, 34853), (880, 34931), (887, 34967), (893, 34988), (901, 35015),

Gene: Valary\_34 Start: 26795, Stop: 28561, Start Num: 97

Candidate Starts for Valary\_34:

(80, 26753), (Start: 97 @26795 has 73 MA's), (Start: 121 @26831 has 1 MA's), (Start: 148 @26864 has 14 MA's), (264, 27074), (265, 27077), (277, 27107), (298, 27173), (306, 27197), (311, 27206), (331, 27239), (386, 27392), (406, 27431), (445, 27482), (451, 27494), (458, 27512), (460, 27524), (465, 27536), (472, 27551), (487, 27581), (489, 27584), (499, 27605), (547, 27677), (597, 27803), (613, 27836), (632, 27869), (647, 27908), (649, 27911), (670, 27983), (707, 28049), (715, 28061), (793, 28232), (797, 28244), (799, 28250), (810, 28283), (824, 28310), (832, 28337), (860, 28391), (891, 28508), (897, 28529), (909, 28556),

Gene: Validus\_23 Start: 16448, Stop: 18214, Start Num: 114

Candidate Starts for Validus\_23:

(Start: 114 @16448 has 139 MA's), (140, 16478), (Start: 227 @16604 has 2 MA's), (230, 16619), (236, 16637), (248, 16670), (278, 16745), (282, 16763), (316, 16835), (334, 16871), (360, 16949), (362, 16958), (395, 17051), (400, 17063), (403, 17066), (444, 17132), (448, 17138), (463, 17174), (465, 17180), (468, 17186), (481, 17213), (564, 17351), (572, 17369), (593, 17429), (603, 17459), (618, 17486), (632, 17519), (655, 17591), (670, 17645), (714, 17699), (719, 17705), (748, 17750), (756, 17783), (758, 17789), (768, 17816), (772, 17825), (793, 17900), (810, 17951), (867, 18065), (890, 18146), (901, 18185), (902, 18188), (913, 18206),

Gene: VanDeWege\_34 Start: 26622, Stop: 28388, Start Num: 97

Candidate Starts for VanDeWege\_34:

(80, 26580), (Start: 97 @26622 has 73 MA's), (Start: 121 @26658 has 1 MA's), (Start: 148 @26691 has 14 MA's), (264, 26901), (265, 26904), (277, 26934), (306, 27024), (311, 27033), (331, 27066), (371, 27171), (386, 27219), (406, 27258), (445, 27309), (458, 27339), (460, 27351), (465, 27363), (472, 27378), (487, 27408), (489, 27411), (499, 27432), (547, 27504), (568, 27552), (613, 27663), (632, 27696), (649, 27738), (670, 27810), (707, 27876), (793, 28059), (794, 28062), (810, 28110), (824, 28137), (832, 28164), (860, 28218), (891, 28335), (897, 28356), (909, 28383),

Gene: VanLee\_20 Start: 16446, Stop: 18107, Start Num: 151

Candidate Starts for VanLee\_20:

(Start: 141 @16431 has 14 MA's), (Start: 151 @16446 has 5 MA's), (176, 16482), (207, 16533), (286, 16716), (306, 16761), (365, 16896), (436, 17031), (445, 17049), (495, 17157), (497, 17160), (551, 17244), (579, 17304), (619, 17409), (636, 17439), (664, 17514), (665, 17517), (718, 17604), (731, 17628), (747, 17664), (781, 17736), (793, 17778), (797, 17790), (816, 17844), (832, 17886), (860, 17940), (881, 18009), (893, 18063), (896, 18072), (909, 18102),

Gene: Vanisoa\_27 Start: 19606, Stop: 21396, Start Num: 144

Candidate Starts for Vanisoa\_27:

(94, 19540), (130, 19591), (Start: 144 @19606 has 603 MA's), (219, 19705), (277, 19840), (278, 19843), (305, 19915), (306, 19918), (315, 19933), (338, 19972), (341, 19978), (368, 20062), (378, 20089), (380, 20095), (417, 20176), (463, 20257), (467, 20260), (495, 20320), (500, 20329), (535, 20422), (584, 20533), (597, 20572), (619, 20623), (636, 20653), (695, 20824), (731, 20881), (746, 20914), (750, 20929), (756, 20953), (770, 20989), (781, 21028), (784, 21043), (813, 21127), (860, 21232), (862, 21238), (873, 21283),

Gene: Vasanti\_17 Start: 14704, Stop: 16413, Start Num: 171

Candidate Starts for Vasanti\_17:

(83, 14569), (88, 14584), (Start: 171 @14704 has 40 MA's), (197, 14746), (237, 14821), (259, 14893), (262, 14896), (315, 15025), (351, 15106), (377, 15184), (378, 15187), (392, 15232), (462, 15373), (500, 15454), (511, 15490), (519, 15514), (525, 15526), (554, 15562), (607, 15679), (624, 15712), (637, 15736), (665, 15808), (669, 15832), (670, 15835), (788, 16066), (794, 16081), (847, 16216), (849, 16219), (865, 16267), (874, 16297),

Gene: Veliki\_23 Start: 17191, Stop: 18957, Start Num: 114

Candidate Starts for Veliki\_23:

(Start: 114 @17191 has 139 MA's), (140, 17221), (236, 17380), (248, 17413), (258, 17443), (272, 17476), (278, 17488), (316, 17578), (337, 17620), (360, 17692), (362, 17701), (378, 17740), (392, 17785), (400, 17806), (403, 17809), (438, 17863), (448, 17881), (465, 17923), (468, 17929), (481, 17956), (564, 18094), (572, 18112), (587, 18154), (593, 18172), (603, 18202), (618, 18229), (655, 18334), (748, 18493), (757, 18529), (768, 18559), (772, 18568), (793, 18643), (810, 18694), (863, 18793), (890, 18889), (901, 18928), (902, 18931), (913, 18949),



Gene: Velveteen\_17 Start: 14635, Stop: 16344, Start Num: 123

Candidate Starts for Velveteen\_17:

(Start: 123 @14635 has 215 MA's), (193, 14722), (Start: 227 @14767 has 2 MA's), (233, 14791), (271, 14896), (274, 14902), (281, 14920), (300, 14950), (348, 15055), (370, 15115), (378, 15136), (381, 15145), (388, 15169), (418, 15244), (420, 15247), (459, 15295), (465, 15310), (468, 15316), (484, 15352), (486, 15355), (492, 15367), (494, 15373), (511, 15421), (515, 15433), (521, 15439), (564, 15499), (568, 15511), (583, 15547), (587, 15559), (614, 15634), (618, 15643), (625, 15661), (627, 15667), (638, 15697), (710, 15802), (717, 15811), (720, 15814), (737, 15850), (761, 15928), (791, 16027), (799, 16048), (810, 16081), (826, 16111), (836, 16141), (841, 16150), (844, 16156), (860, 16171), (861, 16174), (866, 16198), (877, 16228), (882, 16240), (887, 16270), (900, 16312),

Gene: Vendetta\_22 Start: 16480, Stop: 17808, Start Num: 257

Candidate Starts for Vendetta\_22:

(Start: 257 @16480 has 11 MA's), (267, 16495), (333, 16639), (349, 16684), (364, 16729), (372, 16753), (382, 16783), (388, 16804), (391, 16813), (401, 16837), (406, 16846), (437, 16897), (447, 16909), (531, 17002), (536, 17011), (548, 17020), (580, 17065), (590, 17083), (636, 17176), (653, 17221), (671, 17290), (680, 17311), (749, 17392), (763, 17425), (799, 17512), (812, 17548), (819, 17563), (823, 17572), (849, 17614), (863, 17653), (881, 17707), (884, 17725), (899, 17782), (902, 17791),

Gene: Venti\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Venti\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Veracruz\_27 Start: 20455, Stop: 22254, Start Num: 144

Candidate Starts for Veracruz\_27:

(Start: 144 @20455 has 603 MA's), (Start: 190 @20515 has 1 MA's), (230, 20584), (272, 20686), (277, 20698), (278, 20701), (306, 20776), (315, 20791), (338, 20830), (384, 20965), (417, 21034), (481, 21148), (532, 21274), (583, 21388), (591, 21412), (595, 21424), (597, 21430), (636, 21511), (665, 21586), (668, 21604), (670, 21613), (675, 21637), (677, 21643), (682, 21658), (703, 21691), (729, 21736), (731, 21739), (742, 21760), (782, 21889), (813, 21985), (860, 22090), (862, 22096), (900, 22231),

Gene: Verity\_34 Start: 30944, Stop: 32566, Start Num: 160

Candidate Starts for Verity\_34:

(Start: 116 @30887 has 1 MA's), (Start: 160 @30944 has 17 MA's), (178, 30965), (219, 31028), (246, 31091), (272, 31151), (277, 31163), (312, 31250), (341, 31301), (348, 31331), (378, 31412), (386, 31439), (449, 31538), (460, 31568), (464, 31577), (482, 31613), (508, 31673), (547, 31721), (551, 31730), (596, 31829), (609, 31868), (619, 31880), (672, 32036), (675, 32048), (711, 32075), (746, 32132), (764, 32171), (769, 32180), (786, 32237), (790, 32249), (806, 32297), (810, 32306), (813, 32312), (824, 32333), (863, 32411), (902, 32549),

Gene: Veteran\_16 Start: 14805, Stop: 16514, Start Num: 123

Candidate Starts for Veteran\_16:

(Start: 123 @14805 has 215 MA's), (193, 14892), (Start: 227 @14937 has 2 MA's), (233, 14961), (271, 15066), (274, 15072), (281, 15090), (300, 15120), (348, 15225), (367, 15279), (370, 15285), (373, 15294), (378, 15306), (381, 15315), (388, 15339), (402, 15375), (403, 15381), (407, 15393), (418,

15414), (420, 15417), (424, 15426), (443, 15441), (448, 15447), (459, 15465), (465, 15480), (468, 15486), (475, 15504), (477, 15507), (484, 15522), (492, 15537), (494, 15543), (506, 15573), (511, 15591), (515, 15603), (521, 15609), (564, 15669), (568, 15681), (583, 15717), (587, 15729), (594, 15750), (614, 15804), (618, 15813), (627, 15837), (638, 15867), (710, 15972), (720, 15984), (737, 16020), (751, 16059), (761, 16098), (791, 16197), (799, 16218), (810, 16251), (826, 16281), (836, 16311), (841, 16320), (844, 16326), (860, 16341), (861, 16344), (865, 16365), (866, 16368), (882, 16410), (887, 16440), (900, 16482), (901, 16488),

Gene: ViaConlectus\_35 Start: 29390, Stop: 31012, Start Num: 160

Candidate Starts for ViaConlectus\_35:

(Start: 160 @29390 has 17 MA's), (178, 29411), (188, 29423), (219, 29474), (236, 29513), (246, 29537), (277, 29609), (312, 29696), (341, 29747), (348, 29777), (391, 29900), (449, 29984), (460, 30014), (464, 30023), (481, 30056), (482, 30059), (508, 30119), (547, 30167), (551, 30176), (596, 30275), (609, 30314), (619, 30326), (672, 30482), (711, 30521), (747, 30581), (749, 30584), (755, 30611), (769, 30626), (786, 30683), (790, 30695), (806, 30743), (810, 30752), (813, 30758), (824, 30779), (842, 30812), (860, 30842), (863, 30857), (880, 30908), (900, 30986), (902, 30995),

Gene: Vidya\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Vidya\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's), (178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805), (356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003), (422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165), (529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465), (636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654), (747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Vine\_19 Start: 16430, Stop: 18124, Start Num: 144

Candidate Starts for Vine\_19:

(Start: 133 @16427 has 8 MA's), (Start: 144 @16430 has 603 MA's), (214, 16529), (236, 16571), (336, 16811), (365, 16898), (374, 16919), (377, 16928), (385, 16955), (406, 17000), (436, 17033), (444, 17048), (454, 17072), (465, 17105), (481, 17138), (487, 17150), (509, 17207), (546, 17255), (560, 17285), (574, 17315), (580, 17330), (596, 17378), (617, 17429), (636, 17465), (643, 17480), (650, 17498), (668, 17555), (670, 17564), (747, 17684), (750, 17696), (777, 17744), (791, 17795), (793, 17798), (799, 17816), (829, 17894), (842, 17921), (862, 17963), (902, 18110), (907, 18116),

Gene: Violet\_26 Start: 21646, Stop: 23448, Start Num: 146

Candidate Starts for Violet\_26:

(Start: 146 @21646 has 223 MA's), (Start: 161 @21667 has 4 MA's), (Start: 190 @21709 has 1 MA's), (216, 21754), (306, 21970), (332, 22015), (338, 22024), (349, 22063), (368, 22114), (369, 22117), (467, 22312), (500, 22381), (583, 22582), (584, 22585), (591, 22606), (635, 22702), (636, 22705), (638, 22711), (665, 22780), (668, 22798), (670, 22807), (677, 22837), (731, 22933), (746, 22966), (750, 22981), (793, 23122), (813, 23179), (862, 23290), (909, 23443),

Gene: Vivi2\_37 Start: 31487, Stop: 33250, Start Num: 97

Candidate Starts for Vivi2\_37:

