

Pham 215659

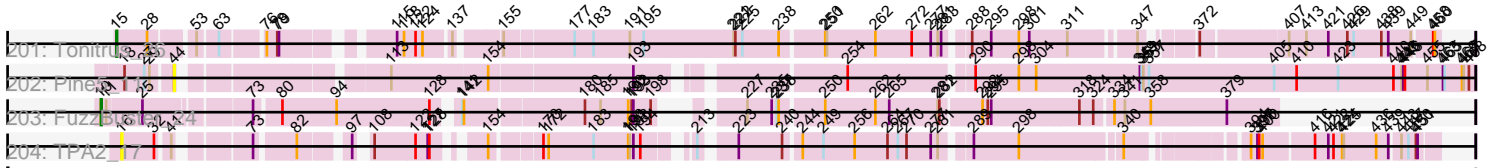
Table with 50 rows and multiple columns. Rows are numbered 1 to 50. Columns contain numerical values, some with handwritten annotations. The table is overlaid with a complex grid of red and purple lines.







# Pham 215659



A series of 20 empty musical staves, each with a dashed right border, provided for further notation or practice.

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 215659 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215659 has 680 members, 98 are drafts.

Phages represented in each track:

- Track 1 : Mao1\_6, Mask\_7
- Track 2 : Sejanus\_7, Dori\_7
- Track 3 : Causa\_16
- Track 4 : StAugustine\_14
- Track 5 : Struggle\_8, MelsMeow\_8, Mag7\_8, Veritas\_8, MichaelPhcott\_8, PhrankReynolds\_8, Wallhey\_8, Labeouficaum\_8, Phleuron\_8, Oline\_8, Derpp\_8, PhenghisKhan\_8, DuchessDung\_8, Ashraf\_8, BatteryCK\_8, ImtiyazSitla\_8, CharlieGBrown\_8, Pinkman\_8, Maskar\_8, TyrionL\_8, Kailash\_8, Kwksand96\_8, Phergie\_8
- Track 6 : Banjo\_8, Selr12\_8, Morty\_8, Newman\_8, Orion\_8, HenryJackson\_8, Weher20\_8, Colbert\_8, PhatCats2014\_8, Eugenia\_8, Childish\_8, Skippy\_8, Adriana\_8, Kloppinator\_8, Grand2040\_8, Robyn\_8, EmpTee\_8, LemonSlice\_8, Legolas\_8, Puhltonio\_8, Buckeye\_8, Pops\_8, Virgeve\_8, DoesntMatter\_8, ThreeOh3D2\_8, ProfessorX\_8, DonSanchon\_8, PhrodoBaggins\_8, Riggan\_8, Fringe\_8, ShiVal\_8, Orwigg\_8, Matalotodo\_8, Serendipity\_8, Craff\_8, FriarPreacher\_8, True\_8, Timmi\_8, Surely\_8, Kimbrough\_8, Haimas\_8, Oosterbaan\_8, Simielle\_8, Spartan300\_8, Megatron\_8, Aelin\_8, Iridoclysis\_8, Burr\_8, DirtJuice\_8, Mana\_8, Valjean\_8, Usavi\_8, SilverBell\_8, Hetaeria\_8, Inchworm\_8, Cobra\_8, Boehler\_8, Placalicious\_8, KingTut\_8, Hamish\_8, Vaishali24\_8, FluffyNinja\_8, Lulwa\_8, Badfish\_8, Gyarad\_008, Xavier\_8, TallGrassMM\_8, RedMaple\_8, Prickles\_8, Yoshand\_8, Lopsy\_8, UncleHowie\_8, Lasso\_8, Squiggle\_8, Chipette\_10, Vista\_8, BlackStallion\_8, Cosmolli16\_8, Solosis\_8, Tooj\_8, Potter\_8, Fang\_8, Sigman\_8, AbsoluteMadLad\_8, HSavage\_8, LeeLot\_8, Altwerkus\_8, Emiris\_8, Caspiboi\_9, Freya\_8, OliverWalter\_8, Hartsy\_8, Thora\_8, Eremos\_8, KlimbOn\_8, Nicole21\_8, Andre\_8, TomBombadil\_8, ABU\_8, Zaider\_9, LasagnaCat\_8, Kahve\_8, YouGoGlencoco\_8, MRabcd\_8, IsaacEli\_8, Mutante\_8, Omniscient\_8, CampRoach\_8, Toni\_8, QueenBeane\_8, Scoot17C\_8, Frankicide\_8, Apizium\_8, Virapocalypse\_8, SassyCat97\_8, FugateOSU\_8, Piglet\_008, Charles1\_8, Nacho\_008, Mesh1\_8, JangoPhett\_8, Olak\_8, Nyala\_8, Antonia\_8, Suffolk\_8, Dice\_8, Chorkpop\_8, LostAndPhound\_8, Kikipoo\_8, Lego3393\_8, HighStump\_8, PG1\_8, Vortex\_8, Mulan\_8, PinheadLarry\_8, Mecca\_8, Mosaic\_8, Pherdinand\_8, JacAttac\_8, Phunky\_8, Bluephacebaby\_8, Gareth\_8, Hertubise\_8, Serpentine\_008, Phamished\_8, Samaymay\_8, CamL\_8, Telesworld\_8, Maru\_8, Jillium\_8, Magic8\_8, Cannibal\_8, Vaticameos\_8, Podrick\_8, Ricotta\_8, Dati\_8, Gwilliam\_8, UAch1\_8, Quisquiliae\_8, Waterdiva\_8, Manad\_8, Murdoc\_8, Daka\_8, Phareon\_8, Schueller\_8, Cher\_8, Cornobble\_8, Morgushi\_8, Zelda\_8, Kwadwo\_8, Squid\_8, Slatt\_8, Beaglebox\_8, Chah\_8, Vivaldi\_8, Mcshane\_8, Numberten\_8, Tomlarah\_8,

Pipsqueak\_8

- Track 7 : Fozzie\_8, Brilliant\_8, Plmatters\_8, Chunky\_8, DaddyDaniels\_8, KingVeVeVe\_8, Lumine\_8, Roliet\_8, Phipps\_8, Melc17\_8, Lulumae\_8, MitKao\_8, Roy17\_8, Held\_8, Crownjwl\_9, Longacauda\_8, JakeO\_8, Etaye\_8, Soile\_8, Durga\_8, LuckyMarjie\_8, Soto\_8, Jiminy\_8, Daffy\_8, JDog\_8, AltPhacts\_8, Dione\_8, Roscoe\_9, KLucky39\_8, GeneCoco\_8, Pacifista\_8, DelRivs\_8, Zonia\_8, Haleema\_8, Scrick\_8, Jiraiya\_8, OSmaximus\_8, Duggie\_8, Horchata\_8, Giraffe\_8, SDcharge11\_8, Harvey\_8, Sheila\_8, Dingo\_8, MiniBoss\_8, PhatLouie\_8, Mikota\_8, Orfeu\_8, Doddsville\_8, BlueHusk\_8
- Track 8 : Swish\_8, Sophia\_8
- Track 9 : LeiMonet\_8, Mesmerelda\_9, Basato\_9, Khan1\_8, Plata\_8, ElvisPhasley\_8, MrPhizzler\_8, Jesabah\_9, Swiphy\_8, Gwennie1\_9, Nathan\_9, Coletti\_8, Iridessa\_8, Thunderbird\_8, Chute\_8
- Track 10 : AngelCake\_8
- Track 11 : Riverton\_8, Rimu\_8
- Track 12 : TooFast2Furius\_10, Gophee\_8, Katniss\_8, Cornbread\_9, CheetO\_8
- Track 13 : Schadenfreude\_8
- Track 14 : Windsor\_8, Trypo\_8, Chaelin\_8
- Track 15 : Hocus\_8
- Track 16 : Inverness\_8, Bishoperium\_8, Olive\_8, Megamind20\_9, Anderson\_8
- Track 17 : Carthage\_8
- Track 18 : Keitherie\_8
- Track 19 : SirBeauregard\_8
- Track 20 : Imvubu\_5
- Track 21 : Indlovu\_9
- Track 22 : LilMcDreamy\_10
- Track 23 : Zenteno07\_13
- Track 24 : BirdsNest\_12
- Track 25 : Hashim76\_13
- Track 26 : Boyle\_12, Glass\_12
- Track 27 : Arbiter\_12
- Track 28 : Kheth\_12, Ares\_12, Eaglehorse\_12, Lephleur\_12, FrenchFry\_12, Calamitous\_12, Blocker23\_12, LizLemon\_12, Rhinoforte\_12, Faze9\_12, Lars\_12, Kaleb\_12, Brownie5\_12, Rosebush\_12, Tinciduntolum\_13, West99\_12, Qyrzula\_12, LilSmirk\_12, Opia\_12, Sabella\_12, MasterPo\_12, Bananafish\_12, Hedgerow\_12, Coffee\_12
- Track 29 : ItsyBitsy1\_12, Phantasmagoria\_12, Tres\_12, Godines\_12, PrinceCharming\_12, Kolhan\_12, Allegro\_12, Holeinone\_12
- Track 30 : TA17A\_12
- Track 31 : Laurie\_12
- Track 32 : Vic9\_00012
- Track 33 : Jackstina\_10, Chandler\_11, Yinz\_11, Casbah\_10, Compostia\_11, Neos5\_11, Corofin\_11, Baloo\_11, Chalmers\_11, Halfpint\_10, Daisy\_11, Athena\_12, RomaT\_11, Nozo\_11, ChaChing\_11, Philly\_10, Yahalom\_11, Kamiyu\_11, OrangeOswald\_11, Tydolla\_11, Abinghost\_11, Gadjet\_12, Devonte\_11, MmasiCarm\_11
- Track 34 : GlenHope\_12, Chentzyk\_10, Audrey\_11, Olivio\_10, HarveySr\_11, Ben11\_10, Marlia\_11, Briakila\_11, SwainyDoc\_11, Gervas\_11, Rita1961\_11, Phaerudus\_10, Morty007\_11, Glubnar\_11, Heathcliff\_11, Marley1013\_11, Phlyer\_11, SlippinJimmy\_11, TinyTerror\_11, Phayeta\_11, Shenandoah\_11
- Track 35 : RagingRooster\_11, Deenasa\_11, SynergyX\_11
- Track 36 : Pipefish\_11, Bernardo\_11, Kronus\_10, Mortcellus\_10, Akoma\_11, LestyG\_11, Obutu\_11

- Track 37 : JAMaL\_8
- Track 38 : Apex\_8, Mudslide\_9, Prince\_9
- Track 39 : Fortunato\_9
- Track 40 : VioletZ\_9, Heath\_9
- Track 41 : Antihero\_8, Lambano\_8, Epah\_8, Poster\_8, Hally898\_8, Nanao\_8
- Track 42 : Cooper\_9
- Track 43 : Ahwei\_8
- Track 44 : Stinger\_7
- Track 45 : Nigel\_7
- Track 46 : Lolalove\_9, BobbyK\_9, Hangman\_9, Hydro\_9, Zemanar\_10
- Track 47 : AlanGrant\_10, Vincenzo\_10
- Track 48 : Magpie\_9
- Track 49 : QueenPie\_9
- Track 50 : Xincheng\_9
- Track 51 : GinPorsche\_8
- Track 52 : JaguarMi\_10
- Track 53 : Fanaw\_9
- Track 54 : Frederick\_9
- Track 55 : Mithril\_9
- Track 56 : ChrisnMich\_8
- Track 57 : Waleliano\_9, BrownCNA\_10
- Track 58 : Austelle\_9
- Track 59 : RawrgerThat\_9
- Track 60 : DigitDog\_10, Shenyu\_10, Nangang\_10
- Track 61 : KarasumaRum\_11, StinkyVeggy\_11
- Track 62 : Rich\_10
- Track 63 : Nehemiah\_9, Mysterious\_10
- Track 64 : SirJeffery\_10, Donny\_10, Suigeneris\_10, Rita130\_10
- Track 65 : Phelemich\_10, Reprobate\_10
- Track 66 : Acadian\_10
- Track 67 : Bae\_10
- Track 68 : Serendipitous\_10
- Track 69 : EastView9101\_10
- Track 70 : 40BC\_07, 39HC\_07
- Track 71 : KayaCho\_7
- Track 72 : Hosp\_05
- Track 73 : Jolie1\_07
- Track 74 : ForDig\_7
- Track 75 : Saguaro\_11
- Track 76 : Thonko\_7
- Track 77 : Quesadilla\_11
- Track 78 : PenguinLover67\_12
- Track 79 : Knocker\_14
- Track 80 : Funsized\_14
- Track 81 : CRB2\_11
- Track 82 : Rinkes\_13
- Track 83 : Jollymon\_42, ColdSoup\_42, Amo99\_42
- Track 84 : Clawz\_41
- Track 85 : Soos\_37, DonTron\_41
- Track 86 : Sting\_40, KingstonB\_41
- Track 87 : Fugax\_12, PinkCoffee\_12, Mutzi\_12, KimmyK\_12, ClamChowder\_12, Barb\_12, Salvador\_12, Twister6\_12, Evamon\_12, CoveyB\_12, Togo\_12, Danyall\_12, SmokingBunny\_12



- Track 88 : YungMoney\_12
- Track 89 : Shinji\_12, Jambalaya\_12, TillyBobJoe\_12, Savbucketdawg\_12, Portcullis\_12
- Track 90 : Halo3\_13
- Track 91 : RogerDodger\_13
- Track 92 : Fireball\_13, Gezellig\_12, Phlop\_12, Egi03\_13, Wizard\_12, PullumCavea\_12
- Track 93 : CherryCola\_14, Valary\_13
- Track 94 : Arri\_13
- Track 95 : Nubi\_12
- Track 96 : Bakery\_13
- Track 97 : VanDeWege\_13
- Track 98 : Clown\_16
- Track 99 : YorkOnyx\_12
- Track 100 : Ailee\_12, Angelicage\_12, Keitabear\_13
- Track 101 : Rofo\_12, Bibwit\_12, Nordenberg\_7, Galadriel\_14
- Track 102 : Sitar\_13, Lennon\_13
- Track 103 : Charming\_10, Tangent\_10, Paries\_13, BobBob\_10, Brandonk123\_15
- Track 104 : Bizzy\_13, LilHam\_10, Saronaya\_12, Kwobi\_12, Ribeye\_13, Gustavo\_12, Ashertheman\_12, SchottB\_11
- Track 105 : Love\_14
- Track 106 : Fosterous\_10
- Track 107 : Tycho\_12, Flatwoods\_13
- Track 108 : Kroos\_12
- Track 109 : RiverRaider\_13
- Track 110 : FuegoCuervo\_16, Barsten\_13, Vivi2\_11, Geodirt\_12, Sedona\_13, ChadMasterC\_12
- Track 111 : Baumdotcom\_12, StorminNorm\_12, Tangerine\_12, Gaea\_12
- Track 112 : MoontowerMania\_11
- Track 113 : Jabberwocky\_11, Fitzgerald\_11, Kewpiedoll\_13, Sanjuju\_11
- Track 114 : Stultus\_12
- Track 115 : Kamashten\_13, Thing3\_13
- Track 116 : Baddon\_12
- Track 117 : Affeca\_12
- Track 118 : Derg\_8
- Track 119 : Shivanishola\_12
- Track 120 : JKSyngboy\_11
- Track 121 : McKinley\_13
- Track 122 : MelBins\_13
- Track 123 : Leonard\_13, Inspectinfecti\_14, Phinally\_13, Ali17\_11
- Track 124 : EMOore\_7
- Track 125 : Hans\_15, Phauci\_6
- Track 126 : Dexdert\_14
- Track 127 : Tiamoceli\_14, Chickadee\_13, EdmundFerry\_12, Twonlo\_11, RoadKill\_11
- Track 128 : GTE6\_14
- Track 129 : Kwekel\_13
- Track 130 : Verity\_14, Delrey21\_14, DoctorFroggo\_14
- Track 131 : Scioto\_14, ViaConlectus\_14, Abblin\_14, Natkenzie\_14, Sampson\_14
- Track 132 : Tardus\_14
- Track 133 : APunk\_15
- Track 134 : Zitch\_15
- Track 135 : Zipp\_14

- Track 136 : Lilbeanie\_13
- Track 137 : Wooper\_10
- Track 138 : AksarBAT\_8
- Track 139 : Shatter\_8, Fresco\_8, Axumite\_8
- Track 140 : BiggityBass\_7
- Track 141 : CaiB\_10
- Track 142 : Ligma\_8
- Track 143 : Yago84\_7, Sisko\_7, AnClar\_7
- Track 144 : MakoManhole\_10
- Track 145 : NHagos\_8
- Track 146 : Evaa\_9
- Track 147 : CharlottesWeb\_8, Mariokart\_8
- Track 148 : LittleMunchkin\_9
- Track 149 : CloverMinnie\_10
- Track 150 : BobRoss2024\_7
- Track 151 : Yeshua\_10
- Track 152 : Sour\_11
- Track 153 : MossRose\_10
- Track 154 : Coldpizza\_9
- Track 155 : AnarQue\_10
- Track 156 : Ramiel05\_19, CrazyRich\_19, Shotgun\_19, Kowalski\_19, Savannah\_19
- Track 157 : Shrubaron\_20, Metamorphoo\_20
- Track 158 : LittleFortune\_21, Yeti\_20, Phorgeous\_19
- Track 159 : Jefe\_20
- Track 160 : ClearAsMud\_22
- Track 161 : Jayden\_20
- Track 162 : NoodlelyBoi\_19
- Track 163 : Megan\_13
- Track 164 : KaiHaiDragon\_20, EarickHC\_20
- Track 165 : Phrancesco\_21, Honeyfin\_21, Scumberland\_21
- Track 166 : Gina\_20, Teamocil\_20
- Track 167 : Ariadne\_28
- Track 168 : Merry\_, Sunny\_
- Track 169 : Hermeonysus\_19, Busephilis\_20
- Track 170 : Ganandorf\_19
- Track 171 : Cranjis\_21
- Track 172 : Jollipop\_20
- Track 173 : Pulchra\_21
- Track 174 : Paschalis\_19, PierreOrion\_20
- Track 175 : Glorp\_21
- Track 176 : BrazzalePHS\_19
- Track 177 : Smarties\_28
- Track 178 : Quhwah\_22
- Track 179 : Antares\_20
- Track 180 : Tyumbra\_18
- Track 181 : PhedwardCullen\_18
- Track 182 : Piperis\_20
- Track 183 : SirFrank\_19
- Track 184 : Crisis\_21
- Track 185 : PiperSansNom\_20
- Track 186 : Onika\_19
- Track 187 : Selwyn23\_21
- Track 188 : Fireman\_20

- Track 189 : Nicole72\_14
- Track 190 : RobsFeet\_21
- Track 191 : Margaery\_12
- Track 192 : Cressida\_13
- Track 193 : Matzah\_13
- Track 194 : Kozie\_14
- Track 195 : MementoMori\_13
- Track 196 : Cinna\_12
- Track 197 : Terij\_13
- Track 198 : Taptic\_6, Jeon\_6, Megabear\_6
- Track 199 : Argie\_7, GodPhather\_7, Cepens\_6
- Track 200 : PR\_06, D12\_06
- Track 201 : Tonitrus\_26
- Track 202 : Pine5\_11
- Track 203 : FuzzBuster\_24
- Track 204 : TPA2\_17

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

The start number called the most often in the published annotations is 16, it was called in 401 of the 582 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 39HC\_07, 40BC\_07, ABU\_8, Abinghost\_11, AbsoluteMadLad\_8, Acadian\_10, Adriana\_8, Aelin\_8, Ahwei\_8, Akoma\_11, AksarBAT\_8, AlanGrant\_10, Allegro\_12, AltPhacts\_8, Altwerkus\_8, AnClar\_7, AnarQue\_10, Andre\_8, Antihero\_8, Antonia\_8, Apex\_8, Apizium\_8, Arbiter\_12, Ares\_12, Ashraf\_8, Athena\_12, Audrey\_11, Austelle\_9, Axumite\_8, Badfish\_8, Bae\_10, Baloo\_11, Bananafish\_12, Banjo\_8, BatteryCK\_8, Beaglebox\_8, Ben11\_10, Bernardo\_11, BiggityBass\_7, BirdsNest\_12, BlackStallion\_8, Blocker23\_12, BlueHusk\_8, Bluephacebaby\_8, BobRoss2024\_7, BobbyK\_9, Bohler\_8, Boyle\_12, Briakila\_11, Brilliant\_8, BrownCNA\_10, Brownie5\_12, Buckeye\_8, Burr\_8, CRB2\_11, Calamitous\_12, CamL\_8, CampRoach\_8, Cannibal\_8, Carthage\_8, Casbah\_10, Caspiboi\_9, Causa\_16, ChaChing\_11, Chaelin\_8, Chah\_8, Chalmers\_11, Chandler\_11, Charles1\_8, CharlieGBrown\_8, Chentzyk\_10, Cher\_8, Childish\_8, Chipette\_10, Chorkpop\_8, ChrisnMich\_8, Chunky\_8, CloverMinnie\_10, Cobra\_8, Coffee\_12, Colbert\_8, Compostia\_11, Cooper\_9, Cornobble\_8, Corofin\_11, Cosmolli16\_8, Craff\_8, Crownjwl\_9, DaddyDaniels\_8, Daffy\_8, Daisy\_11, Daka\_8, Dati\_8, Deenasa\_11, DelRivs\_8, Derpp\_8, Devonte\_11, Dice\_8, DigitDog\_10, Dingo\_8, Dione\_8, DirtJuice\_8, Doddsville\_8, DoesntMatter\_8, DonSanchon\_8, Donny\_10, DuchessDung\_8, Duggie\_8, Durga\_8, Eaglehorse\_12, EastView9101\_10, Emiris\_8, EmpTee\_8, Epah\_8, Eremos\_8, Etaye\_8, Eugenia\_8, Evaa\_9, Fang\_8, Faze9\_12, FluffyNinja\_8, ForDig\_7, Fortunato\_9, Fozzie\_8, Frankicide\_8, Frederick\_9, FrenchFry\_12, Fresco\_8, Freya\_8, FriarPreacher\_8, Fringe\_8, FugateOSU\_8, Funsized\_14, Gadget\_12, Gareth\_8, GeneCoco\_8, Gervas\_11, GinPorsche\_8, Giraffe\_8, Glass\_12, GlenHope\_12, Glubnar\_11, Godines\_12, Grand2040\_8, Gwilliam\_8, Gyarad\_008, HSavage\_8, Haimas\_8, Haleema\_8, Halfpint\_10, Hally898\_8, Hamish\_8, Hangman\_9, Hartsy\_8, HarveySr\_11, Harvey\_8, Hashim76\_13, Heath\_9, Heathcliff\_11, Hedgerow\_12, Held\_8, HenryJackson\_8, Hertubise\_8, Hetaeria\_8, HighStump\_8, Hocus\_8, Holeinone\_12, Horchata\_8,

Hosp\_05, Hydro\_9, ImtiyazSitla\_8, Imvubu\_5, Inchworm\_8, Indlovu\_9, Iridoclysis\_8, IsaacEli\_8, ItsyBitsy1\_12, JAMaL\_8, JDog\_8, JacAttac\_8, Jackstina\_10, JaguarMi\_10, JakeO\_8, JangoPhett\_8, Jillium\_8, Jiminy\_8, Jiraiya\_8, Jolie1\_07, KLucky39\_8, Kahve\_8, Kailash\_8, Kaleb\_12, Kamiyu\_11, KarasumaRum\_11, KayaCho\_7, Keitherie\_8, Kheth\_12, Kikipoo\_8, Kimbrough\_8, KingTut\_8, KingVeVeVe\_8, KlimbOn\_8, Kloppinator\_8, Knocker\_14, Kolhan\_12, Kronus\_10, Kwadwo\_8, Kwksand96\_8, Labeouficaum\_8, Lambano\_8, Lars\_12, LasagnaCat\_8, Lasso\_8, Laurie\_12, LeeLot\_8, Lego3393\_8, Legolas\_8, LemonSlice\_8, Lephleur\_12, LestyG\_11, LilMcDreamy\_10, LilSmirk\_12, LittleMunchkin\_9, LizLemon\_12, Lolalove\_9, Longacauda\_8, Lopsy\_8, LostAndPhound\_8, LuckyMarjie\_8, Lulumae\_8, Lulwa\_8, Lumine\_8, MRabcd\_8, Mag7\_8, Magic8\_8, Magpie\_9, MakoManhole\_10, Mana\_8, Manad\_8, Marley1013\_11, Marlia\_11, Maru\_8, Maskar\_8, MasterPo\_12, Matalotodo\_8, Mcshane\_8, Mecca\_8, Megatron\_8, Melc17\_8, MelsMeow\_8, Mesh1\_8, MichaelPhcott\_8, Mikota\_8, MiniBoss\_8, MitKao\_8, Mithril\_9, MmasiCarm\_11, Morgushi\_8, Mortcellus\_10, Morty007\_11, Morty\_8, Mosaic\_8, Mudslide\_9, Mulan\_8, Murdoc\_8, Mutante\_8, Mysterious\_10, NHagos\_8, Nacho\_008, Nanao\_8, Nangang\_10, Nehemiah\_9, Neos5\_11, Newman\_8, Nicole21\_8, Nigel\_7, Nozo\_11, Numberben\_8, Nyala\_8, OSmaximus\_8, Obutu\_11, Olak\_8, Oline\_8, OliverWalter\_8, Olivio\_10, Omniscient\_8, Oosterbaan\_8, Opia\_12, OrangeOswald\_11, Orfeu\_8, Orion\_8, Orwigg\_8, PG1\_8, Pacifista\_8, PenguinLover67\_12, Phaedrus\_10, Phamished\_8, Phantasmagoria\_12, Phareon\_8, PhatCats2014\_8, PhatLouie\_8, Phayeta\_11, Phelemich\_10, PhenghisKhan\_8, Pherdinand\_8, Phergie\_8, Philly\_10, Phipps\_8, Phleuron\_8, Phlyer\_11, PhrankReynolds\_8, PhrodoBaggins\_8, Phunky\_8, Piglet\_008, PinheadLarry\_8, Pinkman\_8, Pipefish\_11, Pipsqueak\_8, Placalicious\_8, Plmatters\_8, Podrick\_8, Pops\_8, Poster\_8, Potter\_8, Prickles\_8, PrinceCharming\_12, Prince\_9, ProfessorX\_8, Puhltonio\_8, QueenBeane\_8, QueenPie\_9, Quesadilla\_11, Quisquilliae\_8, Qyrzula\_12, RagingRooster\_11, RedMaple\_8, Reprobate\_10, Rhinoforte\_12, Rich\_10, Ricotta\_8, Riggan\_8, Rinkes\_13, Rita130\_10, Rita1961\_11, Robyn\_8, Roliet\_8, RomaT\_11, Roscoe\_9, Rosebush\_12, Roy17\_8, SDcharge11\_8, Sabella\_12, Saguaro\_11, Samaymay\_8, SassyCat97\_8, Schadenfreude\_8, Schueller\_8, Scoot17C\_8, Scrick\_8, Selr12\_8, Serendipitous\_10, Serendipity\_8, Serpentine\_008, Shatter\_8, Sheila\_8, Shenandoah\_11, Shenyu\_10, ShiVal\_8, Sigman\_8, SilverBell\_8, Simielle\_8, SirJeffery\_10, Sisko\_7, Skippy\_8, Slatt\_8, SlippinJimmy\_11, Soile\_8, Solosis\_8, Sophia\_8, Soto\_8, Sour\_11, Spartan300\_8, Squid\_8, Squiggle\_8, StAugustine\_14, Stinger\_7, StinkyVeggy\_11, Struggle\_8, Suffolk\_8, Suigeneris\_10, Surely\_8, SwainyDoc\_11, Swish\_8, SynergyX\_11, TA17A\_12, TPA2\_17, TallGrassMM\_8, Telesworld\_8, Thonko\_7, Thora\_8, ThreeOh3D2\_8, Timmi\_8, Tinciduntolum\_13, TinyTerror\_11, TomBombadil\_8, Tomlarah\_8, Toni\_8, Tooj\_8, Tres\_12, True\_8, Trypo\_8, Tydolla\_11, TyrionL\_8, UAch1\_8, UncleHowie\_8, Usavi\_8, Vaishali24\_8, Valjean\_8, Vaticameos\_8, Veritas\_8, Vic9\_00012, Vincenzo\_10, VioletZ\_9, Virapocalypse\_8, Virgeve\_8, Vista\_8, Vivaldi\_8, Vortex\_8, Waleliano\_9, Wallhey\_8, Waterdiva\_8, Weher20\_8, West99\_12, Windsor\_8, Wooper\_10, Xavier\_8, Yago84\_7, Yahalom\_11, Yeshua\_10, Yinz\_11, Yoshand\_8, YouGoGlencoco\_8, Zaider\_9, Zelda\_8, Zemanar\_10, Zenteno07\_13, Zonia\_8,

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

- Anderson\_8, AngelCake\_8, Basato\_9, Bishoperium\_8, CaiB\_10, CharlottesWeb\_8, CheetO\_8, Chute\_8, Coldpizza\_9, Coletti\_8, Cornbread\_9, ElvisPhasley\_8, Fanaw\_9, Gophee\_8, Gwennie1\_9, Inverness\_8, Iridessa\_8, Jesabah\_9, Katniss\_8, Khan1\_8, LeiMonet\_8, Ligma\_8, Lilbeanie\_13, Mariokart\_8, Megamind20\_9, Mesmerelda\_9, MossRose\_10, MrPhizzler\_8, Nathan\_9, Olive\_8, Plata\_8,

RawrgerThat\_9, Rimu\_8, Riverton\_8, SirBeauregard\_8, Swiphy\_8, Thunderbird\_8, TooFast2Furius\_10, Xincheng\_9,

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

- APunk\_15, Abblin\_14, Affeca\_12, Ailee\_12, Ali17\_11, Amo99\_42, Angelicage\_12, Antares\_20, Argie\_7, Ariadne\_28, Arri\_13, Ashertheman\_12, Baddon\_12, Bakery\_13, Barb\_12, Barsten\_13, Baumdotcom\_12, Bibwit\_12, Bizzy\_13, BobBob\_10, Brandonk123\_15, BrazzalePHS\_19, Busephilis\_20, Cepens\_6, ChadMasterC\_12, Charming\_10, CherryCola\_14, Chickadee\_13, Cinna\_12, ClamChowder\_12, Clawz\_41, ClearAsMud\_22, Clown\_16, ColdSoup\_42, CoveyB\_12, Cranjis\_21, CrazyRich\_19, Cressida\_13, Crisis\_21, D12\_06, Danyall\_12, Delrey21\_14, Derg\_8, Dxdert\_14, DoctorFroggo\_14, DonTron\_41, Dori\_7, EMOore\_7, EarickHC\_20, EdmundFerry\_12, Egi03\_13, Evamon\_12, Fireball\_13, Fireman\_20, Fitzgerald\_11, Flatwoods\_13, Fosterous\_10, FuegoCuervo\_16, Fugax\_12, FuzzBuster\_24, GTE6\_14, Gaea\_12, Galadriel\_14, Ganandorf\_19, Geodirt\_12, Gezellig\_12, Gina\_20, Glorp\_21, GodPhather\_7, Gustavo\_12, Halo3\_13, Hans\_15, Hermeonysus\_19, Honeyfin\_21, Inspectinfecti\_14, JKSyngboy\_11, Jabberwocky\_11, Jambalaya\_12, Jayden\_20, Jefe\_20, Jeon\_6, Jollipop\_20, Jollymon\_42, KaiHaiDragon\_20, Kamashten\_13, Keitabear\_13, Kewpiedoll\_13, KimmyK\_12, KingstonB\_41, Kowalski\_19, Kozi\_14, Kroos\_12, Kwekel\_13, Kwobi\_12, Lennon\_13, Leonard\_13, LilHam\_10, LittleFortune\_21, Love\_14, Mao1\_6, Margaery\_12, Mask\_7, Matzah\_13, McKinley\_13, Megabear\_6, Megan\_13, MelBins\_13, MementoMori\_13, Merry\_, Metamorphoo\_20, MoontowerMania\_11, Mutzi\_12, Natkenzie\_14, Nicole72\_14, NoodlelyBoi\_19, Nordenberg\_7, Nubi\_12, Onika\_19, PR\_06, Paries\_13, Paschalis\_19, Phauci\_6, PhedwardCullen\_18, Phinally\_13, Phlop\_12, Phorgeous\_19, Phrancesco\_21, PierreOrion\_20, Pine5\_11, PinkCoffee\_12, PiperSansNom\_20, Piperis\_20, Portcullis\_12, Pulchra\_21, PullumCavea\_12, Quhwah\_22, Ramiel05\_19, Ribeye\_13, RiverRaider\_13, RoadKill\_11, RobsFeet\_21, Rofo\_12, RogerDodger\_13, Salvador\_12, Sampson\_14, Sanjuju\_11, Saronaya\_12, Savannah\_19, Savbucketdawg\_12, SchottB\_11, Scioto\_14, Scumberland\_21, Sedona\_13, Sejanus\_7, Selwyn23\_21, Shinji\_12, Shivanishola\_12, Shotgun\_19, Shrubaron\_20, SirFrank\_19, Sitar\_13, Smarties\_28, SmokingBunny\_12, Soos\_37, Sting\_40, StorminNorm\_12, Stultus\_12, Sunny\_, Tangent\_10, Tangerine\_12, Taptic\_6, Tardus\_14, Teamocil\_20, Terij\_13, Thing3\_13, Tiamoceli\_14, TillyBobJoe\_12, Togo\_12, Tonitrus\_26, Twister6\_12, Twonlo\_11, Tycho\_12, Tyrumbra\_18, Valary\_13, VanDeWege\_13, Verity\_14, ViaConlectus\_14, Vivi2\_11, Wizard\_12, Yeti\_20, YorkOnyx\_12, YungMoney\_12, Zipp\_14, Zitch\_15,

### Summary by start number:

Start 2:

- Found in 2 of 680 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 582
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Merry\_ (EC), Sunny\_ (EC),

Start 3:

- Found in 1 of 680 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 582
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lilbeanie\_13 (DE5),

Start 4:

- Found in 115 of 680 ( 16.9% ) of genes in pham
- Manual Annotations of this start: 98 of 582
- Called 100.0% of time when present
- Phage (with cluster) where this start called: APunk\_15 (DE4), Abblin\_14 (DE4), Affeca\_12 (DE1), Ailee\_12 (DE1), Ali17\_11 (DE2), Angelicage\_12 (DE1), Arri\_13 (DC1), Ashertheman\_12 (DE1), Baddon\_12 (DE1), Bakery\_13 (DC1), Barb\_12 (DC1), Barsten\_13 (DE1), Baumdotcom\_12 (DE1), Bibwit\_12 (DE1), Bizzy\_13 (DE1), BobBob\_10 (DE1), Brandonk123\_15 (DE1), ChadMasterC\_12 (DE1), Charming\_10 (DE1), CherryCola\_14 (DC1), Chickadee\_13 (DE3), ClamChowder\_12 (DC1), Clown\_16 (DC2), CoveyB\_12 (DC1), Danyall\_12 (DC1), Delrey21\_14 (DE4), Derg\_8 (DE1), Dexpert\_14 (DE3), DoctorFroggo\_14 (DE4), EMoore\_7 (DE2), EdmundFerry\_12 (DE3), Egi03\_13 (DC1), Evamon\_12 (DC1), Fireball\_13 (DC1), Fitzgerald\_11 (DE1), Flatwoods\_13 (DE1), Fosterous\_10 (DE1), FuegoCuervo\_16 (DE1), Fugax\_12 (DC1), GTE6\_14 (DE3), Gaea\_12 (DE1), Galadriel\_14 (DE1), Geodirt\_12 (DE1), Gezellig\_12 (DC1), Gustavo\_12 (DE1), Halo3\_13 (DC1), Hans\_15 (DE2), Inspectinfecti\_14 (DE2), JKSyngboy\_11 (DE1), Jabberwocky\_11 (DE1), Jambalaya\_12 (DC1), Kamashten\_13 (DE1), Keitabear\_13 (DE1), Kewpiedoll\_13 (DE1), KimmyK\_12 (DC1), Kroos\_12 (DE1), Kwekel\_13 (DE3), Kwobi\_12 (DE1), Lennon\_13 (DE1), Leonard\_13 (DE2), LilHam\_10 (DE1), Love\_14 (DE1), McKinley\_13 (DE1), MelBins\_13 (DE2), MoontowerMania\_11 (DE1), Mutzi\_12 (DC1), Natkenzie\_14 (DE4), Nordenberg\_7 (DE1), Nubi\_12 (DC1), Paries\_13 (DE1), Phauci\_6 (DE2), Phinally\_13 (DE2), Phlop\_12 (DC1), PinkCoffee\_12 (DC1), Portcullis\_12 (DC1), PullumCavea\_12 (DC1), Ribeye\_13 (DE1), RiverRaider\_13 (DE1), RoadKill\_11 (DE3), Rofo\_12 (DE1), RogerDodger\_13 (DC1), Salvador\_12 (DC1), Sampson\_14 (DE4), Sanjuju\_11 (DE1), Saronaya\_12 (DE1), Savbucketdawg\_12 (DC1), SchottB\_11 (DE1), Scioto\_14 (DE4), Sedona\_13 (DE1), Shinji\_12 (DC1), Shivanishola\_12 (DE1), Sitar\_13 (DE1), SmokingBunny\_12 (DC1), StorminNorm\_12 (DE1), Stultus\_12 (DE1), Tangent\_10 (DE1), Tangerine\_12 (DE1), Tardus\_14 (DE4), Thing3\_13 (DE1), Tiamoceli\_14 (DE3), TillyBobJoe\_12 (DC1), Togo\_12 (DC1), Twister6\_12 (DC1), Twonlo\_11 (DE3), Tycho\_12 (DE1), Valary\_13 (DC1), VanDeWege\_13 (DC1), Verity\_14 (DE4), ViaConlectus\_14 (DE4), Vivi2\_11 (DE1), Wizard\_12 (DC1), YorkOnyx\_12 (DE1), YungMoney\_12 (DC1), Zipp\_14 (DE4), Zitch\_15 (DE4),

#### Start 9:

- Found in 4 of 680 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 4 of 582
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dori\_7 (AD), Mao1\_6 (AD), Mask\_7 (AD), Sejanus\_7 (AD),

#### Start 10:

- Found in 57 of 680 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 37 of 582
- Called 70.2% of time when present
- Phage (with cluster) where this start called: Antares\_20 (EC), Busephilis\_20 (EC), ClearAsMud\_22 (EC), Cranjis\_21 (EC), CrazyRich\_19 (EC), Crisis\_21 (EC), FuzzBuster\_24 (singleton), Gina\_20 (EC), Hermeonysus\_19 (EC), Honeyfin\_21 (EC), Jayden\_20 (EC), Jefe\_20 (EC), Jollipop\_20 (EC), Kowalski\_19 (EC), LittleFortune\_21 (EC), Megan\_13 (EC), MementoMori\_13 (EI), Metamorphoo\_20 (EC), Nicole72\_14 (EC), NoodlelyBoi\_19 (EC), Onika\_19 (EC), Paschalis\_19 (EC), Phorgeous\_19 (EC), Phrancesco\_21 (EC), PierreOrion\_20 (EC), PiperSansNom\_20 (EC), Piperis\_20 (EC), Pulchra\_21 (EC), Quhwah\_22 (EC), Ramiel05\_19 (EC), RobsFeet\_21 (EC),

Savannah\_19 (EC), Scumberland\_21 (EC), Selwyn23\_21 (EC), Shotgun\_19 (EC), Shrubaron\_20 (EC), SirFrank\_19 (EC), Smarties\_28 (EC), Teamocil\_20 (EC), Yeti\_20 (EC),

Start 11:

- Found in 58 of 680 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 13 of 582
- Called 25.9% of time when present
- Phage (with cluster) where this start called: Ariadne\_28 (EC), BrazzalePHS\_19 (EC), Cinna\_12 (EI), Cressida\_13 (EI), EarickHC\_20 (EC), Fireman\_20 (EC), Ganandorf\_19 (EC), Glorp\_21 (EC), KaiHaiDragon\_20 (EC), Kozie\_14 (EI), Margaery\_12 (EI), Matzah\_13 (EI), PhedwardCullen\_18 (EC), Terij\_13 (EI), Tyrumbra\_18 (EC),

Start 13:

- Found in 8 of 680 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 582
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Jeon\_6 (W), Megabear\_6 (W), Taptic\_6 (W),

