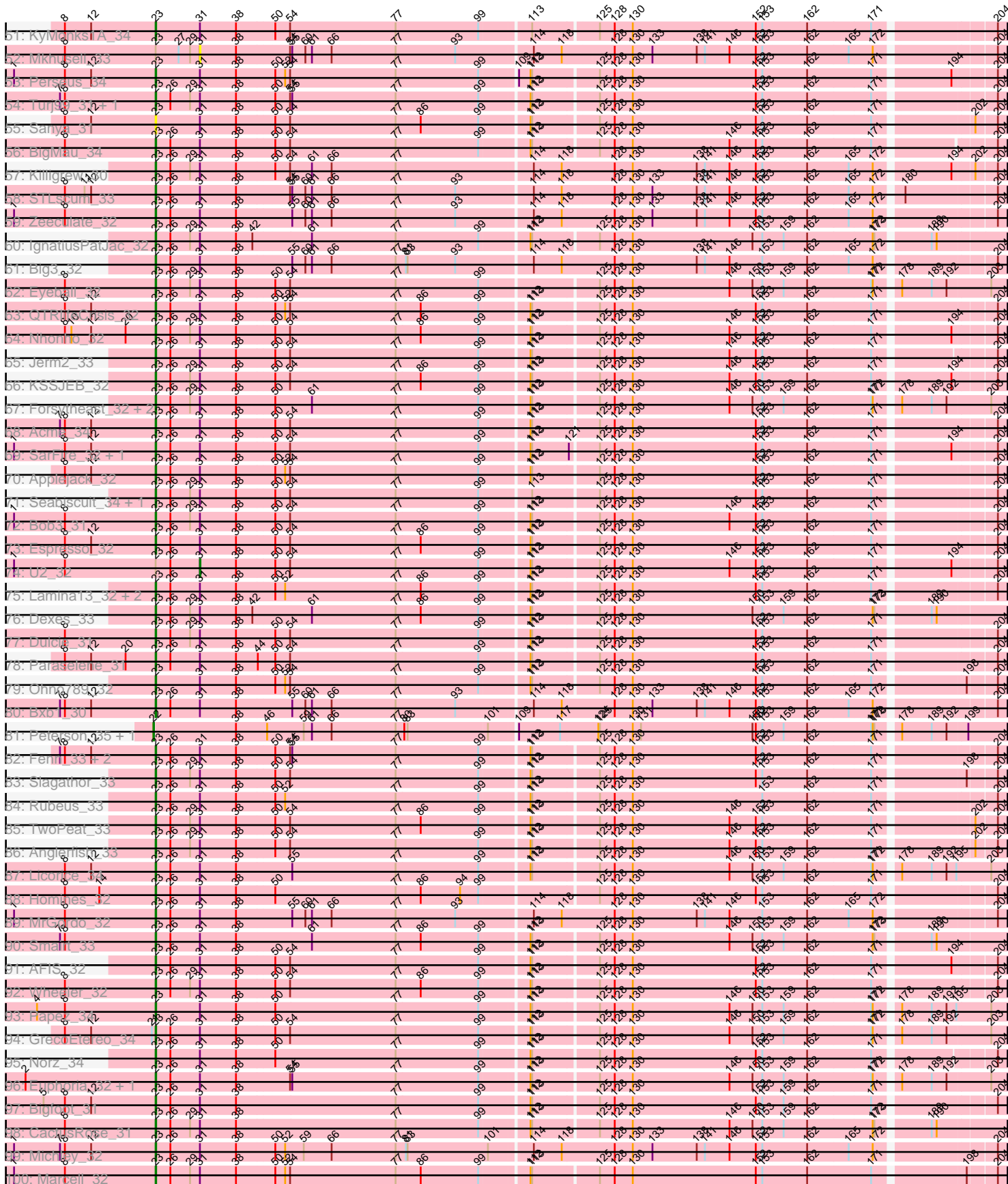




Pham 183413



Pham 183413

r01: Max QZJ_32 + 2	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r02: BritT15_34	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r03: Phia_34 + 1	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r04: Myrio_61	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r05: Lopon_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r06: Nerjay_33 + 1	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r07: Momi_31	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r08: Parliament_31	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r09: Kenmech_35	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r10: NEHalo_32 + 1	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r11: iLeeKay_34	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r12: BeeKnees_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r13: PacerPaul_32 + 1	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r14: Brugs_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r15: Pak_P_15	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r16: Aivi_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r17: Sumter_31	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r18: Cuznys_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r19: PayJen_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r20: PStivah_34	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r21: DDA_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r22: StrongArm_35	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r23: Dusty_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r24: BigPaolini_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r25: Soxh_32 + 1	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r26: Blug_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r27: EdJersn_33 + 2	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r28: Martha_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r29: Graduation_34	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r30: SnaZy_31	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r31: Trole_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r32: RtdgeCh_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r33: Swiger_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r34: Carlie_34	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r35: MPant_49_31	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r36: Marge_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r37: PhemisBueiler_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r38: ProJou_31	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r39: BaconJack_35	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r40: TopJun_32 + 1	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r41: FrogHopper_35	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r42: Barga_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r43: Zepyr_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r44: Paily_33	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r45: Hernia_35	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r46: Hox_46_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r47: Nize_34	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r48: Beatrix_32	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r49: Sheen_5	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203
r50: Hinder_5	23	31	38	50	54	71	86	99	112	125	128	130	146	153	159	162	172	178	189	192	203



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 183413 Report

This analysis was run 11/02/24 on database version 579.

Pham number 183413 has 465 members, 34 are drafts.

Phages represented in each track:

- Track 1 : Crispicous1\_31
- Track 2 : Aeneas\_34, PhrostyMug\_32
- Track 3 : Ringer\_32
- Track 4 : LilBib\_33
- Track 5 : Bethlehem\_32
- Track 6 : Maroc7\_31
- Track 7 : GageAP\_34
- Track 8 : Kugel\_33
- Track 9 : Chanagan\_31
- Track 10 : Tasp14\_33, Kanely\_33, Gwendoluna\_34, Jorgensen\_32, StewieG\_31, Altman\_34, Magnar\_32
- Track 11 : Alsfro\_36, Museum\_34, Burton\_33, ConceptII\_34, Petp2012\_34, Rohr\_33, HermioneGrange\_32, Gandalf20\_33
- Track 12 : PascalRango\_33, BillKnuckles\_33, Sorpresa\_32, SpikeBT\_34, Sandaddy\_31
- Track 13 : Zeuska\_33
- Track 14 : Kykar\_32
- Track 15 : Petruccio\_33, Oogway\_31
- Track 16 : Inyanga\_31
- Track 17 : Pippin\_34, Fajezeel\_34, Greg\_34, Seanderson\_33
- Track 18 : Lesedi\_31
- Track 19 : Arcanine\_33
- Track 20 : TheloniousMonk\_34
- Track 21 : HanShotFirst\_32
- Track 22 : Violet\_31
- Track 23 : Paphu\_31
- Track 24 : DrFeelGood\_31
- Track 25 : Gyzlar\_34
- Track 26 : KBG\_33
- Track 27 : Teodoridan\_30
- Track 28 : Bones\_32
- Track 29 : Rutherford\_34, JackSparrow\_33
- Track 30 : DreamCatcher\_35
- Track 31 : Rufus\_33, Pinto\_35
- Track 32 : Buttons\_34
- Track 33 : Doom\_33
- Track 34 : Traft412\_34

- Track 35 : Ciao\_32
- Track 36 : Abrogate\_330
- Track 37 : Dreamboat\_33, Jasper\_33
- Track 38 : HarryOW\_33
- Track 39 : Pari\_33
- Track 40 : BK1\_30, A6\_30
- Track 41 : ShortQueendom\_31
- Track 42 : JC27\_34
- Track 43 : Ichabod\_33, Atkinbua\_34
- Track 44 : Ashballer\_34
- Track 45 : Rhynn\_32, PinkPlastic\_31
- Track 46 : McGuire\_33, Manatee\_33
- Track 47 : Tripl3t\_33
- Track 48 : Arlo\_31, Swole\_34, JuliaChild\_34
- Track 49 : Sagefire\_33
- Track 50 : Ajay\_33
- Track 51 : KyMonks1A\_34
- Track 52 : Mkhuseleli\_33
- Track 53 : Perseus\_34
- Track 54 : Turj99\_31, Magnito\_31
- Track 55 : Sanya\_31
- Track 56 : BigMau\_34
- Track 57 : Killigrew\_30
- Track 58 : STLscum\_33
- Track 59 : Zeeculate\_32
- Track 60 : IgnatiusPatJac\_32
- Track 61 : Big3\_32
- Track 62 : Eyeball\_32
- Track 63 : QTRlifeCrisis\_32
- Track 64 : Nhonho\_32
- Track 65 : Jerm2\_33
- Track 66 : KSSJEB\_32
- Track 67 : Forsytheast\_32, SwissCheese\_34, Moose\_32
- Track 68 : Acme\_34
- Track 69 : SarFire\_32, Thor\_32
- Track 70 : Applejack\_32
- Track 71 : Seabiscuit\_34, Dynamix\_33
- Track 72 : Bob3\_31
- Track 73 : Espresso\_32
- Track 74 : U2\_32
- Track 75 : Lamina13\_32, Bircsak\_32, Gompeii16\_32
- Track 76 : Dexes\_33
- Track 77 : Dulcie\_31
- Track 78 : Paraselene\_31
- Track 79 : Ohno789\_32
- Track 80 : Bxb1\_30
- Track 81 : Peterson\_35, Smeagol\_34
- Track 82 : Fenn\_33, Squee\_33, Naira\_33
- Track 83 : Slagathor\_33
- Track 84 : Rubeus\_33
- Track 85 : TwoPeat\_33
- Track 86 : Anglerfish\_33
- Track 87 : Licorice\_34

- Track 88 : Homines\_32
- Track 89 : MrGordo\_32
- Track 90 : Smairt\_33
- Track 91 : AFIS\_32
- Track 92 : Wheeler\_32
- Track 93 : Papez\_34
- Track 94 : GrecoEtereo\_34
- Track 95 : Norz\_34
- Track 96 : Euphoria\_32, Watermelon\_34
- Track 97 : Bigfoot\_31
- Track 98 : CactusRose\_31
- Track 99 : Michley\_32
- Track 100 : Marcell\_32
- Track 101 : MetalQZJ\_32, MaryBeth\_32, Corvo\_33
- Track 102 : Briton15\_34
- Track 103 : Pita2\_34, Target\_35
- Track 104 : Mryolo\_31
- Track 105 : Lopton\_33
- Track 106 : Nerujay\_33, Fushigi\_33
- Track 107 : Molly\_33
- Track 108 : Parliament\_31
- Track 109 : Kenmech\_35
- Track 110 : NEHalo\_32, Mule\_32
- Track 111 : ILeeKay\_34
- Track 112 : BeesKnees\_33
- Track 113 : PacerPaul\_32, Francis47\_32
- Track 114 : Bruns\_31
- Track 115 : PattyP\_34
- Track 116 : Alvin\_33
- Track 117 : Sumter\_31
- Track 118 : Cueylyss\_32
- Track 119 : Payneful\_32
- Track 120 : PSullivan\_34
- Track 121 : DD5\_33
- Track 122 : StrongArm\_31
- Track 123 : Dussy\_33
- Track 124 : BigPaolini\_33
- Track 125 : Solon\_32, BPBiels31\_33
- Track 126 : Blue\_32
- Track 127 : Edtherson\_33, Monet\_34, Treddle\_34
- Track 128 : Marsha\_32
- Track 129 : Graduation\_34
- Track 130 : Snazzy\_31
- Track 131 : Trouble\_33
- Track 132 : RidgeCB\_32
- Track 133 : Switzer\_33
- Track 134 : Carlyle\_34
- Track 135 : MPlant7149\_31
- Track 136 : Marge\_33
- Track 137 : PherrisBueller\_33
- Track 138 : ProMouse\_31
- Track 139 : BaconJack\_35
- Track 140 : Topgun\_32, Wilkins\_32

- Track 141 : Froghopper\_33
- Track 142 : Barriga\_32
- Track 143 : Zephyr\_32
- Track 144 : Pelly\_33
- Track 145 : Hermia\_35
- Track 146 : Hope4ever\_32
- Track 147 : Niza\_34
- Track 148 : Beatrix\_32
- Track 149 : Sheen\_5
- Track 150 : HINdeR\_5
- Track 151 : FlyCatcher\_5, Toro\_5
- Track 152 : DroogsArmy\_5
- Track 153 : Timshel\_5
- Track 154 : Fowlmouth\_25
- Track 155 : MrMiyagi\_25
- Track 156 : Catera\_169, JayJay\_172, Norm\_173, ParkTD\_172, BananaFence\_172, Sauce\_171, Grasshills\_182, Pio\_181, Demodog\_180, BackyardAgain\_171, BeanWater\_164, Rizal\_168, Khaleesi\_172, JPickles\_170, JigglyPuff\_181, Tyke\_173, Wally\_173, Bxz1\_169, Bangla1971\_175, Naval22\_178, Darko\_173, Ewok\_173, DTDevon\_176, InterFolia\_178, Tainan\_176, Roots515\_177, Issimir\_170, DrPhinkDaddy\_170, Burrough\_176, Dandelion\_180, Astraea\_169, Napoleon13\_171, Sprinklers\_170, Mangeria\_173, Loanshark\_171, Cane17\_163, Cali\_169, BigCity\_183, Jemmno\_173, Megamind\_170, Bipolarisk\_171, Bread\_170, Tortoise16\_172, YoungMoneyMata\_174, Jedediah\_176, Guwapp\_171, Zeenon\_174, Zalkecks\_172, EmToTheThree\_175, McWolfish\_171, JulietS\_168, Salacia\_175, Gabriel\_176, FrayBell\_177, Shifa\_164, Izajani\_171, Phox\_173, Halldule\_167, Ava3\_172, StubbySaigey\_177, NuevoMundo\_178, Yucca\_172, YemiJoy2021\_173, I3\_181, Jessibeth14\_173, PurduePete\_173, Sebata\_174, FoxtrotP1\_172, ChaylaJr\_171, Delylah\_174, Maby2021\_172, Spec\_170, Gizmo\_177, MikeLiesIn\_174, EmmaElysia\_175, Melpomini\_167, NoodleTree\_179, QBert\_165, Pier\_176, ZygoTaiga\_169, Colt\_164, Littleton\_175, Blubba\_162, Janiyra\_178, Pleione\_176, Phusco\_173, Trinitium\_172, Erdmann\_174, JustHall\_169, Ronan\_169, Rabinovish\_168, Mikro\_171, Domi\_168, Iota\_168, Bonray\_175, IkeLoa\_166, Daffodil\_177, Concombre\_179, Shrimp\_176, LinStu\_171, BadAgartude\_168, LRRHood\_166, Lee7\_172, Essence\_171, EggyFarm\_183, Pinkcreek\_156, Blackdragon\_169, CharlieB\_169, Koguma\_171, Grungle\_159, Yassified\_170, Bigswole\_178, ArcherS7\_175, Caravan\_165, DirtMonster\_166, Spud\_171, StephanieG\_172, Derek\_172, SmallFry\_174, Kamryn\_173, Nappy\_174, Specks\_178, MoMoMixon\_171, LifeSavor\_172, Shelob\_174, Nidhogg\_174, ScottMcG\_168, Asterius\_171, HyRo\_163, Stubby\_157, Teardrop\_171, Willis\_172, Dietrick\_164, NedWong\_172, Matsumoto\_172, SrishMeg2525\_170, LolaVinca\_174, Drazdys\_174, ShiaLabeouf\_171, EasyJones\_177, Shaqnato\_166, Morizzled23\_172, Breeniome\_175, TinyTim\_172, RoMag\_169, Delilah\_171, Lukilu\_163
- Track 157 : Ading\_175, Capablanca\_177, Phlegm\_178, Fludd\_175, Babyland\_177, ChickenPhender\_171, CindyLou\_176, Naija\_174, Amataga\_174, Quasimodo\_177, Latch\_174, Cactojaque\_170, Patter\_174, Chomp\_174, Pivoine\_174, Audrick\_177, Basquiat\_172, Ngannou\_171, Flabslab\_169, Gamgam\_175, Kboogie\_177, Ghost\_173, Atlantean\_173, ET08\_160, Blackbrain\_170, Turret\_169, Chargie21\_172, McGee\_175, InigoMontoya\_177, SilverDipper\_176, ErnieJ\_168, Momo\_173, ValleyTerrace\_174
- Track 158 : Adlitam\_173, Tonenili\_190, Jaygup\_172, Rahel\_175, Shnickers\_172
- Track 159 : LordLeafolot\_177
- Track 160 : FudgeTart\_170



- Track 161 : Alice\_159
- Track 162 : Hawkeye\_33
- Track 163 : Puissant\_29
- Track 164 : Phreeze\_30, Beckerton\_30, Oaker\_30, Damien\_30, Konstantine\_35, Megatron06\_32
- Track 165 : Cborch11\_31
- Track 166 : Thumb\_30
- Track 167 : NihilNomen\_39, Pound\_41, Yeet\_38, Odette\_39, Ejimix\_40, Bombitas\_36, Dove\_37, Schatzie\_37, Hughesyang\_38
- Track 168 : Constella\_34, Bobby\_41, Thibault\_36
- Track 169 : Phoebus\_39, HokkenD\_35, Kalah2\_40, Bagrid\_39, Dallas\_41, ThreeRngTarjay\_38, Halley\_40, Beem\_40, JuicyJay\_42, Zelink\_41, Redno2\_38, EricMillard\_40
- Track 170 : Klein\_40
- Track 171 : Vagabond\_57, Krili\_58, NiebruSaylor\_58, Mori\_59, Catdawg\_59, Ryadel\_63, Alkhayr\_57, MadKillah\_60, TelAviv\_56, Murai\_60, Idergollasper\_59, Familton\_60, Bora\_57, Winget\_60, Schuy\_60, Blessica\_60, Shida\_59, SchoolBus\_59, JangDynasty\_59, FoulBall\_59, Vorrps\_59
- Track 172 : YungJamal\_64, Wildflower\_59, Corndog\_62, Dylan\_59, Firecracker\_60, Smooch\_62, Ashwin\_61, Zakhe101\_59
- Track 173 : Shipwreck\_21, Pygmy\_21, Brujita\_22, Bogie\_21, Island3\_22

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

The start number called the most often in the published annotations is 23, it was called in 192 of the 431 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6\_30, AFIS\_32, Abrogate\_330, Acme\_34, Aeneas\_34, Ajay\_33, Alsfro\_36, Altman\_34, Alvin\_33, Anglerfish\_33, Applejack\_32, Arcanine\_33, Arlo\_31, Ashballer\_34, Atkinbua\_34, BK1\_30, BPBiebs31\_33, BaconJack\_35, Barriga\_32, Beatrix\_32, BeesKnees\_33, Bethlehem\_32, Big3\_32, BigMau\_34, BigPaolini\_33, Bigfoot\_31, BillKnuckles\_33, Bircsak\_32, Blue\_32, Bob3\_31, Bogie\_21, Bones\_32, Briton15\_34, Brujita\_22, Bruns\_31, Burton\_33, Buttons\_34, Bxb1\_30, CactusRose\_31, Carlyle\_34, Chanagan\_31, Ciao\_32, ConceptII\_34, Corvo\_33, Crispicous1\_31, Cueylyss\_32, DD5\_33, Dexes\_33, DrFeelGood\_31, DreamCatcher\_35, Dreamboat\_33, Dulcie\_31, Dussy\_33, Dynamix\_33, Edtherson\_33, Espresso\_32, Euphoria\_32, Eyeball\_32, Fajezeel\_34, Fenn\_33, Forsytheast\_32, Francis47\_32, Froghopper\_33, Fushigi\_33, GageAP\_34, Gandalf20\_33, Gompeii16\_32, Graduation\_34, GrecoEtereo\_34, Greg\_34, Gwendoluna\_34, Gyzlar\_34, HanShotFirst\_32, HarryOW\_33, Hawkeye\_33, Hermia\_35, HermioneGrange\_32, Homines\_32, Hope4ever\_32, ILeeKay\_34, Ichabod\_33, IgnatiusPatJac\_32, Inyanga\_31, Island3\_22, JC27\_34, JackSparrow\_33, Jasper\_33, Jerm2\_33, Jorgensen\_32, JuliaChild\_34, KSSJEB\_32, Kanely\_33, Kenmech\_35, Killigrew\_30, Kugel\_33, KyMonks1A\_34, Kykar\_32, Lamina13\_32, Lesedi\_31, Licorice\_34, LilBib\_33, Lopton\_33, MPlant7149\_31, Magnar\_32, Magnito\_31, Manatee\_33, Marcell\_32, Marge\_33, Maroc7\_31, Marsha\_32, MaryBeth\_32, McGuire\_33, MetalQZJ\_32, Michley\_32, Molly\_33, Monet\_34, Moose\_32, MrGordo\_32, Mryolo\_31, Mule\_32, Museum\_34, NEHalo\_32, Naira\_33, Nerujay\_33, Nhonho\_32, Niza\_34, Norz\_34, Ohno789\_32, Oogway\_31,

PSullivan\_34, PacerPaul\_32, Papez\_34, Paphu\_31, Paraselene\_31, Pari\_33, Parliament\_31, PascalRango\_33, PattyP\_34, Payneful\_32, Pelly\_33, Perseus\_34, Petp2012\_34, Petruccio\_33, PherrisBueller\_33, PhrostyMug\_32, PinkPlastic\_31, Pinto\_35, Pippin\_34, Pita2\_34, ProMouse\_31, Pygmy\_21, QTRlifeCrisis\_32, Rhynn\_32, RidgeCB\_32, Ringer\_32, Rohr\_33, Rubeus\_33, Rufus\_33, Rutherford\_34, STLscum\_33, Sagefire\_33, Sandaddy\_31, Sanya\_31, SarFire\_32, Seabiscuit\_34, Seanderson\_33, Shipwreck\_21, ShortQueendom\_31, Slagathor\_33, Smairt\_33, Snazzy\_31, Solon\_32, Sorpresa\_32, SpikeBT\_34, Squee\_33, StewieG\_31, StrongArm\_31, Sumter\_31, SwissCheese\_34, Switzer\_33, Swole\_34, Target\_35, Tasp14\_33, TheloniousMonk\_34, Thor\_32, Topgun\_32, Traft412\_34, Treddle\_34, Tripl3t\_33, Trouble\_33, Turj99\_31, TwoPeat\_33, Violet\_31, Watermelon\_34, Wheeler\_32, Wilkins\_32, Zeeculate\_32, Zephyr\_32, Zeuska\_33,

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

- Doom\_33, KBG\_33, Mkhusei\_33, U2\_32,

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

- Ading\_175, Adlitam\_173, Alice\_159, Alkhayr\_57, Amataga\_174, ArcherS7\_175, Ashwin\_61, Asterius\_171, Astraea\_169, Atlantean\_173, Audrick\_177, Ava3\_172, Babyland\_177, BackyardAgain\_171, BadAgartude\_168, Bagrid\_39, BananaFence\_172, Bangla1971\_175, Basquiat\_172, BeanWater\_164, Beckerton\_30, Beem\_40, BigCity\_183, Bigswole\_178, Bipolarisk\_171, Blackbrain\_170, Blackdragon\_169, Blessica\_60, Blubba\_162, Bobby\_41, Bombitas\_36, Bonray\_175, Bora\_57, Bread\_170, Breeniome\_175, Burrough\_176, Bxz1\_169, Cactojaque\_170, Cali\_169, Cane17\_163, Capablanca\_177, Caravan\_165, Catdawg\_59, Catera\_169, Cborch11\_31, Chargie21\_172, CharlieB\_169, ChaylaJr\_171, ChickenPhender\_171, Chomp\_174, CindyLou\_176, Colt\_164, Concombre\_179, Constella\_34, Corndog\_62, DTDevon\_176, Daffodil\_177, Dallas\_41, Damien\_30, Dandelion\_180, Darko\_173, Delilah\_171, Delylah\_174, Demodog\_180, Derek\_172, Dietrick\_164, DirtMonster\_166, Domi\_168, Dove\_37, DrPhinkDaddy\_170, Drazdys\_174, DroogsArmy\_5, Dylan\_59, ET08\_160, EasyJones\_177, EggyFarm\_183, Ejimix\_40, EmToTheThree\_175, EmmaElysia\_175, Erdmann\_174, EricMillard\_40, ErnieJ\_168, Essence\_171, Ewok\_173, Familton\_60, Firecracker\_60, Flabslab\_169, Fludd\_175, FlyCatcher\_5, FoulBall\_59, Fowlmouth\_25, FoxtrotP1\_172, FrayBell\_177, FudgeTart\_170, Gabriel\_176, Gamgam\_175, Ghost\_173, Gizmo\_177, Grasshills\_182, Grungle\_159, Guwapp\_171, HINdeR\_5, Halldule\_167, Halley\_40, HokkenD\_35, Hughesyang\_38, HyRo\_163, I3\_181, Idergollasper\_59, IkeLoa\_166, InigoMontoya\_177, InterFolia\_178, Iota\_168, Issimir\_170, Izajani\_171, JPickles\_170, JangDynasty\_59, Janiyra\_178, JayJay\_172, Jaygup\_172, Jedediah\_176, Jemmno\_173, Jessibeth14\_173, JigglyPuff\_181, JuicyJay\_42, JulietS\_168, JustHall\_169, Kalah2\_40, Kamryn\_173, Kboogie\_177, Khaleesi\_172, Klein\_40, Koguma\_171, Konstantine\_35, Krili\_58, LRRHood\_166, Latch\_174, Lee7\_172, LifeSavor\_172, LinStu\_171, Littleton\_175, Loanshark\_171, LolaVinca\_174, LordLeafolot\_177, Lukilu\_163, Maby2021\_172, MadKillah\_60, Mangeria\_173, Matsumoto\_172, McGee\_175, McWolfish\_171, Megamind\_170, Megatron06\_32, Melpomini\_167, MikeLiesIn\_174, Mikro\_171, MoMoMixon\_171, Momo\_173, Mori\_59, Morizzled23\_172, MrMiyagi\_25, Murai\_60, Naija\_174, Napoleon13\_171, Nappy\_174, Naval22\_178, NedWong\_172, Ngannou\_171, Nidhogg\_174, NiebruSaylor\_58, NihilNomen\_39, NoodleTree\_179, Norm\_173, NuevoMundo\_178, Oaker\_30, Odette\_39, ParkTD\_172, Patter\_174, Peterson\_35, Phlegm\_178, Phoebus\_39, Phox\_173, Phreeze\_30, Phusco\_173, Pier\_176, Pinkcreek\_156, Pio\_181, Pivoine\_174, Pleione\_176, Pound\_41, Puissant\_29, PurduePete\_173, QBert\_165, Quasimodo\_177, Rabinovish\_168, Rahel\_175,

Redno2\_38, Rizal\_168, RoMag\_169, Ronan\_169, Roots515\_177, Ryadel\_63, Salacia\_175, Sauce\_171, Schatzie\_37, SchoolBus\_59, Schuy\_60, ScottMcG\_168, Sebata\_174, Shaqnato\_166, Sheen\_5, Shelob\_174, ShiaLabeouf\_171, Shida\_59, Shifa\_164, Shnickers\_172, Shrimp\_176, SilverDipper\_176, SmallFry\_174, Smeagol\_34, Smooch\_62, Spec\_170, Specks\_178, Sprinklers\_170, Spud\_171, SrishMeg2525\_170, StephanieG\_172, StubbySaigey\_177, Stubby\_157, Tainan\_176, Teardrop\_171, TelAviv\_56, Teodoridan\_30, Thibault\_36, ThreeRngTarjay\_38, Thumb\_30, Timshel\_5, TinyTim\_172, Tonenili\_190, Toro\_5, Tortoise16\_172, Trinitium\_172, Turret\_169, Tyke\_173, Vagabond\_57, ValleyTerrace\_174, Vorrps\_59, Wally\_173, Wildflower\_59, Willis\_172, Winget\_60, Yassified\_170, Yeet\_38, YemiJoy2021\_173, YoungMoneyMata\_174, Yucca\_172, YungJamal\_64, Zakhe101\_59, Zalkecks\_172, Zeenon\_174, Zelink\_41, ZygoTaiga\_169,

### Summary by start number:

#### Start 22:

- Found in 57 of 465 ( 12.3% ) of genes in pham
- Manual Annotations of this start: 52 of 431
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alkhayr\_57 (O), Ashwin\_61 (O), Bagrid\_39 (J), Beem\_40 (J), Blessica\_60 (O), Bobby\_41 (J), Bombitas\_36 (J), Bora\_57 (O), Catdawg\_59 (O), Constella\_34 (J), Corndog\_62 (O), Dallas\_41 (J), Dove\_37 (J), Dylan\_59 (O), Ejimix\_40 (J), EricMillard\_40 (J), Familton\_60 (O), Firecracker\_60 (O), FoulBall\_59 (O), Halley\_40 (J), HokkenD\_35 (J), Hughesyang\_38 (J), Idergollasper\_59 (O), JangDynasty\_59 (O), JuicyJay\_42 (J), Kalah2\_40 (J), Klein\_40 (J), Krili\_58 (O), MadKillah\_60 (O), Mori\_59 (O), Murai\_60 (O), NiebruSaylor\_58 (O), NihilNomen\_39 (J), Odette\_39 (J), Peterson\_35 (A1), Phoebus\_39 (J), Pound\_41 (J), Redno2\_38 (J), Ryadel\_63 (O), Schatzie\_37 (J), SchoolBus\_59 (O), Schuy\_60 (O), Shida\_59 (O), Smeagol\_34 (A1), Smooch\_62 (O), TelAviv\_56 (O), Teodoridan\_30 (A1), Thibault\_36 (J), ThreeRngTarjay\_38 (J), Vagabond\_57 (O), Vorrps\_59 (O), Wildflower\_59 (O), Winget\_60 (O), Yeet\_38 (J), YungJamal\_64 (O), Zakhe101\_59 (O), Zelink\_41 (J),

#### Start 23:

- Found in 203 of 465 ( 43.7% ) of genes in pham
- Manual Annotations of this start: 192 of 431
- Called 98.0% of time when present
- Phage (with cluster) where this start called: A6\_30 (A1), AFIS\_32 (A1), Abrogate\_330 (A1), Acme\_34 (A1), Aeneas\_34 (A1), Ajay\_33 (A1), Alsfro\_36 (A1), Altman\_34 (A1), Alvin\_33 (A1), Anglerfish\_33 (A1), Applejack\_32 (A1), Arcanine\_33 (A1), Arlo\_31 (A1), Ashballer\_34 (A1), Atkinbua\_34 (A1), BK1\_30 (A1), BPBiebs31\_33 (A1), BaconJack\_35 (A1), Barriga\_32 (A1), Beatrix\_32 (A1), BeesKnees\_33 (A1), Bethlehem\_32 (A1), Big3\_32 (A1), BigMau\_34 (A1), BigPaolini\_33 (A1), Bigfoot\_31 (A1), BillKnuckles\_33 (A1), Bircsak\_32 (A1), Blue\_32 (A1), Bob3\_31 (A1), Bogie\_21 (P1), Bones\_32 (A1), Briton15\_34 (A1), Brujita\_22 (I1), Bruns\_31 (A1), Burton\_33 (A1), Buttons\_34 (A1), Bxb1\_30 (A1), CactusRose\_31 (A1), Carlyle\_34 (A1), Chanagan\_31 (A1), Ciao\_32 (A1), ConceptII\_34 (A1), Corvo\_33 (A1), Crispicous1\_31 (A1), Cueyllyss\_32 (A1), DD5\_33 (A1), Dexes\_33 (A1), DrFeelGood\_31 (A1), DreamCatcher\_35 (A1), Dreamboat\_33 (A1), Dulcie\_31 (A1), Dussy\_33 (A1), Dynamix\_33 (A1), Edtherson\_33 (A1), Espresso\_32 (A1), Euphoria\_32 (A1), Eyeball\_32 (A1), Fajezeel\_34 (A1), Fenn\_33 (A1), Forsytheast\_32 (A1), Francis47\_32 (A1), Froghopper\_33 (A1), Fushigi\_33 (A1), GageAP\_34 (A1), Gandalf20\_33 (A1), Gompeii16\_32 (A1), Graduation\_34 (A1), GrecoEtereo\_34 (A1),

Greg\_34 (A1), Gwendoluna\_34 (A1), Gyzlar\_34 (A1), HanShotFirst\_32 (A1), HarryOW\_33 (A1), Hawkeye\_33 (D2), Hermia\_35 (A1), HermioneGrange\_32 (A1), Homines\_32 (A1), Hope4ever\_32 (A1), ILeeKay\_34 (A1), Ichabod\_33 (A1), IgnatiusPatJac\_32 (A1), Inyanga\_31 (A1), Island3\_22 (I1), JC27\_34 (A1), JackSparrow\_33 (A1), Jasper\_33 (A1), Jerm2\_33 (A1), Jorgensen\_32 (A1), JuliaChild\_34 (A1), KSSJEB\_32 (A1), Kanely\_33 (A1), Kenmech\_35 (A1), Killigrew\_30 (A1), Kugel\_33 (A1), KyMonks1A\_34 (A1), Kykar\_32 (A1), Lamina13\_32 (A1), Lesedi\_31 (A1), Licorice\_34 (A1), LilBib\_33 (A1), Lopton\_33 (A1), MPlant7149\_31 (A1), Magnar\_32 (A1), Magnito\_31 (A1), Manatee\_33 (A1), Marcell\_32 (A1), Marge\_33 (A1), Maroc7\_31 (A1), Marsha\_32 (A1), MaryBeth\_32 (A1), McGuire\_33 (A1), MetalQZJ\_32 (A1), Michley\_32 (A1), Molly\_33 (A1), Monet\_34 (A1), Moose\_32 (A1), MrGordo\_32 (A1), Mryolo\_31 (A1), Mule\_32 (A1), Museum\_34 (A1), NEHalo\_32 (A1), Naira\_33 (A1), Nerujay\_33 (A1), Nhonho\_32 (A1), Niza\_34 (A1), Norz\_34 (A1), Ohno789\_32 (A1), Oogway\_31 (A1), PSullivan\_34 (A1), PacerPaul\_32 (A1), Papez\_34 (A1), Paphu\_31 (A1), Paraselene\_31 (A1), Pari\_33 (A1), Parliament\_31 (A1), PascalRango\_33 (A1), PattyP\_34 (A1), Payneful\_32 (A1), Pelly\_33 (A1), Perseus\_34 (A1), Petp2012\_34 (A1), Petruchio\_33 (A1), PherrisBueller\_33 (A1), PhrostyMug\_32 (A1), PinkPlastic\_31 (A1), Pinto\_35 (A1), Pippin\_34 (A1), Pita2\_34 (A1), ProMouse\_31 (A1), Pygmy\_21 (P1), QTRLifeCrisis\_32 (A1), Rhynn\_32 (A1), RidgeCB\_32 (A1), Ringer\_32 (A1), Rohr\_33 (A1), Rubeus\_33 (A1), Rufus\_33 (A1), Rutherford\_34 (A1), STLscum\_33 (A1), Sagefire\_33 (A1), Sandaddy\_31 (A1), Sanya\_31 (A1), SarFire\_32 (A1), Seabiscuit\_34 (A1), Seanderson\_33 (A1), Shipwreck\_21 (P1), ShortQueendom\_31 (A1), Slagathor\_33 (A1), Smairt\_33 (A1), Snazzy\_31 (A1), Solon\_32 (A1), Sorpresa\_32 (A1), SpikeBT\_34 (A1), Squee\_33 (A1), StewieG\_31 (A1), StrongArm\_31 (A1), Sumter\_31 (A1), SwissCheese\_34 (A1), Switzer\_33 (A1), Swole\_34 (A1), Target\_35 (A1), Tasp14\_33 (A1), TheloniousMonk\_34 (A1), Thor\_32 (A1), Topgun\_32 (A1), Traft412\_34 (A1), Treddle\_34 (A1), Trip13t\_33 (A1), Trouble\_33 (A1), Turj99\_31 (A1), TwoPeat\_33 (A1), Violet\_31 (A1), Watermelon\_34 (A1), Wheeler\_32 (A1), Wilkins\_32 (A1), Zeeculate\_32 (A1), Zephyr\_32 (A1), Zeuska\_33 (A1),

#### Start 26:

- Found in 171 of 465 ( 36.8% ) of genes in pham
- Manual Annotations of this start: 1 of 431
- Called 0.6% of time when present
- Phage (with cluster) where this start called: Doom\_33 (A1),

#### Start 31:

- Found in 198 of 465 ( 42.6% ) of genes in pham
- Manual Annotations of this start: 1 of 431
- Called 1.0% of time when present
- Phage (with cluster) where this start called: Mkhuseleli\_33 (A1), U2\_32 (A1),

#### Start 32:

- Found in 11 of 465 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 10 of 431
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beckerton\_30 (H1), Cborch11\_31 (H1), Damien\_30 (H1), Fowlmouth\_25 (AC), Konstantine\_35 (H1), Megatron06\_32 (H1), MrMiyagi\_25 (AC), Oaker\_30 (H1), Phreeze\_30 (H1), Puissant\_29 (H1), Thumb\_30 (H1),

Start 35:

- Found in 3 of 465 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 3 of 431
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DroogsArmy\_5 (A7), HINdeR\_5 (A7), Timshel\_5 (A7),

Start 36:

- Found in 3 of 465 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 431
- Called 100.0% of time when present
- Phage (with cluster) where this start called: FlyCatcher\_5 (A7), Sheen\_5 (A7), Toro\_5 (A7),

Start 50:

- Found in 159 of 465 ( 34.2% ) of genes in pham
- Manual Annotations of this start: 1 of 431
- Called 0.6% of time when present
- Phage (with cluster) where this start called: KBG\_33 (A1),

Start 51:

- Found in 188 of 465 ( 40.4% ) of genes in pham
- Manual Annotations of this start: 170 of 431
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ading\_175 (C1), Adlitam\_173 (C1), Alice\_159 (C1), Amataga\_174 (C1), ArcherS7\_175 (C1), Asterius\_171 (C1), Astraea\_169 (C1), Atlantean\_173 (C1), Audrick\_177 (C1), Ava3\_172 (C1), Babyland\_177 (C1), BackyardAgain\_171 (C1), BadAgartude\_168 (C1), BananaFence\_172 (C1), Bangla1971\_175 (C1), Basquiat\_172 (C1), BeanWater\_164 (C1), BigCity\_183 (C1), Bigswole\_178 (C1), Bipolarisk\_171 (C1), Blackbrain\_170 (C1), Blackdragon\_169 (C1), Blubba\_162 (C1), Bonray\_175 (C1), Bread\_170 (C1), Breeniome\_175 (C1), Burrough\_176 (C1), Bxz1\_169 (C1), Cactojaque\_170 (C1), Cali\_169 (C1), Cane17\_163 (C1), Capablanca\_177 (C1), Caravan\_165 (C1), Catera\_169 (C1), Chargie21\_172 (C1), CharlieB\_169 (C1), ChaylaJr\_171 (C1), ChickenPhender\_171 (C1), Chomp\_174 (C1), CindyLou\_176 (C1), Colt\_164 (C1), Concombre\_179 (C1), DTDevon\_176 (C1), Daffodil\_177 (C1), Dandelion\_180 (C1), Darko\_173 (C1), Delilah\_171 (C1), Delylah\_174 (C1), Demodog\_180 (C1), Derek\_172 (C1), Dietrick\_164 (C1), DirtMonster\_166 (C1), Domi\_168 (C1), DrPhinkDaddy\_170 (C1), Drazdys\_174 (C1), ET08\_160 (C1), EasyJones\_177 (C1), EggyFarm\_183 (C1), EmToTheThree\_175 (C1), EmmaElysia\_175 (C1), Erdmann\_174 (C1), ErnieJ\_168 (C1), Essence\_171 (C1), Ewok\_173 (C1), Flabslab\_169 (C1), Fludd\_175 (C1), FoxtrotP1\_172 (C1), FrayBell\_177 (C1), FudgeTart\_170 (C1), Gabriel\_176 (C1), Gangam\_175 (C1), Ghost\_173 (C1), Gizmo\_177 (C1), Grasshills\_182 (C1), Grungle\_159 (C1), Guwapp\_171 (C1), Halldule\_167 (C1), HyRo\_163 (C1), I3\_181 (C1), IkeLoa\_166 (C1), InigoMontoya\_177 (C1), InterFolia\_178 (C1), Iota\_168 (C1), Issimir\_170 (C1), Izajani\_171 (C1), JPickles\_170 (C1), Janiyr\_178 (C1), JayJay\_172 (C1), Jaygup\_172 (C1), Jedediah\_176 (C1), Jemmno\_173 (C1), Jessibeth14\_173 (C1), JigglyPuff\_181 (C1), JulietS\_168 (C1), JustHall\_169 (C1), Kamryn\_173 (C1), Kboogie\_177 (C1), Khaleesi\_172 (C1), Koguma\_171 (C1), LRRHood\_166 (C1), Latch\_174 (C1), Lee7\_172 (C1), LifeSavor\_172 (C1), LinStu\_171 (C1), Littleton\_175 (C1), Loanshark\_171 (C1), LolaVinca\_174 (C1), LordLeafolot\_177 (C1), Lukilu\_163 (C1), Maby2021\_172 (C1), Mangeria\_173 (C1), Matsumoto\_172 (C1), McGee\_175

(C1), McWolfish\_171 (C1), Megamind\_170 (C1), Melpomini\_167 (C1), MikeLiesIn\_174 (C1), Mikro\_171 (C1), MoMoMixon\_171 (C1), Momo\_173 (C1), Morizzled23\_172 (C1), Naija\_174 (C1), Napoleon13\_171 (C1), Nappy\_174 (C1), Naval22\_178 (C1), NedWong\_172 (C1), Ngannou\_171 (C1), Nidhogg\_174 (C1), NoodleTree\_179 (C1), Norm\_173 (C1), NuevoMundo\_178 (C1), ParkTD\_172 (C1), Patter\_174 (C1), Phlegm\_178 (C1), Phox\_173 (C1), Phusco\_173 (C1), Pier\_176 (C1), Pinkcreek\_156 (C1), Pio\_181 (C1), Pivoine\_174 (C1), Pleione\_176 (C1), PurduePete\_173 (C1), QBert\_165 (C1), Quasimodo\_177 (C1), Rabinovich\_168 (C1), Rahel\_175 (C1), Rizal\_168 (C1), RoMag\_169 (C1), Ronan\_169 (C1), Roots515\_177 (C1), Salacia\_175 (C1), Sauce\_171 (C1), ScottMcG\_168 (C1), Sebata\_174 (C1), Shaqato\_166 (C1), Shelob\_174 (C1), ShiaLabeouf\_171 (C1), Shifa\_164 (C1), Shnickers\_172 (C1), Shrimp\_176 (C1), SilverDipper\_176 (C1), SmallFry\_174 (C1), Spec\_170 (C1), Specks\_178 (C1), Sprinklers\_170 (C1), Spud\_171 (C1), SrishMeg2525\_170 (C1), StephanieG\_172 (C1), StubbySaigey\_177 (C1), Stubby\_157 (C1), Tainan\_176 (C1), Teardrop\_171 (C1), TinyTim\_172 (C1), Tonenili\_190 (C1), Tortoise16\_172 (C1), Trinitium\_172 (C1), Turret\_169 (C1), Tyke\_173 (C1), ValleyTerrace\_174 (C1), Wally\_173 (C1), Willis\_172 (C1), Yassified\_170 (C1), YemiJoy2021\_173 (C1), YoungMoneyMata\_174 (C1), Yucca\_172 (C1), Zalkecks\_172 (C1), Zeenon\_174 (C1), ZygoTaiga\_169 (C1),

### **Summary by clusters:**

There are 10 clusters represented in this pham: AC, H1, I1, J, O, A1, P1, A7, C1, D2,

Info for manual annotations of cluster A1:

- Start number 22 was manually annotated 2 times for cluster A1.
- Start number 23 was manually annotated 186 times for cluster A1.
- Start number 26 was manually annotated 1 time for cluster A1.
- Start number 31 was manually annotated 1 time for cluster A1.
- Start number 50 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A7:

- Start number 35 was manually annotated 3 times for cluster A7.
- Start number 36 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster AC:

- Start number 32 was manually annotated 2 times for cluster AC.