(90, 31469), (Start: 97 @31487 has 73 MA's), (Start: 121 @31523 has 1 MA's), (219, 31661), (262, 31757), (265, 31766), (288, 31835), (306, 31886), (332, 31931), (341, 31946), (368, 32027), (384, 32072), (386, 32081), (445, 32171), (458, 32201), (461, 32216), (472, 32240), (487, 32270), (551, 32375), (597, 32492), (607, 32510), (613, 32525), (631, 32555), (635, 32567), (636, 32570), (647, 32597), (791, 32918), (793, 32921), (794, 32924), (810, 32972), (824, 32999), (832, 33026), (860, 33080), (865, 33104), (866, 33107), (891, 33197), (909, 33245),

Gene: Vix\_29 Start: 20461, Stop: 22257, Start Num: 144

Candidate Starts for Vix\_29:

(Start: 144 @20461 has 603 MA's), (Start: 190 @20518 has 1 MA's), (197, 20533), (219, 20566), (230, 20587), (Start: 235 @20602 has 1 MA's), (272, 20689), (277, 20701), (278, 20704), (306, 20779), (315, 20794), (336, 20830), (417, 21037), (481, 21151), (500, 21190), (532, 21277), (583, 21391), (591, 21415), (597, 21433), (636, 21514), (665, 21589), (668, 21607), (675, 21640), (677, 21646), (695, 21685), (729, 21739), (731, 21742), (742, 21763), (758, 21820), (813, 21988), (860, 22093), (862, 22099), (900, 22234),

Gene: VohminGhazi\_31 Start: 19976, Stop: 21748, Start Num: 144

Candidate Starts for VohminGhazi\_31:

(94, 19910), (Start: 123 @19952 has 215 MA's), (Start: 144 @19976 has 603 MA's), (263, 20174), (278, 20213), (305, 20285), (306, 20288), (318, 20306), (338, 20342), (341, 20348), (378, 20459), (380, 20465), (392, 20504), (417, 20546), (448, 20585), (463, 20627), (467, 20630), (495, 20690), (592, 20927), (597, 20942), (636, 21023), (677, 21155), (750, 21281), (765, 21332), (770, 21341), (781, 21380), (782, 21383), (784, 21395), (813, 21479), (860, 21584), (862, 21590), (900, 21725),

Gene: Volt\_55 Start: 28894, Stop: 30579, Start Num: 135

Candidate Starts for Volt\_55:

(59, 28702), (60, 28711), (62, 28717), (87, 28819), (102, 28849), (Start: 135 @28894 has 7 MA's), (232, 29035), (292, 29194), (316, 29248), (378, 29404), (434, 29503), (458, 29551), (481, 29608), (489, 29623), (546, 29713), (600, 29851), (635, 29914), (668, 30010), (703, 30061), (705, 30064), (711, 30076), (750, 30151), (754, 30166), (791, 30250), (824, 30331), (867, 30442), (897, 30547), (902, 30565),

Gene: Vordorf\_22 Start: 18371, Stop: 20029, Start Num: 149

Candidate Starts for Vordorf\_22:

(63, 18182), (77, 18242), (Start: 121 @18335 has 1 MA's), (Start: 149 @18371 has 8 MA's), (Start: 157 @18383 has 4 MA's), (230, 18497), (232, 18503), (261, 18581), (284, 18647), (287, 18653), (337, 18764), (341, 18773), (347, 18800), (349, 18806), (350, 18809), (358, 18830), (444, 19001), (445, 19004), (474, 19070), (482, 19085), (555, 19169), (559, 19178), (576, 19220), (583, 19241), (599, 19289), (602, 19301), (610, 19328), (641, 19397), (662, 19466), (670, 19499), (716, 19556), (757, 19607), (780, 19676), (795, 19727), (806, 19763), (813, 19778), (838, 19835), (843, 19844), (865, 19883), (878, 19922), (881, 19928),

Gene: Vorrps\_56 Start: 33517, Stop: 35253, Start Num: 107

Candidate Starts for Vorrps\_56:

(Start: 100 @33508 has 2 MA's), (Start: 107 @33517 has 25 MA's), (174, 33607), (240, 33724), (251, 33760), (259, 33781), (271, 33808), (274, 33814), (286, 33844), (302, 33868), (332, 33919), (381, 34057), (383, 34063), (400, 34114), (402, 34117), (407, 34135), (459, 34186), (468, 34207), (470, 34210), (492, 34258), (494, 34264), (511, 34312), (513, 34318), (515, 34324), (555, 34384), (564, 34408), (565, 34411), (583, 34456), (588, 34471), (591, 34480), (594, 34489), (608, 34534), (618, 34552), (631, 34585), (720, 34723), (729, 34744), (754, 34810), (762, 34840), (779, 34894), (791, 34936), (799, 34957), (805, 34978), (810, 34990), (821, 35011), (844, 35065), (880, 35143), (887, 35179), (893, 35200), (901, 35227),

Gene: Wachhund\_16 Start: 14831, Stop: 16540, Start Num: 123

Candidate Starts for Wachhund\_16:

(Start: 123 @14831 has 215 MA's), (193, 14918), (Start: 227 @14963 has 2 MA's), (233, 14987), (271, 15092), (274, 15098), (281, 15116), (300, 15146), (348, 15251), (370, 15311), (378, 15332), (381, 15341), (388, 15365), (459, 15491), (465, 15506), (468, 15512), (484, 15548), (486, 15551), (492, 15563), (494, 15569), (511, 15617), (515, 15629), (521, 15635), (564, 15695), (568, 15707), (583, 15743), (587, 15755), (614, 15830), (618, 15839), (625, 15857), (627, 15863), (638, 15893), (710,

15998), (717, 16007), (720, 16010), (737, 16046), (761, 16124), (791, 16223), (799, 16244), (810, 16277), (826, 16307), (836, 16337), (841, 16346), (844, 16352), (860, 16367), (861, 16370), (866, 16394), (877, 16424), (882, 16436), (887, 16466), (900, 16508),

Gene: Waits\_30 Start: 19063, Stop: 20850, Start Num: 144

Candidate Starts for Waits\_30:

(94, 18997), (Start: 123 @19039 has 215 MA's), (Start: 144 @19063 has 603 MA's), (236, 19201), (262, 19258), (278, 19300), (292, 19336), (306, 19375), (343, 19444), (349, 19468), (369, 19522), (448, 19672), (467, 19717), (481, 19747), (499, 19783), (515, 19834), (530, 19870), (553, 19918), (580, 19978), (635, 20107), (665, 20185), (750, 20386), (752, 20392), (782, 20488), (845, 20653), (880, 20752),

Gene: Walrus\_20 Start: 16873, Stop: 18519, Start Num: 195

Candidate Starts for Walrus\_20:

(172, 16837), (Start: 195 @16873 has 45 MA's), (244, 16975), (272, 17053), (274, 17056), (308, 17152), (329, 17191), (357, 17272), (377, 17326), (382, 17341), (460, 17437), (494, 17512), (506, 17542), (594, 17725), (601, 17749), (626, 17800), (658, 17893), (664, 17905), (694, 17950), (702, 17965), (757, 18097), (758, 18100), (788, 18199), (795, 18217), (813, 18268), (839, 18328), (843, 18334), (872, 18397), (877, 18409),

Gene: WalterMcMickey\_27 Start: 19820, Stop: 21598, Start Num: 144

Candidate Starts for WalterMcMickey\_27:

(Start: 144 @19820 has 603 MA's), (Start: 190 @19877 has 1 MA's), (197, 19892), (219, 19925), (230, 19946), (272, 20048), (277, 20060), (278, 20063), (306, 20138), (315, 20153), (338, 20192), (378, 20309), (384, 20327), (417, 20396), (460, 20471), (481, 20510), (500, 20549), (532, 20636), (553, 20681), (583, 20750), (591, 20774), (595, 20786), (597, 20792), (636, 20873), (668, 20966), (670, 20975), (675, 20999), (677, 21005), (682, 21020), (713, 21053), (742, 21104), (749, 21122), (758, 21161), (788, 21260), (813, 21329), (825, 21353), (827, 21359), (860, 21434), (862, 21440), (863, 21449), (880, 21500), (900, 21575),

Gene: Wanda\_37 Start: 26916, Stop: 28914, Start Num: 124

Candidate Starts for Wanda\_37:

(Start: 124 @26916 has 30 MA's), (Start: 191 @27006 has 45 MA's), (222, 27054), (233, 27084), (243, 27111), (282, 27213), (301, 27243), (327, 27294), (346, 27342), (358, 27378), (360, 27384), (368, 27405), (392, 27477), (395, 27486), (403, 27507), (468, 27615), (470, 27618), (475, 27633), (494, 27672), (511, 27720), (515, 27732), (521, 27738), (552, 27786), (558, 27795), (565, 27816), (573, 27834), (590, 27882), (625, 27984), (653, 28056), (667, 28101), (669, 28113), (684, 28248), (685, 28254), (686, 28278), (696, 28350), (708, 28377), (800, 28626),

Gene: Wander\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Wander\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),

Gene: Waterfoul\_21 Start: 17516, Stop: 19288, Start Num: 117

Candidate Starts for Waterfoul\_21:

(Start: 117 @17516 has 59 MA's), (Start: 123 @17522 has 215 MA's), (143, 17546), (Start: 168 @17579 has 32 MA's), (197, 17627), (230, 17681), (248, 17732), (272, 17795), (321, 17903), (360,

18011), (400, 18125), (403, 18128), (424, 18167), (438, 18182), (444, 18194), (448, 18200), (465, 18242), (468, 18248), (487, 18287), (499, 18311), (564, 18413), (588, 18476), (602, 18521), (655, 18656), (708, 18755), (750, 18833), (756, 18857), (758, 18863), (762, 18878), (793, 18974), (795, 18980), (865, 19133), (895, 19238), (896, 19241), (901, 19259),

Gene: Watermelon\_29 Start: 21982, Stop: 23784, Start Num: 146

Candidate Starts for Watermelon\_29:

(Start: 146 @21982 has 223 MA's), (Start: 161 @22003 has 4 MA's), (Start: 190 @22045 has 1 MA's), (216, 22090), (306, 22306), (332, 22351), (338, 22360), (349, 22399), (368, 22450), (369, 22453), (467, 22648), (500, 22717), (583, 22918), (584, 22921), (591, 22942), (635, 23038), (636, 23041), (638, 23047), (665, 23116), (668, 23134), (670, 23143), (677, 23173), (731, 23269), (746, 23302), (750, 23317), (793, 23458), (813, 23515), (862, 23626), (909, 23779),

Gene: Watson\_29 Start: 20371, Stop: 22167, Start Num: 144

Candidate Starts for Watson\_29:

(Start: 144 @20371 has 603 MA's), (Start: 190 @20428 has 1 MA's), (197, 20443), (219, 20476), (230, 20497), (Start: 235 @20512 has 1 MA's), (272, 20599), (277, 20611), (278, 20614), (306, 20689), (315, 20704), (336, 20740), (417, 20947), (481, 21061), (500, 21100), (532, 21187), (583, 21301), (591, 21325), (597, 21343), (636, 21424), (665, 21499), (668, 21517), (675, 21550), (677, 21556), (695, 21595), (729, 21649), (731, 21652), (742, 21673), (758, 21730), (813, 21898), (860, 22003), (862, 22009), (900, 22144),

Gene: Webster2\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Webster2\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Wee\_17 Start: 15380, Stop: 17089, Start Num: 123

Candidate Starts for Wee\_17:

(Start: 123 @15380 has 215 MA's), (193, 15467), (Start: 227 @15512 has 2 MA's), (233, 15536), (271, 15641), (274, 15647), (281, 15665), (300, 15695), (348, 15800), (370, 15860), (378, 15881), (381, 15890), (388, 15914), (459, 16040), (465, 16055), (468, 16061), (484, 16097), (486, 16100), (492, 16112), (494, 16118), (511, 16166), (515, 16178), (521, 16184), (564, 16244), (568, 16256), (583, 16292), (587, 16304), (614, 16379), (618, 16388), (625, 16406), (627, 16412), (638, 16442), (710, 16547), (717, 16556), (720, 16559), (737, 16595), (761, 16673), (791, 16772), (799, 16793), (810, 16826), (826, 16856), (836, 16886), (841, 16895), (844, 16901), (860, 16916), (861, 16919), (866, 16943), (877, 16973), (882, 16985), (887, 17015), (900, 17057),

Gene: WeiHuaDA\_34 Start: 22438, Stop: 24234, Start Num: 123

Candidate Starts for WeiHuaDA\_34:

(94, 22396), (Start: 123 @22438 has 215 MA's), (Start: 144 @22462 has 603 MA's), (277, 22696), (278, 22699), (305, 22771), (306, 22774), (338, 22828), (341, 22834), (349, 22867), (378, 22945), (417, 23032), (463, 23113), (467, 23116), (481, 23146), (584, 23389), (631, 23494), (636, 23509), (677, 23641), (713, 23689), (731, 23719), (746, 23752), (750, 23767), (752, 23773), (770, 23827), (784, 23881), (813, 23965), (842, 24031), (860, 24070), (862, 24076),

Gene: Weirido19\_19 Start: 16080, Stop: 17819, Start Num: 112

Candidate Starts for Weirido19\_19:

(92, 16044), (Start: 112 @16080 has 41 MA's), (130, 16101), (Start: 132 @16104 has 45 MA's), (179, 16164), (184, 16170), (189, 16176), (201, 16200), (Start: 227 @16233 has 2 MA's), (255, 16326), (266, 16347), (302, 16446), (358, 16581), (360, 16587), (365, 16602), (375, 16626), (388, 16668), (444, 16758), (449, 16767), (481, 16839), (487, 16851), (489, 16854), (496, 16869), (514, 16920), (563, 16965), (576, 16995), (602, 17076), (641, 17163), (714, 17319), (723, 17325), (802, 17532), (836, 17616), (850, 17637), (863, 17655), (878, 17703), (893, 17763),