Start 15:

- Found in 31 of 680 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 4 of 582
- Called 29.0% of time when present
- Phage (with cluster) where this start called: Amo99\_42 (CP), Clawz\_41 (CP), ColdSoup\_42 (CP), DonTron\_41 (CP), Jollymon\_42 (CP), KingstonB\_41 (CP), Soos\_37 (CP), Sting\_40 (CP), Tonitrus\_26 (singleton),

Start 16:

- Found in 486 of 680 ( 71.5% ) of genes in pham
- Manual Annotations of this start: 401 of 582
- Called 92.0% of time when present
- Phage (with cluster) where this start called: 39HC\_07 (B6), 40BC\_07 (B6), ABU\_8 (B1), Abinghost\_11 (B3), AbsoluteMadLad\_8 (B1), Acadian\_10 (B5), Adriana\_8 (B1), Aelin\_8 (B1), Ahwei\_8 (B4), Akoma\_11 (B3), AksarBAT\_8 (DR), AlanGrant\_10 (B4), Allegro\_12 (B2), AltPhacts\_8 (B1), Altwerkus\_8 (B1), AnClar\_7 (DR), AnarQue\_10 (DR), Andre\_8 (B1), Antihero\_8 (B4), Antonia\_8 (B1), Apex\_8 (B4), Apizium\_8 (B1), Arbiter\_12 (B2), Ares\_12 (B2), Ashraf\_8 (B1), Athena\_12 (B3), Audrey\_11 (B3), Austelle\_9 (B4), Axumite\_8 (DR), Badfish\_8 (B1), Bae\_10 (B5), Baloo\_11 (B3), Bananafish\_12 (B2), Banjo\_8 (B1), BatteryCK\_8 (B1), Beaglebox\_8 (B1), Ben11\_10 (B3), Bernardo\_11 (B3), BiggityBass\_7 (DR), BirdsNest\_12 (B13), BlackStallion\_8 (B1), Blocker23\_12 (B2), BlueHusk\_8 (B1), Bluephacebaby\_8 (B1), BobRoss2024\_7 (DR), BobbyK\_9 (B4), Boehler\_8 (B1), Boyle\_12 (B2), Briakila\_11 (B3), Brilliant\_8 (B1), BrownCNA\_10 (B4), Brownie5\_12 (B2), Buckeye\_8 (B1), Burr\_8 (B1), CRB2\_11 (B9), Calamitous\_12 (B2), CamL\_8 (B1), CampRoach\_8 (B1), Cannibal\_8 (B1), Carthage\_8 (B1), Casbah\_10 (B3), Caspiroi\_9 (B1), Causa\_16 (AI), ChaChing\_11 (B3), Chaelin\_8 (B1), Chah\_8 (B1), Chalmers\_11 (B3), Chandler\_11 (B3), Charles1\_8 (B1), CharlieGBrown\_8 (B1), Chentzyk\_10 (B3), Cher\_8 (B1), Childish\_8 (B1), Chipette\_10 (B1), Chorkpop\_8 (B1), ChrisnMich\_8 (B4), Chunky\_8 (B1), CloverMinnie\_10 (DR), Cobra\_8 (B1), Coffee\_12 (B2), Colbert\_8 (B1), Compostia\_11 (B3), Cooper\_9 (B4), Cornobble\_8 (B1), Corofin\_11 (B3), Cosmolli16\_8 (B1), Craff\_8 (B1), Crownjwl\_9 (B1), DaddyDaniels\_8 (B1), Daffy\_8 (B1), Daisy\_11 (B3), Daka\_8

(B1), Dati\_8 (B1), Deenasa\_11 (B3), DelRivs\_8 (B1), Derpp\_8 (B1), Devonte\_11 (B3), Dice\_8 (B1), DigitDog\_10 (B5), Dingo\_8 (B1), Dione\_8 (B1), DirtJuice\_8 (B1), Doddsville\_8 (B1), DoesntMatter\_8 (B1), DonSanchon\_8 (B1), Donny\_10 (B5), DuchessDung\_8 (B1), Duggie\_8 (B1), Durga\_8 (B1), Eaglehorse\_12 (B2), EastView9101\_10 (B5), Emiris\_8 (B1), EmpTee\_8 (B1), Epah\_8 (B4), Eremos\_8 (B1), Etaye\_8 (B1), Eugenia\_8 (B1), Evaa\_9 (DR), Fang\_8 (B1), Faze9\_12 (B2), FluffyNinja\_8 (B1), ForDig\_7 (B6), Fortunato\_9 (B4), Fozzie\_8 (B1), Frankicide\_8 (B1), Frederick\_9 (B4), FrenchFry\_12 (B2), Fresco\_8 (DR), Freya\_8 (B1), FriarPreacher\_8 (B1), Fringe\_8 (B1), FugateOSU\_8 (B1), Funsized\_14 (B9), Gadget\_12 (B3), Gareth\_8 (B1), GeneCoco\_8 (B1), Gervas\_11 (B3), GinPorsche\_8 (B4), Giraffe\_8 (B1), Glass\_12 (B2), GlenHope\_12 (B3), Glubnar\_11 (B3), Godines\_12 (B2), Grand2040\_8 (B1), Gwilliam\_8 (B1), Gyarad\_008 (B1), HSavage\_8 (B1), Haimas\_8 (B1), Haleema\_8 (B1), Halfpint\_10 (B3), Hally898\_8 (B4), Hamish\_8 (B1), Hangman\_9 (B4), Hartsy\_8 (B1), HarveySr\_11 (B3), Harvey\_8 (B1), Hashim76\_13 (B13), Heath\_9 (B4), Heathcliff\_11 (B3), Hedgerow\_12 (B2), Held\_8 (B1), HenryJackson\_8 (B1), Hertubise\_8 (B1), Hetaeria\_8 (B1), HighStump\_8 (B1), Hocus\_8 (B1), Holeinone\_12 (B2), Horchata\_8 (B1), Hosp\_05 (B6), Hydro\_9 (B4), ImtiyazSitla\_8 (B1), Imvubu\_5 (B10), Inchworm\_8 (B1), Indlovu\_9 (B11), Iridoclysis\_8 (B1), IsaacEli\_8 (B1), ItsyBitsy1\_12 (B2), JAMaL\_8 (B4), JDog\_8 (B1), JacAttac\_8 (B1), Jackstina\_10 (B3), JaguarMi\_10 (B4), JakeO\_8 (B1), JangoPhett\_8 (B1), Jillium\_8 (B1), Jiminy\_8 (B1), Jiraiya\_8 (B1), Jolie1\_07 (B6), KLucky39\_8 (B1), Kahve\_8 (B1), Kailash\_8 (B1), Kaleb\_12 (B2), Kamiyu\_11 (B3), KarasumaRum\_11 (B5), KayaCho\_7 (B6), Keitherie\_8 (B1), Kheth\_12 (B2), Kikipoo\_8 (B1), Kimbrough\_8 (B1), KingTut\_8 (B1), KingVeVeVe\_8 (B1), KlimbOn\_8 (B1), Kloppinator\_8 (B1), Knocker\_14 (B9), Kolhan\_12 (B2), Kronus\_10 (B3), Kwadwo\_8 (B1), Kwksand96\_8 (B1), Labeouficaum\_8 (B1), Lambano\_8 (B4), Lars\_12 (B2), LasagnaCat\_8 (B1), Lasso\_8 (B1), Laurie\_12 (B2), LeeLot\_8 (B1), Lego3393\_8 (B1), Legolas\_8 (B1), LemonSlice\_8 (B1), Lephleur\_12 (B2), LestyG\_11 (B3), LilMcDreamy\_10 (B12), LilSmirk\_12 (B2), LittleMunchkin\_9 (DR), LizLemon\_12 (B2), Lolalove\_9 (B4), Longacauda\_8 (B1), Lopsy\_8 (B1), LostAndPhound\_8 (B1), LuckyMarjie\_8 (B1), Lulumae\_8 (B1), Lulwa\_8 (B1), Lumine\_8 (B1), MRabcd\_8 (B1), Mag7\_8 (B1), Magic8\_8 (B1), Magpie\_9 (B4), MakoManhole\_10 (DR), Mana\_8 (B1), Manad\_8 (B1), Marley1013\_11 (B3), Marlia\_11 (B3), Maru\_8 (B1), Maskar\_8 (B1), MasterPo\_12 (B2), Matalotodo\_8 (B1), Mcshane\_8 (B1), Mecca\_8 (B1), Megatron\_8 (B1), Melc17\_8 (B1), MelsMeow\_8 (B1), Mesh1\_8 (B1), MichaelPhcott\_8 (B1), Mikota\_8 (B1), MiniBoss\_8 (B1), MitKao\_8 (B1), Mithril\_9 (B4), MmasiCarm\_11 (B3), Morgushi\_8 (B1), Mortcellus\_10 (B3), Morty007\_11 (B3), Morty\_8 (B1), Mosaic\_8 (B1), Mudslide\_9 (B4), Mulan\_8 (B1), Murdoc\_8 (B1), Mutante\_8 (B1), Mysterious\_10 (B5), NHagos\_8 (DR), Nacho\_008 (B1), Nanao\_8 (B4), Nangang\_10 (B5), Nehemiah\_9 (B5), Neos5\_11 (B3), Newman\_8 (B1), Nicole21\_8 (B1), Nigel\_7 (B4), Nozo\_11 (B3), Numberten\_8 (B1), Nyala\_8 (B1), OSmaximus\_8 (B1), Obutu\_11 (B3), Olak\_8 (B1), Oline\_8 (B1), OliverWalter\_8 (B1), Olivio\_10 (B3), Omniscient\_8 (B1), Oosterbaan\_8 (B1), Opia\_12 (B2), OrangeOswald\_11 (B3), Orfeu\_8 (B1), Orion\_8 (B1), Orwigg\_8 (B1), PG1\_8 (B1), Pacifista\_8 (B1), PenguinLover67\_12 (B9), Phaedrus\_10 (B3), Phamished\_8 (B1), Phantasmagoria\_12 (B2), Phareon\_8 (B1), PhatCats2014\_8 (B1), PhatLouie\_8 (B1), Phayeta\_11 (B3), Phelemich\_10 (B5), PhenghisKhan\_8 (B1), Pherdinand\_8 (B1), Phergie\_8 (B1), Philly\_10 (B3), Phipps\_8 (B1), Phleuron\_8 (B1), Phlyer\_11 (B3), PhrankReynolds\_8 (B1), PhrodoBaggins\_8 (B1), Phunky\_8 (B1), Piglet\_008 (B1), PinheadLarry\_8 (B1), Pinkman\_8 (B1), Pipefish\_11 (B3), Pipsqueak\_8 (B1), Placalicious\_8 (B1), Plmatters\_8 (B1), Podrick\_8 (B1), Pops\_8 (B1), Poster\_8 (B4), Potter\_8 (B1), Prickles\_8 (B1), PrinceCharming\_12 (B2), Prince\_9 (B4), ProfessorX\_8 (B1), Puhltonio\_8 (B1), QueenBeane\_8 (B1), QueenPie\_9 (B4), Quesadilla\_11 (B9), Quisquilliae\_8 (B1), Qyrzula\_12 (B2),



RagingRooster\_11 (B3), RedMaple\_8 (B1), Reprobate\_10 (B5), Rhinoforte\_12 (B2), Rich\_10 (B5), Ricotta\_8 (B1), Riggan\_8 (B1), Rinkes\_13 (B9), Rita130\_10 (B5), Rita1961\_11 (B3), Robyn\_8 (B1), Roliet\_8 (B1), RomaT\_11 (B3), Roscoe\_9 (B1), Rosebush\_12 (B2), Roy17\_8 (B1), SDcharge11\_8 (B1), Sabella\_12 (B2), Saguaro\_11 (B7), Samaymay\_8 (B1), SassyCat97\_8 (B1), Schadenfreude\_8 (B1), Schueller\_8 (B1), Scoot17C\_8 (B1), Scrick\_8 (B1), Selr12\_8 (B1), Serendipitous\_10 (B5), Serendipity\_8 (B1), Serpentine\_008 (B1), Shatter\_8 (DR), Sheila\_8 (B1), Shenandoah\_11 (B3), Shenyu\_10 (B5), ShiVal\_8 (B1), Sigman\_8 (B1), SilverBell\_8 (B1), Simielle\_8 (B1), SirJeffery\_10 (B5), Sisko\_7 (DR), Skippy\_8 (B1), Slatt\_8 (B1), SlippinJimmy\_11 (B3), Soile\_8 (B1), Solosis\_8 (B1), Sophia\_8 (B1), Soto\_8 (B1), Sour\_11 (DR), Spartan300\_8 (B1), Squid\_8 (B1), Squiggle\_8 (B1), StAugustine\_14 (A1), Stinger\_7 (B4), StinkyVeggy\_11 (B5), Struggle\_8 (B1), Suffolk\_8 (B1), Suigeneris\_10 (B5), Surely\_8 (B1), SwainyDoc\_11 (B3), Swish\_8 (B1), SynergyX\_11 (B3), TA17A\_12 (B2), TPA2\_17 (singleton), TallGrassMM\_8 (B1), Telesworld\_8 (B1), Thonko\_7 (B8), Thora\_8 (B1), ThreeOh3D2\_8 (B1), Timmi\_8 (B1), Tinciduntolum\_13 (B2), TinyTerror\_11 (B3), TomBombadil\_8 (B1), Tomlarah\_8 (B1), Toni\_8 (B1), Tooj\_8 (B1), Tres\_12 (B2), True\_8 (B1), Trypo\_8 (B1), Tydolla\_11 (B3), TyrionL\_8 (B1), UAch1\_8 (B1), UncleHowie\_8 (B1), Usavi\_8 (B1), Vaishali24\_8 (B1), Valjean\_8 (B1), Vaticameos\_8 (B1), Veritas\_8 (B1), Vic9\_00012 (B2), Vincenzo\_10 (B4), VioletZ\_9 (B4), Virapocalypse\_8 (B1), Virgeve\_8 (B1), Vista\_8 (B1), Vivaldi\_8 (B1), Vortex\_8 (B1), Waleliano\_9 (B4), Wallhey\_8 (B1), Waterdiva\_8 (B1), Weher20\_8 (B1), West99\_12 (B2), Windsor\_8 (B1), Wooper\_10 (DR), Xavier\_8 (B1), Yago84\_7 (DR), Yahalom\_11 (B3), Yeshua\_10 (DR), Yinz\_11 (B3), Yoshand\_8 (B1), YouGoGlencoco\_8 (B1), Zaider\_9 (B1), Zelda\_8 (B1), Zemanar\_10 (B4), Zenteno07\_13 (B13), Zonia\_8 (B1),

#### Start 17:

- Found in 8 of 680 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 582
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Argie\_7 (W), Cepens\_6 (W), GodPhather\_7 (W),

#### Start 21:

- Found in 237 of 680 ( 34.9% ) of genes in pham
- Manual Annotations of this start: 5 of 582
- Called 3.4% of time when present
- Phage (with cluster) where this start called: Anderson\_8 (B1), Bishoperium\_8 (B1), Fanaw\_9 (B4), Inverness\_8 (B1), Megamind20\_9 (B1), Olive\_8 (B1), RawrgerThat\_9 (B4), Xincheng\_9 (B4),

#### Start 32:

- Found in 7 of 680 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 582
- Called 42.9% of time when present
- Phage (with cluster) where this start called: CharlottesWeb\_8 (DR), Ligma\_8 (DR), Mariokart\_8 (DR),

#### Start 35:

- Found in 8 of 680 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 2 of 582
- Called 25.0% of time when present
- Phage (with cluster) where this start called: D12\_06 (W), PR\_06 (W),

Start 44:

- Found in 1 of 680 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pine5\_11 (singleton),

Start 62:

- Found in 296 of 680 ( 43.5% ) of genes in pham
- Manual Annotations of this start: 5 of 582
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Basato\_9 (B1), CheetO\_8 (B1), Chute\_8 (B1), Coletti\_8 (B1), Cornbread\_9 (B1), ElvisPhasley\_8 (B1), Gophe\_8 (B1), Gwennie1\_9 (B1), Iridessa\_8 (B1), Jesabah\_9 (B1), Katniss\_8 (B1), Khan1\_8 (B1), LeiMonet\_8 (B1), Mesmerelda\_9 (B1), MrPhizzler\_8 (B1), Nathan\_9 (B1), Plata\_8 (B1), SirBeauregard\_8 (B1), Swiphy\_8 (B1), Thunderbird\_8 (B1), TooFast2Furius\_10 (B1),

Start 66:

- Found in 69 of 680 ( 10.1% ) of genes in pham
- Manual Annotations of this start: 2 of 582
- Called 4.3% of time when present
- Phage (with cluster) where this start called: CaiB\_10 (DR), Coldpizza\_9 (DR), MossRose\_10 (DR),

Start 67:

- Found in 290 of 680 ( 42.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.0% of time when present
- Phage (with cluster) where this start called: AngelCake\_8 (B1), Rimu\_8 (B1), Riverton\_8 (B1),

**Summary by clusters:**

There are 28 clusters represented in this pham: singleton, B12, B13, B10, B11, DR, EI, AD, AI, EC, W, CP, DC2, DC1, DE1, DE2, DE3, DE4, DE5, B4, B5, B6, B7, B1, B2, B3, B8, B9,

Info for manual annotations of cluster AD:

- Start number 9 was manually annotated 4 times for cluster AD.

Info for manual annotations of cluster AI:

- Start number 16 was manually annotated 1 time for cluster AI.

Info for manual annotations of cluster B1:

- Start number 16 was manually annotated 258 times for cluster B1.
- Start number 21 was manually annotated 4 times for cluster B1.
- Start number 62 was manually annotated 5 times for cluster B1.

Info for manual annotations of cluster B10:

- Start number 16 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 16 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 16 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 16 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 16 was manually annotated 34 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 16 was manually annotated 45 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 16 was manually annotated 24 times for cluster B4.

- Start number 21 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:

- Start number 16 was manually annotated 9 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 16 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 16 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 16 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 16 was manually annotated 6 times for cluster B9.

Info for manual annotations of cluster CP:

- Start number 15 was manually annotated 3 times for cluster CP.

Info for manual annotations of cluster DC1:

- Start number 4 was manually annotated 28 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 4 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:

- Start number 4 was manually annotated 45 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 4 was manually annotated 8 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 4 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 4 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 3 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DR:

- Start number 16 was manually annotated 15 times for cluster DR.
- Start number 32 was manually annotated 2 times for cluster DR.
- Start number 66 was manually annotated 2 times for cluster DR.

Info for manual annotations of cluster EC:

- Start number 2 was manually annotated 2 times for cluster EC.
- Start number 10 was manually annotated 35 times for cluster EC.
- Start number 11 was manually annotated 7 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 10 was manually annotated 1 time for cluster EI.
- Start number 11 was manually annotated 6 times for cluster EI.

Info for manual annotations of cluster W:

- Start number 13 was manually annotated 3 times for cluster W.
- Start number 17 was manually annotated 3 times for cluster W.
- Start number 35 was manually annotated 2 times for cluster W.

### **Gene Information:**

Gene: 39HC\_07 Start: 5208, Stop: 7124, Start Num: 16

Candidate Starts for 39HC\_07:

(Start: 16 @5208 has 401 MA's), (Start: 21 @5223 has 5 MA's), (51, 5286), (Start: 62 @5310 has 5 MA's), (71, 5352), (73, 5367), (74, 5370), (76, 5379), (105, 5529), (122, 5610), (131, 5640), (146, 5688), (169, 5781), (170, 5784), (172, 5793), (177, 5838), (178, 5847), (190, 5928), (191, 5931), (194, 5949), (211, 6012), (217, 6030), (229, 6078), (240, 6132), (249, 6192), (254, 6234), (265, 6306), (267, 6321), (271, 6342), (277, 6378), (281, 6390), (289, 6426), (309, 6573), (328, 6639), (351, 6705), (392, 6828), (402, 6858), (405, 6867), (406, 6885), (433, 7017), (434, 7020), (453, 7098),

Gene: 40BC\_07 Start: 5208, Stop: 7124, Start Num: 16

Candidate Starts for 40BC\_07:

(Start: 16 @5208 has 401 MA's), (Start: 21 @5223 has 5 MA's), (51, 5286), (Start: 62 @5310 has 5 MA's), (71, 5352), (73, 5367), (74, 5370), (76, 5379), (105, 5529), (122, 5610), (131, 5640), (146, 5688), (169, 5781), (170, 5784), (172, 5793), (177, 5838), (178, 5847), (190, 5928), (191, 5931), (194, 5949), (211, 6012), (217, 6030), (229, 6078), (240, 6132), (249, 6192), (254, 6234), (265, 6306), (267, 6321), (271, 6342), (277, 6378), (281, 6390), (289, 6426), (309, 6573), (328, 6639), (351, 6705), (392, 6828), (402, 6858), (405, 6867), (406, 6885), (433, 7017), (434, 7020), (453, 7098),

Gene: ABU\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for ABU\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: APunk\_15 Start: 7441, Stop: 9111, Start Num: 4

Candidate Starts for APunk\_15:

(Start: 4 @7441 has 98 MA's), (Start: 15 @7516 has 4 MA's), (27, 7564), (55, 7651), (72, 7732), (77, 7762), (78, 7771), (105, 7894), (114, 7939), (145, 8011), (149, 8020), (173, 8131), (177, 8170), (180, 8188), (182, 8200), (183, 8203), (184, 8209), (194, 8284), (227, 8344), (250, 8479), (255, 8524), (262, 8563), (269, 8614), (276, 8647), (277, 8659), (278, 8662), (285, 8689), (290, 8713), (299, 8791), (307, 8842), (314, 8872), (316, 8878), (323, 8896), (335, 8935), (352, 8980),

Gene: Abblin\_14 Start: 6957, Stop: 8627, Start Num: 4

Candidate Starts for Abblin\_14:

(Start: 4 @6957 has 98 MA's), (Start: 15 @7032 has 4 MA's), (20, 7053), (27, 7080), (55, 7167), (72, 7248), (77, 7278), (78, 7287), (89, 7362), (91, 7374), (105, 7410), (114, 7455), (145, 7527), (149, 7536), (173, 7647), (177, 7686), (178, 7695), (180, 7704), (182, 7716), (183, 7719), (184, 7725), (194, 7800), (224, 7848), (227, 7860), (247, 7980), (250, 7995), (255, 8040), (262, 8079), (269, 8130), (276, 8163), (277, 8175), (278, 8178), (285, 8205), (290, 8229), (299, 8307), (307, 8358), (314, 8388), (316, 8394), (335, 8451), (352, 8496),

Gene: Abinghost\_11 Start: 6314, Stop: 8218, Start Num: 16

Candidate Starts for Abinghost\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151), (220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7934), (398, 7943), (421, 8048), (422, 8057), (427, 8084), (447, 8174), (454, 8198), (459, 8210),

Gene: AbsoluteMadLad\_8 Start: 4437, Stop: 6356, Start Num: 16

Candidate Starts for AbsoluteMadLad\_8:

(Start: 16 @4437 has 401 MA's), (Start: 21 @4452 has 5 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),

Gene: Acadian\_10 Start: 6693, Stop: 8558, Start Num: 16

Candidate Starts for Acadian\_10:

(Start: 16 @6693 has 401 MA's), (Start: 21 @6708 has 5 MA's), (39, 6750), (73, 6846), (76, 6858), (116, 7044), (119, 7056), (121, 7065), (159, 7182), (161, 7197), (191, 7374), (194, 7392), (213, 7452), (244, 7590), (249, 7626), (254, 7668), (256, 7680), (267, 7755), (272, 7779), (277, 7812), (281, 7824), (284, 7836), (289, 7860), (319, 8040), (323, 8058), (381, 8238), (392, 8259), (400, 8280), (420, 8382), (431, 8442), (461, 8550), (462, 8553),

Gene: Adriana\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Adriana\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Aelin\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Aelin\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188,

5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Affeca\_12 Start: 6664, Stop: 8292, Start Num: 4

Candidate Starts for Affeca\_12:

(Start: 4 @6664 has 98 MA's), (29, 6784), (50, 6823), (58, 6862), (72, 6925), (86, 7018), (90, 7045), (102, 7084), (149, 7213), (160, 7273), (175, 7342), (177, 7363), (180, 7381), (183, 7396), (184, 7402), (193, 7465), (224, 7525), (227, 7537), (234, 7576), (237, 7588), (240, 7597), (243, 7630), (246, 7642), (250, 7672), (255, 7717), (257, 7732), (258, 7735), (263, 7771), (272, 7819), (274, 7828), (277, 7852), (278, 7855), (307, 8032), (324, 8089), (327, 8095), (334, 8110), (343, 8131), (363, 8179), (368, 8206),

Gene: Ahwei\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for Ahwei\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Ailee\_12 Start: 7526, Stop: 9148, Start Num: 4

Candidate Starts for Ailee\_12:

(Start: 4 @7526 has 98 MA's), (29, 7646), (50, 7685), (56, 7706), (58, 7724), (72, 7787), (86, 7880), (90, 7907), (102, 7946), (149, 8075), (160, 8135), (175, 8204), (177, 8225), (180, 8243), (183, 8258), (184, 8264), (193, 8327), (224, 8387), (227, 8399), (234, 8438), (237, 8450), (240, 8459), (243, 8492), (246, 8504), (250, 8534), (255, 8579), (257, 8594), (258, 8597), (263, 8633), (272, 8681), (274, 8690), (278, 8717), (307, 8894), (324, 8951), (327, 8957), (334, 8972), (343, 8993), (344, 8999), (363, 9035), (368, 9062),

Gene: Akoma\_11 Start: 6314, Stop: 8218, Start Num: 16

Candidate Starts for Akoma\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151), (220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7934), (398, 7943), (421, 8048), (422, 8057), (427, 8084), (434, 8120), (447, 8174), (448, 8177), (454, 8198), (459, 8210),

Gene: AksarBAT\_8 Start: 5267, Stop: 7105, Start Num: 16

Candidate Starts for AksarBAT\_8:

(Start: 16 @5267 has 401 MA's), (Start: 66 @5381 has 2 MA's), (73, 5423), (97, 5558), (122, 5639), (126, 5657), (155, 5735), (156, 5738), (157, 5741), (165, 5774), (190, 5936), (191, 5939), (194, 5957), (226, 6083), (228, 6089), (232, 6116), (236, 6134), (240, 6146), (254, 6248), (256, 6260), (267, 6335), (272, 6359), (277, 6392), (324, 6638), (332, 6659), (336, 6665), (394, 6821), (397, 6830), (398, 6833), (421, 6932), (431, 6989), (433, 7001), (439, 7034), (443, 7046), (454, 7082), (456, 7085), (461, 7097),

Gene: AlanGrant\_10 Start: 7459, Stop: 9357, Start Num: 16

Candidate Starts for AlanGrant\_10:

(Start: 16 @7459 has 401 MA's), (53, 7540), (74, 7621), (75, 7627), (82, 7681), (106, 7768), (110, 7786), (122, 7846), (127, 7867), (150, 7927), (170, 8023), (177, 8077), (190, 8167), (196, 8194), (211, 8245), (231, 8317), (240, 8365), (242, 8380), (249, 8425), (254, 8467), (272, 8578), (273, 8584), (277, 8611), (289, 8659), (320, 8842), (352, 8917), (384, 9037), (390, 9046), (392, 9049), (406, 9106), (408, 9112), (421, 9175), (422, 9184), (452, 9328), (461, 9349),

Gene: Ali17\_11 Start: 6421, Stop: 8055, Start Num: 4

Candidate Starts for Ali17\_11:

(Start: 4 @6421 has 98 MA's), (6, 6448), (8, 6457), (Start: 15 @6493 has 4 MA's), (24, 6535), (33, 6559), (56, 6616), (65, 6649), (72, 6694), (77, 6724), (78, 6733), (81, 6757), (83, 6772), (102, 6853), (116, 6910), (144, 6970), (149, 6982), (152, 7000), (160, 7042), (177, 7132), (180, 7150), (183, 7165), (184, 7171), (190, 7225), (194, 7246), (227, 7306), (228, 7309), (240, 7366), (241, 7390), (250, 7441), (255, 7486), (258, 7504), (262, 7525), (272, 7588), (276, 7609), (278, 7624), (290, 7675), (304, 7780), (307, 7801), (314, 7831), (322, 7849), (344, 7915), (352, 7936), (369, 7990),

Gene: Allegro\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Allegro\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: AltPhacts\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for AltPhacts\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Altwerkus\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Altwerkus\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Amo99\_42 Start: 18192, Stop: 20150, Start Num: 15

Candidate Starts for Amo99\_42:

(Start: 15 @18192 has 4 MA's), (26, 18237), (47, 18288), (57, 18315), (98, 18504), (152, 18663), (172, 18756), (182, 18831), (193, 18900), (194, 18912), (195, 18918), (216, 19020), (222, 19053), (237, 19125), (238, 19128), (244, 19158), (250, 19197), (256, 19248), (262, 19281), (288, 19425), (289, 19428), (295, 19458), (308, 19566), (317, 19602), (320, 19611), (371, 19746), (402, 19860), (421, 19950), (452, 20103), (464, 20142),

Gene: AnClar\_7 Start: 5605, Stop: 7446, Start Num: 16

Candidate Starts for AnClar\_7:

(Start: 16 @5605 has 401 MA's), (Start: 66 @5719 has 2 MA's), (73, 5761), (82, 5824), (118, 5956), (122, 5974), (148, 6028), (152, 6049), (177, 6181), (183, 6214), (190, 6271), (191, 6274), (194, 6292), (204, 6343), (211, 6364), (236, 6472), (240, 6484), (254, 6586), (278, 6733), (281, 6742), (293, 6799), (370, 7078), (396, 7165), (397, 7171), (414, 7246), (416, 7252), (421, 7273), (436, 7354), (443, 7387), (447, 7399), (454, 7423), (456, 7426),

Gene: AnarQue\_10 Start: 6780, Stop: 8627, Start Num: 16

Candidate Starts for AnarQue\_10:

(Start: 16 @6780 has 401 MA's), (Start: 66 @6894 has 2 MA's), (73, 6936), (82, 6999), (96, 7065), (126, 7170), (166, 7293), (167, 7299), (170, 7308), (172, 7317), (191, 7455), (194, 7473), (228, 7614), (232, 7641), (236, 7659), (240, 7671), (248, 7722), (254, 7773), (267, 7860), (272, 7884), (319, 8142), (345, 8202), (347, 8211), (367, 8259), (397, 8352), (398, 8355), (414, 8427), (416, 8433), (421, 8454), (431, 8511), (433, 8523), (439, 8556), (443, 8568), (447, 8580), (450, 8592), (454, 8604), (456, 8607),

Gene: Anderson\_8 Start: 4456, Stop: 6360, Start Num: 21

Candidate Starts for Anderson\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Andre\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Andre\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: AngelCake\_8 Start: 4564, Stop: 6357, Start Num: 67

Candidate Starts for AngelCake\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Angelicage\_12 Start: 7093, Stop: 8715, Start Num: 4

Candidate Starts for Angelicage\_12:

(Start: 4 @7093 has 98 MA's), (29, 7213), (50, 7252), (56, 7273), (58, 7291), (72, 7354), (86, 7447), (90, 7474), (102, 7513), (149, 7642), (160, 7702), (175, 7771), (177, 7792), (180, 7810), (183, 7825), (184, 7831), (193, 7894), (224, 7954), (227, 7966), (234, 8005), (237, 8017), (240, 8026), (243, 8059), (246, 8071), (250, 8101), (255, 8146), (257, 8161), (258, 8164), (263, 8200), (272, 8248), (274, 8257), (278, 8284), (307, 8461), (324, 8518), (327, 8524), (334, 8539), (343, 8560), (344, 8566), (363, 8602), (368, 8629),

Gene: Antares\_20 Start: 8653, Stop: 10359, Start Num: 10

Candidate Starts for Antares\_20:

(Start: 10 @8653 has 37 MA's), (Start: 11 @8662 has 13 MA's), (14, 8677), (46, 8776), (49, 8782), (73, 8887), (76, 8899), (91, 9004), (94, 9016), (106, 9070), (110, 9088), (121, 9142), (129, 9172), (145, 9211), (151, 9229), (152, 9238), (159, 9274), (172, 9337), (180, 9400), (185, 9427), (190, 9472), (227, 9574), (228, 9577), (235, 9616), (240, 9634), (252, 9706), (261, 9772), (262, 9781), (267, 9820), (274, 9853), (280, 9886), (282, 9892), (286, 9922), (308, 10075), (311, 10090), (318, 10111), (319, 10114), (376, 10318), (378, 10327),

Gene: Antihero\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for Antihero\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (272, 6759), (273, 6765),



(277, 6792), (279, 6798), (289, 6840), (295, 6870), (384, 7212), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Antonia\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Antonia\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Apex\_8 Start: 6292, Stop: 8181, Start Num: 16

Candidate Starts for Apex\_8:

(Start: 16 @6292 has 401 MA's), (Start: 21 @6307 has 5 MA's), (59, 6388), (64, 6403), (74, 6454), (76, 6463), (82, 6514), (110, 6619), (122, 6679), (152, 6775), (169, 6853), (170, 6856), (172, 6865), (177, 6910), (190, 7000), (191, 7003), (213, 7081), (217, 7093), (240, 7195), (249, 7255), (254, 7297), (256, 7309), (272, 7408), (273, 7414), (277, 7441), (279, 7447), (282, 7456), (289, 7489), (304, 7597), (384, 7861), (390, 7870), (392, 7873), (408, 7936), (420, 7996), (421, 7999), (422, 8008), (443, 8122), (457, 8167), (461, 8173),

Gene: Apizium\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Apizium\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Arbiter\_12 Start: 7818, Stop: 9707, Start Num: 16

Candidate Starts for Arbiter\_12:

(Start: 16 @7818 has 401 MA's), (31, 7866), (41, 7890), (53, 7908), (Start: 66 @7941 has 2 MA's), (82, 8049), (103, 8133), (118, 8196), (126, 8232), (143, 8283), (148, 8295), (152, 8316), (170, 8394), (172, 8403), (177, 8448), (190, 8538), (191, 8541), (193, 8547), (194, 8559), (199, 8574), (201, 8586), (226, 8670), (232, 8703), (236, 8721), (246, 8766), (254, 8835), (256, 8847), (267, 8922), (272, 8946), (273, 8952), (277, 8979), (281, 8991), (283, 8997), (289, 9027), (290, 9030), (295, 9057), (301, 9123), (303, 9132), (319, 9207), (329, 9243), (394, 9426), (396, 9429), (400, 9441), (419, 9528), (421, 9537), (422, 9546), (424, 9561), (430, 9591), (434, 9609), (437, 9624), (443, 9651), (447, 9663), (461, 9699),

Gene: Ares\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Ares\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Argie\_7 Start: 3607, Stop: 5463, Start Num: 17

Candidate Starts for Argie\_7:

(Start: 13 @3589 has 3 MA's), (Start: 17 @3607 has 3 MA's), (Start: 35 @3664 has 2 MA's), (79, 3802), (82, 3832), (95, 3886), (122, 3997), (155, 4126), (170, 4183), (172, 4192), (177, 4237), (180,

4255), (192, 4333), (193, 4336), (223, 4420), (230, 4444), (233, 4468), (254, 4597), (256, 4609), (261, 4633), (267, 4684), (277, 4741), (281, 4753), (308, 4927), (326, 4996), (414, 5248), (441, 5389), (444, 5401), (456, 5443),

Gene: Ariadne\_28 Start: 10109, Stop: 11824, Start Num: 11

Candidate Starts for Ariadne\_28:

(Start: 10 @10100 has 37 MA's), (Start: 11 @10109 has 13 MA's), (49, 10229), (73, 10334), (76, 10346), (90, 10445), (106, 10517), (110, 10535), (157, 10715), (159, 10721), (163, 10745), (172, 10784), (180, 10847), (185, 10874), (190, 10919), (227, 11021), (228, 11024), (235, 11063), (237, 11072), (246, 11114), (252, 11153), (261, 11219), (262, 11228), (263, 11243), (267, 11267), (280, 11333), (282, 11339), (286, 11366), (308, 11519), (312, 11537), (324, 11579), (333, 11603), (341, 11624), (359, 11660), (387, 11801), (393, 11813),

Gene: Arri\_13 Start: 5627, Stop: 7213, Start Num: 4

Candidate Starts for Arri\_13:

(Start: 4 @5627 has 98 MA's), (73, 5879), (78, 5909), (102, 6026), (109, 6047), (111, 6062), (169, 6236), (176, 6278), (178, 6302), (179, 6305), (186, 6344), (198, 6416), (227, 6476), (228, 6479), (229, 6482), (235, 6518), (237, 6527), (239, 6533), (240, 6536), (250, 6599), (255, 6644), (261, 6674), (267, 6722), (278, 6779), (281, 6788), (284, 6800), (295, 6857), (299, 6908),

Gene: Ashertheman\_12 Start: 6272, Stop: 7900, Start Num: 4

Candidate Starts for Ashertheman\_12:

(Start: 4 @6272 has 98 MA's), (29, 6395), (38, 6416), (58, 6473), (72, 6536), (77, 6566), (86, 6629), (90, 6656), (149, 6824), (167, 6911), (174, 6950), (177, 6974), (180, 6992), (183, 7007), (184, 7013), (193, 7076), (227, 7148), (234, 7187), (246, 7253), (250, 7283), (255, 7328), (257, 7343), (258, 7346), (263, 7382), (272, 7430), (274, 7439), (278, 7466), (285, 7493), (294, 7538), (302, 7613), (307, 7643), (310, 7661), (324, 7700), (327, 7706), (334, 7721), (343, 7742), (344, 7748), (363, 7784), (369, 7817),

Gene: Ashraf\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Ashraf\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Athena\_12 Start: 7077, Stop: 8981, Start Num: 16

Candidate Starts for Athena\_12:

(Start: 16 @7077 has 401 MA's), (22, 7104), (60, 7185), (74, 7248), (83, 7314), (89, 7347), (118, 7455), (140, 7545), (158, 7623), (172, 7680), (178, 7734), (190, 7815), (194, 7836), (200, 7863), (219, 7914), (220, 7923), (223, 7932), (254, 8109), (256, 8121), (267, 8196), (272, 8220), (276, 8241), (294, 8325), (313, 8463), (319, 8481), (326, 8508), (337, 8532), (396, 8697), (398, 8706), (421, 8811), (422, 8820), (427, 8847), (447, 8937), (454, 8961), (459, 8973),

Gene: Audrey\_11 Start: 6314, Stop: 8218, Start Num: 16

Candidate Starts for Audrey\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151), (220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7934), (398, 7943), (421, 8048), (422, 8057), (427, 8084), (447, 8174), (448, 8177), (454, 8198), (459, 8210),

Gene: Austelle\_9 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for Austelle\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (267, 7840), (272, 7864), (273, 7870), (274, 7873), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (295, 7975), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (421, 8455), (422, 8464), (443, 8578), (457, 8623), (461, 8629),

Gene: Axumite\_8 Start: 5303, Stop: 7141, Start Num: 16

Candidate Starts for Axumite\_8:

(Start: 16 @5303 has 401 MA's), (Start: 32 @5351 has 2 MA's), (Start: 66 @5417 has 2 MA's), (73, 5459), (97, 5591), (118, 5654), (122, 5672), (170, 5825), (172, 5834), (177, 5879), (183, 5912), (190, 5969), (191, 5972), (194, 5990), (202, 6023), (210, 6050), (236, 6161), (240, 6173), (242, 6188), (254, 6275), (256, 6287), (267, 6362), (272, 6386), (278, 6422), (280, 6428), (281, 6431), (282, 6434), (289, 6467), (397, 6866), (398, 6869), (400, 6872), (414, 6941), (416, 6947), (421, 6968), (427, 7004), (436, 7049), (439, 7070), (447, 7094), (450, 7106), (454, 7118), (456, 7121),

Gene: Baddon\_12 Start: 6982, Stop: 8613, Start Num: 4

Candidate Starts for Baddon\_12:

(Start: 4 @6982 has 98 MA's), (29, 7105), (38, 7126), (58, 7183), (72, 7246), (77, 7276), (86, 7339), (90, 7366), (144, 7522), (149, 7534), (167, 7621), (174, 7660), (177, 7684), (180, 7702), (183, 7717), (184, 7723), (193, 7786), (227, 7858), (231, 7870), (234, 7897), (240, 7918), (246, 7963), (250, 7993), (255, 8038), (257, 8053), (258, 8056), (263, 8092), (272, 8140), (274, 8149), (294, 8248), (299, 8305), (302, 8323), (307, 8353), (310, 8371), (324, 8410), (327, 8416), (334, 8431), (343, 8452), (344, 8458), (363, 8497),