Info for manual annotations of cluster C1:

- Start number 51 was manually annotated 170 times for cluster C1.

Info for manual annotations of cluster D2:

- Start number 23 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster H1:

- Start number 32 was manually annotated 8 times for cluster H1.

Info for manual annotations of cluster I1:

- Start number 23 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster J:

- Start number 22 was manually annotated 23 times for cluster J.

Info for manual annotations of cluster O:

- Start number 22 was manually annotated 27 times for cluster O.

Info for manual annotations of cluster P1:

- Start number 23 was manually annotated 3 times for cluster P1.

### **Gene Information:**

Gene: A6\_30 Start: 25506, Stop: 26984, Start Num: 23

Candidate Starts for A6\_30:

(Start: 23 @25506 has 192 MA's), (Start: 31 @25587 has 1 MA's), (38, 25653), (42, 25683), (77, 25935), (99, 26085), (112, 26166), (113, 26169), (125, 26280), (128, 26307), (130, 26340), (152, 26565), (153, 26577), (159, 26613), (162, 26655), (171, 26769), (204, 26967),

Gene: AFIS\_32 Start: 26049, Stop: 27527, Start Num: 23

Candidate Starts for AFIS\_32:

(Start: 23 @26049 has 192 MA's), (Start: 26 @26076 has 1 MA's), (Start: 31 @26130 has 1 MA's), (38, 26196), (Start: 50 @26262 has 1 MA's), (54, 26289), (77, 26478), (99, 26628), (112, 26709), (113, 26712), (125, 26823), (128, 26850), (130, 26883), (152, 27108), (153, 27120), (162, 27198), (171, 27312), (194, 27438), (204, 27510),

Gene: Abrogate\_330 Start: 26724, Stop: 28202, Start Num: 23

Candidate Starts for Abrogate\_330:

(8, 26559), (12, 26607), (Start: 23 @26724 has 192 MA's), (Start: 31 @26805 has 1 MA's), (38, 26871), (Start: 50 @26937 has 1 MA's), (54, 26964), (77, 27153), (99, 27303), (112, 27384), (113, 27387), (125, 27498), (128, 27525), (130, 27558), (152, 27783), (153, 27795), (162, 27873), (171, 27987), (204, 28185),

Gene: Acme\_34 Start: 26265, Stop: 27743, Start Num: 23

Candidate Starts for Acme\_34:

(7, 26091), (8, 26100), (12, 26148), (Start: 23 @26265 has 192 MA's), (Start: 26 @26292 has 1 MA's), (Start: 31 @26346 has 1 MA's), (38, 26412), (Start: 50 @26478 has 1 MA's), (54, 26505), (77, 26694), (99, 26844), (112, 26925), (113, 26928), (125, 27039), (128, 27066), (130, 27099), (152, 27324), (153, 27336), (162, 27414), (171, 27528), (204, 27726),

Gene: Ading\_175 Start: 96031, Stop: 97107, Start Num: 51

Candidate Starts for Ading\_175:

(Start: 51 @96031 has 170 MA's), (59, 96073), (60, 96076), (61, 96088), (65, 96112), (66, 96115), (73, 96172), (74, 96190), (79, 96244), (92, 96334), (96, 96355), (97, 96358), (109, 96454), (115, 96505), (125, 96586), (128, 96613), (144, 96745), (146, 96757), (147, 96766), (149, 96787), (160, 96850), (163, 96892), (167, 96961), (169, 96985), (172, 96997), (174, 97006), (177, 97027), (182, 97045), (183, 97051), (187, 97078),

Gene: Adlitam\_173 Start: 95019, Stop: 96095, Start Num: 51

Candidate Starts for Adlitam\_173:

(Start: 51 @95019 has 170 MA's), (59, 95061), (60, 95064), (61, 95076), (65, 95100), (66, 95103), (73, 95160), (74, 95178), (79, 95232), (92, 95322), (96, 95343), (97, 95346), (109, 95442), (115, 95493), (125, 95574), (128, 95601), (144, 95733), (146, 95745), (147, 95754), (149, 95775), (150, 95787), (160, 95838), (163, 95880), (167, 95949), (169, 95973), (172, 95985), (174, 95994), (177, 96015), (182, 96033), (183, 96039), (187, 96066),

Gene: Aeneas\_34 Start: 26301, Stop: 27779, Start Num: 23

Candidate Starts for Aeneas\_34:

(20, 26247), (Start: 23 @26301 has 192 MA's), (Start: 26 @26328 has 1 MA's), (29, 26364), (Start: 31 @26382 has 1 MA's), (38, 26448), (Start: 50 @26514 has 1 MA's), (54, 26541), (77, 26730), (86, 26775), (99, 26880), (112, 26961), (113, 26964), (125, 27075), (128, 27102), (130, 27135), (152, 27360), (153, 27372), (162, 27450), (171, 27564), (204, 27762),

Gene: Ajay\_33 Start: 26477, Stop: 27955, Start Num: 23

Candidate Starts for Ajay\_33:

(Start: 23 @26477 has 192 MA's), (Start: 26 @26504 has 1 MA's), (Start: 31 @26558 has 1 MA's), (38, 26624), (Start: 50 @26690 has 1 MA's), (54, 26717), (77, 26906), (99, 27056), (112, 27137), (113, 27140), (122, 27236), (125, 27251), (128, 27278), (130, 27311), (152, 27536), (153, 27548), (162, 27626), (171, 27740), (204, 27938),

Gene: Alice\_159 Start: 93768, Stop: 94844, Start Num: 51

Candidate Starts for Alice\_159:

(Start: 51 @93768 has 170 MA's), (59, 93810), (60, 93813), (61, 93825), (65, 93849), (66, 93852), (72, 93900), (73, 93909), (74, 93927), (79, 93981), (92, 94071), (96, 94092), (97, 94095), (109, 94191), (115, 94242), (125, 94323), (128, 94350), (144, 94482), (146, 94494), (147, 94503), (149, 94524), (160, 94587), (163, 94629), (167, 94698), (169, 94722), (172, 94734), (174, 94743), (177, 94764), (182, 94782), (183, 94788), (187, 94815),

Gene: Alkhayr\_57 Start: 38313, Stop: 39803, Start Num: 22

Candidate Starts for Alkhayr\_57:

(Start: 22 @38313 has 52 MA's), (27, 38355), (41, 38484), (49, 38523), (60, 38580), (75, 38700), (77, 38736), (81, 38754), (90, 38811), (91, 38820), (95, 38856), (96, 38859), (97, 38862), (101, 38904), (109, 38949), (114, 38976), (131, 39168), (141, 39285), (148, 39342), (153, 39390), (162, 39468), (165, 39543), (171, 39582), (178, 39612), (188, 39660), (197, 39729),

Gene: Alsfro\_36 Start: 26710, Stop: 28188, Start Num: 23

Candidate Starts for Alsfro\_36:

(Start: 23 @26710 has 192 MA's), (Start: 26 @26737 has 1 MA's), (29, 26773), (Start: 31 @26791 has 1 MA's), (38, 26857), (Start: 50 @26923 has 1 MA's), (54, 26950), (77, 27139), (99, 27289), (112, 27370), (113, 27373), (125, 27484), (128, 27511), (130, 27544), (146, 27721), (152, 27769), (153, 27781), (162, 27859), (171, 27973), (204, 28171),

Gene: Altman\_34 Start: 26768, Stop: 28246, Start Num: 23

Candidate Starts for Altman\_34:

(Start: 23 @26768 has 192 MA's), (Start: 26 @26795 has 1 MA's), (Start: 31 @26849 has 1 MA's), (38, 26915), (Start: 50 @26981 has 1 MA's), (54, 27008), (77, 27197), (99, 27347), (112, 27428), (113, 27431), (125, 27542), (128, 27569), (130, 27602), (152, 27827), (153, 27839), (162, 27917), (171, 28031), (204, 28229),

Gene: Alvin\_33 Start: 26537, Stop: 28027, Start Num: 23

Candidate Starts for Alvin\_33:

(7, 26363), (8, 26372), (13, 26432), (Start: 23 @26537 has 192 MA's), (Start: 26 @26564 has 1 MA's), (27, 26579), (Start: 31 @26618 has 1 MA's), (38, 26684), (55, 26780), (60, 26804), (61, 26816), (64, 26840), (66, 26852), (77, 26966), (93, 27074), (114, 27206), (118, 27257), (128, 27350), (130, 27383), (133, 27419), (138, 27500), (141, 27515), (146, 27560), (153, 27620), (162, 27698), (165, 27773), (172, 27815), (204, 28010),

Gene: Amataga\_174 Start: 94447, Stop: 95523, Start Num: 51

Candidate Starts for Amataga\_174:



(Start: 51 @94447 has 170 MA's), (59, 94489), (60, 94492), (61, 94504), (65, 94528), (66, 94531), (73, 94588), (74, 94606), (79, 94660), (92, 94750), (96, 94771), (97, 94774), (109, 94870), (115, 94921), (125, 95002), (128, 95029), (144, 95161), (146, 95173), (147, 95182), (149, 95203), (160, 95266), (163, 95308), (167, 95377), (169, 95401), (172, 95413), (174, 95422), (177, 95443), (182, 95461), (183, 95467), (187, 95494),

Gene: Anglerfish\_33 Start: 26681, Stop: 28159, Start Num: 23

Candidate Starts for Anglerfish\_33:

(Start: 23 @26681 has 192 MA's), (Start: 26 @26708 has 1 MA's), (29, 26744), (Start: 31 @26762 has 1 MA's), (38, 26828), (Start: 50 @26894 has 1 MA's), (54, 26921), (77, 27110), (99, 27260), (112, 27341), (113, 27344), (125, 27455), (128, 27482), (130, 27515), (146, 27692), (152, 27740), (153, 27752), (162, 27830), (171, 27944), (202, 28106), (204, 28142),

Gene: Applejack\_32 Start: 25942, Stop: 27420, Start Num: 23

Candidate Starts for Applejack\_32:

(8, 25777), (12, 25825), (Start: 23 @25942 has 192 MA's), (Start: 26 @25969 has 1 MA's), (Start: 31 @26023 has 1 MA's), (38, 26089), (Start: 50 @26155 has 1 MA's), (52, 26173), (54, 26182), (77, 26371), (99, 26521), (112, 26602), (113, 26605), (125, 26716), (128, 26743), (130, 26776), (152, 27001), (153, 27013), (162, 27091), (171, 27205), (204, 27403),

Gene: Arcanine\_33 Start: 25695, Stop: 27173, Start Num: 23

Candidate Starts for Arcanine\_33:

(Start: 23 @25695 has 192 MA's), (Start: 26 @25722 has 1 MA's), (29, 25758), (Start: 31 @25776 has 1 MA's), (38, 25842), (Start: 50 @25908 has 1 MA's), (54, 25935), (77, 26124), (86, 26169), (99, 26274), (112, 26355), (113, 26358), (125, 26469), (128, 26496), (130, 26529), (152, 26754), (153, 26766), (162, 26844), (171, 26958), (202, 27120), (204, 27156),

Gene: ArcherS7\_175 Start: 95477, Stop: 96553, Start Num: 51

Candidate Starts for ArcherS7\_175:

(Start: 51 @95477 has 170 MA's), (59, 95519), (60, 95522), (61, 95534), (65, 95558), (66, 95561), (73, 95618), (74, 95636), (79, 95690), (92, 95780), (96, 95801), (97, 95804), (109, 95900), (115, 95951), (125, 96032), (128, 96059), (144, 96191), (146, 96203), (147, 96212), (149, 96233), (160, 96296), (163, 96338), (167, 96407), (169, 96431), (172, 96443), (174, 96452), (177, 96473), (182, 96491), (183, 96497), (187, 96524),

Gene: Arlo\_31 Start: 25571, Stop: 27049, Start Num: 23

Candidate Starts for Arlo\_31:

(1, 25313), (8, 25406), (12, 25454), (Start: 23 @25571 has 192 MA's), (Start: 26 @25598 has 1 MA's), (Start: 31 @25652 has 1 MA's), (38, 25718), (Start: 50 @25784 has 1 MA's), (54, 25811), (77, 26000), (86, 26045), (99, 26150), (112, 26231), (113, 26234), (125, 26345), (128, 26372), (130, 26405), (152, 26630), (153, 26642), (162, 26720), (171, 26834), (194, 26960), (204, 27032),

Gene: Ashballer\_34 Start: 26695, Stop: 28173, Start Num: 23

Candidate Starts for Ashballer\_34:

(1, 26437), (8, 26530), (Start: 23 @26695 has 192 MA's), (Start: 26 @26722 has 1 MA's), (29, 26758), (Start: 31 @26776 has 1 MA's), (38, 26842), (Start: 50 @26908 has 1 MA's), (54, 26935), (77, 27124), (99, 27274), (112, 27355), (113, 27358), (125, 27469), (128, 27496), (130, 27529), (152, 27754), (153, 27766), (162, 27844), (171, 27958), (204, 28156),

Gene: Ashwin\_61 Start: 39083, Stop: 40573, Start Num: 22

Candidate Starts for Ashwin\_61:

(Start: 22 @39083 has 52 MA's), (27, 39125), (41, 39254), (49, 39293), (60, 39350), (77, 39506), (81, 39524), (90, 39581), (91, 39590), (96, 39629), (97, 39632), (101, 39674), (109, 39719), (114, 39746),

(131, 39938), (141, 40055), (148, 40112), (153, 40160), (162, 40238), (165, 40313), (171, 40352), (178, 40382), (188, 40430), (197, 40499),

Gene: Asterius\_171 Start: 95164, Stop: 96240, Start Num: 51

Candidate Starts for Asterius\_171:

(Start: 51 @95164 has 170 MA's), (59, 95206), (60, 95209), (61, 95221), (65, 95245), (66, 95248), (73, 95305), (74, 95323), (79, 95377), (92, 95467), (96, 95488), (97, 95491), (109, 95587), (115, 95638), (125, 95719), (128, 95746), (144, 95878), (146, 95890), (147, 95899), (149, 95920), (160, 95983), (163, 96025), (167, 96094), (169, 96118), (172, 96130), (174, 96139), (177, 96160), (182, 96178), (183, 96184), (187, 96211),

Gene: Astraea\_169 Start: 94538, Stop: 95614, Start Num: 51

Candidate Starts for Astraea\_169:

(Start: 51 @94538 has 170 MA's), (59, 94580), (60, 94583), (61, 94595), (65, 94619), (66, 94622), (73, 94679), (74, 94697), (79, 94751), (92, 94841), (96, 94862), (97, 94865), (109, 94961), (115, 95012), (125, 95093), (128, 95120), (144, 95252), (146, 95264), (147, 95273), (149, 95294), (160, 95357), (163, 95399), (167, 95468), (169, 95492), (172, 95504), (174, 95513), (177, 95534), (182, 95552), (183, 95558), (187, 95585),

Gene: Atkinbua\_34 Start: 26395, Stop: 27873, Start Num: 23

Candidate Starts for Atkinbua\_34:

(8, 26230), (Start: 23 @26395 has 192 MA's), (Start: 26 @26422 has 1 MA's), (Start: 31 @26476 has 1 MA's), (38, 26542), (Start: 50 @26608 has 1 MA's), (54, 26635), (77, 26824), (99, 26974), (112, 27055), (113, 27058), (125, 27169), (128, 27196), (130, 27229), (152, 27454), (153, 27466), (162, 27544), (171, 27658), (204, 27856),

Gene: Atlantean\_173 Start: 94447, Stop: 95523, Start Num: 51

Candidate Starts for Atlantean\_173:

(Start: 51 @94447 has 170 MA's), (59, 94489), (60, 94492), (61, 94504), (65, 94528), (66, 94531), (73, 94588), (74, 94606), (79, 94660), (92, 94750), (96, 94771), (97, 94774), (109, 94870), (115, 94921), (125, 95002), (128, 95029), (144, 95161), (146, 95173), (147, 95182), (149, 95203), (160, 95266), (163, 95308), (167, 95377), (169, 95401), (172, 95413), (174, 95422), (177, 95443), (182, 95461), (183, 95467), (187, 95494),

Gene: Audrick\_177 Start: 95129, Stop: 96205, Start Num: 51

Candidate Starts for Audrick\_177:

(Start: 51 @95129 has 170 MA's), (59, 95171), (60, 95174), (61, 95186), (65, 95210), (66, 95213), (73, 95270), (74, 95288), (79, 95342), (92, 95432), (96, 95453), (97, 95456), (109, 95552), (115, 95603), (125, 95684), (128, 95711), (144, 95843), (146, 95855), (147, 95864), (149, 95885), (160, 95948), (163, 95990), (167, 96059), (169, 96083), (172, 96095), (174, 96104), (177, 96125), (182, 96143), (183, 96149), (187, 96176),

Gene: Ava3\_172 Start: 94630, Stop: 95706, Start Num: 51

Candidate Starts for Ava3\_172:

(Start: 51 @94630 has 170 MA's), (59, 94672), (60, 94675), (61, 94687), (65, 94711), (66, 94714), (73, 94771), (74, 94789), (79, 94843), (92, 94933), (96, 94954), (97, 94957), (109, 95053), (115, 95104), (125, 95185), (128, 95212), (144, 95344), (146, 95356), (147, 95365), (149, 95386), (160, 95449), (163, 95491), (167, 95560), (169, 95584), (172, 95596), (174, 95605), (177, 95626), (182, 95644), (183, 95650), (187, 95677),

Gene: BK1\_30 Start: 25506, Stop: 26984, Start Num: 23

Candidate Starts for BK1\_30:

(Start: 23 @25506 has 192 MA's), (Start: 31 @25587 has 1 MA's), (38, 25653), (42, 25683), (77, 25935), (99, 26085), (112, 26166), (113, 26169), (125, 26280), (128, 26307), (130, 26340), (152, 26565), (153, 26577), (159, 26613), (162, 26655), (171, 26769), (204, 26967),

Gene: BPBiebs31\_33 Start: 26266, Stop: 27744, Start Num: 23

Candidate Starts for BPBiebs31\_33:

(Start: 23 @26266 has 192 MA's), (Start: 26 @26293 has 1 MA's), (29, 26329), (Start: 31 @26347 has 1 MA's), (38, 26413), (Start: 50 @26479 has 1 MA's), (54, 26506), (77, 26695), (99, 26845), (112, 26926), (113, 26929), (125, 27040), (128, 27067), (130, 27100), (146, 27277), (152, 27325), (153, 27337), (162, 27415), (171, 27529), (194, 27655), (204, 27727),

Gene: Babyland\_177 Start: 95224, Stop: 96300, Start Num: 51

Candidate Starts for Babyland\_177:

(Start: 51 @95224 has 170 MA's), (59, 95266), (60, 95269), (61, 95281), (65, 95305), (66, 95308), (73, 95365), (74, 95383), (79, 95437), (92, 95527), (96, 95548), (97, 95551), (109, 95647), (115, 95698), (125, 95779), (128, 95806), (144, 95938), (146, 95950), (147, 95959), (149, 95980), (160, 96043), (163, 96085), (167, 96154), (169, 96178), (172, 96190), (174, 96199), (177, 96220), (182, 96238), (183, 96244), (187, 96271),

Gene: BackyardAgain\_171 Start: 93925, Stop: 95001, Start Num: 51

Candidate Starts for BackyardAgain\_171:

(Start: 51 @93925 has 170 MA's), (59, 93967), (60, 93970), (61, 93982), (65, 94006), (66, 94009), (73, 94066), (74, 94084), (79, 94138), (92, 94228), (96, 94249), (97, 94252), (109, 94348), (115, 94399), (125, 94480), (128, 94507), (144, 94639), (146, 94651), (147, 94660), (149, 94681), (160, 94744), (163, 94786), (167, 94855), (169, 94879), (172, 94891), (174, 94900), (177, 94921), (182, 94939), (183, 94945), (187, 94972),

Gene: BaconJack\_35 Start: 26464, Stop: 27948, Start Num: 23

Candidate Starts for BaconJack\_35:

(8, 26299), (12, 26347), (Start: 23 @26464 has 192 MA's), (Start: 26 @26491 has 1 MA's), (Start: 31 @26545 has 1 MA's), (38, 26611), (42, 26641), (Start: 50 @26677 has 1 MA's), (54, 26704), (77, 26893), (86, 26938), (99, 27043), (112, 27124), (113, 27127), (125, 27238), (128, 27265), (130, 27298), (146, 27475), (150, 27517), (153, 27535), (159, 27571), (162, 27613), (171, 27727), (172, 27730), (178, 27763), (189, 27817), (192, 27844), (203, 27919),

Gene: BadAgartude\_168 Start: 94930, Stop: 96006, Start Num: 51

Candidate Starts for BadAgartude\_168:

(Start: 51 @94930 has 170 MA's), (59, 94972), (60, 94975), (61, 94987), (65, 95011), (66, 95014), (73, 95071), (74, 95089), (79, 95143), (92, 95233), (96, 95254), (97, 95257), (109, 95353), (115, 95404), (125, 95485), (128, 95512), (144, 95644), (146, 95656), (147, 95665), (149, 95686), (160, 95749), (163, 95791), (167, 95860), (169, 95884), (172, 95896), (174, 95905), (177, 95926), (182, 95944), (183, 95950), (187, 95977),

Gene: Bagrid\_39 Start: 31581, Stop: 33086, Start Num: 22

Candidate Starts for Bagrid\_39:

(3, 31356), (19, 31524), (21, 31578), (Start: 22 @31581 has 52 MA's), (28, 31629), (41, 31752), (66, 31902), (67, 31905), (77, 32016), (93, 32124), (98, 32154), (114, 32256), (125, 32373), (130, 32433), (131, 32448), (146, 32610), (148, 32622), (153, 32670), (159, 32706), (162, 32748), (166, 32826), (172, 32865), (173, 32868), (178, 32898), (185, 32928), (189, 32952),

Gene: BananaFence\_172 Start: 95167, Stop: 96243, Start Num: 51

Candidate Starts for BananaFence\_172:

(Start: 51 @95167 has 170 MA's), (59, 95209), (60, 95212), (61, 95224), (65, 95248), (66, 95251), (73, 95308), (74, 95326), (79, 95380), (92, 95470), (96, 95491), (97, 95494), (109, 95590), (115, 95641), (125, 95722), (128, 95749), (144, 95881), (146, 95893), (147, 95902), (149, 95923), (160, 95986), (163, 96028), (167, 96097), (169, 96121), (172, 96133), (174, 96142), (177, 96163), (182, 96181), (183, 96187), (187, 96214),

Gene: Bangla1971\_175 Start: 94837, Stop: 95913, Start Num: 51

Candidate Starts for Bangla1971\_175:

(Start: 51 @94837 has 170 MA's), (59, 94879), (60, 94882), (61, 94894), (65, 94918), (66, 94921), (73, 94978), (74, 94996), (79, 95050), (92, 95140), (96, 95161), (97, 95164), (109, 95260), (115, 95311), (125, 95392), (128, 95419), (144, 95551), (146, 95563), (147, 95572), (149, 95593), (160, 95656), (163, 95698), (167, 95767), (169, 95791), (172, 95803), (174, 95812), (177, 95833), (182, 95851), (183, 95857), (187, 95884),

Gene: Barriga\_32 Start: 25797, Stop: 27275, Start Num: 23

Candidate Starts for Barriga\_32:

(20, 25743), (Start: 23 @25797 has 192 MA's), (Start: 26 @25824 has 1 MA's), (29, 25860), (Start: 31 @25878 has 1 MA's), (38, 25944), (Start: 50 @26010 has 1 MA's), (54, 26037), (77, 26226), (86, 26271), (99, 26376), (112, 26457), (113, 26460), (125, 26571), (128, 26598), (130, 26631), (146, 26808), (152, 26856), (153, 26868), (162, 26946), (171, 27060), (194, 27186), (204, 27258),

Gene: Basquiat\_172 Start: 94751, Stop: 95827, Start Num: 51

Candidate Starts for Basquiat\_172:

(Start: 51 @94751 has 170 MA's), (59, 94793), (60, 94796), (61, 94808), (65, 94832), (66, 94835), (73, 94892), (74, 94910), (79, 94964), (92, 95054), (96, 95075), (97, 95078), (109, 95174), (115, 95225), (125, 95306), (128, 95333), (144, 95465), (146, 95477), (147, 95486), (149, 95507), (160, 95570), (163, 95612), (167, 95681), (169, 95705), (172, 95717), (174, 95726), (177, 95747), (182, 95765), (183, 95771), (187, 95798),

Gene: BeanWater\_164 Start: 94491, Stop: 95567, Start Num: 51

Candidate Starts for BeanWater\_164:

(Start: 51 @94491 has 170 MA's), (59, 94533), (60, 94536), (61, 94548), (65, 94572), (66, 94575), (73, 94632), (74, 94650), (79, 94704), (92, 94794), (96, 94815), (97, 94818), (109, 94914), (115, 94965), (125, 95046), (128, 95073), (144, 95205), (146, 95217), (147, 95226), (149, 95247), (160, 95310), (163, 95352), (167, 95421), (169, 95445), (172, 95457), (174, 95466), (177, 95487), (182, 95505), (183, 95511), (187, 95538),

Gene: Beatrix\_32 Start: 27379, Stop: 28863, Start Num: 23

Candidate Starts for Beatrix\_32:

(1, 27121), (8, 27214), (13, 27274), (Start: 23 @27379 has 192 MA's), (Start: 26 @27406 has 1 MA's), (Start: 31 @27460 has 1 MA's), (38, 27526), (Start: 50 @27592 has 1 MA's), (54, 27619), (77, 27808), (99, 27958), (112, 28039), (113, 28042), (125, 28153), (128, 28180), (130, 28213), (146, 28390), (150, 28432), (153, 28450), (159, 28486), (162, 28528), (171, 28642), (172, 28645), (178, 28678), (189, 28732), (192, 28759), (203, 28834),

Gene: Beckerton\_30 Start: 29062, Stop: 30270, Start Num: 32

Candidate Starts for Beckerton\_30:

(Start: 32 @29062 has 10 MA's), (34, 29089), (39, 29128), (58, 29230), (61, 29254), (79, 29407), (84, 29419), (85, 29437), (93, 29503), (94, 29512), (95, 29515), (97, 29521), (101, 29560), (102, 29563), (114, 29644), (119, 29701), (128, 29779), (132, 29809), (142, 29854), (144, 29875), (145, 29878), (147, 29896), (148, 29899), (164, 30040), (169, 30127), (170, 30133), (179, 30187), (187, 30229),

Gene: Beem\_40 Start: 32147, Stop: 33652, Start Num: 22

Candidate Starts for Beem\_40:

(3, 31922), (19, 32090), (21, 32144), (Start: 22 @32147 has 52 MA's), (28, 32195), (41, 32318), (66, 32468), (67, 32471), (77, 32582), (93, 32690), (98, 32720), (114, 32822), (125, 32939), (130, 32999), (131, 33014), (146, 33176), (148, 33188), (153, 33236), (159, 33272), (162, 33314), (166, 33392), (172, 33431), (173, 33434), (178, 33464), (185, 33494), (189, 33518),

Gene: BeesKnees\_33 Start: 25996, Stop: 27474, Start Num: 23

Candidate Starts for BeesKnees\_33:

(8, 25831), (Start: 23 @25996 has 192 MA's), (Start: 26 @26023 has 1 MA's), (Start: 31 @26077 has 1 MA's), (38, 26143), (Start: 50 @26209 has 1 MA's), (54, 26236), (77, 26425), (99, 26575), (112, 26656), (113, 26659), (125, 26770), (128, 26797), (130, 26830), (153, 27067), (162, 27145), (171, 27259), (204, 27457),

Gene: Bethlehem\_32 Start: 27222, Stop: 28700, Start Num: 23

Candidate Starts for Bethlehem\_32:

(Start: 23 @27222 has 192 MA's), (Start: 26 @27249 has 1 MA's), (29, 27285), (Start: 31 @27303 has 1 MA's), (38, 27369), (Start: 50 @27435 has 1 MA's), (54, 27462), (56, 27471), (77, 27651), (86, 27696), (99, 27801), (112, 27882), (113, 27885), (125, 27996), (128, 28023), (130, 28056), (146, 28233), (152, 28281), (153, 28293), (162, 28371), (171, 28485), (194, 28611), (204, 28683),

Gene: Big3\_32 Start: 26577, Stop: 28067, Start Num: 23

Candidate Starts for Big3\_32:

(Start: 23 @26577 has 192 MA's), (Start: 26 @26604 has 1 MA's), (Start: 31 @26658 has 1 MA's), (38, 26724), (55, 26820), (60, 26844), (61, 26856), (66, 26892), (77, 27006), (81, 27024), (83, 27027), (93, 27114), (114, 27246), (118, 27297), (128, 27390), (130, 27423), (138, 27540), (141, 27555), (146, 27600), (153, 27660), (162, 27738), (165, 27813), (172, 27855), (204, 28050),

Gene: BigCity\_183 Start: 98043, Stop: 99119, Start Num: 51

Candidate Starts for BigCity\_183:

(Start: 51 @98043 has 170 MA's), (59, 98085), (60, 98088), (61, 98100), (65, 98124), (66, 98127), (73, 98184), (74, 98202), (79, 98256), (92, 98346), (96, 98367), (97, 98370), (109, 98466), (115, 98517), (125, 98598), (128, 98625), (144, 98757), (146, 98769), (147, 98778), (149, 98799), (160, 98862), (163, 98904), (167, 98973), (169, 98997), (172, 99009), (174, 99018), (177, 99039), (182, 99057), (183, 99063), (187, 99090),

Gene: BigMau\_34 Start: 26131, Stop: 27603, Start Num: 23

Candidate Starts for BigMau\_34:

(8, 25966), (Start: 23 @26131 has 192 MA's), (Start: 26 @26158 has 1 MA's), (Start: 31 @26212 has 1 MA's), (38, 26278), (Start: 50 @26344 has 1 MA's), (54, 26371), (77, 26560), (99, 26710), (112, 26791), (113, 26794), (125, 26905), (128, 26932), (130, 26965), (146, 27142), (152, 27190), (153, 27202), (162, 27280), (171, 27394), (204, 27586),

Gene: BigPaolini\_33 Start: 26575, Stop: 28053, Start Num: 23

Candidate Starts for BigPaolini\_33:

(12, 26458), (Start: 23 @26575 has 192 MA's), (Start: 31 @26656 has 1 MA's), (38, 26722), (Start: 50 @26788 has 1 MA's), (52, 26806), (54, 26815), (77, 27004), (99, 27154), (112, 27235), (113, 27238), (125, 27349), (128, 27376), (130, 27409), (152, 27634), (153, 27646), (162, 27724), (171, 27838), (204, 28036),

Gene: Bigfoot\_31 Start: 25737, Stop: 27215, Start Num: 23

Candidate Starts for Bigfoot\_31:

(5, 25533), (8, 25572), (12, 25620), (Start: 23 @25737 has 192 MA's), (Start: 26 @25764 has 1 MA's), (Start: 31 @25818 has 1 MA's), (38, 25884), (77, 26166), (99, 26316), (112, 26397), (113, 26400),

(125, 26511), (128, 26538), (130, 26571), (152, 26796), (153, 26808), (159, 26844), (162, 26886),  
(171, 27000), (204, 27198),

Gene: Bigswole\_178 Start: 97475, Stop: 98551, Start Num: 51

Candidate Starts for Bigswole\_178:

(Start: 51 @97475 has 170 MA's), (59, 97517), (60, 97520), (61, 97532), (65, 97556), (66, 97559), (73, 97616), (74, 97634), (79, 97688), (92, 97778), (96, 97799), (97, 97802), (109, 97898), (115, 97949), (125, 98030), (128, 98057), (144, 98189), (146, 98201), (147, 98210), (149, 98231), (160, 98294), (163, 98336), (167, 98405), (169, 98429), (172, 98441), (174, 98450), (177, 98471), (182, 98489), (183, 98495), (187, 98522),

Gene: BillKnuckles\_33 Start: 26662, Stop: 28140, Start Num: 23

Candidate Starts for BillKnuckles\_33:

(Start: 23 @26662 has 192 MA's), (Start: 26 @26689 has 1 MA's), (29, 26725), (Start: 31 @26743 has 1 MA's), (38, 26809), (Start: 50 @26875 has 1 MA's), (54, 26902), (77, 27091), (99, 27241), (112, 27322), (113, 27325), (125, 27436), (128, 27463), (130, 27496), (152, 27721), (153, 27733), (162, 27811), (171, 27925), (204, 28123),

Gene: Bipolarisk\_171 Start: 94898, Stop: 95974, Start Num: 51

Candidate Starts for Bipolarisk\_171:

(Start: 51 @94898 has 170 MA's), (59, 94940), (60, 94943), (61, 94955), (65, 94979), (66, 94982), (73, 95039), (74, 95057), (79, 95111), (92, 95201), (96, 95222), (97, 95225), (109, 95321), (115, 95372), (125, 95453), (128, 95480), (144, 95612), (146, 95624), (147, 95633), (149, 95654), (160, 95717), (163, 95759), (167, 95828), (169, 95852), (172, 95864), (174, 95873), (177, 95894), (182, 95912), (183, 95918), (187, 95945),

Gene: Bircsak\_32 Start: 26434, Stop: 27912, Start Num: 23

Candidate Starts for Bircsak\_32:

(Start: 23 @26434 has 192 MA's), (Start: 26 @26461 has 1 MA's), (Start: 31 @26515 has 1 MA's), (38, 26581), (Start: 50 @26647 has 1 MA's), (52, 26665), (77, 26863), (86, 26908), (99, 27013), (112, 27094), (113, 27097), (125, 27208), (128, 27235), (130, 27268), (152, 27493), (153, 27505), (162, 27583), (171, 27697), (204, 27895),

Gene: Blackbrain\_170 Start: 94796, Stop: 95872, Start Num: 51

Candidate Starts for Blackbrain\_170:

(Start: 51 @94796 has 170 MA's), (59, 94838), (60, 94841), (61, 94853), (65, 94877), (66, 94880), (73, 94937), (74, 94955), (79, 95009), (92, 95099), (96, 95120), (97, 95123), (109, 95219), (115, 95270), (125, 95351), (128, 95378), (144, 95510), (146, 95522), (147, 95531), (149, 95552), (160, 95615), (163, 95657), (167, 95726), (169, 95750), (172, 95762), (174, 95771), (177, 95792), (182, 95810), (183, 95816), (187, 95843),

Gene: Blackdragon\_169 Start: 94330, Stop: 95406, Start Num: 51

Candidate Starts for Blackdragon\_169:

(Start: 51 @94330 has 170 MA's), (59, 94372), (60, 94375), (61, 94387), (65, 94411), (66, 94414), (73, 94471), (74, 94489), (79, 94543), (92, 94633), (96, 94654), (97, 94657), (109, 94753), (115, 94804), (125, 94885), (128, 94912), (144, 95044), (146, 95056), (147, 95065), (149, 95086), (160, 95149), (163, 95191), (167, 95260), (169, 95284), (172, 95296), (174, 95305), (177, 95326), (182, 95344), (183, 95350), (187, 95377),

Gene: Blessica\_60 Start: 38912, Stop: 40402, Start Num: 22

Candidate Starts for Blessica\_60:

(Start: 22 @38912 has 52 MA's), (27, 38954), (41, 39083), (49, 39122), (60, 39179), (75, 39299), (77, 39335), (81, 39353), (90, 39410), (91, 39419), (95, 39455), (96, 39458), (97, 39461), (101, 39503),

(109, 39548), (114, 39575), (131, 39767), (141, 39884), (148, 39941), (153, 39989), (162, 40067), (165, 40142), (171, 40181), (178, 40211), (188, 40259), (197, 40328),

Gene: Blubba\_162 Start: 96259, Stop: 97335, Start Num: 51

Candidate Starts for Blubba\_162:

(Start: 51 @96259 has 170 MA's), (59, 96301), (60, 96304), (61, 96316), (65, 96340), (66, 96343), (73, 96400), (74, 96418), (79, 96472), (92, 96562), (96, 96583), (97, 96586), (109, 96682), (115, 96733), (125, 96814), (128, 96841), (144, 96973), (146, 96985), (147, 96994), (149, 97015), (160, 97078), (163, 97120), (167, 97189), (169, 97213), (172, 97225), (174, 97234), (177, 97255), (182, 97273), (183, 97279), (187, 97306),

Gene: Blue\_32 Start: 26430, Stop: 27908, Start Num: 23

Candidate Starts for Blue\_32:

(1, 26172), (7, 26256), (8, 26265), (12, 26313), (Start: 23 @26430 has 192 MA's), (Start: 31 @26511 has 1 MA's), (38, 26577), (Start: 50 @26643 has 1 MA's), (54, 26670), (77, 26859), (99, 27009), (112, 27090), (113, 27093), (125, 27204), (128, 27231), (130, 27264), (152, 27489), (153, 27501), (162, 27579), (171, 27693), (204, 27891),

Gene: Bob3\_31 Start: 25471, Stop: 26949, Start Num: 23

Candidate Starts for Bob3\_31:

(1, 25213), (8, 25306), (Start: 23 @25471 has 192 MA's), (Start: 26 @25498 has 1 MA's), (29, 25534), (Start: 31 @25552 has 1 MA's), (38, 25618), (Start: 50 @25684 has 1 MA's), (54, 25711), (77, 25900), (99, 26050), (112, 26131), (113, 26134), (125, 26245), (128, 26272), (130, 26305), (146, 26482), (152, 26530), (153, 26542), (162, 26620), (171, 26734), (204, 26932),

Gene: Bobby\_41 Start: 32988, Stop: 34496, Start Num: 22

Candidate Starts for Bobby\_41:

(4, 32778), (9, 32835), (15, 32895), (19, 32931), (Start: 22 @32988 has 52 MA's), (41, 33159), (66, 33309), (77, 33423), (89, 33492), (93, 33531), (109, 33636), (118, 33714), (124, 33777), (133, 33876), (146, 34017), (150, 34059), (153, 34077), (158, 34098), (162, 34155), (171, 34269), (172, 34272), (173, 34275), (180, 34311), (189, 34359),

Gene: Bogie\_21 Start: 21258, Stop: 22748, Start Num: 23

Candidate Starts for Bogie\_21:

(20, 21204), (Start: 23 @21258 has 192 MA's), (27, 21300), (33, 21357), (41, 21429), (77, 21681), (80, 21696), (81, 21699), (83, 21702), (89, 21750), (96, 21804), (97, 21807), (101, 21849), (109, 21894), (117, 21969), (122, 22023), (124, 22035), (128, 22065), (136, 22176), (153, 22335), (155, 22344), (158, 22356), (162, 22413), (165, 22488), (171, 22527), (185, 22587), (191, 22623), (196, 22659), (200, 22680), (203, 22719),

Gene: Bombitas\_36 Start: 31171, Stop: 32673, Start Num: 22

Candidate Starts for Bombitas\_36:

(6, 30982), (7, 31000), (9, 31018), (10, 31021), (17, 31102), (18, 31111), (Start: 22 @31171 has 52 MA's), (24, 31183), (28, 31219), (29, 31234), (30, 31237), (55, 31420), (60, 31444), (61, 31456), (62, 31474), (74, 31558), (77, 31600), (89, 31669), (109, 31813), (114, 31840), (116, 31885), (118, 31891), (120, 31900), (124, 31957), (128, 31987), (134, 32080), (146, 32197), (151, 32242), (153, 32257), (154, 32263), (159, 32293), (162, 32335), (169, 32440), (178, 32485), (180, 32491), (189, 32539), (193, 32569), (198, 32599), (201, 32608),

Gene: Bones\_32 Start: 25837, Stop: 27321, Start Num: 23

Candidate Starts for Bones\_32:

(8, 25672), (12, 25720), (Start: 23 @25837 has 192 MA's), (Start: 26 @25864 has 1 MA's), (Start: 31 @25918 has 1 MA's), (38, 25984), (Start: 50 @26050 has 1 MA's), (54, 26077), (77, 26266), (86,

26311), (99, 26416), (125, 26611), (128, 26638), (130, 26671), (146, 26848), (150, 26890), (153, 26908), (159, 26944), (162, 26986), (171, 27100), (172, 27103), (178, 27136), (189, 27190), (192, 27217), (203, 27292),

Gene: Bonray\_175 Start: 96301, Stop: 97377, Start Num: 51

Candidate Starts for Bonray\_175:

(Start: 51 @96301 has 170 MA's), (59, 96343), (60, 96346), (61, 96358), (65, 96382), (66, 96385), (73, 96442), (74, 96460), (79, 96514), (92, 96604), (96, 96625), (97, 96628), (109, 96724), (115, 96775), (125, 96856), (128, 96883), (144, 97015), (146, 97027), (147, 97036), (149, 97057), (160, 97120), (163, 97162), (167, 97231), (169, 97255), (172, 97267), (174, 97276), (177, 97297), (182, 97315), (183, 97321), (187, 97348),