Gene: WelcomeAyanna\_18 Start: 17806, Stop: 19404, Start Num: 170

Candidate Starts for WelcomeAyanna\_18:

(53, 17509), (61, 17584), (64, 17605), (88, 17689), (Start: 170 @17806 has 87 MA's), (298, 18064), (306, 18082), (307, 18085), (340, 18139), (385, 18283), (392, 18304), (415, 18355), (440, 18391), (441, 18394), (501, 18427), (519, 18484), (603, 18661), (618, 18685), (636, 18721), (669, 18823), (687, 18880), (751, 18970), (849, 19210), (874, 19288),

Gene: Wendigo\_18 Start: 16640, Stop: 18403, Start Num: 109

Candidate Starts for Wendigo\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Whabigail7\_30 Start: 20683, Stop: 22455, Start Num: 144

Candidate Starts for Whabigail7\_30:

(Start: 123 @20659 has 215 MA's), (Start: 144 @20683 has 603 MA's), (219, 20782), (251, 20866), (277, 20917), (278, 20920), (305, 20992), (306, 20995), (338, 21049), (349, 21088), (378, 21166), (417, 21253), (463, 21334), (467, 21337), (546, 21523), (584, 21610), (631, 21715), (636, 21730), (675, 21856), (677, 21862), (713, 21910), (750, 21988), (752, 21994), (770, 22048), (781, 22087), (784, 22102), (813, 22186), (862, 22297),

Gene: Whack\_18 Start: 17086, Stop: 18663, Start Num: 164

Candidate Starts for Whack\_18:

(Start: 164 @17086 has 1 MA's), (236, 17212), (248, 17242), (355, 17488), (360, 17503), (386, 17578), (444, 17668), (445, 17671), (448, 17674), (472, 17734), (576, 17914), (653, 18070), (681, 18172), (713, 18184), (721, 18193), (769, 18286), (785, 18331), (791, 18352), (825, 18439), (893, 18616), (897, 18628), (902, 18646),

Gene: Whatsapiecost\_16 Start: 14856, Stop: 16565, Start Num: 123

Candidate Starts for Whatsapiecost\_16:

(Start: 123 @14856 has 215 MA's), (193, 14943), (Start: 227 @14988 has 2 MA's), (233, 15012), (271, 15117), (274, 15123), (281, 15141), (300, 15171), (348, 15276), (370, 15336), (378, 15357), (381, 15366), (388, 15390), (459, 15516), (465, 15531), (468, 15537), (484, 15573), (486, 15576), (492, 15588), (494, 15594), (511, 15642), (515, 15654), (521, 15660), (564, 15720), (568, 15732), (583, 15768), (587, 15780), (614, 15855), (618, 15864), (625, 15882), (627, 15888), (638, 15918), (710, 16023), (717, 16032), (720, 16035), (737, 16071), (761, 16149), (791, 16248), (799, 16269), (810, 16302), (826, 16332), (836, 16362), (841, 16371), (844, 16377), (860, 16392), (861, 16395), (866, 16419), (877, 16449), (882, 16461), (887, 16491), (900, 16533),

Gene: WheatThin\_22 Start: 17344, Stop: 19050, Start Num: 162

Candidate Starts for WheatThin\_22:

(Start: 101 @17269 has 2 MA's), (Start: 162 @17344 has 16 MA's), (Start: 227 @17437 has 2 MA's), (230, 17452), (232, 17458), (256, 17533), (283, 17605), (336, 17716), (349, 17761), (356, 17779), (360, 17791), (444, 17962), (449, 17971), (451, 17977), (465, 18010), (496, 18073), (514, 18124), (541, 18148), (563, 18172), (591, 18247), (603, 18286), (653, 18418), (714, 18532), (756, 18619), (792, 18733), (795, 18742), (836, 18847), (878, 18934), (913, 19042),

Gene: Wheeler\_27 Start: 21414, Stop: 23216, Start Num: 146

Candidate Starts for Wheeler\_27:

(Start: 146 @21414 has 223 MA's), (Start: 161 @21435 has 4 MA's), (Start: 190 @21477 has 1 MA's), (216, 21522), (306, 21738), (332, 21783), (338, 21792), (349, 21831), (368, 21882), (369, 21885), (406, 21978), (467, 22080), (500, 22149), (583, 22350), (584, 22353), (591, 22374), (635, 22470), (636, 22473), (638, 22479), (665, 22548), (668, 22566), (670, 22575), (677, 22605), (731, 22701), (746, 22734), (750, 22749), (793, 22890), (813, 22947), (862, 23058), (909, 23211),

Gene: Wheezy\_41 Start: 29808, Stop: 31421, Start Num: 170

Candidate Starts for Wheezy\_41:

(Start: 170 @29808 has 87 MA's), (Start: 194 @29844 has 1 MA's), (202, 29862), (236, 29922), (340, 30162), (343, 30174), (347, 30189), (372, 30255), (377, 30270), (386, 30294), (387, 30297), (432, 30381), (449, 30411), (450, 30414), (493, 30471), (510, 30519), (511, 30522), (518, 30543), (571, 30648), (592, 30693), (607, 30735), (673, 30909), (683, 30939), (688, 30945), (775, 31053), (776, 31056), (799, 31131), (887, 31350), (906, 31407),

Gene: Whiteclaw\_17 Start: 14758, Stop: 16467, Start Num: 171

Candidate Starts for Whiteclaw\_17:

(Start: 171 @14758 has 40 MA's), (237, 14875), (287, 15025), (306, 15064), (315, 15079), (347, 15148), (351, 15160), (377, 15238), (378, 15241), (440, 15373), (462, 15427), (500, 15508), (519, 15568), (521, 15574), (525, 15580), (578, 15661), (592, 15697), (607, 15733), (618, 15751), (637, 15790), (665, 15862), (669, 15886), (788, 16120), (794, 16135), (807, 16177), (847, 16270), (849, 16273), (865, 16321), (874, 16351),

Gene: Whitney\_21 Start: 17225, Stop: 18922, Start Num: 144

Candidate Starts for Whitney\_21:

(113, 17186), (Start: 144 @17225 has 603 MA's), (Start: 150 @17237 has 4 MA's), (Start: 153 @17240 has 11 MA's), (180, 17276), (202, 17315), (219, 17336), (239, 17378), (240, 17384), (241, 17387), (246, 17399), (263, 17435), (277, 17471), (295, 17528), (316, 17576), (331, 17603), (368, 17705), (382, 17744), (406, 17801), (414, 17819), (432, 17828), (436, 17834), (458, 17882), (469, 17912), (485, 17948), (489, 17954), (499, 17975), (500, 17978), (517, 18029), (547, 18056), (549, 18059), (561, 18086), (574, 18113), (599, 18185), (618, 18224), (649, 18278), (670, 18350), (683, 18395), (736, 18458), (747, 18485), (749, 18488), (752, 18503), (788, 18587), (791, 18596), (793, 18599), (795, 18605), (799, 18617), (801, 18620), (811, 18650), (814, 18656), (824, 18677), (825, 18680), (849, 18734), (862, 18764), (863, 18773), (879, 18824), (887, 18857), (891, 18869), (896, 18887),

Gene: WhoseManz\_43 Start: 27503, Stop: 29119, Start Num: 170

Candidate Starts for WhoseManz\_43:

(Start: 170 @27503 has 87 MA's), (Start: 177 @27515 has 1 MA's), (Start: 194 @27539 has 1 MA's), (236, 27617), (306, 27800), (340, 27857), (343, 27869), (347, 27884), (372, 27950), (377, 27965), (386, 27989), (432, 28076), (436, 28082), (449, 28106), (493, 28166), (505, 28196), (511, 28217), (560, 28322), (571, 28343), (607, 28430), (635, 28478), (673, 28604), (688, 28640), (791, 28805), (798, 28823), (809, 28859), (885, 29033), (887, 29045), (906, 29102),

Gene: Whouxphf\_16 Start: 14910, Stop: 16619, Start Num: 123

Candidate Starts for Whouxphf\_16:

(Start: 123 @14910 has 215 MA's), (193, 14997), (209, 15018), (Start: 227 @15042 has 2 MA's), (233, 15066), (271, 15171), (274, 15177), (281, 15195), (300, 15225), (348, 15330), (370, 15390), (378, 15411), (381, 15420), (388, 15444), (402, 15480), (403, 15486), (407, 15498), (418, 15519), (448, 15552), (459, 15570), (465, 15585), (468, 15591), (484, 15627), (492, 15642), (494, 15648), (511, 15696), (515, 15708), (521, 15714), (564, 15774), (583, 15822), (587, 15834), (594, 15855), (614, 15909), (618, 15918), (625, 15936), (627, 15942), (638, 15972), (710, 16077), (720, 16089), (737, 16125), (761, 16203), (791, 16302), (799, 16323), (810, 16356), (826, 16386), (836, 16416), (839, 16422), (841, 16425), (844, 16431), (860, 16446), (861, 16449), (865, 16470), (866, 16473), (882, 16515), (900, 16587),

Gene: WideWale\_30 Start: 20656, Stop: 22428, Start Num: 144

Candidate Starts for WideWale\_30:

(Start: 123 @20632 has 215 MA's), (Start: 144 @20656 has 603 MA's), (Start: 235 @20791 has 1 MA's), (277, 20890), (278, 20893), (305, 20965), (306, 20968), (338, 21022), (341, 21028), (360, 21091), (378, 21139), (388, 21172), (417, 21226), (463, 21307), (467, 21310), (481, 21340), (546, 21496), (584, 21583), (636, 21703), (674, 21826), (675, 21829), (677, 21835), (713, 21883), (746, 21946), (750, 21961), (752, 21967), (770, 22021), (781, 22060), (784, 22075), (795, 22108), (810, 22153), (860, 22264), (862, 22270), (877, 22324),

Gene: Widow\_18 Start: 15130, Stop: 16746, Start Num: 153

Candidate Starts for Widow\_18:

(Start: 153 @15130 has 11 MA's), (216, 15226), (284, 15394), (292, 15406), (321, 15457), (366, 15580), (417, 15697), (464, 15775), (501, 15850), (512, 15883), (576, 15976), (583, 15997), (636, 16114), (653, 16156), (657, 16174), (664, 16186), (665, 16189), (731, 16294), (735, 16300), (742, 16315), (769, 16372), (863, 16591), (891, 16690),

Gene: Wiggin\_27 Start: 20250, Stop: 21929, Start Num: 129

Candidate Starts for Wiggin\_27:

(Start: 129 @20250 has 79 MA's), (Start: 191 @20334 has 45 MA's), (Start: 235 @20412 has 1 MA's), (268, 20499), (274, 20514), (300, 20562), (324, 20601), (356, 20688), (368, 20721), (381, 20757), (390, 20787), (392, 20793), (422, 20862), (461, 20892), (466, 20904), (468, 20907), (494, 20964), (565, 21096), (567, 21102), (592, 21168), (594, 21174), (601, 21198), (618, 21246), (627, 21270), (631, 21279), (658, 21354), (717, 21405), (725, 21420), (782, 21582), (788, 21609), (799, 21639), (843, 21744), (880, 21822), (887, 21858), (890, 21867), (900, 21900), (907, 21915),

Gene: Wiks\_31 Start: 19971, Stop: 21743, Start Num: 144

Candidate Starts for Wiks\_31:

(94, 19905), (Start: 123 @19947 has 215 MA's), (Start: 144 @19971 has 603 MA's), (278, 20208), (305, 20280), (306, 20283), (315, 20298), (338, 20337), (341, 20343), (378, 20454), (380, 20460), (392, 20499), (417, 20541), (448, 20580), (463, 20622), (467, 20625), (532, 20781), (592, 20922), (597, 20937), (677, 21150), (742, 21249), (750, 21276), (765, 21327), (770, 21336), (781, 21375), (784, 21390), (813, 21474), (860, 21579), (862, 21585), (900, 21720),

Gene: Wilbur\_27 Start: 19827, Stop: 21605, Start Num: 144

Candidate Starts for Wilbur\_27:

(Start: 123 @19803 has 215 MA's), (Start: 144 @19827 has 603 MA's), (Start: 190 @19884 has 1 MA's), (222, 19938), (230, 19953), (236, 19971), (272, 20055), (277, 20067), (278, 20070), (306, 20145), (315, 20160), (338, 20199), (378, 20316), (417, 20403), (463, 20484), (489, 20532), (500, 20556), (532, 20643), (553, 20688), (584, 20760), (591, 20781), (597, 20799), (636, 20880), (668, 20973), (670, 20982), (675, 21006), (677, 21012), (687, 21036), (731, 21090), (742, 21111), (756, 21162), (763, 21186), (782, 21240), (813, 21336), (860, 21441), (863, 21456), (894, 21564), (900, 21582),



Gene: Wildflower\_56 Start: 33020, Stop: 34765, Start Num: 100

Candidate Starts for Wildflower\_56:

(Start: 100 @33020 has 2 MA's), (Start: 107 @33029 has 25 MA's), (174, 33119), (240, 33236), (251, 33272), (259, 33293), (271, 33320), (274, 33326), (286, 33356), (302, 33380), (332, 33431), (381, 33569), (383, 33575), (400, 33626), (402, 33629), (407, 33647), (459, 33698), (468, 33719), (470, 33722), (484, 33755), (492, 33770), (494, 33776), (511, 33824), (513, 33830), (515, 33836), (555, 33896), (564, 33920), (565, 33923), (583, 33968), (588, 33983), (591, 33992), (594, 34001), (608, 34046), (618, 34064), (631, 34097), (720, 34235), (729, 34256), (754, 34322), (762, 34352), (779, 34406), (791, 34448), (799, 34469), (805, 34490), (810, 34502), (821, 34523), (844, 34577), (880, 34655), (887, 34691), (893, 34712), (901, 34739),

Gene: Wile\_27 Start: 19836, Stop: 21635, Start Num: 144

Candidate Starts for Wile\_27:

(Start: 123 @19812 has 215 MA's), (Start: 144 @19836 has 603 MA's), (Start: 148 @19842 has 14 MA's), (Start: 190 @19896 has 1 MA's), (230, 19965), (263, 20043), (272, 20067), (278, 20082), (292, 20118), (306, 20157), (315, 20172), (338, 20211), (369, 20304), (378, 20328), (417, 20415), (481, 20529), (500, 20568), (532, 20655), (553, 20700), (583, 20769), (591, 20793), (595, 20805), (636, 20892), (665, 20967), (668, 20985), (670, 20994), (675, 21018), (677, 21024), (682, 21039), (703, 21072), (729, 21117), (731, 21120), (742, 21141), (813, 21366), (849, 21444), (860, 21471), (862, 21477), (900, 21612),

Gene: Wilkins\_27 Start: 20952, Stop: 22754, Start Num: 146

Candidate Starts for Wilkins\_27:

(Start: 146 @20952 has 223 MA's), (Start: 161 @20973 has 4 MA's), (Start: 190 @21015 has 1 MA's), (216, 21060), (306, 21276), (332, 21321), (338, 21330), (349, 21369), (368, 21420), (369, 21423), (406, 21516), (467, 21618), (500, 21687), (579, 21876), (583, 21888), (584, 21891), (591, 21912), (635, 22008), (636, 22011), (638, 22017), (665, 22086), (668, 22104), (670, 22113), (677, 22143), (731, 22239), (746, 22272), (750, 22287), (758, 22317), (793, 22428), (813, 22485), (862, 22596),

Gene: WillSterrel\_17 Start: 16164, Stop: 17873, Start Num: 123

Candidate Starts for WillSterrel\_17:

(Start: 123 @16164 has 215 MA's), (193, 16251), (Start: 227 @16296 has 2 MA's), (233, 16320), (271, 16425), (274, 16431), (281, 16449), (300, 16479), (348, 16584), (370, 16644), (378, 16665), (381, 16674), (388, 16698), (402, 16734), (403, 16740), (418, 16773), (420, 16776), (424, 16785), (443, 16800), (448, 16806), (459, 16824), (465, 16839), (468, 16845), (475, 16863), (477, 16866), (484, 16881), (492, 16896), (494, 16902), (511, 16950), (515, 16962), (521, 16968), (564, 17028), (568, 17040), (583, 17076), (587, 17088), (614, 17163), (618, 17172), (625, 17190), (627, 17196), (638, 17226), (710, 17331), (720, 17343), (737, 17379), (761, 17457), (799, 17577), (810, 17610), (826, 17640), (829, 17652), (836, 17670), (839, 17676), (841, 17679), (844, 17685), (860, 17700), (861, 17703), (865, 17724), (866, 17727), (882, 17769), (887, 17799), (900, 17841), (901, 17847),

Gene: Willez\_23 Start: 19334, Stop: 20929, Start Num: 191

Candidate Starts for Willez\_23:

(Start: 129 @19250 has 79 MA's), (Start: 191 @19334 has 45 MA's), (Start: 235 @19412 has 1 MA's), (268, 19499), (274, 19514), (300, 19562), (324, 19601), (356, 19688), (368, 19721), (381, 19757), (390, 19787), (392, 19793), (422, 19862), (461, 19892), (466, 19904), (468, 19907), (494, 19964), (565, 20096), (567, 20102), (592, 20168), (594, 20174), (601, 20198), (618, 20246), (627, 20270), (631, 20279), (658, 20354), (717, 20405), (725, 20420), (782, 20582), (788, 20609), (799, 20639), (843, 20744), (880, 20822), (887, 20858), (890, 20867), (900, 20900), (907, 20915),

Gene: William\_19 Start: 16689, Stop: 18338, Start Num: 195

Candidate Starts for William\_19:

(4, 15642), (6, 15687), (7, 15711), (8, 15717), (9, 15825), (11, 15873), (16, 15945), (22, 16020), (34, 16158), (36, 16188), (38, 16194), (50, 16326), (56, 16383), (57, 16392), (Start: 99 @16551 has 2 MA's), (172, 16653), (Start: 195 @16689 has 45 MA's), (244, 16794), (272, 16872), (293, 16932), (299, 16944), (300, 16947), (308, 16971), (343, 17046), (377, 17145), (382, 17160), (415, 17244), (460, 17256), (464, 17265), (465, 17268), (473, 17289), (494, 17331), (506, 17361), (594, 17544), (601, 17568), (626, 17619), (658, 17712), (664, 17724), (702, 17784), (758, 17919), (786, 18012), (788, 18018), (795, 18036), (813, 18087), (839, 18147), (843, 18153), (877, 18228),

Gene: WilliamBoone\_48 Start: 28921, Stop: 30612, Start Num: 146

Candidate Starts for WilliamBoone\_48:

(Start: 146 @28921 has 223 MA's), (188, 28981), (206, 29014), (228, 29047), (229, 29056), (255, 29137), (258, 29143), (286, 29215), (347, 29338), (349, 29344), (366, 29392), (388, 29455), (494, 29605), (498, 29611), (506, 29635), (576, 29764), (583, 29785), (621, 29905), (658, 30016), (710, 30058), (747, 30130), (758, 30169), (788, 30268), (793, 30280), (796, 30289), (829, 30373), (898, 30556),

Gene: Willsammy\_19 Start: 16277, Stop: 18013, Start Num: 117

Candidate Starts for Willsammy\_19:

(Start: 101 @16253 has 2 MA's), (Start: 117 @16277 has 59 MA's), (Start: 166 @16337 has 1 MA's), (178, 16358), (180, 16361), (246, 16481), (258, 16520), (272, 16553), (282, 16577), (344, 16697), (356, 16736), (358, 16742), (386, 16826), (388, 16832), (392, 16844), (402, 16868), (410, 16895), (422, 16913), (452, 16952), (459, 16958), (470, 16982), (494, 17036), (500, 17048), (503, 17057), (529, 17117), (573, 17195), (587, 17234), (598, 17267), (618, 17333), (624, 17348), (627, 17357), (636, 17381), (647, 17411), (653, 17423), (735, 17525), (740, 17537), (742, 17540), (745, 17546), (747, 17555), (779, 17663), (805, 17747), (853, 17846), (890, 17954), (907, 18002),

Gene: Winget\_57 Start: 33735, Stop: 35471, Start Num: 107

Candidate Starts for Winget\_57:

(Start: 100 @33726 has 2 MA's), (Start: 107 @33735 has 25 MA's), (174, 33825), (240, 33942), (251, 33978), (259, 33999), (271, 34026), (274, 34032), (286, 34062), (302, 34086), (332, 34137), (381, 34275), (383, 34281), (400, 34332), (402, 34335), (407, 34353), (459, 34404), (468, 34425), (470, 34428), (492, 34476), (494, 34482), (511, 34530), (513, 34536), (515, 34542), (555, 34602), (564, 34626), (565, 34629), (583, 34674), (588, 34689), (591, 34698), (594, 34707), (608, 34752), (618, 34770), (631, 34803), (720, 34941), (729, 34962), (754, 35028), (762, 35058), (779, 35112), (791, 35154), (799, 35175), (805, 35196), (810, 35208), (821, 35229), (844, 35283), (880, 35361), (887, 35397), (893, 35418), (901, 35445),

Gene: WinkNick\_20 Start: 17322, Stop: 18902, Start Num: 170

Candidate Starts for WinkNick\_20:

(88, 17205), (Start: 170 @17322 has 87 MA's), (298, 17580), (307, 17601), (340, 17655), (351, 17694), (369, 17751), (377, 17772), (501, 17943), (507, 17961), (514, 17985), (521, 18006), (554, 18048), (592, 18129), (636, 18219), (653, 18264), (669, 18321), (670, 18324), (687, 18378), (751, 18468), (863, 18747), (865, 18756), (874, 18786),

Gene: Wintermute\_24 Start: 18622, Stop: 20409, Start Num: 114

Candidate Starts for Wintermute\_24:

(Start: 93 @18583 has 1 MA's), (Start: 109 @18613 has 26 MA's), (Start: 112 @18619 has 41 MA's), (Start: 114 @18622 has 139 MA's), (Start: 137 @18637 has 2 MA's), (Start: 168 @18679 has 32 MA's), (197, 18727), (Start: 227 @18766 has 2 MA's), (230, 18781), (236, 18799), (248, 18832), (258, 18862), (278, 18907), (282, 18925), (316, 18997), (321, 19003), (334, 19033), (336, 19036), (356, 19099), (360, 19111), (412, 19246), (423, 19264), (444, 19294), (448, 19300), (454, 19318), (468, 19348), (487, 19387), (564, 19513), (588, 19576), (655, 19777), (670, 19831), (708, 19876), (734, 19921), (748, 19945), (756, 19978), (768, 20011), (788, 20083), (793, 20095), (810, 20146), (813,

20152), (865, 20254), (901, 20380), (913, 20401),

Gene: Wishmaker\_22 Start: 17406, Stop: 19148, Start Num: 112

Candidate Starts for Wishmaker\_22:

(Start: 112 @17406 has 41 MA's), (Start: 117 @17415 has 59 MA's), (152, 17457), (189, 17508), (201, 17532), (212, 17544), (Start: 227 @17565 has 2 MA's), (230, 17580), (236, 17598), (249, 17631), (255, 17658), (282, 17730), (325, 17820), (355, 17904), (358, 17913), (365, 17934), (388, 18000), (398, 18027), (416, 18060), (438, 18078), (449, 18099), (454, 18114), (455, 18117), (487, 18183), (489, 18186), (514, 18252), (527, 18264), (541, 18273), (555, 18276), (588, 18363), (605, 18417), (628, 18462), (631, 18468), (654, 18540), (665, 18570), (670, 18597), (704, 18633), (708, 18642), (756, 18720), (802, 18864), (807, 18882), (813, 18894), (822, 18909), (824, 18912), (831, 18933), (836, 18945), (865, 18993), (876, 19026), (896, 19101), (901, 19119), (913, 19140),

Gene: Wisp\_18 Start: 16363, Stop: 18009, Start Num: 195

Candidate Starts for Wisp\_18:

(172, 16327), (Start: 195 @16363 has 45 MA's), (244, 16465), (272, 16543), (274, 16546), (308, 16642), (329, 16681), (349, 16741), (357, 16762), (377, 16816), (382, 16831), (494, 17002), (506, 17032), (594, 17215), (601, 17239), (626, 17290), (658, 17383), (664, 17395), (694, 17440), (702, 17455), (757, 17587), (758, 17590), (788, 17689), (795, 17707), (813, 17758), (843, 17824), (872, 17887), (877, 17899),

Gene: Wizard\_31 Start: 25993, Stop: 27759, Start Num: 97

Candidate Starts for Wizard\_31:

(80, 25951), (Start: 97 @25993 has 73 MA's), (Start: 121 @26029 has 1 MA's), (Start: 148 @26062 has 14 MA's), (264, 26272), (265, 26275), (277, 26305), (298, 26371), (306, 26395), (311, 26404), (331, 26437), (386, 26590), (406, 26629), (445, 26680), (451, 26692), (458, 26710), (460, 26722), (465, 26734), (472, 26749), (487, 26779), (489, 26782), (499, 26803), (547, 26875), (568, 26923), (613, 27034), (632, 27067), (647, 27106), (649, 27109), (670, 27181), (707, 27247), (715, 27259), (793, 27430), (794, 27433), (810, 27481), (824, 27508), (832, 27535), (860, 27589), (891, 27706), (897, 27727), (909, 27754),

Gene: Wizard007\_27 Start: 19829, Stop: 21607, Start Num: 144

Candidate Starts for Wizard007\_27:

(Start: 123 @19805 has 215 MA's), (Start: 144 @19829 has 603 MA's), (Start: 190 @19886 has 1 MA's), (222, 19940), (230, 19955), (236, 19973), (272, 20057), (277, 20069), (278, 20072), (306, 20147), (315, 20162), (338, 20201), (378, 20318), (417, 20405), (463, 20486), (489, 20534), (500, 20558), (532, 20645), (553, 20690), (584, 20762), (591, 20783), (597, 20801), (636, 20882), (668, 20975), (670, 20984), (675, 21008), (677, 21014), (687, 21038), (731, 21092), (742, 21113), (756, 21164), (763, 21188), (782, 21242), (813, 21338), (860, 21443), (863, 21458), (894, 21566), (900, 21584),

Gene: Wocket\_20 Start: 16837, Stop: 18483, Start Num: 195

Candidate Starts for Wocket\_20:

(172, 16801), (Start: 195 @16837 has 45 MA's), (244, 16939), (272, 17017), (308, 17116), (329, 17155), (345, 17200), (357, 17236), (377, 17290), (382, 17305), (392, 17338), (415, 17389), (494, 17476), (506, 17506), (594, 17689), (601, 17713), (658, 17857), (664, 17869), (702, 17929), (757, 18061), (758, 18064), (788, 18163), (795, 18181), (813, 18232), (839, 18292), (843, 18298), (872, 18361), (877, 18373),