Gene: Badfish\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Badfish\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Bae\_10 Start: 6699, Stop: 8567, Start Num: 16

Candidate Starts for Bae\_10:

(Start: 16 @6699 has 401 MA's), (22, 6723), (70, 6819), (73, 6855), (76, 6867), (116, 7053), (121, 7074), (122, 7080), (159, 7191), (161, 7206), (172, 7245), (191, 7383), (194, 7401), (213, 7461), (244, 7599), (254, 7677), (256, 7689), (272, 7788), (277, 7821), (281, 7833), (284, 7845), (289, 7869), (323, 8067), (381, 8247), (392, 8268), (393, 8271), (400, 8289), (420, 8391), (431, 8451), (461, 8559), (462, 8562),

Gene: Bakery\_13 Start: 5328, Stop: 6914, Start Num: 4

Candidate Starts for Bakery\_13:

(Start: 4 @5328 has 98 MA's), (29, 5442), (69, 5544), (78, 5610), (82, 5643), (105, 5730), (109, 5748), (178, 6003), (179, 6006), (186, 6045), (198, 6117), (227, 6177), (228, 6180), (229, 6183), (234, 6216), (235, 6219), (237, 6228), (239, 6234), (240, 6237), (250, 6300), (255, 6345), (261, 6375), (267, 6423), (278, 6480), (281, 6489), (284, 6501), (295, 6558), (299, 6609),

Gene: Baloo\_11 Start: 6314, Stop: 8218, Start Num: 16

Candidate Starts for Baloo\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151),

(220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7934), (398, 7943), (421, 8048), (422, 8057), (427, 8084), (447, 8174), (454, 8198), (459, 8210),

Gene: Bananafish\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Bananafish\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Banjo\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Banjo\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Barb\_12 Start: 5583, Stop: 7169, Start Num: 4

Candidate Starts for Barb\_12:

(Start: 4 @5583 has 98 MA's), (73, 5835), (78, 5865), (102, 5982), (109, 6003), (111, 6018), (169, 6192), (176, 6234), (178, 6258), (179, 6261), (186, 6300), (198, 6372), (227, 6432), (228, 6435), (229, 6438), (235, 6474), (237, 6483), (239, 6489), (240, 6492), (250, 6555), (255, 6600), (261, 6630), (267, 6678), (278, 6735), (284, 6756), (289, 6783), (290, 6786), (295, 6813), (299, 6864), (307, 6912),

Gene: Barsten\_13 Start: 6478, Stop: 8100, Start Num: 4

Candidate Starts for Barsten\_13:

(Start: 4 @6478 has 98 MA's), (50, 6637), (58, 6676), (72, 6739), (86, 6832), (90, 6859), (102, 6898), (149, 7027), (160, 7087), (175, 7156), (177, 7177), (180, 7195), (183, 7210), (184, 7216), (193, 7279), (224, 7339), (227, 7351), (234, 7390), (237, 7402), (240, 7411), (243, 7444), (246, 7456), (250, 7486), (255, 7531), (257, 7546), (258, 7549), (263, 7585), (272, 7633), (274, 7642), (278, 7669), (307, 7846), (324, 7903), (327, 7909), (334, 7924), (343, 7945), (344, 7951), (363, 7987), (368, 8014),

Gene: Basato\_9 Start: 4786, Stop: 6594, Start Num: 62

Candidate Starts for Basato\_9:

(Start: 16 @4675 has 401 MA's), (Start: 62 @4786 has 5 MA's), (67, 4801), (83, 4912), (115, 5044), (121, 5068), (122, 5074), (124, 5086), (128, 5098), (171, 5263), (188, 5389), (189, 5392), (190, 5404), (193, 5413), (194, 5425), (211, 5488), (214, 5497), (223, 5533), (228, 5551), (231, 5560), (240, 5608), (253, 5704), (254, 5710), (261, 5746), (267, 5794), (272, 5818), (305, 6013), (326, 6106), (408, 6358), (434, 6493), (443, 6535), (447, 6547),

Gene: BatteryCK\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for BatteryCK\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Baumdotcom\_12 Start: 6295, Stop: 7923, Start Num: 4

Candidate Starts for Baumdotcom\_12:

(Start: 4 @6295 has 98 MA's), (29, 6418), (38, 6439), (58, 6496), (72, 6559), (77, 6589), (86, 6652), (90, 6679), (149, 6847), (167, 6934), (174, 6973), (177, 6997), (180, 7015), (183, 7030), (184, 7036), (193, 7099), (227, 7171), (234, 7210), (246, 7276), (250, 7306), (255, 7351), (257, 7366), (258, 7369), (263, 7405), (272, 7453), (274, 7462), (278, 7489), (285, 7516), (294, 7561), (299, 7618), (302, 7636), (307, 7666), (310, 7684), (324, 7723), (327, 7729), (334, 7744), (343, 7765), (344, 7771), (363, 7807), (369, 7840),

Gene: Beaglebox\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Beaglebox\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Ben11\_10 Start: 6162, Stop: 8066, Start Num: 16

Candidate Starts for Ben11\_10:

(Start: 16 @6162 has 401 MA's), (22, 6189), (60, 6270), (74, 6333), (83, 6399), (89, 6432), (118, 6540), (140, 6630), (158, 6708), (172, 6765), (178, 6819), (190, 6900), (194, 6921), (200, 6948), (219, 6999), (220, 7008), (223, 7017), (254, 7194), (256, 7206), (267, 7281), (272, 7305), (276, 7326), (294, 7410), (313, 7548), (319, 7566), (326, 7593), (337, 7617), (396, 7782), (398, 7791), (421, 7896), (422, 7905), (427, 7932), (447, 8022), (448, 8025), (454, 8046), (459, 8058),

Gene: Bernardo\_11 Start: 6342, Stop: 8240, Start Num: 16

Candidate Starts for Bernardo\_11:

(Start: 16 @6342 has 401 MA's), (22, 6369), (60, 6450), (74, 6513), (83, 6579), (89, 6612), (118, 6720), (140, 6810), (158, 6888), (172, 6945), (178, 6999), (190, 7080), (194, 7101), (200, 7128), (219, 7179), (220, 7188), (223, 7197), (254, 7374), (256, 7386), (267, 7461), (272, 7485), (276, 7506), (294, 7590), (313, 7728), (319, 7746), (326, 7773), (337, 7797), (396, 7956), (398, 7965), (421, 8070), (422, 8079), (427, 8106), (434, 8142), (447, 8196), (448, 8199), (454, 8220), (459, 8232),

Gene: Bibwit\_12 Start: 7349, Stop: 8971, Start Num: 4

Candidate Starts for Bibwit\_12:

(Start: 4 @7349 has 98 MA's), (50, 7508), (58, 7547), (72, 7610), (86, 7703), (90, 7730), (102, 7769), (149, 7898), (160, 7958), (175, 8027), (177, 8048), (180, 8066), (183, 8081), (184, 8087), (193, 8150), (224, 8210), (227, 8222), (234, 8261), (237, 8273), (240, 8282), (246, 8327), (250, 8357), (255, 8402), (257, 8417), (258, 8420), (263, 8456), (272, 8504), (274, 8513), (278, 8540), (307, 8717), (324, 8774), (327, 8780), (334, 8795), (343, 8816), (344, 8822), (363, 8858), (368, 8885),

Gene: BiggityBass\_7 Start: 5116, Stop: 6957, Start Num: 16

Candidate Starts for BiggityBass\_7:

(Start: 16 @5116 has 401 MA's), (Start: 66 @5230 has 2 MA's), (73, 5272), (82, 5335), (118, 5467), (122, 5485), (152, 5560), (177, 5692), (183, 5725), (190, 5782), (191, 5785), (194, 5803), (204, 5854), (236, 5983), (240, 5995), (242, 6010), (254, 6097), (278, 6244), (281, 6253), (283, 6259), (293, 6310), (370, 6589), (396, 6676), (397, 6682), (414, 6757), (416, 6763), (421, 6784), (436, 6865), (443, 6898), (447, 6910), (454, 6934), (456, 6937),

Gene: BirdsNest\_12 Start: 5147, Stop: 7066, Start Num: 16

Candidate Starts for BirdsNest\_12:

(Start: 16 @5147 has 401 MA's), (116, 5522), (119, 5534), (128, 5573), (144, 5624), (150, 5639), (173, 5750), (177, 5789), (188, 5864), (189, 5867), (194, 5900), (205, 5948), (214, 5972), (217, 5981), (220, 5999), (231, 6035), (248, 6134), (254, 6185), (261, 6221), (272, 6293), (313, 6536), (319, 6554), (393, 6770), (397, 6782), (421, 6893), (422, 6902), (424, 6917), (434, 6965), (457, 7052),

Gene: Bishoperium\_8 Start: 4457, Stop: 6361, Start Num: 21

Candidate Starts for Bishoperium\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Bizzy\_13 Start: 6469, Stop: 8097, Start Num: 4

Candidate Starts for Bizzy\_13:

(Start: 4 @6469 has 98 MA's), (29, 6592), (38, 6613), (58, 6670), (72, 6733), (77, 6763), (86, 6826), (90, 6853), (149, 7021), (167, 7108), (174, 7147), (177, 7171), (180, 7189), (183, 7204), (184, 7210), (193, 7273), (227, 7345), (234, 7384), (246, 7450), (250, 7480), (255, 7525), (257, 7540), (258, 7543), (263, 7579), (272, 7627), (274, 7636), (278, 7663), (285, 7690), (294, 7735), (302, 7810), (307, 7840), (310, 7858), (324, 7897), (327, 7903), (334, 7918), (343, 7939), (344, 7945), (363, 7981), (369, 8014),

Gene: BlackStallion\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for BlackStallion\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Blocker23\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Blocker23\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: BlueHusk\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for BlueHusk\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Bluephacebaby\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Bluephacebaby\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228,

5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: BobBob\_10 Start: 6015, Stop: 7637, Start Num: 4

Candidate Starts for BobBob\_10:

(Start: 4 @6015 has 98 MA's), (50, 6174), (58, 6213), (72, 6276), (86, 6369), (90, 6396), (102, 6435), (145, 6555), (149, 6564), (160, 6624), (175, 6693), (177, 6714), (180, 6732), (183, 6747), (184, 6753), (193, 6816), (224, 6876), (227, 6888), (234, 6927), (237, 6939), (240, 6948), (246, 6993), (250, 7023), (255, 7068), (257, 7083), (258, 7086), (263, 7122), (272, 7170), (274, 7179), (278, 7206), (307, 7383), (324, 7440), (327, 7446), (334, 7461), (343, 7482), (344, 7488), (363, 7524), (368, 7551),

Gene: BobRoss2024\_7 Start: 5144, Stop: 6973, Start Num: 16

Candidate Starts for BobRoss2024\_7:

(Start: 16 @5144 has 401 MA's), (Start: 66 @5258 has 2 MA's), (73, 5300), (122, 5513), (150, 5573), (172, 5675), (177, 5720), (191, 5813), (194, 5831), (226, 5960), (228, 5966), (232, 5993), (236, 6011), (240, 6023), (254, 6125), (272, 6236), (274, 6245), (275, 6248), (281, 6281), (319, 6494), (347, 6563), (396, 6692), (397, 6698), (398, 6701), (400, 6704), (403, 6716), (414, 6773), (416, 6779), (421, 6800), (427, 6836), (431, 6857), (433, 6869), (439, 6902), (447, 6926), (456, 6953),

Gene: BobbyK\_9 Start: 6745, Stop: 8634, Start Num: 16

Candidate Starts for BobbyK\_9:

(Start: 16 @6745 has 401 MA's), (Start: 21 @6760 has 5 MA's), (59, 6841), (64, 6856), (74, 6907), (76, 6916), (82, 6967), (110, 7072), (122, 7132), (152, 7228), (169, 7306), (170, 7309), (172, 7318), (177, 7363), (190, 7453), (191, 7456), (213, 7534), (217, 7546), (240, 7648), (249, 7708), (254, 7750), (256, 7762), (267, 7837), (272, 7861), (273, 7867), (277, 7894), (279, 7900), (282, 7909), (289, 7942), (295, 7972), (384, 8314), (390, 8323), (392, 8326), (408, 8389), (420, 8449), (421, 8452), (422, 8461), (443, 8575), (450, 8599), (461, 8626),

Gene: Boehler\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Boehler\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Boyle\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Boyle\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Brandonk123\_15 Start: 7162, Stop: 8784, Start Num: 4

Candidate Starts for Brandonk123\_15:

(Start: 4 @7162 has 98 MA's), (50, 7321), (58, 7360), (72, 7423), (86, 7516), (90, 7543), (102, 7582), (145, 7702), (149, 7711), (160, 7771), (175, 7840), (177, 7861), (180, 7879), (183, 7894), (184, 7900), (193, 7963), (224, 8023), (227, 8035), (234, 8074), (237, 8086), (240, 8095), (246, 8140), (250, 8170), (255, 8215), (257, 8230), (258, 8233), (263, 8269), (272, 8317), (274, 8326), (278, 8353), (307, 8530), (324, 8587), (327, 8593), (334, 8608), (343, 8629), (344, 8635), (363, 8671), (368, 8698),

Gene: BrazzalePHS\_19 Start: 8484, Stop: 10151, Start Num: 11

Candidate Starts for BrazzalePHS\_19:

(Start: 10 @8475 has 37 MA's), (Start: 11 @8484 has 13 MA's), (46, 8598), (49, 8604), (73, 8709), (76, 8721), (90, 8820), (91, 8826), (94, 8838), (106, 8892), (110, 8910), (121, 8964), (129, 8994), (145, 9033), (151, 9051), (152, 9060), (159, 9096), (172, 9159), (180, 9222), (185, 9249), (227, 9396), (228, 9399), (235, 9438), (240, 9456), (252, 9528), (261, 9594), (262, 9603), (274, 9675), (280, 9708), (282, 9714), (286, 9744), (289, 9759), (308, 9897), (311, 9912), (318, 9933), (319, 9936),

Gene: Briakila\_11 Start: 7103, Stop: 9007, Start Num: 16

Candidate Starts for Briakila\_11:

(Start: 16 @7103 has 401 MA's), (22, 7130), (60, 7211), (74, 7274), (83, 7340), (89, 7373), (118, 7481), (140, 7571), (158, 7649), (172, 7706), (178, 7760), (190, 7841), (194, 7862), (200, 7889), (219, 7940), (220, 7949), (223, 7958), (254, 8135), (256, 8147), (267, 8222), (272, 8246), (276, 8267), (294, 8351), (313, 8489), (319, 8507), (326, 8534), (337, 8558), (396, 8723), (398, 8732), (421, 8837), (422, 8846), (427, 8873), (447, 8963), (448, 8966), (454, 8987), (459, 8999),

Gene: Brilliant\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Brilliant\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: BrownCNA\_10 Start: 6999, Stop: 8888, Start Num: 16

Candidate Starts for BrownCNA\_10:

(Start: 16 @6999 has 401 MA's), (Start: 21 @7014 has 5 MA's), (59, 7095), (64, 7110), (74, 7161), (76, 7170), (82, 7221), (110, 7326), (122, 7386), (152, 7482), (169, 7560), (170, 7563), (172, 7572), (177, 7617), (190, 7707), (191, 7710), (213, 7788), (217, 7800), (236, 7890), (240, 7902), (249, 7962), (254, 8004), (256, 8016), (272, 8115), (273, 8121), (277, 8148), (279, 8154), (282, 8163), (289, 8196), (384, 8568), (390, 8577), (392, 8580), (408, 8643), (420, 8703), (421, 8706), (422, 8715), (443, 8829), (450, 8853), (461, 8880),

Gene: Brownie5\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Brownie5\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Buckeye\_8 Start: 4443, Stop: 6362, Start Num: 16

Candidate Starts for Buckeye\_8:

(Start: 16 @4443 has 401 MA's), (Start: 21 @4458 has 5 MA's), (Start: 62 @4554 has 5 MA's), (67, 4569), (83, 4680), (115, 4812), (121, 4836), (122, 4842), (124, 4854), (128, 4866), (171, 5031), (188, 5157), (189, 5160), (190, 5172), (193, 5181), (194, 5193), (211, 5256), (214, 5265), (223, 5301), (228, 5319), (231, 5328), (240, 5376), (253, 5472), (254, 5478), (261, 5514), (267, 5562), (272, 5586), (305, 5781), (326, 5874), (408, 6126), (434, 6261), (443, 6303), (447, 6315),



Gene: Burr\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Burr\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Busephilis\_20 Start: 8414, Stop: 10090, Start Num: 10

Candidate Starts for Busephilis\_20:

(Start: 10 @8414 has 37 MA's), (Start: 11 @8423 has 13 MA's), (46, 8537), (49, 8543), (73, 8648), (76, 8660), (90, 8759), (91, 8765), (94, 8777), (106, 8831), (110, 8849), (121, 8903), (129, 8933), (145, 8972), (151, 8990), (152, 8999), (159, 9035), (172, 9098), (180, 9161), (185, 9188), (227, 9335), (228, 9338), (235, 9377), (240, 9395), (252, 9467), (261, 9533), (262, 9542), (274, 9614), (280, 9647), (282, 9653), (286, 9683), (289, 9698), (308, 9836), (311, 9851), (318, 9872), (319, 9875),

Gene: CRB2\_11 Start: 7447, Stop: 9324, Start Num: 16

Candidate Starts for CRB2\_11:

(Start: 16 @7447 has 401 MA's), (Start: 66 @7561 has 2 MA's), (92, 7723), (104, 7747), (105, 7753), (115, 7804), (122, 7834), (124, 7846), (152, 7909), (159, 7945), (161, 7960), (183, 8077), (190, 8134), (194, 8155), (201, 8182), (205, 8203), (213, 8224), (217, 8236), (226, 8275), (229, 8284), (237, 8329), (240, 8338), (248, 8389), (254, 8440), (272, 8551), (277, 8584), (281, 8596), (295, 8662), (313, 8794), (319, 8812), (321, 8818), (383, 9016), (390, 9028), (397, 9046), (398, 9049), (420, 9148), (422, 9160), (435, 9229),

Gene: CaiB\_10 Start: 6894, Stop: 8627, Start Num: 66

Candidate Starts for CaiB\_10:

(Start: 16 @6780 has 401 MA's), (Start: 66 @6894 has 2 MA's), (73, 6936), (82, 6999), (96, 7065), (126, 7170), (166, 7293), (167, 7299), (170, 7308), (172, 7317), (191, 7455), (194, 7473), (228, 7614), (232, 7641), (236, 7659), (240, 7671), (248, 7722), (254, 7773), (267, 7860), (319, 8142), (345, 8202), (347, 8211), (397, 8352), (398, 8355), (414, 8427), (416, 8433), (421, 8454), (431, 8511), (433, 8523), (439, 8556), (443, 8568), (447, 8580), (450, 8592), (454, 8604), (456, 8607),

Gene: Calamitous\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Calamitous\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: CamL\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for CamL\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: CampRoach\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for CampRoach\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Cannibal\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Cannibal\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Carthage\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Carthage\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Casbah\_10 Start: 6163, Stop: 8070, Start Num: 16

Candidate Starts for Casbah\_10:

(Start: 16 @6163 has 401 MA's), (22, 6190), (60, 6271), (74, 6334), (83, 6400), (89, 6433), (118, 6541), (140, 6631), (158, 6709), (172, 6766), (178, 6820), (190, 6901), (194, 6922), (200, 6949), (219, 7000), (220, 7009), (223, 7018), (254, 7195), (256, 7207), (267, 7282), (272, 7306), (276, 7327), (294, 7411), (313, 7549), (319, 7567), (326, 7594), (337, 7618), (396, 7786), (398, 7795), (421, 7900), (422, 7909), (427, 7936), (447, 8026), (454, 8050), (459, 8062),

Gene: Caspiboi\_9 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Caspiboi\_9:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Causa\_16 Start: 9403, Stop: 11370, Start Num: 16

Candidate Starts for Causa\_16:

(Start: 16 @9403 has 401 MA's), (53, 9496), (Start: 66 @9529 has 2 MA's), (73, 9571), (83, 9640), (119, 9790), (144, 9871), (149, 9883), (177, 10036), (193, 10135), (194, 10147), (219, 10240), (226, 10270), (232, 10303), (236, 10321), (237, 10324), (254, 10435), (259, 10462), (271, 10543), (272, 10546), (289, 10627), (330, 10846), (396, 11065), (399, 11077), (402, 11089), (404, 11095), (409, 11128), (415, 11164), (417, 11176), (421, 11191), (430, 11245), (436, 11272), (454, 11341), (457, 11350),

Gene: Cepens\_6 Start: 3346, Stop: 5202, Start Num: 17

Candidate Starts for Cepens\_6:

(Start: 13 @3328 has 3 MA's), (Start: 17 @3346 has 3 MA's), (Start: 35 @3403 has 2 MA's), (79, 3541), (82, 3571), (95, 3625), (122, 3736), (155, 3865), (170, 3922), (172, 3931), (177, 3976), (180, 3994), (192, 4072), (193, 4075), (223, 4159), (230, 4183), (233, 4207), (254, 4336), (256, 4348), (261,

4372), (267, 4423), (277, 4480), (281, 4492), (308, 4666), (326, 4735), (414, 4987), (441, 5128), (444, 5140), (456, 5182),

Gene: ChaChing\_11 Start: 6329, Stop: 8233, Start Num: 16

Candidate Starts for ChaChing\_11:

(Start: 16 @6329 has 401 MA's), (22, 6356), (60, 6437), (74, 6500), (83, 6566), (89, 6599), (118, 6707), (140, 6797), (158, 6875), (172, 6932), (178, 6986), (190, 7067), (194, 7088), (200, 7115), (219, 7166), (220, 7175), (223, 7184), (254, 7361), (256, 7373), (267, 7448), (272, 7472), (276, 7493), (294, 7577), (313, 7715), (319, 7733), (326, 7760), (337, 7784), (396, 7949), (398, 7958), (421, 8063), (422, 8072), (427, 8099), (447, 8189), (454, 8213), (459, 8225),

Gene: ChadMasterC\_12 Start: 6750, Stop: 8372, Start Num: 4

Candidate Starts for ChadMasterC\_12:

(Start: 4 @6750 has 98 MA's), (50, 6909), (58, 6948), (72, 7011), (86, 7104), (90, 7131), (102, 7170), (149, 7299), (160, 7359), (175, 7428), (177, 7449), (180, 7467), (183, 7482), (184, 7488), (193, 7551), (224, 7611), (227, 7623), (234, 7662), (237, 7674), (240, 7683), (243, 7716), (246, 7728), (250, 7758), (255, 7803), (257, 7818), (258, 7821), (263, 7857), (272, 7905), (274, 7914), (278, 7941), (307, 8118), (324, 8175), (327, 8181), (334, 8196), (343, 8217), (344, 8223), (363, 8259), (368, 8286),

Gene: Chaelin\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Chaelin\_8:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (128, 4862), (158, 4976), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Chah\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Chah\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Chalmers\_11 Start: 7104, Stop: 9008, Start Num: 16

Candidate Starts for Chalmers\_11:

(Start: 16 @7104 has 401 MA's), (22, 7131), (60, 7212), (74, 7275), (83, 7341), (89, 7374), (118, 7482), (140, 7572), (158, 7650), (172, 7707), (178, 7761), (190, 7842), (194, 7863), (200, 7890), (219, 7941), (220, 7950), (223, 7959), (254, 8136), (256, 8148), (267, 8223), (272, 8247), (276, 8268), (294, 8352), (313, 8490), (319, 8508), (326, 8535), (337, 8559), (396, 8724), (398, 8733), (421, 8838), (422, 8847), (427, 8874), (447, 8964), (454, 8988), (459, 9000),

Gene: Chandler\_11 Start: 7077, Stop: 8981, Start Num: 16

Candidate Starts for Chandler\_11:

(Start: 16 @7077 has 401 MA's), (22, 7104), (60, 7185), (74, 7248), (83, 7314), (89, 7347), (118, 7455), (140, 7545), (158, 7623), (172, 7680), (178, 7734), (190, 7815), (194, 7836), (200, 7863), (219, 7914), (220, 7923), (223, 7932), (254, 8109), (256, 8121), (267, 8196), (272, 8220), (276, 8241), (294, 8325), (313, 8463), (319, 8481), (326, 8508), (337, 8532), (396, 8697), (398, 8706), (421, 8811), (422, 8820), (427, 8847), (447, 8937), (454, 8961), (459, 8973),

Gene: Charles1\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Charles1\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: CharlieGBrown\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for CharlieGBrown\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: CharlottesWeb\_8 Start: 5358, Stop: 7151, Start Num: 32

Candidate Starts for CharlottesWeb\_8:

(Start: 16 @5310 has 401 MA's), (Start: 32 @5358 has 2 MA's), (Start: 66 @5424 has 2 MA's), (73, 5466), (83, 5535), (118, 5661), (122, 5679), (154, 5760), (170, 5832), (177, 5886), (183, 5919), (190, 5976), (191, 5979), (194, 5997), (203, 6042), (210, 6063), (236, 6174), (240, 6186), (242, 6201), (248, 6237), (254, 6288), (256, 6300), (267, 6375), (272, 6399), (278, 6435), (281, 6444), (289, 6480), (293, 6501), (394, 6867), (397, 6876), (398, 6879), (414, 6951), (416, 6957), (421, 6978), (422, 6987), (436, 7059), (443, 7092), (447, 7104), (450, 7116), (454, 7128), (456, 7131),

Gene: Charming\_10 Start: 6017, Stop: 7639, Start Num: 4

Candidate Starts for Charming\_10:

(Start: 4 @6017 has 98 MA's), (50, 6176), (58, 6215), (72, 6278), (86, 6371), (90, 6398), (102, 6437), (145, 6557), (149, 6566), (160, 6626), (175, 6695), (177, 6716), (180, 6734), (183, 6749), (184, 6755), (193, 6818), (224, 6878), (227, 6890), (234, 6929), (237, 6941), (240, 6950), (246, 6995), (250, 7025), (255, 7070), (257, 7085), (258, 7088), (263, 7124), (272, 7172), (274, 7181), (278, 7208), (307, 7385), (324, 7442), (327, 7448), (334, 7463), (343, 7484), (344, 7490), (363, 7526), (368, 7553),

Gene: CheetO\_8 Start: 4552, Stop: 6360, Start Num: 62

Candidate Starts for CheetO\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Chentzyk\_10 Start: 6190, Stop: 8094, Start Num: 16

Candidate Starts for Chentzyk\_10:

(Start: 16 @6190 has 401 MA's), (22, 6217), (60, 6298), (74, 6361), (83, 6427), (89, 6460), (118, 6568), (140, 6658), (158, 6736), (172, 6793), (178, 6847), (190, 6928), (194, 6949), (200, 6976), (219, 7027), (220, 7036), (223, 7045), (254, 7222), (256, 7234), (267, 7309), (272, 7333), (276, 7354), (294, 7438), (313, 7576), (319, 7594), (326, 7621), (337, 7645), (396, 7810), (398, 7819), (421, 7924), (422, 7933), (427, 7960), (447, 8050), (448, 8053), (454, 8074), (459, 8086),

Gene: Cher\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Cher\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: CherryCola\_14 Start: 5819, Stop: 7405, Start Num: 4

Candidate Starts for CherryCola\_14:

(Start: 4 @5819 has 98 MA's), (29, 5933), (69, 6035), (78, 6101), (82, 6134), (105, 6221), (109, 6239), (111, 6254), (171, 6434), (178, 6494), (179, 6497), (186, 6536), (198, 6608), (227, 6668), (228, 6671), (229, 6674), (235, 6710), (237, 6719), (239, 6725), (240, 6728), (250, 6791), (255, 6836), (261, 6866), (267, 6914), (278, 6971), (284, 6992), (289, 7019), (290, 7022), (295, 7049), (299, 7100), (307, 7148),

Gene: Chickadee\_13 Start: 5786, Stop: 7462, Start Num: 4

Candidate Starts for Chickadee\_13:

(Start: 4 @5786 has 98 MA's), (7, 5819), (23, 5897), (40, 5951), (72, 6083), (77, 6113), (88, 6191), (91, 6209), (114, 6290), (145, 6362), (149, 6371), (160, 6431), (180, 6539), (182, 6551), (183, 6554), (184, 6560), (227, 6695), (228, 6698), (240, 6755), (250, 6830), (255, 6875), (258, 6893), (262, 6914), (267, 6953), (272, 6977), (276, 6998), (278, 7013), (290, 7064), (294, 7085), (307, 7190), (314, 7220), (323, 7244), (324, 7247), (352, 7325),

Gene: Childish\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Childish\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Chipette\_10 Start: 4676, Stop: 6595, Start Num: 16

Candidate Starts for Chipette\_10:

(Start: 16 @4676 has 401 MA's), (Start: 21 @4691 has 5 MA's), (Start: 62 @4787 has 5 MA's), (67, 4802), (83, 4913), (115, 5045), (121, 5069), (122, 5075), (124, 5087), (128, 5099), (171, 5264), (188, 5390), (189, 5393), (190, 5405), (193, 5414), (194, 5426), (211, 5489), (214, 5498), (223, 5534), (228, 5552), (231, 5561), (240, 5609), (253, 5705), (254, 5711), (261, 5747), (267, 5795), (272, 5819), (305, 6014), (326, 6107), (408, 6359), (434, 6494), (443, 6536), (447, 6548),

Gene: Chorkpop\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Chorkpop\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: ChrisnMich\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for ChrisnMich\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (268, 6741), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (384, 7212), (390, 7221), (392, 7224), (406, 7281), (408, 7287), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Chunky\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Chunky\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170),

(193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Chute\_8 Start: 4549, Stop: 6357, Start Num: 62

Candidate Starts for Chute\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Cinna\_12 Start: 5856, Stop: 7613, Start Num: 11

Candidate Starts for Cinna\_12:

(Start: 10 @5847 has 37 MA's), (Start: 11 @5856 has 13 MA's), (34, 5940), (49, 5976), (56, 6009), (73, 6087), (76, 6099), (77, 6108), (79, 6120), (80, 6126), (90, 6198), (91, 6204), (111, 6300), (121, 6342), (128, 6372), (135, 6402), (145, 6438), (149, 6447), (151, 6456), (152, 6465), (168, 6546), (170, 6552), (172, 6561), (180, 6624), (185, 6651), (190, 6696), (214, 6747), (227, 6798), (235, 6840), (240, 6858), (242, 6873), (252, 6930), (262, 7005), (265, 7029), (281, 7113), (282, 7116), (289, 7161), (295, 7191), (298, 7239), (312, 7320), (318, 7338), (319, 7341), (343, 7410), (350, 7434), (380, 7569), (386, 7593),

Gene: ClamChowder\_12 Start: 5583, Stop: 7169, Start Num: 4

Candidate Starts for ClamChowder\_12:

(Start: 4 @5583 has 98 MA's), (73, 5835), (78, 5865), (102, 5982), (109, 6003), (111, 6018), (169, 6192), (176, 6234), (178, 6258), (179, 6261), (186, 6300), (198, 6372), (227, 6432), (228, 6435), (229, 6438), (235, 6474), (237, 6483), (239, 6489), (240, 6492), (250, 6555), (255, 6600), (261, 6630), (267, 6678), (278, 6735), (284, 6756), (289, 6783), (290, 6786), (295, 6813), (299, 6864), (307, 6912),

Gene: Clawz\_41 Start: 18090, Stop: 20060, Start Num: 15

Candidate Starts for Clawz\_41:

(Start: 15 @18090 has 4 MA's), (26, 18135), (47, 18186), (81, 18330), (97, 18402), (122, 18489), (152, 18564), (158, 18600), (172, 18657), (182, 18732), (194, 18813), (206, 18885), (207, 18888), (216, 18918), (222, 18951), (238, 19026), (244, 19056), (250, 19095), (256, 19146), (262, 19179), (274, 19251), (288, 19323), (289, 19326), (295, 19356), (304, 19434), (308, 19464), (320, 19509), (360, 19602), (382, 19710), (386, 19725), (402, 19767), (418, 19845), (428, 19896), (432, 19914), (464, 20052),

Gene: ClearAsMud\_22 Start: 9173, Stop: 10873, Start Num: 10

Candidate Starts for ClearAsMud\_22:

(Start: 10 @9173 has 37 MA's), (Start: 11 @9182 has 13 MA's), (49, 9302), (73, 9407), (76, 9419), (90, 9518), (91, 9524), (93, 9533), (106, 9590), (110, 9608), (121, 9662), (127, 9686), (128, 9689), (139, 9713), (145, 9731), (151, 9749), (152, 9758), (159, 9794), (172, 9857), (180, 9920), (185, 9947), (190, 9992), (227, 10094), (228, 10097), (235, 10136), (240, 10154), (252, 10226), (261, 10292), (262, 10301), (267, 10340), (280, 10406), (282, 10412), (286, 10442), (308, 10595), (312, 10613), (319, 10634), (324, 10655), (325, 10658), (333, 10679), (376, 10832),

Gene: CloverMinnie\_10 Start: 6780, Stop: 8627, Start Num: 16

Candidate Starts for CloverMinnie\_10:

(Start: 16 @6780 has 401 MA's), (Start: 66 @6894 has 2 MA's), (73, 6936), (82, 6999), (126, 7170), (166, 7293), (167, 7299), (170, 7308), (172, 7317), (191, 7455), (194, 7473), (228, 7614), (232, 7641), (236, 7659), (240, 7671), (248, 7722), (254, 7773), (267, 7860), (281, 7929), (319, 8142), (345, 8202), (347, 8211), (397, 8352), (398, 8355), (414, 8427), (416, 8433), (421, 8454), (431, 8511), (439, 8556), (443, 8568), (447, 8580), (450, 8592), (454, 8604), (456, 8607),

Gene: Clown\_16 Start: 8860, Stop: 10452, Start Num: 4

Candidate Starts for Clown\_16:

(Start: 4 @8860 has 98 MA's), (78, 9139), (100, 9247), (101, 9253), (102, 9256), (109, 9277), (111, 9292), (184, 9565), (186, 9577), (188, 9601), (197, 9646), (198, 9649), (227, 9706), (234, 9745), (235, 9748), (237, 9757), (239, 9763), (250, 9829), (255, 9874), (261, 9904), (267, 9952), (278, 10009), (284, 10030), (285, 10036), (289, 10057), (290, 10060), (294, 10081), (295, 10087), (328, 10264),

Gene: Cobra\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Cobra\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Coffee\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Coffee\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Colbert\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Colbert\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: ColdSoup\_42 Start: 18192, Stop: 20150, Start Num: 15

Candidate Starts for ColdSoup\_42:

(Start: 15 @18192 has 4 MA's), (26, 18237), (47, 18288), (57, 18315), (98, 18504), (152, 18663), (172, 18756), (182, 18831), (193, 18900), (194, 18912), (195, 18918), (216, 19020), (222, 19053), (237, 19125), (238, 19128), (244, 19158), (250, 19197), (256, 19248), (262, 19281), (288, 19425), (289, 19428), (295, 19458), (308, 19566), (317, 19602), (320, 19611), (371, 19746), (402, 19860), (421, 19950), (452, 20103), (464, 20142),

Gene: Coldpizza\_9 Start: 7349, Stop: 9073, Start Num: 66

Candidate Starts for Coldpizza\_9:

(Start: 16 @7235 has 401 MA's), (Start: 66 @7349 has 2 MA's), (73, 7391), (83, 7460), (122, 7604), (123, 7607), (128, 7628), (130, 7631), (154, 7694), (190, 7910), (193, 7919), (194, 7931), (211, 7985), (215, 7997), (226, 8042), (236, 8093), (240, 8105), (242, 8120), (254, 8207), (273, 8324), (281, 8363), (396, 8789), (398, 8798), (421, 8897), (422, 8906), (454, 9047), (459, 9059),

Gene: Coletti\_8 Start: 4549, Stop: 6357, Start Num: 62

Candidate Starts for Coletti\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Compostia\_11 Start: 6322, Stop: 8226, Start Num: 16

Candidate Starts for Compostia\_11:

(Start: 16 @6322 has 401 MA's), (22, 6349), (60, 6430), (74, 6493), (83, 6559), (89, 6592), (118, 6700), (140, 6790), (158, 6868), (172, 6925), (178, 6979), (190, 7060), (194, 7081), (200, 7108), (219, 7159), (220, 7168), (223, 7177), (254, 7354), (256, 7366), (267, 7441), (272, 7465), (276, 7486), (294, 7570), (313, 7708), (319, 7726), (326, 7753), (337, 7777), (396, 7942), (398, 7951), (421, 8056), (422, 8065), (427, 8092), (447, 8182), (454, 8206), (459, 8218),

Gene: Cooper\_9 Start: 5704, Stop: 7593, Start Num: 16

Candidate Starts for Cooper\_9:

(Start: 16 @5704 has 401 MA's), (53, 5785), (64, 5815), (74, 5866), (76, 5875), (110, 6031), (122, 6091), (142, 6151), (169, 6265), (170, 6268), (177, 6322), (190, 6412), (191, 6415), (201, 6460), (211, 6487), (217, 6505), (240, 6607), (242, 6622), (249, 6667), (254, 6709), (256, 6721), (267, 6796), (272, 6820), (273, 6826), (277, 6853), (279, 6859), (289, 6901), (320, 7084), (326, 7108), (390, 7282), (392, 7285), (401, 7309), (406, 7342), (420, 7408), (421, 7411), (422, 7420), (437, 7498), (452, 7564), (461, 7585),

Gene: Cornbread\_9 Start: 4552, Stop: 6360, Start Num: 62

Candidate Starts for Cornbread\_9:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Cornobble\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Cornobble\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Corofin\_11 Start: 6339, Stop: 8243, Start Num: 16

Candidate Starts for Corofin\_11:

(Start: 16 @6339 has 401 MA's), (22, 6366), (60, 6447), (74, 6510), (83, 6576), (89, 6609), (118, 6717), (140, 6807), (158, 6885), (172, 6942), (178, 6996), (190, 7077), (194, 7098), (200, 7125), (219, 7176), (220, 7185), (223, 7194), (254, 7371), (256, 7383), (267, 7458), (272, 7482), (276, 7503), (294, 7587), (313, 7725), (319, 7743), (326, 7770), (337, 7794), (396, 7959), (398, 7968), (421, 8073), (422, 8082), (427, 8109), (447, 8199), (454, 8223), (459, 8235),

Gene: Cosmolli16\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Cosmolli16\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777),



5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: CoveyB\_12 Start: 5455, Stop: 7041, Start Num: 4

Candidate Starts for CoveyB\_12:

(Start: 4 @5455 has 98 MA's), (73, 5707), (78, 5737), (102, 5854), (109, 5875), (111, 5890), (169, 6064), (176, 6106), (178, 6130), (179, 6133), (186, 6172), (198, 6244), (227, 6304), (228, 6307), (229, 6310), (235, 6346), (237, 6355), (239, 6361), (240, 6364), (250, 6427), (255, 6472), (261, 6502), (267, 6550), (278, 6607), (284, 6628), (289, 6655), (290, 6658), (295, 6685), (299, 6736), (307, 6784),

Gene: Craff\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Craff\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Cranjis\_21 Start: 8638, Stop: 10314, Start Num: 10

Candidate Starts for Cranjis\_21:

(Start: 10 @8638 has 37 MA's), (Start: 11 @8647 has 13 MA's), (14, 8662), (46, 8761), (49, 8767), (73, 8872), (76, 8884), (90, 8983), (91, 8989), (94, 9001), (106, 9055), (110, 9073), (121, 9127), (129, 9157), (145, 9196), (151, 9214), (152, 9223), (159, 9259), (172, 9322), (180, 9385), (185, 9412), (227, 9559), (228, 9562), (235, 9601), (240, 9619), (252, 9691), (261, 9757), (262, 9766), (267, 9805), (274, 9838), (280, 9871), (282, 9877), (286, 9907), (289, 9922), (308, 10060), (311, 10075), (318, 10096), (319, 10099),

Gene: CrazyRich\_19 Start: 8448, Stop: 10124, Start Num: 10

Candidate Starts for CrazyRich\_19:

(Start: 10 @8448 has 37 MA's), (Start: 11 @8457 has 13 MA's), (46, 8571), (49, 8577), (73, 8682), (76, 8694), (90, 8793), (91, 8799), (94, 8811), (106, 8865), (110, 8883), (121, 8937), (129, 8967), (145, 9006), (151, 9024), (152, 9033), (159, 9069), (172, 9132), (180, 9195), (185, 9222), (227, 9369), (228, 9372), (235, 9411), (240, 9429), (252, 9501), (261, 9567), (262, 9576), (274, 9648), (280, 9681), (282, 9687), (286, 9717), (289, 9732), (308, 9870), (311, 9885), (318, 9906), (319, 9909),

Gene: Cressida\_13 Start: 6076, Stop: 7833, Start Num: 11

Candidate Starts for Cressida\_13:

(Start: 10 @6067 has 37 MA's), (Start: 11 @6076 has 13 MA's), (34, 6160), (56, 6232), (73, 6310), (76, 6322), (77, 6331), (79, 6343), (80, 6349), (90, 6421), (91, 6427), (111, 6523), (121, 6565), (135, 6625), (136, 6628), (145, 6661), (149, 6670), (151, 6679), (152, 6688), (168, 6769), (170, 6775), (172, 6784), (180, 6847), (185, 6874), (190, 6919), (227, 7021), (234, 7060), (240, 7081), (242, 7096), (252, 7153), (262, 7228), (265, 7252), (281, 7336), (282, 7339), (284, 7348), (289, 7384), (295, 7414), (296, 7420), (298, 7462), (312, 7543), (318, 7561), (319, 7564), (341, 7630), (343, 7633),

Gene: Crisis\_21 Start: 8432, Stop: 10108, Start Num: 10

Candidate Starts for Crisis\_21:

(Start: 10 @8432 has 37 MA's), (Start: 11 @8441 has 13 MA's), (14, 8456), (46, 8555), (49, 8561), (73, 8666), (76, 8678), (90, 8777), (91, 8783), (94, 8795), (106, 8849), (110, 8867), (121, 8921), (129, 8951), (145, 8990), (151, 9008), (152, 9017), (159, 9053), (172, 9116), (180, 9179), (185, 9206), (227, 9353), (228, 9356), (235, 9395), (240, 9413), (252, 9485), (261, 9551), (262, 9560), (274, 9632), (280, 9665), (282, 9671), (286, 9701), (289, 9716), (308, 9854), (311, 9869), (318, 9890), (319, 9893),

Gene: Crownjwl\_9 Start: 4676, Stop: 6595, Start Num: 16

Candidate Starts for Crownjwl\_9:

(Start: 16 @4676 has 401 MA's), (Start: 62 @4787 has 5 MA's), (67, 4802), (83, 4913), (115, 5045), (121, 5069), (122, 5075), (124, 5087), (128, 5099), (171, 5264), (188, 5390), (189, 5393), (190, 5405), (193, 5414), (194, 5426), (211, 5489), (214, 5498), (223, 5534), (228, 5552), (231, 5561), (240, 5609), (253, 5705), (254, 5711), (261, 5747), (267, 5795), (272, 5819), (305, 6014), (326, 6107), (408, 6359), (434, 6494), (443, 6536), (447, 6548),

Gene: D12\_06 Start: 3403, Stop: 5202, Start Num: 35

Candidate Starts for D12\_06:

(Start: 13 @3328 has 3 MA's), (Start: 17 @3346 has 3 MA's), (Start: 35 @3403 has 2 MA's), (79, 3541), (82, 3571), (95, 3625), (122, 3736), (155, 3865), (170, 3922), (172, 3931), (177, 3976), (180, 3994), (192, 4072), (193, 4075), (223, 4159), (230, 4183), (233, 4207), (254, 4336), (256, 4348), (261, 4372), (267, 4423), (277, 4480), (281, 4492), (308, 4666), (326, 4735), (414, 4987), (441, 5128), (444, 5140), (456, 5182),

Gene: DaddyDaniels\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for DaddyDaniels\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Daffy\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Daffy\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Daisy\_11 Start: 6317, Stop: 8221, Start Num: 16

Candidate Starts for Daisy\_11:

(Start: 16 @6317 has 401 MA's), (22, 6344), (60, 6425), (74, 6488), (83, 6554), (89, 6587), (118, 6695), (140, 6785), (158, 6863), (172, 6920), (178, 6974), (190, 7055), (194, 7076), (200, 7103), (219, 7154), (220, 7163), (223, 7172), (254, 7349), (256, 7361), (267, 7436), (272, 7460), (276, 7481), (294, 7565), (313, 7703), (319, 7721), (326, 7748), (337, 7772), (396, 7937), (398, 7946), (421, 8051), (422, 8060), (427, 8087), (447, 8177), (454, 8201), (459, 8213),

Gene: Daka\_8 Start: 4444, Stop: 6363, Start Num: 16

Candidate Starts for Daka\_8:

(Start: 16 @4444 has 401 MA's), (Start: 21 @4459 has 5 MA's), (Start: 62 @4555 has 5 MA's), (67, 4570), (83, 4681), (115, 4813), (121, 4837), (122, 4843), (124, 4855), (128, 4867), (171, 5032), (188, 5158), (189, 5161), (190, 5173), (193, 5182), (194, 5194), (211, 5257), (214, 5266), (223, 5302), (228, 5320), (231, 5329), (240, 5377), (253, 5473), (254, 5479), (261, 5515), (267, 5563), (272, 5587), (305, 5782), (326, 5875), (408, 6127), (434, 6262), (443, 6304), (447, 6316),

Gene: Danyall\_12 Start: 5455, Stop: 7041, Start Num: 4

Candidate Starts for Danyall\_12:

(Start: 4 @5455 has 98 MA's), (73, 5707), (78, 5737), (102, 5854), (109, 5875), (111, 5890), (169, 6064), (176, 6106), (178, 6130), (179, 6133), (186, 6172), (198, 6244), (227, 6304), (228, 6307), (229, 6310), (235, 6346), (237, 6355), (239, 6361), (240, 6364), (250, 6427), (255, 6472), (261, 6502), (267, 6550), (278, 6607), (284, 6628), (289, 6655), (290, 6658), (295, 6685), (299, 6736), (307, 6784),

Gene: Dati\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Dati\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Deenasa\_11 Start: 7077, Stop: 8981, Start Num: 16

Candidate Starts for Deenasa\_11:

(Start: 16 @7077 has 401 MA's), (22, 7104), (60, 7185), (74, 7248), (83, 7314), (89, 7347), (118, 7455), (140, 7545), (158, 7623), (172, 7680), (178, 7734), (190, 7815), (194, 7836), (200, 7863), (219, 7914), (220, 7923), (223, 7932), (254, 8109), (256, 8121), (267, 8196), (272, 8220), (276, 8241), (294, 8325), (313, 8463), (319, 8481), (326, 8508), (337, 8532), (398, 8706), (421, 8811), (422, 8820), (427, 8847), (447, 8937), (454, 8961), (459, 8973),

Gene: DelRivs\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for DelRivs\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Delrey21\_14 Start: 7230, Stop: 8897, Start Num: 4

Candidate Starts for Delrey21\_14:

(Start: 4 @7230 has 98 MA's), (Start: 15 @7305 has 4 MA's), (20, 7326), (27, 7353), (55, 7440), (72, 7521), (77, 7551), (91, 7647), (97, 7662), (105, 7683), (110, 7704), (114, 7728), (145, 7800), (149, 7809), (173, 7920), (174, 7935), (177, 7959), (180, 7977), (183, 7992), (184, 7998), (194, 8073), (227, 8133), (250, 8268), (255, 8313), (262, 8352), (269, 8403), (276, 8436), (277, 8448), (278, 8451), (282, 8463), (285, 8478), (290, 8502), (294, 8523), (299, 8580), (307, 8631), (314, 8661), (316, 8667), (335, 8724), (352, 8769), (368, 8817),

Gene: Derg\_8 Start: 5599, Stop: 7227, Start Num: 4

Candidate Starts for Derg\_8:

(Start: 4 @5599 has 98 MA's), (29, 5722), (38, 5743), (58, 5800), (72, 5863), (77, 5893), (86, 5956), (90, 5983), (149, 6151), (167, 6238), (174, 6277), (177, 6301), (180, 6319), (183, 6334), (184, 6340), (193, 6403), (227, 6475), (234, 6514), (240, 6535), (246, 6580), (250, 6610), (255, 6655), (257, 6670), (258, 6673), (263, 6709), (272, 6757), (274, 6766), (278, 6793), (285, 6820), (294, 6865), (302, 6940), (307, 6970), (310, 6988), (324, 7027), (327, 7033), (334, 7048), (343, 7069), (344, 7075), (363, 7111), (369, 7144),

Gene: Derpp\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Derpp\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Devonte\_11 Start: 6314, Stop: 8218, Start Num: 16

Candidate Starts for Devonte\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151), (220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7934), (398, 7943), (421, 8048), (422, 8057), (427, 8084), (447, 8174), (454, 8198), (459, 8210),

Gene: Dextert\_14 Start: 6244, Stop: 7917, Start Num: 4

Candidate Starts for Dextert\_14:

(Start: 4 @6244 has 98 MA's), (6, 6271), (23, 6352), (72, 6538), (77, 6568), (88, 6646), (91, 6664), (114, 6745), (145, 6817), (149, 6826), (160, 6886), (180, 6994), (182, 7006), (183, 7009), (184, 7015), (227, 7150), (228, 7153), (240, 7210), (250, 7285), (255, 7330), (258, 7348), (261, 7360), (267, 7408), (272, 7432), (276, 7453), (278, 7468), (290, 7519), (307, 7645), (314, 7675), (324, 7702),

Gene: Dice\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Dice\_8:

(Start: 16 @4440 has 401 MA's), (Start: 21 @4455 has 5 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: DigitDog\_10 Start: 6702, Stop: 8567, Start Num: 16

Candidate Starts for DigitDog\_10:

(Start: 16 @6702 has 401 MA's), (Start: 21 @6717 has 5 MA's), (73, 6855), (76, 6867), (84, 6927), (92, 6969), (116, 7053), (119, 7065), (121, 7074), (159, 7191), (161, 7206), (172, 7245), (191, 7383), (194, 7401), (211, 7455), (244, 7599), (249, 7635), (254, 7677), (267, 7764), (272, 7788), (277, 7821), (281, 7833), (284, 7845), (289, 7869), (319, 8049), (323, 8067), (381, 8247), (392, 8268), (400, 8289), (420, 8391), (431, 8451), (461, 8559), (462, 8562),

Gene: Dingo\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Dingo\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Dione\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Dione\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: DirtJuice\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for DirtJuice\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: DoctorFroggo\_14 Start: 7230, Stop: 8897, Start Num: 4

Candidate Starts for DoctorFroggo\_14:

(Start: 4 @7230 has 98 MA's), (Start: 15 @7305 has 4 MA's), (20, 7326), (27, 7353), (55, 7440), (72, 7521), (77, 7551), (91, 7647), (97, 7662), (105, 7683), (110, 7704), (114, 7728), (145, 7800), (149, 7809), (173, 7920), (174, 7935), (177, 7959), (180, 7977), (183, 7992), (184, 7998), (194, 8073), (227, 8133), (250, 8268), (255, 8313), (262, 8352), (269, 8403), (276, 8436), (277, 8448), (278, 8451), (282, 8463), (285, 8478), (290, 8502), (294, 8523), (299, 8580), (307, 8631), (314, 8661), (316, 8667), (335, 8724), (352, 8769), (368, 8817),

Gene: Doddsville\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Doddsville\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: DoesntMatter\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for DoesntMatter\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: DonSanchon\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for DonSanchon\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: DonTron\_41 Start: 18262, Stop: 20220, Start Num: 15

Candidate Starts for DonTron\_41:

(Start: 15 @18262 has 4 MA's), (26, 18307), (47, 18358), (57, 18385), (98, 18574), (152, 18733), (172, 18826), (182, 18901), (193, 18970), (194, 18982), (195, 18988), (216, 19090), (222, 19123), (237, 19195), (238, 19198), (244, 19228), (250, 19267), (262, 19351), (288, 19495), (289, 19498), (295, 19528), (308, 19636), (317, 19672), (320, 19681), (371, 19816), (391, 19897), (402, 19930), (421, 20020), (452, 20173), (464, 20212),

Gene: Donny\_10 Start: 6695, Stop: 8560, Start Num: 16

Candidate Starts for Donny\_10:

(Start: 16 @6695 has 401 MA's), (Start: 21 @6710 has 5 MA's), (39, 6752), (73, 6848), (76, 6860), (116, 7046), (119, 7058), (121, 7067), (159, 7184), (161, 7199), (172, 7238), (191, 7376), (194, 7394), (213, 7454), (244, 7592), (249, 7628), (254, 7670), (256, 7682), (267, 7757), (272, 7781), (277, 7814), (281, 7826), (284, 7838), (289, 7862), (319, 8042), (323, 8060), (381, 8240), (392, 8261), (400, 8282), (420, 8384), (431, 8444), (461, 8552), (462, 8555),

Gene: Dori\_7 Start: 3691, Stop: 5658, Start Num: 9

Candidate Starts for Dori\_7:

(Start: 9 @3691 has 4 MA's), (12, 3709), (36, 3787), (53, 3817), (60, 3835), (82, 3958), (108, 4054), (110, 4063), (120, 4114), (149, 4213), (155, 4258), (170, 4318), (172, 4327), (177, 4372), (181, 4393),

(189, 4450), (192, 4468), (212, 4549), (218, 4570), (221, 4582), (223, 4591), (226, 4603), (236, 4654), (237, 4657), (244, 4690), (254, 4768), (256, 4780), (261, 4804), (271, 4876), (272, 4879), (289, 4960), (302, 5059), (307, 5089), (319, 5140), (395, 5374), (412, 5440), (413, 5449), (421, 5485), (424, 5509), (439, 5587), (443, 5599), (461, 5650), (462, 5653),

Gene: DuchessDung\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for DuchessDung\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Duggie\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Duggie\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Durga\_8 Start: 4437, Stop: 6356, Start Num: 16

Candidate Starts for Durga\_8:

(Start: 16 @4437 has 401 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),

Gene: EMoore\_7 Start: 4408, Stop: 6045, Start Num: 4

Candidate Starts for EMoore\_7:

(Start: 4 @4408 has 98 MA's), (8, 4444), (Start: 11 @4462 has 13 MA's), (24, 4522), (33, 4546), (56, 4603), (65, 4636), (72, 4681), (77, 4711), (81, 4744), (83, 4759), (102, 4840), (144, 4957), (145, 4960), (160, 5029), (177, 5119), (178, 5128), (180, 5137), (183, 5152), (184, 5158), (190, 5212), (194, 5233), (227, 5293), (228, 5296), (240, 5353), (241, 5377), (243, 5386), (250, 5428), (255, 5473), (258, 5491), (262, 5512), (272, 5575), (276, 5596), (278, 5611), (290, 5662), (304, 5767), (307, 5788), (314, 5818), (322, 5836), (323, 5842), (335, 5878), (344, 5902), (346, 5908), (352, 5923), (369, 5980), (374, 6016),

Gene: Eaglehorse\_12 Start: 7746, Stop: 9635, Start Num: 16

Candidate Starts for Eaglehorse\_12:

(Start: 16 @7746 has 401 MA's), (31, 7794), (41, 7818), (53, 7836), (Start: 66 @7869 has 2 MA's), (82, 7977), (103, 8061), (118, 8124), (126, 8160), (143, 8211), (148, 8223), (152, 8244), (170, 8322), (172, 8331), (177, 8376), (190, 8466), (191, 8469), (193, 8475), (194, 8487), (199, 8502), (201, 8514), (226, 8598), (232, 8631), (236, 8649), (246, 8694), (254, 8763), (256, 8775), (267, 8850), (272, 8874), (273, 8880), (277, 8907), (281, 8919), (283, 8925), (289, 8955), (290, 8958), (295, 8985), (301, 9051), (303, 9060), (319, 9135), (329, 9171), (355, 9216), (394, 9354), (396, 9357), (400, 9369), (419, 9456), (421, 9465), (422, 9474), (424, 9489), (430, 9519), (434, 9537), (437, 9552), (443, 9579), (447, 9591), (461, 9627),

Gene: EarickHC\_20 Start: 8353, Stop: 10035, Start Num: 11

Candidate Starts for EarickHC\_20:

(Start: 10 @8344 has 37 MA's), (Start: 11 @8353 has 13 MA's), (14, 8368), (46, 8467), (49, 8473), (73, 8578), (76, 8590), (90, 8689), (91, 8695), (94, 8707), (106, 8761), (110, 8779), (121, 8833), (129,

8863), (145, 8902), (151, 8920), (152, 8929), (159, 8965), (172, 9028), (180, 9091), (185, 9118), (227, 9265), (228, 9268), (235, 9307), (252, 9397), (261, 9463), (262, 9472), (274, 9544), (280, 9577), (282, 9583), (286, 9613), (289, 9628), (308, 9766), (311, 9781), (318, 9802), (319, 9805),

Gene: EastView9101\_10 Start: 6695, Stop: 8563, Start Num: 16

Candidate Starts for EastView9101\_10:

(Start: 16 @6695 has 401 MA's), (Start: 21 @6710 has 5 MA's), (22, 6719), (73, 6851), (76, 6863), (77, 6872), (116, 7049), (119, 7061), (121, 7070), (122, 7076), (159, 7187), (161, 7202), (172, 7241), (191, 7379), (194, 7397), (213, 7457), (244, 7595), (249, 7631), (254, 7673), (256, 7685), (267, 7760), (272, 7784), (277, 7817), (281, 7829), (284, 7841), (289, 7865), (319, 8045), (323, 8063), (381, 8243), (392, 8264), (400, 8285), (420, 8387), (431, 8447), (461, 8555), (462, 8558),

Gene: EdmundFerry\_12 Start: 5801, Stop: 7477, Start Num: 4

Candidate Starts for EdmundFerry\_12:

(Start: 4 @5801 has 98 MA's), (7, 5834), (23, 5912), (40, 5966), (72, 6098), (77, 6128), (88, 6206), (91, 6224), (114, 6305), (145, 6377), (149, 6386), (160, 6446), (180, 6554), (182, 6566), (183, 6569), (184, 6575), (227, 6710), (228, 6713), (240, 6770), (250, 6845), (255, 6890), (258, 6908), (262, 6929), (267, 6968), (272, 6992), (276, 7013), (278, 7028), (290, 7079), (294, 7100), (307, 7205), (314, 7235), (323, 7259), (324, 7262), (352, 7340),

Gene: Egi03\_13 Start: 5562, Stop: 7145, Start Num: 4

Candidate Starts for Egi03\_13:

(Start: 4 @5562 has 98 MA's), (29, 5676), (78, 5844), (105, 5964), (109, 5982), (111, 5997), (162, 6147), (171, 6177), (178, 6237), (179, 6240), (186, 6279), (198, 6351), (227, 6411), (228, 6414), (229, 6417), (235, 6453), (237, 6462), (239, 6468), (240, 6471), (250, 6534), (255, 6579), (261, 6609), (267, 6657), (278, 6714), (284, 6735), (285, 6741), (289, 6762), (295, 6792), (299, 6843), (307, 6891),

Gene: ElvisPhasley\_8 Start: 4553, Stop: 6361, Start Num: 62

Candidate Starts for ElvisPhasley\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Emiris\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Emiris\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: EmpTee\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for EmpTee\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Epah\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for Epah\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (384, 7212), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Eremos\_8 Start: 4441, Stop: 6354, Start Num: 16

Candidate Starts for Eremos\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6118), (434, 6253), (443, 6295), (447, 6307),

Gene: Etaye\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Etaye\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Eugenia\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Eugenia\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Evaa\_9 Start: 6619, Stop: 8448, Start Num: 16

Candidate Starts for Evaa\_9:

(Start: 16 @6619 has 401 MA's), (30, 6664), (Start: 66 @6733 has 2 MA's), (73, 6775), (82, 6838), (97, 6907), (109, 6925), (128, 7012), (163, 7132), (179, 7222), (183, 7243), (190, 7300), (193, 7309), (194, 7321), (226, 7432), (236, 7483), (240, 7495), (242, 7510), (254, 7597), (256, 7609), (267, 7684), (272, 7708), (281, 7753), (289, 7789), (319, 7966), (394, 8173), (397, 8182), (398, 8185), (414, 8257), (421, 8284), (422, 8293), (443, 8398), (454, 8434), (456, 8437),

Gene: Evamon\_12 Start: 5436, Stop: 7022, Start Num: 4

Candidate Starts for Evamon\_12:

(Start: 4 @5436 has 98 MA's), (73, 5688), (78, 5718), (102, 5835), (109, 5856), (111, 5871), (169, 6045), (176, 6087), (178, 6111), (179, 6114), (186, 6153), (198, 6225), (227, 6285), (228, 6288), (229, 6291), (235, 6327), (237, 6336), (239, 6342), (240, 6345), (250, 6408), (255, 6453), (261, 6483), (267, 6531), (278, 6588), (284, 6609), (289, 6636), (290, 6639), (295, 6666), (299, 6717), (307, 6765),

Gene: Fanaw\_9 Start: 6763, Stop: 8637, Start Num: 21

Candidate Starts for Fanaw\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (295, 7975), (384, 8317), (390, 8326), (405, 8368), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (457, 8623), (461, 8629),



Gene: Fang\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Fang\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Faze9\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Faze9\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Fireball\_13 Start: 5562, Stop: 7145, Start Num: 4

Candidate Starts for Fireball\_13:

(Start: 4 @5562 has 98 MA's), (29, 5676), (78, 5844), (105, 5964), (109, 5982), (111, 5997), (162, 6147), (171, 6177), (178, 6237), (179, 6240), (186, 6279), (198, 6351), (227, 6411), (228, 6414), (229, 6417), (235, 6453), (237, 6462), (239, 6468), (240, 6471), (250, 6534), (255, 6579), (261, 6609), (267, 6657), (278, 6714), (284, 6735), (285, 6741), (289, 6762), (295, 6792), (299, 6843), (307, 6891),

Gene: Fireman\_20 Start: 8089, Stop: 9774, Start Num: 11

Candidate Starts for Fireman\_20:

(Start: 10 @8080 has 37 MA's), (Start: 11 @8089 has 13 MA's), (49, 8212), (73, 8317), (76, 8329), (106, 8500), (110, 8518), (120, 8569), (145, 8641), (150, 8653), (151, 8659), (152, 8668), (159, 8704), (172, 8767), (180, 8830), (185, 8857), (190, 8902), (193, 8911), (214, 8953), (227, 9004), (228, 9007), (235, 9046), (237, 9055), (240, 9064), (246, 9097), (252, 9136), (261, 9202), (262, 9211), (263, 9226), (267, 9250), (280, 9316), (282, 9322), (286, 9349), (308, 9502), (319, 9541), (324, 9562), (341, 9607), (378, 9754),

Gene: Fitzgerald\_11 Start: 6943, Stop: 8565, Start Num: 4

Candidate Starts for Fitzgerald\_11:

(Start: 4 @6943 has 98 MA's), (29, 7063), (50, 7102), (58, 7141), (72, 7204), (86, 7297), (90, 7324), (102, 7363), (149, 7492), (160, 7552), (175, 7621), (177, 7642), (180, 7660), (183, 7675), (184, 7681), (193, 7744), (224, 7804), (227, 7816), (234, 7855), (237, 7867), (240, 7876), (243, 7909), (246, 7921), (250, 7951), (255, 7996), (257, 8011), (258, 8014), (263, 8050), (272, 8098), (274, 8107), (278, 8134), (307, 8311), (324, 8368), (327, 8374), (334, 8389), (343, 8410), (344, 8416), (363, 8452), (368, 8479),

Gene: Flatwoods\_13 Start: 6473, Stop: 8101, Start Num: 4

Candidate Starts for Flatwoods\_13:

(Start: 4 @6473 has 98 MA's), (29, 6596), (38, 6617), (58, 6674), (72, 6737), (77, 6767), (86, 6830), (90, 6857), (145, 7016), (149, 7025), (167, 7112), (174, 7151), (177, 7175), (180, 7193), (183, 7208), (184, 7214), (193, 7277), (227, 7349), (234, 7388), (246, 7454), (250, 7484), (255, 7529), (257, 7544), (258, 7547), (263, 7583), (272, 7631), (274, 7640), (278, 7667), (285, 7694), (294, 7739), (302, 7814), (307, 7844), (310, 7862), (324, 7901), (327, 7907), (334, 7922), (343, 7943), (344, 7949), (363, 7985), (369, 8018),

Gene: FluffyNinja\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for FluffyNinja\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: ForDig\_7 Start: 5208, Stop: 7124, Start Num: 16

Candidate Starts for ForDig\_7:

(Start: 16 @5208 has 401 MA's), (Start: 21 @5223 has 5 MA's), (51, 5286), (53, 5289), (Start: 62 @5310 has 5 MA's), (71, 5352), (73, 5367), (74, 5370), (76, 5379), (105, 5529), (122, 5610), (131, 5640), (146, 5688), (169, 5781), (170, 5784), (177, 5838), (178, 5847), (190, 5928), (191, 5931), (194, 5949), (211, 6012), (217, 6030), (229, 6078), (240, 6132), (249, 6192), (254, 6234), (265, 6306), (267, 6321), (271, 6342), (277, 6378), (281, 6390), (289, 6426), (309, 6573), (315, 6594), (328, 6639), (351, 6705), (392, 6828), (405, 6867), (406, 6885), (433, 7017), (434, 7020), (453, 7098),

Gene: Fortunato\_9 Start: 6742, Stop: 8628, Start Num: 16

Candidate Starts for Fortunato\_9:

(Start: 16 @6742 has 401 MA's), (Start: 21 @6757 has 5 MA's), (59, 6838), (64, 6853), (74, 6904), (76, 6913), (82, 6964), (110, 7069), (122, 7129), (152, 7225), (169, 7303), (170, 7306), (177, 7360), (190, 7450), (191, 7453), (213, 7531), (217, 7543), (240, 7645), (249, 7705), (254, 7747), (256, 7759), (272, 7858), (273, 7864), (277, 7891), (279, 7897), (289, 7939), (295, 7969), (384, 8308), (390, 8317), (392, 8320), (405, 8359), (408, 8383), (420, 8443), (421, 8446), (422, 8455), (443, 8569), (457, 8614), (461, 8620),

Gene: Fosterous\_10 Start: 6015, Stop: 7637, Start Num: 4

Candidate Starts for Fosterous\_10:

(Start: 4 @6015 has 98 MA's), (50, 6174), (58, 6213), (72, 6276), (86, 6369), (90, 6396), (102, 6435), (145, 6555), (149, 6564), (160, 6624), (175, 6693), (177, 6714), (180, 6732), (183, 6747), (184, 6753), (193, 6816), (224, 6876), (227, 6888), (234, 6927), (237, 6939), (240, 6948), (246, 6993), (250, 7023), (255, 7068), (257, 7083), (258, 7086), (263, 7122), (272, 7170), (274, 7179), (278, 7206), (301, 7350), (307, 7383), (324, 7440), (327, 7446), (334, 7461), (343, 7482), (344, 7488), (363, 7524), (368, 7551),

Gene: Fozzie\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Fozzie\_8:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Frankicide\_8 Start: 4443, Stop: 6362, Start Num: 16

Candidate Starts for Frankicide\_8:

(Start: 16 @4443 has 401 MA's), (Start: 21 @4458 has 5 MA's), (Start: 62 @4554 has 5 MA's), (67, 4569), (83, 4680), (115, 4812), (121, 4836), (122, 4842), (124, 4854), (128, 4866), (171, 5031), (188, 5157), (189, 5160), (190, 5172), (193, 5181), (194, 5193), (211, 5256), (214, 5265), (223, 5301), (228, 5319), (231, 5328), (240, 5376), (253, 5472), (254, 5478), (261, 5514), (267, 5562), (272, 5586), (305, 5781), (326, 5874), (408, 6126), (434, 6261), (443, 6303), (447, 6315),

Gene: Frederick\_9 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for Frederick\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (295, 7975), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (450, 8602), (461, 8629),

Gene: FrenchFry\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for FrenchFry\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Fresco\_8 Start: 5303, Stop: 7141, Start Num: 16

Candidate Starts for Fresco\_8:

(Start: 16 @5303 has 401 MA's), (Start: 32 @5351 has 2 MA's), (Start: 66 @5417 has 2 MA's), (73, 5459), (97, 5591), (118, 5654), (122, 5672), (170, 5825), (172, 5834), (177, 5879), (183, 5912), (190, 5969), (191, 5972), (194, 5990), (202, 6023), (210, 6050), (236, 6161), (240, 6173), (242, 6188), (254, 6275), (256, 6287), (267, 6362), (272, 6386), (278, 6422), (280, 6428), (281, 6431), (282, 6434), (289, 6467), (397, 6866), (398, 6869), (400, 6872), (414, 6941), (416, 6947), (421, 6968), (427, 7004), (436, 7049), (439, 7070), (447, 7094), (450, 7106), (454, 7118), (456, 7121),

Gene: Freya\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Freya\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: FriarPreacher\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for FriarPreacher\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Fringe\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Fringe\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: FuegoCuervo\_16 Start: 6765, Stop: 8387, Start Num: 4

Candidate Starts for FuegoCuervo\_16:

(Start: 4 @6765 has 98 MA's), (50, 6924), (58, 6963), (72, 7026), (86, 7119), (90, 7146), (102, 7185), (149, 7314), (160, 7374), (175, 7443), (177, 7464), (180, 7482), (183, 7497), (184, 7503), (193, 7566), (224, 7626), (227, 7638), (234, 7677), (237, 7689), (240, 7698), (243, 7731), (246, 7743), (250, 7773), (255, 7818), (257, 7833), (258, 7836), (263, 7872), (272, 7920), (274, 7929), (278, 7956), (307, 8133), (324, 8190), (327, 8196), (334, 8211), (343, 8232), (344, 8238), (363, 8274), (368, 8301),

Gene: FugateOSU\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for FugateOSU\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Fugax\_12 Start: 5583, Stop: 7169, Start Num: 4

Candidate Starts for Fugax\_12:

(Start: 4 @5583 has 98 MA's), (73, 5835), (78, 5865), (102, 5982), (109, 6003), (111, 6018), (169, 6192), (176, 6234), (178, 6258), (179, 6261), (186, 6300), (198, 6372), (227, 6432), (228, 6435), (229, 6438), (235, 6474), (237, 6483), (239, 6489), (240, 6492), (250, 6555), (255, 6600), (261, 6630), (267, 6678), (278, 6735), (284, 6756), (289, 6783), (290, 6786), (295, 6813), (299, 6864), (307, 6912),

Gene: Funsized\_14 Start: 8736, Stop: 10637, Start Num: 16

Candidate Starts for Funsized\_14:

(Start: 16 @8736 has 401 MA's), (53, 8817), (78, 8931), (105, 9063), (138, 9207), (165, 9303), (172, 9330), (177, 9375), (187, 9432), (190, 9465), (191, 9468), (194, 9486), (214, 9549), (217, 9558), (220, 9576), (235, 9642), (236, 9648), (249, 9720), (254, 9762), (255, 9768), (277, 9903), (278, 9906), (281, 9915), (294, 9975), (309, 10098), (320, 10134), (327, 10161), (356, 10221), (390, 10335), (422, 10473), (435, 10542), (437, 10551),

Gene: FuzzBuster\_24 Start: 8570, Stop: 10354, Start Num: 10

Candidate Starts for FuzzBuster\_24:

(Start: 10 @8570 has 37 MA's), (Start: 11 @8579 has 13 MA's), (25, 8636), (73, 8798), (80, 8837), (94, 8930), (128, 9086), (141, 9116), (142, 9119), (180, 9314), (185, 9341), (190, 9386), (192, 9392), (193, 9395), (198, 9419), (227, 9488), (235, 9530), (237, 9539), (238, 9542), (250, 9611), (262, 9695), (265, 9719), (281, 9803), (282, 9806), (292, 9863), (294, 9872), (295, 9878), (318, 10025), (324, 10049), (334, 10076), (341, 10094), (358, 10136), (379, 10265),

Gene: GTE6\_14 Start: 6302, Stop: 7978, Start Num: 4

Candidate Starts for GTE6\_14:

(Start: 4 @6302 has 98 MA's), (7, 6335), (23, 6413), (33, 6440), (40, 6467), (72, 6599), (77, 6629), (88, 6707), (91, 6725), (114, 6806), (145, 6878), (149, 6887), (160, 6947), (180, 7055), (182, 7067), (183, 7070), (184, 7076), (227, 7211), (228, 7214), (240, 7271), (250, 7346), (255, 7391), (258, 7409), (262, 7430), (267, 7469), (272, 7493), (276, 7514), (278, 7529), (290, 7580), (294, 7601), (307, 7706), (314, 7736),

Gene: Gadget\_12 Start: 6318, Stop: 8222, Start Num: 16

Candidate Starts for Gadget\_12:

(Start: 16 @6318 has 401 MA's), (22, 6345), (60, 6426), (74, 6489), (83, 6555), (89, 6588), (118, 6696), (140, 6786), (158, 6864), (172, 6921), (178, 6975), (190, 7056), (194, 7077), (200, 7104), (219, 7155), (220, 7164), (223, 7173), (254, 7350), (256, 7362), (267, 7437), (272, 7461), (276, 7482), (294, 7566), (313, 7704), (319, 7722), (326, 7749), (337, 7773), (396, 7938), (398, 7947), (421, 8052), (422, 8061), (427, 8088), (447, 8178), (454, 8202), (459, 8214),

Gene: Gaea\_12 Start: 6275, Stop: 7903, Start Num: 4

Candidate Starts for Gaea\_12:

(Start: 4 @6275 has 98 MA's), (29, 6398), (38, 6419), (58, 6476), (72, 6539), (77, 6569), (86, 6632), (90, 6659), (149, 6827), (167, 6914), (174, 6953), (177, 6977), (180, 6995), (183, 7010), (184, 7016), (193, 7079), (227, 7151), (234, 7190), (246, 7256), (250, 7286), (255, 7331), (257, 7346), (258, 7349), (263, 7385), (272, 7433), (274, 7442), (278, 7469), (285, 7496), (294, 7541), (299, 7598), (302, 7616), (307, 7646), (310, 7664), (324, 7703), (327, 7709), (334, 7724), (343, 7745), (344, 7751), (363, 7787), (369, 7820),

Gene: Galadriel\_14 Start: 6783, Stop: 8405, Start Num: 4

Candidate Starts for Galadriel\_14:

(Start: 4 @6783 has 98 MA's), (50, 6942), (58, 6981), (72, 7044), (86, 7137), (90, 7164), (102, 7203), (149, 7332), (160, 7392), (175, 7461), (177, 7482), (180, 7500), (183, 7515), (184, 7521), (193, 7584), (224, 7644), (227, 7656), (234, 7695), (237, 7707), (240, 7716), (246, 7761), (250, 7791), (255, 7836), (257, 7851), (258, 7854), (263, 7890), (272, 7938), (274, 7947), (278, 7974), (307, 8151), (324, 8208), (327, 8214), (334, 8229), (343, 8250), (344, 8256), (363, 8292), (368, 8319),

Gene: Ganandorf\_19 Start: 8504, Stop: 10171, Start Num: 11

Candidate Starts for Ganandorf\_19:

(Start: 10 @8495 has 37 MA's), (Start: 11 @8504 has 13 MA's), (46, 8618), (49, 8624), (73, 8729), (76, 8741), (90, 8840), (91, 8846), (94, 8858), (106, 8912), (110, 8930), (121, 8984), (129, 9014), (145, 9053), (151, 9071), (152, 9080), (159, 9116), (172, 9179), (180, 9242), (185, 9269), (227, 9416), (228, 9419), (235, 9458), (240, 9476), (252, 9548), (261, 9614), (262, 9623), (274, 9695), (280, 9728), (282, 9734), (286, 9764), (289, 9779), (308, 9917), (311, 9932), (318, 9953), (319, 9956),

Gene: Gareth\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Gareth\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: GeneCoco\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for GeneCoco\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Geodirt\_12 Start: 6790, Stop: 8412, Start Num: 4

Candidate Starts for Geodirt\_12:

(Start: 4 @6790 has 98 MA's), (50, 6949), (58, 6988), (72, 7051), (86, 7144), (90, 7171), (102, 7210), (149, 7339), (160, 7399), (175, 7468), (177, 7489), (180, 7507), (183, 7522), (184, 7528), (193, 7591), (224, 7651), (227, 7663), (234, 7702), (237, 7714), (240, 7723), (243, 7756), (246, 7768), (250, 7798), (255, 7843), (257, 7858), (258, 7861), (263, 7897), (272, 7945), (274, 7954), (278, 7981), (307, 8158), (324, 8215), (327, 8221), (334, 8236), (343, 8257), (344, 8263), (363, 8299), (368, 8326),

Gene: Gervas\_11 Start: 6309, Stop: 8207, Start Num: 16

Candidate Starts for Gervas\_11:

(Start: 16 @6309 has 401 MA's), (22, 6336), (60, 6417), (74, 6480), (83, 6546), (89, 6579), (118, 6687), (140, 6777), (158, 6855), (172, 6912), (178, 6966), (190, 7047), (194, 7068), (200, 7095), (219, 7146),

(220, 7155), (223, 7164), (254, 7341), (256, 7353), (267, 7428), (272, 7452), (276, 7473), (294, 7557), (313, 7695), (319, 7713), (326, 7740), (337, 7764), (396, 7923), (398, 7932), (421, 8037), (422, 8046), (427, 8073), (447, 8163), (448, 8166), (454, 8187), (459, 8199),

Gene: Gezellig\_12 Start: 5562, Stop: 7145, Start Num: 4

Candidate Starts for Gezellig\_12:

(Start: 4 @5562 has 98 MA's), (29, 5676), (78, 5844), (105, 5964), (109, 5982), (111, 5997), (162, 6147), (171, 6177), (178, 6237), (179, 6240), (186, 6279), (198, 6351), (227, 6411), (228, 6414), (229, 6417), (235, 6453), (237, 6462), (239, 6468), (240, 6471), (250, 6534), (255, 6579), (261, 6609), (267, 6657), (278, 6714), (284, 6735), (285, 6741), (289, 6762), (295, 6792), (299, 6843), (307, 6891),

Gene: GinPorsche\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for GinPorsche\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (142, 6090), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (261, 6684), (267, 6735), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Gina\_20 Start: 7583, Stop: 9301, Start Num: 10

Candidate Starts for Gina\_20:

(Start: 10 @7583 has 37 MA's), (Start: 11 @7592 has 13 MA's), (49, 7712), (73, 7817), (76, 7829), (90, 7928), (94, 7946), (106, 8000), (110, 8018), (120, 8069), (125, 8093), (139, 8123), (150, 8153), (151, 8159), (152, 8168), (159, 8204), (172, 8267), (180, 8330), (185, 8357), (190, 8402), (227, 8504), (228, 8507), (237, 8555), (240, 8564), (246, 8597), (252, 8636), (261, 8702), (262, 8711), (263, 8726), (265, 8735), (267, 8750), (269, 8762), (274, 8783), (280, 8816), (282, 8822), (286, 8852), (295, 8897), (308, 9005), (314, 9029), (324, 9065), (325, 9068), (333, 9089), (341, 9110), (375, 9245), (378, 9257), (385, 9284),

Gene: Giraffe\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Giraffe\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Glass\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Glass\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: GlenHope\_12 Start: 6328, Stop: 8232, Start Num: 16

Candidate Starts for GlenHope\_12:

(Start: 16 @6328 has 401 MA's), (22, 6355), (60, 6436), (74, 6499), (83, 6565), (89, 6598), (118, 6706), (140, 6796), (158, 6874), (172, 6931), (178, 6985), (190, 7066), (194, 7087), (200, 7114), (219, 7165), (220, 7174), (223, 7183), (254, 7360), (256, 7372), (267, 7447), (272, 7471), (276, 7492), (294, 7576), (313, 7714), (319, 7732), (326, 7759), (337, 7783), (396, 7948), (398, 7957), (421, 8062), (422, 8071),

(427, 8098), (447, 8188), (448, 8191), (454, 8212), (459, 8224),

Gene: Glorp\_21 Start: 8506, Stop: 10173, Start Num: 11

Candidate Starts for Glorp\_21:

(Start: 10 @8497 has 37 MA's), (Start: 11 @8506 has 13 MA's), (14, 8521), (46, 8620), (49, 8626), (73, 8731), (76, 8743), (90, 8842), (91, 8848), (94, 8860), (106, 8914), (110, 8932), (121, 8986), (129, 9016), (145, 9055), (151, 9073), (152, 9082), (159, 9118), (172, 9181), (180, 9244), (185, 9271), (227, 9418), (228, 9421), (235, 9460), (240, 9478), (252, 9550), (261, 9616), (262, 9625), (274, 9697), (280, 9730), (282, 9736), (286, 9766), (289, 9781), (308, 9919), (311, 9934), (318, 9955), (319, 9958),