Gene: Bora\_57 Start: 38269, Stop: 39759, Start Num: 22

Candidate Starts for Bora\_57:

(Start: 22 @38269 has 52 MA's), (27, 38311), (41, 38440), (49, 38479), (60, 38536), (75, 38656), (77, 38692), (81, 38710), (90, 38767), (91, 38776), (95, 38812), (96, 38815), (97, 38818), (101, 38860), (109, 38905), (114, 38932), (131, 39124), (141, 39241), (148, 39298), (153, 39346), (162, 39424), (165, 39499), (171, 39538), (178, 39568), (188, 39616), (197, 39685),

Gene: Bread\_170 Start: 94859, Stop: 95935, Start Num: 51

Candidate Starts for Bread\_170:

(Start: 51 @94859 has 170 MA's), (59, 94901), (60, 94904), (61, 94916), (65, 94940), (66, 94943), (73, 95000), (74, 95018), (79, 95072), (92, 95162), (96, 95183), (97, 95186), (109, 95282), (115, 95333), (125, 95414), (128, 95441), (144, 95573), (146, 95585), (147, 95594), (149, 95615), (160, 95678), (163, 95720), (167, 95789), (169, 95813), (172, 95825), (174, 95834), (177, 95855), (182, 95873), (183, 95879), (187, 95906),

Gene: Breeniome\_175 Start: 94490, Stop: 95566, Start Num: 51

Candidate Starts for Breeniome\_175:

(Start: 51 @94490 has 170 MA's), (59, 94532), (60, 94535), (61, 94547), (65, 94571), (66, 94574), (73, 94631), (74, 94649), (79, 94703), (92, 94793), (96, 94814), (97, 94817), (109, 94913), (115, 94964), (125, 95045), (128, 95072), (144, 95204), (146, 95216), (147, 95225), (149, 95246), (160, 95309), (163, 95351), (167, 95420), (169, 95444), (172, 95456), (174, 95465), (177, 95486), (182, 95504), (183, 95510), (187, 95537),

Gene: Briton15\_34 Start: 26229, Stop: 27707, Start Num: 23

Candidate Starts for Briton15\_34:

(7, 26055), (8, 26064), (Start: 23 @26229 has 192 MA's), (Start: 26 @26256 has 1 MA's), (29, 26292), (Start: 31 @26310 has 1 MA's), (38, 26376), (55, 26472), (77, 26658), (99, 26808), (112, 26889), (113, 26892), (125, 27003), (128, 27030), (130, 27063), (146, 27240), (153, 27300), (162, 27378), (171, 27492), (204, 27690),

Gene: Brujita\_22 Start: 21613, Stop: 23103, Start Num: 23

Candidate Starts for Brujita\_22:

(20, 21559), (Start: 23 @21613 has 192 MA's), (27, 21655), (33, 21712), (41, 21784), (77, 22036), (80, 22051), (81, 22054), (83, 22057), (89, 22105), (96, 22159), (97, 22162), (101, 22204), (109, 22249), (117, 22324), (122, 22378), (124, 22390), (128, 22420), (136, 22531), (153, 22690), (155, 22699), (158, 22711), (162, 22768), (165, 22843), (171, 22882), (185, 22942), (191, 22978), (196, 23014), (200, 23035), (203, 23074),

Gene: Bruns\_31 Start: 25859, Stop: 27343, Start Num: 23

Candidate Starts for Bruns\_31:



(Start: 23 @25859 has 192 MA's), (Start: 31 @25940 has 1 MA's), (38, 26006), (Start: 50 @26072 has 1 MA's), (54, 26099), (77, 26288), (86, 26333), (99, 26438), (112, 26519), (113, 26522), (125, 26633), (128, 26660), (130, 26693), (146, 26870), (150, 26912), (153, 26930), (159, 26966), (162, 27008), (171, 27122), (172, 27125), (178, 27158), (189, 27212), (192, 27239), (203, 27314),

Gene: Burrough\_176 Start: 96704, Stop: 97780, Start Num: 51

Candidate Starts for Burrough\_176:

(Start: 51 @96704 has 170 MA's), (59, 96746), (60, 96749), (61, 96761), (65, 96785), (66, 96788), (73, 96845), (74, 96863), (79, 96917), (92, 97007), (96, 97028), (97, 97031), (109, 97127), (115, 97178), (125, 97259), (128, 97286), (144, 97418), (146, 97430), (147, 97439), (149, 97460), (160, 97523), (163, 97565), (167, 97634), (169, 97658), (172, 97670), (174, 97679), (177, 97700), (182, 97718), (183, 97724), (187, 97751),

Gene: Burton\_33 Start: 26079, Stop: 27557, Start Num: 23

Candidate Starts for Burton\_33:

(Start: 23 @26079 has 192 MA's), (Start: 26 @26106 has 1 MA's), (29, 26142), (Start: 31 @26160 has 1 MA's), (38, 26226), (Start: 50 @26292 has 1 MA's), (54, 26319), (77, 26508), (99, 26658), (112, 26739), (113, 26742), (125, 26853), (128, 26880), (130, 26913), (146, 27090), (152, 27138), (153, 27150), (162, 27228), (171, 27342), (204, 27540),

Gene: Buttons\_34 Start: 26920, Stop: 28398, Start Num: 23

Candidate Starts for Buttons\_34:

(1, 26662), (4, 26704), (8, 26755), (Start: 23 @26920 has 192 MA's), (Start: 26 @26947 has 1 MA's), (29, 26983), (Start: 31 @27001 has 1 MA's), (38, 27067), (Start: 50 @27133 has 1 MA's), (54, 27160), (77, 27349), (86, 27394), (99, 27499), (125, 27694), (128, 27721), (130, 27754), (152, 27979), (153, 27991), (162, 28069), (171, 28183), (204, 28381),

Gene: Bxb1\_30 Start: 26030, Stop: 27520, Start Num: 23

Candidate Starts for Bxb1\_30:

(7, 25856), (8, 25865), (12, 25913), (Start: 23 @26030 has 192 MA's), (Start: 26 @26057 has 1 MA's), (Start: 31 @26111 has 1 MA's), (38, 26177), (55, 26273), (60, 26297), (61, 26309), (66, 26345), (77, 26459), (93, 26567), (114, 26699), (118, 26750), (128, 26843), (130, 26876), (133, 26912), (138, 26993), (141, 27008), (146, 27053), (152, 27101), (153, 27113), (162, 27191), (165, 27266), (172, 27308), (204, 27503),

Gene: Bxz1\_169 Start: 97902, Stop: 98978, Start Num: 51

Candidate Starts for Bxz1\_169:

(Start: 51 @97902 has 170 MA's), (59, 97944), (60, 97947), (61, 97959), (65, 97983), (66, 97986), (73, 98043), (74, 98061), (79, 98115), (92, 98205), (96, 98226), (97, 98229), (109, 98325), (115, 98376), (125, 98457), (128, 98484), (144, 98616), (146, 98628), (147, 98637), (149, 98658), (160, 98721), (163, 98763), (167, 98832), (169, 98856), (172, 98868), (174, 98877), (177, 98898), (182, 98916), (183, 98922), (187, 98949),

Gene: Cactojaque\_170 Start: 94771, Stop: 95847, Start Num: 51

Candidate Starts for Cactojaque\_170:

(Start: 51 @94771 has 170 MA's), (59, 94813), (60, 94816), (61, 94828), (65, 94852), (66, 94855), (73, 94912), (74, 94930), (79, 94984), (92, 95074), (96, 95095), (97, 95098), (109, 95194), (115, 95245), (125, 95326), (128, 95353), (144, 95485), (146, 95497), (147, 95506), (149, 95527), (160, 95590), (163, 95632), (167, 95701), (169, 95725), (172, 95737), (174, 95746), (177, 95767), (182, 95785), (183, 95791), (187, 95818),

Gene: CactusRose\_31 Start: 25832, Stop: 27313, Start Num: 23

Candidate Starts for CactusRose\_31:

(8, 25667), (Start: 23 @25832 has 192 MA's), (Start: 26 @25859 has 1 MA's), (29, 25895), (Start: 31 @25913 has 1 MA's), (38, 25979), (77, 26261), (99, 26411), (112, 26492), (113, 26495), (125, 26606), (128, 26633), (130, 26666), (146, 26843), (150, 26885), (153, 26903), (159, 26939), (162, 26981), (172, 27098), (173, 27101), (189, 27185), (190, 27194),

Gene: Cali\_169 Start: 95810, Stop: 96886, Start Num: 51

Candidate Starts for Cali\_169:

(Start: 51 @95810 has 170 MA's), (59, 95852), (60, 95855), (61, 95867), (65, 95891), (66, 95894), (73, 95951), (74, 95969), (79, 96023), (92, 96113), (96, 96134), (97, 96137), (109, 96233), (115, 96284), (125, 96365), (128, 96392), (144, 96524), (146, 96536), (147, 96545), (149, 96566), (160, 96629), (163, 96671), (167, 96740), (169, 96764), (172, 96776), (174, 96785), (177, 96806), (182, 96824), (183, 96830), (187, 96857),

Gene: Cane17\_163 Start: 96668, Stop: 97744, Start Num: 51

Candidate Starts for Cane17\_163:

(Start: 51 @96668 has 170 MA's), (59, 96710), (60, 96713), (61, 96725), (65, 96749), (66, 96752), (73, 96809), (74, 96827), (79, 96881), (92, 96971), (96, 96992), (97, 96995), (109, 97091), (115, 97142), (125, 97223), (128, 97250), (144, 97382), (146, 97394), (147, 97403), (149, 97424), (160, 97487), (163, 97529), (167, 97598), (169, 97622), (172, 97634), (174, 97643), (177, 97664), (182, 97682), (183, 97688), (187, 97715),

Gene: Capablanca\_177 Start: 96896, Stop: 97972, Start Num: 51

Candidate Starts for Capablanca\_177:

(Start: 51 @96896 has 170 MA's), (59, 96938), (60, 96941), (61, 96953), (65, 96977), (66, 96980), (73, 97037), (74, 97055), (79, 97109), (92, 97199), (96, 97220), (97, 97223), (109, 97319), (115, 97370), (125, 97451), (128, 97478), (144, 97610), (146, 97622), (147, 97631), (149, 97652), (160, 97715), (163, 97757), (167, 97826), (169, 97850), (172, 97862), (174, 97871), (177, 97892), (182, 97910), (183, 97916), (187, 97943),

Gene: Caravan\_165 Start: 94605, Stop: 95681, Start Num: 51

Candidate Starts for Caravan\_165:

(Start: 51 @94605 has 170 MA's), (59, 94647), (60, 94650), (61, 94662), (65, 94686), (66, 94689), (73, 94746), (74, 94764), (79, 94818), (92, 94908), (96, 94929), (97, 94932), (109, 95028), (115, 95079), (125, 95160), (128, 95187), (144, 95319), (146, 95331), (147, 95340), (149, 95361), (160, 95424), (163, 95466), (167, 95535), (169, 95559), (172, 95571), (174, 95580), (177, 95601), (182, 95619), (183, 95625), (187, 95652),

Gene: Carlyle\_34 Start: 26759, Stop: 28237, Start Num: 23

Candidate Starts for Carlyle\_34:

(4, 26543), (8, 26594), (12, 26642), (Start: 23 @26759 has 192 MA's), (Start: 26 @26786 has 1 MA's), (Start: 31 @26840 has 1 MA's), (38, 26906), (Start: 50 @26972 has 1 MA's), (54, 26999), (77, 27188), (99, 27338), (113, 27422), (125, 27533), (128, 27560), (130, 27593), (152, 27818), (153, 27830), (162, 27908), (171, 28022), (204, 28220),

Gene: Catdawg\_59 Start: 38648, Stop: 40138, Start Num: 22

Candidate Starts for Catdawg\_59:

(Start: 22 @38648 has 52 MA's), (27, 38690), (41, 38819), (49, 38858), (60, 38915), (75, 39035), (77, 39071), (81, 39089), (90, 39146), (91, 39155), (95, 39191), (96, 39194), (97, 39197), (101, 39239), (109, 39284), (114, 39311), (131, 39503), (141, 39620), (148, 39677), (153, 39725), (162, 39803), (165, 39878), (171, 39917), (178, 39947), (188, 39995), (197, 40064),

Gene: Catera\_169 Start: 93891, Stop: 94967, Start Num: 51

Candidate Starts for Catera\_169:

(Start: 51 @93891 has 170 MA's), (59, 93933), (60, 93936), (61, 93948), (65, 93972), (66, 93975), (73, 94032), (74, 94050), (79, 94104), (92, 94194), (96, 94215), (97, 94218), (109, 94314), (115, 94365), (125, 94446), (128, 94473), (144, 94605), (146, 94617), (147, 94626), (149, 94647), (160, 94710), (163, 94752), (167, 94821), (169, 94845), (172, 94857), (174, 94866), (177, 94887), (182, 94905), (183, 94911), (187, 94938),

Gene: Cborch11\_31 Start: 28524, Stop: 29732, Start Num: 32

Candidate Starts for Cborch11\_31:

(Start: 32 @28524 has 10 MA's), (34, 28551), (39, 28590), (58, 28692), (61, 28716), (79, 28869), (84, 28881), (93, 28965), (94, 28974), (95, 28977), (97, 28983), (101, 29022), (102, 29025), (114, 29106), (119, 29163), (128, 29241), (132, 29271), (142, 29316), (144, 29337), (145, 29340), (147, 29358), (148, 29361), (164, 29502), (169, 29589), (170, 29595), (179, 29649), (187, 29691),

Gene: Chanagan\_31 Start: 25544, Stop: 27022, Start Num: 23

Candidate Starts for Chanagan\_31:

(8, 25379), (Start: 23 @25544 has 192 MA's), (Start: 26 @25571 has 1 MA's), (Start: 31 @25625 has 1 MA's), (38, 25691), (40, 25709), (Start: 50 @25757 has 1 MA's), (54, 25784), (77, 25973), (86, 26018), (99, 26123), (112, 26204), (113, 26207), (125, 26318), (128, 26345), (130, 26378), (152, 26603), (153, 26615), (162, 26693), (171, 26807), (204, 27005),

Gene: Chargie21\_172 Start: 94751, Stop: 95827, Start Num: 51

Candidate Starts for Chargie21\_172:

(Start: 51 @94751 has 170 MA's), (59, 94793), (60, 94796), (61, 94808), (65, 94832), (66, 94835), (73, 94892), (74, 94910), (79, 94964), (92, 95054), (96, 95075), (97, 95078), (109, 95174), (115, 95225), (125, 95306), (128, 95333), (144, 95465), (146, 95477), (147, 95486), (149, 95507), (160, 95570), (163, 95612), (167, 95681), (169, 95705), (172, 95717), (174, 95726), (177, 95747), (182, 95765), (183, 95771), (187, 95798),

Gene: CharlieB\_169 Start: 94693, Stop: 95769, Start Num: 51

Candidate Starts for CharlieB\_169:

(Start: 51 @94693 has 170 MA's), (59, 94735), (60, 94738), (61, 94750), (65, 94774), (66, 94777), (73, 94834), (74, 94852), (79, 94906), (92, 94996), (96, 95017), (97, 95020), (109, 95116), (115, 95167), (125, 95248), (128, 95275), (144, 95407), (146, 95419), (147, 95428), (149, 95449), (160, 95512), (163, 95554), (167, 95623), (169, 95647), (172, 95659), (174, 95668), (177, 95689), (182, 95707), (183, 95713), (187, 95740),

Gene: ChaylaJr\_171 Start: 94619, Stop: 95695, Start Num: 51

Candidate Starts for ChaylaJr\_171:

(Start: 51 @94619 has 170 MA's), (59, 94661), (60, 94664), (61, 94676), (65, 94700), (66, 94703), (73, 94760), (74, 94778), (79, 94832), (92, 94922), (96, 94943), (97, 94946), (109, 95042), (115, 95093), (125, 95174), (128, 95201), (144, 95333), (146, 95345), (147, 95354), (149, 95375), (160, 95438), (163, 95480), (167, 95549), (169, 95573), (172, 95585), (174, 95594), (177, 95615), (182, 95633), (183, 95639), (187, 95666),

Gene: ChickenPhender\_171 Start: 94898, Stop: 95974, Start Num: 51

Candidate Starts for ChickenPhender\_171:

(Start: 51 @94898 has 170 MA's), (59, 94940), (60, 94943), (61, 94955), (65, 94979), (66, 94982), (73, 95039), (74, 95057), (79, 95111), (92, 95201), (96, 95222), (97, 95225), (109, 95321), (115, 95372), (125, 95453), (128, 95480), (144, 95612), (146, 95624), (147, 95633), (149, 95654), (160, 95717), (163, 95759), (167, 95828), (169, 95852), (172, 95864), (174, 95873), (177, 95894), (182, 95912), (183, 95918), (187, 95945),

Gene: Chomp\_174 Start: 95736, Stop: 96812, Start Num: 51

Candidate Starts for Chomp\_174:

(Start: 51 @95736 has 170 MA's), (59, 95778), (60, 95781), (61, 95793), (65, 95817), (66, 95820), (73, 95877), (74, 95895), (79, 95949), (92, 96039), (96, 96060), (97, 96063), (109, 96159), (115, 96210), (125, 96291), (128, 96318), (144, 96450), (146, 96462), (147, 96471), (149, 96492), (160, 96555), (163, 96597), (167, 96666), (169, 96690), (172, 96702), (174, 96711), (177, 96732), (182, 96750), (183, 96756), (187, 96783),

Gene: Ciao\_32 Start: 25887, Stop: 27365, Start Num: 23

Candidate Starts for Ciao\_32:

(7, 25713), (8, 25722), (12, 25770), (Start: 23 @25887 has 192 MA's), (Start: 26 @25914 has 1 MA's), (Start: 31 @25968 has 1 MA's), (38, 26034), (Start: 50 @26100 has 1 MA's), (52, 26118), (54, 26127), (77, 26316), (86, 26361), (99, 26466), (112, 26547), (113, 26550), (125, 26661), (128, 26688), (130, 26721), (152, 26946), (153, 26958), (162, 27036), (171, 27150), (204, 27348),

Gene: CindyLou\_176 Start: 96479, Stop: 97555, Start Num: 51

Candidate Starts for CindyLou\_176:

(Start: 51 @96479 has 170 MA's), (59, 96521), (60, 96524), (61, 96536), (65, 96560), (66, 96563), (73, 96620), (74, 96638), (79, 96692), (92, 96782), (96, 96803), (97, 96806), (109, 96902), (115, 96953), (125, 97034), (128, 97061), (144, 97193), (146, 97205), (147, 97214), (149, 97235), (160, 97298), (163, 97340), (167, 97409), (169, 97433), (172, 97445), (174, 97454), (177, 97475), (182, 97493), (183, 97499), (187, 97526),

Gene: Colt\_164 Start: 96333, Stop: 97409, Start Num: 51

Candidate Starts for Colt\_164:

(Start: 51 @96333 has 170 MA's), (59, 96375), (60, 96378), (61, 96390), (65, 96414), (66, 96417), (73, 96474), (74, 96492), (79, 96546), (92, 96636), (96, 96657), (97, 96660), (109, 96756), (115, 96807), (125, 96888), (128, 96915), (144, 97047), (146, 97059), (147, 97068), (149, 97089), (160, 97152), (163, 97194), (167, 97263), (169, 97287), (172, 97299), (174, 97308), (177, 97329), (182, 97347), (183, 97353), (187, 97380),

Gene: ConceptII\_34 Start: 26901, Stop: 28379, Start Num: 23

Candidate Starts for ConceptII\_34:

(Start: 23 @26901 has 192 MA's), (Start: 26 @26928 has 1 MA's), (29, 26964), (Start: 31 @26982 has 1 MA's), (38, 27048), (Start: 50 @27114 has 1 MA's), (54, 27141), (77, 27330), (99, 27480), (112, 27561), (113, 27564), (125, 27675), (128, 27702), (130, 27735), (146, 27912), (152, 27960), (153, 27972), (162, 28050), (171, 28164), (204, 28362),

Gene: Concombres\_179 Start: 97486, Stop: 98562, Start Num: 51

Candidate Starts for Concombres\_179:

(Start: 51 @97486 has 170 MA's), (59, 97528), (60, 97531), (61, 97543), (65, 97567), (66, 97570), (73, 97627), (74, 97645), (79, 97699), (92, 97789), (96, 97810), (97, 97813), (109, 97909), (115, 97960), (125, 98041), (128, 98068), (144, 98200), (146, 98212), (147, 98221), (149, 98242), (160, 98305), (163, 98347), (167, 98416), (169, 98440), (172, 98452), (174, 98461), (177, 98482), (182, 98500), (183, 98506), (187, 98533),

Gene: Constella\_34 Start: 30934, Stop: 32442, Start Num: 22

Candidate Starts for Constella\_34:

(4, 30724), (9, 30781), (15, 30841), (19, 30877), (Start: 22 @30934 has 52 MA's), (41, 31105), (66, 31255), (77, 31369), (89, 31438), (93, 31477), (109, 31582), (118, 31660), (124, 31723), (133, 31822), (146, 31963), (150, 32005), (153, 32023), (158, 32044), (162, 32101), (171, 32215), (172, 32218), (173, 32221), (180, 32257), (189, 32305),

Gene: Corndog\_62 Start: 39642, Stop: 41132, Start Num: 22

Candidate Starts for Corndog\_62:

(Start: 22 @39642 has 52 MA's), (27, 39684), (41, 39813), (49, 39852), (60, 39909), (77, 40065), (81, 40083), (90, 40140), (91, 40149), (96, 40188), (97, 40191), (101, 40233), (109, 40278), (114, 40305), (131, 40497), (141, 40614), (148, 40671), (153, 40719), (162, 40797), (165, 40872), (171, 40911), (178, 40941), (188, 40989), (197, 41058),

Gene: Corvo\_33 Start: 26896, Stop: 28380, Start Num: 23

Candidate Starts for Corvo\_33:

(8, 26731), (Start: 23 @26896 has 192 MA's), (Start: 31 @26977 has 1 MA's), (38, 27043), (Start: 50 @27109 has 1 MA's), (54, 27136), (77, 27325), (86, 27370), (99, 27475), (112, 27556), (113, 27559), (125, 27670), (128, 27697), (130, 27730), (146, 27907), (150, 27949), (153, 27967), (159, 28003), (162, 28045), (171, 28159), (172, 28162), (178, 28195), (189, 28249), (192, 28276), (203, 28351),

Gene: Crispicous1\_31 Start: 25473, Stop: 26963, Start Num: 23

Candidate Starts for Crispicous1\_31:

(8, 25308), (16, 25398), (Start: 23 @25473 has 192 MA's), (Start: 26 @25500 has 1 MA's), (Start: 31 @25554 has 1 MA's), (38, 25620), (54, 25713), (55, 25716), (60, 25740), (61, 25752), (66, 25788), (77, 25902), (93, 26010), (114, 26142), (118, 26193), (128, 26286), (130, 26319), (133, 26355), (138, 26436), (141, 26451), (146, 26496), (152, 26544), (153, 26556), (162, 26634), (165, 26709), (172, 26751), (204, 26946),

Gene: Cueyllyss\_32 Start: 26070, Stop: 27554, Start Num: 23

Candidate Starts for Cueyllyss\_32:

(Start: 23 @26070 has 192 MA's), (Start: 31 @26151 has 1 MA's), (38, 26217), (Start: 50 @26283 has 1 MA's), (54, 26310), (77, 26499), (86, 26544), (99, 26649), (125, 26844), (128, 26871), (130, 26904), (146, 27081), (150, 27123), (153, 27141), (159, 27177), (162, 27219), (171, 27333), (172, 27336), (178, 27369), (189, 27423), (192, 27450), (203, 27525),

Gene: DD5\_33 Start: 26663, Stop: 28141, Start Num: 23

Candidate Starts for DD5\_33:

(4, 26447), (8, 26498), (Start: 23 @26663 has 192 MA's), (Start: 26 @26690 has 1 MA's), (29, 26726), (Start: 31 @26744 has 1 MA's), (38, 26810), (Start: 50 @26876 has 1 MA's), (54, 26903), (60, 26930), (77, 27092), (99, 27242), (112, 27323), (113, 27326), (125, 27437), (128, 27464), (130, 27497), (152, 27722), (153, 27734), (159, 27770), (162, 27812), (171, 27926), (204, 28124),

Gene: DTDevon\_176 Start: 96971, Stop: 98047, Start Num: 51

Candidate Starts for DTDevon\_176:

(Start: 51 @96971 has 170 MA's), (59, 97013), (60, 97016), (61, 97028), (65, 97052), (66, 97055), (73, 97112), (74, 97130), (79, 97184), (92, 97274), (96, 97295), (97, 97298), (109, 97394), (115, 97445), (125, 97526), (128, 97553), (144, 97685), (146, 97697), (147, 97706), (149, 97727), (160, 97790), (163, 97832), (167, 97901), (169, 97925), (172, 97937), (174, 97946), (177, 97967), (182, 97985), (183, 97991), (187, 98018),

Gene: Daffodil\_177 Start: 95198, Stop: 96274, Start Num: 51

Candidate Starts for Daffodil\_177:

(Start: 51 @95198 has 170 MA's), (59, 95240), (60, 95243), (61, 95255), (65, 95279), (66, 95282), (73, 95339), (74, 95357), (79, 95411), (92, 95501), (96, 95522), (97, 95525), (109, 95621), (115, 95672), (125, 95753), (128, 95780), (144, 95912), (146, 95924), (147, 95933), (149, 95954), (160, 96017), (163, 96059), (167, 96128), (169, 96152), (172, 96164), (174, 96173), (177, 96194), (182, 96212), (183, 96218), (187, 96245),

Gene: Dallas\_41 Start: 31672, Stop: 33177, Start Num: 22

Candidate Starts for Dallas\_41:

(3, 31447), (19, 31615), (21, 31669), (Start: 22 @31672 has 52 MA's), (28, 31720), (41, 31843), (66, 31993), (67, 31996), (77, 32107), (93, 32215), (98, 32245), (114, 32347), (125, 32464), (130, 32524), (131, 32539), (146, 32701), (148, 32713), (153, 32761), (159, 32797), (162, 32839), (166, 32917), (172, 32956), (173, 32959), (178, 32989), (185, 33019), (189, 33043),

Gene: Damien\_30 Start: 28525, Stop: 29733, Start Num: 32

Candidate Starts for Damien\_30:

(Start: 32 @28525 has 10 MA's), (34, 28552), (39, 28591), (58, 28693), (61, 28717), (79, 28870), (84, 28882), (85, 28900), (93, 28966), (94, 28975), (95, 28978), (97, 28984), (101, 29023), (102, 29026), (114, 29107), (119, 29164), (128, 29242), (132, 29272), (142, 29317), (144, 29338), (145, 29341), (147, 29359), (148, 29362), (164, 29503), (169, 29590), (170, 29596), (179, 29650), (187, 29692),

Gene: Dandelion\_180 Start: 99293, Stop: 100369, Start Num: 51

Candidate Starts for Dandelion\_180:

(Start: 51 @99293 has 170 MA's), (59, 99335), (60, 99338), (61, 99350), (65, 99374), (66, 99377), (73, 99434), (74, 99452), (79, 99506), (92, 99596), (96, 99617), (97, 99620), (109, 99716), (115, 99767), (125, 99848), (128, 99875), (144, 100007), (146, 100019), (147, 100028), (149, 100049), (160, 100112), (163, 100154), (167, 100223), (169, 100247), (172, 100259), (174, 100268), (177, 100289), (182, 100307), (183, 100313), (187, 100340),

Gene: Darko\_173 Start: 95171, Stop: 96247, Start Num: 51

Candidate Starts for Darko\_173:

(Start: 51 @95171 has 170 MA's), (59, 95213), (60, 95216), (61, 95228), (65, 95252), (66, 95255), (73, 95312), (74, 95330), (79, 95384), (92, 95474), (96, 95495), (97, 95498), (109, 95594), (115, 95645), (125, 95726), (128, 95753), (144, 95885), (146, 95897), (147, 95906), (149, 95927), (160, 95990), (163, 96032), (167, 96101), (169, 96125), (172, 96137), (174, 96146), (177, 96167), (182, 96185), (183, 96191), (187, 96218),

Gene: Delilah\_171 Start: 95316, Stop: 96392, Start Num: 51

Candidate Starts for Delilah\_171:

(Start: 51 @95316 has 170 MA's), (59, 95358), (60, 95361), (61, 95373), (65, 95397), (66, 95400), (73, 95457), (74, 95475), (79, 95529), (92, 95619), (96, 95640), (97, 95643), (109, 95739), (115, 95790), (125, 95871), (128, 95898), (144, 96030), (146, 96042), (147, 96051), (149, 96072), (160, 96135), (163, 96177), (167, 96246), (169, 96270), (172, 96282), (174, 96291), (177, 96312), (182, 96330), (183, 96336), (187, 96363),

Gene: Delylah\_174 Start: 95296, Stop: 96372, Start Num: 51

Candidate Starts for Delylah\_174:

(Start: 51 @95296 has 170 MA's), (59, 95338), (60, 95341), (61, 95353), (65, 95377), (66, 95380), (73, 95437), (74, 95455), (79, 95509), (92, 95599), (96, 95620), (97, 95623), (109, 95719), (115, 95770), (125, 95851), (128, 95878), (144, 96010), (146, 96022), (147, 96031), (149, 96052), (160, 96115), (163, 96157), (167, 96226), (169, 96250), (172, 96262), (174, 96271), (177, 96292), (182, 96310), (183, 96316), (187, 96343),

Gene: Demodog\_180 Start: 97495, Stop: 98571, Start Num: 51

Candidate Starts for Demodog\_180:

(Start: 51 @97495 has 170 MA's), (59, 97537), (60, 97540), (61, 97552), (65, 97576), (66, 97579), (73, 97636), (74, 97654), (79, 97708), (92, 97798), (96, 97819), (97, 97822), (109, 97918), (115, 97969), (125, 98050), (128, 98077), (144, 98209), (146, 98221), (147, 98230), (149, 98251), (160, 98314), (163, 98356), (167, 98425), (169, 98449), (172, 98461), (174, 98470), (177, 98491), (182, 98509), (183, 98515), (187, 98542),

Gene: Derek\_172 Start: 95499, Stop: 96575, Start Num: 51

Candidate Starts for Derek\_172:

(Start: 51 @95499 has 170 MA's), (59, 95541), (60, 95544), (61, 95556), (65, 95580), (66, 95583), (73, 95640), (74, 95658), (79, 95712), (92, 95802), (96, 95823), (97, 95826), (109, 95922), (115, 95973), (125, 96054), (128, 96081), (144, 96213), (146, 96225), (147, 96234), (149, 96255), (160, 96318), (163, 96360), (167, 96429), (169, 96453), (172, 96465), (174, 96474), (177, 96495), (182, 96513), (183, 96519), (187, 96546),

Gene: Dexes\_33 Start: 26625, Stop: 28106, Start Num: 23

Candidate Starts for Dexes\_33:

(Start: 23 @26625 has 192 MA's), (Start: 26 @26652 has 1 MA's), (29, 26688), (Start: 31 @26706 has 1 MA's), (38, 26772), (42, 26802), (61, 26904), (77, 27054), (86, 27099), (99, 27204), (112, 27285), (113, 27288), (125, 27399), (128, 27426), (130, 27459), (150, 27678), (153, 27696), (159, 27732), (162, 27774), (172, 27891), (173, 27894), (189, 27978), (190, 27987),

Gene: Dietrick\_164 Start: 93921, Stop: 94997, Start Num: 51

Candidate Starts for Dietrick\_164:

(Start: 51 @93921 has 170 MA's), (59, 93963), (60, 93966), (61, 93978), (65, 94002), (66, 94005), (73, 94062), (74, 94080), (79, 94134), (92, 94224), (96, 94245), (97, 94248), (109, 94344), (115, 94395), (125, 94476), (128, 94503), (144, 94635), (146, 94647), (147, 94656), (149, 94677), (160, 94740), (163, 94782), (167, 94851), (169, 94875), (172, 94887), (174, 94896), (177, 94917), (182, 94935), (183, 94941), (187, 94968),

Gene: DirtMonster\_166 Start: 95092, Stop: 96168, Start Num: 51

Candidate Starts for DirtMonster\_166:

(Start: 51 @95092 has 170 MA's), (59, 95134), (60, 95137), (61, 95149), (65, 95173), (66, 95176), (73, 95233), (74, 95251), (79, 95305), (92, 95395), (96, 95416), (97, 95419), (109, 95515), (115, 95566), (125, 95647), (128, 95674), (144, 95806), (146, 95818), (147, 95827), (149, 95848), (160, 95911), (163, 95953), (167, 96022), (169, 96046), (172, 96058), (174, 96067), (177, 96088), (182, 96106), (183, 96112), (187, 96139),

Gene: Domi\_168 Start: 95089, Stop: 96165, Start Num: 51

Candidate Starts for Domi\_168:

(Start: 51 @95089 has 170 MA's), (59, 95131), (60, 95134), (61, 95146), (65, 95170), (66, 95173), (73, 95230), (74, 95248), (79, 95302), (92, 95392), (96, 95413), (97, 95416), (109, 95512), (115, 95563), (125, 95644), (128, 95671), (144, 95803), (146, 95815), (147, 95824), (149, 95845), (160, 95908), (163, 95950), (167, 96019), (169, 96043), (172, 96055), (174, 96064), (177, 96085), (182, 96103), (183, 96109), (187, 96136),

Gene: Doom\_33 Start: 26760, Stop: 28211, Start Num: 26

Candidate Starts for Doom\_33:

(8, 26568), (Start: 23 @26733 has 192 MA's), (Start: 26 @26760 has 1 MA's), (29, 26796), (Start: 31 @26814 has 1 MA's), (38, 26880), (54, 26973), (77, 27162), (86, 27207), (99, 27312), (125, 27507), (128, 27534), (130, 27567), (152, 27792), (153, 27804), (162, 27882), (171, 27996), (204, 28194),

Gene: Dove\_37 Start: 31170, Stop: 32672, Start Num: 22

Candidate Starts for Dove\_37:

(6, 30981), (7, 30999), (9, 31017), (10, 31020), (17, 31101), (18, 31110), (Start: 22 @31170 has 52 MA's), (24, 31182), (28, 31218), (29, 31233), (30, 31236), (55, 31419), (60, 31443), (61, 31455), (62, 31473), (74, 31557), (77, 31599), (89, 31668), (109, 31812), (114, 31839), (116, 31884), (118, 31890), (120, 31899), (124, 31956), (128, 31986), (134, 32079), (146, 32196), (151, 32241), (153, 32256), (154, 32262), (159, 32292), (162, 32334), (169, 32439), (178, 32484), (180, 32490), (189, 32538), (193, 32568), (198, 32598), (201, 32607),

Gene: DrFeelGood\_31 Start: 26336, Stop: 27826, Start Num: 23

Candidate Starts for DrFeelGood\_31:

(7, 26162), (8, 26171), (12, 26219), (Start: 23 @26336 has 192 MA's), (Start: 26 @26363 has 1 MA's), (29, 26399), (Start: 31 @26417 has 1 MA's), (38, 26483), (54, 26576), (55, 26579), (60, 26603), (61, 26615), (66, 26651), (77, 26765), (93, 26873), (114, 27005), (118, 27056), (128, 27149), (130, 27182), (133, 27218), (138, 27299), (141, 27314), (146, 27359), (152, 27407), (153, 27419), (162, 27497), (165, 27572), (172, 27614), (204, 27809),

Gene: DrPhinkDaddy\_170 Start: 95977, Stop: 97053, Start Num: 51

Candidate Starts for DrPhinkDaddy\_170:

(Start: 51 @95977 has 170 MA's), (59, 96019), (60, 96022), (61, 96034), (65, 96058), (66, 96061), (73, 96118), (74, 96136), (79, 96190), (92, 96280), (96, 96301), (97, 96304), (109, 96400), (115, 96451), (125, 96532), (128, 96559), (144, 96691), (146, 96703), (147, 96712), (149, 96733), (160, 96796), (163, 96838), (167, 96907), (169, 96931), (172, 96943), (174, 96952), (177, 96973), (182, 96991), (183, 96997), (187, 97024),

Gene: Drazdys\_174 Start: 95514, Stop: 96590, Start Num: 51

Candidate Starts for Drazdys\_174:

(Start: 51 @95514 has 170 MA's), (59, 95556), (60, 95559), (61, 95571), (65, 95595), (66, 95598), (73, 95655), (74, 95673), (79, 95727), (92, 95817), (96, 95838), (97, 95841), (109, 95937), (115, 95988), (125, 96069), (128, 96096), (144, 96228), (146, 96240), (147, 96249), (149, 96270), (160, 96333), (163, 96375), (167, 96444), (169, 96468), (172, 96480), (174, 96489), (177, 96510), (182, 96528), (183, 96534), (187, 96561),

Gene: DreamCatcher\_35 Start: 27303, Stop: 28781, Start Num: 23

Candidate Starts for DreamCatcher\_35:

(8, 27138), (Start: 23 @27303 has 192 MA's), (Start: 26 @27330 has 1 MA's), (Start: 31 @27384 has 1 MA's), (38, 27450), (Start: 50 @27516 has 1 MA's), (54, 27543), (77, 27732), (99, 27882), (112, 27963), (113, 27966), (125, 28077), (128, 28104), (130, 28137), (152, 28362), (153, 28374), (162, 28452), (165, 28527), (172, 28569), (204, 28764),

Gene: Dreamboat\_33 Start: 25902, Stop: 27386, Start Num: 23

Candidate Starts for Dreamboat\_33:

(8, 25737), (Start: 23 @25902 has 192 MA's), (Start: 26 @25929 has 1 MA's), (Start: 31 @25983 has 1 MA's), (38, 26049), (54, 26142), (77, 26331), (99, 26481), (112, 26562), (113, 26565), (125, 26676), (128, 26703), (130, 26736), (146, 26913), (150, 26955), (153, 26973), (159, 27009), (162, 27051), (171, 27165), (172, 27168), (178, 27201), (189, 27255), (192, 27282), (203, 27357),

Gene: DroogsArmy\_5 Start: 2345, Stop: 3565, Start Num: 35

Candidate Starts for DroogsArmy\_5:

(Start: 35 @2345 has 3 MA's), (48, 2435), (52, 2459), (61, 2507), (65, 2531), (68, 2540), (78, 2648), (88, 2705), (97, 2768), (102, 2810), (104, 2822), (110, 2867), (113, 2885), (117, 2936), (120, 2948), (128, 3014), (135, 3101), (145, 3194), (152, 3251), (169, 3446), (187, 3533),

Gene: Dulcie\_31 Start: 25599, Stop: 27077, Start Num: 23

Candidate Starts for Dulcie\_31:

(8, 25434), (Start: 23 @25599 has 192 MA's), (Start: 26 @25626 has 1 MA's), (29, 25662), (Start: 31 @25680 has 1 MA's), (38, 25746), (Start: 50 @25812 has 1 MA's), (54, 25839), (77, 26028), (99, 26178), (112, 26259), (113, 26262), (125, 26373), (128, 26400), (130, 26433), (152, 26658), (153, 26670), (162, 26748), (171, 26862), (204, 27060),

Gene: Dussy\_33 Start: 26164, Stop: 27648, Start Num: 23

Candidate Starts for Dussy\_33:



(4, 25948), (8, 25999), (12, 26047), (20, 26110), (Start: 23 @26164 has 192 MA's), (Start: 26 @26191 has 1 MA's), (Start: 31 @26245 has 1 MA's), (38, 26311), (Start: 50 @26377 has 1 MA's), (54, 26404), (77, 26593), (86, 26638), (99, 26743), (112, 26824), (113, 26827), (125, 26938), (128, 26965), (130, 26998), (146, 27175), (150, 27217), (153, 27235), (159, 27271), (162, 27313), (171, 27427), (172, 27430), (178, 27463), (189, 27517), (192, 27544), (203, 27619),

Gene: Dylan\_59 Start: 38693, Stop: 40183, Start Num: 22

Candidate Starts for Dylan\_59:

(Start: 22 @38693 has 52 MA's), (27, 38735), (41, 38864), (49, 38903), (60, 38960), (77, 39116), (81, 39134), (90, 39191), (91, 39200), (96, 39239), (97, 39242), (101, 39284), (109, 39329), (114, 39356), (131, 39548), (141, 39665), (148, 39722), (153, 39770), (162, 39848), (165, 39923), (171, 39962), (178, 39992), (188, 40040), (197, 40109),

Gene: Dynamix\_33 Start: 25981, Stop: 27459, Start Num: 23

Candidate Starts for Dynamix\_33:

(Start: 23 @25981 has 192 MA's), (Start: 26 @26008 has 1 MA's), (29, 26044), (Start: 31 @26062 has 1 MA's), (38, 26128), (Start: 50 @26194 has 1 MA's), (54, 26221), (77, 26410), (99, 26560), (113, 26644), (125, 26755), (128, 26782), (130, 26815), (152, 27040), (153, 27052), (162, 27130), (171, 27244), (204, 27442),

Gene: ET08\_160 Start: 94293, Stop: 95369, Start Num: 51

Candidate Starts for ET08\_160:

(Start: 51 @94293 has 170 MA's), (59, 94335), (60, 94338), (61, 94350), (65, 94374), (66, 94377), (73, 94434), (74, 94452), (79, 94506), (92, 94596), (96, 94617), (97, 94620), (109, 94716), (115, 94767), (125, 94848), (128, 94875), (144, 95007), (146, 95019), (147, 95028), (149, 95049), (160, 95112), (163, 95154), (167, 95223), (169, 95247), (172, 95259), (174, 95268), (177, 95289), (182, 95307), (183, 95313), (187, 95340),

Gene: EasyJones\_177 Start: 95433, Stop: 96509, Start Num: 51

Candidate Starts for EasyJones\_177:

(Start: 51 @95433 has 170 MA's), (59, 95475), (60, 95478), (61, 95490), (65, 95514), (66, 95517), (73, 95574), (74, 95592), (79, 95646), (92, 95736), (96, 95757), (97, 95760), (109, 95856), (115, 95907), (125, 95988), (128, 96015), (144, 96147), (146, 96159), (147, 96168), (149, 96189), (160, 96252), (163, 96294), (167, 96363), (169, 96387), (172, 96399), (174, 96408), (177, 96429), (182, 96447), (183, 96453), (187, 96480),

Gene: Edtherson\_33 Start: 26681, Stop: 28159, Start Num: 23

Candidate Starts for Edtherson\_33:

(8, 26516), (12, 26564), (Start: 23 @26681 has 192 MA's), (Start: 26 @26708 has 1 MA's), (Start: 31 @26762 has 1 MA's), (38, 26828), (42, 26858), (Start: 50 @26894 has 1 MA's), (52, 26912), (54, 26921), (77, 27110), (86, 27155), (99, 27260), (112, 27341), (113, 27344), (125, 27455), (128, 27482), (130, 27515), (152, 27740), (153, 27752), (162, 27830), (171, 27944), (204, 28142),

Gene: EggyFarm\_183 Start: 98043, Stop: 99119, Start Num: 51

Candidate Starts for EggyFarm\_183:

(Start: 51 @98043 has 170 MA's), (59, 98085), (60, 98088), (61, 98100), (65, 98124), (66, 98127), (73, 98184), (74, 98202), (79, 98256), (92, 98346), (96, 98367), (97, 98370), (109, 98466), (115, 98517), (125, 98598), (128, 98625), (144, 98757), (146, 98769), (147, 98778), (149, 98799), (160, 98862), (163, 98904), (167, 98973), (169, 98997), (172, 99009), (174, 99018), (177, 99039), (182, 99057), (183, 99063), (187, 99090),

Gene: Ejimix\_40 Start: 32900, Stop: 34402, Start Num: 22

Candidate Starts for Ejimix\_40:

(6, 32711), (7, 32729), (9, 32747), (10, 32750), (17, 32831), (18, 32840), (Start: 22 @32900 has 52 MA's), (24, 32912), (28, 32948), (29, 32963), (30, 32966), (55, 33149), (60, 33173), (61, 33185), (62, 33203), (74, 33287), (77, 33329), (89, 33398), (109, 33542), (114, 33569), (116, 33614), (118, 33620), (120, 33629), (124, 33686), (128, 33716), (134, 33809), (146, 33926), (151, 33971), (153, 33986), (154, 33992), (159, 34022), (162, 34064), (169, 34169), (178, 34214), (180, 34220), (189, 34268), (193, 34298), (198, 34328), (201, 34337),

Gene: EmToTheThree\_175 Start: 96393, Stop: 97469, Start Num: 51

Candidate Starts for EmToTheThree\_175:

(Start: 51 @96393 has 170 MA's), (59, 96435), (60, 96438), (61, 96450), (65, 96474), (66, 96477), (73, 96534), (74, 96552), (79, 96606), (92, 96696), (96, 96717), (97, 96720), (109, 96816), (115, 96867), (125, 96948), (128, 96975), (144, 97107), (146, 97119), (147, 97128), (149, 97149), (160, 97212), (163, 97254), (167, 97323), (169, 97347), (172, 97359), (174, 97368), (177, 97389), (182, 97407), (183, 97413), (187, 97440),

Gene: EmmaElysia\_175 Start: 95444, Stop: 96520, Start Num: 51

Candidate Starts for EmmaElysia\_175:

(Start: 51 @95444 has 170 MA's), (59, 95486), (60, 95489), (61, 95501), (65, 95525), (66, 95528), (73, 95585), (74, 95603), (79, 95657), (92, 95747), (96, 95768), (97, 95771), (109, 95867), (115, 95918), (125, 95999), (128, 96026), (144, 96158), (146, 96170), (147, 96179), (149, 96200), (160, 96263), (163, 96305), (167, 96374), (169, 96398), (172, 96410), (174, 96419), (177, 96440), (182, 96458), (183, 96464), (187, 96491),

Gene: Erdmann\_174 Start: 95867, Stop: 96943, Start Num: 51

Candidate Starts for Erdmann\_174:

(Start: 51 @95867 has 170 MA's), (59, 95909), (60, 95912), (61, 95924), (65, 95948), (66, 95951), (73, 96008), (74, 96026), (79, 96080), (92, 96170), (96, 96191), (97, 96194), (109, 96290), (115, 96341), (125, 96422), (128, 96449), (144, 96581), (146, 96593), (147, 96602), (149, 96623), (160, 96686), (163, 96728), (167, 96797), (169, 96821), (172, 96833), (174, 96842), (177, 96863), (182, 96881), (183, 96887), (187, 96914),

Gene: EricMillard\_40 Start: 32433, Stop: 33938, Start Num: 22

Candidate Starts for EricMillard\_40:

(3, 32208), (19, 32376), (21, 32430), (Start: 22 @32433 has 52 MA's), (28, 32481), (41, 32604), (66, 32754), (67, 32757), (77, 32868), (93, 32976), (98, 33006), (114, 33108), (125, 33225), (130, 33285), (131, 33300), (146, 33462), (148, 33474), (153, 33522), (159, 33558), (162, 33600), (166, 33678), (172, 33717), (173, 33720), (178, 33750), (185, 33780), (189, 33804),

Gene: ErnieJ\_168 Start: 94173, Stop: 95249, Start Num: 51

Candidate Starts for ErnieJ\_168:

(Start: 51 @94173 has 170 MA's), (59, 94215), (60, 94218), (61, 94230), (65, 94254), (66, 94257), (73, 94314), (74, 94332), (79, 94386), (92, 94476), (96, 94497), (97, 94500), (109, 94596), (115, 94647), (125, 94728), (128, 94755), (144, 94887), (146, 94899), (147, 94908), (149, 94929), (160, 94992), (163, 95034), (167, 95103), (169, 95127), (172, 95139), (174, 95148), (177, 95169), (182, 95187), (183, 95193), (187, 95220),

Gene: Espresso\_32 Start: 26045, Stop: 27523, Start Num: 23

Candidate Starts for Espresso\_32:

(8, 25880), (12, 25928), (Start: 23 @26045 has 192 MA's), (Start: 26 @26072 has 1 MA's), (Start: 31 @26126 has 1 MA's), (38, 26192), (Start: 50 @26258 has 1 MA's), (54, 26285), (77, 26474), (86, 26519), (99, 26624), (112, 26705), (113, 26708), (125, 26819), (128, 26846), (130, 26879), (152, 27104), (153, 27116), (162, 27194), (171, 27308), (204, 27506),

Gene: Essence\_171 Start: 94725, Stop: 95801, Start Num: 51

Candidate Starts for Essence\_171:

(Start: 51 @94725 has 170 MA's), (59, 94767), (60, 94770), (61, 94782), (65, 94806), (66, 94809), (73, 94866), (74, 94884), (79, 94938), (92, 95028), (96, 95049), (97, 95052), (109, 95148), (115, 95199), (125, 95280), (128, 95307), (144, 95439), (146, 95451), (147, 95460), (149, 95481), (160, 95544), (163, 95586), (167, 95655), (169, 95679), (172, 95691), (174, 95700), (177, 95721), (182, 95739), (183, 95745), (187, 95772),

Gene: Euphoria\_32 Start: 25935, Stop: 27419, Start Num: 23

Candidate Starts for Euphoria\_32:

(2, 25698), (Start: 23 @25935 has 192 MA's), (Start: 26 @25962 has 1 MA's), (Start: 31 @26016 has 1 MA's), (38, 26082), (54, 26175), (55, 26178), (77, 26364), (99, 26514), (112, 26595), (113, 26598), (125, 26709), (128, 26736), (130, 26769), (146, 26946), (150, 26988), (153, 27006), (159, 27042), (162, 27084), (171, 27198), (172, 27201), (178, 27234), (189, 27288), (192, 27315), (203, 27390),

Gene: Ewok\_173 Start: 95787, Stop: 96863, Start Num: 51

Candidate Starts for Ewok\_173:

(Start: 51 @95787 has 170 MA's), (59, 95829), (60, 95832), (61, 95844), (65, 95868), (66, 95871), (73, 95928), (74, 95946), (79, 96000), (92, 96090), (96, 96111), (97, 96114), (109, 96210), (115, 96261), (125, 96342), (128, 96369), (144, 96501), (146, 96513), (147, 96522), (149, 96543), (160, 96606), (163, 96648), (167, 96717), (169, 96741), (172, 96753), (174, 96762), (177, 96783), (182, 96801), (183, 96807), (187, 96834),

Gene: Eyeball\_32 Start: 25740, Stop: 27224, Start Num: 23

Candidate Starts for Eyeball\_32:

(8, 25575), (Start: 23 @25740 has 192 MA's), (Start: 26 @25767 has 1 MA's), (29, 25803), (Start: 31 @25821 has 1 MA's), (38, 25887), (Start: 50 @25953 has 1 MA's), (54, 25980), (77, 26169), (99, 26319), (125, 26514), (128, 26541), (130, 26574), (146, 26751), (150, 26793), (153, 26811), (159, 26847), (162, 26889), (171, 27003), (172, 27006), (178, 27039), (189, 27093), (192, 27120), (203, 27195),

Gene: Fajezeel\_34 Start: 26250, Stop: 27728, Start Num: 23

Candidate Starts for Fajezeel\_34:

(7, 26076), (8, 26085), (Start: 23 @26250 has 192 MA's), (Start: 26 @26277 has 1 MA's), (Start: 31 @26331 has 1 MA's), (38, 26397), (Start: 50 @26463 has 1 MA's), (54, 26490), (77, 26679), (99, 26829), (112, 26910), (113, 26913), (125, 27024), (128, 27051), (130, 27084), (152, 27309), (153, 27321), (162, 27399), (171, 27513), (204, 27711),

Gene: Familton\_60 Start: 38605, Stop: 40095, Start Num: 22

Candidate Starts for Familton\_60:

(Start: 22 @38605 has 52 MA's), (27, 38647), (41, 38776), (49, 38815), (60, 38872), (75, 38992), (77, 39028), (81, 39046), (90, 39103), (91, 39112), (95, 39148), (96, 39151), (97, 39154), (101, 39196), (109, 39241), (114, 39268), (131, 39460), (141, 39577), (148, 39634), (153, 39682), (162, 39760), (165, 39835), (171, 39874), (178, 39904), (188, 39952), (197, 40021),

Gene: Fenn\_33 Start: 27568, Stop: 29046, Start Num: 23

Candidate Starts for Fenn\_33:

(7, 27394), (8, 27403), (12, 27451), (Start: 23 @27568 has 192 MA's), (Start: 26 @27595 has 1 MA's), (Start: 31 @27649 has 1 MA's), (38, 27715), (Start: 50 @27781 has 1 MA's), (54, 27808), (55, 27811), (77, 27997), (99, 28147), (112, 28228), (113, 28231), (125, 28342), (128, 28369), (130, 28402), (152, 28627), (153, 28639), (162, 28717), (171, 28831), (204, 29029),

Gene: Firecracker\_60 Start: 38795, Stop: 40285, Start Num: 22

Candidate Starts for Firecracker\_60:

(Start: 22 @38795 has 52 MA's), (27, 38837), (41, 38966), (49, 39005), (60, 39062), (77, 39218), (81, 39236), (90, 39293), (91, 39302), (96, 39341), (97, 39344), (101, 39386), (109, 39431), (114, 39458), (131, 39650), (141, 39767), (148, 39824), (153, 39872), (162, 39950), (165, 40025), (171, 40064), (178, 40094), (188, 40142), (197, 40211),

Gene: Flabslab\_169 Start: 93755, Stop: 94831, Start Num: 51

Candidate Starts for Flabslab\_169:

(Start: 51 @93755 has 170 MA's), (59, 93797), (60, 93800), (61, 93812), (65, 93836), (66, 93839), (73, 93896), (74, 93914), (79, 93968), (92, 94058), (96, 94079), (97, 94082), (109, 94178), (115, 94229), (125, 94310), (128, 94337), (144, 94469), (146, 94481), (147, 94490), (149, 94511), (160, 94574), (163, 94616), (167, 94685), (169, 94709), (172, 94721), (174, 94730), (177, 94751), (182, 94769), (183, 94775), (187, 94802),

Gene: Fludd\_175 Start: 95706, Stop: 96782, Start Num: 51

Candidate Starts for Fludd\_175:

(Start: 51 @95706 has 170 MA's), (59, 95748), (60, 95751), (61, 95763), (65, 95787), (66, 95790), (73, 95847), (74, 95865), (79, 95919), (92, 96009), (96, 96030), (97, 96033), (109, 96129), (115, 96180), (125, 96261), (128, 96288), (144, 96420), (146, 96432), (147, 96441), (149, 96462), (160, 96525), (163, 96567), (167, 96636), (169, 96660), (172, 96672), (174, 96681), (177, 96702), (182, 96720), (183, 96726), (187, 96753),

Gene: FlyCatcher\_5 Start: 2346, Stop: 3569, Start Num: 36

Candidate Starts for FlyCatcher\_5:

(Start: 36 @2346 has 1 MA's), (47, 2433), (59, 2493), (65, 2532), (66, 2535), (77, 2643), (83, 2664), (95, 2763), (97, 2769), (100, 2802), (102, 2811), (106, 2835), (107, 2862), (113, 2886), (121, 2952), (128, 3018), (139, 3159), (140, 3162), (143, 3177), (153, 3267), (165, 3417), (172, 3459), (187, 3534),

Gene: Forsytheast\_32 Start: 26174, Stop: 27658, Start Num: 23

Candidate Starts for Forsytheast\_32:

(Start: 23 @26174 has 192 MA's), (Start: 26 @26201 has 1 MA's), (29, 26237), (Start: 31 @26255 has 1 MA's), (38, 26321), (Start: 50 @26387 has 1 MA's), (61, 26453), (77, 26603), (99, 26753), (112, 26834), (113, 26837), (125, 26948), (128, 26975), (130, 27008), (146, 27185), (150, 27227), (153, 27245), (159, 27281), (162, 27323), (171, 27437), (172, 27440), (178, 27473), (189, 27527), (192, 27554), (203, 27629),

Gene: FoulBall\_59 Start: 38599, Stop: 40089, Start Num: 22

Candidate Starts for FoulBall\_59:

(Start: 22 @38599 has 52 MA's), (27, 38641), (41, 38770), (49, 38809), (60, 38866), (75, 38986), (77, 39022), (81, 39040), (90, 39097), (91, 39106), (95, 39142), (96, 39145), (97, 39148), (101, 39190), (109, 39235), (114, 39262), (131, 39454), (141, 39571), (148, 39628), (153, 39676), (162, 39754), (165, 39829), (171, 39868), (178, 39898), (188, 39946), (197, 40015),

Gene: Fowlmouth\_25 Start: 24044, Stop: 25258, Start Num: 32

Candidate Starts for Fowlmouth\_25:

(Start: 32 @24044 has 10 MA's), (34, 24071), (45, 24155), (52, 24188), (53, 24191), (57, 24209), (61, 24236), (69, 24272), (71, 24293), (74, 24335), (84, 24401), (87, 24428), (95, 24497), (97, 24503), (114, 24626), (118, 24677), (119, 24683), (126, 24746), (128, 24761), (132, 24791), (144, 24857), (147, 24878), (149, 24899), (151, 24914), (157, 24944), (168, 25100), (170, 25118), (186, 25202), (187, 25214), (191, 25235),

Gene: FoxtrotP1\_172 Start: 96368, Stop: 97444, Start Num: 51

Candidate Starts for FoxtrotP1\_172:

(Start: 51 @96368 has 170 MA's), (59, 96410), (60, 96413), (61, 96425), (65, 96449), (66, 96452), (73, 96509), (74, 96527), (79, 96581), (92, 96671), (96, 96692), (97, 96695), (109, 96791), (115, 96842), (125, 96923), (128, 96950), (144, 97082), (146, 97094), (147, 97103), (149, 97124), (160, 97187), (163, 97229), (167, 97298), (169, 97322), (172, 97334), (174, 97343), (177, 97364), (182, 97382), (183, 97388), (187, 97415),

Gene: Francis47\_32 Start: 26440, Stop: 27918, Start Num: 23

Candidate Starts for Francis47\_32:

(Start: 23 @26440 has 192 MA's), (Start: 26 @26467 has 1 MA's), (Start: 31 @26521 has 1 MA's), (38, 26587), (Start: 50 @26653 has 1 MA's), (54, 26680), (77, 26869), (86, 26914), (99, 27019), (112, 27100), (113, 27103), (125, 27214), (128, 27241), (130, 27274), (146, 27451), (152, 27499), (153, 27511), (162, 27589), (171, 27703), (204, 27901),

Gene: FrayBell\_177 Start: 95491, Stop: 96567, Start Num: 51

Candidate Starts for FrayBell\_177:

(Start: 51 @95491 has 170 MA's), (59, 95533), (60, 95536), (61, 95548), (65, 95572), (66, 95575), (73, 95632), (74, 95650), (79, 95704), (92, 95794), (96, 95815), (97, 95818), (109, 95914), (115, 95965), (125, 96046), (128, 96073), (144, 96205), (146, 96217), (147, 96226), (149, 96247), (160, 96310), (163, 96352), (167, 96421), (169, 96445), (172, 96457), (174, 96466), (177, 96487), (182, 96505), (183, 96511), (187, 96538),

Gene: Froghopper\_33 Start: 25902, Stop: 27380, Start Num: 23

Candidate Starts for Froghopper\_33:

(1, 25644), (8, 25737), (Start: 23 @25902 has 192 MA's), (Start: 26 @25929 has 1 MA's), (29, 25965), (Start: 31 @25983 has 1 MA's), (38, 26049), (42, 26079), (77, 26331), (99, 26481), (112, 26562), (113, 26565), (125, 26676), (128, 26703), (130, 26736), (152, 26961), (153, 26973), (159, 27009), (162, 27051), (171, 27165), (204, 27363),

Gene: FudgeTart\_170 Start: 94934, Stop: 96010, Start Num: 51

Candidate Starts for FudgeTart\_170:

(Start: 51 @94934 has 170 MA's), (59, 94976), (60, 94979), (61, 94991), (65, 95015), (66, 95018), (74, 95093), (79, 95147), (92, 95237), (96, 95258), (97, 95261), (109, 95357), (115, 95408), (125, 95489), (128, 95516), (144, 95648), (146, 95660), (147, 95669), (149, 95690), (160, 95753), (163, 95795), (167, 95864), (169, 95888), (172, 95900), (174, 95909), (177, 95930), (182, 95948), (183, 95954), (187, 95981),

Gene: Fushigi\_33 Start: 26359, Stop: 27837, Start Num: 23

Candidate Starts for Fushigi\_33:

(8, 26194), (Start: 23 @26359 has 192 MA's), (Start: 26 @26386 has 1 MA's), (Start: 31 @26440 has 1 MA's), (38, 26506), (Start: 50 @26572 has 1 MA's), (54, 26599), (77, 26788), (99, 26938), (112, 27019), (113, 27022), (125, 27133), (128, 27160), (130, 27193), (152, 27418), (153, 27430), (162, 27508), (171, 27622), (204, 27820),

Gene: Gabriel\_176 Start: 94464, Stop: 95540, Start Num: 51

Candidate Starts for Gabriel\_176:

(Start: 51 @94464 has 170 MA's), (59, 94506), (60, 94509), (61, 94521), (65, 94545), (66, 94548), (73, 94605), (74, 94623), (79, 94677), (92, 94767), (96, 94788), (97, 94791), (109, 94887), (115, 94938), (125, 95019), (128, 95046), (144, 95178), (146, 95190), (147, 95199), (149, 95220), (160, 95283), (163, 95325), (167, 95394), (169, 95418), (172, 95430), (174, 95439), (177, 95460), (182, 95478), (183, 95484), (187, 95511),

Gene: GageAP\_34 Start: 26673, Stop: 28151, Start Num: 23

Candidate Starts for GageAP\_34:

(8, 26508), (Start: 23 @26673 has 192 MA's), (Start: 26 @26700 has 1 MA's), (29, 26736), (Start: 31 @26754 has 1 MA's), (38, 26820), (77, 27102), (86, 27147), (99, 27252), (125, 27447), (128, 27474), (130, 27507), (150, 27726), (153, 27744), (159, 27780), (162, 27822), (171, 27936),

Gene: Gamgam\_175 Start: 94437, Stop: 95513, Start Num: 51

Candidate Starts for Gamgam\_175:

(Start: 51 @94437 has 170 MA's), (59, 94479), (60, 94482), (61, 94494), (65, 94518), (66, 94521), (73, 94578), (74, 94596), (79, 94650), (92, 94740), (96, 94761), (97, 94764), (109, 94860), (115, 94911), (125, 94992), (128, 95019), (144, 95151), (146, 95163), (147, 95172), (149, 95193), (160, 95256), (163, 95298), (167, 95367), (169, 95391), (172, 95403), (174, 95412), (177, 95433), (182, 95451), (183, 95457), (187, 95484),

Gene: Gandalf20\_33 Start: 26778, Stop: 28256, Start Num: 23

Candidate Starts for Gandalf20\_33:

(Start: 23 @26778 has 192 MA's), (Start: 26 @26805 has 1 MA's), (29, 26841), (Start: 31 @26859 has 1 MA's), (38, 26925), (Start: 50 @26991 has 1 MA's), (54, 27018), (77, 27207), (99, 27357), (112, 27438), (113, 27441), (125, 27552), (128, 27579), (130, 27612), (146, 27789), (152, 27837), (153, 27849), (162, 27927), (171, 28041), (204, 28239),

Gene: Ghost\_173 Start: 95150, Stop: 96226, Start Num: 51

Candidate Starts for Ghost\_173:

(Start: 51 @95150 has 170 MA's), (59, 95192), (60, 95195), (61, 95207), (65, 95231), (66, 95234), (73, 95291), (74, 95309), (79, 95363), (92, 95453), (96, 95474), (97, 95477), (109, 95573), (115, 95624), (125, 95705), (128, 95732), (144, 95864), (146, 95876), (147, 95885), (149, 95906), (160, 95969), (163, 96011), (167, 96080), (169, 96104), (172, 96116), (174, 96125), (177, 96146), (182, 96164), (183, 96170), (187, 96197),

Gene: Gizmo\_177 Start: 96792, Stop: 97868, Start Num: 51

Candidate Starts for Gizmo\_177:

(Start: 51 @96792 has 170 MA's), (59, 96834), (60, 96837), (61, 96849), (65, 96873), (66, 96876), (73, 96933), (74, 96951), (79, 97005), (92, 97095), (96, 97116), (97, 97119), (109, 97215), (115, 97266), (125, 97347), (128, 97374), (144, 97506), (146, 97518), (147, 97527), (149, 97548), (160, 97611), (163, 97653), (167, 97722), (169, 97746), (172, 97758), (174, 97767), (177, 97788), (182, 97806), (183, 97812), (187, 97839),

Gene: Gompeii16\_32 Start: 26435, Stop: 27913, Start Num: 23

Candidate Starts for Gompeii16\_32:

(Start: 23 @26435 has 192 MA's), (Start: 26 @26462 has 1 MA's), (Start: 31 @26516 has 1 MA's), (38, 26582), (Start: 50 @26648 has 1 MA's), (52, 26666), (77, 26864), (86, 26909), (99, 27014), (112, 27095), (113, 27098), (125, 27209), (128, 27236), (130, 27269), (152, 27494), (153, 27506), (162, 27584), (171, 27698), (204, 27896),

Gene: Graduation\_34 Start: 26657, Stop: 28141, Start Num: 23

Candidate Starts for Graduation\_34:

(Start: 23 @26657 has 192 MA's), (Start: 31 @26738 has 1 MA's), (38, 26804), (Start: 50 @26870 has 1 MA's), (54, 26897), (77, 27086), (99, 27236), (125, 27431), (128, 27458), (130, 27491), (146, 27668), (150, 27710), (153, 27728), (159, 27764), (162, 27806), (171, 27920), (172, 27923), (178, 27956), (189, 28010), (192, 28037), (203, 28112),

Gene: Grasshills\_182 Start: 98043, Stop: 99119, Start Num: 51

Candidate Starts for Grasshills\_182:

(Start: 51 @98043 has 170 MA's), (59, 98085), (60, 98088), (61, 98100), (65, 98124), (66, 98127), (73, 98184), (74, 98202), (79, 98256), (92, 98346), (96, 98367), (97, 98370), (109, 98466), (115, 98517),

(125, 98598), (128, 98625), (144, 98757), (146, 98769), (147, 98778), (149, 98799), (160, 98862), (163, 98904), (167, 98973), (169, 98997), (172, 99009), (174, 99018), (177, 99039), (182, 99057), (183, 99063), (187, 99090),

Gene: GrecoEtereo\_34 Start: 26744, Stop: 28228, Start Num: 23

Candidate Starts for GrecoEtereo\_34:

(8, 26579), (12, 26627), (21, 26738), (Start: 23 @26744 has 192 MA's), (Start: 26 @26771 has 1 MA's), (Start: 31 @26825 has 1 MA's), (38, 26891), (Start: 50 @26957 has 1 MA's), (54, 26984), (77, 27173), (99, 27323), (112, 27404), (113, 27407), (125, 27518), (128, 27545), (130, 27578), (146, 27755), (150, 27797), (153, 27815), (159, 27851), (162, 27893), (171, 28007), (172, 28010), (178, 28043), (189, 28097), (192, 28124), (203, 28199),

Gene: Greg\_34 Start: 26250, Stop: 27728, Start Num: 23

Candidate Starts for Greg\_34:

(7, 26076), (8, 26085), (Start: 23 @26250 has 192 MA's), (Start: 26 @26277 has 1 MA's), (Start: 31 @26331 has 1 MA's), (38, 26397), (Start: 50 @26463 has 1 MA's), (54, 26490), (77, 26679), (99, 26829), (112, 26910), (113, 26913), (125, 27024), (128, 27051), (130, 27084), (152, 27309), (153, 27321), (162, 27399), (171, 27513), (204, 27711),

Gene: Grungle\_159 Start: 92753, Stop: 93829, Start Num: 51

Candidate Starts for Grungle\_159:

(Start: 51 @92753 has 170 MA's), (59, 92795), (60, 92798), (61, 92810), (65, 92834), (66, 92837), (73, 92894), (74, 92912), (79, 92966), (92, 93056), (96, 93077), (97, 93080), (109, 93176), (115, 93227), (125, 93308), (128, 93335), (144, 93467), (146, 93479), (147, 93488), (149, 93509), (160, 93572), (163, 93614), (167, 93683), (169, 93707), (172, 93719), (174, 93728), (177, 93749), (182, 93767), (183, 93773), (187, 93800),

Gene: Guwapp\_171 Start: 93678, Stop: 94754, Start Num: 51

Candidate Starts for Guwapp\_171:

(Start: 51 @93678 has 170 MA's), (59, 93720), (60, 93723), (61, 93735), (65, 93759), (66, 93762), (73, 93819), (74, 93837), (79, 93891), (92, 93981), (96, 94002), (97, 94005), (109, 94101), (115, 94152), (125, 94233), (128, 94260), (144, 94392), (146, 94404), (147, 94413), (149, 94434), (160, 94497), (163, 94539), (167, 94608), (169, 94632), (172, 94644), (174, 94653), (177, 94674), (182, 94692), (183, 94698), (187, 94725),

Gene: Gwendoluna\_34 Start: 27892, Stop: 29370, Start Num: 23

Candidate Starts for Gwendoluna\_34:

(Start: 23 @27892 has 192 MA's), (Start: 26 @27919 has 1 MA's), (Start: 31 @27973 has 1 MA's), (38, 28039), (Start: 50 @28105 has 1 MA's), (54, 28132), (77, 28321), (99, 28471), (112, 28552), (113, 28555), (125, 28666), (128, 28693), (130, 28726), (152, 28951), (153, 28963), (162, 29041), (171, 29155), (204, 29353),

Gene: Gyzlar\_34 Start: 27198, Stop: 28676, Start Num: 23

Candidate Starts for Gyzlar\_34:

(16, 27123), (Start: 23 @27198 has 192 MA's), (Start: 26 @27225 has 1 MA's), (Start: 31 @27279 has 1 MA's), (38, 27345), (Start: 50 @27411 has 1 MA's), (54, 27438), (77, 27627), (99, 27777), (112, 27858), (113, 27861), (125, 27972), (128, 27999), (130, 28032), (152, 28257), (153, 28269), (162, 28347), (171, 28461), (204, 28659),

Gene: HINdeR\_5 Start: 2340, Stop: 3560, Start Num: 35

Candidate Starts for HINdeR\_5:

(Start: 35 @2340 has 3 MA's), (52, 2454), (61, 2502), (65, 2526), (68, 2535), (74, 2595), (88, 2700), (97, 2763), (102, 2805), (110, 2862), (113, 2880), (117, 2931), (128, 3009), (135, 3096), (145, 3189),

(156, 3270), (169, 3441), (187, 3528),

Gene: Halldule\_167 Start: 93149, Stop: 94225, Start Num: 51

Candidate Starts for Halldule\_167:

(Start: 51 @93149 has 170 MA's), (59, 93191), (60, 93194), (61, 93206), (65, 93230), (66, 93233), (73, 93290), (74, 93308), (79, 93362), (92, 93452), (96, 93473), (97, 93476), (109, 93572), (115, 93623), (125, 93704), (128, 93731), (144, 93863), (146, 93875), (147, 93884), (149, 93905), (160, 93968), (163, 94010), (167, 94079), (169, 94103), (172, 94115), (174, 94124), (177, 94145), (182, 94163), (183, 94169), (187, 94196),

Gene: Halley\_40 Start: 32146, Stop: 33651, Start Num: 22

Candidate Starts for Halley\_40:

(3, 31921), (19, 32089), (21, 32143), (Start: 22 @32146 has 52 MA's), (28, 32194), (41, 32317), (66, 32467), (67, 32470), (77, 32581), (93, 32689), (98, 32719), (114, 32821), (125, 32938), (130, 32998), (131, 33013), (146, 33175), (148, 33187), (153, 33235), (159, 33271), (162, 33313), (166, 33391), (172, 33430), (173, 33433), (178, 33463), (185, 33493), (189, 33517),

Gene: HanShotFirst\_32 Start: 25878, Stop: 27359, Start Num: 23

Candidate Starts for HanShotFirst\_32:

(Start: 23 @25878 has 192 MA's), (Start: 26 @25905 has 1 MA's), (29, 25941), (Start: 31 @25959 has 1 MA's), (38, 26025), (42, 26055), (61, 26157), (77, 26307), (86, 26352), (99, 26457), (125, 26652), (128, 26679), (130, 26712), (146, 26889), (150, 26931), (153, 26949), (159, 26985), (162, 27027), (172, 27144), (173, 27147), (189, 27231), (190, 27240),

Gene: HarryOW\_33 Start: 26332, Stop: 27813, Start Num: 23

Candidate Starts for HarryOW\_33:

(2, 26095), (Start: 23 @26332 has 192 MA's), (Start: 26 @26359 has 1 MA's), (Start: 31 @26413 has 1 MA's), (38, 26479), (42, 26509), (61, 26611), (77, 26761), (99, 26911), (112, 26992), (113, 26995), (125, 27106), (128, 27133), (130, 27166), (150, 27385), (153, 27403), (159, 27439), (162, 27481), (172, 27598), (173, 27601), (189, 27685), (190, 27694),

Gene: Hawkeye\_33 Start: 27204, Stop: 28514, Start Num: 23

Candidate Starts for Hawkeye\_33:

(Start: 23 @27204 has 192 MA's), (25, 27225), (37, 27345), (60, 27474), (61, 27486), (82, 27651), (88, 27693), (97, 27756), (103, 27807), (108, 27849), (123, 27972), (125, 27978), (127, 27993), (129, 28026), (133, 28047), (142, 28098), (152, 28179), (161, 28263), (164, 28287), (171, 28383), (175, 28422), (185, 28470), (187, 28485),

Gene: Hermia\_35 Start: 27460, Stop: 28944, Start Num: 23

Candidate Starts for Hermia\_35:

(Start: 23 @27460 has 192 MA's), (Start: 26 @27487 has 1 MA's), (29, 27523), (Start: 31 @27541 has 1 MA's), (38, 27607), (54, 27700), (77, 27889), (99, 28039), (112, 28120), (113, 28123), (125, 28234), (128, 28261), (130, 28294), (146, 28471), (150, 28513), (153, 28531), (159, 28567), (162, 28609), (171, 28723), (172, 28726), (178, 28759), (189, 28813), (192, 28840), (203, 28915),

Gene: HermioneGrange\_32 Start: 25859, Stop: 27337, Start Num: 23

Candidate Starts for HermioneGrange\_32:

(Start: 23 @25859 has 192 MA's), (Start: 26 @25886 has 1 MA's), (29, 25922), (Start: 31 @25940 has 1 MA's), (38, 26006), (Start: 50 @26072 has 1 MA's), (54, 26099), (77, 26288), (99, 26438), (112, 26519), (113, 26522), (125, 26633), (128, 26660), (130, 26693), (146, 26870), (152, 26918), (153, 26930), (162, 27008), (171, 27122), (204, 27320),

Gene: HokkenD\_35 Start: 31695, Stop: 33200, Start Num: 22



Candidate Starts for HokkenD\_35:

(3, 31470), (19, 31638), (21, 31692), (Start: 22 @31695 has 52 MA's), (28, 31743), (41, 31866), (66, 32016), (67, 32019), (77, 32130), (93, 32238), (98, 32268), (114, 32370), (125, 32487), (130, 32547), (131, 32562), (146, 32724), (148, 32736), (153, 32784), (159, 32820), (162, 32862), (166, 32940), (172, 32979), (173, 32982), (178, 33012), (185, 33042), (189, 33066),

Gene: Homines\_32 Start: 26231, Stop: 27709, Start Num: 23

Candidate Starts for Homines\_32:

(8, 26066), (14, 26129), (Start: 23 @26231 has 192 MA's), (Start: 26 @26258 has 1 MA's), (Start: 31 @26312 has 1 MA's), (38, 26378), (Start: 50 @26444 has 1 MA's), (77, 26660), (86, 26705), (94, 26777), (99, 26810), (125, 27005), (128, 27032), (130, 27065), (152, 27290), (153, 27302), (162, 27380), (171, 27494), (204, 27692),

Gene: Hope4ever\_32 Start: 26347, Stop: 27831, Start Num: 23

Candidate Starts for Hope4ever\_32:

(8, 26182), (12, 26230), (Start: 23 @26347 has 192 MA's), (Start: 26 @26374 has 1 MA's), (Start: 31 @26428 has 1 MA's), (38, 26494), (Start: 50 @26560 has 1 MA's), (54, 26587), (77, 26776), (86, 26821), (99, 26926), (112, 27007), (113, 27010), (125, 27121), (128, 27148), (130, 27181), (146, 27358), (150, 27400), (153, 27418), (159, 27454), (162, 27496), (171, 27610), (172, 27613), (178, 27646), (189, 27700), (192, 27727), (203, 27802),

Gene: Hughesyang\_38 Start: 32043, Stop: 33545, Start Num: 22

Candidate Starts for Hughesyang\_38:

(6, 31854), (7, 31872), (9, 31890), (10, 31893), (17, 31974), (18, 31983), (Start: 22 @32043 has 52 MA's), (24, 32055), (28, 32091), (29, 32106), (30, 32109), (55, 32292), (60, 32316), (61, 32328), (62, 32346), (74, 32430), (77, 32472), (89, 32541), (109, 32685), (114, 32712), (116, 32757), (118, 32763), (120, 32772), (124, 32829), (128, 32859), (134, 32952), (146, 33069), (151, 33114), (153, 33129), (154, 33135), (159, 33165), (162, 33207), (169, 33312), (178, 33357), (180, 33363), (189, 33411), (193, 33441), (198, 33471), (201, 33480),

Gene: HyRo\_163 Start: 94776, Stop: 95852, Start Num: 51

Candidate Starts for HyRo\_163:

(Start: 51 @94776 has 170 MA's), (59, 94818), (60, 94821), (61, 94833), (65, 94857), (66, 94860), (73, 94917), (74, 94935), (79, 94989), (92, 95079), (96, 95100), (97, 95103), (109, 95199), (115, 95250), (125, 95331), (128, 95358), (144, 95490), (146, 95502), (147, 95511), (149, 95532), (160, 95595), (163, 95637), (167, 95706), (169, 95730), (172, 95742), (174, 95751), (177, 95772), (182, 95790), (183, 95796), (187, 95823),

Gene: I3\_181 Start: 96571, Stop: 97647, Start Num: 51

Candidate Starts for I3\_181:

(Start: 51 @96571 has 170 MA's), (59, 96613), (60, 96616), (61, 96628), (65, 96652), (66, 96655), (73, 96712), (74, 96730), (79, 96784), (92, 96874), (96, 96895), (97, 96898), (109, 96994), (115, 97045), (125, 97126), (128, 97153), (144, 97285), (146, 97297), (147, 97306), (149, 97327), (160, 97390), (163, 97432), (167, 97501), (169, 97525), (172, 97537), (174, 97546), (177, 97567), (182, 97585), (183, 97591), (187, 97618),

Gene: ILeeKay\_34 Start: 26111, Stop: 27595, Start Num: 23

Candidate Starts for ILeeKay\_34:

(Start: 23 @26111 has 192 MA's), (Start: 26 @26138 has 1 MA's), (Start: 31 @26192 has 1 MA's), (38, 26258), (Start: 50 @26324 has 1 MA's), (52, 26342), (77, 26540), (99, 26690), (112, 26771), (113, 26774), (125, 26885), (128, 26912), (130, 26945), (146, 27122), (150, 27164), (153, 27182), (159, 27218), (162, 27260), (171, 27374), (172, 27377), (178, 27410), (189, 27464), (192, 27491), (203, 27566),

Gene: Ichabod\_33 Start: 26135, Stop: 27613, Start Num: 23

Candidate Starts for Ichabod\_33:

(8, 25970), (Start: 23 @26135 has 192 MA's), (Start: 26 @26162 has 1 MA's), (Start: 31 @26216 has 1 MA's), (38, 26282), (Start: 50 @26348 has 1 MA's), (54, 26375), (77, 26564), (99, 26714), (112, 26795), (113, 26798), (125, 26909), (128, 26936), (130, 26969), (152, 27194), (153, 27206), (162, 27284), (171, 27398), (204, 27596),

Gene: Idergollasper\_59 Start: 38599, Stop: 40089, Start Num: 22

Candidate Starts for Idergollasper\_59:

(Start: 22 @38599 has 52 MA's), (27, 38641), (41, 38770), (49, 38809), (60, 38866), (75, 38986), (77, 39022), (81, 39040), (90, 39097), (91, 39106), (95, 39142), (96, 39145), (97, 39148), (101, 39190), (109, 39235), (114, 39262), (131, 39454), (141, 39571), (148, 39628), (153, 39676), (162, 39754), (165, 39829), (171, 39868), (178, 39898), (188, 39946), (197, 40015),

Gene: IgnatiusPatJac\_32 Start: 26193, Stop: 27674, Start Num: 23

Candidate Starts for IgnatiusPatJac\_32:

(Start: 23 @26193 has 192 MA's), (Start: 26 @26220 has 1 MA's), (29, 26256), (Start: 31 @26274 has 1 MA's), (38, 26340), (42, 26370), (61, 26472), (77, 26622), (99, 26772), (112, 26853), (113, 26856), (125, 26967), (128, 26994), (130, 27027), (150, 27246), (153, 27264), (159, 27300), (162, 27342), (172, 27459), (173, 27462), (189, 27546), (190, 27555),

Gene: IkeLoa\_166 Start: 94049, Stop: 95125, Start Num: 51

Candidate Starts for IkeLoa\_166:

(Start: 51 @94049 has 170 MA's), (59, 94091), (60, 94094), (61, 94106), (65, 94130), (66, 94133), (73, 94190), (74, 94208), (79, 94262), (92, 94352), (96, 94373), (97, 94376), (109, 94472), (115, 94523), (125, 94604), (128, 94631), (144, 94763), (146, 94775), (147, 94784), (149, 94805), (160, 94868), (163, 94910), (167, 94979), (169, 95003), (172, 95015), (174, 95024), (177, 95045), (182, 95063), (183, 95069), (187, 95096),

Gene: InigoMontoya\_177 Start: 95111, Stop: 96187, Start Num: 51

Candidate Starts for InigoMontoya\_177:

(Start: 51 @95111 has 170 MA's), (59, 95153), (60, 95156), (61, 95168), (65, 95192), (66, 95195), (73, 95252), (74, 95270), (79, 95324), (92, 95414), (96, 95435), (97, 95438), (109, 95534), (115, 95585), (125, 95666), (128, 95693), (144, 95825), (146, 95837), (147, 95846), (149, 95867), (160, 95930), (163, 95972), (167, 96041), (169, 96065), (172, 96077), (174, 96086), (177, 96107), (182, 96125), (183, 96131), (187, 96158),

Gene: InterFolia\_178 Start: 97194, Stop: 98270, Start Num: 51

Candidate Starts for InterFolia\_178:

(Start: 51 @97194 has 170 MA's), (59, 97236), (60, 97239), (61, 97251), (65, 97275), (66, 97278), (73, 97335), (74, 97353), (79, 97407), (92, 97497), (96, 97518), (97, 97521), (109, 97617), (115, 97668), (125, 97749), (128, 97776), (144, 97908), (146, 97920), (147, 97929), (149, 97950), (160, 98013), (163, 98055), (167, 98124), (169, 98148), (172, 98160), (174, 98169), (177, 98190), (182, 98208), (183, 98214), (187, 98241),

Gene: Inyanga\_31 Start: 25714, Stop: 27192, Start Num: 23

Candidate Starts for Inyanga\_31:

(8, 25549), (21, 25708), (Start: 23 @25714 has 192 MA's), (Start: 26 @25741 has 1 MA's), (29, 25777), (Start: 31 @25795 has 1 MA's), (38, 25861), (42, 25891), (77, 26143), (99, 26293), (112, 26374), (113, 26377), (125, 26488), (128, 26515), (130, 26548), (152, 26773), (153, 26785), (159, 26821), (162, 26863), (171, 26977), (204, 27175),

Gene: Iota\_168 Start: 94784, Stop: 95860, Start Num: 51

Candidate Starts for Iota\_168:

(Start: 51 @94784 has 170 MA's), (59, 94826), (60, 94829), (61, 94841), (65, 94865), (66, 94868), (73, 94925), (74, 94943), (79, 94997), (92, 95087), (96, 95108), (97, 95111), (109, 95207), (115, 95258), (125, 95339), (128, 95366), (144, 95498), (146, 95510), (147, 95519), (149, 95540), (160, 95603), (163, 95645), (167, 95714), (169, 95738), (172, 95750), (174, 95759), (177, 95780), (182, 95798), (183, 95804), (187, 95831),

Gene: Island3\_22 Start: 21613, Stop: 23103, Start Num: 23

Candidate Starts for Island3\_22:

(20, 21559), (Start: 23 @21613 has 192 MA's), (27, 21655), (33, 21712), (41, 21784), (77, 22036), (80, 22051), (81, 22054), (83, 22057), (89, 22105), (96, 22159), (97, 22162), (101, 22204), (109, 22249), (117, 22324), (122, 22378), (124, 22390), (128, 22420), (136, 22531), (153, 22690), (155, 22699), (158, 22711), (162, 22768), (165, 22843), (171, 22882), (185, 22942), (191, 22978), (196, 23014), (200, 23035), (203, 23074),

Gene: Issimir\_170 Start: 95058, Stop: 96134, Start Num: 51

Candidate Starts for Issimir\_170:

(Start: 51 @95058 has 170 MA's), (59, 95100), (60, 95103), (61, 95115), (65, 95139), (66, 95142), (73, 95199), (74, 95217), (79, 95271), (92, 95361), (96, 95382), (97, 95385), (109, 95481), (115, 95532), (125, 95613), (128, 95640), (144, 95772), (146, 95784), (147, 95793), (149, 95814), (160, 95877), (163, 95919), (167, 95988), (169, 96012), (172, 96024), (174, 96033), (177, 96054), (182, 96072), (183, 96078), (187, 96105),

Gene: Izajani\_171 Start: 95367, Stop: 96443, Start Num: 51

Candidate Starts for Izajani\_171:

(Start: 51 @95367 has 170 MA's), (59, 95409), (60, 95412), (61, 95424), (65, 95448), (66, 95451), (73, 95508), (74, 95526), (79, 95580), (92, 95670), (96, 95691), (97, 95694), (109, 95790), (115, 95841), (125, 95922), (128, 95949), (144, 96081), (146, 96093), (147, 96102), (149, 96123), (160, 96186), (163, 96228), (167, 96297), (169, 96321), (172, 96333), (174, 96342), (177, 96363), (182, 96381), (183, 96387), (187, 96414),

Gene: JC27\_34 Start: 26847, Stop: 28328, Start Num: 23

Candidate Starts for JC27\_34:

(8, 26682), (Start: 23 @26847 has 192 MA's), (Start: 26 @26874 has 1 MA's), (Start: 31 @26928 has 1 MA's), (38, 26994), (42, 27024), (61, 27126), (77, 27276), (86, 27321), (99, 27426), (112, 27507), (113, 27510), (125, 27621), (128, 27648), (130, 27681), (146, 27858), (150, 27900), (153, 27918), (159, 27954), (162, 27996), (172, 28113), (173, 28116), (189, 28200), (190, 28209),

Gene: JPickles\_170 Start: 93579, Stop: 94655, Start Num: 51

Candidate Starts for JPickles\_170:

(Start: 51 @93579 has 170 MA's), (59, 93621), (60, 93624), (61, 93636), (65, 93660), (66, 93663), (73, 93720), (74, 93738), (79, 93792), (92, 93882), (96, 93903), (97, 93906), (109, 94002), (115, 94053), (125, 94134), (128, 94161), (144, 94293), (146, 94305), (147, 94314), (149, 94335), (160, 94398), (163, 94440), (167, 94509), (169, 94533), (172, 94545), (174, 94554), (177, 94575), (182, 94593), (183, 94599), (187, 94626),

Gene: JackSparrow\_33 Start: 26309, Stop: 27787, Start Num: 23

Candidate Starts for JackSparrow\_33:

(4, 26093), (8, 26144), (12, 26192), (Start: 23 @26309 has 192 MA's), (29, 26372), (Start: 31 @26390 has 1 MA's), (38, 26456), (42, 26486), (Start: 50 @26522 has 1 MA's), (54, 26549), (77, 26738), (86, 26783), (99, 26888), (112, 26969), (113, 26972), (125, 27083), (128, 27110), (130, 27143), (152, 27368), (153, 27380), (162, 27458), (171, 27572), (204, 27770),

Gene: JangDynasty\_59 Start: 38685, Stop: 40175, Start Num: 22

Candidate Starts for JangDynasty\_59:

(Start: 22 @38685 has 52 MA's), (27, 38727), (41, 38856), (49, 38895), (60, 38952), (75, 39072), (77, 39108), (81, 39126), (90, 39183), (91, 39192), (95, 39228), (96, 39231), (97, 39234), (101, 39276), (109, 39321), (114, 39348), (131, 39540), (141, 39657), (148, 39714), (153, 39762), (162, 39840), (165, 39915), (171, 39954), (178, 39984), (188, 40032), (197, 40101),

Gene: Janiyra\_178 Start: 96128, Stop: 97204, Start Num: 51

Candidate Starts for Janiyra\_178:

(Start: 51 @96128 has 170 MA's), (59, 96170), (60, 96173), (61, 96185), (65, 96209), (66, 96212), (73, 96269), (74, 96287), (79, 96341), (92, 96431), (96, 96452), (97, 96455), (109, 96551), (115, 96602), (125, 96683), (128, 96710), (144, 96842), (146, 96854), (147, 96863), (149, 96884), (160, 96947), (163, 96989), (167, 97058), (169, 97082), (172, 97094), (174, 97103), (177, 97124), (182, 97142), (183, 97148), (187, 97175),

Gene: Jasper\_33 Start: 25788, Stop: 27272, Start Num: 23

Candidate Starts for Jasper\_33:

(8, 25623), (Start: 23 @25788 has 192 MA's), (Start: 26 @25815 has 1 MA's), (Start: 31 @25869 has 1 MA's), (38, 25935), (54, 26028), (77, 26217), (99, 26367), (112, 26448), (113, 26451), (125, 26562), (128, 26589), (130, 26622), (146, 26799), (150, 26841), (153, 26859), (159, 26895), (162, 26937), (171, 27051), (172, 27054), (178, 27087), (189, 27141), (192, 27168), (203, 27243),

Gene: JayJay\_172 Start: 96339, Stop: 97415, Start Num: 51

Candidate Starts for JayJay\_172:

(Start: 51 @96339 has 170 MA's), (59, 96381), (60, 96384), (61, 96396), (65, 96420), (66, 96423), (73, 96480), (74, 96498), (79, 96552), (92, 96642), (96, 96663), (97, 96666), (109, 96762), (115, 96813), (125, 96894), (128, 96921), (144, 97053), (146, 97065), (147, 97074), (149, 97095), (160, 97158), (163, 97200), (167, 97269), (169, 97293), (172, 97305), (174, 97314), (177, 97335), (182, 97353), (183, 97359), (187, 97386),

Gene: Jaygup\_172 Start: 94541, Stop: 95617, Start Num: 51

Candidate Starts for Jaygup\_172:

(Start: 51 @94541 has 170 MA's), (59, 94583), (60, 94586), (61, 94598), (65, 94622), (66, 94625), (73, 94682), (74, 94700), (79, 94754), (92, 94844), (96, 94865), (97, 94868), (109, 94964), (115, 95015), (125, 95096), (128, 95123), (144, 95255), (146, 95267), (147, 95276), (149, 95297), (150, 95309), (160, 95360), (163, 95402), (167, 95471), (169, 95495), (172, 95507), (174, 95516), (177, 95537), (182, 95555), (183, 95561), (187, 95588),

Gene: Jedediah\_176 Start: 95696, Stop: 96772, Start Num: 51

Candidate Starts for Jedediah\_176:

(Start: 51 @95696 has 170 MA's), (59, 95738), (60, 95741), (61, 95753), (65, 95777), (66, 95780), (73, 95837), (74, 95855), (79, 95909), (92, 95999), (96, 96020), (97, 96023), (109, 96119), (115, 96170), (125, 96251), (128, 96278), (144, 96410), (146, 96422), (147, 96431), (149, 96452), (160, 96515), (163, 96557), (167, 96626), (169, 96650), (172, 96662), (174, 96671), (177, 96692), (182, 96710), (183, 96716), (187, 96743),

Gene: Jemmno\_173 Start: 94522, Stop: 95598, Start Num: 51

Candidate Starts for Jemmno\_173:

(Start: 51 @94522 has 170 MA's), (59, 94564), (60, 94567), (61, 94579), (65, 94603), (66, 94606), (73, 94663), (74, 94681), (79, 94735), (92, 94825), (96, 94846), (97, 94849), (109, 94945), (115, 94996), (125, 95077), (128, 95104), (144, 95236), (146, 95248), (147, 95257), (149, 95278), (160, 95341), (163, 95383), (167, 95452), (169, 95476), (172, 95488), (174, 95497), (177, 95518), (182, 95536),

(183, 95542), (187, 95569),

Gene: Jerm2\_33 Start: 26131, Stop: 27603, Start Num: 23

Candidate Starts for Jerm2\_33:

(Start: 23 @26131 has 192 MA's), (Start: 26 @26158 has 1 MA's), (Start: 31 @26212 has 1 MA's), (38, 26278), (Start: 50 @26344 has 1 MA's), (54, 26371), (77, 26560), (99, 26710), (112, 26791), (113, 26794), (125, 26905), (128, 26932), (130, 26965), (146, 27142), (152, 27190), (153, 27202), (162, 27280), (171, 27394), (204, 27586),

Gene: Jessibeth14\_173 Start: 95976, Stop: 97052, Start Num: 51

Candidate Starts for Jessibeth14\_173:

(Start: 51 @95976 has 170 MA's), (59, 96018), (60, 96021), (61, 96033), (65, 96057), (66, 96060), (73, 96117), (74, 96135), (79, 96189), (92, 96279), (96, 96300), (97, 96303), (109, 96399), (115, 96450), (125, 96531), (128, 96558), (144, 96690), (146, 96702), (147, 96711), (149, 96732), (160, 96795), (163, 96837), (167, 96906), (169, 96930), (172, 96942), (174, 96951), (177, 96972), (182, 96990), (183, 96996), (187, 97023),

Gene: JigglyPuff\_181 Start: 97400, Stop: 98476, Start Num: 51

Candidate Starts for JigglyPuff\_181:

(Start: 51 @97400 has 170 MA's), (59, 97442), (60, 97445), (61, 97457), (65, 97481), (66, 97484), (73, 97541), (74, 97559), (79, 97613), (92, 97703), (96, 97724), (97, 97727), (109, 97823), (115, 97874), (125, 97955), (128, 97982), (144, 98114), (146, 98126), (147, 98135), (149, 98156), (160, 98219), (163, 98261), (167, 98330), (169, 98354), (172, 98366), (174, 98375), (177, 98396), (182, 98414), (183, 98420), (187, 98447),

Gene: Jorgensen\_32 Start: 25842, Stop: 27320, Start Num: 23

Candidate Starts for Jorgensen\_32:

(Start: 23 @25842 has 192 MA's), (Start: 26 @25869 has 1 MA's), (Start: 31 @25923 has 1 MA's), (38, 25989), (Start: 50 @26055 has 1 MA's), (54, 26082), (77, 26271), (99, 26421), (112, 26502), (113, 26505), (125, 26616), (128, 26643), (130, 26676), (152, 26901), (153, 26913), (162, 26991), (171, 27105), (204, 27303),

Gene: JuicyJay\_42 Start: 33896, Stop: 35401, Start Num: 22

Candidate Starts for JuicyJay\_42:

(3, 33671), (19, 33839), (21, 33893), (Start: 22 @33896 has 52 MA's), (28, 33944), (41, 34067), (66, 34217), (67, 34220), (77, 34331), (93, 34439), (98, 34469), (114, 34571), (125, 34688), (130, 34748), (131, 34763), (146, 34925), (148, 34937), (153, 34985), (159, 35021), (162, 35063), (166, 35141), (172, 35180), (173, 35183), (178, 35213), (185, 35243), (189, 35267),

Gene: JuliaChild\_34 Start: 26487, Stop: 27965, Start Num: 23

Candidate Starts for JuliaChild\_34:

(1, 26229), (8, 26322), (12, 26370), (Start: 23 @26487 has 192 MA's), (Start: 26 @26514 has 1 MA's), (Start: 31 @26568 has 1 MA's), (38, 26634), (Start: 50 @26700 has 1 MA's), (54, 26727), (77, 26916), (86, 26961), (99, 27066), (112, 27147), (113, 27150), (125, 27261), (128, 27288), (130, 27321), (152, 27546), (153, 27558), (162, 27636), (171, 27750), (194, 27876), (204, 27948),

Gene: JulietS\_168 Start: 92352, Stop: 93428, Start Num: 51

Candidate Starts for JulietS\_168:

(Start: 51 @92352 has 170 MA's), (59, 92394), (60, 92397), (61, 92409), (65, 92433), (66, 92436), (73, 92493), (74, 92511), (79, 92565), (92, 92655), (96, 92676), (97, 92679), (109, 92775), (115, 92826), (125, 92907), (128, 92934), (144, 93066), (146, 93078), (147, 93087), (149, 93108), (160, 93171), (163, 93213), (167, 93282), (169, 93306), (172, 93318), (174, 93327), (177, 93348), (182, 93366), (183, 93372), (187, 93399),

Gene: JustHall\_169 Start: 95035, Stop: 96111, Start Num: 51

Candidate Starts for JustHall\_169:

(Start: 51 @95035 has 170 MA's), (59, 95077), (60, 95080), (61, 95092), (65, 95116), (66, 95119), (73, 95176), (74, 95194), (79, 95248), (92, 95338), (96, 95359), (97, 95362), (109, 95458), (115, 95509), (125, 95590), (128, 95617), (144, 95749), (146, 95761), (147, 95770), (149, 95791), (160, 95854), (163, 95896), (167, 95965), (169, 95989), (172, 96001), (174, 96010), (177, 96031), (182, 96049), (183, 96055), (187, 96082),

Gene: KBG\_33 Start: 27054, Stop: 28319, Start Num: 50

Candidate Starts for KBG\_33:

(1, 26583), (8, 26676), (12, 26724), (Start: 23 @26841 has 192 MA's), (Start: 31 @26922 has 1 MA's), (38, 26988), (Start: 50 @27054 has 1 MA's), (54, 27081), (77, 27270), (86, 27315), (99, 27420), (112, 27501), (113, 27504), (125, 27615), (128, 27642), (130, 27675), (152, 27900), (153, 27912), (162, 27990), (171, 28104), (204, 28302),

Gene: KSSJEB\_32 Start: 25735, Stop: 27213, Start Num: 23

Candidate Starts for KSSJEB\_32:

(Start: 23 @25735 has 192 MA's), (Start: 26 @25762 has 1 MA's), (29, 25798), (Start: 31 @25816 has 1 MA's), (38, 25882), (Start: 50 @25948 has 1 MA's), (54, 25975), (77, 26164), (86, 26209), (99, 26314), (112, 26395), (113, 26398), (125, 26509), (128, 26536), (130, 26569), (146, 26746), (152, 26794), (153, 26806), (162, 26884), (171, 26998), (194, 27124), (204, 27196),

Gene: Kalah2\_40 Start: 32483, Stop: 33988, Start Num: 22

Candidate Starts for Kalah2\_40:

(3, 32258), (19, 32426), (21, 32480), (Start: 22 @32483 has 52 MA's), (28, 32531), (41, 32654), (66, 32804), (67, 32807), (77, 32918), (93, 33026), (98, 33056), (114, 33158), (125, 33275), (130, 33335), (131, 33350), (146, 33512), (148, 33524), (153, 33572), (159, 33608), (162, 33650), (166, 33728), (172, 33767), (173, 33770), (178, 33800), (185, 33830), (189, 33854),

Gene: Kamryn\_173 Start: 96257, Stop: 97333, Start Num: 51

Candidate Starts for Kamryn\_173:

(Start: 51 @96257 has 170 MA's), (59, 96299), (60, 96302), (61, 96314), (65, 96338), (66, 96341), (73, 96398), (74, 96416), (79, 96470), (92, 96560), (96, 96581), (97, 96584), (109, 96680), (115, 96731), (125, 96812), (128, 96839), (144, 96971), (146, 96983), (147, 96992), (149, 97013), (160, 97076), (163, 97118), (167, 97187), (169, 97211), (172, 97223), (174, 97232), (177, 97253), (182, 97271), (183, 97277), (187, 97304),

Gene: Kanely\_33 Start: 26545, Stop: 28023, Start Num: 23

Candidate Starts for Kanely\_33:

(Start: 23 @26545 has 192 MA's), (Start: 26 @26572 has 1 MA's), (Start: 31 @26626 has 1 MA's), (38, 26692), (Start: 50 @26758 has 1 MA's), (54, 26785), (77, 26974), (99, 27124), (112, 27205), (113, 27208), (125, 27319), (128, 27346), (130, 27379), (152, 27604), (153, 27616), (162, 27694), (171, 27808), (204, 28006),

Gene: Kboogie\_177 Start: 95133, Stop: 96209, Start Num: 51

Candidate Starts for Kboogie\_177:

(Start: 51 @95133 has 170 MA's), (59, 95175), (60, 95178), (61, 95190), (65, 95214), (66, 95217), (73, 95274), (74, 95292), (79, 95346), (92, 95436), (96, 95457), (97, 95460), (109, 95556), (115, 95607), (125, 95688), (128, 95715), (144, 95847), (146, 95859), (147, 95868), (149, 95889), (160, 95952), (163, 95994), (167, 96063), (169, 96087), (172, 96099), (174, 96108), (177, 96129), (182, 96147), (183, 96153), (187, 96180),

Gene: Kenmech\_35 Start: 27251, Stop: 28735, Start Num: 23

Candidate Starts for Kenmech\_35:

(4, 27035), (8, 27086), (Start: 23 @27251 has 192 MA's), (Start: 26 @27278 has 1 MA's), (29, 27314), (Start: 31 @27332 has 1 MA's), (38, 27398), (Start: 50 @27464 has 1 MA's), (54, 27491), (77, 27680), (86, 27725), (99, 27830), (112, 27911), (113, 27914), (125, 28025), (128, 28052), (130, 28085), (146, 28262), (150, 28304), (153, 28322), (159, 28358), (162, 28400), (171, 28514), (172, 28517), (178, 28550), (189, 28604), (192, 28631), (203, 28706),

Gene: Khaleesi\_172 Start: 95443, Stop: 96519, Start Num: 51

Candidate Starts for Khaleesi\_172:

(Start: 51 @95443 has 170 MA's), (59, 95485), (60, 95488), (61, 95500), (65, 95524), (66, 95527), (73, 95584), (74, 95602), (79, 95656), (92, 95746), (96, 95767), (97, 95770), (109, 95866), (115, 95917), (125, 95998), (128, 96025), (144, 96157), (146, 96169), (147, 96178), (149, 96199), (160, 96262), (163, 96304), (167, 96373), (169, 96397), (172, 96409), (174, 96418), (177, 96439), (182, 96457), (183, 96463), (187, 96490),

Gene: Killigrew\_30 Start: 25457, Stop: 26947, Start Num: 23

Candidate Starts for Killigrew\_30:

(Start: 23 @25457 has 192 MA's), (Start: 26 @25484 has 1 MA's), (29, 25520), (Start: 31 @25538 has 1 MA's), (38, 25604), (Start: 50 @25670 has 1 MA's), (54, 25697), (61, 25736), (66, 25772), (77, 25886), (114, 26126), (118, 26177), (128, 26270), (130, 26303), (138, 26420), (141, 26435), (146, 26480), (152, 26528), (153, 26540), (162, 26618), (165, 26693), (172, 26735), (194, 26858), (202, 26894), (204, 26930),

Gene: Klein\_40 Start: 31707, Stop: 33212, Start Num: 22

Candidate Starts for Klein\_40:

(19, 31650), (21, 31704), (Start: 22 @31707 has 52 MA's), (28, 31755), (41, 31878), (66, 32028), (67, 32031), (77, 32142), (93, 32250), (98, 32280), (114, 32382), (125, 32499), (130, 32559), (131, 32574), (146, 32736), (148, 32748), (153, 32796), (159, 32832), (162, 32874), (166, 32952), (172, 32991), (173, 32994), (178, 33024), (185, 33054), (189, 33078),

Gene: Koguma\_171 Start: 93049, Stop: 94125, Start Num: 51

Candidate Starts for Koguma\_171:

(Start: 51 @93049 has 170 MA's), (59, 93091), (60, 93094), (61, 93106), (65, 93130), (66, 93133), (73, 93190), (74, 93208), (79, 93262), (92, 93352), (96, 93373), (97, 93376), (109, 93472), (115, 93523), (125, 93604), (128, 93631), (144, 93763), (146, 93775), (147, 93784), (149, 93805), (160, 93868), (163, 93910), (167, 93979), (169, 94003), (172, 94015), (174, 94024), (177, 94045), (182, 94063), (183, 94069), (187, 94096),

Gene: Konstantine\_35 Start: 29726, Stop: 30934, Start Num: 32

Candidate Starts for Konstantine\_35:

(Start: 32 @29726 has 10 MA's), (34, 29753), (39, 29792), (58, 29894), (61, 29918), (79, 30071), (84, 30083), (85, 30101), (93, 30167), (94, 30176), (95, 30179), (97, 30185), (101, 30224), (102, 30227), (114, 30308), (119, 30365), (128, 30443), (132, 30473), (142, 30518), (144, 30539), (145, 30542), (147, 30560), (148, 30563), (164, 30704), (169, 30791), (170, 30797), (179, 30851), (187, 30893),

Gene: Krili\_58 Start: 38109, Stop: 39599, Start Num: 22

Candidate Starts for Krili\_58:

(Start: 22 @38109 has 52 MA's), (27, 38151), (41, 38280), (49, 38319), (60, 38376), (75, 38496), (77, 38532), (81, 38550), (90, 38607), (91, 38616), (95, 38652), (96, 38655), (97, 38658), (101, 38700), (109, 38745), (114, 38772), (131, 38964), (141, 39081), (148, 39138), (153, 39186), (162, 39264), (165, 39339), (171, 39378), (178, 39408), (188, 39456), (197, 39525),

Gene: Kugel\_33 Start: 26118, Stop: 27596, Start Num: 23

Candidate Starts for Kugel\_33:

(1, 25860), (7, 25944), (8, 25953), (Start: 23 @26118 has 192 MA's), (29, 26181), (Start: 31 @26199 has 1 MA's), (38, 26265), (Start: 50 @26331 has 1 MA's), (54, 26358), (77, 26547), (99, 26697), (112, 26778), (113, 26781), (125, 26892), (128, 26919), (130, 26952), (152, 27177), (153, 27189), (162, 27267), (171, 27381), (204, 27579),

Gene: KyMonks1A\_34 Start: 26284, Stop: 27762, Start Num: 23

Candidate Starts for KyMonks1A\_34:

(8, 26119), (12, 26167), (Start: 23 @26284 has 192 MA's), (Start: 31 @26365 has 1 MA's), (38, 26431), (Start: 50 @26497 has 1 MA's), (54, 26524), (77, 26713), (99, 26863), (113, 26947), (125, 27058), (128, 27085), (130, 27118), (152, 27343), (153, 27355), (162, 27433), (171, 27547), (204, 27745),

Gene: Kykar\_32 Start: 25906, Stop: 27384, Start Num: 23

Candidate Starts for Kykar\_32:

(Start: 23 @25906 has 192 MA's), (Start: 26 @25933 has 1 MA's), (Start: 31 @25987 has 1 MA's), (38, 26053), (42, 26083), (77, 26335), (99, 26485), (112, 26566), (113, 26569), (125, 26680), (128, 26707), (130, 26740), (152, 26965), (153, 26977), (159, 27013), (162, 27055), (171, 27169), (204, 27367),

Gene: LRRHood\_166 Start: 94905, Stop: 95981, Start Num: 51

Candidate Starts for LRRHood\_166:

(Start: 51 @94905 has 170 MA's), (59, 94947), (60, 94950), (61, 94962), (65, 94986), (66, 94989), (73, 95046), (74, 95064), (79, 95118), (92, 95208), (96, 95229), (97, 95232), (109, 95328), (115, 95379), (125, 95460), (128, 95487), (144, 95619), (146, 95631), (147, 95640), (149, 95661), (160, 95724), (163, 95766), (167, 95835), (169, 95859), (172, 95871), (174, 95880), (177, 95901), (182, 95919), (183, 95925), (187, 95952),

Gene: Lamina13\_32 Start: 25555, Stop: 27033, Start Num: 23

Candidate Starts for Lamina13\_32:

(Start: 23 @25555 has 192 MA's), (Start: 26 @25582 has 1 MA's), (Start: 31 @25636 has 1 MA's), (38, 25702), (Start: 50 @25768 has 1 MA's), (52, 25786), (77, 25984), (86, 26029), (99, 26134), (112, 26215), (113, 26218), (125, 26329), (128, 26356), (130, 26389), (152, 26614), (153, 26626), (162, 26704), (171, 26818), (204, 27016),

Gene: Latch\_174 Start: 94447, Stop: 95523, Start Num: 51

Candidate Starts for Latch\_174:

(Start: 51 @94447 has 170 MA's), (59, 94489), (60, 94492), (61, 94504), (65, 94528), (66, 94531), (73, 94588), (74, 94606), (79, 94660), (92, 94750), (96, 94771), (97, 94774), (109, 94870), (115, 94921), (125, 95002), (128, 95029), (144, 95161), (146, 95173), (147, 95182), (149, 95203), (160, 95266), (163, 95308), (167, 95377), (169, 95401), (172, 95413), (174, 95422), (177, 95443), (182, 95461), (183, 95467), (187, 95494),

Gene: Lee7\_172 Start: 96823, Stop: 97899, Start Num: 51

Candidate Starts for Lee7\_172:

(Start: 51 @96823 has 170 MA's), (59, 96865), (60, 96868), (61, 96880), (65, 96904), (66, 96907), (73, 96964), (74, 96982), (79, 97036), (92, 97126), (96, 97147), (97, 97150), (109, 97246), (115, 97297), (125, 97378), (128, 97405), (144, 97537), (146, 97549), (147, 97558), (149, 97579), (160, 97642), (163, 97684), (167, 97753), (169, 97777), (172, 97789), (174, 97798), (177, 97819), (182, 97837), (183, 97843), (187, 97870),

Gene: Lesedi\_31 Start: 25713, Stop: 27191, Start Num: 23



Candidate Starts for Lesedi\_31:

(Start: 23 @25713 has 192 MA's), (Start: 31 @25794 has 1 MA's), (38, 25860), (Start: 50 @25926 has 1 MA's), (54, 25953), (77, 26142), (99, 26292), (112, 26373), (113, 26376), (125, 26487), (128, 26514), (130, 26547), (152, 26772), (153, 26784), (162, 26862), (171, 26976), (204, 27174),

Gene: Licorice\_34 Start: 26942, Stop: 28426, Start Num: 23

Candidate Starts for Licorice\_34:

(8, 26777), (12, 26825), (Start: 23 @26942 has 192 MA's), (Start: 26 @26969 has 1 MA's), (Start: 31 @27023 has 1 MA's), (38, 27089), (55, 27185), (77, 27371), (99, 27521), (112, 27602), (113, 27605), (125, 27716), (128, 27743), (130, 27776), (146, 27953), (150, 27995), (153, 28013), (159, 28049), (162, 28091), (171, 28205), (172, 28208), (178, 28241), (189, 28295), (192, 28322), (195, 28337), (203, 28397),

Gene: LifeSavor\_172 Start: 95356, Stop: 96432, Start Num: 51

Candidate Starts for LifeSavor\_172:

(Start: 51 @95356 has 170 MA's), (59, 95398), (60, 95401), (61, 95413), (65, 95437), (66, 95440), (73, 95497), (74, 95515), (79, 95569), (92, 95659), (96, 95680), (97, 95683), (109, 95779), (115, 95830), (125, 95911), (128, 95938), (144, 96070), (146, 96082), (147, 96091), (149, 96112), (160, 96175), (163, 96217), (167, 96286), (169, 96310), (172, 96322), (174, 96331), (177, 96352), (182, 96370), (183, 96376), (187, 96403),

Gene: LilBib\_33 Start: 27155, Stop: 28636, Start Num: 23

Candidate Starts for LilBib\_33:

(8, 26990), (12, 27038), (Start: 23 @27155 has 192 MA's), (Start: 26 @27182 has 1 MA's), (Start: 31 @27236 has 1 MA's), (38, 27302), (42, 27332), (61, 27434), (77, 27584), (99, 27734), (112, 27815), (113, 27818), (125, 27929), (128, 27956), (130, 27989), (146, 28166), (150, 28208), (153, 28226), (159, 28262), (162, 28304), (172, 28421), (173, 28424), (189, 28508), (190, 28517),

Gene: LinStu\_171 Start: 95501, Stop: 96577, Start Num: 51

Candidate Starts for LinStu\_171:

(Start: 51 @95501 has 170 MA's), (59, 95543), (60, 95546), (61, 95558), (65, 95582), (66, 95585), (73, 95642), (74, 95660), (79, 95714), (92, 95804), (96, 95825), (97, 95828), (109, 95924), (115, 95975), (125, 96056), (128, 96083), (144, 96215), (146, 96227), (147, 96236), (149, 96257), (160, 96320), (163, 96362), (167, 96431), (169, 96455), (172, 96467), (174, 96476), (177, 96497), (182, 96515), (183, 96521), (187, 96548),

Gene: Littleton\_175 Start: 95607, Stop: 96683, Start Num: 51

Candidate Starts for Littleton\_175:

(Start: 51 @95607 has 170 MA's), (59, 95649), (60, 95652), (61, 95664), (65, 95688), (66, 95691), (73, 95748), (74, 95766), (79, 95820), (92, 95910), (96, 95931), (97, 95934), (109, 96030), (115, 96081), (125, 96162), (128, 96189), (144, 96321), (146, 96333), (147, 96342), (149, 96363), (160, 96426), (163, 96468), (167, 96537), (169, 96561), (172, 96573), (174, 96582), (177, 96603), (182, 96621), (183, 96627), (187, 96654),

Gene: Loanshark\_171 Start: 95317, Stop: 96393, Start Num: 51

Candidate Starts for Loanshark\_171:

(Start: 51 @95317 has 170 MA's), (59, 95359), (60, 95362), (61, 95374), (65, 95398), (66, 95401), (73, 95458), (74, 95476), (79, 95530), (92, 95620), (96, 95641), (97, 95644), (109, 95740), (115, 95791), (125, 95872), (128, 95899), (144, 96031), (146, 96043), (147, 96052), (149, 96073), (160, 96136), (163, 96178), (167, 96247), (169, 96271), (172, 96283), (174, 96292), (177, 96313), (182, 96331), (183, 96337), (187, 96364),

Gene: LolaVinca\_174 Start: 96726, Stop: 97802, Start Num: 51

Candidate Starts for LolaVinca\_174:

(Start: 51 @96726 has 170 MA's), (59, 96768), (60, 96771), (61, 96783), (65, 96807), (66, 96810), (73, 96867), (74, 96885), (79, 96939), (92, 97029), (96, 97050), (97, 97053), (109, 97149), (115, 97200), (125, 97281), (128, 97308), (144, 97440), (146, 97452), (147, 97461), (149, 97482), (160, 97545), (163, 97587), (167, 97656), (169, 97680), (172, 97692), (174, 97701), (177, 97722), (182, 97740), (183, 97746), (187, 97773),

Gene: Lopton\_33 Start: 27357, Stop: 28835, Start Num: 23

Candidate Starts for Lopton\_33:

(Start: 23 @27357 has 192 MA's), (Start: 26 @27384 has 1 MA's), (29, 27420), (Start: 31 @27438 has 1 MA's), (38, 27504), (Start: 50 @27570 has 1 MA's), (54, 27597), (77, 27786), (86, 27831), (99, 27936), (112, 28017), (113, 28020), (125, 28131), (128, 28158), (130, 28191), (146, 28368), (152, 28416), (153, 28428), (162, 28506), (171, 28620), (204, 28818),

Gene: LordLeafolot\_177 Start: 96339, Stop: 97415, Start Num: 51

Candidate Starts for LordLeafolot\_177:

(Start: 51 @96339 has 170 MA's), (59, 96381), (60, 96384), (61, 96396), (65, 96420), (66, 96423), (73, 96480), (74, 96498), (79, 96552), (92, 96642), (96, 96663), (97, 96666), (109, 96762), (115, 96813), (125, 96894), (128, 96921), (144, 97053), (146, 97065), (147, 97074), (149, 97095), (163, 97200), (167, 97269), (169, 97293), (172, 97305), (174, 97314), (177, 97335), (182, 97353), (183, 97359), (187, 97386),

Gene: Lukilu\_163 Start: 95915, Stop: 96991, Start Num: 51

Candidate Starts for Lukilu\_163:

(Start: 51 @95915 has 170 MA's), (59, 95957), (60, 95960), (61, 95972), (65, 95996), (66, 95999), (73, 96056), (74, 96074), (79, 96128), (92, 96218), (96, 96239), (97, 96242), (109, 96338), (115, 96389), (125, 96470), (128, 96497), (144, 96629), (146, 96641), (147, 96650), (149, 96671), (160, 96734), (163, 96776), (167, 96845), (169, 96869), (172, 96881), (174, 96890), (177, 96911), (182, 96929), (183, 96935), (187, 96962),

Gene: MPlant7149\_31 Start: 25485, Stop: 26963, Start Num: 23

Candidate Starts for MPlant7149\_31:

(1, 25227), (8, 25320), (12, 25368), (Start: 23 @25485 has 192 MA's), (Start: 26 @25512 has 1 MA's), (Start: 31 @25566 has 1 MA's), (38, 25632), (Start: 50 @25698 has 1 MA's), (54, 25725), (77, 25914), (86, 25959), (99, 26064), (112, 26145), (113, 26148), (125, 26259), (128, 26286), (130, 26319), (152, 26544), (153, 26556), (162, 26634), (171, 26748), (198, 26898), (204, 26946),

Gene: Maby2021\_172 Start: 95887, Stop: 96963, Start Num: 51

Candidate Starts for Maby2021\_172:

(Start: 51 @95887 has 170 MA's), (59, 95929), (60, 95932), (61, 95944), (65, 95968), (66, 95971), (73, 96028), (74, 96046), (79, 96100), (92, 96190), (96, 96211), (97, 96214), (109, 96310), (115, 96361), (125, 96442), (128, 96469), (144, 96601), (146, 96613), (147, 96622), (149, 96643), (160, 96706), (163, 96748), (167, 96817), (169, 96841), (172, 96853), (174, 96862), (177, 96883), (182, 96901), (183, 96907), (187, 96934),

Gene: MadKillah\_60 Start: 38378, Stop: 39868, Start Num: 22

Candidate Starts for MadKillah\_60:

(Start: 22 @38378 has 52 MA's), (27, 38420), (41, 38549), (49, 38588), (60, 38645), (75, 38765), (77, 38801), (81, 38819), (90, 38876), (91, 38885), (95, 38921), (96, 38924), (97, 38927), (101, 38969), (109, 39014), (114, 39041), (131, 39233), (141, 39350), (148, 39407), (153, 39455), (162, 39533), (165, 39608), (171, 39647), (178, 39677), (188, 39725), (197, 39794),

Gene: Magnar\_32 Start: 25682, Stop: 27160, Start Num: 23

Candidate Starts for Magnar\_32:

(Start: 23 @25682 has 192 MA's), (Start: 26 @25709 has 1 MA's), (Start: 31 @25763 has 1 MA's), (38, 25829), (Start: 50 @25895 has 1 MA's), (54, 25922), (77, 26111), (99, 26261), (112, 26342), (113, 26345), (125, 26456), (128, 26483), (130, 26516), (152, 26741), (153, 26753), (162, 26831), (171, 26945), (204, 27143),

Gene: Magnito\_31 Start: 25434, Stop: 26912, Start Num: 23

Candidate Starts for Magnito\_31:

(7, 25260), (8, 25269), (Start: 23 @25434 has 192 MA's), (Start: 26 @25461 has 1 MA's), (29, 25497), (Start: 31 @25515 has 1 MA's), (38, 25581), (Start: 50 @25647 has 1 MA's), (54, 25674), (55, 25677), (77, 25863), (99, 26013), (112, 26094), (113, 26097), (125, 26208), (128, 26235), (130, 26268), (152, 26493), (153, 26505), (162, 26583), (171, 26697), (204, 26895),

Gene: Manatee\_33 Start: 25680, Stop: 27158, Start Num: 23

Candidate Starts for Manatee\_33:

(7, 25506), (8, 25515), (12, 25563), (Start: 23 @25680 has 192 MA's), (Start: 26 @25707 has 1 MA's), (29, 25743), (Start: 31 @25761 has 1 MA's), (38, 25827), (55, 25923), (77, 26109), (99, 26259), (112, 26340), (113, 26343), (125, 26454), (128, 26481), (130, 26514), (152, 26739), (153, 26751), (162, 26829), (171, 26943), (204, 27141),

Gene: Mangeria\_173 Start: 96239, Stop: 97315, Start Num: 51

Candidate Starts for Mangeria\_173:

(Start: 51 @96239 has 170 MA's), (59, 96281), (60, 96284), (61, 96296), (65, 96320), (66, 96323), (73, 96380), (74, 96398), (79, 96452), (92, 96542), (96, 96563), (97, 96566), (109, 96662), (115, 96713), (125, 96794), (128, 96821), (144, 96953), (146, 96965), (147, 96974), (149, 96995), (160, 97058), (163, 97100), (167, 97169), (169, 97193), (172, 97205), (174, 97214), (177, 97235), (182, 97253), (183, 97259), (187, 97286),

Gene: Marcell\_32 Start: 26170, Stop: 27648, Start Num: 23

Candidate Starts for Marcell\_32:

(1, 25912), (8, 26005), (Start: 23 @26170 has 192 MA's), (Start: 26 @26197 has 1 MA's), (29, 26233), (Start: 31 @26251 has 1 MA's), (38, 26317), (Start: 50 @26383 has 1 MA's), (52, 26401), (54, 26410), (77, 26599), (86, 26644), (99, 26749), (112, 26830), (113, 26833), (125, 26944), (128, 26971), (130, 27004), (152, 27229), (153, 27241), (162, 27319), (171, 27433), (198, 27583), (204, 27631),

Gene: Marge\_33 Start: 26570, Stop: 28048, Start Num: 23

Candidate Starts for Marge\_33:

(8, 26405), (12, 26453), (Start: 23 @26570 has 192 MA's), (Start: 26 @26597 has 1 MA's), (29, 26633), (Start: 31 @26651 has 1 MA's), (38, 26717), (Start: 50 @26783 has 1 MA's), (54, 26810), (77, 26999), (86, 27044), (99, 27149), (112, 27230), (113, 27233), (125, 27344), (128, 27371), (130, 27404), (152, 27629), (153, 27641), (162, 27719), (171, 27833), (204, 28031),

Gene: Maroc7\_31 Start: 25674, Stop: 27152, Start Num: 23

Candidate Starts for Maroc7\_31:

(Start: 23 @25674 has 192 MA's), (Start: 31 @25755 has 1 MA's), (38, 25821), (Start: 50 @25887 has 1 MA's), (54, 25914), (63, 25974), (77, 26103), (99, 26253), (125, 26448), (128, 26475), (130, 26508), (152, 26733), (153, 26745), (162, 26823), (171, 26937), (204, 27135),

Gene: Marsha\_32 Start: 26749, Stop: 28227, Start Num: 23

Candidate Starts for Marsha\_32:

(8, 26584), (12, 26632), (Start: 23 @26749 has 192 MA's), (Start: 26 @26776 has 1 MA's), (Start: 31 @26830 has 1 MA's), (38, 26896), (44, 26935), (Start: 50 @26962 has 1 MA's), (54, 26989), (77, 27178), (99, 27328), (112, 27409), (113, 27412), (125, 27523), (128, 27550), (130, 27583), (152,

27808), (153, 27820), (162, 27898), (171, 28012), (204, 28210),

Gene: MaryBeth\_32 Start: 26102, Stop: 27586, Start Num: 23

Candidate Starts for MaryBeth\_32:

(8, 25937), (Start: 23 @26102 has 192 MA's), (Start: 31 @26183 has 1 MA's), (38, 26249), (Start: 50 @26315 has 1 MA's), (54, 26342), (77, 26531), (86, 26576), (99, 26681), (112, 26762), (113, 26765), (125, 26876), (128, 26903), (130, 26936), (146, 27113), (150, 27155), (153, 27173), (159, 27209), (162, 27251), (171, 27365), (172, 27368), (178, 27401), (189, 27455), (192, 27482), (203, 27557),

Gene: Matsumoto\_172 Start: 95121, Stop: 96197, Start Num: 51

Candidate Starts for Matsumoto\_172:

(Start: 51 @95121 has 170 MA's), (59, 95163), (60, 95166), (61, 95178), (65, 95202), (66, 95205), (73, 95262), (74, 95280), (79, 95334), (92, 95424), (96, 95445), (97, 95448), (109, 95544), (115, 95595), (125, 95676), (128, 95703), (144, 95835), (146, 95847), (147, 95856), (149, 95877), (160, 95940), (163, 95982), (167, 96051), (169, 96075), (172, 96087), (174, 96096), (177, 96117), (182, 96135), (183, 96141), (187, 96168),

Gene: McGee\_175 Start: 94875, Stop: 95951, Start Num: 51

Candidate Starts for McGee\_175:

(Start: 51 @94875 has 170 MA's), (59, 94917), (60, 94920), (61, 94932), (65, 94956), (66, 94959), (73, 95016), (74, 95034), (79, 95088), (92, 95178), (96, 95199), (97, 95202), (109, 95298), (115, 95349), (125, 95430), (128, 95457), (144, 95589), (146, 95601), (147, 95610), (149, 95631), (160, 95694), (163, 95736), (167, 95805), (169, 95829), (172, 95841), (174, 95850), (177, 95871), (182, 95889), (183, 95895), (187, 95922),

Gene: McGuire\_33 Start: 25972, Stop: 27450, Start Num: 23

Candidate Starts for McGuire\_33:

(7, 25798), (8, 25807), (12, 25855), (Start: 23 @25972 has 192 MA's), (Start: 26 @25999 has 1 MA's), (29, 26035), (Start: 31 @26053 has 1 MA's), (38, 26119), (55, 26215), (77, 26401), (99, 26551), (112, 26632), (113, 26635), (125, 26746), (128, 26773), (130, 26806), (152, 27031), (153, 27043), (162, 27121), (171, 27235), (204, 27433),

Gene: McWolfish\_171 Start: 95214, Stop: 96290, Start Num: 51

Candidate Starts for McWolfish\_171:

(Start: 51 @95214 has 170 MA's), (59, 95256), (60, 95259), (61, 95271), (65, 95295), (66, 95298), (73, 95355), (74, 95373), (79, 95427), (92, 95517), (96, 95538), (97, 95541), (109, 95637), (115, 95688), (125, 95769), (128, 95796), (144, 95928), (146, 95940), (147, 95949), (149, 95970), (160, 96033), (163, 96075), (167, 96144), (169, 96168), (172, 96180), (174, 96189), (177, 96210), (182, 96228), (183, 96234), (187, 96261),

Gene: Megamind\_170 Start: 94945, Stop: 96021, Start Num: 51

Candidate Starts for Megamind\_170:

(Start: 51 @94945 has 170 MA's), (59, 94987), (60, 94990), (61, 95002), (65, 95026), (66, 95029), (73, 95086), (74, 95104), (79, 95158), (92, 95248), (96, 95269), (97, 95272), (109, 95368), (115, 95419), (125, 95500), (128, 95527), (144, 95659), (146, 95671), (147, 95680), (149, 95701), (160, 95764), (163, 95806), (167, 95875), (169, 95899), (172, 95911), (174, 95920), (177, 95941), (182, 95959), (183, 95965), (187, 95992),

Gene: Megatron06\_32 Start: 29058, Stop: 30266, Start Num: 32

Candidate Starts for Megatron06\_32:

(Start: 32 @29058 has 10 MA's), (34, 29085), (39, 29124), (58, 29226), (61, 29250), (79, 29403), (84, 29415), (85, 29433), (93, 29499), (94, 29508), (95, 29511), (97, 29517), (101, 29556), (102, 29559), (114, 29640), (119, 29697), (128, 29775), (132, 29805), (142, 29850), (144, 29871), (145, 29874),

(147, 29892), (148, 29895), (164, 30036), (169, 30123), (170, 30129), (179, 30183), (187, 30225),

Gene: Melpomini\_167 Start: 93421, Stop: 94497, Start Num: 51

Candidate Starts for Melpomini\_167:

(Start: 51 @93421 has 170 MA's), (59, 93463), (60, 93466), (61, 93478), (65, 93502), (66, 93505), (73, 93562), (74, 93580), (79, 93634), (92, 93724), (96, 93745), (97, 93748), (109, 93844), (115, 93895), (125, 93976), (128, 94003), (144, 94135), (146, 94147), (147, 94156), (149, 94177), (160, 94240), (163, 94282), (167, 94351), (169, 94375), (172, 94387), (174, 94396), (177, 94417), (182, 94435), (183, 94441), (187, 94468),

Gene: MetalQZJ\_32 Start: 26102, Stop: 27586, Start Num: 23

Candidate Starts for MetalQZJ\_32:

(8, 25937), (Start: 23 @26102 has 192 MA's), (Start: 31 @26183 has 1 MA's), (38, 26249), (Start: 50 @26315 has 1 MA's), (54, 26342), (77, 26531), (86, 26576), (99, 26681), (112, 26762), (113, 26765), (125, 26876), (128, 26903), (130, 26936), (146, 27113), (150, 27155), (153, 27173), (159, 27209), (162, 27251), (171, 27365), (172, 27368), (178, 27401), (189, 27455), (192, 27482), (203, 27557),

Gene: Michley\_32 Start: 25799, Stop: 27289, Start Num: 23

Candidate Starts for Michley\_32:

(1, 25541), (7, 25625), (8, 25634), (12, 25682), (Start: 23 @25799 has 192 MA's), (Start: 26 @25826 has 1 MA's), (Start: 31 @25880 has 1 MA's), (38, 25946), (Start: 50 @26012 has 1 MA's), (52, 26030), (59, 26063), (66, 26114), (77, 26228), (81, 26246), (83, 26249), (101, 26396), (114, 26468), (118, 26519), (128, 26612), (130, 26645), (133, 26681), (138, 26762), (141, 26777), (146, 26822), (152, 26870), (153, 26882), (162, 26960), (165, 27035), (172, 27077), (204, 27272),

Gene: MikeLiesIn\_174 Start: 96081, Stop: 97157, Start Num: 51

Candidate Starts for MikeLiesIn\_174:

(Start: 51 @96081 has 170 MA's), (59, 96123), (60, 96126), (61, 96138), (65, 96162), (66, 96165), (73, 96222), (74, 96240), (79, 96294), (92, 96384), (96, 96405), (97, 96408), (109, 96504), (115, 96555), (125, 96636), (128, 96663), (144, 96795), (146, 96807), (147, 96816), (149, 96837), (160, 96900), (163, 96942), (167, 97011), (169, 97035), (172, 97047), (174, 97056), (177, 97077), (182, 97095), (183, 97101), (187, 97128),

Gene: Mikro\_171 Start: 96881, Stop: 97957, Start Num: 51

Candidate Starts for Mikro\_171:

(Start: 51 @96881 has 170 MA's), (59, 96923), (60, 96926), (61, 96938), (65, 96962), (66, 96965), (73, 97022), (74, 97040), (79, 97094), (92, 97184), (96, 97205), (97, 97208), (109, 97304), (115, 97355), (125, 97436), (128, 97463), (144, 97595), (146, 97607), (147, 97616), (149, 97637), (160, 97700), (163, 97742), (167, 97811), (169, 97835), (172, 97847), (174, 97856), (177, 97877), (182, 97895), (183, 97901), (187, 97928),

Gene: Mkhuseleli\_33 Start: 26078, Stop: 27487, Start Num: 31

Candidate Starts for Mkhuseleli\_33:

(8, 25832), (Start: 23 @25997 has 192 MA's), (27, 26039), (29, 26060), (Start: 31 @26078 has 1 MA's), (38, 26144), (54, 26237), (55, 26240), (60, 26264), (61, 26276), (66, 26312), (77, 26426), (93, 26534), (114, 26666), (118, 26717), (128, 26810), (130, 26843), (133, 26879), (138, 26960), (141, 26975), (146, 27020), (152, 27068), (153, 27080), (162, 27158), (165, 27233), (172, 27275), (204, 27470),

Gene: MoMoMixon\_171 Start: 94709, Stop: 95785, Start Num: 51

Candidate Starts for MoMoMixon\_171:

(Start: 51 @94709 has 170 MA's), (59, 94751), (60, 94754), (61, 94766), (65, 94790), (66, 94793), (73, 94850), (74, 94868), (79, 94922), (92, 95012), (96, 95033), (97, 95036), (109, 95132), (115, 95183),

(125, 95264), (128, 95291), (144, 95423), (146, 95435), (147, 95444), (149, 95465), (160, 95528), (163, 95570), (167, 95639), (169, 95663), (172, 95675), (174, 95684), (177, 95705), (182, 95723), (183, 95729), (187, 95756),

Gene: Molly\_33 Start: 25770, Stop: 27248, Start Num: 23

Candidate Starts for Molly\_33:

(1, 25512), (8, 25605), (12, 25653), (Start: 23 @25770 has 192 MA's), (Start: 26 @25797 has 1 MA's), (Start: 31 @25851 has 1 MA's), (38, 25917), (Start: 50 @25983 has 1 MA's), (54, 26010), (77, 26199), (99, 26349), (112, 26430), (113, 26433), (125, 26544), (128, 26571), (130, 26604), (152, 26829), (153, 26841), (162, 26919), (171, 27033), (204, 27231),

Gene: Momo\_173 Start: 94447, Stop: 95523, Start Num: 51

Candidate Starts for Momo\_173:

(Start: 51 @94447 has 170 MA's), (59, 94489), (60, 94492), (61, 94504), (65, 94528), (66, 94531), (73, 94588), (74, 94606), (79, 94660), (92, 94750), (96, 94771), (97, 94774), (109, 94870), (115, 94921), (125, 95002), (128, 95029), (144, 95161), (146, 95173), (147, 95182), (149, 95203), (160, 95266), (163, 95308), (167, 95377), (169, 95401), (172, 95413), (174, 95422), (177, 95443), (182, 95461), (183, 95467), (187, 95494),

Gene: Monet\_34 Start: 27198, Stop: 28676, Start Num: 23

Candidate Starts for Monet\_34:

(8, 27033), (12, 27081), (Start: 23 @27198 has 192 MA's), (Start: 26 @27225 has 1 MA's), (Start: 31 @27279 has 1 MA's), (38, 27345), (42, 27375), (Start: 50 @27411 has 1 MA's), (52, 27429), (54, 27438), (77, 27627), (86, 27672), (99, 27777), (112, 27858), (113, 27861), (125, 27972), (128, 27999), (130, 28032), (152, 28257), (153, 28269), (162, 28347), (171, 28461), (204, 28659),

Gene: Moose\_32 Start: 26174, Stop: 27658, Start Num: 23

Candidate Starts for Moose\_32:

(Start: 23 @26174 has 192 MA's), (Start: 26 @26201 has 1 MA's), (29, 26237), (Start: 31 @26255 has 1 MA's), (38, 26321), (Start: 50 @26387 has 1 MA's), (61, 26453), (77, 26603), (99, 26753), (112, 26834), (113, 26837), (125, 26948), (128, 26975), (130, 27008), (146, 27185), (150, 27227), (153, 27245), (159, 27281), (162, 27323), (171, 27437), (172, 27440), (178, 27473), (189, 27527), (192, 27554), (203, 27629),

Gene: Mori\_59 Start: 38640, Stop: 40130, Start Num: 22

Candidate Starts for Mori\_59:

(Start: 22 @38640 has 52 MA's), (27, 38682), (41, 38811), (49, 38850), (60, 38907), (75, 39027), (77, 39063), (81, 39081), (90, 39138), (91, 39147), (95, 39183), (96, 39186), (97, 39189), (101, 39231), (109, 39276), (114, 39303), (131, 39495), (141, 39612), (148, 39669), (153, 39717), (162, 39795), (165, 39870), (171, 39909), (178, 39939), (188, 39987), (197, 40056),

Gene: Morizzled23\_172 Start: 94605, Stop: 95681, Start Num: 51

Candidate Starts for Morizzled23\_172:

(Start: 51 @94605 has 170 MA's), (59, 94647), (60, 94650), (61, 94662), (65, 94686), (66, 94689), (73, 94746), (74, 94764), (79, 94818), (92, 94908), (96, 94929), (97, 94932), (109, 95028), (115, 95079), (125, 95160), (128, 95187), (144, 95319), (146, 95331), (147, 95340), (149, 95361), (160, 95424), (163, 95466), (167, 95535), (169, 95559), (172, 95571), (174, 95580), (177, 95601), (182, 95619), (183, 95625), (187, 95652),

Gene: MrGordo\_32 Start: 25662, Stop: 27152, Start Num: 23

Candidate Starts for MrGordo\_32:

(1, 25404), (8, 25497), (Start: 23 @25662 has 192 MA's), (Start: 26 @25689 has 1 MA's), (Start: 31 @25743 has 1 MA's), (38, 25809), (55, 25905), (60, 25929), (61, 25941), (66, 25977), (77, 26091),

(93, 26199), (114, 26331), (118, 26382), (128, 26475), (130, 26508), (138, 26625), (141, 26640), (146, 26685), (153, 26745), (162, 26823), (165, 26898), (172, 26940), (204, 27135),

Gene: MrMiyagi\_25 Start: 24064, Stop: 25275, Start Num: 32

Candidate Starts for MrMiyagi\_25:

(Start: 32 @24064 has 10 MA's), (34, 24091), (45, 24175), (52, 24208), (61, 24256), (65, 24280), (69, 24292), (70, 24304), (71, 24313), (74, 24355), (84, 24421), (87, 24448), (89, 24466), (90, 24472), (95, 24517), (97, 24523), (114, 24646), (118, 24697), (119, 24703), (128, 24781), (132, 24811), (144, 24877), (147, 24898), (157, 24964), (168, 25120), (170, 25138), (186, 25222), (187, 25234), (191, 25255),

Gene: Mryolo\_31 Start: 25699, Stop: 27183, Start Num: 23

Candidate Starts for Mryolo\_31:

(1, 25441), (8, 25534), (12, 25582), (Start: 23 @25699 has 192 MA's), (Start: 26 @25726 has 1 MA's), (Start: 31 @25780 has 1 MA's), (38, 25846), (Start: 50 @25912 has 1 MA's), (77, 26128), (99, 26278), (112, 26359), (113, 26362), (125, 26473), (128, 26500), (130, 26533), (146, 26710), (150, 26752), (153, 26770), (159, 26806), (162, 26848), (171, 26962), (172, 26965), (178, 26998), (189, 27052), (192, 27079), (203, 27154),

Gene: Mule\_32 Start: 26008, Stop: 27486, Start Num: 23

Candidate Starts for Mule\_32:

(Start: 23 @26008 has 192 MA's), (Start: 26 @26035 has 1 MA's), (Start: 31 @26089 has 1 MA's), (38, 26155), (Start: 50 @26221 has 1 MA's), (54, 26248), (77, 26437), (86, 26482), (99, 26587), (112, 26668), (113, 26671), (125, 26782), (128, 26809), (130, 26842), (152, 27067), (153, 27079), (162, 27157), (171, 27271), (204, 27469),

Gene: Murai\_60 Start: 38821, Stop: 40311, Start Num: 22

Candidate Starts for Murai\_60:

(Start: 22 @38821 has 52 MA's), (27, 38863), (41, 38992), (49, 39031), (60, 39088), (75, 39208), (77, 39244), (81, 39262), (90, 39319), (91, 39328), (95, 39364), (96, 39367), (97, 39370), (101, 39412), (109, 39457), (114, 39484), (131, 39676), (141, 39793), (148, 39850), (153, 39898), (162, 39976), (165, 40051), (171, 40090), (178, 40120), (188, 40168), (197, 40237),

Gene: Museum\_34 Start: 26018, Stop: 27496, Start Num: 23

Candidate Starts for Museum\_34:

(Start: 23 @26018 has 192 MA's), (Start: 26 @26045 has 1 MA's), (29, 26081), (Start: 31 @26099 has 1 MA's), (38, 26165), (Start: 50 @26231 has 1 MA's), (54, 26258), (77, 26447), (99, 26597), (112, 26678), (113, 26681), (125, 26792), (128, 26819), (130, 26852), (146, 27029), (152, 27077), (153, 27089), (162, 27167), (171, 27281), (204, 27479),

Gene: NEHalo\_32 Start: 25756, Stop: 27234, Start Num: 23

Candidate Starts for NEHalo\_32:

(Start: 23 @25756 has 192 MA's), (Start: 26 @25783 has 1 MA's), (Start: 31 @25837 has 1 MA's), (38, 25903), (Start: 50 @25969 has 1 MA's), (54, 25996), (77, 26185), (86, 26230), (99, 26335), (112, 26416), (113, 26419), (125, 26530), (128, 26557), (130, 26590), (152, 26815), (153, 26827), (162, 26905), (171, 27019), (204, 27217),

Gene: Naija\_174 Start: 95150, Stop: 96226, Start Num: 51

Candidate Starts for Naija\_174:

(Start: 51 @95150 has 170 MA's), (59, 95192), (60, 95195), (61, 95207), (65, 95231), (66, 95234), (73, 95291), (74, 95309), (79, 95363), (92, 95453), (96, 95474), (97, 95477), (109, 95573), (115, 95624), (125, 95705), (128, 95732), (144, 95864), (146, 95876), (147, 95885), (149, 95906), (160, 95969), (163, 96011), (167, 96080), (169, 96104), (172, 96116), (174, 96125), (177, 96146), (182, 96164),

(183, 96170), (187, 96197),

Gene: Naira\_33 Start: 27615, Stop: 29093, Start Num: 23

Candidate Starts for Naira\_33:

(7, 27441), (8, 27450), (12, 27498), (Start: 23 @27615 has 192 MA's), (Start: 26 @27642 has 1 MA's), (Start: 31 @27696 has 1 MA's), (38, 27762), (Start: 50 @27828 has 1 MA's), (54, 27855), (55, 27858), (77, 28044), (99, 28194), (112, 28275), (113, 28278), (125, 28389), (128, 28416), (130, 28449), (152, 28674), (153, 28686), (162, 28764), (171, 28878), (204, 29076),

Gene: Napoleon13\_171 Start: 94410, Stop: 95486, Start Num: 51

Candidate Starts for Napoleon13\_171:

(Start: 51 @94410 has 170 MA's), (59, 94452), (60, 94455), (61, 94467), (65, 94491), (66, 94494), (73, 94551), (74, 94569), (79, 94623), (92, 94713), (96, 94734), (97, 94737), (109, 94833), (115, 94884), (125, 94965), (128, 94992), (144, 95124), (146, 95136), (147, 95145), (149, 95166), (160, 95229), (163, 95271), (167, 95340), (169, 95364), (172, 95376), (174, 95385), (177, 95406), (182, 95424), (183, 95430), (187, 95457),

Gene: Nappy\_174 Start: 96273, Stop: 97349, Start Num: 51

Candidate Starts for Nappy\_174:

(Start: 51 @96273 has 170 MA's), (59, 96315), (60, 96318), (61, 96330), (65, 96354), (66, 96357), (73, 96414), (74, 96432), (79, 96486), (92, 96576), (96, 96597), (97, 96600), (109, 96696), (115, 96747), (125, 96828), (128, 96855), (144, 96987), (146, 96999), (147, 97008), (149, 97029), (160, 97092), (163, 97134), (167, 97203), (169, 97227), (172, 97239), (174, 97248), (177, 97269), (182, 97287), (183, 97293), (187, 97320),

Gene: Naval22\_178 Start: 96676, Stop: 97752, Start Num: 51

Candidate Starts for Naval22\_178:

(Start: 51 @96676 has 170 MA's), (59, 96718), (60, 96721), (61, 96733), (65, 96757), (66, 96760), (73, 96817), (74, 96835), (79, 96889), (92, 96979), (96, 97000), (97, 97003), (109, 97099), (115, 97150), (125, 97231), (128, 97258), (144, 97390), (146, 97402), (147, 97411), (149, 97432), (160, 97495), (163, 97537), (167, 97606), (169, 97630), (172, 97642), (174, 97651), (177, 97672), (182, 97690), (183, 97696), (187, 97723),

Gene: NedWong\_172 Start: 95332, Stop: 96408, Start Num: 51

Candidate Starts for NedWong\_172:

(Start: 51 @95332 has 170 MA's), (59, 95374), (60, 95377), (61, 95389), (65, 95413), (66, 95416), (73, 95473), (74, 95491), (79, 95545), (92, 95635), (96, 95656), (97, 95659), (109, 95755), (115, 95806), (125, 95887), (128, 95914), (144, 96046), (146, 96058), (147, 96067), (149, 96088), (160, 96151), (163, 96193), (167, 96262), (169, 96286), (172, 96298), (174, 96307), (177, 96328), (182, 96346), (183, 96352), (187, 96379),

Gene: Nerujay\_33 Start: 26424, Stop: 27902, Start Num: 23

Candidate Starts for Nerujay\_33:

(8, 26259), (Start: 23 @26424 has 192 MA's), (Start: 26 @26451 has 1 MA's), (Start: 31 @26505 has 1 MA's), (38, 26571), (Start: 50 @26637 has 1 MA's), (54, 26664), (77, 26853), (99, 27003), (112, 27084), (113, 27087), (125, 27198), (128, 27225), (130, 27258), (152, 27483), (153, 27495), (162, 27573), (171, 27687), (204, 27885),

Gene: Ngannou\_171 Start: 93429, Stop: 94505, Start Num: 51

Candidate Starts for Ngannou\_171:

(Start: 51 @93429 has 170 MA's), (59, 93471), (60, 93474), (61, 93486), (65, 93510), (66, 93513), (73, 93570), (74, 93588), (79, 93642), (92, 93732), (96, 93753), (97, 93756), (109, 93852), (115, 93903), (125, 93984), (128, 94011), (144, 94143), (146, 94155), (147, 94164), (149, 94185), (160, 94248),



(163, 94290), (167, 94359), (169, 94383), (172, 94395), (174, 94404), (177, 94425), (182, 94443),  
(183, 94449), (187, 94476),

Gene: Nhonho\_32 Start: 26175, Stop: 27653, Start Num: 23

Candidate Starts for Nhonho\_32:

(8, 26010), (10, 26022), (12, 26058), (20, 26121), (Start: 23 @26175 has 192 MA's), (Start: 26  
@26202 has 1 MA's), (29, 26238), (Start: 31 @26256 has 1 MA's), (38, 26322), (Start: 50 @26388 has  
1 MA's), (54, 26415), (77, 26604), (86, 26649), (99, 26754), (112, 26835), (113, 26838), (125, 26949),  
(128, 26976), (130, 27009), (146, 27186), (152, 27234), (153, 27246), (162, 27324), (171, 27438),  
(194, 27564), (204, 27636),

Gene: Nidhogg\_174 Start: 95725, Stop: 96801, Start Num: 51

Candidate Starts for Nidhogg\_174:

(Start: 51 @95725 has 170 MA's), (59, 95767), (60, 95770), (61, 95782), (65, 95806), (66, 95809), (73,  
95866), (74, 95884), (79, 95938), (92, 96028), (96, 96049), (97, 96052), (109, 96148), (115, 96199),  
(125, 96280), (128, 96307), (144, 96439), (146, 96451), (147, 96460), (149, 96481), (160, 96544),  
(163, 96586), (167, 96655), (169, 96679), (172, 96691), (174, 96700), (177, 96721), (182, 96739),  
(183, 96745), (187, 96772),

Gene: NiebruSaylor\_58 Start: 38028, Stop: 39518, Start Num: 22

Candidate Starts for NiebruSaylor\_58:

(Start: 22 @38028 has 52 MA's), (27, 38070), (41, 38199), (49, 38238), (60, 38295), (75, 38415), (77,  
38451), (81, 38469), (90, 38526), (91, 38535), (95, 38571), (96, 38574), (97, 38577), (101, 38619),  
(109, 38664), (114, 38691), (131, 38883), (141, 39000), (148, 39057), (153, 39105), (162, 39183),  
(165, 39258), (171, 39297), (178, 39327), (188, 39375), (197, 39444),

Gene: NihilNomen\_39 Start: 32191, Stop: 33693, Start Num: 22

Candidate Starts for NihilNomen\_39:

(6, 32002), (7, 32020), (9, 32038), (10, 32041), (17, 32122), (18, 32131), (Start: 22 @32191 has 52  
MA's), (24, 32203), (28, 32239), (29, 32254), (30, 32257), (55, 32440), (60, 32464), (61, 32476), (62,  
32494), (74, 32578), (77, 32620), (89, 32689), (109, 32833), (114, 32860), (116, 32905), (118, 32911),  
(120, 32920), (124, 32977), (128, 33007), (134, 33100), (146, 33217), (151, 33262), (153, 33277),  
(154, 33283), (159, 33313), (162, 33355), (169, 33460), (178, 33505), (180, 33511), (189, 33559),  
(193, 33589), (198, 33619), (201, 33628),

Gene: Niza\_34 Start: 27052, Stop: 28530, Start Num: 23

Candidate Starts for Niza\_34:

(7, 26878), (8, 26887), (12, 26935), (Start: 23 @27052 has 192 MA's), (Start: 26 @27079 has 1 MA's),  
(29, 27115), (Start: 31 @27133 has 1 MA's), (38, 27199), (42, 27229), (Start: 50 @27265 has 1 MA's),  
(54, 27292), (77, 27481), (99, 27631), (112, 27712), (113, 27715), (125, 27826), (128, 27853), (130,  
27886), (152, 28111), (153, 28123), (162, 28201), (171, 28315), (204, 28513),

Gene: NoodleTree\_179 Start: 95632, Stop: 96708, Start Num: 51

Candidate Starts for NoodleTree\_179:

(Start: 51 @95632 has 170 MA's), (59, 95674), (60, 95677), (61, 95689), (65, 95713), (66, 95716), (73,  
95773), (74, 95791), (79, 95845), (92, 95935), (96, 95956), (97, 95959), (109, 96055), (115, 96106),  
(125, 96187), (128, 96214), (144, 96346), (146, 96358), (147, 96367), (149, 96388), (160, 96451),  
(163, 96493), (167, 96562), (169, 96586), (172, 96598), (174, 96607), (177, 96628), (182, 96646),  
(183, 96652), (187, 96679),

Gene: Norm\_173 Start: 95891, Stop: 96967, Start Num: 51

Candidate Starts for Norm\_173:

(Start: 51 @95891 has 170 MA's), (59, 95933), (60, 95936), (61, 95948), (65, 95972), (66, 95975), (73, 96032), (74, 96050), (79, 96104), (92, 96194), (96, 96215), (97, 96218), (109, 96314), (115, 96365), (125, 96446), (128, 96473), (144, 96605), (146, 96617), (147, 96626), (149, 96647), (160, 96710), (163, 96752), (167, 96821), (169, 96845), (172, 96857), (174, 96866), (177, 96887), (182, 96905), (183, 96911), (187, 96938),

Gene: Norz\_34 Start: 26831, Stop: 28303, Start Num: 23

Candidate Starts for Norz\_34:

(Start: 23 @26831 has 192 MA's), (Start: 26 @26858 has 1 MA's), (Start: 31 @26912 has 1 MA's), (38, 26978), (Start: 50 @27044 has 1 MA's), (77, 27260), (99, 27410), (112, 27491), (113, 27494), (125, 27605), (128, 27632), (130, 27665), (152, 27890), (153, 27902), (162, 27980), (171, 28094), (204, 28286),

Gene: NuevoMundo\_178 Start: 97821, Stop: 98897, Start Num: 51

Candidate Starts for NuevoMundo\_178:

(Start: 51 @97821 has 170 MA's), (59, 97863), (60, 97866), (61, 97878), (65, 97902), (66, 97905), (73, 97962), (74, 97980), (79, 98034), (92, 98124), (96, 98145), (97, 98148), (109, 98244), (115, 98295), (125, 98376), (128, 98403), (144, 98535), (146, 98547), (147, 98556), (149, 98577), (160, 98640), (163, 98682), (167, 98751), (169, 98775), (172, 98787), (174, 98796), (177, 98817), (182, 98835), (183, 98841), (187, 98868),

Gene: Oaker\_30 Start: 28782, Stop: 29990, Start Num: 32

Candidate Starts for Oaker\_30:

(Start: 32 @28782 has 10 MA's), (34, 28809), (39, 28848), (58, 28950), (61, 28974), (79, 29127), (84, 29139), (85, 29157), (93, 29223), (94, 29232), (95, 29235), (97, 29241), (101, 29280), (102, 29283), (114, 29364), (119, 29421), (128, 29499), (132, 29529), (142, 29574), (144, 29595), (145, 29598), (147, 29616), (148, 29619), (164, 29760), (169, 29847), (170, 29853), (179, 29907), (187, 29949),

Gene: Odette\_39 Start: 31424, Stop: 32926, Start Num: 22

Candidate Starts for Odette\_39:

(6, 31235), (7, 31253), (9, 31271), (10, 31274), (17, 31355), (18, 31364), (Start: 22 @31424 has 52 MA's), (24, 31436), (28, 31472), (29, 31487), (30, 31490), (55, 31673), (60, 31697), (61, 31709), (62, 31727), (74, 31811), (77, 31853), (89, 31922), (109, 32066), (114, 32093), (116, 32138), (118, 32144), (120, 32153), (124, 32210), (128, 32240), (134, 32333), (146, 32450), (151, 32495), (153, 32510), (154, 32516), (159, 32546), (162, 32588), (169, 32693), (178, 32738), (180, 32744), (189, 32792), (193, 32822), (198, 32852), (201, 32861),

Gene: Ohno789\_32 Start: 25817, Stop: 27295, Start Num: 23

Candidate Starts for Ohno789\_32:

(Start: 23 @25817 has 192 MA's), (Start: 31 @25898 has 1 MA's), (38, 25964), (Start: 50 @26030 has 1 MA's), (52, 26048), (54, 26057), (77, 26246), (99, 26396), (112, 26477), (113, 26480), (125, 26591), (128, 26618), (130, 26651), (152, 26876), (153, 26888), (162, 26966), (171, 27080), (198, 27230), (204, 27278),

Gene: Oogway\_31 Start: 25939, Stop: 27417, Start Num: 23

Candidate Starts for Oogway\_31:

(Start: 23 @25939 has 192 MA's), (29, 26002), (Start: 31 @26020 has 1 MA's), (38, 26086), (Start: 50 @26152 has 1 MA's), (54, 26179), (77, 26368), (99, 26518), (112, 26599), (113, 26602), (125, 26713), (128, 26740), (130, 26773), (152, 26998), (153, 27010), (162, 27088), (171, 27202), (204, 27400),

Gene: PSullivan\_34 Start: 26487, Stop: 27731, Start Num: 23

Candidate Starts for PSullivan\_34:

(8, 26322), (12, 26370), (Start: 23 @26487 has 192 MA's), (Start: 26 @26514 has 1 MA's), (Start: 31 @26568 has 1 MA's), (38, 26634), (Start: 50 @26700 has 1 MA's), (54, 26727), (77, 26916), (99, 27066), (112, 27147), (113, 27150), (125, 27261), (128, 27288), (130, 27321), (152, 27546), (153, 27558), (162, 27636),

Gene: PacerPaul\_32 Start: 26171, Stop: 27649, Start Num: 23

Candidate Starts for PacerPaul\_32:

(Start: 23 @26171 has 192 MA's), (Start: 26 @26198 has 1 MA's), (Start: 31 @26252 has 1 MA's), (38, 26318), (Start: 50 @26384 has 1 MA's), (54, 26411), (77, 26600), (86, 26645), (99, 26750), (112, 26831), (113, 26834), (125, 26945), (128, 26972), (130, 27005), (146, 27182), (152, 27230), (153, 27242), (162, 27320), (171, 27434), (204, 27632),

Gene: Papez\_34 Start: 27655, Stop: 29139, Start Num: 23

Candidate Starts for Papez\_34:

(4, 27439), (8, 27490), (Start: 23 @27655 has 192 MA's), (Start: 31 @27736 has 1 MA's), (38, 27802), (Start: 50 @27868 has 1 MA's), (77, 28084), (99, 28234), (112, 28315), (113, 28318), (125, 28429), (128, 28456), (130, 28489), (146, 28666), (150, 28708), (153, 28726), (159, 28762), (162, 28804), (171, 28918), (172, 28921), (178, 28954), (189, 29008), (192, 29035), (195, 29050), (203, 29110),

Gene: Paphu\_31 Start: 25687, Stop: 27165, Start Num: 23

Candidate Starts for Paphu\_31:

(1, 25429), (7, 25513), (8, 25522), (12, 25570), (Start: 23 @25687 has 192 MA's), (Start: 26 @25714 has 1 MA's), (Start: 31 @25768 has 1 MA's), (38, 25834), (Start: 50 @25900 has 1 MA's), (54, 25927), (77, 26116), (99, 26266), (112, 26347), (113, 26350), (125, 26461), (128, 26488), (130, 26521), (152, 26746), (153, 26758), (162, 26836), (171, 26950), (204, 27148),

Gene: Paraselene\_31 Start: 26159, Stop: 27637, Start Num: 23

Candidate Starts for Paraselene\_31:

(8, 25994), (12, 26042), (20, 26105), (Start: 23 @26159 has 192 MA's), (Start: 26 @26186 has 1 MA's), (Start: 31 @26240 has 1 MA's), (38, 26306), (44, 26345), (Start: 50 @26372 has 1 MA's), (54, 26399), (77, 26588), (99, 26738), (112, 26819), (113, 26822), (125, 26933), (128, 26960), (130, 26993), (152, 27218), (153, 27230), (162, 27308), (171, 27422), (204, 27620),

Gene: Pari\_33 Start: 25691, Stop: 27169, Start Num: 23

Candidate Starts for Pari\_33:

(Start: 23 @25691 has 192 MA's), (Start: 26 @25718 has 1 MA's), (Start: 31 @25772 has 1 MA's), (38, 25838), (Start: 50 @25904 has 1 MA's), (54, 25931), (77, 26120), (99, 26270), (113, 26354), (125, 26465), (128, 26492), (130, 26525), (152, 26750), (153, 26762), (162, 26840), (171, 26954), (204, 27152),

Gene: ParkTD\_172 Start: 95195, Stop: 96271, Start Num: 51

Candidate Starts for ParkTD\_172:

(Start: 51 @95195 has 170 MA's), (59, 95237), (60, 95240), (61, 95252), (65, 95276), (66, 95279), (73, 95336), (74, 95354), (79, 95408), (92, 95498), (96, 95519), (97, 95522), (109, 95618), (115, 95669), (125, 95750), (128, 95777), (144, 95909), (146, 95921), (147, 95930), (149, 95951), (160, 96014), (163, 96056), (167, 96125), (169, 96149), (172, 96161), (174, 96170), (177, 96191), (182, 96209), (183, 96215), (187, 96242),

Gene: Parliament\_31 Start: 26026, Stop: 27504, Start Num: 23

Candidate Starts for Parliament\_31:

(Start: 23 @26026 has 192 MA's), (Start: 26 @26053 has 1 MA's), (29, 26089), (Start: 31 @26107 has 1 MA's), (38, 26173), (Start: 50 @26239 has 1 MA's), (54, 26266), (77, 26455), (99, 26605), (112, 26686), (113, 26689), (125, 26800), (128, 26827), (130, 26860), (153, 27097), (162, 27175), (171,

27289), (204, 27487),

Gene: PascalRango\_33 Start: 25994, Stop: 27472, Start Num: 23

Candidate Starts for PascalRango\_33:

(Start: 23 @25994 has 192 MA's), (Start: 26 @26021 has 1 MA's), (29, 26057), (Start: 31 @26075 has 1 MA's), (38, 26141), (Start: 50 @26207 has 1 MA's), (54, 26234), (77, 26423), (99, 26573), (112, 26654), (113, 26657), (125, 26768), (128, 26795), (130, 26828), (152, 27053), (153, 27065), (162, 27143), (171, 27257), (204, 27455),

Gene: Patter\_174 Start: 94464, Stop: 95540, Start Num: 51

Candidate Starts for Patter\_174:

(Start: 51 @94464 has 170 MA's), (59, 94506), (60, 94509), (61, 94521), (65, 94545), (66, 94548), (73, 94605), (74, 94623), (79, 94677), (92, 94767), (96, 94788), (97, 94791), (109, 94887), (115, 94938), (125, 95019), (128, 95046), (144, 95178), (146, 95190), (147, 95199), (149, 95220), (160, 95283), (163, 95325), (167, 95394), (169, 95418), (172, 95430), (174, 95439), (177, 95460), (182, 95478), (183, 95484), (187, 95511),

Gene: PattyP\_34 Start: 26227, Stop: 27705, Start Num: 23

Candidate Starts for PattyP\_34:

(1, 25969), (8, 26062), (12, 26110), (Start: 23 @26227 has 192 MA's), (Start: 26 @26254 has 1 MA's), (Start: 31 @26308 has 1 MA's), (38, 26374), (Start: 50 @26440 has 1 MA's), (54, 26467), (77, 26656), (86, 26701), (99, 26806), (112, 26887), (113, 26890), (125, 27001), (128, 27028), (130, 27061), (152, 27286), (153, 27298), (162, 27376), (171, 27490), (204, 27688),

Gene: Payneful\_32 Start: 25475, Stop: 26953, Start Num: 23

Candidate Starts for Payneful\_32:

(7, 25301), (8, 25310), (12, 25358), (Start: 23 @25475 has 192 MA's), (Start: 26 @25502 has 1 MA's), (Start: 31 @25556 has 1 MA's), (38, 25622), (Start: 50 @25688 has 1 MA's), (77, 25904), (99, 26054), (125, 26249), (128, 26276), (130, 26309), (152, 26534), (153, 26546), (162, 26624), (171, 26738), (194, 26864), (204, 26936),

Gene: Pelly\_33 Start: 26646, Stop: 28127, Start Num: 23

Candidate Starts for Pelly\_33:

(8, 26481), (Start: 23 @26646 has 192 MA's), (Start: 26 @26673 has 1 MA's), (29, 26709), (Start: 31 @26727 has 1 MA's), (38, 26793), (42, 26823), (44, 26832), (77, 27075), (99, 27225), (112, 27306), (113, 27309), (125, 27420), (128, 27447), (130, 27480), (146, 27657), (150, 27699), (153, 27717), (159, 27753), (162, 27795), (172, 27912), (173, 27915), (189, 27999), (190, 28008),

Gene: Perseus\_34 Start: 26843, Stop: 28321, Start Num: 23

Candidate Starts for Perseus\_34:

(1, 26585), (8, 26678), (12, 26726), (Start: 23 @26843 has 192 MA's), (Start: 31 @26924 has 1 MA's), (38, 26990), (Start: 50 @27056 has 1 MA's), (52, 27074), (54, 27083), (77, 27272), (99, 27422), (109, 27482), (112, 27503), (113, 27506), (125, 27617), (128, 27644), (130, 27677), (152, 27902), (153, 27914), (162, 27992), (171, 28106), (194, 28232), (204, 28304),

Gene: Peterson\_35 Start: 27853, Stop: 29352, Start Num: 22

Candidate Starts for Peterson\_35:

(Start: 22 @27853 has 52 MA's), (38, 28000), (46, 28057), (59, 28123), (61, 28138), (66, 28174), (77, 28288), (80, 28303), (83, 28309), (101, 28453), (109, 28498), (117, 28573), (124, 28639), (125, 28642), (130, 28702), (131, 28717), (150, 28921), (152, 28927), (153, 28939), (159, 28975), (162, 29017), (171, 29131), (172, 29134), (173, 29137), (178, 29167), (189, 29221), (192, 29248), (199, 29281),

Gene: Petp2012\_34 Start: 26898, Stop: 28376, Start Num: 23

Candidate Starts for Petp2012\_34:

(Start: 23 @26898 has 192 MA's), (Start: 26 @26925 has 1 MA's), (29, 26961), (Start: 31 @26979 has 1 MA's), (38, 27045), (Start: 50 @27111 has 1 MA's), (54, 27138), (77, 27327), (99, 27477), (112, 27558), (113, 27561), (125, 27672), (128, 27699), (130, 27732), (146, 27909), (152, 27957), (153, 27969), (162, 28047), (171, 28161), (204, 28359),

Gene: Petruccio\_33 Start: 26356, Stop: 27834, Start Num: 23

Candidate Starts for Petruccio\_33:

(Start: 23 @26356 has 192 MA's), (29, 26419), (Start: 31 @26437 has 1 MA's), (38, 26503), (Start: 50 @26569 has 1 MA's), (54, 26596), (77, 26785), (99, 26935), (112, 27016), (113, 27019), (125, 27130), (128, 27157), (130, 27190), (152, 27415), (153, 27427), (162, 27505), (171, 27619), (204, 27817),

Gene: PherrisBueller\_33 Start: 25811, Stop: 27295, Start Num: 23

Candidate Starts for PherrisBueller\_33:

(8, 25646), (Start: 23 @25811 has 192 MA's), (Start: 31 @25892 has 1 MA's), (38, 25958), (Start: 50 @26024 has 1 MA's), (54, 26051), (77, 26240), (99, 26390), (112, 26471), (113, 26474), (125, 26585), (128, 26612), (130, 26645), (146, 26822), (150, 26864), (153, 26882), (159, 26918), (162, 26960), (171, 27074), (172, 27077), (178, 27110), (189, 27164), (192, 27191), (203, 27266),

Gene: Phlegm\_178 Start: 95150, Stop: 96226, Start Num: 51

Candidate Starts for Phlegm\_178:

(Start: 51 @95150 has 170 MA's), (59, 95192), (60, 95195), (61, 95207), (65, 95231), (66, 95234), (73, 95291), (74, 95309), (79, 95363), (92, 95453), (96, 95474), (97, 95477), (109, 95573), (115, 95624), (125, 95705), (128, 95732), (144, 95864), (146, 95876), (147, 95885), (149, 95906), (160, 95969), (163, 96011), (167, 96080), (169, 96104), (172, 96116), (174, 96125), (177, 96146), (182, 96164), (183, 96170), (187, 96197),

Gene: Phoebus\_39 Start: 32433, Stop: 33938, Start Num: 22

Candidate Starts for Phoebus\_39:

(3, 32208), (19, 32376), (21, 32430), (Start: 22 @32433 has 52 MA's), (28, 32481), (41, 32604), (66, 32754), (67, 32757), (77, 32868), (93, 32976), (98, 33006), (114, 33108), (125, 33225), (130, 33285), (131, 33300), (146, 33462), (148, 33474), (153, 33522), (159, 33558), (162, 33600), (166, 33678), (172, 33717), (173, 33720), (178, 33750), (185, 33780), (189, 33804),

Gene: Phox\_173 Start: 96111, Stop: 97187, Start Num: 51

Candidate Starts for Phox\_173:

(Start: 51 @96111 has 170 MA's), (59, 96153), (60, 96156), (61, 96168), (65, 96192), (66, 96195), (73, 96252), (74, 96270), (79, 96324), (92, 96414), (96, 96435), (97, 96438), (109, 96534), (115, 96585), (125, 96666), (128, 96693), (144, 96825), (146, 96837), (147, 96846), (149, 96867), (160, 96930), (163, 96972), (167, 97041), (169, 97065), (172, 97077), (174, 97086), (177, 97107), (182, 97125), (183, 97131), (187, 97158),

Gene: Phreeze\_30 Start: 28525, Stop: 29733, Start Num: 32

Candidate Starts for Phreeze\_30:

(Start: 32 @28525 has 10 MA's), (34, 28552), (39, 28591), (58, 28693), (61, 28717), (79, 28870), (84, 28882), (85, 28900), (93, 28966), (94, 28975), (95, 28978), (97, 28984), (101, 29023), (102, 29026), (114, 29107), (119, 29164), (128, 29242), (132, 29272), (142, 29317), (144, 29338), (145, 29341), (147, 29359), (148, 29362), (164, 29503), (169, 29590), (170, 29596), (179, 29650), (187, 29692),

Gene: PhrostyMug\_32 Start: 26005, Stop: 27483, Start Num: 23

Candidate Starts for PhrostyMug\_32:

(20, 25951), (Start: 23 @26005 has 192 MA's), (Start: 26 @26032 has 1 MA's), (29, 26068), (Start: 31 @26086 has 1 MA's), (38, 26152), (Start: 50 @26218 has 1 MA's), (54, 26245), (77, 26434), (86, 26479), (99, 26584), (112, 26665), (113, 26668), (125, 26779), (128, 26806), (130, 26839), (152, 27064), (153, 27076), (162, 27154), (171, 27268), (204, 27466),

Gene: Phusco\_173 Start: 94774, Stop: 95850, Start Num: 51

Candidate Starts for Phusco\_173:

(Start: 51 @94774 has 170 MA's), (59, 94816), (60, 94819), (61, 94831), (65, 94855), (66, 94858), (73, 94915), (74, 94933), (79, 94987), (92, 95077), (96, 95098), (97, 95101), (109, 95197), (115, 95248), (125, 95329), (128, 95356), (144, 95488), (146, 95500), (147, 95509), (149, 95530), (160, 95593), (163, 95635), (167, 95704), (169, 95728), (172, 95740), (174, 95749), (177, 95770), (182, 95788), (183, 95794), (187, 95821),

Gene: Pier\_176 Start: 97363, Stop: 98439, Start Num: 51

Candidate Starts for Pier\_176:

(Start: 51 @97363 has 170 MA's), (59, 97405), (60, 97408), (61, 97420), (65, 97444), (66, 97447), (73, 97504), (74, 97522), (79, 97576), (92, 97666), (96, 97687), (97, 97690), (109, 97786), (115, 97837), (125, 97918), (128, 97945), (144, 98077), (146, 98089), (147, 98098), (149, 98119), (160, 98182), (163, 98224), (167, 98293), (169, 98317), (172, 98329), (174, 98338), (177, 98359), (182, 98377), (183, 98383), (187, 98410),

Gene: PinkPlastic\_31 Start: 25745, Stop: 27223, Start Num: 23

Candidate Starts for PinkPlastic\_31:

(Start: 23 @25745 has 192 MA's), (Start: 26 @25772 has 1 MA's), (29, 25808), (Start: 31 @25826 has 1 MA's), (38, 25892), (Start: 50 @25958 has 1 MA's), (54, 25985), (77, 26174), (86, 26219), (99, 26324), (112, 26405), (113, 26408), (125, 26519), (128, 26546), (130, 26579), (152, 26804), (153, 26816), (162, 26894), (171, 27008), (204, 27206),

Gene: Pinkcreek\_156 Start: 92910, Stop: 93986, Start Num: 51

Candidate Starts for Pinkcreek\_156:

(Start: 51 @92910 has 170 MA's), (59, 92952), (60, 92955), (61, 92967), (65, 92991), (66, 92994), (73, 93051), (74, 93069), (79, 93123), (92, 93213), (96, 93234), (97, 93237), (109, 93333), (115, 93384), (125, 93465), (128, 93492), (144, 93624), (146, 93636), (147, 93645), (149, 93666), (160, 93729), (163, 93771), (167, 93840), (169, 93864), (172, 93876), (174, 93885), (177, 93906), (182, 93924), (183, 93930), (187, 93957),

Gene: Pinto\_35 Start: 26558, Stop: 28036, Start Num: 23

Candidate Starts for Pinto\_35:

(8, 26393), (12, 26441), (Start: 23 @26558 has 192 MA's), (Start: 26 @26585 has 1 MA's), (Start: 31 @26639 has 1 MA's), (38, 26705), (77, 26987), (99, 27137), (112, 27218), (113, 27221), (125, 27332), (128, 27359), (130, 27392), (152, 27617), (153, 27629), (162, 27707), (171, 27821), (204, 28019),

Gene: Pio\_181 Start: 98558, Stop: 99634, Start Num: 51

Candidate Starts for Pio\_181:

(Start: 51 @98558 has 170 MA's), (59, 98600), (60, 98603), (61, 98615), (65, 98639), (66, 98642), (73, 98699), (74, 98717), (79, 98771), (92, 98861), (96, 98882), (97, 98885), (109, 98981), (115, 99032), (125, 99113), (128, 99140), (144, 99272), (146, 99284), (147, 99293), (149, 99314), (160, 99377), (163, 99419), (167, 99488), (169, 99512), (172, 99524), (174, 99533), (177, 99554), (182, 99572), (183, 99578), (187, 99605),

Gene: Pippin\_34 Start: 26309, Stop: 27787, Start Num: 23

Candidate Starts for Pippin\_34:

(7, 26135), (8, 26144), (Start: 23 @26309 has 192 MA's), (Start: 26 @26336 has 1 MA's), (Start: 31 @26390 has 1 MA's), (38, 26456), (Start: 50 @26522 has 1 MA's), (54, 26549), (77, 26738), (99, 26888), (112, 26969), (113, 26972), (125, 27083), (128, 27110), (130, 27143), (152, 27368), (153, 27380), (162, 27458), (171, 27572), (204, 27770),

Gene: Pita2\_34 Start: 26487, Stop: 27965, Start Num: 23

Candidate Starts for Pita2\_34:

(8, 26322), (12, 26370), (Start: 23 @26487 has 192 MA's), (Start: 26 @26514 has 1 MA's), (Start: 31 @26568 has 1 MA's), (38, 26634), (Start: 50 @26700 has 1 MA's), (54, 26727), (77, 26916), (99, 27066), (112, 27147), (113, 27150), (125, 27261), (128, 27288), (130, 27321), (152, 27546), (153, 27558), (162, 27636), (171, 27750), (204, 27948),

Gene: Pivoine\_174 Start: 95150, Stop: 96226, Start Num: 51

Candidate Starts for Pivoine\_174:

(Start: 51 @95150 has 170 MA's), (59, 95192), (60, 95195), (61, 95207), (65, 95231), (66, 95234), (73, 95291), (74, 95309), (79, 95363), (92, 95453), (96, 95474), (97, 95477), (109, 95573), (115, 95624), (125, 95705), (128, 95732), (144, 95864), (146, 95876), (147, 95885), (149, 95906), (160, 95969), (163, 96011), (167, 96080), (169, 96104), (172, 96116), (174, 96125), (177, 96146), (182, 96164), (183, 96170), (187, 96197),

Gene: Pleione\_176 Start: 95674, Stop: 96750, Start Num: 51

Candidate Starts for Pleione\_176:

(Start: 51 @95674 has 170 MA's), (59, 95716), (60, 95719), (61, 95731), (65, 95755), (66, 95758), (73, 95815), (74, 95833), (79, 95887), (92, 95977), (96, 95998), (97, 96001), (109, 96097), (115, 96148), (125, 96229), (128, 96256), (144, 96388), (146, 96400), (147, 96409), (149, 96430), (160, 96493), (163, 96535), (167, 96604), (169, 96628), (172, 96640), (174, 96649), (177, 96670), (182, 96688), (183, 96694), (187, 96721),

Gene: Pound\_41 Start: 33422, Stop: 34924, Start Num: 22

Candidate Starts for Pound\_41:

(6, 33233), (7, 33251), (9, 33269), (10, 33272), (17, 33353), (18, 33362), (Start: 22 @33422 has 52 MA's), (24, 33434), (28, 33470), (29, 33485), (30, 33488), (55, 33671), (60, 33695), (61, 33707), (62, 33725), (74, 33809), (77, 33851), (89, 33920), (109, 34064), (114, 34091), (116, 34136), (118, 34142), (120, 34151), (124, 34208), (128, 34238), (134, 34331), (146, 34448), (151, 34493), (153, 34508), (154, 34514), (159, 34544), (162, 34586), (169, 34691), (178, 34736), (180, 34742), (189, 34790), (193, 34820), (198, 34850), (201, 34859),

Gene: ProMouse\_31 Start: 26450, Stop: 27931, Start Num: 23

Candidate Starts for ProMouse\_31:

(Start: 23 @26450 has 192 MA's), (Start: 26 @26477 has 1 MA's), (29, 26513), (Start: 31 @26531 has 1 MA's), (38, 26597), (Start: 50 @26663 has 1 MA's), (63, 26750), (66, 26765), (77, 26879), (99, 27029), (112, 27110), (113, 27113), (125, 27224), (128, 27251), (130, 27284), (137, 27389), (146, 27461), (150, 27503), (153, 27521), (159, 27557), (162, 27599), (172, 27716), (173, 27719), (189, 27803), (190, 27812),

Gene: Puissant\_29 Start: 28991, Stop: 30202, Start Num: 32

Candidate Starts for Puissant\_29:

(Start: 32 @28991 has 10 MA's), (34, 29018), (43, 29084), (61, 29183), (65, 29207), (67, 29213), (76, 29309), (79, 29339), (84, 29351), (87, 29378), (88, 29390), (95, 29447), (97, 29453), (101, 29492), (102, 29495), (105, 29510), (114, 29576), (118, 29627), (119, 29633), (128, 29711), (144, 29807), (147, 29828), (148, 29831), (149, 29849), (155, 29888), (164, 29972), (169, 30059), (171, 30068), (176, 30101), (179, 30119), (184, 30143), (187, 30161),

Gene: PurduePete\_173 Start: 95901, Stop: 96977, Start Num: 51

Candidate Starts for PurduePete\_173:

(Start: 51 @95901 has 170 MA's), (59, 95943), (60, 95946), (61, 95958), (65, 95982), (66, 95985), (73, 96042), (74, 96060), (79, 96114), (92, 96204), (96, 96225), (97, 96228), (109, 96324), (115, 96375), (125, 96456), (128, 96483), (144, 96615), (146, 96627), (147, 96636), (149, 96657), (160, 96720), (163, 96762), (167, 96831), (169, 96855), (172, 96867), (174, 96876), (177, 96897), (182, 96915), (183, 96921), (187, 96948),

Gene: Pygmy\_21 Start: 21258, Stop: 22748, Start Num: 23

Candidate Starts for Pygmy\_21:

(20, 21204), (Start: 23 @21258 has 192 MA's), (27, 21300), (33, 21357), (41, 21429), (77, 21681), (80, 21696), (81, 21699), (83, 21702), (89, 21750), (96, 21804), (97, 21807), (101, 21849), (109, 21894), (117, 21969), (122, 22023), (124, 22035), (128, 22065), (136, 22176), (153, 22335), (155, 22344), (158, 22356), (162, 22413), (165, 22488), (171, 22527), (185, 22587), (191, 22623), (196, 22659), (200, 22680), (203, 22719),

Gene: QBert\_165 Start: 94388, Stop: 95464, Start Num: 51

Candidate Starts for QBert\_165:

(Start: 51 @94388 has 170 MA's), (59, 94430), (60, 94433), (61, 94445), (65, 94469), (66, 94472), (73, 94529), (74, 94547), (79, 94601), (92, 94691), (96, 94712), (97, 94715), (109, 94811), (115, 94862), (125, 94943), (128, 94970), (144, 95102), (146, 95114), (147, 95123), (149, 95144), (160, 95207), (163, 95249), (167, 95318), (169, 95342), (172, 95354), (174, 95363), (177, 95384), (182, 95402), (183, 95408), (187, 95435),

Gene: QTRlifeCrisis\_32 Start: 26565, Stop: 28043, Start Num: 23

Candidate Starts for QTRlifeCrisis\_32:

(8, 26400), (12, 26448), (Start: 23 @26565 has 192 MA's), (Start: 26 @26592 has 1 MA's), (Start: 31 @26646 has 1 MA's), (38, 26712), (Start: 50 @26778 has 1 MA's), (52, 26796), (54, 26805), (77, 26994), (86, 27039), (99, 27144), (112, 27225), (113, 27228), (125, 27339), (128, 27366), (130, 27399), (152, 27624), (153, 27636), (162, 27714), (171, 27828), (204, 28026),

Gene: Quasimodo\_177 Start: 96568, Stop: 97644, Start Num: 51

Candidate Starts for Quasimodo\_177:

(Start: 51 @96568 has 170 MA's), (59, 96610), (60, 96613), (61, 96625), (65, 96649), (66, 96652), (73, 96709), (74, 96727), (79, 96781), (92, 96871), (96, 96892), (97, 96895), (109, 96991), (115, 97042), (125, 97123), (128, 97150), (144, 97282), (146, 97294), (147, 97303), (149, 97324), (160, 97387), (163, 97429), (167, 97498), (169, 97522), (172, 97534), (174, 97543), (177, 97564), (182, 97582), (183, 97588), (187, 97615),

Gene: Rabinovish\_168 Start: 95632, Stop: 96708, Start Num: 51

Candidate Starts for Rabinovish\_168:

(Start: 51 @95632 has 170 MA's), (59, 95674), (60, 95677), (61, 95689), (65, 95713), (66, 95716), (73, 95773), (74, 95791), (79, 95845), (92, 95935), (96, 95956), (97, 95959), (109, 96055), (115, 96106), (125, 96187), (128, 96214), (144, 96346), (146, 96358), (147, 96367), (149, 96388), (160, 96451), (163, 96493), (167, 96562), (169, 96586), (172, 96598), (174, 96607), (177, 96628), (182, 96646), (183, 96652), (187, 96679),

Gene: Rahel\_175 Start: 95368, Stop: 96444, Start Num: 51

Candidate Starts for Rahel\_175:

(Start: 51 @95368 has 170 MA's), (59, 95410), (60, 95413), (61, 95425), (65, 95449), (66, 95452), (73, 95509), (74, 95527), (79, 95581), (92, 95671), (96, 95692), (97, 95695), (109, 95791), (115, 95842), (125, 95923), (128, 95950), (144, 96082), (146, 96094), (147, 96103), (149, 96124), (150, 96136), (160, 96187), (163, 96229), (167, 96298), (169, 96322), (172, 96334), (174, 96343), (177, 96364),



(182, 96382), (183, 96388), (187, 96415),

Gene: Redno2\_38 Start: 31896, Stop: 33401, Start Num: 22

Candidate Starts for Redno2\_38:

(3, 31671), (19, 31839), (21, 31893), (Start: 22 @31896 has 52 MA's), (28, 31944), (41, 32067), (66, 32217), (67, 32220), (77, 32331), (93, 32439), (98, 32469), (114, 32571), (125, 32688), (130, 32748), (131, 32763), (146, 32925), (148, 32937), (153, 32985), (159, 33021), (162, 33063), (166, 33141), (172, 33180), (173, 33183), (178, 33213), (185, 33243), (189, 33267),

Gene: Rhynn\_32 Start: 26014, Stop: 27492, Start Num: 23

Candidate Starts for Rhynn\_32:

(Start: 23 @26014 has 192 MA's), (Start: 26 @26041 has 1 MA's), (29, 26077), (Start: 31 @26095 has 1 MA's), (38, 26161), (Start: 50 @26227 has 1 MA's), (54, 26254), (77, 26443), (86, 26488), (99, 26593), (112, 26674), (113, 26677), (125, 26788), (128, 26815), (130, 26848), (152, 27073), (153, 27085), (162, 27163), (171, 27277), (204, 27475),

Gene: RidgeCB\_32 Start: 25742, Stop: 27226, Start Num: 23

Candidate Starts for RidgeCB\_32:

(8, 25577), (12, 25625), (Start: 23 @25742 has 192 MA's), (Start: 26 @25769 has 1 MA's), (Start: 31 @25823 has 1 MA's), (38, 25889), (Start: 50 @25955 has 1 MA's), (54, 25982), (75, 26135), (77, 26171), (86, 26216), (99, 26321), (125, 26516), (128, 26543), (130, 26576), (146, 26753), (150, 26795), (153, 26813), (159, 26849), (162, 26891), (171, 27005), (172, 27008), (178, 27041), (189, 27095), (192, 27122), (203, 27197),

Gene: Ringer\_32 Start: 26666, Stop: 28144, Start Num: 23

Candidate Starts for Ringer\_32:

(8, 26501), (12, 26549), (Start: 23 @26666 has 192 MA's), (Start: 26 @26693 has 1 MA's), (29, 26729), (Start: 31 @26747 has 1 MA's), (38, 26813), (Start: 50 @26879 has 1 MA's), (54, 26906), (77, 27095), (99, 27245), (112, 27326), (113, 27329), (125, 27440), (128, 27467), (130, 27500), (152, 27725), (153, 27737), (162, 27815), (171, 27929), (204, 28127),

Gene: Rizal\_168 Start: 93635, Stop: 94711, Start Num: 51

Candidate Starts for Rizal\_168:

(Start: 51 @93635 has 170 MA's), (59, 93677), (60, 93680), (61, 93692), (65, 93716), (66, 93719), (73, 93776), (74, 93794), (79, 93848), (92, 93938), (96, 93959), (97, 93962), (109, 94058), (115, 94109), (125, 94190), (128, 94217), (144, 94349), (146, 94361), (147, 94370), (149, 94391), (160, 94454), (163, 94496), (167, 94565), (169, 94589), (172, 94601), (174, 94610), (177, 94631), (182, 94649), (183, 94655), (187, 94682),

Gene: RoMag\_169 Start: 95679, Stop: 96755, Start Num: 51

Candidate Starts for RoMag\_169:

(Start: 51 @95679 has 170 MA's), (59, 95721), (60, 95724), (61, 95736), (65, 95760), (66, 95763), (73, 95820), (74, 95838), (79, 95892), (92, 95982), (96, 96003), (97, 96006), (109, 96102), (115, 96153), (125, 96234), (128, 96261), (144, 96393), (146, 96405), (147, 96414), (149, 96435), (160, 96498), (163, 96540), (167, 96609), (169, 96633), (172, 96645), (174, 96654), (177, 96675), (182, 96693), (183, 96699), (187, 96726),

Gene: Rohr\_33 Start: 26164, Stop: 27642, Start Num: 23

Candidate Starts for Rohr\_33:

(Start: 23 @26164 has 192 MA's), (Start: 26 @26191 has 1 MA's), (29, 26227), (Start: 31 @26245 has 1 MA's), (38, 26311), (Start: 50 @26377 has 1 MA's), (54, 26404), (77, 26593), (99, 26743), (112, 26824), (113, 26827), (125, 26938), (128, 26965), (130, 26998), (146, 27175), (152, 27223), (153, 27235), (162, 27313), (171, 27427), (204, 27625),

Gene: Ronan\_169 Start: 93138, Stop: 94214, Start Num: 51

Candidate Starts for Ronan\_169:

(Start: 51 @93138 has 170 MA's), (59, 93180), (60, 93183), (61, 93195), (65, 93219), (66, 93222), (73, 93279), (74, 93297), (79, 93351), (92, 93441), (96, 93462), (97, 93465), (109, 93561), (115, 93612), (125, 93693), (128, 93720), (144, 93852), (146, 93864), (147, 93873), (149, 93894), (160, 93957), (163, 93999), (167, 94068), (169, 94092), (172, 94104), (174, 94113), (177, 94134), (182, 94152), (183, 94158), (187, 94185),

Gene: Roots515\_177 Start: 96988, Stop: 98064, Start Num: 51

Candidate Starts for Roots515\_177:

(Start: 51 @96988 has 170 MA's), (59, 97030), (60, 97033), (61, 97045), (65, 97069), (66, 97072), (73, 97129), (74, 97147), (79, 97201), (92, 97291), (96, 97312), (97, 97315), (109, 97411), (115, 97462), (125, 97543), (128, 97570), (144, 97702), (146, 97714), (147, 97723), (149, 97744), (160, 97807), (163, 97849), (167, 97918), (169, 97942), (172, 97954), (174, 97963), (177, 97984), (182, 98002), (183, 98008), (187, 98035),

Gene: Rubeus\_33 Start: 26049, Stop: 27527, Start Num: 23

Candidate Starts for Rubeus\_33:

(Start: 23 @26049 has 192 MA's), (Start: 26 @26076 has 1 MA's), (Start: 31 @26130 has 1 MA's), (38, 26196), (Start: 50 @26262 has 1 MA's), (52, 26280), (77, 26478), (99, 26628), (112, 26709), (113, 26712), (125, 26823), (128, 26850), (130, 26883), (153, 27120), (162, 27198), (171, 27312), (204, 27510),

Gene: Rufus\_33 Start: 26351, Stop: 27829, Start Num: 23

Candidate Starts for Rufus\_33:

(8, 26186), (12, 26234), (Start: 23 @26351 has 192 MA's), (Start: 26 @26378 has 1 MA's), (Start: 31 @26432 has 1 MA's), (38, 26498), (77, 26780), (99, 26930), (112, 27011), (113, 27014), (125, 27125), (128, 27152), (130, 27185), (152, 27410), (153, 27422), (162, 27500), (171, 27614), (204, 27812),

Gene: Rutherferd\_34 Start: 26620, Stop: 28098, Start Num: 23

Candidate Starts for Rutherferd\_34:

(4, 26404), (8, 26455), (12, 26503), (Start: 23 @26620 has 192 MA's), (29, 26683), (Start: 31 @26701 has 1 MA's), (38, 26767), (42, 26797), (Start: 50 @26833 has 1 MA's), (54, 26860), (77, 27049), (86, 27094), (99, 27199), (112, 27280), (113, 27283), (125, 27394), (128, 27421), (130, 27454), (152, 27679), (153, 27691), (162, 27769), (171, 27883), (204, 28081),

Gene: Ryadel\_63 Start: 39409, Stop: 40899, Start Num: 22

Candidate Starts for Ryadel\_63:

(Start: 22 @39409 has 52 MA's), (27, 39451), (41, 39580), (49, 39619), (60, 39676), (75, 39796), (77, 39832), (81, 39850), (90, 39907), (91, 39916), (95, 39952), (96, 39955), (97, 39958), (101, 40000), (109, 40045), (114, 40072), (131, 40264), (141, 40381), (148, 40438), (153, 40486), (162, 40564), (165, 40639), (171, 40678), (178, 40708), (188, 40756), (197, 40825),

Gene: STLscum\_33 Start: 26758, Stop: 28248, Start Num: 23

Candidate Starts for STLscum\_33:

(8, 26593), (11, 26629), (12, 26641), (Start: 23 @26758 has 192 MA's), (Start: 26 @26785 has 1 MA's), (Start: 31 @26839 has 1 MA's), (38, 26905), (54, 26998), (55, 27001), (60, 27025), (61, 27037), (66, 27073), (77, 27187), (93, 27295), (114, 27427), (118, 27478), (128, 27571), (130, 27604), (133, 27640), (138, 27721), (141, 27736), (146, 27781), (152, 27829), (153, 27841), (162, 27919), (165, 27994), (172, 28036), (180, 28075), (204, 28231),

Gene: Sagefire\_33 Start: 26791, Stop: 28269, Start Num: 23

Candidate Starts for Sagefire\_33:

(8, 26626), (12, 26674), (Start: 23 @26791 has 192 MA's), (Start: 26 @26818 has 1 MA's), (Start: 31 @26872 has 1 MA's), (38, 26938), (Start: 50 @27004 has 1 MA's), (52, 27022), (54, 27031), (77, 27220), (86, 27265), (99, 27370), (112, 27451), (113, 27454), (125, 27565), (128, 27592), (130, 27625), (152, 27850), (153, 27862), (162, 27940), (171, 28054), (204, 28252),

Gene: Salacia\_175 Start: 95774, Stop: 96850, Start Num: 51

Candidate Starts for Salacia\_175:

(Start: 51 @95774 has 170 MA's), (59, 95816), (60, 95819), (61, 95831), (65, 95855), (66, 95858), (73, 95915), (74, 95933), (79, 95987), (92, 96077), (96, 96098), (97, 96101), (109, 96197), (115, 96248), (125, 96329), (128, 96356), (144, 96488), (146, 96500), (147, 96509), (149, 96530), (160, 96593), (163, 96635), (167, 96704), (169, 96728), (172, 96740), (174, 96749), (177, 96770), (182, 96788), (183, 96794), (187, 96821),

Gene: Sandaddy\_31 Start: 25904, Stop: 27382, Start Num: 23

Candidate Starts for Sandaddy\_31:

(Start: 23 @25904 has 192 MA's), (Start: 26 @25931 has 1 MA's), (29, 25967), (Start: 31 @25985 has 1 MA's), (38, 26051), (Start: 50 @26117 has 1 MA's), (54, 26144), (77, 26333), (99, 26483), (112, 26564), (113, 26567), (125, 26678), (128, 26705), (130, 26738), (152, 26963), (153, 26975), (162, 27053), (171, 27167), (204, 27365),

Gene: Sanya\_31 Start: 26588, Stop: 28066, Start Num: 23

Candidate Starts for Sanya\_31:

(8, 26423), (12, 26471), (Start: 23 @26588 has 192 MA's), (Start: 31 @26669 has 1 MA's), (38, 26735), (Start: 50 @26801 has 1 MA's), (54, 26828), (77, 27017), (86, 27062), (99, 27167), (112, 27248), (113, 27251), (125, 27362), (128, 27389), (130, 27422), (152, 27647), (153, 27659), (162, 27737), (171, 27851), (202, 28013), (204, 28049),

Gene: SarFire\_32 Start: 26066, Stop: 27544, Start Num: 23

Candidate Starts for SarFire\_32:

(1, 25808), (8, 25901), (12, 25949), (Start: 23 @26066 has 192 MA's), (Start: 26 @26093 has 1 MA's), (Start: 31 @26147 has 1 MA's), (38, 26213), (Start: 50 @26279 has 1 MA's), (54, 26306), (77, 26495), (99, 26645), (112, 26726), (113, 26729), (121, 26795), (125, 26840), (128, 26867), (130, 26900), (152, 27125), (153, 27137), (162, 27215), (171, 27329), (194, 27455), (204, 27527),

Gene: Sauce\_171 Start: 94154, Stop: 95230, Start Num: 51

Candidate Starts for Sauce\_171:

(Start: 51 @94154 has 170 MA's), (59, 94196), (60, 94199), (61, 94211), (65, 94235), (66, 94238), (73, 94295), (74, 94313), (79, 94367), (92, 94457), (96, 94478), (97, 94481), (109, 94577), (115, 94628), (125, 94709), (128, 94736), (144, 94868), (146, 94880), (147, 94889), (149, 94910), (160, 94973), (163, 95015), (167, 95084), (169, 95108), (172, 95120), (174, 95129), (177, 95150), (182, 95168), (183, 95174), (187, 95201),

Gene: Schatzie\_37 Start: 31172, Stop: 32674, Start Num: 22

Candidate Starts for Schatzie\_37:

(6, 30983), (7, 31001), (9, 31019), (10, 31022), (17, 31103), (18, 31112), (Start: 22 @31172 has 52 MA's), (24, 31184), (28, 31220), (29, 31235), (30, 31238), (55, 31421), (60, 31445), (61, 31457), (62, 31475), (74, 31559), (77, 31601), (89, 31670), (109, 31814), (114, 31841), (116, 31886), (118, 31892), (120, 31901), (124, 31958), (128, 31988), (134, 32081), (146, 32198), (151, 32243), (153, 32258), (154, 32264), (159, 32294), (162, 32336), (169, 32441), (178, 32486), (180, 32492), (189, 32540), (193, 32570), (198, 32600), (201, 32609),

Gene: SchoolBus\_59 Start: 38593, Stop: 40083, Start Num: 22

Candidate Starts for SchoolBus\_59:

(Start: 22 @38593 has 52 MA's), (27, 38635), (41, 38764), (49, 38803), (60, 38860), (75, 38980), (77, 39016), (81, 39034), (90, 39091), (91, 39100), (95, 39136), (96, 39139), (97, 39142), (101, 39184), (109, 39229), (114, 39256), (131, 39448), (141, 39565), (148, 39622), (153, 39670), (162, 39748), (165, 39823), (171, 39862), (178, 39892), (188, 39940), (197, 40009),

Gene: Schuy\_60 Start: 38384, Stop: 39874, Start Num: 22

Candidate Starts for Schuy\_60:

(Start: 22 @38384 has 52 MA's), (27, 38426), (41, 38555), (49, 38594), (60, 38651), (75, 38771), (77, 38807), (81, 38825), (90, 38882), (91, 38891), (95, 38927), (96, 38930), (97, 38933), (101, 38975), (109, 39020), (114, 39047), (131, 39239), (141, 39356), (148, 39413), (153, 39461), (162, 39539), (165, 39614), (171, 39653), (178, 39683), (188, 39731), (197, 39800),

Gene: ScottMcG\_168 Start: 94211, Stop: 95287, Start Num: 51

Candidate Starts for ScottMcG\_168:

(Start: 51 @94211 has 170 MA's), (59, 94253), (60, 94256), (61, 94268), (65, 94292), (66, 94295), (73, 94352), (74, 94370), (79, 94424), (92, 94514), (96, 94535), (97, 94538), (109, 94634), (115, 94685), (125, 94766), (128, 94793), (144, 94925), (146, 94937), (147, 94946), (149, 94967), (160, 95030), (163, 95072), (167, 95141), (169, 95165), (172, 95177), (174, 95186), (177, 95207), (182, 95225), (183, 95231), (187, 95258),

Gene: Seabiscuit\_34 Start: 25972, Stop: 27450, Start Num: 23

Candidate Starts for Seabiscuit\_34:

(Start: 23 @25972 has 192 MA's), (Start: 26 @25999 has 1 MA's), (29, 26035), (Start: 31 @26053 has 1 MA's), (38, 26119), (Start: 50 @26185 has 1 MA's), (54, 26212), (77, 26401), (99, 26551), (113, 26635), (125, 26746), (128, 26773), (130, 26806), (152, 27031), (153, 27043), (162, 27121), (171, 27235), (204, 27433),

Gene: Seanderson\_33 Start: 26446, Stop: 27924, Start Num: 23

Candidate Starts for Seanderson\_33:

(7, 26272), (8, 26281), (Start: 23 @26446 has 192 MA's), (Start: 26 @26473 has 1 MA's), (Start: 31 @26527 has 1 MA's), (38, 26593), (Start: 50 @26659 has 1 MA's), (54, 26686), (77, 26875), (99, 27025), (112, 27106), (113, 27109), (125, 27220), (128, 27247), (130, 27280), (152, 27505), (153, 27517), (162, 27595), (171, 27709), (204, 27907),

Gene: Sebata\_174 Start: 96678, Stop: 97754, Start Num: 51

Candidate Starts for Sebata\_174:

(Start: 51 @96678 has 170 MA's), (59, 96720), (60, 96723), (61, 96735), (65, 96759), (66, 96762), (73, 96819), (74, 96837), (79, 96891), (92, 96981), (96, 97002), (97, 97005), (109, 97101), (115, 97152), (125, 97233), (128, 97260), (144, 97392), (146, 97404), (147, 97413), (149, 97434), (160, 97497), (163, 97539), (167, 97608), (169, 97632), (172, 97644), (174, 97653), (177, 97674), (182, 97692), (183, 97698), (187, 97725),

Gene: Shaqnato\_166 Start: 93600, Stop: 94676, Start Num: 51

Candidate Starts for Shaqnato\_166:

(Start: 51 @93600 has 170 MA's), (59, 93642), (60, 93645), (61, 93657), (65, 93681), (66, 93684), (73, 93741), (74, 93759), (79, 93813), (92, 93903), (96, 93924), (97, 93927), (109, 94023), (115, 94074), (125, 94155), (128, 94182), (144, 94314), (146, 94326), (147, 94335), (149, 94356), (160, 94419), (163, 94461), (167, 94530), (169, 94554), (172, 94566), (174, 94575), (177, 94596), (182, 94614), (183, 94620), (187, 94647),

Gene: Sheen\_5 Start: 2347, Stop: 3570, Start Num: 36

Candidate Starts for Sheen\_5:

(Start: 36 @2347 has 1 MA's), (47, 2434), (59, 2494), (65, 2533), (66, 2536), (70, 2557), (77, 2644), (95, 2764), (97, 2770), (100, 2803), (102, 2812), (106, 2836), (107, 2863), (111, 2872), (113, 2887), (121, 2953), (128, 3019), (139, 3160), (140, 3163), (143, 3178), (153, 3268), (165, 3418), (172, 3460), (187, 3535),

Gene: Shelob\_174 Start: 96708, Stop: 97784, Start Num: 51

Candidate Starts for Shelob\_174:

(Start: 51 @96708 has 170 MA's), (59, 96750), (60, 96753), (61, 96765), (65, 96789), (66, 96792), (73, 96849), (74, 96867), (79, 96921), (92, 97011), (96, 97032), (97, 97035), (109, 97131), (115, 97182), (125, 97263), (128, 97290), (144, 97422), (146, 97434), (147, 97443), (149, 97464), (160, 97527), (163, 97569), (167, 97638), (169, 97662), (172, 97674), (174, 97683), (177, 97704), (182, 97722), (183, 97728), (187, 97755),

Gene: ShiaLabeouf\_171 Start: 94579, Stop: 95655, Start Num: 51

Candidate Starts for ShiaLabeouf\_171:

(Start: 51 @94579 has 170 MA's), (59, 94621), (60, 94624), (61, 94636), (65, 94660), (66, 94663), (73, 94720), (74, 94738), (79, 94792), (92, 94882), (96, 94903), (97, 94906), (109, 95002), (115, 95053), (125, 95134), (128, 95161), (144, 95293), (146, 95305), (147, 95314), (149, 95335), (160, 95398), (163, 95440), (167, 95509), (169, 95533), (172, 95545), (174, 95554), (177, 95575), (182, 95593), (183, 95599), (187, 95626),

Gene: Shida\_59 Start: 38291, Stop: 39781, Start Num: 22

Candidate Starts for Shida\_59:

(Start: 22 @38291 has 52 MA's), (27, 38333), (41, 38462), (49, 38501), (60, 38558), (75, 38678), (77, 38714), (81, 38732), (90, 38789), (91, 38798), (95, 38834), (96, 38837), (97, 38840), (101, 38882), (109, 38927), (114, 38954), (131, 39146), (141, 39263), (148, 39320), (153, 39368), (162, 39446), (165, 39521), (171, 39560), (178, 39590), (188, 39638), (197, 39707),

Gene: Shifa\_164 Start: 94745, Stop: 95821, Start Num: 51

Candidate Starts for Shifa\_164:

(Start: 51 @94745 has 170 MA's), (59, 94787), (60, 94790), (61, 94802), (65, 94826), (66, 94829), (73, 94886), (74, 94904), (79, 94958), (92, 95048), (96, 95069), (97, 95072), (109, 95168), (115, 95219), (125, 95300), (128, 95327), (144, 95459), (146, 95471), (147, 95480), (149, 95501), (160, 95564), (163, 95606), (167, 95675), (169, 95699), (172, 95711), (174, 95720), (177, 95741), (182, 95759), (183, 95765), (187, 95792),

Gene: Shipwreck\_21 Start: 21236, Stop: 22726, Start Num: 23

Candidate Starts for Shipwreck\_21:

(20, 21182), (Start: 23 @21236 has 192 MA's), (27, 21278), (33, 21335), (41, 21407), (77, 21659), (80, 21674), (81, 21677), (83, 21680), (89, 21728), (96, 21782), (97, 21785), (101, 21827), (109, 21872), (117, 21947), (122, 22001), (124, 22013), (128, 22043), (136, 22154), (153, 22313), (155, 22322), (158, 22334), (162, 22391), (165, 22466), (171, 22505), (185, 22565), (191, 22601), (196, 22637), (200, 22658), (203, 22697),

Gene: Shnickers\_172 Start: 94541, Stop: 95617, Start Num: 51

Candidate Starts for Shnickers\_172:

(Start: 51 @94541 has 170 MA's), (59, 94583), (60, 94586), (61, 94598), (65, 94622), (66, 94625), (73, 94682), (74, 94700), (79, 94754), (92, 94844), (96, 94865), (97, 94868), (109, 94964), (115, 95015), (125, 95096), (128, 95123), (144, 95255), (146, 95267), (147, 95276), (149, 95297), (150, 95309), (160, 95360), (163, 95402), (167, 95471), (169, 95495), (172, 95507), (174, 95516), (177, 95537), (182, 95555), (183, 95561), (187, 95588),

Gene: ShortQueendom\_31 Start: 25886, Stop: 27238, Start Num: 23

Candidate Starts for ShortQueendom\_31:

(8, 25721), (12, 25769), (Start: 23 @25886 has 192 MA's), (Start: 26 @25913 has 1 MA's), (29, 25949), (Start: 31 @25967 has 1 MA's), (38, 26033), (Start: 50 @26099 has 1 MA's), (54, 26126), (77, 26315), (99, 26465), (112, 26546), (113, 26549), (125, 26660), (128, 26687), (130, 26720), (152, 26945), (153, 26957), (162, 27035),

Gene: Shrimp\_176 Start: 96211, Stop: 97287, Start Num: 51

Candidate Starts for Shrimp\_176:

(Start: 51 @96211 has 170 MA's), (59, 96253), (60, 96256), (61, 96268), (65, 96292), (66, 96295), (73, 96352), (74, 96370), (79, 96424), (92, 96514), (96, 96535), (97, 96538), (109, 96634), (115, 96685), (125, 96766), (128, 96793), (144, 96925), (146, 96937), (147, 96946), (149, 96967), (160, 97030), (163, 97072), (167, 97141), (169, 97165), (172, 97177), (174, 97186), (177, 97207), (182, 97225), (183, 97231), (187, 97258),

Gene: SilverDipper\_176 Start: 95146, Stop: 96222, Start Num: 51

Candidate Starts for SilverDipper\_176:

(Start: 51 @95146 has 170 MA's), (59, 95188), (60, 95191), (61, 95203), (65, 95227), (66, 95230), (73, 95287), (74, 95305), (79, 95359), (92, 95449), (96, 95470), (97, 95473), (109, 95569), (115, 95620), (125, 95701), (128, 95728), (144, 95860), (146, 95872), (147, 95881), (149, 95902), (160, 95965), (163, 96007), (167, 96076), (169, 96100), (172, 96112), (174, 96121), (177, 96142), (182, 96160), (183, 96166), (187, 96193),

Gene: Slagathor\_33 Start: 25931, Stop: 27409, Start Num: 23

Candidate Starts for Slagathor\_33:

(Start: 23 @25931 has 192 MA's), (Start: 26 @25958 has 1 MA's), (29, 25994), (Start: 31 @26012 has 1 MA's), (38, 26078), (Start: 50 @26144 has 1 MA's), (54, 26171), (77, 26360), (99, 26510), (112, 26591), (113, 26594), (125, 26705), (128, 26732), (130, 26765), (152, 26990), (153, 27002), (162, 27080), (171, 27194), (198, 27344), (204, 27392),

Gene: Smairt\_33 Start: 26659, Stop: 28140, Start Num: 23

Candidate Starts for Smairt\_33:

(7, 26485), (8, 26494), (Start: 23 @26659 has 192 MA's), (Start: 26 @26686 has 1 MA's), (Start: 31 @26740 has 1 MA's), (38, 26806), (61, 26938), (77, 27088), (86, 27133), (99, 27238), (112, 27319), (113, 27322), (125, 27433), (128, 27460), (130, 27493), (146, 27670), (150, 27712), (153, 27730), (159, 27766), (162, 27808), (172, 27925), (173, 27928), (189, 28012), (190, 28021),

Gene: SmallFry\_174 Start: 94737, Stop: 95813, Start Num: 51

Candidate Starts for SmallFry\_174:

(Start: 51 @94737 has 170 MA's), (59, 94779), (60, 94782), (61, 94794), (65, 94818), (66, 94821), (73, 94878), (74, 94896), (79, 94950), (92, 95040), (96, 95061), (97, 95064), (109, 95160), (115, 95211), (125, 95292), (128, 95319), (144, 95451), (146, 95463), (147, 95472), (149, 95493), (160, 95556), (163, 95598), (167, 95667), (169, 95691), (172, 95703), (174, 95712), (177, 95733), (182, 95751), (183, 95757), (187, 95784),

Gene: Smeagol\_34 Start: 27282, Stop: 28781, Start Num: 22

Candidate Starts for Smeagol\_34:

(Start: 22 @27282 has 52 MA's), (38, 27429), (46, 27486), (59, 27552), (61, 27567), (66, 27603), (77, 27717), (80, 27732), (83, 27738), (101, 27882), (109, 27927), (117, 28002), (124, 28068), (125, 28071), (130, 28131), (131, 28146), (150, 28350), (152, 28356), (153, 28368), (159, 28404), (162, 28446), (171, 28560), (172, 28563), (173, 28566), (178, 28596), (189, 28650), (192, 28677), (199, 28710),

Gene: Smooch\_62 Start: 40313, Stop: 41803, Start Num: 22

Candidate Starts for Smooch\_62:

(Start: 22 @40313 has 52 MA's), (27, 40355), (41, 40484), (49, 40523), (60, 40580), (77, 40736), (81, 40754), (90, 40811), (91, 40820), (96, 40859), (97, 40862), (101, 40904), (109, 40949), (114, 40976), (131, 41168), (141, 41285), (148, 41342), (153, 41390), (162, 41468), (165, 41543), (171, 41582), (178, 41612), (188, 41660), (197, 41729),

Gene: Snazzy\_31 Start: 25845, Stop: 27323, Start Num: 23

Candidate Starts for Snazzy\_31:

(8, 25680), (Start: 23 @25845 has 192 MA's), (Start: 26 @25872 has 1 MA's), (29, 25908), (Start: 31 @25926 has 1 MA's), (38, 25992), (40, 26010), (Start: 50 @26058 has 1 MA's), (52, 26076), (54, 26085), (77, 26274), (86, 26319), (99, 26424), (112, 26505), (113, 26508), (125, 26619), (128, 26646), (130, 26679), (146, 26856), (152, 26904), (153, 26916), (162, 26994), (171, 27108), (202, 27270), (204, 27306),

Gene: Solon\_32 Start: 26557, Stop: 28035, Start Num: 23

Candidate Starts for Solon\_32:

(Start: 23 @26557 has 192 MA's), (Start: 26 @26584 has 1 MA's), (29, 26620), (Start: 31 @26638 has 1 MA's), (38, 26704), (Start: 50 @26770 has 1 MA's), (54, 26797), (77, 26986), (99, 27136), (112, 27217), (113, 27220), (125, 27331), (128, 27358), (130, 27391), (146, 27568), (152, 27616), (153, 27628), (162, 27706), (171, 27820), (194, 27946), (204, 28018),

Gene: Sorpresa\_32 Start: 25904, Stop: 27382, Start Num: 23

Candidate Starts for Sorpresa\_32:

(Start: 23 @25904 has 192 MA's), (Start: 26 @25931 has 1 MA's), (29, 25967), (Start: 31 @25985 has 1 MA's), (38, 26051), (Start: 50 @26117 has 1 MA's), (54, 26144), (77, 26333), (99, 26483), (112, 26564), (113, 26567), (125, 26678), (128, 26705), (130, 26738), (152, 26963), (153, 26975), (162, 27053), (171, 27167), (204, 27365),

Gene: Spec\_170 Start: 94928, Stop: 96004, Start Num: 51

Candidate Starts for Spec\_170:

(Start: 51 @94928 has 170 MA's), (59, 94970), (60, 94973), (61, 94985), (65, 95009), (66, 95012), (73, 95069), (74, 95087), (79, 95141), (92, 95231), (96, 95252), (97, 95255), (109, 95351), (115, 95402), (125, 95483), (128, 95510), (144, 95642), (146, 95654), (147, 95663), (149, 95684), (160, 95747), (163, 95789), (167, 95858), (169, 95882), (172, 95894), (174, 95903), (177, 95924), (182, 95942), (183, 95948), (187, 95975),