Gene: Wooldri\_31 Start: 20290, Stop: 22086, Start Num: 144

Candidate Starts for Wooldri\_31:

(Start: 144 @20290 has 603 MA's), (Start: 190 @20347 has 1 MA's), (197, 20362), (219, 20395), (230, 20416), (Start: 235 @20431 has 1 MA's), (272, 20518), (277, 20530), (278, 20533), (306, 20608),

(315, 20623), (336, 20659), (417, 20866), (481, 20980), (500, 21019), (532, 21106), (583, 21220), (591, 21244), (597, 21262), (636, 21343), (665, 21418), (668, 21436), (675, 21469), (677, 21475), (695, 21514), (729, 21568), (731, 21571), (742, 21592), (758, 21649), (813, 21817), (860, 21922), (862, 21928), (900, 22063),

Gene: Wrigley\_20 Start: 17427, Stop: 19133, Start Num: 111

Candidate Starts for Wrigley\_20:

(Start: 95 @17403 has 1 MA's), (Start: 111 @17427 has 24 MA's), (192, 17532), (217, 17574), (251, 17649), (303, 17763), (365, 17910), (368, 17916), (459, 18099), (497, 18174), (635, 18456), (644, 18477), (668, 18552), (715, 18639), (739, 18675), (750, 18708), (752, 18714), (783, 18780), (793, 18810), (860, 18966), (862, 18972), (865, 18990), (897, 19101),

Gene: WunderPhul\_31 Start: 19971, Stop: 21743, Start Num: 144

Candidate Starts for WunderPhul\_31:

(94, 19905), (Start: 123 @19947 has 215 MA's), (Start: 144 @19971 has 603 MA's), (278, 20208), (305, 20280), (306, 20283), (315, 20298), (338, 20337), (341, 20343), (378, 20454), (380, 20460), (392, 20499), (417, 20541), (448, 20580), (463, 20622), (467, 20625), (532, 20781), (592, 20922), (597, 20937), (677, 21150), (742, 21249), (750, 21276), (765, 21327), (770, 21336), (781, 21375), (782, 21378), (813, 21474), (860, 21579), (862, 21585), (900, 21720),

Gene: XFactor\_16 Start: 14812, Stop: 16521, Start Num: 123

Candidate Starts for XFactor\_16:

(Start: 123 @14812 has 215 MA's), (193, 14899), (Start: 227 @14944 has 2 MA's), (233, 14968), (271, 15073), (274, 15079), (281, 15097), (300, 15127), (348, 15232), (370, 15292), (378, 15313), (381, 15322), (388, 15346), (459, 15472), (465, 15487), (468, 15493), (484, 15529), (486, 15532), (492, 15544), (494, 15550), (511, 15598), (515, 15610), (521, 15616), (564, 15676), (568, 15688), (583, 15724), (587, 15736), (614, 15811), (618, 15820), (625, 15838), (627, 15844), (638, 15874), (710, 15979), (720, 15991), (737, 16027), (761, 16105), (791, 16204), (799, 16225), (810, 16258), (826, 16288), (836, 16318), (841, 16327), (844, 16333), (860, 16348), (861, 16351), (866, 16375), (877, 16405), (882, 16417), (887, 16447), (900, 16489),

Gene: Xandras\_26 Start: 19820, Stop: 21415, Start Num: 191

Candidate Starts for Xandras\_26:

(Start: 129 @19736 has 79 MA's), (Start: 191 @19820 has 45 MA's), (Start: 235 @19898 has 1 MA's), (268, 19985), (274, 20000), (300, 20048), (324, 20087), (356, 20174), (368, 20207), (381, 20243), (390, 20273), (392, 20279), (422, 20348), (461, 20378), (466, 20390), (468, 20393), (494, 20450), (565, 20582), (567, 20588), (592, 20654), (594, 20660), (601, 20684), (618, 20732), (627, 20756), (631, 20765), (658, 20840), (717, 20891), (725, 20906), (782, 21068), (788, 21095), (799, 21125), (843, 21230), (880, 21308), (887, 21344), (890, 21353), (900, 21386), (907, 21401),

Gene: Xavia\_19 Start: 16389, Stop: 18125, Start Num: 117

Candidate Starts for Xavia\_19:

(Start: 101 @16365 has 2 MA's), (Start: 117 @16389 has 59 MA's), (Start: 166 @16449 has 1 MA's), (178, 16470), (180, 16473), (243, 16587), (246, 16593), (258, 16632), (272, 16665), (282, 16689), (344, 16809), (356, 16848), (358, 16854), (386, 16938), (388, 16944), (392, 16956), (402, 16980), (422, 17025), (452, 17064), (459, 17070), (470, 17094), (494, 17148), (500, 17160), (503, 17169), (529, 17229), (573, 17307), (587, 17346), (598, 17379), (618, 17445), (624, 17460), (627, 17469), (636, 17493), (647, 17523), (653, 17535), (735, 17637), (740, 17649), (742, 17652), (745, 17658), (747, 17667), (779, 17775), (805, 17859), (853, 17958), (890, 18066), (907, 18114),

Gene: Xena\_27 Start: 19823, Stop: 21622, Start Num: 144

Candidate Starts for Xena\_27:

(Start: 123 @19799 has 215 MA's), (Start: 144 @19823 has 603 MA's), (Start: 148 @19829 has 14 MA's), (Start: 190 @19883 has 1 MA's), (230, 19952), (263, 20030), (272, 20054), (278, 20069), (292, 20105), (306, 20144), (315, 20159), (338, 20198), (369, 20291), (378, 20315), (417, 20402), (481, 20516), (500, 20555), (532, 20642), (553, 20687), (583, 20756), (591, 20780), (595, 20792), (636, 20879), (665, 20954), (668, 20972), (670, 20981), (675, 21005), (677, 21011), (682, 21026), (703, 21059), (729, 21104), (731, 21107), (742, 21128), (813, 21353), (849, 21431), (860, 21458), (862, 21464), (900, 21599),

Gene: Xeno\_18 Start: 14986, Stop: 16695, Start Num: 126

Candidate Starts for Xeno\_18:

(Start: 126 @14986 has 42 MA's), (Start: 150 @15013 has 4 MA's), (Start: 227 @15118 has 2 MA's), (229, 15130), (241, 15166), (258, 15217), (271, 15247), (274, 15253), (284, 15280), (287, 15286), (348, 15406), (367, 15460), (370, 15466), (377, 15484), (381, 15496), (382, 15499), (388, 15520), (403, 15562), (418, 15595), (459, 15646), (465, 15661), (484, 15703), (492, 15718), (494, 15724), (511, 15772), (525, 15796), (547, 15826), (564, 15850), (587, 15910), (591, 15922), (608, 15976), (614, 15985), (637, 16045), (638, 16048), (710, 16153), (717, 16162), (737, 16201), (781, 16339), (834, 16489), (836, 16492), (841, 16501), (860, 16522), (866, 16549), (880, 16585), (907, 16678),

Gene: Xerxes\_18 Start: 14986, Stop: 16695, Start Num: 126

Candidate Starts for Xerxes\_18:

(Start: 126 @14986 has 42 MA's), (Start: 150 @15013 has 4 MA's), (Start: 227 @15118 has 2 MA's), (229, 15130), (241, 15166), (258, 15217), (271, 15247), (274, 15253), (284, 15280), (287, 15286), (348, 15406), (367, 15460), (370, 15466), (377, 15484), (381, 15496), (382, 15499), (388, 15520), (403, 15562), (418, 15595), (459, 15646), (465, 15661), (484, 15703), (492, 15718), (494, 15724), (511, 15772), (525, 15796), (547, 15826), (564, 15850), (587, 15910), (591, 15922), (608, 15976), (614, 15985), (637, 16045), (638, 16048), (710, 16153), (717, 16162), (737, 16201), (781, 16339), (834, 16489), (836, 16492), (841, 16501), (860, 16522), (866, 16549), (880, 16585), (907, 16678),

Gene: XianYue\_28 Start: 20112, Stop: 21908, Start Num: 123

Candidate Starts for XianYue\_28:

(94, 20070), (Start: 123 @20112 has 215 MA's), (Start: 144 @20136 has 603 MA's), (219, 20235), (242, 20289), (277, 20370), (278, 20373), (305, 20445), (306, 20448), (338, 20502), (356, 20559), (365, 20586), (417, 20706), (463, 20787), (467, 20790), (481, 20820), (532, 20946), (584, 21063), (635, 21180), (636, 21183), (677, 21315), (746, 21426), (750, 21441), (752, 21447), (770, 21501), (781, 21540), (784, 21555), (795, 21588), (849, 21717), (860, 21744), (862, 21750), (865, 21768), (877, 21804),

Gene: Ximenita\_23 Start: 16499, Stop: 18265, Start Num: 114

Candidate Starts for Ximenita\_23:

(Start: 109 @16490 has 26 MA's), (Start: 114 @16499 has 139 MA's), (140, 16529), (Start: 227 @16655 has 2 MA's), (230, 16670), (236, 16688), (248, 16721), (258, 16751), (278, 16796), (316, 16886), (334, 16922), (360, 17000), (362, 17009), (400, 17114), (403, 17117), (444, 17183), (448, 17189), (465, 17231), (468, 17237), (572, 17420), (593, 17480), (618, 17537), (636, 17582), (641, 17594), (655, 17642), (708, 17741), (748, 17801), (757, 17837), (772, 17876), (793, 17951), (810, 18002), (813, 18008), (901, 18236), (902, 18239), (913, 18257),

Gene: Xula\_18 Start: 16123, Stop: 17856, Start Num: 131

Candidate Starts for Xula\_18:

(Start: 131 @16123 has 6 MA's), (206, 16222), (213, 16231), (241, 16297), (250, 16321), (272, 16381), (274, 16384), (284, 16411), (367, 16591), (377, 16615), (381, 16627), (388, 16651), (459, 16777), (465, 16792), (470, 16801), (486, 16837), (494, 16855), (608, 17107), (614, 17116), (627, 17149), (717, 17293), (740, 17338), (773, 17440), (775, 17449), (779, 17467), (781, 17470), (813, 17569), (836, 17629), (846, 17647), (860, 17683), (863, 17698), (880, 17746), (897, 17815),

Gene: Y10\_24 Start: 18637, Stop: 20409, Start Num: 137

Candidate Starts for Y10\_24:

(Start: 93 @18583 has 1 MA's), (Start: 109 @18613 has 26 MA's), (Start: 112 @18619 has 41 MA's), (Start: 114 @18622 has 139 MA's), (Start: 137 @18637 has 2 MA's), (Start: 168 @18679 has 32 MA's), (197, 18727), (Start: 227 @18766 has 2 MA's), (230, 18781), (236, 18799), (248, 18832), (258, 18862), (278, 18907), (282, 18925), (316, 18997), (321, 19003), (334, 19033), (336, 19036), (356, 19099), (360, 19111), (412, 19246), (423, 19264), (444, 19294), (448, 19300), (454, 19318), (468, 19348), (487, 19387), (564, 19513), (588, 19576), (655, 19777), (670, 19831), (708, 19876), (734, 19921), (748, 19945), (756, 19978), (768, 20011), (788, 20083), (793, 20095), (810, 20146), (813, 20152), (865, 20254), (901, 20380), (913, 20401),

Gene: Y2\_24 Start: 18637, Stop: 20409, Start Num: 137

Candidate Starts for Y2\_24:

(Start: 93 @18583 has 1 MA's), (Start: 109 @18613 has 26 MA's), (Start: 112 @18619 has 41 MA's), (Start: 114 @18622 has 139 MA's), (Start: 137 @18637 has 2 MA's), (Start: 168 @18679 has 32 MA's), (197, 18727), (Start: 227 @18766 has 2 MA's), (230, 18781), (236, 18799), (248, 18832), (258, 18862), (278, 18907), (282, 18925), (316, 18997), (321, 19003), (334, 19033), (336, 19036), (356, 19099), (360, 19111), (412, 19246), (423, 19264), (444, 19294), (448, 19300), (454, 19318), (468, 19348), (487, 19387), (564, 19513), (588, 19576), (655, 19777), (670, 19831), (708, 19876), (734, 19921), (748, 19945), (756, 19978), (768, 20011), (788, 20083), (793, 20095), (810, 20146), (813, 20152), (865, 20254), (901, 20380), (913, 20401),

Gene: Yakult\_19 Start: 15320, Stop: 17008, Start Num: 144

Candidate Starts for Yakult\_19:

(113, 15290), (Start: 133 @15317 has 8 MA's), (Start: 144 @15320 has 603 MA's), (202, 15404), (264, 15527), (277, 15560), (302, 15638), (349, 15743), (356, 15761), (365, 15788), (377, 15818), (385, 15845), (406, 15890), (436, 15920), (442, 15932), (445, 15938), (448, 15941), (454, 15959), (481, 16025), (513, 16106), (546, 16142), (549, 16148), (553, 16157), (561, 16175), (581, 16220), (610, 16304), (634, 16340), (635, 16343), (636, 16346), (643, 16361), (647, 16370), (650, 16379), (668, 16436), (747, 16565), (750, 16577), (754, 16592), (766, 16604), (791, 16676), (793, 16679), (794, 16682), (804, 16715), (817, 16745), (829, 16778), (847, 16814), (849, 16817), (862, 16847), (863, 16856), (896, 16973), (907, 17000),

Gene: Yarn\_17 Start: 15391, Stop: 17088, Start Num: 144

Candidate Starts for Yarn\_17:

(Start: 133 @15388 has 8 MA's), (Start: 144 @15391 has 603 MA's), (214, 15493), (222, 15505), (264, 15601), (292, 15685), (336, 15775), (356, 15835), (365, 15862), (377, 15892), (378, 15895), (406, 15964), (436, 15997), (442, 16009), (444, 16012), (453, 16033), (454, 16036), (481, 16102), (487, 16114), (574, 16279), (636, 16429), (643, 16444), (650, 16462), (668, 16519), (750, 16660), (752, 16666), (755, 16678), (766, 16687), (791, 16759), (793, 16762), (795, 16768), (799, 16780), (842, 16885), (847, 16894), (862, 16927),

Gene: YassJohnny\_25 Start: 20345, Stop: 21940, Start Num: 191

Candidate Starts for YassJohnny\_25:

(Start: 129 @20261 has 79 MA's), (Start: 191 @20345 has 45 MA's), (Start: 235 @20423 has 1 MA's), (268, 20510), (274, 20525), (300, 20573), (324, 20612), (356, 20699), (368, 20732), (381, 20768), (390, 20798), (392, 20804), (422, 20873), (461, 20903), (466, 20915), (468, 20918), (494, 20975), (565, 21107), (567, 21113), (592, 21179), (594, 21185), (601, 21209), (618, 21257), (627, 21281), (631, 21290), (658, 21365), (717, 21416), (725, 21431), (782, 21593), (788, 21620), (799, 21650), (843, 21755), (880, 21833), (887, 21869), (890, 21878), (900, 21911), (907, 21926),

Gene: Yecey3\_29 Start: 19844, Stop: 21634, Start Num: 144

Candidate Starts for Yecey3\_29:

(Start: 141 @19841 has 14 MA's), (Start: 144 @19844 has 603 MA's), (219, 19943), (263, 20042), (278, 20081), (305, 20153), (306, 20156), (338, 20210), (341, 20216), (356, 20267), (365, 20294), (378, 20327), (417, 20414), (463, 20495), (467, 20498), (495, 20558), (535, 20660), (576, 20747), (584, 20771), (597, 20810), (636, 20891), (643, 20906), (703, 21071), (707, 21080), (731, 21119), (750, 21167), (756, 21191), (770, 21227), (781, 21266), (782, 21269), (784, 21281), (795, 21314), (813, 21365), (842, 21431), (860, 21470), (862, 21476),

Gene: Yeet412\_17 Start: 14751, Stop: 16460, Start Num: 171

Candidate Starts for Yeet412\_17:

(83, 14616), (Start: 171 @14751 has 40 MA's), (259, 14940), (262, 14943), (287, 15018), (315, 15072), (347, 15141), (351, 15153), (377, 15231), (378, 15234), (440, 15366), (462, 15420), (485, 15471), (500, 15501), (519, 15561), (525, 15573), (554, 15609), (607, 15726), (618, 15744), (637, 15783), (669, 15879), (736, 15987), (847, 16263), (849, 16266), (865, 16314), (874, 16344),

Gene: Yeezy\_20 Start: 17119, Stop: 18717, Start Num: 170

Candidate Starts for Yeezy\_20:

(Start: 170 @17119 has 87 MA's), (298, 17377), (306, 17395), (307, 17398), (340, 17452), (363, 17527), (385, 17596), (388, 17605), (392, 17617), (397, 17629), (415, 17668), (435, 17695), (440, 17704), (441, 17707), (501, 17740), (519, 17797), (554, 17863), (603, 17974), (636, 18034), (669, 18136), (687, 18193), (751, 18283), (849, 18523), (874, 18601),

Gene: Yndexa\_43 Start: 29457, Stop: 31073, Start Num: 170

Candidate Starts for Yndexa\_43:

(Start: 170 @29457 has 87 MA's), (Start: 175 @29466 has 1 MA's), (Start: 177 @29469 has 1 MA's), (Start: 194 @29493 has 1 MA's), (236, 29571), (306, 29754), (340, 29811), (343, 29823), (347, 29838), (372, 29904), (377, 29919), (386, 29943), (432, 30030), (436, 30036), (449, 30060), (493, 30120), (505, 30150), (511, 30171), (560, 30276), (571, 30297), (607, 30384), (635, 30432), (673, 30558), (688, 30594), (791, 30759), (798, 30777), (809, 30813), (885, 30987), (887, 30999), (906, 31056),

Gene: YoSam321\_27 Start: 19824, Stop: 21602, Start Num: 144

Candidate Starts for YoSam321\_27:

(Start: 123 @19800 has 215 MA's), (Start: 144 @19824 has 603 MA's), (Start: 190 @19881 has 1 MA's), (222, 19935), (230, 19950), (236, 19968), (272, 20052), (277, 20064), (278, 20067), (306, 20142), (315, 20157), (338, 20196), (378, 20313), (417, 20400), (463, 20481), (489, 20529), (500, 20553), (532, 20640), (553, 20685), (584, 20757), (591, 20778), (597, 20796), (636, 20877), (668, 20970), (670, 20979), (675, 21003), (677, 21009), (687, 21033), (731, 21087), (742, 21108), (756, 21159), (763, 21183), (782, 21237), (813, 21333), (860, 21438), (863, 21453), (894, 21561), (900, 21579),

Gene: Yogi\_23 Start: 16323, Stop: 17948, Start Num: 168

Candidate Starts for Yogi\_23:

(Start: 155 @16308 has 4 MA's), (Start: 168 @16323 has 32 MA's), (211, 16392), (232, 16428), (306, 16614), (361, 16743), (378, 16785), (386, 16812), (394, 16836), (406, 16854), (436, 16884), (444, 16899), (467, 16950), (505, 17034), (576, 17151), (584, 17175), (635, 17289), (654, 17337), (665, 17367), (672, 17406), (675, 17418), (713, 17448), (750, 17526), (807, 17673), (818, 17697), (832, 17733), (854, 17772), (907, 17940),

Gene: Yokurt\_31 Start: 19971, Stop: 21743, Start Num: 144

Candidate Starts for Yokurt\_31:

(94, 19905), (Start: 123 @19947 has 215 MA's), (Start: 144 @19971 has 603 MA's), (278, 20208), (305, 20280), (306, 20283), (315, 20298), (338, 20337), (341, 20343), (378, 20454), (380, 20460),

(392, 20499), (417, 20541), (448, 20580), (463, 20622), (467, 20625), (532, 20781), (592, 20922), (597, 20937), (677, 21150), (742, 21249), (750, 21276), (765, 21327), (770, 21336), (781, 21375), (784, 21390), (813, 21474), (860, 21579), (862, 21585), (900, 21720),

Gene: Yoncess\_23 Start: 16323, Stop: 17948, Start Num: 168

Candidate Starts for Yoncess\_23:

(Start: 155 @16308 has 4 MA's), (Start: 168 @16323 has 32 MA's), (196, 16365), (211, 16392), (232, 16428), (306, 16614), (361, 16743), (378, 16785), (386, 16812), (394, 16836), (406, 16854), (436, 16884), (444, 16899), (467, 16950), (505, 17034), (576, 17151), (584, 17175), (635, 17289), (654, 17337), (665, 17367), (672, 17406), (675, 17418), (713, 17448), (750, 17526), (807, 17673), (818, 17697), (832, 17733), (854, 17772), (907, 17940),

Gene: Yorick\_16 Start: 14811, Stop: 16520, Start Num: 123

Candidate Starts for Yorick\_16:

(Start: 123 @14811 has 215 MA's), (193, 14898), (Start: 227 @14943 has 2 MA's), (233, 14967), (271, 15072), (274, 15078), (281, 15096), (300, 15126), (348, 15231), (367, 15285), (370, 15291), (373, 15300), (381, 15321), (388, 15345), (402, 15381), (403, 15387), (418, 15420), (420, 15423), (424, 15432), (443, 15447), (448, 15453), (459, 15471), (465, 15486), (468, 15492), (475, 15510), (477, 15513), (484, 15528), (492, 15543), (494, 15549), (511, 15597), (515, 15609), (521, 15615), (564, 15675), (568, 15687), (583, 15723), (587, 15735), (614, 15810), (618, 15819), (625, 15837), (627, 15843), (638, 15873), (710, 15978), (720, 15990), (737, 16026), (761, 16104), (799, 16224), (810, 16257), (826, 16287), (829, 16299), (836, 16317), (839, 16323), (841, 16326), (844, 16332), (860, 16347), (861, 16350), (865, 16371), (866, 16374), (882, 16416), (887, 16446), (900, 16488), (901, 16494),

Gene: YorkOnyx\_35 Start: 29872, Stop: 31635, Start Num: 97

Candidate Starts for YorkOnyx\_35:

(Start: 97 @29872 has 73 MA's), (Start: 121 @29908 has 1 MA's), (211, 30037), (219, 30046), (231, 30070), (262, 30142), (265, 30151), (288, 30220), (306, 30271), (311, 30280), (332, 30316), (341, 30331), (345, 30349), (368, 30412), (384, 30457), (386, 30466), (458, 30586), (461, 30601), (465, 30610), (472, 30625), (487, 30655), (597, 30877), (607, 30895), (613, 30910), (635, 30952), (636, 30955), (647, 30982), (688, 31102), (749, 31195), (793, 31306), (794, 31309), (810, 31357), (824, 31384), (832, 31411), (860, 31465),

Gene: Yoshi\_19 Start: 13743, Stop: 15407, Start Num: 148

Candidate Starts for Yoshi\_19:

(Start: 148 @13743 has 14 MA's), (201, 13824), (222, 13854), (232, 13875), (237, 13887), (265, 13953), (280, 13992), (281, 14004), (290, 14028), (313, 14085), (316, 14088), (330, 14112), (332, 14118), (334, 14121), (349, 14166), (356, 14184), (369, 14220), (417, 14331), (448, 14367), (458, 14394), (460, 14406), (461, 14409), (481, 14451), (487, 14463), (499, 14487), (540, 14541), (583, 14640), (620, 14733), (636, 14760), (642, 14772), (664, 14817), (668, 14838), (670, 14847), (793, 15081), (794, 15084), (795, 15087), (842, 15204), (862, 15246), (885, 15330), (902, 15393),

Gene: Youngblood\_24 Start: 19998, Stop: 21593, Start Num: 191

Candidate Starts for Youngblood\_24:

(Start: 129 @19914 has 79 MA's), (Start: 191 @19998 has 45 MA's), (Start: 235 @20076 has 1 MA's), (268, 20163), (274, 20178), (300, 20226), (324, 20265), (356, 20352), (368, 20385), (381, 20421), (390, 20451), (392, 20457), (422, 20526), (461, 20556), (466, 20568), (468, 20571), (494, 20628), (565, 20760), (567, 20766), (592, 20832), (594, 20838), (601, 20862), (618, 20910), (627, 20934), (631, 20943), (658, 21018), (717, 21069), (725, 21084), (782, 21246), (788, 21273), (799, 21303), (843, 21408), (880, 21486), (887, 21522), (890, 21531), (900, 21564), (907, 21579),

Gene: YoureAdopted\_22 Start: 17124, Stop: 18890, Start Num: 114



Candidate Starts for YoureAdopted\_22:

(Start: 114 @17124 has 139 MA's), (140, 17154), (236, 17313), (248, 17346), (258, 17376), (272, 17409), (278, 17421), (316, 17511), (337, 17553), (360, 17625), (362, 17634), (378, 17673), (392, 17718), (400, 17739), (403, 17742), (438, 17796), (448, 17814), (465, 17856), (468, 17862), (481, 17889), (564, 18027), (572, 18045), (587, 18087), (593, 18105), (603, 18135), (618, 18162), (655, 18267), (748, 18426), (757, 18462), (768, 18492), (772, 18501), (793, 18576), (810, 18627), (890, 18822), (901, 18861), (902, 18864), (913, 18882),

Gene: Yummy\_19 Start: 15276, Stop: 16973, Start Num: 144

Candidate Starts for Yummy\_19:

(113, 15246), (Start: 133 @15273 has 8 MA's), (Start: 144 @15276 has 603 MA's), (264, 15486), (332, 15654), (336, 15660), (374, 15768), (385, 15804), (395, 15834), (406, 15849), (436, 15882), (442, 15894), (458, 15930), (481, 15987), (487, 15999), (553, 16119), (562, 16140), (574, 16164), (636, 16314), (643, 16329), (650, 16347), (668, 16404), (747, 16533), (750, 16545), (755, 16563), (766, 16572), (791, 16644), (793, 16647), (795, 16653), (799, 16665), (842, 16770), (847, 16779), (862, 16812), (896, 16938),

Gene: Yuna\_24 Start: 16985, Stop: 18808, Start Num: 84

Candidate Starts for Yuna\_24:

(Start: 84 @16985 has 1 MA's), (Start: 97 @17015 has 73 MA's), (159, 17099), (Start: 227 @17198 has 2 MA's), (230, 17213), (236, 17231), (248, 17264), (278, 17339), (316, 17429), (334, 17465), (362, 17552), (378, 17591), (392, 17636), (403, 17660), (423, 17696), (424, 17699), (438, 17714), (448, 17732), (463, 17768), (468, 17780), (481, 17807), (572, 17963), (593, 18023), (636, 18125), (655, 18185), (698, 18260), (708, 18284), (748, 18344), (757, 18380), (762, 18398), (772, 18419), (793, 18494), (810, 18545), (813, 18551), (824, 18572), (901, 18779), (902, 18782), (913, 18800),