Gene: Specks\_178 Start: 96944, Stop: 98020, Start Num: 51

Candidate Starts for Specks\_178:

(Start: 51 @96944 has 170 MA's), (59, 96986), (60, 96989), (61, 97001), (65, 97025), (66, 97028), (73, 97085), (74, 97103), (79, 97157), (92, 97247), (96, 97268), (97, 97271), (109, 97367), (115, 97418), (125, 97499), (128, 97526), (144, 97658), (146, 97670), (147, 97679), (149, 97700), (160, 97763), (163, 97805), (167, 97874), (169, 97898), (172, 97910), (174, 97919), (177, 97940), (182, 97958), (183, 97964), (187, 97991),

Gene: SpikeBT\_34 Start: 26862, Stop: 28340, Start Num: 23

Candidate Starts for SpikeBT\_34:

(Start: 23 @26862 has 192 MA's), (Start: 26 @26889 has 1 MA's), (29, 26925), (Start: 31 @26943 has 1 MA's), (38, 27009), (Start: 50 @27075 has 1 MA's), (54, 27102), (77, 27291), (99, 27441), (112, 27522), (113, 27525), (125, 27636), (128, 27663), (130, 27696), (152, 27921), (153, 27933), (162, 28011), (171, 28125), (204, 28323),

Gene: Sprinklers\_170 Start: 94381, Stop: 95457, Start Num: 51

Candidate Starts for Sprinklers\_170:

(Start: 51 @94381 has 170 MA's), (59, 94423), (60, 94426), (61, 94438), (65, 94462), (66, 94465), (73, 94522), (74, 94540), (79, 94594), (92, 94684), (96, 94705), (97, 94708), (109, 94804), (115, 94855), (125, 94936), (128, 94963), (144, 95095), (146, 95107), (147, 95116), (149, 95137), (160, 95200), (163, 95242), (167, 95311), (169, 95335), (172, 95347), (174, 95356), (177, 95377), (182, 95395), (183, 95401), (187, 95428),

Gene: Spud\_171 Start: 95313, Stop: 96389, Start Num: 51

Candidate Starts for Spud\_171:

(Start: 51 @95313 has 170 MA's), (59, 95355), (60, 95358), (61, 95370), (65, 95394), (66, 95397), (73, 95454), (74, 95472), (79, 95526), (92, 95616), (96, 95637), (97, 95640), (109, 95736), (115, 95787), (125, 95868), (128, 95895), (144, 96027), (146, 96039), (147, 96048), (149, 96069), (160, 96132), (163, 96174), (167, 96243), (169, 96267), (172, 96279), (174, 96288), (177, 96309), (182, 96327), (183, 96333), (187, 96360),

Gene: Squee\_33 Start: 26811, Stop: 28289, Start Num: 23

Candidate Starts for Squee\_33:

(7, 26637), (8, 26646), (12, 26694), (Start: 23 @26811 has 192 MA's), (Start: 26 @26838 has 1 MA's), (Start: 31 @26892 has 1 MA's), (38, 26958), (Start: 50 @27024 has 1 MA's), (54, 27051), (55, 27054), (77, 27240), (99, 27390), (112, 27471), (113, 27474), (125, 27585), (128, 27612), (130, 27645), (152, 27870), (153, 27882), (162, 27960), (171, 28074), (204, 28272),

Gene: SrishMeg2525\_170 Start: 95434, Stop: 96510, Start Num: 51

Candidate Starts for SrishMeg2525\_170:

(Start: 51 @95434 has 170 MA's), (59, 95476), (60, 95479), (61, 95491), (65, 95515), (66, 95518), (73, 95575), (74, 95593), (79, 95647), (92, 95737), (96, 95758), (97, 95761), (109, 95857), (115, 95908), (125, 95989), (128, 96016), (144, 96148), (146, 96160), (147, 96169), (149, 96190), (160, 96253), (163, 96295), (167, 96364), (169, 96388), (172, 96400), (174, 96409), (177, 96430), (182, 96448), (183, 96454), (187, 96481),

Gene: StephanieG\_172 Start: 96506, Stop: 97582, Start Num: 51

Candidate Starts for StephanieG\_172:

(Start: 51 @96506 has 170 MA's), (59, 96548), (60, 96551), (61, 96563), (65, 96587), (66, 96590), (73, 96647), (74, 96665), (79, 96719), (92, 96809), (96, 96830), (97, 96833), (109, 96929), (115, 96980), (125, 97061), (128, 97088), (144, 97220), (146, 97232), (147, 97241), (149, 97262), (160, 97325), (163, 97367), (167, 97436), (169, 97460), (172, 97472), (174, 97481), (177, 97502), (182, 97520), (183, 97526), (187, 97553),

Gene: StewieG\_31 Start: 25747, Stop: 27225, Start Num: 23

Candidate Starts for StewieG\_31:

(Start: 23 @25747 has 192 MA's), (Start: 26 @25774 has 1 MA's), (Start: 31 @25828 has 1 MA's), (38, 25894), (Start: 50 @25960 has 1 MA's), (54, 25987), (77, 26176), (99, 26326), (112, 26407), (113, 26410), (125, 26521), (128, 26548), (130, 26581), (152, 26806), (153, 26818), (162, 26896), (171, 27010), (204, 27208),

Gene: StrongArm\_31 Start: 26946, Stop: 28424, Start Num: 23

Candidate Starts for StrongArm\_31:

(8, 26781), (12, 26829), (Start: 23 @26946 has 192 MA's), (Start: 26 @26973 has 1 MA's), (Start: 31 @27027 has 1 MA's), (38, 27093), (Start: 50 @27159 has 1 MA's), (54, 27186), (77, 27375), (99, 27525), (112, 27606), (113, 27609), (125, 27720), (128, 27747), (130, 27780), (152, 28005), (153, 28017), (162, 28095), (171, 28209), (204, 28407),

Gene: Stubby\_157 Start: 93597, Stop: 94673, Start Num: 51

Candidate Starts for Stubby\_157:



(Start: 51 @93597 has 170 MA's), (59, 93639), (60, 93642), (61, 93654), (65, 93678), (66, 93681), (73, 93738), (74, 93756), (79, 93810), (92, 93900), (96, 93921), (97, 93924), (109, 94020), (115, 94071), (125, 94152), (128, 94179), (144, 94311), (146, 94323), (147, 94332), (149, 94353), (160, 94416), (163, 94458), (167, 94527), (169, 94551), (172, 94563), (174, 94572), (177, 94593), (182, 94611), (183, 94617), (187, 94644),

Gene: StubbySaigey\_177 Start: 94680, Stop: 95756, Start Num: 51

Candidate Starts for StubbySaigey\_177:

(Start: 51 @94680 has 170 MA's), (59, 94722), (60, 94725), (61, 94737), (65, 94761), (66, 94764), (73, 94821), (74, 94839), (79, 94893), (92, 94983), (96, 95004), (97, 95007), (109, 95103), (115, 95154), (125, 95235), (128, 95262), (144, 95394), (146, 95406), (147, 95415), (149, 95436), (160, 95499), (163, 95541), (167, 95610), (169, 95634), (172, 95646), (174, 95655), (177, 95676), (182, 95694), (183, 95700), (187, 95727),

Gene: Sumter\_31 Start: 25495, Stop: 26985, Start Num: 23

Candidate Starts for Sumter\_31:

(8, 25330), (Start: 23 @25495 has 192 MA's), (Start: 26 @25522 has 1 MA's), (29, 25558), (Start: 31 @25576 has 1 MA's), (38, 25642), (54, 25735), (55, 25738), (60, 25762), (61, 25774), (66, 25810), (77, 25924), (93, 26032), (114, 26164), (118, 26215), (128, 26308), (130, 26341), (138, 26458), (141, 26473), (146, 26518), (153, 26578), (162, 26656), (165, 26731), (172, 26773), (204, 26968),

Gene: SwissCheese\_34 Start: 26674, Stop: 28158, Start Num: 23

Candidate Starts for SwissCheese\_34:

(Start: 23 @26674 has 192 MA's), (Start: 26 @26701 has 1 MA's), (29, 26737), (Start: 31 @26755 has 1 MA's), (38, 26821), (Start: 50 @26887 has 1 MA's), (61, 26953), (77, 27103), (99, 27253), (112, 27334), (113, 27337), (125, 27448), (128, 27475), (130, 27508), (146, 27685), (150, 27727), (153, 27745), (159, 27781), (162, 27823), (171, 27937), (172, 27940), (178, 27973), (189, 28027), (192, 28054), (203, 28129),

Gene: Switzer\_33 Start: 26078, Stop: 27556, Start Num: 23

Candidate Starts for Switzer\_33:

(1, 25820), (8, 25913), (12, 25961), (Start: 23 @26078 has 192 MA's), (Start: 26 @26105 has 1 MA's), (29, 26141), (Start: 31 @26159 has 1 MA's), (38, 26225), (55, 26321), (77, 26507), (99, 26657), (112, 26738), (113, 26741), (125, 26852), (128, 26879), (130, 26912), (152, 27137), (153, 27149), (162, 27227), (171, 27341), (204, 27539),

Gene: Swole\_34 Start: 26487, Stop: 27965, Start Num: 23

Candidate Starts for Swole\_34:

(1, 26229), (8, 26322), (12, 26370), (Start: 23 @26487 has 192 MA's), (Start: 26 @26514 has 1 MA's), (Start: 31 @26568 has 1 MA's), (38, 26634), (Start: 50 @26700 has 1 MA's), (54, 26727), (77, 26916), (86, 26961), (99, 27066), (112, 27147), (113, 27150), (125, 27261), (128, 27288), (130, 27321), (152, 27546), (153, 27558), (162, 27636), (171, 27750), (194, 27876), (204, 27948),

Gene: Tainan\_176 Start: 96064, Stop: 97140, Start Num: 51

Candidate Starts for Tainan\_176:

(Start: 51 @96064 has 170 MA's), (59, 96106), (60, 96109), (61, 96121), (65, 96145), (66, 96148), (73, 96205), (74, 96223), (79, 96277), (92, 96367), (96, 96388), (97, 96391), (109, 96487), (115, 96538), (125, 96619), (128, 96646), (144, 96778), (146, 96790), (147, 96799), (149, 96820), (160, 96883), (163, 96925), (167, 96994), (169, 97018), (172, 97030), (174, 97039), (177, 97060), (182, 97078), (183, 97084), (187, 97111),

Gene: Target\_35 Start: 27461, Stop: 28939, Start Num: 23

Candidate Starts for Target\_35:

(8, 27296), (12, 27344), (Start: 23 @27461 has 192 MA's), (Start: 26 @27488 has 1 MA's), (Start: 31 @27542 has 1 MA's), (38, 27608), (Start: 50 @27674 has 1 MA's), (54, 27701), (77, 27890), (99, 28040), (112, 28121), (113, 28124), (125, 28235), (128, 28262), (130, 28295), (152, 28520), (153, 28532), (162, 28610), (171, 28724), (204, 28922),

Gene: Tasp14\_33 Start: 26179, Stop: 27657, Start Num: 23

Candidate Starts for Tasp14\_33:

(Start: 23 @26179 has 192 MA's), (Start: 26 @26206 has 1 MA's), (Start: 31 @26260 has 1 MA's), (38, 26326), (Start: 50 @26392 has 1 MA's), (54, 26419), (77, 26608), (99, 26758), (112, 26839), (113, 26842), (125, 26953), (128, 26980), (130, 27013), (152, 27238), (153, 27250), (162, 27328), (171, 27442), (204, 27640),

Gene: Teardrop\_171 Start: 94139, Stop: 95215, Start Num: 51

Candidate Starts for Teardrop\_171:

(Start: 51 @94139 has 170 MA's), (59, 94181), (60, 94184), (61, 94196), (65, 94220), (66, 94223), (73, 94280), (74, 94298), (79, 94352), (92, 94442), (96, 94463), (97, 94466), (109, 94562), (115, 94613), (125, 94694), (128, 94721), (144, 94853), (146, 94865), (147, 94874), (149, 94895), (160, 94958), (163, 95000), (167, 95069), (169, 95093), (172, 95105), (174, 95114), (177, 95135), (182, 95153), (183, 95159), (187, 95186),

Gene: TelAviv\_56 Start: 38566, Stop: 40056, Start Num: 22

Candidate Starts for TelAviv\_56:

(Start: 22 @38566 has 52 MA's), (27, 38608), (41, 38737), (49, 38776), (60, 38833), (75, 38953), (77, 38989), (81, 39007), (90, 39064), (91, 39073), (95, 39109), (96, 39112), (97, 39115), (101, 39157), (109, 39202), (114, 39229), (131, 39421), (141, 39538), (148, 39595), (153, 39643), (162, 39721), (165, 39796), (171, 39835), (178, 39865), (188, 39913), (197, 39982),

Gene: Teodoridan\_30 Start: 25309, Stop: 26787, Start Num: 22

Candidate Starts for Teodoridan\_30:

(Start: 22 @25309 has 52 MA's), (Start: 26 @25336 has 1 MA's), (Start: 31 @25390 has 1 MA's), (38, 25456), (Start: 50 @25522 has 1 MA's), (54, 25549), (77, 25738), (99, 25888), (112, 25969), (113, 25972), (125, 26083), (128, 26110), (130, 26143), (152, 26368), (153, 26380), (162, 26458), (171, 26572), (204, 26770),

Gene: TheloniousMonk\_34 Start: 27605, Stop: 29083, Start Num: 23

Candidate Starts for TheloniousMonk\_34:

(8, 27440), (12, 27488), (Start: 23 @27605 has 192 MA's), (Start: 26 @27632 has 1 MA's), (29, 27668), (Start: 31 @27686 has 1 MA's), (38, 27752), (42, 27782), (Start: 50 @27818 has 1 MA's), (54, 27845), (77, 28034), (99, 28184), (112, 28265), (113, 28268), (125, 28379), (128, 28406), (130, 28439), (152, 28664), (153, 28676), (162, 28754), (171, 28868), (204, 29066),

Gene: Thibault\_36 Start: 32293, Stop: 33801, Start Num: 22

Candidate Starts for Thibault\_36:

(4, 32083), (9, 32140), (15, 32200), (19, 32236), (Start: 22 @32293 has 52 MA's), (41, 32464), (66, 32614), (77, 32728), (89, 32797), (93, 32836), (109, 32941), (118, 33019), (124, 33082), (133, 33181), (146, 33322), (150, 33364), (153, 33382), (158, 33403), (162, 33460), (171, 33574), (172, 33577), (173, 33580), (180, 33616), (189, 33664),

Gene: Thor\_32 Start: 26066, Stop: 27544, Start Num: 23

Candidate Starts for Thor\_32:

(1, 25808), (8, 25901), (12, 25949), (Start: 23 @26066 has 192 MA's), (Start: 26 @26093 has 1 MA's), (Start: 31 @26147 has 1 MA's), (38, 26213), (Start: 50 @26279 has 1 MA's), (54, 26306), (77, 26495), (99, 26645), (112, 26726), (113, 26729), (121, 26795), (125, 26840), (128, 26867), (130, 26900), (152,

27125), (153, 27137), (162, 27215), (171, 27329), (194, 27455), (204, 27527),

Gene: ThreeRngTarjay\_38 Start: 32283, Stop: 33788, Start Num: 22

Candidate Starts for ThreeRngTarjay\_38:

(3, 32058), (19, 32226), (21, 32280), (Start: 22 @32283 has 52 MA's), (28, 32331), (41, 32454), (66, 32604), (67, 32607), (77, 32718), (93, 32826), (98, 32856), (114, 32958), (125, 33075), (130, 33135), (131, 33150), (146, 33312), (148, 33324), (153, 33372), (159, 33408), (162, 33450), (166, 33528), (172, 33567), (173, 33570), (178, 33600), (185, 33630), (189, 33654),

Gene: Thumb\_30 Start: 28525, Stop: 29733, Start Num: 32

Candidate Starts for Thumb\_30:

(Start: 32 @28525 has 10 MA's), (34, 28552), (39, 28591), (52, 28669), (58, 28693), (61, 28717), (79, 28870), (84, 28882), (85, 28900), (93, 28966), (94, 28975), (95, 28978), (97, 28984), (101, 29023), (102, 29026), (114, 29107), (119, 29164), (128, 29242), (132, 29272), (142, 29317), (144, 29338), (147, 29359), (148, 29362), (151, 29395), (164, 29503), (169, 29590), (170, 29596), (179, 29650), (184, 29674), (187, 29692),

Gene: Timshel\_5 Start: 2345, Stop: 3565, Start Num: 35

Candidate Starts for Timshel\_5:

(Start: 35 @2345 has 3 MA's), (48, 2435), (52, 2459), (61, 2507), (65, 2531), (68, 2540), (78, 2648), (88, 2705), (97, 2768), (102, 2810), (104, 2822), (110, 2867), (113, 2885), (117, 2936), (120, 2948), (128, 3014), (135, 3101), (145, 3194), (152, 3251), (169, 3446), (181, 3497), (187, 3533),

Gene: TinyTim\_172 Start: 94843, Stop: 95919, Start Num: 51

Candidate Starts for TinyTim\_172:

(Start: 51 @94843 has 170 MA's), (59, 94885), (60, 94888), (61, 94900), (65, 94924), (66, 94927), (73, 94984), (74, 95002), (79, 95056), (92, 95146), (96, 95167), (97, 95170), (109, 95266), (115, 95317), (125, 95398), (128, 95425), (144, 95557), (146, 95569), (147, 95578), (149, 95599), (160, 95662), (163, 95704), (167, 95773), (169, 95797), (172, 95809), (174, 95818), (177, 95839), (182, 95857), (183, 95863), (187, 95890),

Gene: Tonenili\_190 Start: 99591, Stop: 100667, Start Num: 51

Candidate Starts for Tonenili\_190:

(Start: 51 @99591 has 170 MA's), (59, 99633), (60, 99636), (61, 99648), (65, 99672), (66, 99675), (73, 99732), (74, 99750), (79, 99804), (92, 99894), (96, 99915), (97, 99918), (109, 100014), (115, 100065), (125, 100146), (128, 100173), (144, 100305), (146, 100317), (147, 100326), (149, 100347), (150, 100359), (160, 100410), (163, 100452), (167, 100521), (169, 100545), (172, 100557), (174, 100566), (177, 100587), (182, 100605), (183, 100611), (187, 100638),

Gene: Topgun\_32 Start: 25819, Stop: 27300, Start Num: 23

Candidate Starts for Topgun\_32:

(8, 25654), (Start: 23 @25819 has 192 MA's), (Start: 26 @25846 has 1 MA's), (Start: 31 @25900 has 1 MA's), (38, 25966), (Start: 50 @26032 has 1 MA's), (61, 26098), (77, 26248), (99, 26398), (112, 26479), (113, 26482), (125, 26593), (128, 26620), (130, 26653), (146, 26830), (150, 26872), (153, 26890), (159, 26926), (162, 26968), (172, 27085), (173, 27088), (189, 27172), (190, 27181),

Gene: Toro\_5 Start: 2346, Stop: 3569, Start Num: 36

Candidate Starts for Toro\_5:

(Start: 36 @2346 has 1 MA's), (47, 2433), (59, 2493), (65, 2532), (66, 2535), (77, 2643), (83, 2664), (95, 2763), (97, 2769), (100, 2802), (102, 2811), (106, 2835), (107, 2862), (113, 2886), (121, 2952), (128, 3018), (139, 3159), (140, 3162), (143, 3177), (153, 3267), (165, 3417), (172, 3459), (187, 3534),

Gene: Tortoise16\_172 Start: 95380, Stop: 96456, Start Num: 51

Candidate Starts for Tortoise16\_172:

(Start: 51 @95380 has 170 MA's), (59, 95422), (60, 95425), (61, 95437), (65, 95461), (66, 95464), (73, 95521), (74, 95539), (79, 95593), (92, 95683), (96, 95704), (97, 95707), (109, 95803), (115, 95854), (125, 95935), (128, 95962), (144, 96094), (146, 96106), (147, 96115), (149, 96136), (160, 96199), (163, 96241), (167, 96310), (169, 96334), (172, 96346), (174, 96355), (177, 96376), (182, 96394), (183, 96400), (187, 96427),

Gene: Traft412\_34 Start: 26862, Stop: 28340, Start Num: 23

Candidate Starts for Traft412\_34:

(1, 26604), (8, 26697), (Start: 23 @26862 has 192 MA's), (Start: 26 @26889 has 1 MA's), (29, 26925), (Start: 31 @26943 has 1 MA's), (38, 27009), (42, 27039), (Start: 50 @27075 has 1 MA's), (54, 27102), (77, 27291), (86, 27336), (99, 27441), (112, 27522), (113, 27525), (125, 27636), (128, 27663), (130, 27696), (146, 27873), (152, 27921), (153, 27933), (162, 28011), (171, 28125), (204, 28323),

Gene: Treddle\_34 Start: 27152, Stop: 28630, Start Num: 23

Candidate Starts for Treddle\_34:

(8, 26987), (12, 27035), (Start: 23 @27152 has 192 MA's), (Start: 26 @27179 has 1 MA's), (Start: 31 @27233 has 1 MA's), (38, 27299), (42, 27329), (Start: 50 @27365 has 1 MA's), (52, 27383), (54, 27392), (77, 27581), (86, 27626), (99, 27731), (112, 27812), (113, 27815), (125, 27926), (128, 27953), (130, 27986), (152, 28211), (153, 28223), (162, 28301), (171, 28415), (204, 28613),

Gene: Trinitium\_172 Start: 95073, Stop: 96149, Start Num: 51

Candidate Starts for Trinitium\_172:

(Start: 51 @95073 has 170 MA's), (59, 95115), (60, 95118), (61, 95130), (65, 95154), (66, 95157), (73, 95214), (74, 95232), (79, 95286), (92, 95376), (96, 95397), (97, 95400), (109, 95496), (115, 95547), (125, 95628), (128, 95655), (144, 95787), (146, 95799), (147, 95808), (149, 95829), (160, 95892), (163, 95934), (167, 96003), (169, 96027), (172, 96039), (174, 96048), (177, 96069), (182, 96087), (183, 96093), (187, 96120),

Gene: Tripl3t\_33 Start: 26818, Stop: 28302, Start Num: 23

Candidate Starts for Tripl3t\_33:

(1, 26560), (7, 26644), (8, 26653), (Start: 23 @26818 has 192 MA's), (Start: 26 @26845 has 1 MA's), (Start: 31 @26899 has 1 MA's), (38, 26965), (Start: 50 @27031 has 1 MA's), (54, 27058), (77, 27247), (86, 27292), (99, 27397), (112, 27478), (113, 27481), (125, 27592), (128, 27619), (130, 27652), (146, 27829), (150, 27871), (153, 27889), (159, 27925), (162, 27967), (171, 28081), (172, 28084), (178, 28117), (189, 28171), (192, 28198), (203, 28273),

Gene: Trouble\_33 Start: 26765, Stop: 28243, Start Num: 23

Candidate Starts for Trouble\_33:

(8, 26600), (12, 26648), (Start: 23 @26765 has 192 MA's), (29, 26828), (Start: 31 @26846 has 1 MA's), (38, 26912), (Start: 50 @26978 has 1 MA's), (54, 27005), (77, 27194), (99, 27344), (112, 27425), (113, 27428), (125, 27539), (128, 27566), (130, 27599), (152, 27824), (153, 27836), (162, 27914), (171, 28028), (204, 28226),

Gene: Turj99\_31 Start: 25705, Stop: 27183, Start Num: 23

Candidate Starts for Turj99\_31:

(7, 25531), (8, 25540), (Start: 23 @25705 has 192 MA's), (Start: 26 @25732 has 1 MA's), (29, 25768), (Start: 31 @25786 has 1 MA's), (38, 25852), (Start: 50 @25918 has 1 MA's), (54, 25945), (55, 25948), (77, 26134), (99, 26284), (112, 26365), (113, 26368), (125, 26479), (128, 26506), (130, 26539), (152, 26764), (153, 26776), (162, 26854), (171, 26968), (204, 27166),

Gene: Turret\_169 Start: 94655, Stop: 95731, Start Num: 51

Candidate Starts for Turret\_169:

(Start: 51 @94655 has 170 MA's), (59, 94697), (60, 94700), (61, 94712), (65, 94736), (66, 94739), (73, 94796), (74, 94814), (79, 94868), (92, 94958), (96, 94979), (97, 94982), (109, 95078), (115, 95129), (125, 95210), (128, 95237), (144, 95369), (146, 95381), (147, 95390), (149, 95411), (160, 95474), (163, 95516), (167, 95585), (169, 95609), (172, 95621), (174, 95630), (177, 95651), (182, 95669), (183, 95675), (187, 95702),

Gene: TwoPeat\_33 Start: 26286, Stop: 27764, Start Num: 23

Candidate Starts for TwoPeat\_33:

(Start: 23 @26286 has 192 MA's), (Start: 26 @26313 has 1 MA's), (29, 26349), (Start: 31 @26367 has 1 MA's), (38, 26433), (Start: 50 @26499 has 1 MA's), (54, 26526), (77, 26715), (86, 26760), (99, 26865), (112, 26946), (113, 26949), (125, 27060), (128, 27087), (130, 27120), (146, 27297), (152, 27345), (153, 27357), (162, 27435), (171, 27549), (202, 27711), (204, 27747),

Gene: Tyke\_173 Start: 96313, Stop: 97389, Start Num: 51

Candidate Starts for Tyke\_173:

(Start: 51 @96313 has 170 MA's), (59, 96355), (60, 96358), (61, 96370), (65, 96394), (66, 96397), (73, 96454), (74, 96472), (79, 96526), (92, 96616), (96, 96637), (97, 96640), (109, 96736), (115, 96787), (125, 96868), (128, 96895), (144, 97027), (146, 97039), (147, 97048), (149, 97069), (160, 97132), (163, 97174), (167, 97243), (169, 97267), (172, 97279), (174, 97288), (177, 97309), (182, 97327), (183, 97333), (187, 97360),

Gene: U2\_32 Start: 26165, Stop: 27562, Start Num: 31

Candidate Starts for U2\_32:

(1, 25826), (8, 25919), (Start: 23 @26084 has 192 MA's), (Start: 26 @26111 has 1 MA's), (Start: 31 @26165 has 1 MA's), (38, 26231), (Start: 50 @26297 has 1 MA's), (54, 26324), (77, 26513), (99, 26663), (112, 26744), (113, 26747), (125, 26858), (128, 26885), (130, 26918), (146, 27095), (152, 27143), (153, 27155), (162, 27233), (171, 27347), (194, 27473), (204, 27545),

Gene: Vagabond\_57 Start: 38429, Stop: 39919, Start Num: 22

Candidate Starts for Vagabond\_57:

(Start: 22 @38429 has 52 MA's), (27, 38471), (41, 38600), (49, 38639), (60, 38696), (75, 38816), (77, 38852), (81, 38870), (90, 38927), (91, 38936), (95, 38972), (96, 38975), (97, 38978), (101, 39020), (109, 39065), (114, 39092), (131, 39284), (141, 39401), (148, 39458), (153, 39506), (162, 39584), (165, 39659), (171, 39698), (178, 39728), (188, 39776), (197, 39845),

Gene: ValleyTerrace\_174 Start: 94447, Stop: 95523, Start Num: 51

Candidate Starts for ValleyTerrace\_174:

(Start: 51 @94447 has 170 MA's), (59, 94489), (60, 94492), (61, 94504), (65, 94528), (66, 94531), (73, 94588), (74, 94606), (79, 94660), (92, 94750), (96, 94771), (97, 94774), (109, 94870), (115, 94921), (125, 95002), (128, 95029), (144, 95161), (146, 95173), (147, 95182), (149, 95203), (160, 95266), (163, 95308), (167, 95377), (169, 95401), (172, 95413), (174, 95422), (177, 95443), (182, 95461), (183, 95467), (187, 95494),

Gene: Violet\_31 Start: 26491, Stop: 27975, Start Num: 23

Candidate Starts for Violet\_31:

(Start: 23 @26491 has 192 MA's), (Start: 26 @26518 has 1 MA's), (29, 26554), (Start: 31 @26572 has 1 MA's), (38, 26638), (Start: 50 @26704 has 1 MA's), (54, 26731), (77, 26920), (99, 27070), (112, 27151), (113, 27154), (125, 27265), (128, 27292), (130, 27325), (146, 27502), (150, 27544), (153, 27562), (159, 27598), (162, 27640), (171, 27754), (172, 27757), (178, 27790), (189, 27844), (192, 27871), (203, 27946),

Gene: Vorrps\_59 Start: 38641, Stop: 40131, Start Num: 22

Candidate Starts for Vorrps\_59:

(Start: 22 @38641 has 52 MA's), (27, 38683), (41, 38812), (49, 38851), (60, 38908), (75, 39028), (77, 39064), (81, 39082), (90, 39139), (91, 39148), (95, 39184), (96, 39187), (97, 39190), (101, 39232), (109, 39277), (114, 39304), (131, 39496), (141, 39613), (148, 39670), (153, 39718), (162, 39796), (165, 39871), (171, 39910), (178, 39940), (188, 39988), (197, 40057),

Gene: Wally\_173 Start: 94663, Stop: 95739, Start Num: 51

Candidate Starts for Wally\_173:

(Start: 51 @94663 has 170 MA's), (59, 94705), (60, 94708), (61, 94720), (65, 94744), (66, 94747), (73, 94804), (74, 94822), (79, 94876), (92, 94966), (96, 94987), (97, 94990), (109, 95086), (115, 95137), (125, 95218), (128, 95245), (144, 95377), (146, 95389), (147, 95398), (149, 95419), (160, 95482), (163, 95524), (167, 95593), (169, 95617), (172, 95629), (174, 95638), (177, 95659), (182, 95677), (183, 95683), (187, 95710),

Gene: Watermelon\_34 Start: 26827, Stop: 28311, Start Num: 23

Candidate Starts for Watermelon\_34:

(2, 26590), (Start: 23 @26827 has 192 MA's), (Start: 26 @26854 has 1 MA's), (Start: 31 @26908 has 1 MA's), (38, 26974), (54, 27067), (55, 27070), (77, 27256), (99, 27406), (112, 27487), (113, 27490), (125, 27601), (128, 27628), (130, 27661), (146, 27838), (150, 27880), (153, 27898), (159, 27934), (162, 27976), (171, 28090), (172, 28093), (178, 28126), (189, 28180), (192, 28207), (203, 28282),

Gene: Wheeler\_32 Start: 26259, Stop: 27737, Start Num: 23

Candidate Starts for Wheeler\_32:

(8, 26094), (Start: 23 @26259 has 192 MA's), (Start: 26 @26286 has 1 MA's), (29, 26322), (Start: 31 @26340 has 1 MA's), (38, 26406), (Start: 50 @26472 has 1 MA's), (54, 26499), (77, 26688), (86, 26733), (99, 26838), (112, 26919), (113, 26922), (125, 27033), (128, 27060), (130, 27093), (152, 27318), (153, 27330), (162, 27408), (171, 27522), (204, 27720),

Gene: Wildflower\_59 Start: 38153, Stop: 39643, Start Num: 22

Candidate Starts for Wildflower\_59:

(Start: 22 @38153 has 52 MA's), (27, 38195), (41, 38324), (49, 38363), (60, 38420), (77, 38576), (81, 38594), (90, 38651), (91, 38660), (96, 38699), (97, 38702), (101, 38744), (109, 38789), (114, 38816), (131, 39008), (141, 39125), (148, 39182), (153, 39230), (162, 39308), (165, 39383), (171, 39422), (178, 39452), (188, 39500), (197, 39569),

Gene: Wilkins\_32 Start: 25750, Stop: 27231, Start Num: 23

Candidate Starts for Wilkins\_32:

(8, 25585), (Start: 23 @25750 has 192 MA's), (Start: 26 @25777 has 1 MA's), (Start: 31 @25831 has 1 MA's), (38, 25897), (Start: 50 @25963 has 1 MA's), (61, 26029), (77, 26179), (99, 26329), (112, 26410), (113, 26413), (125, 26524), (128, 26551), (130, 26584), (146, 26761), (150, 26803), (153, 26821), (159, 26857), (162, 26899), (172, 27016), (173, 27019), (189, 27103), (190, 27112),

Gene: Willis\_172 Start: 95094, Stop: 96170, Start Num: 51

Candidate Starts for Willis\_172:

(Start: 51 @95094 has 170 MA's), (59, 95136), (60, 95139), (61, 95151), (65, 95175), (66, 95178), (73, 95235), (74, 95253), (79, 95307), (92, 95397), (96, 95418), (97, 95421), (109, 95517), (115, 95568), (125, 95649), (128, 95676), (144, 95808), (146, 95820), (147, 95829), (149, 95850), (160, 95913), (163, 95955), (167, 96024), (169, 96048), (172, 96060), (174, 96069), (177, 96090), (182, 96108), (183, 96114), (187, 96141),

Gene: Winget\_60 Start: 38859, Stop: 40349, Start Num: 22

Candidate Starts for Winget\_60:

(Start: 22 @38859 has 52 MA's), (27, 38901), (41, 39030), (49, 39069), (60, 39126), (75, 39246), (77, 39282), (81, 39300), (90, 39357), (91, 39366), (95, 39402), (96, 39405), (97, 39408), (101, 39450),

(109, 39495), (114, 39522), (131, 39714), (141, 39831), (148, 39888), (153, 39936), (162, 40014), (165, 40089), (171, 40128), (178, 40158), (188, 40206), (197, 40275),

Gene: Yassified\_170 Start: 94361, Stop: 95437, Start Num: 51

Candidate Starts for Yassified\_170:

(Start: 51 @94361 has 170 MA's), (59, 94403), (60, 94406), (61, 94418), (65, 94442), (66, 94445), (73, 94502), (74, 94520), (79, 94574), (92, 94664), (96, 94685), (97, 94688), (109, 94784), (115, 94835), (125, 94916), (128, 94943), (144, 95075), (146, 95087), (147, 95096), (149, 95117), (160, 95180), (163, 95222), (167, 95291), (169, 95315), (172, 95327), (174, 95336), (177, 95357), (182, 95375), (183, 95381), (187, 95408),

Gene: Yeet\_38 Start: 31417, Stop: 32919, Start Num: 22

Candidate Starts for Yeet\_38:

(6, 31228), (7, 31246), (9, 31264), (10, 31267), (17, 31348), (18, 31357), (Start: 22 @31417 has 52 MA's), (24, 31429), (28, 31465), (29, 31480), (30, 31483), (55, 31666), (60, 31690), (61, 31702), (62, 31720), (74, 31804), (77, 31846), (89, 31915), (109, 32059), (114, 32086), (116, 32131), (118, 32137), (120, 32146), (124, 32203), (128, 32233), (134, 32326), (146, 32443), (151, 32488), (153, 32503), (154, 32509), (159, 32539), (162, 32581), (169, 32686), (178, 32731), (180, 32737), (189, 32785), (193, 32815), (198, 32845), (201, 32854),

Gene: YemiJoy2021\_173 Start: 95850, Stop: 96926, Start Num: 51

Candidate Starts for YemiJoy2021\_173:

(Start: 51 @95850 has 170 MA's), (59, 95892), (60, 95895), (61, 95907), (65, 95931), (66, 95934), (73, 95991), (74, 96009), (79, 96063), (92, 96153), (96, 96174), (97, 96177), (109, 96273), (115, 96324), (125, 96405), (128, 96432), (144, 96564), (146, 96576), (147, 96585), (149, 96606), (160, 96669), (163, 96711), (167, 96780), (169, 96804), (172, 96816), (174, 96825), (177, 96846), (182, 96864), (183, 96870), (187, 96897),

Gene: YoungMoneyMata\_174 Start: 95438, Stop: 96514, Start Num: 51

Candidate Starts for YoungMoneyMata\_174:

(Start: 51 @95438 has 170 MA's), (59, 95480), (60, 95483), (61, 95495), (65, 95519), (66, 95522), (73, 95579), (74, 95597), (79, 95651), (92, 95741), (96, 95762), (97, 95765), (109, 95861), (115, 95912), (125, 95993), (128, 96020), (144, 96152), (146, 96164), (147, 96173), (149, 96194), (160, 96257), (163, 96299), (167, 96368), (169, 96392), (172, 96404), (174, 96413), (177, 96434), (182, 96452), (183, 96458), (187, 96485),

Gene: Yucca\_172 Start: 95407, Stop: 96483, Start Num: 51

Candidate Starts for Yucca\_172:

(Start: 51 @95407 has 170 MA's), (59, 95449), (60, 95452), (61, 95464), (65, 95488), (66, 95491), (73, 95548), (74, 95566), (79, 95620), (92, 95710), (96, 95731), (97, 95734), (109, 95830), (115, 95881), (125, 95962), (128, 95989), (144, 96121), (146, 96133), (147, 96142), (149, 96163), (160, 96226), (163, 96268), (167, 96337), (169, 96361), (172, 96373), (174, 96382), (177, 96403), (182, 96421), (183, 96427), (187, 96454),

Gene: YungJamal\_64 Start: 40051, Stop: 41541, Start Num: 22

Candidate Starts for YungJamal\_64:

(Start: 22 @40051 has 52 MA's), (27, 40093), (41, 40222), (49, 40261), (60, 40318), (77, 40474), (81, 40492), (90, 40549), (91, 40558), (96, 40597), (97, 40600), (101, 40642), (109, 40687), (114, 40714), (131, 40906), (141, 41023), (148, 41080), (153, 41128), (162, 41206), (165, 41281), (171, 41320), (178, 41350), (188, 41398), (197, 41467),

Gene: Zakhe101\_59 Start: 38697, Stop: 40187, Start Num: 22

Candidate Starts for Zakhe101\_59:

(Start: 22 @38697 has 52 MA's), (27, 38739), (41, 38868), (49, 38907), (60, 38964), (77, 39120), (81, 39138), (90, 39195), (91, 39204), (96, 39243), (97, 39246), (101, 39288), (109, 39333), (114, 39360), (131, 39552), (141, 39669), (148, 39726), (153, 39774), (162, 39852), (165, 39927), (171, 39966), (178, 39996), (188, 40044), (197, 40113),

Gene: Zalkecks\_172 Start: 94923, Stop: 95999, Start Num: 51

Candidate Starts for Zalkecks\_172:

(Start: 51 @94923 has 170 MA's), (59, 94965), (60, 94968), (61, 94980), (65, 95004), (66, 95007), (73, 95064), (74, 95082), (79, 95136), (92, 95226), (96, 95247), (97, 95250), (109, 95346), (115, 95397), (125, 95478), (128, 95505), (144, 95637), (146, 95649), (147, 95658), (149, 95679), (160, 95742), (163, 95784), (167, 95853), (169, 95877), (172, 95889), (174, 95898), (177, 95919), (182, 95937), (183, 95943), (187, 95970),

Gene: Zeeculate\_32 Start: 26698, Stop: 28188, Start Num: 23

Candidate Starts for Zeeculate\_32:

(1, 26440), (8, 26533), (Start: 23 @26698 has 192 MA's), (Start: 26 @26725 has 1 MA's), (Start: 31 @26779 has 1 MA's), (38, 26845), (55, 26941), (60, 26965), (61, 26977), (66, 27013), (77, 27127), (93, 27235), (114, 27367), (118, 27418), (128, 27511), (130, 27544), (133, 27580), (138, 27661), (141, 27676), (146, 27721), (152, 27769), (153, 27781), (162, 27859), (165, 27934), (172, 27976), (204, 28171),

Gene: Zeenon\_174 Start: 95493, Stop: 96569, Start Num: 51

Candidate Starts for Zeenon\_174:

(Start: 51 @95493 has 170 MA's), (59, 95535), (60, 95538), (61, 95550), (65, 95574), (66, 95577), (73, 95634), (74, 95652), (79, 95706), (92, 95796), (96, 95817), (97, 95820), (109, 95916), (115, 95967), (125, 96048), (128, 96075), (144, 96207), (146, 96219), (147, 96228), (149, 96249), (160, 96312), (163, 96354), (167, 96423), (169, 96447), (172, 96459), (174, 96468), (177, 96489), (182, 96507), (183, 96513), (187, 96540),

Gene: Zelink\_41 Start: 33227, Stop: 34732, Start Num: 22

Candidate Starts for Zelink\_41:

(3, 33002), (19, 33170), (21, 33224), (Start: 22 @33227 has 52 MA's), (28, 33275), (41, 33398), (66, 33548), (67, 33551), (77, 33662), (93, 33770), (98, 33800), (114, 33902), (125, 34019), (130, 34079), (131, 34094), (146, 34256), (148, 34268), (153, 34316), (159, 34352), (162, 34394), (166, 34472), (172, 34511), (173, 34514), (178, 34544), (185, 34574), (189, 34598),

Gene: Zephyr\_32 Start: 26060, Stop: 27538, Start Num: 23

Candidate Starts for Zephyr\_32:

(8, 25895), (Start: 23 @26060 has 192 MA's), (Start: 26 @26087 has 1 MA's), (29, 26123), (Start: 31 @26141 has 1 MA's), (38, 26207), (Start: 50 @26273 has 1 MA's), (54, 26300), (77, 26489), (86, 26534), (99, 26639), (112, 26720), (113, 26723), (125, 26834), (128, 26861), (130, 26894), (146, 27071), (152, 27119), (153, 27131), (162, 27209), (171, 27323), (204, 27521),

Gene: Zeuska\_33 Start: 26494, Stop: 27972, Start Num: 23

Candidate Starts for Zeuska\_33:

(Start: 23 @26494 has 192 MA's), (Start: 26 @26521 has 1 MA's), (Start: 31 @26575 has 1 MA's), (38, 26641), (Start: 50 @26707 has 1 MA's), (52, 26725), (54, 26734), (77, 26923), (99, 27073), (109, 27133), (112, 27154), (113, 27157), (125, 27268), (128, 27295), (130, 27328), (152, 27553), (153, 27565), (162, 27643), (171, 27757), (204, 27955),

Gene: ZygoTaiga\_169 Start: 96114, Stop: 97190, Start Num: 51

Candidate Starts for ZygoTaiga\_169:



(Start: 51 @96114 has 170 MA's), (59, 96156), (60, 96159), (61, 96171), (65, 96195), (66, 96198), (73, 96255), (74, 96273), (79, 96327), (92, 96417), (96, 96438), (97, 96441), (109, 96537), (115, 96588), (125, 96669), (128, 96696), (144, 96828), (146, 96840), (147, 96849), (149, 96870), (160, 96933), (163, 96975), (167, 97044), (169, 97068), (172, 97080), (174, 97089), (177, 97110), (182, 97128), (183, 97134), (187, 97161),