Gene: YungJamal\_61 Start: 34927, Stop: 36663, Start Num: 107

Candidate Starts for YungJamal\_61:

(Start: 100 @34918 has 2 MA's), (Start: 107 @34927 has 25 MA's), (174, 35017), (240, 35134), (251, 35170), (259, 35191), (271, 35218), (274, 35224), (286, 35254), (302, 35278), (332, 35329), (381, 35467), (383, 35473), (400, 35524), (402, 35527), (407, 35545), (459, 35596), (468, 35617), (470, 35620), (492, 35668), (494, 35674), (511, 35722), (513, 35728), (515, 35734), (555, 35794), (564, 35818), (565, 35821), (583, 35866), (588, 35881), (591, 35890), (594, 35899), (608, 35944), (618, 35962), (631, 35995), (720, 36133), (729, 36154), (754, 36220), (762, 36250), (779, 36304), (791, 36346), (799, 36367), (805, 36388), (810, 36400), (821, 36421), (844, 36475), (880, 36553), (887, 36589), (893, 36610), (901, 36637),

Gene: YungMoney\_33 Start: 27341, Stop: 29107, Start Num: 97

Candidate Starts for YungMoney\_33:

(80, 27299), (90, 27329), (Start: 97 @27341 has 73 MA's), (Start: 121 @27377 has 1 MA's), (Start: 148 @27410 has 14 MA's), (240, 27566), (241, 27569), (264, 27620), (265, 27623), (277, 27653), (288, 27692), (306, 27743), (311, 27752), (331, 27785), (386, 27938), (406, 27977), (445, 28028), (451, 28040), (458, 28058), (460, 28070), (465, 28082), (472, 28097), (487, 28127), (489, 28130), (499, 28151), (568, 28271), (613, 28382), (632, 28415), (649, 28457), (670, 28529), (707, 28595), (793, 28778), (794, 28781), (810, 28829), (824, 28856), (832, 28883), (860, 28937), (891, 29054), (897, 29075), (909, 29102),

Gene: Yunkel11\_23 Start: 16380, Stop: 18146, Start Num: 114

Candidate Starts for Yunkel11\_23:

(Start: 114 @16380 has 139 MA's), (Start: 117 @16386 has 59 MA's), (140, 16410), (236, 16569), (248, 16602), (258, 16632), (259, 16635), (272, 16665), (278, 16677), (316, 16767), (337, 16809), (360, 16881), (362, 16890), (378, 16929), (392, 16974), (400, 16995), (403, 16998), (448, 17070), (465, 17112), (468, 17118), (481, 17145), (564, 17283), (572, 17301), (587, 17343), (593, 17361),

(603, 17391), (655, 17523), (704, 17613), (757, 17718), (768, 17748), (793, 17832), (810, 17883), (863, 17982), (890, 18078), (901, 18117), (902, 18120), (913, 18138),

Gene: Yvonnetastic\_45 Start: 30515, Stop: 32209, Start Num: 141

Candidate Starts for Yvonnetastic\_45:

(Start: 141 @30515 has 14 MA's), (188, 30581), (Start: 191 @30587 has 45 MA's), (228, 30644), (282, 30803), (287, 30815), (349, 30941), (366, 30989), (465, 31139), (490, 31190), (494, 31202), (498, 31208), (568, 31349), (576, 31364), (629, 31523), (666, 31631), (756, 31760), (758, 31766), (760, 31775), (782, 31838), (793, 31877), (796, 31886), (813, 31934), (848, 32009), (876, 32069), (888, 32117), (896, 32144), (898, 32153), (900, 32156),

Gene: ZAYM\_19 Start: 16938, Stop: 18701, Start Num: 113

Candidate Starts for ZAYM\_19:

(48, 16659), (72, 16854), (113, 16938), (Start: 121 @16950 has 1 MA's), (Start: 138 @16971 has 5 MA's), (272, 17208), (281, 17241), (368, 17454), (392, 17526), (414, 17568), (448, 17607), (458, 17634), (465, 17658), (485, 17700), (499, 17727), (500, 17730), (537, 17784), (540, 17790), (579, 17877), (690, 18168), (697, 18171), (747, 18261), (752, 18279), (793, 18375), (799, 18393), (849, 18510), (863, 18549), (864, 18552), (867, 18564), (888, 18639), (896, 18666),

Gene: Zabiza\_23 Start: 17155, Stop: 18921, Start Num: 114

Candidate Starts for Zabiza\_23:

(Start: 114 @17155 has 139 MA's), (140, 17185), (236, 17344), (248, 17377), (258, 17407), (272, 17440), (278, 17452), (316, 17542), (337, 17584), (360, 17656), (362, 17665), (378, 17704), (392, 17749), (400, 17770), (403, 17773), (438, 17827), (448, 17845), (465, 17887), (468, 17893), (481, 17920), (564, 18058), (572, 18076), (587, 18118), (593, 18136), (603, 18166), (618, 18193), (655, 18298), (748, 18457), (757, 18493), (768, 18523), (772, 18532), (793, 18607), (810, 18658), (863, 18757), (890, 18853), (901, 18892), (902, 18895), (913, 18913),

Gene: Zaka\_31 Start: 19971, Stop: 21743, Start Num: 144

Candidate Starts for Zaka\_31:

(94, 19905), (Start: 123 @19947 has 215 MA's), (Start: 144 @19971 has 603 MA's), (278, 20208), (305, 20280), (306, 20283), (315, 20298), (338, 20337), (341, 20343), (378, 20454), (380, 20460), (392, 20499), (417, 20541), (448, 20580), (463, 20622), (467, 20625), (532, 20781), (592, 20922), (597, 20937), (677, 21150), (742, 21249), (750, 21276), (765, 21327), (770, 21336), (781, 21375), (784, 21390), (813, 21474), (860, 21579), (862, 21585), (900, 21720),

Gene: Zakhe101\_56 Start: 33573, Stop: 35309, Start Num: 107

Candidate Starts for Zakhe101\_56:

(Start: 100 @33564 has 2 MA's), (Start: 107 @33573 has 25 MA's), (174, 33663), (240, 33780), (251, 33816), (259, 33837), (271, 33864), (274, 33870), (286, 33900), (302, 33924), (332, 33975), (381, 34113), (383, 34119), (400, 34170), (402, 34173), (407, 34191), (459, 34242), (468, 34263), (470, 34266), (484, 34299), (492, 34314), (494, 34320), (511, 34368), (513, 34374), (515, 34380), (555, 34440), (564, 34464), (565, 34467), (583, 34512), (588, 34527), (591, 34536), (594, 34545), (608, 34590), (618, 34608), (631, 34641), (720, 34779), (729, 34800), (754, 34866), (762, 34896), (779, 34950), (791, 34992), (799, 35013), (805, 35034), (810, 35046), (821, 35067), (844, 35121), (880, 35199), (887, 35235), (893, 35256), (901, 35283),

Gene: Zameen\_19 Start: 17773, Stop: 19371, Start Num: 170

Candidate Starts for Zameen\_19:

(Start: 170 @17773 has 87 MA's), (295, 18022), (298, 18031), (306, 18049), (307, 18052), (340, 18106), (363, 18181), (385, 18250), (388, 18259), (392, 18271), (415, 18322), (435, 18349), (440, 18358), (441, 18361), (500, 18391), (501, 18394), (519, 18451), (554, 18517), (591, 18595), (603, 18628), (618, 18652), (636, 18688), (669, 18790), (687, 18847), (732, 18892), (736, 18898), (751,

18937), (849, 19177), (874, 19255),

Gene: Zapner\_20 Start: 14268, Stop: 15932, Start Num: 148

Candidate Starts for Zapner\_20:

(Start: 148 @14268 has 14 MA's), (201, 14349), (222, 14379), (232, 14400), (237, 14412), (265, 14478), (280, 14517), (281, 14529), (290, 14553), (313, 14610), (316, 14613), (330, 14637), (332, 14643), (334, 14646), (349, 14691), (356, 14709), (369, 14745), (417, 14856), (448, 14892), (458, 14919), (460, 14931), (461, 14934), (481, 14976), (487, 14988), (499, 15012), (540, 15066), (583, 15165), (620, 15258), (636, 15285), (642, 15297), (666, 15348), (668, 15363), (705, 15417), (726, 15444), (793, 15606), (794, 15609), (795, 15612), (842, 15729), (862, 15771), (885, 15855), (897, 15900), (902, 15918),

Gene: Zarbodnamra\_19 Start: 16649, Stop: 18295, Start Num: 195

Candidate Starts for Zarbodnamra\_19:

(172, 16613), (Start: 195 @16649 has 45 MA's), (244, 16751), (270, 16823), (272, 16829), (274, 16832), (308, 16928), (329, 16967), (349, 17027), (357, 17048), (377, 17102), (382, 17117), (494, 17288), (506, 17318), (594, 17501), (601, 17525), (626, 17576), (658, 17669), (664, 17681), (694, 17726), (702, 17741), (757, 17873), (758, 17876), (788, 17975), (795, 17993), (813, 18044), (839, 18104), (843, 18110), (872, 18173), (877, 18185),

Gene: Zareef\_22 Start: 16723, Stop: 18405, Start Num: 150

Candidate Starts for Zareef\_22:

(47, 16387), (Start: 144 @16711 has 603 MA's), (Start: 150 @16723 has 4 MA's), (281, 16975), (289, 16996), (290, 16999), (306, 17044), (316, 17059), (349, 17137), (365, 17182), (406, 17284), (436, 17317), (442, 17329), (444, 17332), (465, 17389), (481, 17422), (489, 17437), (513, 17503), (549, 17545), (553, 17554), (574, 17599), (596, 17662), (635, 17743), (643, 17761), (647, 17770), (650, 17779), (668, 17836), (670, 17845), (750, 17977), (766, 18004), (777, 18025), (791, 18076), (793, 18079), (829, 18175), (842, 18202), (847, 18211), (849, 18214), (862, 18244), (865, 18262), (881, 18307), (907, 18397),

Gene: Zavala\_23 Start: 17129, Stop: 18895, Start Num: 114

Candidate Starts for Zavala\_23:

(Start: 114 @17129 has 139 MA's), (140, 17159), (236, 17318), (248, 17351), (258, 17381), (272, 17414), (278, 17426), (316, 17516), (337, 17558), (360, 17630), (362, 17639), (378, 17678), (392, 17723), (400, 17744), (403, 17747), (438, 17801), (448, 17819), (465, 17861), (468, 17867), (481, 17894), (515, 17981), (564, 18032), (572, 18050), (587, 18092), (593, 18110), (603, 18140), (618, 18167), (655, 18272), (748, 18431), (757, 18467), (768, 18497), (772, 18506), (793, 18581), (810, 18632), (890, 18827), (901, 18866), (902, 18869), (913, 18887),

Gene: Zeeculate\_27 Start: 21795, Stop: 23597, Start Num: 146

Candidate Starts for Zeeculate\_27:

(Start: 146 @21795 has 223 MA's), (Start: 161 @21816 has 4 MA's), (Start: 190 @21858 has 1 MA's), (216, 21903), (306, 22119), (332, 22164), (338, 22173), (349, 22212), (368, 22263), (369, 22266), (467, 22461), (500, 22530), (583, 22731), (584, 22734), (591, 22755), (635, 22851), (636, 22854), (638, 22860), (665, 22929), (668, 22947), (670, 22956), (677, 22986), (731, 23082), (746, 23115), (750, 23130), (793, 23271), (813, 23328), (862, 23439),

Gene: Zelink\_38 Start: 28415, Stop: 30413, Start Num: 124

Candidate Starts for Zelink\_38:

(Start: 124 @28415 has 30 MA's), (Start: 191 @28505 has 45 MA's), (222, 28553), (233, 28583), (243, 28610), (282, 28712), (301, 28742), (346, 28841), (358, 28877), (360, 28883), (368, 28904), (392, 28976), (395, 28985), (403, 29006), (468, 29114), (470, 29117), (475, 29132), (494, 29171), (511, 29219), (515, 29231), (521, 29237), (558, 29294), (565, 29315), (573, 29333), (590, 29381), (625,

29483), (653, 29555), (667, 29600), (669, 29612), (684, 29747), (685, 29753), (686, 29777), (696, 29849), (708, 29876), (800, 30125),

Gene: Zephyr\_27 Start: 21215, Stop: 23017, Start Num: 146

Candidate Starts for Zephyr\_27:

(Start: 146 @21215 has 223 MA's), (Start: 161 @21236 has 4 MA's), (Start: 190 @21278 has 1 MA's), (216, 21323), (306, 21539), (332, 21584), (338, 21593), (349, 21632), (368, 21683), (369, 21686), (382, 21722), (406, 21779), (467, 21881), (500, 21950), (583, 22151), (584, 22154), (591, 22175), (635, 22271), (636, 22274), (638, 22280), (665, 22349), (668, 22367), (670, 22376), (677, 22406), (731, 22502), (746, 22535), (750, 22550), (793, 22691), (813, 22748), (862, 22859),

Gene: Zerg\_16 Start: 14774, Stop: 16483, Start Num: 123

Candidate Starts for Zerg\_16:

(Start: 123 @14774 has 215 MA's), (193, 14861), (233, 14930), (240, 14951), (251, 14987), (271, 15035), (274, 15041), (281, 15059), (300, 15089), (348, 15194), (370, 15254), (373, 15263), (378, 15275), (381, 15284), (388, 15308), (418, 15383), (443, 15410), (448, 15416), (459, 15434), (465, 15449), (468, 15455), (484, 15491), (492, 15506), (494, 15512), (511, 15560), (515, 15572), (521, 15578), (564, 15638), (568, 15650), (583, 15686), (587, 15698), (614, 15773), (618, 15782), (625, 15800), (627, 15806), (638, 15836), (710, 15941), (720, 15953), (737, 15989), (761, 16067), (791, 16166), (799, 16187), (810, 16220), (826, 16250), (836, 16280), (841, 16289), (844, 16295), (860, 16310), (861, 16313), (866, 16337), (882, 16379), (887, 16409), (900, 16451),

Gene: Zetzy\_28 Start: 19913, Stop: 21709, Start Num: 144

Candidate Starts for Zetzy\_28:

(Start: 144 @19913 has 603 MA's), (Start: 190 @19970 has 1 MA's), (197, 19985), (219, 20018), (230, 20039), (Start: 235 @20054 has 1 MA's), (272, 20141), (277, 20153), (278, 20156), (306, 20231), (315, 20246), (336, 20282), (417, 20489), (500, 20642), (532, 20729), (583, 20843), (591, 20867), (597, 20885), (636, 20966), (665, 21041), (668, 21059), (675, 21092), (677, 21098), (695, 21137), (729, 21191), (731, 21194), (742, 21215), (758, 21272), (813, 21440), (860, 21545), (862, 21551), (900, 21686),

Gene: Zeuska\_28 Start: 21670, Stop: 23451, Start Num: 161

Candidate Starts for Zeuska\_28:

(Start: 146 @21649 has 223 MA's), (Start: 161 @21670 has 4 MA's), (Start: 190 @21712 has 1 MA's), (216, 21757), (306, 21973), (332, 22018), (338, 22027), (349, 22066), (368, 22117), (369, 22120), (467, 22315), (500, 22384), (583, 22585), (584, 22588), (591, 22609), (635, 22705), (636, 22708), (638, 22714), (665, 22783), (668, 22801), (670, 22810), (677, 22840), (731, 22936), (746, 22969), (750, 22984), (793, 23125), (813, 23182), (862, 23293),

Gene: ZiggyZoo\_18 Start: 16440, Stop: 18086, Start Num: 195

Candidate Starts for ZiggyZoo\_18:

(172, 16404), (Start: 195 @16440 has 45 MA's), (244, 16542), (272, 16620), (274, 16623), (308, 16719), (329, 16758), (349, 16818), (357, 16839), (377, 16893), (382, 16908), (494, 17079), (506, 17109), (594, 17292), (601, 17316), (626, 17367), (658, 17460), (664, 17472), (694, 17517), (702, 17532), (757, 17664), (758, 17667), (788, 17766), (795, 17784), (813, 17835), (843, 17901), (872, 17964), (877, 17976),

Gene: Ziko\_56 Start: 28834, Stop: 30519, Start Num: 135

Candidate Starts for Ziko\_56:

(59, 28642), (60, 28651), (62, 28657), (87, 28759), (102, 28789), (Start: 135 @28834 has 7 MA's), (232, 28975), (292, 29134), (316, 29188), (378, 29344), (434, 29443), (458, 29491), (481, 29548), (489, 29563), (546, 29653), (600, 29791), (635, 29854), (668, 29950), (703, 30001), (705, 30004), (711, 30016), (750, 30091), (754, 30106), (791, 30190), (824, 30271), (867, 30382), (897, 30487),

(902, 30505),

Gene: Zilizebeth\_19 Start: 16385, Stop: 18121, Start Num: 117

Candidate Starts for Zilizebeth\_19:

(Start: 101 @16361 has 2 MA's), (Start: 117 @16385 has 59 MA's), (Start: 166 @16445 has 1 MA's),  
(178, 16466), (180, 16469), (246, 16589), (258, 16628), (272, 16661), (282, 16685), (344, 16805),  
(356, 16844), (358, 16850), (386, 16934), (388, 16940), (392, 16952), (402, 16976), (410, 17003),  
(422, 17021), (452, 17060), (459, 17066), (470, 17090), (494, 17144), (500, 17156), (503, 17165),  
(529, 17225), (573, 17303), (587, 17342), (598, 17375), (618, 17441), (624, 17456), (627, 17465),  
(636, 17489), (647, 17519), (653, 17531), (735, 17633), (740, 17645), (742, 17648), (745, 17654),  
(747, 17663), (779, 17771), (805, 17855), (853, 17954), (890, 18062), (907, 18110),

Gene: Zimmer\_30 Start: 22382, Stop: 24154, Start Num: 144

Candidate Starts for Zimmer\_30:

(94, 22316), (Start: 123 @22358 has 215 MA's), (130, 22367), (Start: 144 @22382 has 603 MA's),  
(242, 22535), (277, 22616), (278, 22619), (305, 22691), (306, 22694), (318, 22712), (338, 22748),  
(341, 22754), (378, 22865), (417, 22952), (463, 23033), (467, 23036), (500, 23105), (532, 23192),  
(597, 23348), (636, 23429), (643, 23444), (746, 23672), (750, 23687), (756, 23711), (781, 23786),  
(784, 23801), (795, 23834), (813, 23885), (860, 23990), (900, 24131),

Gene: Zion\_34 Start: 29327, Stop: 30925, Start Num: 171

Candidate Starts for Zion\_34:

(Start: 171 @29327 has 40 MA's), (239, 29426), (263, 29495), (278, 29534), (338, 29669), (358,  
29729), (436, 29882), (442, 29894), (448, 29903), (449, 29906), (486, 29951), (493, 29966), (498,  
29975), (501, 29984), (518, 30038), (528, 30056), (557, 30110), (653, 30326), (678, 30419), (762,  
30527), (784, 30581), (808, 30656), (867, 30785), (905, 30911),

Gene: Zipp\_34 Start: 30844, Stop: 32466, Start Num: 160

Candidate Starts for Zipp\_34:

(Start: 116 @30787 has 1 MA's), (Start: 160 @30844 has 17 MA's), (178, 30865), (219, 30928), (246,  
30991), (272, 31051), (277, 31063), (312, 31150), (341, 31201), (378, 31312), (386, 31339), (391,  
31354), (449, 31438), (460, 31468), (464, 31477), (482, 31513), (508, 31573), (547, 31621), (551,  
31630), (596, 31729), (609, 31768), (619, 31780), (665, 31897), (672, 31936), (711, 31975), (746,  
32032), (764, 32071), (769, 32080), (786, 32137), (790, 32149), (810, 32206), (813, 32212), (824,  
32233), (842, 32266), (863, 32311), (900, 32440), (902, 32449),

Gene: Zirinka\_19 Start: 17776, Stop: 19374, Start Num: 170

Candidate Starts for Zirinka\_19:

(Start: 170 @17776 has 87 MA's), (295, 18025), (298, 18034), (306, 18052), (307, 18055), (340,  
18109), (363, 18184), (385, 18253), (388, 18262), (392, 18274), (397, 18286), (415, 18325), (435,  
18352), (440, 18361), (441, 18364), (501, 18397), (519, 18454), (554, 18520), (603, 18631), (636,  
18691), (669, 18793), (687, 18850), (751, 18940), (849, 19180), (874, 19258),

Gene: Zitch\_36 Start: 28728, Stop: 30350, Start Num: 160

Candidate Starts for Zitch\_36:

(Start: 160 @28728 has 17 MA's), (178, 28749), (188, 28761), (219, 28812), (236, 28851), (246,  
28875), (277, 28947), (312, 29034), (341, 29085), (348, 29115), (378, 29196), (386, 29223), (445,  
29316), (460, 29352), (464, 29361), (481, 29394), (482, 29397), (508, 29457), (547, 29505), (551,  
29514), (596, 29613), (609, 29652), (619, 29664), (665, 29781), (672, 29820), (711, 29859), (746,  
29916), (764, 29955), (769, 29964), (786, 30021), (790, 30033), (806, 30081), (810, 30090), (813,  
30096), (824, 30117), (842, 30150), (863, 30195), (880, 30246), (900, 30324), (902, 30333),

Gene: Zizzle\_16 Start: 14782, Stop: 16491, Start Num: 123

Candidate Starts for Zizzle\_16:

(Start: 123 @14782 has 215 MA's), (193, 14869), (Start: 227 @14914 has 2 MA's), (233, 14938), (271, 15043), (274, 15049), (281, 15067), (300, 15097), (348, 15202), (367, 15256), (370, 15262), (373, 15271), (381, 15292), (388, 15316), (402, 15352), (403, 15358), (418, 15391), (420, 15394), (424, 15403), (443, 15418), (448, 15424), (459, 15442), (465, 15457), (468, 15463), (475, 15481), (477, 15484), (484, 15499), (492, 15514), (494, 15520), (511, 15568), (515, 15580), (521, 15586), (564, 15646), (568, 15658), (583, 15694), (587, 15706), (614, 15781), (618, 15790), (625, 15808), (627, 15814), (638, 15844), (710, 15949), (720, 15961), (737, 15997), (761, 16075), (799, 16195), (810, 16228), (826, 16258), (829, 16270), (836, 16288), (839, 16294), (841, 16297), (844, 16303), (860, 16318), (861, 16321), (865, 16342), (866, 16345), (882, 16387), (887, 16417), (900, 16459), (901, 16465),

Gene: ZoMa\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for ZoMa\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: ZoeJ\_19 Start: 14954, Stop: 16723, Start Num: 112

Candidate Starts for ZoeJ\_19:

(Start: 93 @14918 has 1 MA's), (Start: 109 @14948 has 26 MA's), (Start: 112 @14954 has 41 MA's), (Start: 135 @14969 has 7 MA's), (Start: 168 @15011 has 32 MA's), (197, 15059), (Start: 227 @15098 has 2 MA's), (230, 15113), (248, 15164), (258, 15194), (272, 15227), (278, 15239), (282, 15257), (316, 15329), (321, 15335), (356, 15431), (360, 15443), (393, 15539), (448, 15632), (454, 15650), (465, 15674), (468, 15680), (487, 15719), (499, 15743), (503, 15755), (564, 15845), (567, 15854), (588, 15908), (598, 15938), (640, 16049), (655, 16100), (714, 16208), (768, 16322), (772, 16331), (793, 16406), (810, 16457), (863, 16559), (881, 16613), (901, 16694), (913, 16715),

Gene: Zolita\_23 Start: 19917, Stop: 21716, Start Num: 144

Candidate Starts for Zolita\_23:

(Start: 144 @19917 has 603 MA's), (236, 20055), (278, 20154), (306, 20229), (336, 20280), (360, 20352), (365, 20367), (378, 20400), (380, 20406), (432, 20499), (481, 20601), (495, 20631), (499, 20637), (532, 20727), (546, 20757), (583, 20841), (584, 20844), (597, 20883), (602, 20901), (635, 20961), (636, 20964), (668, 21057), (729, 21198), (749, 21240), (862, 21558), (900, 21693), (902, 21702),

Gene: Zombie\_18 Start: 16649, Stop: 18403, Start Num: 132

Candidate Starts for Zombie\_18:

(Start: 109 @16640 has 26 MA's), (Start: 132 @16649 has 45 MA's), (Start: 137 @16655 has 2 MA's), (143, 16661), (230, 16793), (248, 16844), (258, 16874), (269, 16898), (309, 17000), (331, 17039), (334, 17045), (341, 17060), (353, 17105), (395, 17225), (425, 17282), (448, 17321), (468, 17369), (481, 17396), (487, 17408), (522, 17489), (564, 17534), (641, 17732), (649, 17762), (655, 17780), (665, 17807), (716, 17891), (730, 17909), (743, 17924), (756, 17972), (760, 17987), (782, 18050), (799, 18107), (813, 18146), (831, 18188), (863, 18239), (890, 18335), (913, 18395),

Gene: Zulu\_31 Start: 19970, Stop: 21742, Start Num: 144

Candidate Starts for Zulu\_31:

(94, 19904), (Start: 123 @19946 has 215 MA's), (Start: 144 @19970 has 603 MA's), (278, 20207), (305, 20279), (306, 20282), (315, 20297), (338, 20336), (341, 20342), (378, 20453), (380, 20459), (392, 20498), (417, 20540), (448, 20579), (463, 20621), (467, 20624), (532, 20780), (592, 20921),

(597, 20936), (677, 21149), (742, 21248), (750, 21275), (765, 21326), (770, 21335), (781, 21374),  
(784, 21389), (813, 21473), (860, 21578), (862, 21584), (900, 21719),

Gene: xkcd\_25 Start: 19999, Stop: 21594, Start Num: 191

Candidate Starts for xkcd\_25:

(Start: 129 @19915 has 79 MA's), (Start: 191 @19999 has 45 MA's), (Start: 235 @20077 has 1 MA's),  
(268, 20164), (274, 20179), (300, 20227), (324, 20266), (356, 20353), (368, 20386), (381, 20422),  
(390, 20452), (392, 20458), (422, 20527), (461, 20557), (466, 20569), (468, 20572), (494, 20629),  
(565, 20761), (567, 20767), (592, 20833), (594, 20839), (601, 20863), (618, 20911), (627, 20935),  
(631, 20944), (658, 21019), (717, 21070), (725, 21085), (782, 21247), (788, 21274), (799, 21304),  
(843, 21409), (880, 21487), (887, 21523), (890, 21532), (900, 21565), (907, 21580),