Gene: Glubnar\_11 Start: 6318, Stop: 8222, Start Num: 16

Candidate Starts for Glubnar\_11:

(Start: 16 @6318 has 401 MA's), (22, 6345), (60, 6426), (74, 6489), (83, 6555), (89, 6588), (118, 6696), (140, 6786), (158, 6864), (172, 6921), (178, 6975), (190, 7056), (194, 7077), (200, 7104), (219, 7155), (220, 7164), (223, 7173), (254, 7350), (256, 7362), (267, 7437), (272, 7461), (276, 7482), (294, 7566), (313, 7704), (319, 7722), (326, 7749), (337, 7773), (396, 7938), (398, 7947), (421, 8052), (422, 8061), (427, 8088), (447, 8178), (448, 8181), (454, 8202), (459, 8214),

Gene: GodPhather\_7 Start: 3607, Stop: 5463, Start Num: 17

Candidate Starts for GodPhather\_7:

(Start: 13 @3589 has 3 MA's), (Start: 17 @3607 has 3 MA's), (Start: 35 @3664 has 2 MA's), (79, 3802), (82, 3832), (95, 3886), (122, 3997), (155, 4126), (170, 4183), (172, 4192), (177, 4237), (180, 4255), (192, 4333), (193, 4336), (223, 4420), (230, 4444), (233, 4468), (254, 4597), (256, 4609), (261, 4633), (267, 4684), (277, 4741), (281, 4753), (308, 4927), (326, 4996), (414, 5248), (441, 5389), (444, 5401), (456, 5443),

Gene: Godines\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Godines\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Gophee\_8 Start: 4552, Stop: 6360, Start Num: 62

Candidate Starts for Gophee\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Grand2040\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Grand2040\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Gustavo\_12 Start: 6272, Stop: 7900, Start Num: 4

Candidate Starts for Gustavo\_12:

(Start: 4 @6272 has 98 MA's), (29, 6395), (38, 6416), (58, 6473), (72, 6536), (77, 6566), (86, 6629), (90, 6656), (149, 6824), (167, 6911), (174, 6950), (177, 6974), (180, 6992), (183, 7007), (184, 7013), (193, 7076), (227, 7148), (234, 7187), (246, 7253), (250, 7283), (255, 7328), (257, 7343), (258, 7346), (263, 7382), (272, 7430), (274, 7439), (278, 7466), (285, 7493), (294, 7538), (302, 7613), (307, 7643), (310, 7661), (324, 7700), (327, 7706), (334, 7721), (343, 7742), (344, 7748), (363, 7784), (369, 7817),

Gene: Gwennie1\_9 Start: 4552, Stop: 6360, Start Num: 62

Candidate Starts for Gwennie1\_9:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Gwilliam\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Gwilliam\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Gyarad\_008 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Gyarad\_008:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: HSavage\_8 Start: 4443, Stop: 6362, Start Num: 16

Candidate Starts for HSavage\_8:

(Start: 16 @4443 has 401 MA's), (Start: 21 @4458 has 5 MA's), (Start: 62 @4554 has 5 MA's), (67, 4569), (83, 4680), (115, 4812), (121, 4836), (122, 4842), (124, 4854), (128, 4866), (171, 5031), (188, 5157), (189, 5160), (190, 5172), (193, 5181), (194, 5193), (211, 5256), (214, 5265), (223, 5301), (228, 5319), (231, 5328), (240, 5376), (253, 5472), (254, 5478), (261, 5514), (267, 5562), (272, 5586), (305, 5781), (326, 5874), (408, 6126), (434, 6261), (443, 6303), (447, 6315),

Gene: Haimas\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Haimas\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Haleema\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Haleema\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124),



(434, 6259), (443, 6301), (447, 6313),

Gene: Halfpint\_10 Start: 6163, Stop: 8067, Start Num: 16

Candidate Starts for Halfpint\_10:

(Start: 16 @6163 has 401 MA's), (22, 6190), (60, 6271), (74, 6334), (83, 6400), (89, 6433), (118, 6541), (140, 6631), (158, 6709), (172, 6766), (178, 6820), (190, 6901), (194, 6922), (200, 6949), (219, 7000), (220, 7009), (223, 7018), (254, 7195), (256, 7207), (267, 7282), (272, 7306), (276, 7327), (294, 7411), (313, 7549), (319, 7567), (326, 7594), (337, 7618), (396, 7783), (398, 7792), (421, 7897), (422, 7906), (427, 7933), (447, 8023), (454, 8047), (459, 8059),

Gene: Hally898\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for Hally898\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (384, 7212), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Halo3\_13 Start: 5892, Stop: 7478, Start Num: 4

Candidate Starts for Halo3\_13:

(Start: 4 @5892 has 98 MA's), (Start: 15 @5955 has 4 MA's), (73, 6144), (78, 6174), (102, 6291), (109, 6312), (111, 6327), (169, 6501), (171, 6507), (176, 6543), (178, 6567), (179, 6570), (186, 6609), (198, 6681), (227, 6741), (234, 6780), (235, 6783), (237, 6792), (239, 6798), (250, 6864), (255, 6909), (261, 6939), (267, 6987), (278, 7044), (284, 7065), (289, 7092), (290, 7095), (295, 7122), (299, 7173), (307, 7221),

Gene: Hamish\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Hamish\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Hangman\_9 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for Hangman\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (267, 7840), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (295, 7975), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (450, 8602), (461, 8629),

Gene: Hans\_15 Start: 6962, Stop: 8596, Start Num: 4

Candidate Starts for Hans\_15:

(Start: 4 @6962 has 98 MA's), (6, 6989), (8, 6998), (Start: 15 @7034 has 4 MA's), (33, 7100), (56, 7157), (65, 7190), (72, 7235), (77, 7265), (78, 7274), (81, 7298), (83, 7313), (102, 7394), (116, 7451), (144, 7511), (149, 7523), (152, 7541), (160, 7583), (177, 7673), (180, 7691), (183, 7706), (184, 7712), (190, 7766), (194, 7787), (227, 7847), (228, 7850), (240, 7907), (241, 7931), (246, 7952), (250, 7982), (255, 8027), (258, 8045), (262, 8066), (272, 8129), (276, 8150), (278, 8165), (290, 8216), (304, 8321), (307, 8342), (314, 8372), (322, 8390), (344, 8456), (352, 8477), (369, 8531),

Gene: Hartsy\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Hartsy\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Harvey\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Harvey\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: HarveySr\_11 Start: 6315, Stop: 8219, Start Num: 16

Candidate Starts for HarveySr\_11:

(Start: 16 @6315 has 401 MA's), (22, 6342), (60, 6423), (74, 6486), (83, 6552), (89, 6585), (118, 6693), (140, 6783), (158, 6861), (172, 6918), (178, 6972), (190, 7053), (194, 7074), (200, 7101), (219, 7152), (220, 7161), (223, 7170), (254, 7347), (256, 7359), (267, 7434), (272, 7458), (276, 7479), (294, 7563), (313, 7701), (319, 7719), (326, 7746), (337, 7770), (396, 7935), (398, 7944), (421, 8049), (422, 8058), (427, 8085), (447, 8175), (448, 8178), (454, 8199), (459, 8211),

Gene: Hashim76\_13 Start: 5567, Stop: 7492, Start Num: 16

Candidate Starts for Hashim76\_13:

(Start: 16 @5567 has 401 MA's), (116, 5942), (119, 5954), (128, 5993), (144, 6044), (150, 6059), (173, 6170), (177, 6209), (181, 6230), (188, 6284), (189, 6287), (194, 6320), (205, 6368), (214, 6392), (217, 6401), (220, 6419), (231, 6455), (248, 6554), (254, 6605), (261, 6641), (272, 6713), (313, 6956), (319, 6974), (397, 7208), (421, 7319), (422, 7328), (424, 7343), (434, 7391), (457, 7478),

Gene: Heath\_9 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for Heath\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (267, 7840), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (295, 7975), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (457, 8623), (461, 8629),

Gene: Heathcliff\_11 Start: 6309, Stop: 8204, Start Num: 16

Candidate Starts for Heathcliff\_11:

(Start: 16 @6309 has 401 MA's), (22, 6336), (60, 6417), (74, 6480), (83, 6546), (89, 6579), (118, 6687), (140, 6777), (158, 6855), (172, 6912), (178, 6966), (190, 7047), (194, 7068), (200, 7095), (219, 7146), (220, 7155), (223, 7164), (254, 7341), (256, 7353), (267, 7428), (272, 7452), (276, 7473), (294, 7557), (313, 7695), (319, 7713), (326, 7740), (337, 7764), (396, 7920), (398, 7929), (421, 8034), (422, 8043), (427, 8070), (447, 8160), (448, 8163), (454, 8184), (459, 8196),

Gene: Hedgerow\_12 Start: 7827, Stop: 9716, Start Num: 16

Candidate Starts for Hedgerow\_12:

(Start: 16 @7827 has 401 MA's), (31, 7875), (41, 7899), (53, 7917), (Start: 66 @7950 has 2 MA's), (82, 8058), (103, 8142), (118, 8205), (126, 8241), (143, 8292), (148, 8304), (152, 8325), (170, 8403), (172, 8412), (177, 8457), (190, 8547), (191, 8550), (193, 8556), (194, 8568), (199, 8583), (201, 8595), (226, 8679), (232, 8712), (236, 8730), (246, 8775), (254, 8844), (256, 8856), (267, 8931), (272, 8955), (273,

8961), (277, 8988), (281, 9000), (283, 9006), (289, 9036), (290, 9039), (295, 9066), (301, 9132), (303, 9141), (319, 9216), (329, 9252), (355, 9297), (394, 9435), (396, 9438), (400, 9450), (419, 9537), (421, 9546), (422, 9555), (424, 9570), (430, 9600), (434, 9618), (437, 9633), (443, 9660), (447, 9672), (461, 9708),

Gene: Held\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Held\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: HenryJackson\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for HenryJackson\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Hermeonysus\_19 Start: 8365, Stop: 10041, Start Num: 10

Candidate Starts for Hermeonysus\_19:

(Start: 10 @8365 has 37 MA's), (Start: 11 @8374 has 13 MA's), (46, 8488), (49, 8494), (73, 8599), (76, 8611), (90, 8710), (91, 8716), (94, 8728), (106, 8782), (110, 8800), (121, 8854), (129, 8884), (145, 8923), (151, 8941), (152, 8950), (159, 8986), (172, 9049), (180, 9112), (185, 9139), (227, 9286), (228, 9289), (235, 9328), (240, 9346), (252, 9418), (261, 9484), (262, 9493), (274, 9565), (280, 9598), (282, 9604), (286, 9634), (289, 9649), (308, 9787), (311, 9802), (318, 9823), (319, 9826),

Gene: Hertubise\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Hertubise\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Hetaeria\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Hetaeria\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: HighStump\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for HighStump\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Hocus\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Hocus\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Holeinone\_12 Start: 7727, Stop: 9616, Start Num: 16

Candidate Starts for Holeinone\_12:

(Start: 16 @7727 has 401 MA's), (31, 7775), (41, 7799), (53, 7817), (Start: 66 @7850 has 2 MA's), (82, 7958), (103, 8042), (118, 8105), (126, 8141), (143, 8192), (152, 8225), (170, 8303), (172, 8312), (177, 8357), (190, 8447), (191, 8450), (193, 8456), (194, 8468), (199, 8483), (201, 8495), (226, 8579), (232, 8612), (236, 8630), (246, 8675), (254, 8744), (256, 8756), (267, 8831), (272, 8855), (273, 8861), (277, 8888), (281, 8900), (283, 8906), (289, 8936), (290, 8939), (295, 8966), (301, 9032), (303, 9041), (319, 9116), (329, 9152), (355, 9197), (394, 9335), (396, 9338), (400, 9350), (419, 9437), (421, 9446), (422, 9455), (424, 9470), (430, 9500), (434, 9518), (437, 9533), (443, 9560), (447, 9572), (461, 9608),

Gene: Honeyfin\_21 Start: 8650, Stop: 10356, Start Num: 10

Candidate Starts for Honeyfin\_21:

(Start: 10 @8650 has 37 MA's), (Start: 11 @8659 has 13 MA's), (14, 8674), (46, 8773), (49, 8779), (73, 8884), (76, 8896), (90, 8995), (91, 9001), (106, 9067), (110, 9085), (121, 9139), (129, 9169), (145, 9208), (151, 9226), (152, 9235), (159, 9271), (172, 9334), (180, 9397), (185, 9424), (190, 9469), (227, 9571), (228, 9574), (235, 9613), (240, 9631), (252, 9703), (261, 9769), (262, 9778), (267, 9817), (274, 9850), (280, 9883), (282, 9889), (286, 9919), (308, 10072), (311, 10087), (318, 10108), (319, 10111), (378, 10324),

Gene: Horchata\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Horchata\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Hosp\_05 Start: 3410, Stop: 5326, Start Num: 16

Candidate Starts for Hosp\_05:

(Start: 16 @3410 has 401 MA's), (Start: 21 @3425 has 5 MA's), (51, 3488), (Start: 62 @3512 has 5 MA's), (71, 3554), (73, 3569), (74, 3572), (76, 3581), (105, 3731), (122, 3812), (131, 3842), (146, 3890), (169, 3983), (170, 3986), (172, 3995), (178, 4049), (179, 4052), (190, 4130), (191, 4133), (194, 4151), (211, 4214), (217, 4232), (229, 4280), (240, 4334), (249, 4394), (254, 4436), (265, 4508), (267, 4523), (271, 4544), (277, 4580), (281, 4592), (289, 4628), (309, 4775), (328, 4841), (351, 4907), (392, 5030), (402, 5060), (405, 5069), (406, 5087), (433, 5219), (434, 5222), (453, 5300),

Gene: Hydro\_9 Start: 6745, Stop: 8634, Start Num: 16

Candidate Starts for Hydro\_9:

(Start: 16 @6745 has 401 MA's), (Start: 21 @6760 has 5 MA's), (59, 6841), (64, 6856), (74, 6907), (76, 6916), (82, 6967), (110, 7072), (122, 7132), (152, 7228), (169, 7306), (170, 7309), (172, 7318), (177, 7363), (190, 7453), (191, 7456), (213, 7534), (217, 7546), (240, 7648), (249, 7708), (254, 7750), (256, 7762), (267, 7837), (272, 7861), (273, 7867), (277, 7894), (279, 7900), (282, 7909), (289, 7942), (295, 7972), (384, 8314), (390, 8323), (392, 8326), (408, 8389), (420, 8449), (421, 8452), (422, 8461), (443, 8575), (450, 8599), (461, 8626),

Gene: ImtiyazSitla\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for ImtiyazSitla\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Imvubu\_5 Start: 3537, Stop: 5456, Start Num: 16

Candidate Starts for Imvubu\_5:

(Start: 16 @3537 has 401 MA's), (53, 3618), (76, 3708), (89, 3798), (105, 3858), (108, 3870), (115, 3909), (138, 4002), (155, 4071), (157, 4077), (164, 4107), (165, 4110), (172, 4137), (177, 4182), (190, 4272), (191, 4275), (194, 4293), (228, 4410), (231, 4419), (235, 4449), (240, 4467), (254, 4569), (261, 4605), (275, 4689), (280, 4719), (281, 4722), (300, 4851), (303, 4863), (356, 5028), (382, 5133), (421, 5283), (424, 5307), (435, 5361), (437, 5370), (447, 5409), (457, 5442),

Gene: Inchworm\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Inchworm\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Indlovu\_9 Start: 6386, Stop: 8284, Start Num: 16

Candidate Starts for Indlovu\_9:

(Start: 16 @6386 has 401 MA's), (79, 6608), (82, 6638), (87, 6668), (99, 6716), (105, 6737), (122, 6818), (159, 6929), (165, 6956), (172, 6983), (177, 7028), (217, 7211), (237, 7304), (240, 7313), (248, 7364), (254, 7415), (256, 7427), (267, 7502), (272, 7526), (277, 7559), (319, 7787), (327, 7817), (389, 7988), (400, 8012), (420, 8108), (422, 8120), (437, 8198), (439, 8213), (461, 8276),

Gene: Inspectinfecti\_14 Start: 7478, Stop: 9112, Start Num: 4

Candidate Starts for Inspectinfecti\_14:

(Start: 4 @7478 has 98 MA's), (6, 7505), (8, 7514), (Start: 15 @7550 has 4 MA's), (24, 7592), (33, 7616), (56, 7673), (65, 7706), (72, 7751), (77, 7781), (78, 7790), (81, 7814), (83, 7829), (102, 7910), (116, 7967), (144, 8027), (149, 8039), (152, 8057), (160, 8099), (177, 8189), (180, 8207), (183, 8222), (184, 8228), (190, 8282), (194, 8303), (227, 8363), (228, 8366), (240, 8423), (241, 8447), (250, 8498), (255, 8543), (258, 8561), (262, 8582), (272, 8645), (276, 8666), (278, 8681), (290, 8732), (304, 8837), (307, 8858), (314, 8888), (322, 8906), (344, 8972), (352, 8993), (369, 9047),

Gene: Inverness\_8 Start: 4458, Stop: 6362, Start Num: 21

Candidate Starts for Inverness\_8:

(Start: 16 @4443 has 401 MA's), (Start: 21 @4458 has 5 MA's), (Start: 62 @4554 has 5 MA's), (67, 4569), (83, 4680), (115, 4812), (121, 4836), (122, 4842), (124, 4854), (128, 4866), (171, 5031), (188, 5157), (189, 5160), (190, 5172), (193, 5181), (194, 5193), (211, 5256), (214, 5265), (223, 5301), (228, 5319), (231, 5328), (240, 5376), (253, 5472), (254, 5478), (261, 5514), (267, 5562), (272, 5586), (305, 5781), (326, 5874), (408, 6126), (434, 6261), (443, 6303), (447, 6315),

Gene: Iridessa\_8 Start: 4551, Stop: 6359, Start Num: 62

Candidate Starts for Iridessa\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373),

(253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Iridoclysis\_8 Start: 4445, Stop: 6364, Start Num: 16

Candidate Starts for Iridoclysis\_8:

(Start: 16 @4445 has 401 MA's), (Start: 21 @4460 has 5 MA's), (Start: 62 @4556 has 5 MA's), (67, 4571), (83, 4682), (115, 4814), (121, 4838), (122, 4844), (124, 4856), (128, 4868), (171, 5033), (188, 5159), (189, 5162), (190, 5174), (193, 5183), (194, 5195), (211, 5258), (214, 5267), (223, 5303), (228, 5321), (231, 5330), (240, 5378), (253, 5474), (254, 5480), (261, 5516), (267, 5564), (272, 5588), (305, 5783), (326, 5876), (408, 6128), (434, 6263), (443, 6305), (447, 6317),

Gene: IsaacEli\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for IsaacEli\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: ItsyBitsy1\_12 Start: 7719, Stop: 9608, Start Num: 16

Candidate Starts for ItsyBitsy1\_12:

(Start: 16 @7719 has 401 MA's), (31, 7767), (41, 7791), (53, 7809), (Start: 66 @7842 has 2 MA's), (82, 7950), (103, 8034), (118, 8097), (126, 8133), (143, 8184), (152, 8217), (170, 8295), (172, 8304), (177, 8349), (190, 8439), (191, 8442), (193, 8448), (194, 8460), (199, 8475), (201, 8487), (226, 8571), (232, 8604), (236, 8622), (246, 8667), (254, 8736), (256, 8748), (267, 8823), (272, 8847), (273, 8853), (277, 8880), (281, 8892), (283, 8898), (289, 8928), (290, 8931), (295, 8958), (301, 9024), (303, 9033), (319, 9108), (329, 9144), (355, 9189), (394, 9327), (396, 9330), (400, 9342), (419, 9429), (421, 9438), (422, 9447), (424, 9462), (430, 9492), (434, 9510), (437, 9525), (443, 9552), (447, 9564), (461, 9600),

Gene: JAMaL\_8 Start: 6274, Stop: 8166, Start Num: 16

Candidate Starts for JAMaL\_8:

(Start: 16 @6274 has 401 MA's), (53, 6355), (64, 6385), (68, 6394), (74, 6436), (76, 6445), (84, 6505), (108, 6592), (110, 6601), (122, 6661), (127, 6682), (142, 6721), (152, 6757), (169, 6835), (170, 6838), (172, 6847), (177, 6892), (190, 6982), (191, 6985), (211, 7057), (213, 7063), (214, 7066), (217, 7075), (231, 7129), (236, 7165), (240, 7177), (242, 7192), (249, 7237), (254, 7279), (256, 7291), (271, 7387), (272, 7390), (273, 7396), (277, 7423), (279, 7429), (295, 7501), (320, 7654), (364, 7744), (384, 7846), (390, 7855), (392, 7858), (406, 7915), (408, 7921), (421, 7984), (422, 7993), (443, 8107), (452, 8137), (461, 8158),

Gene: JDog\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for JDog\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: JKSyngboy\_11 Start: 6783, Stop: 8414, Start Num: 4

Candidate Starts for JKSyngboy\_11:

(Start: 4 @6783 has 98 MA's), (29, 6906), (38, 6927), (58, 6984), (72, 7047), (86, 7140), (90, 7167), (149, 7335), (167, 7422), (174, 7461), (177, 7485), (180, 7503), (183, 7518), (184, 7524), (193, 7587), (227, 7659), (231, 7671), (234, 7698), (240, 7719), (246, 7764), (250, 7794), (255, 7839), (257, 7854), (258, 7857), (263, 7893), (272, 7941), (274, 7950), (294, 8049), (299, 8106), (302, 8124), (307, 8154),

(310, 8172), (324, 8211), (327, 8217), (334, 8232), (343, 8253), (344, 8259), (363, 8298),

Gene: Jabberwocky\_11 Start: 6945, Stop: 8567, Start Num: 4

Candidate Starts for Jabberwocky\_11:

(Start: 4 @6945 has 98 MA's), (29, 7065), (50, 7104), (58, 7143), (72, 7206), (86, 7299), (90, 7326), (102, 7365), (149, 7494), (160, 7554), (175, 7623), (177, 7644), (180, 7662), (183, 7677), (184, 7683), (193, 7746), (224, 7806), (227, 7818), (234, 7857), (237, 7869), (240, 7878), (243, 7911), (246, 7923), (250, 7953), (255, 7998), (257, 8013), (258, 8016), (263, 8052), (272, 8100), (274, 8109), (278, 8136), (307, 8313), (324, 8370), (327, 8376), (334, 8391), (343, 8412), (344, 8418), (363, 8454), (368, 8481),

Gene: JacAttac\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for JacAttac\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Jackstina\_10 Start: 6231, Stop: 8135, Start Num: 16

Candidate Starts for Jackstina\_10:

(Start: 16 @6231 has 401 MA's), (22, 6258), (60, 6339), (74, 6402), (83, 6468), (89, 6501), (118, 6609), (140, 6699), (158, 6777), (172, 6834), (178, 6888), (190, 6969), (194, 6990), (200, 7017), (219, 7068), (220, 7077), (223, 7086), (254, 7263), (256, 7275), (267, 7350), (272, 7374), (276, 7395), (294, 7479), (313, 7617), (319, 7635), (326, 7662), (337, 7686), (396, 7851), (398, 7860), (421, 7965), (422, 7974), (427, 8001), (447, 8091), (454, 8115), (459, 8127),

Gene: JaguarMi\_10 Start: 6572, Stop: 8458, Start Num: 16

Candidate Starts for JaguarMi\_10:

(Start: 16 @6572 has 401 MA's), (Start: 21 @6587 has 5 MA's), (59, 6668), (64, 6683), (74, 6734), (76, 6743), (82, 6794), (110, 6899), (122, 6959), (152, 7055), (169, 7133), (170, 7136), (172, 7145), (177, 7190), (190, 7280), (191, 7283), (213, 7361), (217, 7373), (223, 7400), (240, 7475), (249, 7535), (254, 7577), (256, 7589), (259, 7604), (272, 7688), (273, 7694), (277, 7721), (279, 7727), (282, 7736), (289, 7769), (384, 8138), (390, 8147), (392, 8150), (397, 8165), (408, 8213), (421, 8276), (422, 8285), (443, 8399), (457, 8444), (461, 8450),

Gene: JakeO\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for JakeO\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Jambalaya\_12 Start: 5267, Stop: 6853, Start Num: 4

Candidate Starts for Jambalaya\_12:

(Start: 4 @5267 has 98 MA's), (29, 5381), (78, 5549), (105, 5669), (109, 5687), (111, 5702), (162, 5852), (171, 5882), (178, 5942), (179, 5945), (186, 5984), (198, 6056), (227, 6116), (228, 6119), (229, 6122), (235, 6158), (237, 6167), (239, 6173), (240, 6176), (250, 6239), (255, 6284), (261, 6314), (267, 6362), (278, 6419), (284, 6440), (285, 6446), (289, 6467), (290, 6470), (295, 6497), (299, 6548), (307, 6596),

Gene: JangoPhett\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for JangoPhett\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Jayden\_20 Start: 7979, Stop: 9697, Start Num: 10

Candidate Starts for Jayden\_20:

(1, 7835), (Start: 10 @7979 has 37 MA's), (Start: 11 @7988 has 13 MA's), (37, 8084), (49, 8108), (73, 8213), (76, 8225), (90, 8324), (94, 8342), (106, 8396), (110, 8414), (120, 8465), (121, 8468), (132, 8507), (139, 8519), (145, 8537), (151, 8555), (152, 8564), (159, 8600), (172, 8663), (180, 8726), (185, 8753), (190, 8798), (227, 8900), (228, 8903), (240, 8960), (246, 8993), (252, 9032), (261, 9098), (262, 9107), (263, 9122), (267, 9146), (269, 9158), (280, 9212), (282, 9218), (286, 9248), (308, 9401), (318, 9437), (324, 9461), (325, 9464), (333, 9485), (341, 9506), (374, 9629), (375, 9641), (378, 9653), (385, 9680),

Gene: Jefe\_20 Start: 8418, Stop: 10094, Start Num: 10

Candidate Starts for Jefe\_20:

(Start: 10 @8418 has 37 MA's), (Start: 11 @8427 has 13 MA's), (46, 8541), (49, 8547), (73, 8652), (76, 8664), (91, 8769), (94, 8781), (106, 8835), (110, 8853), (121, 8907), (129, 8937), (145, 8976), (151, 8994), (152, 9003), (159, 9039), (172, 9102), (180, 9165), (185, 9192), (227, 9339), (228, 9342), (235, 9381), (240, 9399), (252, 9471), (261, 9537), (262, 9546), (274, 9618), (280, 9651), (282, 9657), (286, 9687), (289, 9702), (308, 9840), (311, 9855), (318, 9876), (319, 9879),

Gene: Jeon\_6 Start: 3322, Stop: 5196, Start Num: 13

Candidate Starts for Jeon\_6:

(Start: 13 @3322 has 3 MA's), (Start: 17 @3340 has 3 MA's), (Start: 35 @3397 has 2 MA's), (79, 3535), (82, 3565), (95, 3619), (122, 3730), (155, 3859), (170, 3916), (172, 3925), (177, 3970), (180, 3988), (192, 4066), (193, 4069), (223, 4153), (230, 4177), (233, 4201), (254, 4330), (256, 4342), (261, 4366), (267, 4417), (277, 4474), (281, 4486), (308, 4660), (326, 4729), (414, 4981), (441, 5122), (444, 5134), (456, 5176),

Gene: Jesabah\_9 Start: 4553, Stop: 6361, Start Num: 62

Candidate Starts for Jesabah\_9:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Jillium\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Jillium\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Jiminy\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Jiminy\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373),



(253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Jiraiya\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Jiraiya\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Jolie1\_07 Start: 5208, Stop: 7124, Start Num: 16

Candidate Starts for Jolie1\_07:

(Start: 16 @5208 has 401 MA's), (Start: 21 @5223 has 5 MA's), (Start: 62 @5310 has 5 MA's), (71, 5352), (73, 5367), (74, 5370), (76, 5379), (105, 5529), (122, 5610), (131, 5640), (146, 5688), (169, 5781), (170, 5784), (172, 5793), (177, 5838), (178, 5847), (190, 5928), (191, 5931), (194, 5949), (211, 6012), (217, 6030), (229, 6078), (240, 6132), (249, 6192), (254, 6234), (265, 6306), (267, 6321), (271, 6342), (277, 6378), (281, 6390), (289, 6426), (309, 6573), (315, 6594), (328, 6639), (351, 6705), (392, 6828), (405, 6867), (433, 7017), (434, 7020), (453, 7098),

Gene: Jollipop\_20 Start: 8736, Stop: 10442, Start Num: 10

Candidate Starts for Jollipop\_20:

(Start: 10 @8736 has 37 MA's), (Start: 11 @8745 has 13 MA's), (14, 8760), (46, 8859), (49, 8865), (73, 8970), (76, 8982), (90, 9081), (91, 9087), (94, 9099), (106, 9153), (110, 9171), (121, 9225), (129, 9255), (145, 9294), (151, 9312), (152, 9321), (159, 9357), (172, 9420), (180, 9483), (185, 9510), (190, 9555), (227, 9657), (228, 9660), (235, 9699), (240, 9717), (252, 9789), (261, 9855), (262, 9864), (267, 9903), (274, 9936), (280, 9969), (282, 9975), (286, 10005), (308, 10158), (311, 10173), (318, 10194), (319, 10197), (376, 10401), (378, 10410),

Gene: Jollymon\_42 Start: 18192, Stop: 20150, Start Num: 15

Candidate Starts for Jollymon\_42:

(Start: 15 @18192 has 4 MA's), (26, 18237), (47, 18288), (57, 18315), (98, 18504), (152, 18663), (172, 18756), (182, 18831), (193, 18900), (194, 18912), (195, 18918), (216, 19020), (222, 19053), (237, 19125), (238, 19128), (244, 19158), (250, 19197), (256, 19248), (262, 19281), (288, 19425), (289, 19428), (295, 19458), (308, 19566), (317, 19602), (320, 19611), (371, 19746), (402, 19860), (421, 19950), (452, 20103), (464, 20142),

Gene: KLucky39\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for KLucky39\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Kahve\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Kahve\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: KaiHaiDragon\_20 Start: 8353, Stop: 10035, Start Num: 11

Candidate Starts for KaiHaiDragon\_20:

(Start: 10 @8344 has 37 MA's), (Start: 11 @8353 has 13 MA's), (14, 8368), (46, 8467), (49, 8473), (73, 8578), (76, 8590), (90, 8689), (91, 8695), (94, 8707), (106, 8761), (110, 8779), (121, 8833), (129, 8863), (145, 8902), (151, 8920), (152, 8929), (159, 8965), (172, 9028), (180, 9091), (185, 9118), (227, 9265), (228, 9268), (235, 9307), (252, 9397), (261, 9463), (262, 9472), (274, 9544), (280, 9577), (282, 9583), (286, 9613), (289, 9628), (308, 9766), (311, 9781), (318, 9802), (319, 9805),

Gene: Kailash\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Kailash\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Kaleb\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Kaleb\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Kamashten\_13 Start: 7104, Stop: 8729, Start Num: 4

Candidate Starts for Kamashten\_13:

(Start: 4 @7104 has 98 MA's), (50, 7263), (58, 7302), (72, 7365), (90, 7485), (102, 7524), (149, 7653), (160, 7713), (175, 7782), (177, 7803), (180, 7821), (183, 7836), (184, 7842), (193, 7905), (224, 7965), (227, 7977), (234, 8016), (237, 8028), (240, 8037), (243, 8070), (246, 8082), (250, 8112), (255, 8157), (257, 8172), (258, 8175), (263, 8211), (272, 8259), (274, 8268), (278, 8295), (307, 8472), (324, 8529), (327, 8535), (334, 8550), (343, 8571), (344, 8577), (363, 8613), (368, 8643),

Gene: Kamiyu\_11 Start: 6309, Stop: 8213, Start Num: 16

Candidate Starts for Kamiyu\_11:

(Start: 16 @6309 has 401 MA's), (22, 6336), (60, 6417), (74, 6480), (83, 6546), (89, 6579), (118, 6687), (140, 6777), (158, 6855), (172, 6912), (178, 6966), (190, 7047), (194, 7068), (200, 7095), (219, 7146), (220, 7155), (223, 7164), (254, 7341), (256, 7353), (267, 7428), (272, 7452), (276, 7473), (294, 7557), (313, 7695), (319, 7713), (326, 7740), (337, 7764), (396, 7929), (398, 7938), (421, 8043), (422, 8052), (427, 8079), (447, 8169), (454, 8193), (459, 8205),

Gene: KarasumaRum\_11 Start: 6863, Stop: 8728, Start Num: 16

Candidate Starts for KarasumaRum\_11:

(Start: 16 @6863 has 401 MA's), (Start: 21 @6878 has 5 MA's), (73, 7016), (116, 7214), (119, 7226), (121, 7235), (159, 7352), (161, 7367), (172, 7406), (191, 7544), (194, 7562), (244, 7760), (249, 7796), (254, 7838), (267, 7925), (272, 7949), (277, 7982), (281, 7994), (284, 8006), (289, 8030), (319, 8210), (323, 8228), (381, 8408), (392, 8429), (400, 8450), (420, 8552), (431, 8612), (461, 8720), (462, 8723),

Gene: Katniss\_8 Start: 4553, Stop: 6361, Start Num: 62

Candidate Starts for Katniss\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: KayaCho\_7 Start: 5211, Stop: 7142, Start Num: 16

Candidate Starts for KayaCho\_7:

(Start: 16 @5211 has 401 MA's), (Start: 21 @5226 has 5 MA's), (Start: 62 @5313 has 5 MA's), (73, 5370), (74, 5373), (105, 5532), (127, 5634), (131, 5643), (146, 5691), (170, 5787), (177, 5841), (178, 5850), (190, 5931), (191, 5934), (194, 5952), (211, 6015), (217, 6033), (229, 6081), (249, 6195), (254, 6237), (265, 6309), (267, 6324), (271, 6345), (277, 6381), (281, 6393), (289, 6429), (309, 6576), (328, 6642), (351, 6708), (392, 6846), (402, 6876), (405, 6885), (406, 6903), (433, 7035), (434, 7038), (453, 7116),

Gene: Keitabear\_13 Start: 8156, Stop: 9778, Start Num: 4

Candidate Starts for Keitabear\_13:

(Start: 4 @8156 has 98 MA's), (29, 8276), (50, 8315), (56, 8336), (58, 8354), (72, 8417), (86, 8510), (90, 8537), (102, 8576), (149, 8705), (160, 8765), (175, 8834), (177, 8855), (180, 8873), (183, 8888), (184, 8894), (193, 8957), (224, 9017), (227, 9029), (234, 9068), (237, 9080), (240, 9089), (243, 9122), (246, 9134), (250, 9164), (255, 9209), (257, 9224), (258, 9227), (263, 9263), (272, 9311), (274, 9320), (278, 9347), (307, 9524), (324, 9581), (327, 9587), (334, 9602), (343, 9623), (344, 9629), (363, 9665), (368, 9692),

Gene: Keitherie\_8 Start: 4437, Stop: 6356, Start Num: 16

Candidate Starts for Keitherie\_8:

(Start: 16 @4437 has 401 MA's), (Start: 21 @4452 has 5 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (158, 4974), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),

Gene: Kewpiedoll\_13 Start: 6506, Stop: 8128, Start Num: 4

Candidate Starts for Kewpiedoll\_13:

(Start: 4 @6506 has 98 MA's), (29, 6626), (50, 6665), (58, 6704), (72, 6767), (86, 6860), (90, 6887), (102, 6926), (149, 7055), (160, 7115), (175, 7184), (177, 7205), (180, 7223), (183, 7238), (184, 7244), (193, 7307), (224, 7367), (227, 7379), (234, 7418), (237, 7430), (240, 7439), (243, 7472), (246, 7484), (250, 7514), (255, 7559), (257, 7574), (258, 7577), (263, 7613), (272, 7661), (274, 7670), (278, 7697), (307, 7874), (324, 7931), (327, 7937), (334, 7952), (343, 7973), (344, 7979), (363, 8015), (368, 8042),

Gene: Khan1\_8 Start: 4551, Stop: 6359, Start Num: 62

Candidate Starts for Khan1\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Kheth\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Kheth\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226,

8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Kikipoo\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Kikipoo\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Kimbrough\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Kimbrough\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: KimmyK\_12 Start: 5583, Stop: 7169, Start Num: 4

Candidate Starts for KimmyK\_12:

(Start: 4 @5583 has 98 MA's), (73, 5835), (78, 5865), (102, 5982), (109, 6003), (111, 6018), (169, 6192), (176, 6234), (178, 6258), (179, 6261), (186, 6300), (198, 6372), (227, 6432), (228, 6435), (229, 6438), (235, 6474), (237, 6483), (239, 6489), (240, 6492), (250, 6555), (255, 6600), (261, 6630), (267, 6678), (278, 6735), (284, 6756), (289, 6783), (290, 6786), (295, 6813), (299, 6864), (307, 6912),

Gene: KingTut\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for KingTut\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: KingVeVeVe\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for KingVeVeVe\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: KingstonB\_41 Start: 17700, Stop: 19658, Start Num: 15

Candidate Starts for KingstonB\_41:

(Start: 15 @17700 has 4 MA's), (26, 17745), (47, 17796), (57, 17823), (98, 18012), (152, 18171), (172, 18264), (182, 18339), (193, 18408), (194, 18420), (195, 18426), (216, 18528), (222, 18561), (237, 18633), (238, 18636), (244, 18666), (250, 18705), (262, 18789), (288, 18933), (289, 18936), (295, 18966), (308, 19074), (317, 19110), (320, 19119), (371, 19254), (402, 19368), (416, 19437), (421, 19458), (452, 19611), (464, 19650),

Gene: KlimbOn\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for KlimbOn\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Kloppinator\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Kloppinator\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Knocker\_14 Start: 9188, Stop: 11104, Start Num: 16

Candidate Starts for Knocker\_14:

(Start: 16 @9188 has 401 MA's), (22, 9212), (53, 9269), (68, 9305), (76, 9356), (77, 9365), (81, 9398), (83, 9413), (92, 9461), (105, 9506), (112, 9542), (138, 9650), (147, 9668), (155, 9707), (172, 9773), (177, 9818), (181, 9839), (187, 9875), (190, 9908), (191, 9911), (194, 9929), (196, 9935), (211, 9983), (213, 9989), (214, 9992), (217, 10001), (220, 10019), (234, 10082), (235, 10085), (236, 10091), (251, 10169), (254, 10205), (255, 10211), (261, 10241), (267, 10289), (281, 10358), (303, 10499), (309, 10541), (327, 10604), (331, 10613), (339, 10631), (390, 10796), (398, 10817), (413, 10889), (420, 10922), (421, 10925), (422, 10934), (424, 10949), (426, 10958), (435, 11003), (436, 11006), (437, 11012), (439, 11027), (445, 11042), (447, 11051), (450, 11063), (453, 11075), (454, 11081),

Gene: Kolhan\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Kolhan\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Kowalski\_19 Start: 8475, Stop: 10151, Start Num: 10

Candidate Starts for Kowalski\_19:

(Start: 10 @8475 has 37 MA's), (Start: 11 @8484 has 13 MA's), (46, 8598), (49, 8604), (73, 8709), (76, 8721), (90, 8820), (91, 8826), (94, 8838), (106, 8892), (110, 8910), (121, 8964), (129, 8994), (145, 9033), (151, 9051), (152, 9060), (159, 9096), (172, 9159), (180, 9222), (185, 9249), (227, 9396), (228, 9399), (235, 9438), (240, 9456), (252, 9528), (261, 9594), (262, 9603), (274, 9675), (280, 9708), (282, 9714), (286, 9744), (289, 9759), (308, 9897), (311, 9912), (318, 9933), (319, 9936),

Gene: Kozie\_14 Start: 7119, Stop: 8849, Start Num: 11

Candidate Starts for Kozie\_14:

(Start: 10 @7110 has 37 MA's), (Start: 11 @7119 has 13 MA's), (34, 7200), (61, 7275), (73, 7341), (76, 7353), (77, 7362), (80, 7380), (90, 7452), (106, 7524), (111, 7554), (120, 7593), (121, 7596), (134, 7650), (139, 7677), (145, 7695), (149, 7704), (151, 7713), (152, 7722), (156, 7746), (164, 7779), (168, 7800), (170, 7806), (185, 7905), (190, 7950), (227, 8052), (240, 8112), (242, 8127), (252, 8184), (262, 8259), (267, 8298), (282, 8370), (284, 8379), (312, 8574), (318, 8592), (319, 8595), (334, 8643), (343, 8664), (350, 8688), (354, 8694), (362, 8712), (377, 8805),

Gene: Kronus\_10 Start: 6924, Stop: 8825, Start Num: 16

Candidate Starts for Kronus\_10:

(Start: 16 @6924 has 401 MA's), (22, 6951), (60, 7032), (74, 7095), (83, 7161), (89, 7194), (118, 7302), (140, 7392), (158, 7470), (172, 7527), (178, 7581), (190, 7662), (194, 7683), (200, 7710), (219, 7761), (220, 7770), (223, 7779), (254, 7956), (256, 7968), (267, 8043), (272, 8067), (276, 8088), (294, 8172), (313, 8310), (319, 8328), (326, 8355), (337, 8379), (396, 8541), (398, 8550), (421, 8655), (422, 8664), (427, 8691), (434, 8727), (447, 8781), (448, 8784), (454, 8805), (459, 8817),

Gene: Kroos\_12 Start: 6436, Stop: 8064, Start Num: 4

Candidate Starts for Kroos\_12:

(Start: 4 @6436 has 98 MA's), (29, 6559), (38, 6580), (58, 6637), (72, 6700), (77, 6730), (86, 6793), (90, 6820), (105, 6862), (149, 6988), (167, 7075), (174, 7114), (177, 7138), (180, 7156), (183, 7171), (184, 7177), (193, 7240), (227, 7312), (234, 7351), (246, 7417), (250, 7447), (255, 7492), (257, 7507), (258, 7510), (263, 7546), (272, 7594), (274, 7603), (278, 7630), (285, 7657), (294, 7702), (299, 7759), (302, 7777), (307, 7807), (310, 7825), (324, 7864), (327, 7870), (334, 7885), (343, 7906), (344, 7912), (363, 7948), (369, 7981),

Gene: Kwadwo\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Kwadwo\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Kwekel\_13 Start: 5795, Stop: 7471, Start Num: 4

Candidate Starts for Kwekel\_13:

(Start: 4 @5795 has 98 MA's), (23, 5906), (33, 5933), (42, 5963), (72, 6092), (77, 6122), (88, 6200), (114, 6299), (145, 6371), (149, 6380), (153, 6401), (160, 6440), (177, 6530), (180, 6548), (183, 6563), (184, 6569), (194, 6644), (227, 6704), (228, 6707), (240, 6764), (250, 6839), (255, 6884), (262, 6923), (267, 6962), (272, 6986), (276, 7007), (278, 7022), (282, 7034), (290, 7073), (307, 7199), (314, 7229), (352, 7334),

Gene: Kwksand96\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Kwksand96\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Kwobi\_12 Start: 6275, Stop: 7903, Start Num: 4

Candidate Starts for Kwobi\_12:

(Start: 4 @6275 has 98 MA's), (29, 6398), (38, 6419), (58, 6476), (72, 6539), (77, 6569), (86, 6632), (90, 6659), (149, 6827), (167, 6914), (174, 6953), (177, 6977), (180, 6995), (183, 7010), (184, 7016), (193, 7079), (227, 7151), (234, 7190), (246, 7256), (250, 7286), (255, 7331), (257, 7346), (258, 7349), (263, 7385), (272, 7433), (274, 7442), (278, 7469), (285, 7496), (294, 7541), (302, 7616), (307, 7646), (310, 7664), (324, 7703), (327, 7709), (334, 7724), (343, 7745), (344, 7751), (363, 7787), (369, 7820),

Gene: Labeouficaum\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Labeouficaum\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Lambano\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for Lambano\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (384, 7212), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Lars\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Lars\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: LasagnaCat\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for LasagnaCat\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Lasso\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Lasso\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Laurie\_12 Start: 7729, Stop: 9618, Start Num: 16

Candidate Starts for Laurie\_12:

(Start: 16 @7729 has 401 MA's), (31, 7777), (41, 7801), (53, 7819), (Start: 66 @7852 has 2 MA's), (82, 7960), (115, 8095), (118, 8107), (126, 8143), (143, 8194), (170, 8305), (172, 8314), (177, 8359), (190, 8449), (191, 8452), (193, 8458), (194, 8470), (199, 8485), (201, 8497), (226, 8581), (232, 8614), (236, 8632), (246, 8677), (254, 8746), (256, 8758), (267, 8833), (272, 8857), (273, 8863), (277, 8890), (281, 8902), (283, 8908), (289, 8938), (290, 8941), (295, 8968), (301, 9034), (303, 9043), (319, 9118), (329, 9154), (355, 9199), (394, 9337), (396, 9340), (400, 9352), (419, 9439), (421, 9448), (422, 9457), (424, 9472), (430, 9502), (434, 9520), (437, 9535), (443, 9562), (447, 9574), (461, 9610),

Gene: LeeLot\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for LeeLot\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Lego3393\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Lego3393\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Legolas\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Legolas\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: LeiMonet\_8 Start: 4548, Stop: 6356, Start Num: 62

Candidate Starts for LeiMonet\_8:

(Start: 16 @4437 has 401 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),

Gene: LemonSlice\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for LemonSlice\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Lennon\_13 Start: 7365, Stop: 8987, Start Num: 4

Candidate Starts for Lennon\_13:

(Start: 4 @7365 has 98 MA's), (50, 7524), (58, 7563), (72, 7626), (90, 7746), (102, 7785), (145, 7905), (149, 7914), (160, 7974), (175, 8043), (177, 8064), (180, 8082), (183, 8097), (184, 8103), (193, 8166), (224, 8226), (227, 8238), (234, 8277), (237, 8289), (240, 8298), (243, 8331), (246, 8343), (250, 8373), (255, 8418), (257, 8433), (258, 8436), (263, 8472), (272, 8520), (274, 8529), (278, 8556), (307, 8733), (324, 8790), (327, 8796), (334, 8811), (343, 8832), (344, 8838), (363, 8874), (368, 8901),

Gene: Leonard\_13 Start: 7073, Stop: 8707, Start Num: 4

Candidate Starts for Leonard\_13:

(Start: 4 @7073 has 98 MA's), (6, 7100), (8, 7109), (Start: 15 @7145 has 4 MA's), (24, 7187), (33, 7211), (56, 7268), (65, 7301), (72, 7346), (77, 7376), (78, 7385), (81, 7409), (83, 7424), (102, 7505), (116, 7562), (144, 7622), (149, 7634), (152, 7652), (160, 7694), (177, 7784), (180, 7802), (183, 7817), (184, 7823), (190, 7877), (194, 7898), (227, 7958), (228, 7961), (240, 8018), (241, 8042), (250, 8093), (255, 8138), (258, 8156), (262, 8177), (272, 8240), (276, 8261), (278, 8276), (290, 8327), (304, 8432),



(307, 8453), (314, 8483), (322, 8501), (344, 8567), (352, 8588), (369, 8642),

Gene: Lephleur\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Lephleur\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: LestyG\_11 Start: 6318, Stop: 8222, Start Num: 16

Candidate Starts for LestyG\_11:

(Start: 16 @6318 has 401 MA's), (22, 6345), (60, 6426), (74, 6489), (83, 6555), (89, 6588), (118, 6696), (140, 6786), (158, 6864), (172, 6921), (178, 6975), (190, 7056), (194, 7077), (200, 7104), (219, 7155), (220, 7164), (223, 7173), (254, 7350), (256, 7362), (267, 7437), (272, 7461), (276, 7482), (294, 7566), (313, 7704), (319, 7722), (326, 7749), (337, 7773), (396, 7938), (398, 7947), (421, 8052), (422, 8061), (427, 8088), (434, 8124), (447, 8178), (448, 8181), (454, 8202), (459, 8214),

Gene: Ligma\_8 Start: 5351, Stop: 7141, Start Num: 32

Candidate Starts for Ligma\_8:

(Start: 16 @5303 has 401 MA's), (Start: 32 @5351 has 2 MA's), (Start: 66 @5417 has 2 MA's), (73, 5459), (97, 5591), (118, 5654), (122, 5672), (170, 5825), (172, 5834), (177, 5879), (183, 5912), (190, 5969), (191, 5972), (194, 5990), (202, 6023), (210, 6050), (236, 6161), (240, 6173), (242, 6188), (254, 6275), (256, 6287), (267, 6362), (272, 6386), (278, 6422), (280, 6428), (281, 6431), (282, 6434), (289, 6467), (397, 6866), (398, 6869), (400, 6872), (414, 6941), (416, 6947), (421, 6968), (427, 7004), (436, 7049), (439, 7070), (447, 7094), (450, 7106), (454, 7118), (456, 7121),

Gene: LilHam\_10 Start: 5591, Stop: 7219, Start Num: 4

Candidate Starts for LilHam\_10:

(Start: 4 @5591 has 98 MA's), (29, 5714), (38, 5735), (58, 5792), (72, 5855), (77, 5885), (86, 5948), (90, 5975), (149, 6143), (167, 6230), (174, 6269), (177, 6293), (180, 6311), (183, 6326), (184, 6332), (193, 6395), (227, 6467), (234, 6506), (246, 6572), (250, 6602), (255, 6647), (257, 6662), (258, 6665), (263, 6701), (272, 6749), (274, 6758), (278, 6785), (285, 6812), (294, 6857), (302, 6932), (307, 6962), (310, 6980), (324, 7019), (327, 7025), (334, 7040), (343, 7061), (344, 7067), (363, 7103), (369, 7136),

Gene: LilMcDreamy\_10 Start: 7470, Stop: 9329, Start Num: 16

Candidate Starts for LilMcDreamy\_10:

(Start: 16 @7470 has 401 MA's), (73, 7614), (85, 7689), (89, 7713), (122, 7839), (159, 7950), (165, 7977), (172, 8004), (177, 8049), (183, 8082), (194, 8160), (211, 8214), (213, 8220), (240, 8334), (245, 8361), (254, 8436), (256, 8448), (267, 8523), (272, 8547), (277, 8580), (289, 8628), (313, 8790), (319, 8808), (323, 8826), (338, 8859), (393, 9033), (397, 9045), (406, 9087), (420, 9153), (426, 9189), (443, 9270),

Gene: LilSmirk\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for LilSmirk\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303,

9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Lilbeanie\_13 Start: 5278, Stop: 6954, Start Num: 3

Candidate Starts for Lilbeanie\_13:

(Start: 3 @5278 has 1 MA's), (Start: 16 @5377 has 401 MA's), (34, 5437), (55, 5512), (56, 5515), (72, 5593), (102, 5752), (110, 5776), (117, 5812), (160, 5935), (162, 5944), (186, 6076), (198, 6148), (227, 6208), (228, 6211), (231, 6220), (240, 6268), (243, 6292), (244, 6295), (250, 6334), (261, 6409), (267, 6457), (277, 6514), (283, 6532), (290, 6568), (298, 6643), (301, 6661), (366, 6853),

Gene: LittleFortune\_21 Start: 8692, Stop: 10398, Start Num: 10

Candidate Starts for LittleFortune\_21:

(Start: 10 @8692 has 37 MA's), (Start: 11 @8701 has 13 MA's), (14, 8716), (46, 8815), (49, 8821), (73, 8926), (76, 8938), (90, 9037), (91, 9043), (106, 9109), (110, 9127), (121, 9181), (129, 9211), (145, 9250), (151, 9268), (152, 9277), (159, 9313), (172, 9376), (180, 9439), (185, 9466), (190, 9511), (227, 9613), (228, 9616), (235, 9655), (240, 9673), (252, 9745), (261, 9811), (262, 9820), (267, 9859), (274, 9892), (280, 9925), (282, 9931), (286, 9961), (308, 10114), (311, 10129), (318, 10150), (319, 10153), (376, 10357), (378, 10366),

Gene: LittleMunchkin\_9 Start: 6586, Stop: 8433, Start Num: 16

Candidate Starts for LittleMunchkin\_9:

(Start: 16 @6586 has 401 MA's), (Start: 66 @6700 has 2 MA's), (73, 6742), (97, 6874), (116, 6928), (118, 6937), (172, 7120), (183, 7198), (190, 7255), (191, 7258), (194, 7276), (203, 7321), (236, 7459), (240, 7471), (242, 7486), (248, 7522), (254, 7573), (267, 7660), (278, 7720), (319, 7942), (394, 8149), (396, 8152), (397, 8158), (398, 8161), (414, 8233), (416, 8239), (421, 8260), (424, 8284), (436, 8341), (439, 8362), (442, 8371), (454, 8410), (456, 8413),

Gene: LizLemon\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for LizLemon\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Lolalove\_9 Start: 6745, Stop: 8634, Start Num: 16

Candidate Starts for Lolalove\_9:

(Start: 16 @6745 has 401 MA's), (Start: 21 @6760 has 5 MA's), (59, 6841), (64, 6856), (74, 6907), (76, 6916), (82, 6967), (110, 7072), (122, 7132), (152, 7228), (169, 7306), (170, 7309), (172, 7318), (177, 7363), (190, 7453), (191, 7456), (213, 7534), (217, 7546), (240, 7648), (249, 7708), (254, 7750), (256, 7762), (267, 7837), (272, 7861), (273, 7867), (277, 7894), (279, 7900), (282, 7909), (289, 7942), (295, 7972), (384, 8314), (390, 8323), (392, 8326), (408, 8389), (420, 8449), (421, 8452), (422, 8461), (443, 8575), (450, 8599), (461, 8626),

Gene: Longacauda\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Longacauda\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373),

(253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Lopsy\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Lopsy\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: LostAndPhound\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for LostAndPhound\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Love\_14 Start: 7094, Stop: 8716, Start Num: 4

Candidate Starts for Love\_14:

(Start: 4 @7094 has 98 MA's), (29, 7214), (50, 7253), (58, 7292), (72, 7355), (86, 7448), (90, 7475), (102, 7514), (145, 7634), (149, 7643), (160, 7703), (175, 7772), (177, 7793), (180, 7811), (183, 7826), (184, 7832), (193, 7895), (224, 7955), (227, 7967), (234, 8006), (237, 8018), (240, 8027), (246, 8072), (250, 8102), (255, 8147), (257, 8162), (258, 8165), (263, 8201), (272, 8249), (274, 8258), (278, 8285), (307, 8462), (324, 8519), (327, 8525), (334, 8540), (343, 8561), (344, 8567), (363, 8603), (368, 8630),

Gene: LuckyMarjie\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for LuckyMarjie\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Lulumae\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Lulumae\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Lulwa\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Lulwa\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Lumine\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Lumine\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: MRabcd\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for MRabcd\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Mag7\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Mag7\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Magic8\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Magic8\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Magpie\_9 Start: 6903, Stop: 8792, Start Num: 16

Candidate Starts for Magpie\_9:

(Start: 16 @6903 has 401 MA's), (Start: 21 @6918 has 5 MA's), (59, 6999), (64, 7014), (74, 7065), (76, 7074), (82, 7125), (110, 7230), (122, 7290), (152, 7386), (169, 7464), (170, 7467), (172, 7476), (177, 7521), (190, 7611), (191, 7614), (213, 7692), (217, 7704), (240, 7806), (249, 7866), (254, 7908), (256, 7920), (272, 8019), (273, 8025), (277, 8052), (279, 8058), (282, 8067), (289, 8100), (295, 8130), (384, 8472), (390, 8481), (405, 8523), (408, 8547), (420, 8607), (421, 8610), (422, 8619), (443, 8733), (457, 8778), (461, 8784),

Gene: MakoManhole\_10 Start: 6780, Stop: 8627, Start Num: 16

Candidate Starts for MakoManhole\_10:

(Start: 16 @6780 has 401 MA's), (Start: 66 @6894 has 2 MA's), (73, 6936), (82, 6999), (96, 7065), (126, 7170), (166, 7293), (167, 7299), (170, 7308), (172, 7317), (191, 7455), (194, 7473), (228, 7614), (232, 7641), (236, 7659), (240, 7671), (248, 7722), (254, 7773), (267, 7860), (281, 7929), (319, 8142), (345, 8202), (347, 8211), (397, 8352), (398, 8355), (414, 8427), (416, 8433), (421, 8454), (431, 8511), (439, 8556), (443, 8568), (447, 8580), (450, 8592), (454, 8604), (456, 8607),

Gene: Mana\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Mana\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305,

5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Manad\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Manad\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Mao1\_6 Start: 4087, Stop: 6054, Start Num: 9

Candidate Starts for Mao1\_6:

(Start: 9 @4087 has 4 MA's), (12, 4105), (36, 4183), (60, 4231), (82, 4354), (108, 4450), (110, 4459), (120, 4510), (149, 4609), (155, 4654), (170, 4714), (172, 4723), (177, 4768), (181, 4789), (189, 4846), (192, 4864), (212, 4945), (218, 4966), (221, 4978), (223, 4987), (226, 4999), (236, 5050), (237, 5053), (244, 5086), (254, 5164), (256, 5176), (261, 5200), (271, 5272), (272, 5275), (289, 5356), (302, 5455), (307, 5485), (319, 5536), (395, 5770), (412, 5836), (413, 5845), (421, 5881), (424, 5905), (439, 5983), (443, 5995), (461, 6046), (462, 6049),

Gene: Margaery\_12 Start: 5952, Stop: 7694, Start Num: 11

Candidate Starts for Margaery\_12:

(Start: 10 @5943 has 37 MA's), (Start: 11 @5952 has 13 MA's), (29, 6021), (34, 6033), (56, 6090), (61, 6105), (73, 6168), (76, 6180), (77, 6189), (80, 6207), (90, 6279), (111, 6381), (121, 6423), (134, 6474), (139, 6501), (141, 6507), (145, 6519), (149, 6528), (155, 6567), (156, 6570), (164, 6606), (168, 6627), (170, 6633), (172, 6642), (180, 6705), (185, 6732), (190, 6777), (227, 6879), (237, 6930), (246, 6972), (252, 7011), (261, 7077), (262, 7086), (265, 7110), (266, 7122), (267, 7125), (282, 7197), (289, 7242), (292, 7257), (318, 7419), (334, 7470), (343, 7491), (359, 7536), (371, 7590),

Gene: Mariokart\_8 Start: 5358, Stop: 7151, Start Num: 32

Candidate Starts for Mariokart\_8:

(Start: 16 @5310 has 401 MA's), (Start: 32 @5358 has 2 MA's), (Start: 66 @5424 has 2 MA's), (73, 5466), (83, 5535), (118, 5661), (122, 5679), (154, 5760), (170, 5832), (177, 5886), (183, 5919), (190, 5976), (191, 5979), (194, 5997), (203, 6042), (210, 6063), (236, 6174), (240, 6186), (242, 6201), (248, 6237), (254, 6288), (256, 6300), (267, 6375), (272, 6399), (278, 6435), (281, 6444), (289, 6480), (293, 6501), (394, 6867), (397, 6876), (398, 6879), (414, 6951), (416, 6957), (421, 6978), (422, 6987), (436, 7059), (443, 7092), (447, 7104), (450, 7116), (454, 7128), (456, 7131),

Gene: Marley1013\_11 Start: 7104, Stop: 9008, Start Num: 16

Candidate Starts for Marley1013\_11:

(Start: 16 @7104 has 401 MA's), (22, 7131), (60, 7212), (74, 7275), (83, 7341), (89, 7374), (118, 7482), (140, 7572), (158, 7650), (172, 7707), (178, 7761), (190, 7842), (194, 7863), (200, 7890), (219, 7941), (220, 7950), (223, 7959), (254, 8136), (256, 8148), (267, 8223), (272, 8247), (276, 8268), (294, 8352), (313, 8490), (319, 8508), (326, 8535), (337, 8559), (396, 8724), (398, 8733), (421, 8838), (422, 8847), (427, 8874), (447, 8964), (448, 8967), (454, 8988), (459, 9000),

Gene: Marlia\_11 Start: 6309, Stop: 8210, Start Num: 16

Candidate Starts for Marlia\_11:

(Start: 16 @6309 has 401 MA's), (22, 6336), (60, 6417), (74, 6480), (83, 6546), (89, 6579), (118, 6687), (140, 6777), (158, 6855), (172, 6912), (178, 6966), (190, 7047), (194, 7068), (200, 7095), (219, 7146), (220, 7155), (223, 7164), (254, 7341), (256, 7353), (267, 7428), (272, 7452), (276, 7473), (294, 7557), (313, 7695), (319, 7713), (326, 7740), (337, 7764), (396, 7926), (398, 7935), (421, 8040), (422, 8049), (427, 8076), (447, 8166), (448, 8169), (454, 8190), (459, 8202),

Gene: Maru\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Maru\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Mask\_7 Start: 4088, Stop: 6055, Start Num: 9

Candidate Starts for Mask\_7:

(Start: 9 @4088 has 4 MA's), (12, 4106), (36, 4184), (60, 4232), (82, 4355), (108, 4451), (110, 4460), (120, 4511), (149, 4610), (155, 4655), (170, 4715), (172, 4724), (177, 4769), (181, 4790), (189, 4847), (192, 4865), (212, 4946), (218, 4967), (221, 4979), (223, 4988), (226, 5000), (236, 5051), (237, 5054), (244, 5087), (254, 5165), (256, 5177), (261, 5201), (271, 5273), (272, 5276), (289, 5357), (302, 5456), (307, 5486), (319, 5537), (395, 5771), (412, 5837), (413, 5846), (421, 5882), (424, 5906), (439, 5984), (443, 5996), (461, 6047), (462, 6050),

Gene: Maskar\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Maskar\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: MasterPo\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for MasterPo\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Matalotodo\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Matalotodo\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Matzah\_13 Start: 6000, Stop: 7757, Start Num: 11

Candidate Starts for Matzah\_13:

(Start: 10 @5991 has 37 MA's), (Start: 11 @6000 has 13 MA's), (34, 6084), (49, 6120), (56, 6153), (73, 6231), (76, 6243), (77, 6252), (79, 6264), (80, 6270), (90, 6342), (91, 6348), (111, 6444), (121, 6486), (128, 6516), (135, 6546), (145, 6582), (149, 6591), (151, 6600), (152, 6609), (168, 6690), (170, 6696), (172, 6705), (180, 6768), (185, 6795), (190, 6840), (214, 6891), (227, 6942), (240, 7002), (242, 7017), (252, 7074), (262, 7149), (265, 7173), (281, 7257), (282, 7260), (289, 7305), (295, 7335), (298, 7383), (312, 7464), (318, 7482), (319, 7485), (343, 7554), (350, 7578), (380, 7713), (386, 7737),

Gene: McKinley\_13 Start: 7453, Stop: 9075, Start Num: 4

Candidate Starts for McKinley\_13:

(Start: 4 @7453 has 98 MA's), (29, 7573), (50, 7612), (58, 7651), (72, 7714), (86, 7807), (90, 7834), (102, 7873), (149, 8002), (160, 8062), (175, 8131), (177, 8152), (180, 8170), (183, 8185), (184, 8191), (193, 8254), (224, 8314), (227, 8326), (234, 8365), (237, 8377), (240, 8386), (246, 8431), (250, 8461), (255, 8506), (257, 8521), (258, 8524), (263, 8560), (272, 8608), (274, 8617), (278, 8644), (301, 8788), (307, 8821), (324, 8878), (327, 8884), (334, 8899), (343, 8920), (344, 8926), (363, 8962), (368, 8989),

Gene: Mcshane\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Mcshane\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Mecca\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Mecca\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Megabear\_6 Start: 3328, Stop: 5202, Start Num: 13

Candidate Starts for Megabear\_6:

(Start: 13 @3328 has 3 MA's), (Start: 17 @3346 has 3 MA's), (Start: 35 @3403 has 2 MA's), (79, 3541), (82, 3571), (95, 3625), (122, 3736), (155, 3865), (170, 3922), (172, 3931), (177, 3976), (180, 3994), (192, 4072), (193, 4075), (223, 4159), (230, 4183), (233, 4207), (254, 4336), (256, 4348), (261, 4372), (267, 4423), (277, 4480), (281, 4492), (308, 4666), (326, 4735), (414, 4987), (441, 5128), (444, 5140), (456, 5182),

Gene: Megamind20\_9 Start: 4457, Stop: 6361, Start Num: 21

Candidate Starts for Megamind20\_9:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Megan\_13 Start: 8673, Stop: 10412, Start Num: 10

Candidate Starts for Megan\_13:

(5, 8646), (Start: 10 @8673 has 37 MA's), (Start: 11 @8682 has 13 MA's), (19, 8712), (45, 8790), (54, 8826), (73, 8910), (76, 8922), (81, 8964), (85, 8985), (94, 9039), (106, 9093), (107, 9096), (120, 9162), (145, 9225), (151, 9243), (152, 9252), (172, 9345), (180, 9408), (185, 9435), (190, 9480), (198, 9513), (211, 9522), (212, 9525), (227, 9582), (228, 9585), (235, 9624), (237, 9633), (240, 9642), (246, 9675), (252, 9714), (261, 9780), (262, 9789), (265, 9813), (267, 9828), (282, 9900), (292, 9975), (295, 9990), (309, 10110), (310, 10116), (318, 10140), (319, 10143), (334, 10191), (354, 10242), (359, 10254), (365, 10290), (373, 10332), (388, 10395),

Gene: Megatron\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Megatron\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: MelBins\_13 Start: 6850, Stop: 8484, Start Num: 4

Candidate Starts for MelBins\_13:

(Start: 4 @6850 has 98 MA's), (6, 6877), (8, 6886), (Start: 15 @6922 has 4 MA's), (33, 6988), (56, 7045), (65, 7078), (72, 7123), (77, 7153), (78, 7162), (81, 7186), (83, 7201), (102, 7282), (116, 7339), (144, 7399), (149, 7411), (152, 7429), (160, 7471), (177, 7561), (180, 7579), (183, 7594), (184, 7600), (190, 7654), (194, 7675), (227, 7735), (228, 7738), (240, 7795), (241, 7819), (250, 7870), (255, 7915), (258, 7933), (262, 7954), (272, 8017), (276, 8038), (278, 8053), (290, 8104), (304, 8209), (307, 8230), (314, 8260), (322, 8278), (323, 8284), (335, 8320), (344, 8344), (346, 8350), (352, 8365), (369, 8419),

Gene: Melc17\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Melc17\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: MelsMeow\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for MelsMeow\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: MementoMori\_13 Start: 5993, Stop: 7759, Start Num: 10

Candidate Starts for MementoMori\_13:

(Start: 10 @5993 has 37 MA's), (Start: 11 @6002 has 13 MA's), (34, 6083), (49, 6119), (56, 6152), (73, 6230), (76, 6242), (77, 6251), (79, 6263), (80, 6269), (90, 6341), (91, 6347), (111, 6443), (121, 6485), (128, 6515), (134, 6536), (135, 6545), (145, 6581), (149, 6590), (151, 6599), (152, 6608), (168, 6689), (170, 6695), (172, 6704), (180, 6767), (185, 6794), (190, 6839), (214, 6890), (227, 6941), (240, 7001), (242, 7016), (252, 7073), (262, 7148), (265, 7172), (281, 7256), (282, 7259), (289, 7304), (295, 7334), (298, 7382), (312, 7463), (318, 7481), (319, 7484), (334, 7532), (343, 7553), (350, 7577), (354, 7583), (380, 7715), (386, 7739),

Gene: Merry\_ Start: 8363, Stop: 10132, Start Num: 2

Candidate Starts for Merry\_:

(Start: 2 @8363 has 2 MA's), (5, 8429), (Start: 10 @8456 has 37 MA's), (Start: 11 @8465 has 13 MA's), (37, 8561), (49, 8585), (73, 8690), (76, 8702), (90, 8801), (106, 8873), (110, 8891), (125, 8966), (128, 8972), (145, 9011), (150, 9023), (152, 9038), (155, 9062), (159, 9074), (164, 9101), (170, 9128), (172, 9137), (185, 9227), (190, 9272), (227, 9374), (228, 9377), (237, 9425), (240, 9434), (252, 9506), (261, 9572), (262, 9581), (282, 9692), (291, 9749), (312, 9893), (316, 9905), (324, 9935), (374, 10103),

Gene: Mesh1\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Mesh1\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188,



5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Mesmerelda\_9 Start: 4552, Stop: 6360, Start Num: 62

Candidate Starts for Mesmerelda\_9:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Metamorphoo\_20 Start: 8066, Stop: 9760, Start Num: 10

Candidate Starts for Metamorphoo\_20:

(Start: 10 @8066 has 37 MA's), (Start: 11 @8075 has 13 MA's), (49, 8198), (73, 8303), (76, 8315), (90, 8414), (106, 8486), (110, 8504), (145, 8627), (150, 8639), (151, 8645), (152, 8654), (159, 8690), (172, 8753), (180, 8816), (185, 8843), (190, 8888), (193, 8897), (214, 8939), (227, 8990), (228, 8993), (235, 9032), (237, 9041), (240, 9050), (246, 9083), (252, 9122), (261, 9188), (262, 9197), (263, 9212), (267, 9236), (280, 9302), (282, 9308), (286, 9335), (308, 9488), (319, 9527), (324, 9548), (341, 9593), (378, 9740),

Gene: MichaelPhcott\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for MichaelPhcott\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Mikota\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Mikota\_8:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: MiniBoss\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for MiniBoss\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: MitKao\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for MitKao\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Mithril\_9 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for Mithril\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (450, 8602), (461, 8629),

Gene: MmasiCarm\_11 Start: 6314, Stop: 8218, Start Num: 16

Candidate Starts for MmasiCarm\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151), (220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7934), (398, 7943), (421, 8048), (422, 8057), (427, 8084), (447, 8174), (454, 8198), (459, 8210),

Gene: MoontowerMania\_11 Start: 6493, Stop: 8115, Start Num: 4

Candidate Starts for MoontowerMania\_11:

(Start: 4 @6493 has 98 MA's), (29, 6613), (50, 6652), (58, 6691), (72, 6754), (86, 6847), (90, 6874), (102, 6913), (145, 7033), (149, 7042), (160, 7102), (175, 7171), (177, 7192), (180, 7210), (183, 7225), (184, 7231), (193, 7294), (224, 7354), (227, 7366), (234, 7405), (237, 7417), (240, 7426), (243, 7459), (246, 7471), (250, 7501), (255, 7546), (257, 7561), (258, 7564), (263, 7600), (272, 7648), (274, 7657), (278, 7684), (307, 7861), (324, 7918), (327, 7924), (334, 7939), (343, 7960), (344, 7966), (363, 8002), (368, 8029),

Gene: Morgushi\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Morgushi\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Mortcellus\_10 Start: 6952, Stop: 8856, Start Num: 16

Candidate Starts for Mortcellus\_10:

(Start: 16 @6952 has 401 MA's), (22, 6979), (60, 7060), (74, 7123), (83, 7189), (89, 7222), (118, 7330), (140, 7420), (158, 7498), (172, 7555), (178, 7609), (190, 7690), (194, 7711), (200, 7738), (219, 7789), (220, 7798), (223, 7807), (254, 7984), (256, 7996), (267, 8071), (272, 8095), (276, 8116), (294, 8200), (313, 8338), (319, 8356), (326, 8383), (337, 8407), (396, 8572), (398, 8581), (421, 8686), (422, 8695), (427, 8722), (434, 8758), (447, 8812), (448, 8815), (454, 8836), (459, 8848),

Gene: Morty\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Morty\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Morty007\_11 Start: 7104, Stop: 9008, Start Num: 16

Candidate Starts for Morty007\_11:

(Start: 16 @7104 has 401 MA's), (22, 7131), (60, 7212), (74, 7275), (83, 7341), (89, 7374), (118, 7482), (140, 7572), (158, 7650), (172, 7707), (178, 7761), (190, 7842), (194, 7863), (200, 7890), (219, 7941), (220, 7950), (223, 7959), (254, 8136), (256, 8148), (267, 8223), (272, 8247), (276, 8268), (294, 8352), (313, 8490), (319, 8508), (326, 8535), (337, 8559), (396, 8724), (398, 8733), (421, 8838), (422, 8847), (427, 8874), (447, 8964), (448, 8967), (454, 8988), (459, 9000),

Gene: Mosaic\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Mosaic\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: MossRose\_10 Start: 6894, Stop: 8627, Start Num: 66

Candidate Starts for MossRose\_10:

(Start: 16 @6780 has 401 MA's), (Start: 66 @6894 has 2 MA's), (73, 6936), (82, 6999), (96, 7065), (126, 7170), (133, 7194), (166, 7293), (167, 7299), (170, 7308), (172, 7317), (191, 7455), (194, 7473), (228, 7614), (232, 7641), (236, 7659), (240, 7671), (248, 7722), (254, 7773), (267, 7860), (272, 7884), (319, 8142), (345, 8202), (347, 8211), (397, 8352), (398, 8355), (414, 8427), (416, 8433), (421, 8454), (431, 8511), (433, 8523), (439, 8556), (443, 8568), (447, 8580), (450, 8592), (454, 8604), (456, 8607),

Gene: MrPhizzler\_8 Start: 4548, Stop: 6356, Start Num: 62

Candidate Starts for MrPhizzler\_8:

(Start: 16 @4437 has 401 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),

Gene: Mudslide\_9 Start: 6996, Stop: 8885, Start Num: 16

Candidate Starts for Mudslide\_9:

(Start: 16 @6996 has 401 MA's), (Start: 21 @7011 has 5 MA's), (59, 7092), (64, 7107), (74, 7158), (76, 7167), (82, 7218), (110, 7323), (122, 7383), (152, 7479), (169, 7557), (170, 7560), (172, 7569), (177, 7614), (190, 7704), (191, 7707), (213, 7785), (217, 7797), (240, 7899), (249, 7959), (254, 8001), (256, 8013), (272, 8112), (273, 8118), (277, 8145), (279, 8151), (282, 8160), (289, 8193), (304, 8301), (384, 8565), (390, 8574), (392, 8577), (408, 8640), (420, 8700), (421, 8703), (422, 8712), (443, 8826), (457, 8871), (461, 8877),

Gene: Mulan\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Mulan\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Murdoc\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Murdoc\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305,

5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Mutante\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Mutante\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Mutzi\_12 Start: 5455, Stop: 7041, Start Num: 4

Candidate Starts for Mutzi\_12:

(Start: 4 @5455 has 98 MA's), (73, 5707), (78, 5737), (102, 5854), (109, 5875), (111, 5890), (169, 6064), (176, 6106), (178, 6130), (179, 6133), (186, 6172), (198, 6244), (227, 6304), (228, 6307), (229, 6310), (235, 6346), (237, 6355), (239, 6361), (240, 6364), (250, 6427), (255, 6472), (261, 6502), (267, 6550), (278, 6607), (284, 6628), (289, 6655), (290, 6658), (295, 6685), (299, 6736), (307, 6784),

Gene: Mysterious\_10 Start: 6968, Stop: 8833, Start Num: 16

Candidate Starts for Mysterious\_10:

(Start: 16 @6968 has 401 MA's), (70, 7088), (73, 7124), (76, 7136), (77, 7145), (89, 7223), (103, 7268), (121, 7343), (122, 7349), (155, 7448), (159, 7460), (161, 7475), (172, 7514), (177, 7559), (191, 7652), (194, 7670), (231, 7796), (240, 7844), (244, 7868), (249, 7904), (254, 7946), (259, 7973), (267, 8033), (272, 8057), (277, 8090), (281, 8102), (284, 8114), (289, 8138), (313, 8300), (319, 8318), (323, 8336), (393, 8537), (400, 8555), (403, 8567), (406, 8591), (420, 8657), (439, 8762), (461, 8825), (462, 8828),

Gene: NHagos\_8 Start: 5267, Stop: 7105, Start Num: 16

Candidate Starts for NHagos\_8:

(Start: 16 @5267 has 401 MA's), (Start: 66 @5381 has 2 MA's), (73, 5423), (97, 5558), (122, 5639), (126, 5657), (155, 5735), (156, 5738), (157, 5741), (165, 5774), (190, 5936), (191, 5939), (194, 5957), (196, 5963), (226, 6083), (228, 6089), (232, 6116), (236, 6134), (240, 6146), (254, 6248), (256, 6260), (267, 6335), (272, 6359), (277, 6392), (324, 6638), (332, 6659), (336, 6665), (394, 6821), (397, 6830), (398, 6833), (421, 6932), (431, 6989), (433, 7001), (439, 7034), (443, 7046), (454, 7082), (456, 7085), (461, 7097),

Gene: Nacho\_008 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Nacho\_008:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Nanao\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for Nanao\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (384, 7212), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Nangang\_10 Start: 6702, Stop: 8567, Start Num: 16

Candidate Starts for Nangang\_10:

(Start: 16 @6702 has 401 MA's), (Start: 21 @6717 has 5 MA's), (73, 6855), (76, 6867), (84, 6927), (92, 6969), (116, 7053), (119, 7065), (121, 7074), (159, 7191), (161, 7206), (172, 7245), (191, 7383), (194, 7401), (211, 7455), (244, 7599), (249, 7635), (254, 7677), (267, 7764), (272, 7788), (277, 7821), (281, 7833), (284, 7845), (289, 7869), (319, 8049), (323, 8067), (381, 8247), (392, 8268), (400, 8289), (420, 8391), (431, 8451), (461, 8559), (462, 8562),

Gene: Nathan\_9 Start: 4550, Stop: 6358, Start Num: 62

Candidate Starts for Nathan\_9:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Natkenzie\_14 Start: 6957, Stop: 8627, Start Num: 4

Candidate Starts for Natkenzie\_14:

(Start: 4 @6957 has 98 MA's), (Start: 15 @7032 has 4 MA's), (20, 7053), (27, 7080), (55, 7167), (72, 7248), (77, 7278), (78, 7287), (89, 7362), (91, 7374), (105, 7410), (114, 7455), (145, 7527), (149, 7536), (173, 7647), (177, 7686), (178, 7695), (180, 7704), (182, 7716), (183, 7719), (184, 7725), (194, 7800), (224, 7848), (227, 7860), (247, 7980), (250, 7995), (255, 8040), (262, 8079), (269, 8130), (276, 8163), (277, 8175), (278, 8178), (285, 8205), (290, 8229), (299, 8307), (307, 8358), (314, 8388), (316, 8394), (335, 8451), (352, 8496),

Gene: Nehemiah\_9 Start: 6968, Stop: 8833, Start Num: 16

Candidate Starts for Nehemiah\_9:

(Start: 16 @6968 has 401 MA's), (70, 7088), (73, 7124), (76, 7136), (77, 7145), (89, 7223), (103, 7268), (121, 7343), (122, 7349), (155, 7448), (159, 7460), (161, 7475), (172, 7514), (177, 7559), (191, 7652), (194, 7670), (231, 7796), (240, 7844), (244, 7868), (249, 7904), (254, 7946), (259, 7973), (267, 8033), (272, 8057), (277, 8090), (281, 8102), (284, 8114), (289, 8138), (313, 8300), (319, 8318), (323, 8336), (393, 8537), (400, 8555), (403, 8567), (406, 8591), (420, 8657), (439, 8762), (461, 8825), (462, 8828),

Gene: Neos5\_11 Start: 7104, Stop: 9008, Start Num: 16

Candidate Starts for Neos5\_11:

(Start: 16 @7104 has 401 MA's), (22, 7131), (60, 7212), (74, 7275), (83, 7341), (89, 7374), (118, 7482), (140, 7572), (158, 7650), (172, 7707), (178, 7761), (190, 7842), (194, 7863), (200, 7890), (219, 7941), (220, 7950), (223, 7959), (254, 8136), (256, 8148), (267, 8223), (272, 8247), (276, 8268), (294, 8352), (313, 8490), (319, 8508), (326, 8535), (337, 8559), (396, 8724), (398, 8733), (421, 8838), (422, 8847), (427, 8874), (447, 8964), (454, 8988), (459, 9000),

Gene: Newman\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Newman\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Nicole21\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Nicole21\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305,

5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Nicole72\_14 Start: 8906, Stop: 10651, Start Num: 10

Candidate Starts for Nicole72\_14:

(Start: 10 @8906 has 37 MA's), (Start: 11 @8915 has 13 MA's), (54, 9056), (73, 9140), (76, 9152), (79, 9173), (81, 9194), (90, 9251), (94, 9269), (110, 9341), (120, 9392), (145, 9455), (151, 9473), (152, 9482), (172, 9575), (180, 9638), (185, 9665), (190, 9710), (198, 9743), (211, 9752), (212, 9755), (227, 9812), (228, 9815), (235, 9854), (237, 9863), (240, 9872), (246, 9905), (252, 9944), (261, 10010), (262, 10019), (265, 10043), (267, 10058), (282, 10130), (287, 10175), (309, 10340), (310, 10346), (318, 10370), (319, 10373), (334, 10421), (341, 10439), (357, 10478), (359, 10487), (373, 10565), (380, 10607),

Gene: Nigel\_7 Start: 5552, Stop: 7444, Start Num: 16

Candidate Starts for Nigel\_7:

(Start: 16 @5552 has 401 MA's), (53, 5633), (64, 5663), (68, 5672), (74, 5714), (76, 5723), (84, 5783), (108, 5870), (110, 5879), (122, 5939), (127, 5960), (169, 6113), (170, 6116), (172, 6125), (177, 6170), (190, 6260), (191, 6263), (211, 6335), (213, 6341), (214, 6344), (217, 6353), (231, 6407), (236, 6443), (240, 6455), (242, 6470), (249, 6515), (254, 6557), (271, 6665), (272, 6668), (273, 6674), (277, 6701), (279, 6707), (281, 6713), (320, 6932), (327, 6959), (364, 7022), (384, 7124), (390, 7133), (392, 7136), (406, 7193), (408, 7199), (420, 7259), (421, 7262), (422, 7271), (443, 7385), (452, 7415), (461, 7436),

Gene: NoodlelyBoi\_19 Start: 8480, Stop: 10180, Start Num: 10

Candidate Starts for NoodlelyBoi\_19:

(Start: 10 @8480 has 37 MA's), (Start: 11 @8489 has 13 MA's), (49, 8609), (73, 8714), (76, 8726), (90, 8825), (91, 8831), (93, 8840), (106, 8897), (110, 8915), (121, 8969), (127, 8993), (128, 8996), (139, 9020), (145, 9038), (151, 9056), (152, 9065), (159, 9101), (172, 9164), (180, 9227), (185, 9254), (190, 9299), (227, 9401), (228, 9404), (235, 9443), (240, 9461), (252, 9533), (261, 9599), (262, 9608), (267, 9647), (280, 9713), (282, 9719), (286, 9749), (308, 9902), (312, 9920), (319, 9941), (324, 9962), (325, 9965), (333, 9986),

Gene: Nordenberg\_7 Start: 4637, Stop: 6259, Start Num: 4

Candidate Starts for Nordenberg\_7:

(Start: 4 @4637 has 98 MA's), (50, 4796), (58, 4835), (72, 4898), (86, 4991), (90, 5018), (102, 5057), (149, 5186), (160, 5246), (175, 5315), (177, 5336), (180, 5354), (183, 5369), (184, 5375), (193, 5438), (224, 5498), (227, 5510), (234, 5549), (237, 5561), (240, 5570), (246, 5615), (250, 5645), (255, 5690), (257, 5705), (258, 5708), (263, 5744), (272, 5792), (274, 5801), (278, 5828), (307, 6005), (324, 6062), (327, 6068), (334, 6083), (343, 6104), (344, 6110), (363, 6146), (368, 6173),

Gene: Nozo\_11 Start: 7076, Stop: 8983, Start Num: 16

Candidate Starts for Nozo\_11:

(Start: 16 @7076 has 401 MA's), (22, 7103), (60, 7184), (74, 7247), (83, 7313), (89, 7346), (118, 7454), (140, 7544), (158, 7622), (172, 7679), (178, 7733), (190, 7814), (194, 7835), (200, 7862), (219, 7913), (220, 7922), (223, 7931), (254, 8108), (256, 8120), (267, 8195), (272, 8219), (276, 8240), (294, 8324), (313, 8462), (319, 8480), (326, 8507), (337, 8531), (396, 8699), (398, 8708), (421, 8813), (422, 8822), (427, 8849), (447, 8939), (454, 8963), (459, 8975),

Gene: Nubi\_12 Start: 5453, Stop: 7042, Start Num: 4

Candidate Starts for Nubi\_12:

(Start: 4 @5453 has 98 MA's), (Start: 15 @5516 has 4 MA's), (73, 5708), (78, 5738), (102, 5855), (109, 5876), (111, 5891), (169, 6065), (176, 6107), (178, 6131), (179, 6134), (186, 6173), (198, 6245), (227, 6305), (228, 6308), (229, 6311), (235, 6347), (237, 6356), (239, 6362), (240, 6365), (250, 6428), (255, 6473), (261, 6503), (267, 6551), (278, 6608), (284, 6629), (289, 6656), (290, 6659), (295, 6686), (299, 6737), (307, 6785),

Gene: Numberten\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Numberten\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Nyala\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Nyala\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: OSmaximus\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for OSmaximus\_8:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Obutu\_11 Start: 6315, Stop: 8219, Start Num: 16

Candidate Starts for Obutu\_11:

(Start: 16 @6315 has 401 MA's), (22, 6342), (60, 6423), (74, 6486), (83, 6552), (89, 6585), (118, 6693), (140, 6783), (158, 6861), (172, 6918), (178, 6972), (190, 7053), (194, 7074), (200, 7101), (219, 7152), (220, 7161), (223, 7170), (254, 7347), (256, 7359), (267, 7434), (272, 7458), (276, 7479), (294, 7563), (313, 7701), (319, 7719), (326, 7746), (337, 7770), (396, 7935), (398, 7944), (421, 8049), (422, 8058), (427, 8085), (434, 8121), (447, 8175), (448, 8178), (454, 8199), (459, 8211),

Gene: Olak\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Olak\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Oline\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Oline\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Olive\_8 Start: 4453, Stop: 6357, Start Num: 21

Candidate Starts for Olive\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188,

5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: OliverWalter\_8 Start: 4437, Stop: 6356, Start Num: 16

Candidate Starts for OliverWalter\_8:

(Start: 16 @4437 has 401 MA's), (Start: 21 @4452 has 5 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),

Gene: Olivio\_10 Start: 6163, Stop: 8067, Start Num: 16

Candidate Starts for Olivio\_10:

(Start: 16 @6163 has 401 MA's), (22, 6190), (60, 6271), (74, 6334), (83, 6400), (89, 6433), (118, 6541), (140, 6631), (158, 6709), (172, 6766), (178, 6820), (190, 6901), (194, 6922), (200, 6949), (219, 7000), (220, 7009), (223, 7018), (254, 7195), (256, 7207), (267, 7282), (272, 7306), (276, 7327), (294, 7411), (313, 7549), (319, 7567), (326, 7594), (337, 7618), (396, 7783), (398, 7792), (421, 7897), (422, 7906), (427, 7933), (447, 8023), (448, 8026), (454, 8047), (459, 8059),

Gene: Omniscient\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Omniscient\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Onika\_19 Start: 8448, Stop: 10124, Start Num: 10

Candidate Starts for Onika\_19:

(Start: 10 @8448 has 37 MA's), (Start: 11 @8457 has 13 MA's), (46, 8571), (49, 8577), (73, 8682), (76, 8694), (90, 8793), (91, 8799), (94, 8811), (106, 8865), (110, 8883), (121, 8937), (129, 8967), (145, 9006), (151, 9024), (152, 9033), (159, 9069), (172, 9132), (180, 9195), (185, 9222), (190, 9267), (227, 9369), (228, 9372), (235, 9411), (240, 9429), (252, 9501), (261, 9567), (262, 9576), (267, 9615), (274, 9648), (280, 9681), (282, 9687), (286, 9717), (289, 9732), (308, 9870), (311, 9885), (318, 9906), (319, 9909),

Gene: Oosterbaan\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Oosterbaan\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Opia\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Opia\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421,



9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: OrangeOswald\_11 Start: 6314, Stop: 8218, Start Num: 16

Candidate Starts for OrangeOswald\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151), (220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7934), (398, 7943), (421, 8048), (422, 8057), (427, 8084), (447, 8174), (454, 8198), (459, 8210),

Gene: Orfeu\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Orfeu\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Orion\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Orion\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Orwigg\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Orwigg\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: PG1\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for PG1\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: PR\_06 Start: 3403, Stop: 5202, Start Num: 35

Candidate Starts for PR\_06:

(Start: 13 @3328 has 3 MA's), (Start: 17 @3346 has 3 MA's), (Start: 35 @3403 has 2 MA's), (79, 3541), (82, 3571), (95, 3625), (122, 3736), (155, 3865), (170, 3922), (172, 3931), (177, 3976), (180, 3994), (192, 4072), (193, 4075), (223, 4159), (230, 4183), (233, 4207), (254, 4336), (256, 4348), (261, 4372), (267, 4423), (277, 4480), (281, 4492), (308, 4666), (326, 4735), (414, 4987), (441, 5128), (444, 5140), (456, 5182),

Gene: Pacifista\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Pacifista\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Paries\_13 Start: 6785, Stop: 8407, Start Num: 4

Candidate Starts for Paries\_13:

(Start: 4 @6785 has 98 MA's), (50, 6944), (58, 6983), (72, 7046), (86, 7139), (90, 7166), (102, 7205), (145, 7325), (149, 7334), (160, 7394), (175, 7463), (177, 7484), (180, 7502), (183, 7517), (184, 7523), (193, 7586), (224, 7646), (227, 7658), (234, 7697), (237, 7709), (240, 7718), (246, 7763), (250, 7793), (255, 7838), (257, 7853), (258, 7856), (263, 7892), (272, 7940), (274, 7949), (278, 7976), (307, 8153), (324, 8210), (327, 8216), (334, 8231), (343, 8252), (344, 8258), (363, 8294), (368, 8321),

Gene: Paschalis\_19 Start: 8434, Stop: 10140, Start Num: 10

Candidate Starts for Paschalis\_19:

(Start: 10 @8434 has 37 MA's), (Start: 11 @8443 has 13 MA's), (14, 8458), (46, 8557), (49, 8563), (73, 8668), (76, 8680), (90, 8779), (91, 8785), (94, 8797), (106, 8851), (110, 8869), (121, 8923), (129, 8953), (145, 8992), (151, 9010), (152, 9019), (159, 9055), (172, 9118), (180, 9181), (185, 9208), (190, 9253), (227, 9355), (228, 9358), (235, 9397), (240, 9415), (252, 9487), (261, 9553), (262, 9562), (267, 9601), (274, 9634), (280, 9667), (282, 9673), (286, 9703), (308, 9856), (311, 9871), (318, 9892), (319, 9895), (378, 10108),

Gene: PenguinLover67\_12 Start: 7600, Stop: 9486, Start Num: 16

Candidate Starts for PenguinLover67\_12:

(Start: 16 @7600 has 401 MA's), (Start: 66 @7714 has 2 MA's), (82, 7822), (104, 7900), (105, 7906), (115, 7957), (122, 7987), (150, 8047), (152, 8062), (159, 8098), (161, 8113), (177, 8197), (183, 8230), (190, 8287), (194, 8308), (201, 8335), (205, 8356), (213, 8377), (217, 8389), (237, 8482), (240, 8491), (248, 8542), (254, 8593), (272, 8704), (277, 8737), (281, 8749), (295, 8815), (319, 8965), (321, 8971), (327, 8995), (348, 9046), (383, 9178), (390, 9190), (397, 9208), (420, 9310), (422, 9322), (435, 9391), (436, 9394),

Gene: Phaedrus\_10 Start: 6231, Stop: 8135, Start Num: 16

Candidate Starts for Phaedrus\_10:

(Start: 16 @6231 has 401 MA's), (22, 6258), (60, 6339), (74, 6402), (83, 6468), (89, 6501), (118, 6609), (140, 6699), (158, 6777), (172, 6834), (178, 6888), (190, 6969), (194, 6990), (200, 7017), (219, 7068), (220, 7077), (223, 7086), (254, 7263), (256, 7275), (267, 7350), (272, 7374), (276, 7395), (294, 7479), (313, 7617), (319, 7635), (326, 7662), (337, 7686), (396, 7851), (398, 7860), (421, 7965), (422, 7974), (427, 8001), (447, 8091), (448, 8094), (454, 8115), (459, 8127),

Gene: Phamished\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Phamished\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Phantasmagoria\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Phantasmagoria\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232,

8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Phareon\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Phareon\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: PhatCats2014\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for PhatCats2014\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: PhatLouie\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for PhatLouie\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Phauci\_6 Start: 3603, Stop: 5237, Start Num: 4

Candidate Starts for Phauci\_6:

(Start: 4 @3603 has 98 MA's), (6, 3630), (8, 3639), (Start: 15 @3675 has 4 MA's), (33, 3741), (56, 3798), (65, 3831), (72, 3876), (77, 3906), (78, 3915), (81, 3939), (83, 3954), (102, 4035), (116, 4092), (144, 4152), (149, 4164), (152, 4182), (160, 4224), (177, 4314), (180, 4332), (183, 4347), (184, 4353), (190, 4407), (194, 4428), (227, 4488), (228, 4491), (240, 4548), (241, 4572), (246, 4593), (250, 4623), (255, 4668), (258, 4686), (262, 4707), (272, 4770), (276, 4791), (278, 4806), (290, 4857), (304, 4962), (307, 4983), (314, 5013), (322, 5031), (344, 5097), (352, 5118), (369, 5172),

Gene: Phayeta\_11 Start: 6190, Stop: 8094, Start Num: 16

Candidate Starts for Phayeta\_11:

(Start: 16 @6190 has 401 MA's), (22, 6217), (60, 6298), (74, 6361), (83, 6427), (89, 6460), (118, 6568), (140, 6658), (158, 6736), (172, 6793), (178, 6847), (190, 6928), (194, 6949), (200, 6976), (219, 7027), (220, 7036), (223, 7045), (254, 7222), (256, 7234), (267, 7309), (272, 7333), (276, 7354), (294, 7438), (313, 7576), (319, 7594), (326, 7621), (337, 7645), (396, 7810), (398, 7819), (421, 7924), (422, 7933), (427, 7960), (447, 8050), (448, 8053), (454, 8074), (459, 8086),

Gene: PhedwardCullen\_18 Start: 8217, Stop: 9884, Start Num: 11

Candidate Starts for PhedwardCullen\_18:

(Start: 10 @8208 has 37 MA's), (Start: 11 @8217 has 13 MA's), (14, 8232), (46, 8331), (49, 8337), (73, 8442), (76, 8454), (90, 8553), (91, 8559), (94, 8571), (106, 8625), (110, 8643), (121, 8697), (129, 8727), (145, 8766), (151, 8784), (152, 8793), (159, 8829), (172, 8892), (180, 8955), (185, 8982), (190, 9027), (227, 9129), (228, 9132), (235, 9171), (240, 9189), (252, 9261), (261, 9327), (262, 9336), (267, 9375), (274, 9408), (280, 9441), (282, 9447), (286, 9477), (289, 9492), (308, 9630), (311, 9645), (318,

9666), (319, 9669),

Gene: Phelemich\_10 Start: 6971, Stop: 8836, Start Num: 16

Candidate Starts for Phelemich\_10:

(Start: 16 @6971 has 401 MA's), (Start: 21 @6986 has 5 MA's), (70, 7091), (73, 7127), (76, 7139), (77, 7148), (89, 7226), (103, 7271), (121, 7346), (122, 7352), (155, 7451), (159, 7463), (161, 7478), (172, 7517), (177, 7562), (183, 7595), (191, 7655), (194, 7673), (231, 7799), (240, 7847), (244, 7871), (249, 7907), (254, 7949), (267, 8036), (272, 8060), (277, 8093), (281, 8105), (284, 8117), (289, 8141), (319, 8321), (338, 8372), (393, 8540), (400, 8558), (403, 8570), (406, 8594), (420, 8660), (439, 8765), (461, 8828), (462, 8831),

Gene: PhenghisKhan\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for PhenghisKhan\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Pherdinand\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Pherdinand\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Phergie\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Phergie\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Philly\_10 Start: 6204, Stop: 8108, Start Num: 16

Candidate Starts for Philly\_10:

(Start: 16 @6204 has 401 MA's), (22, 6231), (60, 6312), (74, 6375), (83, 6441), (89, 6474), (118, 6582), (140, 6672), (158, 6750), (172, 6807), (178, 6861), (190, 6942), (194, 6963), (200, 6990), (219, 7041), (220, 7050), (223, 7059), (254, 7236), (256, 7248), (267, 7323), (272, 7347), (276, 7368), (294, 7452), (313, 7590), (319, 7608), (326, 7635), (337, 7659), (396, 7824), (398, 7833), (421, 7938), (422, 7947), (427, 7974), (447, 8064), (454, 8088), (459, 8100),

Gene: Phinally\_13 Start: 7070, Stop: 8704, Start Num: 4

Candidate Starts for Phinally\_13:

(Start: 4 @7070 has 98 MA's), (6, 7097), (8, 7106), (Start: 15 @7142 has 4 MA's), (24, 7184), (33, 7208), (56, 7265), (65, 7298), (72, 7343), (77, 7373), (78, 7382), (81, 7406), (83, 7421), (102, 7502), (116, 7559), (144, 7619), (149, 7631), (152, 7649), (160, 7691), (177, 7781), (180, 7799), (183, 7814), (184, 7820), (190, 7874), (194, 7895), (227, 7955), (228, 7958), (240, 8015), (241, 8039), (250, 8090), (255, 8135), (258, 8153), (262, 8174), (272, 8237), (276, 8258), (278, 8273), (290, 8324), (304, 8429), (307, 8450), (314, 8480), (322, 8498), (344, 8564), (352, 8585), (369, 8639),

Gene: Phipps\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Phipps\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Phleuron\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Phleuron\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Phlop\_12 Start: 5562, Stop: 7145, Start Num: 4

Candidate Starts for Phlop\_12:

(Start: 4 @5562 has 98 MA's), (29, 5676), (78, 5844), (105, 5964), (109, 5982), (111, 5997), (162, 6147), (171, 6177), (178, 6237), (179, 6240), (186, 6279), (198, 6351), (227, 6411), (228, 6414), (229, 6417), (235, 6453), (237, 6462), (239, 6468), (240, 6471), (250, 6534), (255, 6579), (261, 6609), (267, 6657), (278, 6714), (284, 6735), (285, 6741), (289, 6762), (295, 6792), (299, 6843), (307, 6891),

Gene: Phlyer\_11 Start: 7071, Stop: 8975, Start Num: 16

Candidate Starts for Phlyer\_11:

(Start: 16 @7071 has 401 MA's), (22, 7098), (60, 7179), (74, 7242), (83, 7308), (89, 7341), (118, 7449), (140, 7539), (158, 7617), (172, 7674), (178, 7728), (190, 7809), (194, 7830), (200, 7857), (219, 7908), (220, 7917), (223, 7926), (254, 8103), (256, 8115), (267, 8190), (272, 8214), (276, 8235), (294, 8319), (313, 8457), (319, 8475), (326, 8502), (337, 8526), (396, 8691), (398, 8700), (421, 8805), (422, 8814), (427, 8841), (447, 8931), (448, 8934), (454, 8955), (459, 8967),

Gene: Phorgeous\_19 Start: 8286, Stop: 9992, Start Num: 10

Candidate Starts for Phorgeous\_19:

(Start: 10 @8286 has 37 MA's), (Start: 11 @8295 has 13 MA's), (14, 8310), (46, 8409), (49, 8415), (73, 8520), (76, 8532), (90, 8631), (91, 8637), (106, 8703), (110, 8721), (121, 8775), (129, 8805), (145, 8844), (151, 8862), (152, 8871), (159, 8907), (172, 8970), (180, 9033), (185, 9060), (190, 9105), (227, 9207), (228, 9210), (235, 9249), (240, 9267), (252, 9339), (261, 9405), (262, 9414), (267, 9453), (274, 9486), (280, 9519), (282, 9525), (286, 9555), (308, 9708), (311, 9723), (318, 9744), (319, 9747), (376, 9951), (378, 9960),

Gene: Phrancesco\_21 Start: 8565, Stop: 10271, Start Num: 10

Candidate Starts for Phrancesco\_21:

(Start: 10 @8565 has 37 MA's), (Start: 11 @8574 has 13 MA's), (14, 8589), (46, 8688), (49, 8694), (73, 8799), (76, 8811), (90, 8910), (91, 8916), (106, 8982), (110, 9000), (121, 9054), (129, 9084), (145, 9123), (151, 9141), (152, 9150), (159, 9186), (172, 9249), (180, 9312), (185, 9339), (190, 9384), (227, 9486), (228, 9489), (235, 9528), (240, 9546), (252, 9618), (261, 9684), (262, 9693), (267, 9732), (274, 9765), (280, 9798), (282, 9804), (286, 9834), (308, 9987), (311, 10002), (318, 10023), (319, 10026), (378, 10239),

Gene: PhrankReynolds\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for PhrankReynolds\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371),

(253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: PhrodoBaggins\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for PhrodoBaggins\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Phunky\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Phunky\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: PierreOrion\_20 Start: 8589, Stop: 10295, Start Num: 10

Candidate Starts for PierreOrion\_20:

(Start: 10 @8589 has 37 MA's), (Start: 11 @8598 has 13 MA's), (14, 8613), (46, 8712), (49, 8718), (73, 8823), (76, 8835), (90, 8934), (91, 8940), (94, 8952), (106, 9006), (110, 9024), (121, 9078), (129, 9108), (145, 9147), (151, 9165), (152, 9174), (159, 9210), (172, 9273), (180, 9336), (185, 9363), (190, 9408), (227, 9510), (228, 9513), (235, 9552), (240, 9570), (252, 9642), (261, 9708), (262, 9717), (267, 9756), (274, 9789), (280, 9822), (282, 9828), (286, 9858), (308, 10011), (311, 10026), (318, 10047), (319, 10050), (378, 10263),

Gene: Piglet\_008 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Piglet\_008:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Pine5\_11 Start: 6413, Stop: 8443, Start Num: 44

Candidate Starts for Pine5\_11:

(18, 6338), (27, 6371), (29, 6380), (44, 6413), (113, 6716), (154, 6875), (193, 7112), (254, 7397), (290, 7592), (298, 7667), (304, 7697), (349, 7868), (351, 7871), (353, 7874), (357, 7883), (405, 8096), (410, 8135), (423, 8207), (440, 8303), (443, 8315), (445, 8318), (446, 8321), (455, 8360), (463, 8387), (465, 8390), (466, 8420), (467, 8423), (468, 8432),

Gene: PinheadLarry\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for PinheadLarry\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: PinkCoffee\_12 Start: 5592, Stop: 7178, Start Num: 4

Candidate Starts for PinkCoffee\_12:

(Start: 4 @5592 has 98 MA's), (73, 5844), (78, 5874), (102, 5991), (109, 6012), (111, 6027), (169, 6201), (176, 6243), (178, 6267), (179, 6270), (186, 6309), (198, 6381), (227, 6441), (228, 6444), (229, 6447), (235, 6483), (237, 6492), (239, 6498), (240, 6501), (250, 6564), (255, 6609), (261, 6639), (267, 6687), (278, 6744), (284, 6765), (289, 6792), (290, 6795), (295, 6822), (299, 6873), (307, 6921),

Gene: Pinkman\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Pinkman\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Pipefish\_11 Start: 7209, Stop: 9104, Start Num: 16

Candidate Starts for Pipefish\_11:

(Start: 16 @7209 has 401 MA's), (22, 7236), (60, 7317), (74, 7380), (83, 7446), (89, 7479), (118, 7587), (140, 7677), (158, 7755), (172, 7812), (178, 7866), (190, 7947), (194, 7968), (200, 7995), (219, 8046), (220, 8055), (223, 8064), (254, 8241), (256, 8253), (267, 8328), (272, 8352), (276, 8373), (294, 8457), (313, 8595), (319, 8613), (326, 8640), (337, 8664), (396, 8820), (398, 8829), (421, 8934), (422, 8943), (427, 8970), (434, 9006), (447, 9060), (448, 9063), (454, 9084), (459, 9096),

Gene: PiperSansNom\_20 Start: 8738, Stop: 10444, Start Num: 10

Candidate Starts for PiperSansNom\_20:

(Start: 10 @8738 has 37 MA's), (Start: 11 @8747 has 13 MA's), (14, 8762), (46, 8861), (49, 8867), (73, 8972), (76, 8984), (90, 9083), (91, 9089), (94, 9101), (106, 9155), (110, 9173), (121, 9227), (129, 9257), (145, 9296), (151, 9314), (152, 9323), (159, 9359), (172, 9422), (180, 9485), (185, 9512), (227, 9659), (228, 9662), (235, 9701), (240, 9719), (252, 9791), (261, 9857), (262, 9866), (267, 9905), (274, 9938), (280, 9971), (282, 9977), (286, 10007), (308, 10160), (311, 10175), (318, 10196), (319, 10199), (376, 10403), (378, 10412),

Gene: Piperis\_20 Start: 8441, Stop: 10117, Start Num: 10

Candidate Starts for Piperis\_20:

(Start: 10 @8441 has 37 MA's), (Start: 11 @8450 has 13 MA's), (14, 8465), (46, 8564), (49, 8570), (73, 8675), (76, 8687), (90, 8786), (91, 8792), (94, 8804), (106, 8858), (110, 8876), (121, 8930), (129, 8960), (145, 8999), (151, 9017), (152, 9026), (159, 9062), (172, 9125), (180, 9188), (185, 9215), (190, 9260), (227, 9362), (228, 9365), (235, 9404), (240, 9422), (252, 9494), (261, 9560), (262, 9569), (267, 9608), (274, 9641), (280, 9674), (282, 9680), (286, 9710), (308, 9863), (311, 9878), (318, 9899), (319, 9902),

Gene: Pipsqueak\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Pipsqueak\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Placalicious\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Placalicious\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305,

5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Plata\_8 Start: 4551, Stop: 6359, Start Num: 62

Candidate Starts for Plata\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Plmatters\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Plmatters\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Podrick\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Podrick\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Pops\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Pops\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Portcullis\_12 Start: 5515, Stop: 7101, Start Num: 4

Candidate Starts for Portcullis\_12:

(Start: 4 @5515 has 98 MA's), (29, 5629), (78, 5797), (105, 5917), (109, 5935), (111, 5950), (162, 6100), (171, 6130), (178, 6190), (179, 6193), (186, 6232), (198, 6304), (227, 6364), (228, 6367), (229, 6370), (235, 6406), (237, 6415), (239, 6421), (240, 6424), (250, 6487), (255, 6532), (261, 6562), (267, 6610), (278, 6667), (284, 6688), (285, 6694), (289, 6715), (290, 6718), (295, 6745), (299, 6796), (307, 6844),

Gene: Poster\_8 Start: 5643, Stop: 7532, Start Num: 16

Candidate Starts for Poster\_8:

(Start: 16 @5643 has 401 MA's), (59, 5739), (64, 5754), (74, 5805), (76, 5814), (82, 5865), (84, 5874), (110, 5970), (122, 6030), (152, 6126), (170, 6207), (177, 6261), (190, 6351), (191, 6354), (213, 6432), (217, 6444), (240, 6546), (249, 6606), (254, 6648), (256, 6660), (267, 6735), (272, 6759), (273, 6765), (277, 6792), (279, 6798), (289, 6840), (295, 6870), (384, 7212), (390, 7221), (392, 7224), (406, 7281), (420, 7347), (421, 7350), (422, 7359), (443, 7473), (457, 7518), (461, 7524),

Gene: Potter\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Potter\_8:



(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Prickles\_8 Start: 4447, Stop: 6366, Start Num: 16

Candidate Starts for Prickles\_8:

(Start: 16 @4447 has 401 MA's), (Start: 21 @4462 has 5 MA's), (Start: 62 @4558 has 5 MA's), (67, 4573), (83, 4684), (115, 4816), (121, 4840), (122, 4846), (124, 4858), (128, 4870), (171, 5035), (188, 5161), (189, 5164), (190, 5176), (193, 5185), (194, 5197), (211, 5260), (214, 5269), (223, 5305), (228, 5323), (231, 5332), (240, 5380), (253, 5476), (254, 5482), (261, 5518), (267, 5566), (272, 5590), (305, 5785), (326, 5878), (408, 6130), (434, 6265), (443, 6307), (447, 6319),

Gene: Prince\_9 Start: 6908, Stop: 8797, Start Num: 16

Candidate Starts for Prince\_9:

(Start: 16 @6908 has 401 MA's), (Start: 21 @6923 has 5 MA's), (59, 7004), (64, 7019), (74, 7070), (76, 7079), (82, 7130), (110, 7235), (122, 7295), (152, 7391), (169, 7469), (170, 7472), (172, 7481), (177, 7526), (190, 7616), (191, 7619), (213, 7697), (217, 7709), (240, 7811), (249, 7871), (254, 7913), (256, 7925), (272, 8024), (273, 8030), (277, 8057), (279, 8063), (282, 8072), (289, 8105), (304, 8213), (384, 8477), (390, 8486), (392, 8489), (408, 8552), (420, 8612), (421, 8615), (422, 8624), (443, 8738), (457, 8783), (461, 8789),

Gene: PrinceCharming\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for PrinceCharming\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: ProfessorX\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for ProfessorX\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Puhltonio\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Puhltonio\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Pulchra\_21 Start: 8840, Stop: 10516, Start Num: 10

Candidate Starts for Pulchra\_21:

(Start: 10 @8840 has 37 MA's), (Start: 11 @8849 has 13 MA's), (14, 8864), (46, 8963), (49, 8969), (73, 9074), (76, 9086), (90, 9185), (91, 9191), (94, 9203), (106, 9257), (110, 9275), (121, 9329), (129,

9359), (145, 9398), (151, 9416), (152, 9425), (159, 9461), (172, 9524), (180, 9587), (185, 9614), (227, 9761), (228, 9764), (235, 9803), (240, 9821), (252, 9893), (261, 9959), (262, 9968), (267, 10007), (274, 10040), (280, 10073), (282, 10079), (286, 10109), (289, 10124), (308, 10262), (311, 10277), (318, 10298), (319, 10301),

Gene: PullumCavea\_12 Start: 5562, Stop: 7145, Start Num: 4

Candidate Starts for PullumCavea\_12:

(Start: 4 @5562 has 98 MA's), (29, 5676), (78, 5844), (105, 5964), (109, 5982), (111, 5997), (162, 6147), (171, 6177), (178, 6237), (179, 6240), (186, 6279), (198, 6351), (227, 6411), (228, 6414), (229, 6417), (235, 6453), (237, 6462), (239, 6468), (240, 6471), (250, 6534), (255, 6579), (261, 6609), (267, 6657), (278, 6714), (284, 6735), (285, 6741), (289, 6762), (295, 6792), (299, 6843), (307, 6891),

Gene: QueenBeane\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for QueenBeane\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: QueenPie\_9 Start: 6601, Stop: 8490, Start Num: 16

Candidate Starts for QueenPie\_9:

(Start: 16 @6601 has 401 MA's), (59, 6697), (64, 6712), (74, 6763), (76, 6772), (82, 6823), (84, 6832), (110, 6928), (122, 6988), (152, 7084), (170, 7165), (177, 7219), (190, 7309), (191, 7312), (213, 7390), (217, 7402), (240, 7504), (249, 7564), (254, 7606), (256, 7618), (267, 7693), (272, 7717), (273, 7723), (277, 7750), (279, 7756), (289, 7798), (384, 8170), (390, 8179), (392, 8182), (408, 8245), (420, 8305), (421, 8308), (422, 8317), (443, 8431), (457, 8476), (461, 8482),

Gene: Quesadilla\_11 Start: 7419, Stop: 9299, Start Num: 16

Candidate Starts for Quesadilla\_11:

(Start: 16 @7419 has 401 MA's), (Start: 66 @7533 has 2 MA's), (73, 7578), (105, 7725), (108, 7737), (115, 7776), (131, 7836), (152, 7881), (159, 7917), (161, 7932), (177, 8016), (183, 8049), (189, 8094), (190, 8106), (194, 8127), (213, 8196), (217, 8208), (248, 8361), (254, 8412), (277, 8556), (278, 8559), (281, 8568), (295, 8634), (319, 8784), (325, 8808), (383, 8991), (390, 9003), (397, 9021), (420, 9123), (422, 9135), (435, 9204), (454, 9276),

Gene: Quhwah\_22 Start: 8789, Stop: 10495, Start Num: 10

Candidate Starts for Quhwah\_22:

(Start: 10 @8789 has 37 MA's), (Start: 11 @8798 has 13 MA's), (46, 8912), (49, 8918), (73, 9023), (76, 9035), (90, 9134), (91, 9140), (94, 9152), (106, 9206), (110, 9224), (121, 9278), (129, 9308), (145, 9347), (151, 9365), (152, 9374), (159, 9410), (172, 9473), (180, 9536), (185, 9563), (190, 9608), (227, 9710), (228, 9713), (235, 9752), (240, 9770), (252, 9842), (261, 9908), (262, 9917), (267, 9956), (274, 9989), (280, 10022), (282, 10028), (286, 10058), (308, 10211), (311, 10226), (318, 10247), (319, 10250), (376, 10454), (378, 10463),

Gene: Quisquilliae\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Quisquilliae\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Qyrzula\_12 Start: 7818, Stop: 9707, Start Num: 16

Candidate Starts for Qyrzula\_12:

(Start: 16 @7818 has 401 MA's), (31, 7866), (41, 7890), (53, 7908), (Start: 66 @7941 has 2 MA's), (82, 8049), (103, 8133), (118, 8196), (126, 8232), (143, 8283), (148, 8295), (152, 8316), (170, 8394), (172, 8403), (177, 8448), (190, 8538), (191, 8541), (193, 8547), (194, 8559), (199, 8574), (201, 8586), (226, 8670), (232, 8703), (236, 8721), (246, 8766), (254, 8835), (256, 8847), (267, 8922), (272, 8946), (273, 8952), (277, 8979), (281, 8991), (283, 8997), (289, 9027), (290, 9030), (295, 9057), (301, 9123), (303, 9132), (319, 9207), (329, 9243), (355, 9288), (394, 9426), (396, 9429), (400, 9441), (419, 9528), (421, 9537), (422, 9546), (424, 9561), (430, 9591), (434, 9609), (437, 9624), (443, 9651), (447, 9663), (461, 9699),

Gene: RagingRooster\_11 Start: 6315, Stop: 8219, Start Num: 16

Candidate Starts for RagingRooster\_11:

(Start: 16 @6315 has 401 MA's), (22, 6342), (60, 6423), (74, 6486), (83, 6552), (89, 6585), (118, 6693), (140, 6783), (158, 6861), (172, 6918), (178, 6972), (190, 7053), (194, 7074), (200, 7101), (219, 7152), (220, 7161), (223, 7170), (254, 7347), (256, 7359), (267, 7434), (272, 7458), (276, 7479), (294, 7563), (313, 7701), (319, 7719), (326, 7746), (337, 7770), (398, 7944), (421, 8049), (422, 8058), (427, 8085), (447, 8175), (454, 8199), (459, 8211),

Gene: Ramiel05\_19 Start: 8475, Stop: 10151, Start Num: 10

Candidate Starts for Ramiel05\_19:

(Start: 10 @8475 has 37 MA's), (Start: 11 @8484 has 13 MA's), (46, 8598), (49, 8604), (73, 8709), (76, 8721), (90, 8820), (91, 8826), (94, 8838), (106, 8892), (110, 8910), (121, 8964), (129, 8994), (145, 9033), (151, 9051), (152, 9060), (159, 9096), (172, 9159), (180, 9222), (185, 9249), (227, 9396), (228, 9399), (235, 9438), (240, 9456), (252, 9528), (261, 9594), (262, 9603), (274, 9675), (280, 9708), (282, 9714), (286, 9744), (289, 9759), (308, 9897), (311, 9912), (318, 9933), (319, 9936),

Gene: RawrgerThat\_9 Start: 6757, Stop: 8628, Start Num: 21

Candidate Starts for RawrgerThat\_9:

(Start: 16 @6742 has 401 MA's), (Start: 21 @6757 has 5 MA's), (59, 6838), (64, 6853), (74, 6904), (76, 6913), (82, 6964), (110, 7069), (122, 7129), (152, 7225), (169, 7303), (170, 7306), (177, 7360), (190, 7450), (191, 7453), (213, 7531), (217, 7543), (240, 7645), (249, 7705), (254, 7747), (256, 7759), (272, 7858), (273, 7864), (277, 7891), (279, 7897), (289, 7939), (295, 7969), (384, 8308), (390, 8317), (392, 8320), (405, 8359), (408, 8383), (420, 8443), (421, 8446), (422, 8455), (443, 8569), (457, 8614), (461, 8620),

Gene: RedMaple\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for RedMaple\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Reprobate\_10 Start: 6968, Stop: 8833, Start Num: 16

Candidate Starts for Reprobate\_10:

(Start: 16 @6968 has 401 MA's), (Start: 21 @6983 has 5 MA's), (70, 7088), (73, 7124), (76, 7136), (77, 7145), (89, 7223), (103, 7268), (121, 7343), (122, 7349), (155, 7448), (159, 7460), (161, 7475), (172, 7514), (177, 7559), (183, 7592), (191, 7652), (194, 7670), (231, 7796), (240, 7844), (244, 7868), (249, 7904), (254, 7946), (267, 8033), (272, 8057), (277, 8090), (281, 8102), (284, 8114), (289, 8138), (319, 8318), (338, 8369), (393, 8537), (400, 8555), (403, 8567), (406, 8591), (420, 8657), (439, 8762), (461, 8825), (462, 8828),

Gene: Rhinoforte\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Rhinoforte\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Ribeye\_13 Start: 6470, Stop: 8098, Start Num: 4

Candidate Starts for Ribeye\_13:

(Start: 4 @6470 has 98 MA's), (29, 6593), (38, 6614), (58, 6671), (72, 6734), (77, 6764), (86, 6827), (90, 6854), (149, 7022), (167, 7109), (174, 7148), (177, 7172), (180, 7190), (183, 7205), (184, 7211), (193, 7274), (227, 7346), (234, 7385), (246, 7451), (250, 7481), (255, 7526), (257, 7541), (258, 7544), (263, 7580), (272, 7628), (274, 7637), (278, 7664), (285, 7691), (294, 7736), (302, 7811), (307, 7841), (310, 7859), (324, 7898), (327, 7904), (334, 7919), (343, 7940), (344, 7946), (363, 7982), (369, 8015),

Gene: Rich\_10 Start: 6696, Stop: 8564, Start Num: 16

Candidate Starts for Rich\_10:

(Start: 16 @6696 has 401 MA's), (22, 6720), (70, 6816), (73, 6852), (76, 6864), (116, 7050), (121, 7071), (122, 7077), (159, 7188), (161, 7203), (172, 7242), (191, 7380), (194, 7398), (213, 7458), (244, 7596), (254, 7674), (256, 7686), (260, 7704), (272, 7785), (277, 7818), (281, 7830), (284, 7842), (289, 7866), (323, 8064), (331, 8085), (381, 8244), (392, 8265), (393, 8268), (400, 8286), (420, 8388), (431, 8448), (461, 8556), (462, 8559),

Gene: Ricotta\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Ricotta\_8:

(Start: 16 @4440 has 401 MA's), (Start: 21 @4455 has 5 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Riggan\_8 Start: 4445, Stop: 6364, Start Num: 16

Candidate Starts for Riggan\_8:

(Start: 16 @4445 has 401 MA's), (Start: 21 @4460 has 5 MA's), (Start: 62 @4556 has 5 MA's), (67, 4571), (83, 4682), (115, 4814), (121, 4838), (122, 4844), (124, 4856), (128, 4868), (171, 5033), (188, 5159), (189, 5162), (190, 5174), (193, 5183), (194, 5195), (211, 5258), (214, 5267), (223, 5303), (228, 5321), (231, 5330), (240, 5378), (253, 5474), (254, 5480), (261, 5516), (267, 5564), (272, 5588), (305, 5783), (326, 5876), (408, 6128), (434, 6263), (443, 6305), (447, 6317),

Gene: Rimu\_8 Start: 4563, Stop: 6356, Start Num: 67

Candidate Starts for Rimu\_8:

(Start: 16 @4437 has 401 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),

Gene: Rinkes\_13 Start: 8554, Stop: 10458, Start Num: 16

Candidate Starts for Rinkes\_13:

(Start: 16 @8554 has 401 MA's), (79, 8749), (82, 8779), (105, 8878), (115, 8929), (138, 9022), (181, 9211), (187, 9247), (190, 9280), (191, 9283), (194, 9301), (196, 9307), (211, 9355), (214, 9364), (220, 9391), (234, 9454), (235, 9457), (236, 9463), (240, 9475), (249, 9535), (254, 9577), (255, 9583), (271, 9682), (274, 9694), (277, 9718), (278, 9721), (281, 9730), (294, 9790), (299, 9847), (300, 9859), (303, 9871), (356, 10036), (382, 10141), (390, 10156), (400, 10180), (411, 10234), (420, 10282), (421, 10285), (422, 10294), (435, 10363), (437, 10372), (447, 10411), (450, 10423), (462, 10453),

Gene: Rita130\_10 Start: 6695, Stop: 8560, Start Num: 16

Candidate Starts for Rita130\_10:

(Start: 16 @6695 has 401 MA's), (Start: 21 @6710 has 5 MA's), (39, 6752), (73, 6848), (76, 6860), (116, 7046), (119, 7058), (121, 7067), (159, 7184), (161, 7199), (172, 7238), (191, 7376), (194, 7394), (213, 7454), (244, 7592), (249, 7628), (254, 7670), (256, 7682), (267, 7757), (272, 7781), (277, 7814), (281, 7826), (284, 7838), (289, 7862), (319, 8042), (323, 8060), (381, 8240), (392, 8261), (400, 8282), (420, 8384), (431, 8444), (461, 8552), (462, 8555),

Gene: Rita1961\_11 Start: 6315, Stop: 8219, Start Num: 16

Candidate Starts for Rita1961\_11:

(Start: 16 @6315 has 401 MA's), (22, 6342), (60, 6423), (74, 6486), (83, 6552), (89, 6585), (118, 6693), (140, 6783), (158, 6861), (172, 6918), (178, 6972), (190, 7053), (194, 7074), (200, 7101), (219, 7152), (220, 7161), (223, 7170), (254, 7347), (256, 7359), (267, 7434), (272, 7458), (276, 7479), (294, 7563), (313, 7701), (319, 7719), (326, 7746), (337, 7770), (396, 7935), (398, 7944), (421, 8049), (422, 8058), (427, 8085), (447, 8175), (448, 8178), (454, 8199), (459, 8211),

Gene: RiverRaider\_13 Start: 6026, Stop: 7657, Start Num: 4

Candidate Starts for RiverRaider\_13:

(Start: 4 @6026 has 98 MA's), (58, 6227), (72, 6290), (86, 6383), (100, 6440), (144, 6566), (149, 6578), (175, 6707), (177, 6728), (180, 6746), (183, 6761), (184, 6767), (227, 6902), (234, 6941), (240, 6962), (246, 7007), (250, 7037), (255, 7082), (257, 7097), (258, 7100), (263, 7136), (274, 7193), (278, 7220), (285, 7247), (298, 7346), (299, 7349), (301, 7364), (306, 7388), (307, 7397), (310, 7415), (315, 7430), (324, 7454), (333, 7472), (334, 7475), (343, 7496), (348, 7517), (363, 7541), (368, 7568), (374, 7607),

Gene: Riverton\_8 Start: 4567, Stop: 6360, Start Num: 67

Candidate Starts for Riverton\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: RoadKill\_11 Start: 5257, Stop: 6933, Start Num: 4

Candidate Starts for RoadKill\_11:

(Start: 4 @5257 has 98 MA's), (7, 5290), (23, 5368), (40, 5422), (72, 5554), (77, 5584), (88, 5662), (91, 5680), (114, 5761), (145, 5833), (149, 5842), (160, 5902), (180, 6010), (182, 6022), (183, 6025), (184, 6031), (227, 6166), (228, 6169), (240, 6226), (250, 6301), (255, 6346), (258, 6364), (262, 6385), (267, 6424), (272, 6448), (276, 6469), (278, 6484), (290, 6535), (294, 6556), (307, 6661), (314, 6691), (323, 6715), (324, 6718), (352, 6796),

Gene: RobsFeet\_21 Start: 8347, Stop: 10041, Start Num: 10

Candidate Starts for RobsFeet\_21:

(Start: 10 @8347 has 37 MA's), (Start: 11 @8356 has 13 MA's), (49, 8479), (73, 8584), (76, 8596), (90, 8695), (106, 8767), (110, 8785), (145, 8908), (150, 8920), (151, 8926), (152, 8935), (159, 8971), (172, 9034), (180, 9097), (185, 9124), (190, 9169), (214, 9220), (227, 9271), (228, 9274), (235, 9313), (237, 9322), (240, 9331), (246, 9364), (252, 9403), (261, 9469), (262, 9478), (263, 9493), (267, 9517), (280,

9583), (282, 9589), (286, 9616), (308, 9769), (319, 9808), (324, 9829), (341, 9874), (378, 10021),

Gene: Robyn\_8 Start: 4443, Stop: 6362, Start Num: 16

Candidate Starts for Robyn\_8:

(Start: 16 @4443 has 401 MA's), (Start: 21 @4458 has 5 MA's), (Start: 62 @4554 has 5 MA's), (67, 4569), (83, 4680), (115, 4812), (121, 4836), (122, 4842), (124, 4854), (128, 4866), (171, 5031), (188, 5157), (189, 5160), (190, 5172), (193, 5181), (194, 5193), (211, 5256), (214, 5265), (223, 5301), (228, 5319), (231, 5328), (240, 5376), (253, 5472), (254, 5478), (261, 5514), (267, 5562), (272, 5586), (305, 5781), (326, 5874), (408, 6126), (434, 6261), (443, 6303), (447, 6315),

Gene: Rofo\_12 Start: 7025, Stop: 8647, Start Num: 4

Candidate Starts for Rofo\_12:

(Start: 4 @7025 has 98 MA's), (50, 7184), (58, 7223), (72, 7286), (86, 7379), (90, 7406), (102, 7445), (149, 7574), (160, 7634), (175, 7703), (177, 7724), (180, 7742), (183, 7757), (184, 7763), (193, 7826), (224, 7886), (227, 7898), (234, 7937), (237, 7949), (240, 7958), (246, 8003), (250, 8033), (255, 8078), (257, 8093), (258, 8096), (263, 8132), (272, 8180), (274, 8189), (278, 8216), (307, 8393), (324, 8450), (327, 8456), (334, 8471), (343, 8492), (344, 8498), (363, 8534), (368, 8561),

Gene: RogerDodger\_13 Start: 5819, Stop: 7405, Start Num: 4

Candidate Starts for RogerDodger\_13:

(Start: 4 @5819 has 98 MA's), (48, 5963), (69, 6035), (78, 6101), (82, 6134), (102, 6218), (109, 6239), (111, 6254), (169, 6428), (171, 6434), (176, 6470), (178, 6494), (179, 6497), (186, 6536), (198, 6608), (227, 6668), (228, 6671), (229, 6674), (235, 6710), (237, 6719), (239, 6725), (240, 6728), (250, 6791), (255, 6836), (261, 6866), (267, 6914), (278, 6971), (284, 6992), (289, 7019), (290, 7022), (295, 7049), (299, 7100), (307, 7148),

Gene: Roliet\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Roliet\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: RomaT\_11 Start: 7077, Stop: 8981, Start Num: 16

Candidate Starts for RomaT\_11:

(Start: 16 @7077 has 401 MA's), (22, 7104), (60, 7185), (74, 7248), (83, 7314), (89, 7347), (118, 7455), (140, 7545), (158, 7623), (172, 7680), (178, 7734), (190, 7815), (194, 7836), (200, 7863), (219, 7914), (220, 7923), (223, 7932), (254, 8109), (256, 8121), (267, 8196), (272, 8220), (276, 8241), (294, 8325), (313, 8463), (319, 8481), (326, 8508), (337, 8532), (396, 8697), (398, 8706), (421, 8811), (422, 8820), (427, 8847), (447, 8937), (454, 8961), (459, 8973),

Gene: Roscoe\_9 Start: 4676, Stop: 6595, Start Num: 16

Candidate Starts for Roscoe\_9:

(Start: 16 @4676 has 401 MA's), (Start: 62 @4787 has 5 MA's), (67, 4802), (83, 4913), (115, 5045), (121, 5069), (122, 5075), (124, 5087), (128, 5099), (171, 5264), (188, 5390), (189, 5393), (190, 5405), (193, 5414), (194, 5426), (211, 5489), (214, 5498), (223, 5534), (228, 5552), (231, 5561), (240, 5609), (253, 5705), (254, 5711), (261, 5747), (267, 5795), (272, 5819), (305, 6014), (326, 6107), (408, 6359), (434, 6494), (443, 6536), (447, 6548),

Gene: Rosebush\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for Rosebush\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Roy17\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Roy17\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: SDcharge11\_8 Start: 4440, Stop: 6353, Start Num: 16

Candidate Starts for SDcharge11\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6117), (434, 6252), (443, 6294), (447, 6306),

Gene: Sabella\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Sabella\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (148, 8205), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: Saguaro\_11 Start: 7627, Stop: 9525, Start Num: 16

Candidate Starts for Saguaro\_11:

(Start: 16 @7627 has 401 MA's), (Start: 66 @7741 has 2 MA's), (76, 7798), (82, 7849), (89, 7888), (105, 7948), (108, 7960), (112, 7984), (124, 8041), (152, 8104), (159, 8140), (172, 8194), (177, 8239), (181, 8260), (183, 8272), (190, 8329), (194, 8350), (201, 8377), (205, 8398), (213, 8419), (217, 8431), (226, 8470), (229, 8479), (237, 8524), (240, 8533), (244, 8557), (254, 8635), (256, 8647), (267, 8722), (272, 8746), (281, 8791), (289, 8827), (294, 8851), (309, 8974), (319, 9007), (324, 9028), (437, 9439), (442, 9463), (443, 9466), (457, 9511),

Gene: Salvador\_12 Start: 5434, Stop: 7020, Start Num: 4

Candidate Starts for Salvador\_12:

(Start: 4 @5434 has 98 MA's), (73, 5686), (78, 5716), (102, 5833), (109, 5854), (111, 5869), (169, 6043), (176, 6085), (178, 6109), (179, 6112), (186, 6151), (198, 6223), (227, 6283), (228, 6286), (229, 6289), (235, 6325), (237, 6334), (239, 6340), (240, 6343), (250, 6406), (255, 6451), (261, 6481), (267, 6529), (278, 6586), (284, 6607), (289, 6634), (290, 6637), (295, 6664), (299, 6715), (307, 6763),

Gene: Samaymay\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Samaymay\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Sampson\_14 Start: 6902, Stop: 8572, Start Num: 4

Candidate Starts for Sampson\_14:

(Start: 4 @6902 has 98 MA's), (Start: 15 @6977 has 4 MA's), (20, 6998), (27, 7025), (55, 7112), (72, 7193), (77, 7223), (78, 7232), (89, 7307), (91, 7319), (105, 7355), (114, 7400), (145, 7472), (149, 7481), (173, 7592), (177, 7631), (178, 7640), (180, 7649), (182, 7661), (183, 7664), (184, 7670), (194, 7745), (224, 7793), (227, 7805), (247, 7925), (250, 7940), (255, 7985), (262, 8024), (269, 8075), (276, 8108), (277, 8120), (278, 8123), (285, 8150), (290, 8174), (299, 8252), (307, 8303), (314, 8333), (316, 8339), (335, 8396), (352, 8441),

Gene: Sanjuju\_11 Start: 6983, Stop: 8605, Start Num: 4

Candidate Starts for Sanjuju\_11:

(Start: 4 @6983 has 98 MA's), (29, 7103), (50, 7142), (58, 7181), (72, 7244), (86, 7337), (90, 7364), (102, 7403), (149, 7532), (160, 7592), (175, 7661), (177, 7682), (180, 7700), (183, 7715), (184, 7721), (193, 7784), (224, 7844), (227, 7856), (234, 7895), (237, 7907), (240, 7916), (243, 7949), (246, 7961), (250, 7991), (255, 8036), (257, 8051), (258, 8054), (263, 8090), (272, 8138), (274, 8147), (278, 8174), (307, 8351), (324, 8408), (327, 8414), (334, 8429), (343, 8450), (344, 8456), (363, 8492), (368, 8519),

Gene: Saronaya\_12 Start: 6272, Stop: 7900, Start Num: 4

Candidate Starts for Saronaya\_12:

(Start: 4 @6272 has 98 MA's), (29, 6395), (38, 6416), (58, 6473), (72, 6536), (77, 6566), (86, 6629), (90, 6656), (149, 6824), (167, 6911), (174, 6950), (177, 6974), (180, 6992), (183, 7007), (184, 7013), (193, 7076), (227, 7148), (234, 7187), (246, 7253), (250, 7283), (255, 7328), (257, 7343), (258, 7346), (263, 7382), (272, 7430), (274, 7439), (278, 7466), (285, 7493), (294, 7538), (302, 7613), (307, 7643), (310, 7661), (324, 7700), (327, 7706), (334, 7721), (343, 7742), (344, 7748), (363, 7784), (369, 7817),

Gene: SassyCat97\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for SassyCat97\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Savannah\_19 Start: 8499, Stop: 10175, Start Num: 10

Candidate Starts for Savannah\_19:

(Start: 10 @8499 has 37 MA's), (Start: 11 @8508 has 13 MA's), (46, 8622), (49, 8628), (73, 8733), (76, 8745), (90, 8844), (91, 8850), (94, 8862), (106, 8916), (110, 8934), (121, 8988), (129, 9018), (145, 9057), (151, 9075), (152, 9084), (159, 9120), (172, 9183), (180, 9246), (185, 9273), (227, 9420), (228, 9423), (235, 9462), (240, 9480), (252, 9552), (261, 9618), (262, 9627), (274, 9699), (280, 9732), (282, 9738), (286, 9768), (289, 9783), (308, 9921), (311, 9936), (318, 9957), (319, 9960),

Gene: Savbucketdawg\_12 Start: 5267, Stop: 6853, Start Num: 4

Candidate Starts for Savbucketdawg\_12:

(Start: 4 @5267 has 98 MA's), (29, 5381), (78, 5549), (105, 5669), (109, 5687), (111, 5702), (162, 5852), (171, 5882), (178, 5942), (179, 5945), (186, 5984), (198, 6056), (227, 6116), (228, 6119), (229, 6122), (235, 6158), (237, 6167), (239, 6173), (240, 6176), (250, 6239), (255, 6284), (261, 6314), (267,



6362), (278, 6419), (284, 6440), (285, 6446), (289, 6467), (290, 6470), (295, 6497), (299, 6548), (307, 6596),

Gene: Schadenfreude\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Schadenfreude\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: SchottB\_11 Start: 6448, Stop: 8076, Start Num: 4

Candidate Starts for SchottB\_11:

(Start: 4 @6448 has 98 MA's), (29, 6571), (38, 6592), (58, 6649), (72, 6712), (77, 6742), (86, 6805), (90, 6832), (149, 7000), (167, 7087), (174, 7126), (177, 7150), (180, 7168), (183, 7183), (184, 7189), (193, 7252), (227, 7324), (234, 7363), (246, 7429), (250, 7459), (255, 7504), (257, 7519), (258, 7522), (263, 7558), (272, 7606), (274, 7615), (278, 7642), (285, 7669), (294, 7714), (302, 7789), (307, 7819), (310, 7837), (324, 7876), (327, 7882), (334, 7897), (343, 7918), (344, 7924), (363, 7960), (369, 7993),

Gene: Schueller\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Schueller\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Scioto\_14 Start: 6957, Stop: 8627, Start Num: 4

Candidate Starts for Scioto\_14:

(Start: 4 @6957 has 98 MA's), (Start: 15 @7032 has 4 MA's), (20, 7053), (27, 7080), (55, 7167), (72, 7248), (77, 7278), (78, 7287), (89, 7362), (91, 7374), (105, 7410), (114, 7455), (145, 7527), (149, 7536), (173, 7647), (177, 7686), (178, 7695), (180, 7704), (182, 7716), (183, 7719), (184, 7725), (194, 7800), (224, 7848), (227, 7860), (247, 7980), (250, 7995), (255, 8040), (262, 8079), (269, 8130), (276, 8163), (277, 8175), (278, 8178), (285, 8205), (290, 8229), (299, 8307), (307, 8358), (314, 8388), (316, 8394), (335, 8451), (352, 8496),

Gene: Scoot17C\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Scoot17C\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Scrick\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Scrick\_8:

(Start: 16 @4442 has 401 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Scumberland\_21 Start: 8659, Stop: 10365, Start Num: 10

Candidate Starts for Scumberland\_21:

(Start: 10 @8659 has 37 MA's), (Start: 11 @8668 has 13 MA's), (14, 8683), (46, 8782), (49, 8788), (73, 8893), (76, 8905), (90, 9004), (91, 9010), (106, 9076), (110, 9094), (121, 9148), (129, 9178), (145, 9217), (151, 9235), (152, 9244), (159, 9280), (172, 9343), (180, 9406), (185, 9433), (190, 9478), (227, 9580), (228, 9583), (235, 9622), (240, 9640), (252, 9712), (261, 9778), (262, 9787), (267, 9826), (274, 9859), (280, 9892), (282, 9898), (286, 9928), (308, 10081), (311, 10096), (318, 10117), (319, 10120), (378, 10333),

Gene: Sedona\_13 Start: 7991, Stop: 9613, Start Num: 4

Candidate Starts for Sedona\_13:

(Start: 4 @7991 has 98 MA's), (50, 8150), (58, 8189), (72, 8252), (86, 8345), (90, 8372), (102, 8411), (149, 8540), (160, 8600), (175, 8669), (177, 8690), (180, 8708), (183, 8723), (184, 8729), (193, 8792), (224, 8852), (227, 8864), (234, 8903), (237, 8915), (240, 8924), (243, 8957), (246, 8969), (250, 8999), (255, 9044), (257, 9059), (258, 9062), (263, 9098), (272, 9146), (274, 9155), (278, 9182), (307, 9359), (324, 9416), (327, 9422), (334, 9437), (343, 9458), (344, 9464), (363, 9500), (368, 9527),

Gene: Sejanus\_7 Start: 4088, Stop: 6055, Start Num: 9

Candidate Starts for Sejanus\_7:

(Start: 9 @4088 has 4 MA's), (12, 4106), (36, 4184), (53, 4214), (60, 4232), (82, 4355), (108, 4451), (110, 4460), (120, 4511), (149, 4610), (155, 4655), (170, 4715), (172, 4724), (177, 4769), (181, 4790), (189, 4847), (192, 4865), (212, 4946), (218, 4967), (221, 4979), (223, 4988), (226, 5000), (236, 5051), (237, 5054), (244, 5087), (254, 5165), (256, 5177), (261, 5201), (271, 5273), (272, 5276), (289, 5357), (302, 5456), (307, 5486), (319, 5537), (395, 5771), (412, 5837), (413, 5846), (421, 5882), (424, 5906), (439, 5984), (443, 5996), (461, 6047), (462, 6050),

Gene: Selr12\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Selr12\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Selwyn23\_21 Start: 8668, Stop: 10344, Start Num: 10

Candidate Starts for Selwyn23\_21:

(Start: 10 @8668 has 37 MA's), (Start: 11 @8677 has 13 MA's), (14, 8692), (46, 8791), (49, 8797), (73, 8902), (76, 8914), (90, 9013), (91, 9019), (94, 9031), (106, 9085), (110, 9103), (121, 9157), (129, 9187), (145, 9226), (151, 9244), (152, 9253), (159, 9289), (172, 9352), (180, 9415), (185, 9442), (227, 9589), (228, 9592), (235, 9631), (240, 9649), (252, 9721), (261, 9787), (262, 9796), (274, 9868), (280, 9901), (282, 9907), (286, 9937), (289, 9952), (308, 10090), (311, 10105), (318, 10126), (319, 10129),

Gene: Serendipitous\_10 Start: 6747, Stop: 8612, Start Num: 16

Candidate Starts for Serendipitous\_10:

(Start: 16 @6747 has 401 MA's), (Start: 21 @6762 has 5 MA's), (73, 6900), (76, 6912), (84, 6972), (103, 7044), (121, 7119), (122, 7125), (159, 7236), (161, 7251), (165, 7263), (172, 7290), (191, 7428), (194, 7446), (213, 7506), (244, 7644), (249, 7680), (254, 7722), (256, 7734), (267, 7809), (272, 7833), (277, 7866), (281, 7878), (284, 7890), (289, 7914), (319, 8094), (323, 8112), (400, 8334), (420, 8436), (443, 8553),

Gene: Serendipity\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Serendipity\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188,

5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Serpentine\_008 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Serpentine\_008:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Shatter\_8 Start: 5303, Stop: 7141, Start Num: 16

Candidate Starts for Shatter\_8:

(Start: 16 @5303 has 401 MA's), (Start: 32 @5351 has 2 MA's), (Start: 66 @5417 has 2 MA's), (73, 5459), (97, 5591), (118, 5654), (122, 5672), (170, 5825), (172, 5834), (177, 5879), (183, 5912), (190, 5969), (191, 5972), (194, 5990), (202, 6023), (210, 6050), (236, 6161), (240, 6173), (242, 6188), (254, 6275), (256, 6287), (267, 6362), (272, 6386), (278, 6422), (280, 6428), (281, 6431), (282, 6434), (289, 6467), (397, 6866), (398, 6869), (400, 6872), (414, 6941), (416, 6947), (421, 6968), (427, 7004), (436, 7049), (439, 7070), (447, 7094), (450, 7106), (454, 7118), (456, 7121),

Gene: Sheila\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Sheila\_8:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Shenandoah\_11 Start: 6314, Stop: 8221, Start Num: 16

Candidate Starts for Shenandoah\_11:

(Start: 16 @6314 has 401 MA's), (22, 6341), (60, 6422), (74, 6485), (83, 6551), (89, 6584), (118, 6692), (140, 6782), (158, 6860), (172, 6917), (178, 6971), (190, 7052), (194, 7073), (200, 7100), (219, 7151), (220, 7160), (223, 7169), (254, 7346), (256, 7358), (267, 7433), (272, 7457), (276, 7478), (294, 7562), (313, 7700), (319, 7718), (326, 7745), (337, 7769), (396, 7937), (398, 7946), (421, 8051), (422, 8060), (427, 8087), (447, 8177), (448, 8180), (454, 8201), (459, 8213),

Gene: Shenyu\_10 Start: 6702, Stop: 8567, Start Num: 16

Candidate Starts for Shenyu\_10:

(Start: 16 @6702 has 401 MA's), (Start: 21 @6717 has 5 MA's), (73, 6855), (76, 6867), (84, 6927), (92, 6969), (116, 7053), (119, 7065), (121, 7074), (159, 7191), (161, 7206), (172, 7245), (191, 7383), (194, 7401), (211, 7455), (244, 7599), (249, 7635), (254, 7677), (267, 7764), (272, 7788), (277, 7821), (281, 7833), (284, 7845), (289, 7869), (319, 8049), (323, 8067), (381, 8247), (392, 8268), (400, 8289), (420, 8391), (431, 8451), (461, 8559), (462, 8562),

Gene: ShiVal\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for ShiVal\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Shinji\_12 Start: 5456, Stop: 7042, Start Num: 4

Candidate Starts for Shinji\_12:

(Start: 4 @5456 has 98 MA's), (29, 5570), (78, 5738), (105, 5858), (109, 5876), (111, 5891), (162, 6041), (171, 6071), (178, 6131), (179, 6134), (186, 6173), (198, 6245), (227, 6305), (228, 6308), (229, 6311), (235, 6347), (237, 6356), (239, 6362), (240, 6365), (250, 6428), (255, 6473), (261, 6503), (267, 6551), (278, 6608), (284, 6629), (285, 6635), (289, 6656), (290, 6659), (295, 6686), (299, 6737), (307, 6785),

Gene: Shivanishola\_12 Start: 7199, Stop: 8818, Start Num: 4

Candidate Starts for Shivanishola\_12:

(Start: 4 @7199 has 98 MA's), (50, 7358), (58, 7397), (72, 7460), (86, 7553), (90, 7580), (102, 7619), (149, 7748), (160, 7808), (175, 7877), (177, 7898), (180, 7916), (183, 7931), (184, 7937), (193, 8000), (227, 8072), (234, 8111), (237, 8123), (240, 8132), (243, 8165), (246, 8177), (250, 8207), (255, 8252), (257, 8267), (258, 8270), (263, 8306), (272, 8354), (274, 8363), (278, 8390), (307, 8567), (324, 8624), (327, 8630), (334, 8645), (343, 8666), (344, 8672), (363, 8708), (368, 8735),

Gene: Shotgun\_19 Start: 8297, Stop: 9973, Start Num: 10

Candidate Starts for Shotgun\_19:

(Start: 10 @8297 has 37 MA's), (Start: 11 @8306 has 13 MA's), (46, 8420), (49, 8426), (73, 8531), (76, 8543), (90, 8642), (91, 8648), (94, 8660), (106, 8714), (110, 8732), (121, 8786), (129, 8816), (145, 8855), (151, 8873), (152, 8882), (159, 8918), (172, 8981), (180, 9044), (185, 9071), (227, 9218), (228, 9221), (235, 9260), (240, 9278), (252, 9350), (261, 9416), (262, 9425), (274, 9497), (280, 9530), (282, 9536), (286, 9566), (289, 9581), (308, 9719), (311, 9734), (318, 9755), (319, 9758),

Gene: Shrubaron\_20 Start: 7982, Stop: 9676, Start Num: 10

Candidate Starts for Shrubaron\_20:

(Start: 10 @7982 has 37 MA's), (Start: 11 @7991 has 13 MA's), (49, 8114), (73, 8219), (76, 8231), (90, 8330), (106, 8402), (110, 8420), (145, 8543), (150, 8555), (151, 8561), (152, 8570), (159, 8606), (172, 8669), (180, 8732), (185, 8759), (190, 8804), (193, 8813), (214, 8855), (227, 8906), (228, 8909), (235, 8948), (237, 8957), (240, 8966), (246, 8999), (252, 9038), (261, 9104), (262, 9113), (263, 9128), (267, 9152), (280, 9218), (282, 9224), (286, 9251), (308, 9404), (319, 9443), (324, 9464), (341, 9509), (378, 9656),

Gene: Sigman\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Sigman\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: SilverBell\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for SilverBell\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Simielle\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Simielle\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188,

5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: SirBeauregard\_8 Start: 4550, Stop: 6358, Start Num: 62

Candidate Starts for SirBeauregard\_8:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (128, 4862), (158, 4976), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: SirFrank\_19 Start: 8327, Stop: 10030, Start Num: 10

Candidate Starts for SirFrank\_19:

(Start: 10 @8327 has 37 MA's), (Start: 11 @8336 has 13 MA's), (49, 8456), (73, 8561), (76, 8573), (90, 8672), (91, 8678), (93, 8687), (106, 8744), (121, 8816), (127, 8840), (128, 8843), (139, 8867), (145, 8885), (151, 8903), (152, 8912), (159, 8948), (172, 9011), (180, 9074), (185, 9101), (190, 9146), (227, 9248), (228, 9251), (235, 9290), (240, 9308), (252, 9380), (261, 9446), (262, 9455), (267, 9494), (280, 9560), (282, 9566), (286, 9596), (308, 9749), (312, 9767), (319, 9788), (324, 9809), (325, 9812), (333, 9833), (376, 9989),

Gene: SirJeffery\_10 Start: 6695, Stop: 8560, Start Num: 16

Candidate Starts for SirJeffery\_10:

(Start: 16 @6695 has 401 MA's), (Start: 21 @6710 has 5 MA's), (39, 6752), (73, 6848), (76, 6860), (116, 7046), (119, 7058), (121, 7067), (159, 7184), (161, 7199), (172, 7238), (191, 7376), (194, 7394), (213, 7454), (244, 7592), (249, 7628), (254, 7670), (256, 7682), (267, 7757), (272, 7781), (277, 7814), (281, 7826), (284, 7838), (289, 7862), (319, 8042), (323, 8060), (381, 8240), (392, 8261), (400, 8282), (420, 8384), (431, 8444), (461, 8552), (462, 8555),

Gene: Sisko\_7 Start: 5107, Stop: 6948, Start Num: 16

Candidate Starts for Sisko\_7:

(Start: 16 @5107 has 401 MA's), (Start: 66 @5221 has 2 MA's), (73, 5263), (82, 5326), (118, 5458), (122, 5476), (148, 5530), (152, 5551), (177, 5683), (183, 5716), (190, 5773), (191, 5776), (194, 5794), (204, 5845), (211, 5866), (236, 5974), (240, 5986), (254, 6088), (278, 6235), (281, 6244), (293, 6301), (370, 6580), (396, 6667), (397, 6673), (414, 6748), (416, 6754), (421, 6775), (436, 6856), (443, 6889), (447, 6901), (454, 6925), (456, 6928),

Gene: Sitar\_13 Start: 7365, Stop: 8987, Start Num: 4

Candidate Starts for Sitar\_13:

(Start: 4 @7365 has 98 MA's), (50, 7524), (58, 7563), (72, 7626), (90, 7746), (102, 7785), (145, 7905), (149, 7914), (160, 7974), (175, 8043), (177, 8064), (180, 8082), (183, 8097), (184, 8103), (193, 8166), (224, 8226), (227, 8238), (234, 8277), (237, 8289), (240, 8298), (243, 8331), (246, 8343), (250, 8373), (255, 8418), (257, 8433), (258, 8436), (263, 8472), (272, 8520), (274, 8529), (278, 8556), (307, 8733), (324, 8790), (327, 8796), (334, 8811), (343, 8832), (344, 8838), (363, 8874), (368, 8901),

Gene: Skippy\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Skippy\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Slatt\_8 Start: 4443, Stop: 6362, Start Num: 16

Candidate Starts for Slatt\_8:

(Start: 16 @4443 has 401 MA's), (Start: 21 @4458 has 5 MA's), (Start: 62 @4554 has 5 MA's), (67, 4569), (83, 4680), (115, 4812), (121, 4836), (122, 4842), (124, 4854), (128, 4866), (171, 5031), (188, 5157), (189, 5160), (190, 5172), (193, 5181), (194, 5193), (211, 5256), (214, 5265), (223, 5301), (228, 5319), (231, 5328), (240, 5376), (253, 5472), (254, 5478), (261, 5514), (267, 5562), (272, 5586), (305, 5781), (326, 5874), (408, 6126), (434, 6261), (443, 6303), (447, 6315),

Gene: SlippinJimmy\_11 Start: 7076, Stop: 8980, Start Num: 16

Candidate Starts for SlippinJimmy\_11:

(Start: 16 @7076 has 401 MA's), (22, 7103), (60, 7184), (74, 7247), (83, 7313), (89, 7346), (118, 7454), (140, 7544), (158, 7622), (172, 7679), (178, 7733), (190, 7814), (194, 7835), (200, 7862), (219, 7913), (220, 7922), (223, 7931), (254, 8108), (256, 8120), (267, 8195), (272, 8219), (276, 8240), (294, 8324), (313, 8462), (319, 8480), (326, 8507), (337, 8531), (396, 8696), (398, 8705), (421, 8810), (422, 8819), (427, 8846), (447, 8936), (448, 8939), (454, 8960), (459, 8972),

Gene: Smarties\_28 Start: 10100, Stop: 11824, Start Num: 10

Candidate Starts for Smarties\_28:

(Start: 10 @10100 has 37 MA's), (Start: 11 @10109 has 13 MA's), (49, 10229), (73, 10334), (76, 10346), (90, 10445), (106, 10517), (110, 10535), (157, 10715), (159, 10721), (163, 10745), (172, 10784), (180, 10847), (185, 10874), (190, 10919), (227, 11021), (228, 11024), (235, 11063), (237, 11072), (246, 11114), (252, 11153), (261, 11219), (262, 11228), (263, 11243), (267, 11267), (280, 11333), (282, 11339), (286, 11366), (308, 11519), (312, 11537), (324, 11579), (333, 11603), (341, 11624), (359, 11660), (387, 11801), (393, 11813),

Gene: SmokingBunny\_12 Start: 5434, Stop: 7020, Start Num: 4

Candidate Starts for SmokingBunny\_12:

(Start: 4 @5434 has 98 MA's), (73, 5686), (78, 5716), (102, 5833), (109, 5854), (111, 5869), (169, 6043), (176, 6085), (178, 6109), (179, 6112), (186, 6151), (198, 6223), (227, 6283), (228, 6286), (229, 6289), (235, 6325), (237, 6334), (239, 6340), (240, 6343), (250, 6406), (255, 6451), (261, 6481), (267, 6529), (278, 6586), (284, 6607), (289, 6634), (290, 6637), (295, 6664), (299, 6715), (307, 6763),

Gene: Soile\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Soile\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Solosis\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Solosis\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Soos\_37 Start: 17429, Stop: 19387, Start Num: 15

Candidate Starts for Soos\_37:

(Start: 15 @17429 has 4 MA's), (26, 17474), (47, 17525), (57, 17552), (98, 17741), (152, 17900), (172, 17993), (182, 18068), (193, 18137), (194, 18149), (195, 18155), (216, 18257), (222, 18290), (237, 18362), (238, 18365), (244, 18395), (250, 18434), (262, 18518), (288, 18662), (289, 18665), (295,

18695), (308, 18803), (317, 18839), (320, 18848), (371, 18983), (391, 19064), (402, 19097), (421, 19187), (452, 19340), (464, 19379),

Gene: Sophia\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Sophia\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Soto\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Soto\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Sour\_11 Start: 6964, Stop: 8784, Start Num: 16

Candidate Starts for Sour\_11:

(Start: 16 @6964 has 401 MA's), (Start: 66 @7078 has 2 MA's), (73, 7120), (79, 7153), (82, 7183), (97, 7252), (118, 7315), (122, 7333), (126, 7351), (170, 7486), (177, 7540), (179, 7552), (183, 7573), (190, 7630), (191, 7633), (193, 7639), (194, 7651), (236, 7828), (240, 7840), (242, 7855), (254, 7942), (256, 7954), (267, 8029), (278, 8089), (293, 8155), (297, 8176), (342, 8365), (394, 8509), (398, 8521), (414, 8593), (416, 8599), (421, 8620), (422, 8629), (424, 8644), (439, 8722), (443, 8734), (454, 8770), (456, 8773),

Gene: Spartan300\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Spartan300\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Squid\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Squid\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Squiggle\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Squiggle\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: StAugustine\_14 Start: 9397, Stop: 11364, Start Num: 16

Candidate Starts for StAugustine\_14:

(Start: 16 @9397 has 401 MA's), (53, 9490), (Start: 66 @9523 has 2 MA's), (73, 9565), (83, 9634), (119, 9784), (144, 9865), (149, 9877), (177, 10030), (193, 10129), (194, 10141), (219, 10234), (232, 10297), (236, 10315), (237, 10318), (254, 10429), (259, 10456), (271, 10537), (272, 10540), (289, 10621), (330, 10840), (396, 11059), (399, 11071), (402, 11083), (409, 11122), (415, 11158), (417, 11170), (421, 11185), (430, 11239), (436, 11266), (454, 11335), (457, 11344),

Gene: Sting\_40 Start: 17868, Stop: 19826, Start Num: 15

Candidate Starts for Sting\_40:

(Start: 15 @17868 has 4 MA's), (26, 17913), (47, 17964), (57, 17991), (98, 18180), (152, 18339), (172, 18432), (182, 18507), (193, 18576), (194, 18588), (195, 18594), (216, 18696), (222, 18729), (237, 18801), (238, 18804), (244, 18834), (250, 18873), (262, 18957), (288, 19101), (289, 19104), (295, 19134), (308, 19242), (317, 19278), (320, 19287), (371, 19422), (402, 19536), (416, 19605), (421, 19626), (452, 19779), (464, 19818),

Gene: Stinger\_7 Start: 5191, Stop: 7080, Start Num: 16

Candidate Starts for Stinger\_7:

(Start: 16 @5191 has 401 MA's), (53, 5272), (64, 5302), (68, 5311), (74, 5353), (76, 5362), (84, 5422), (108, 5509), (110, 5518), (122, 5578), (142, 5638), (152, 5674), (169, 5752), (170, 5755), (177, 5809), (179, 5821), (190, 5899), (191, 5902), (211, 5974), (214, 5983), (240, 6094), (242, 6109), (249, 6154), (254, 6196), (256, 6208), (271, 6304), (272, 6307), (273, 6313), (277, 6340), (279, 6346), (289, 6388), (320, 6571), (327, 6598), (364, 6661), (390, 6769), (392, 6772), (393, 6775), (397, 6787), (406, 6829), (408, 6835), (420, 6895), (421, 6898), (422, 6907), (443, 7021), (452, 7051), (461, 7072),

Gene: StinkyVeggy\_11 Start: 6863, Stop: 8728, Start Num: 16

Candidate Starts for StinkyVeggy\_11:

(Start: 16 @6863 has 401 MA's), (Start: 21 @6878 has 5 MA's), (73, 7016), (116, 7214), (119, 7226), (121, 7235), (159, 7352), (161, 7367), (172, 7406), (191, 7544), (194, 7562), (244, 7760), (249, 7796), (254, 7838), (267, 7925), (272, 7949), (277, 7982), (281, 7994), (284, 8006), (289, 8030), (319, 8210), (323, 8228), (381, 8408), (392, 8429), (400, 8450), (420, 8552), (431, 8612), (461, 8720), (462, 8723),

Gene: StorminNorm\_12 Start: 6275, Stop: 7903, Start Num: 4

Candidate Starts for StorminNorm\_12:

(Start: 4 @6275 has 98 MA's), (29, 6398), (38, 6419), (58, 6476), (72, 6539), (77, 6569), (86, 6632), (90, 6659), (149, 6827), (167, 6914), (174, 6953), (177, 6977), (180, 6995), (183, 7010), (184, 7016), (193, 7079), (227, 7151), (234, 7190), (246, 7256), (250, 7286), (255, 7331), (257, 7346), (258, 7349), (263, 7385), (272, 7433), (274, 7442), (278, 7469), (285, 7496), (294, 7541), (299, 7598), (302, 7616), (307, 7646), (310, 7664), (324, 7703), (327, 7709), (334, 7724), (343, 7745), (344, 7751), (363, 7787), (369, 7820),

Gene: Struggle\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Struggle\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Stultus\_12 Start: 7189, Stop: 8811, Start Num: 4

Candidate Starts for Stultus\_12:

(Start: 4 @7189 has 98 MA's), (50, 7348), (58, 7387), (72, 7450), (86, 7543), (90, 7570), (102, 7609), (149, 7738), (160, 7798), (164, 7813), (175, 7867), (177, 7888), (180, 7906), (183, 7921), (184, 7927), (193, 7990), (224, 8050), (227, 8062), (234, 8101), (237, 8113), (240, 8122), (243, 8155), (246, 8167),



(250, 8197), (255, 8242), (257, 8257), (258, 8260), (263, 8296), (272, 8344), (274, 8353), (278, 8380), (307, 8557), (324, 8614), (327, 8620), (334, 8635), (343, 8656), (344, 8662), (363, 8698), (368, 8725),

Gene: Suffolk\_8 Start: 4440, Stop: 6359, Start Num: 16

Candidate Starts for Suffolk\_8:

(Start: 16 @4440 has 401 MA's), (Start: 21 @4455 has 5 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Suigeneris\_10 Start: 6695, Stop: 8560, Start Num: 16

Candidate Starts for Suigeneris\_10:

(Start: 16 @6695 has 401 MA's), (Start: 21 @6710 has 5 MA's), (39, 6752), (73, 6848), (76, 6860), (116, 7046), (119, 7058), (121, 7067), (159, 7184), (161, 7199), (172, 7238), (191, 7376), (194, 7394), (213, 7454), (244, 7592), (249, 7628), (254, 7670), (256, 7682), (267, 7757), (272, 7781), (277, 7814), (281, 7826), (284, 7838), (289, 7862), (319, 8042), (323, 8060), (381, 8240), (392, 8261), (400, 8282), (420, 8384), (431, 8444), (461, 8552), (462, 8555),

Gene: Sunny\_ Start: 8363, Stop: 10132, Start Num: 2

Candidate Starts for Sunny\_:

(Start: 2 @8363 has 2 MA's), (5, 8429), (Start: 10 @8456 has 37 MA's), (Start: 11 @8465 has 13 MA's), (37, 8561), (49, 8585), (73, 8690), (76, 8702), (90, 8801), (106, 8873), (110, 8891), (125, 8966), (128, 8972), (145, 9011), (150, 9023), (152, 9038), (155, 9062), (159, 9074), (164, 9101), (170, 9128), (172, 9137), (185, 9227), (190, 9272), (227, 9374), (228, 9377), (237, 9425), (240, 9434), (252, 9506), (261, 9572), (262, 9581), (282, 9692), (291, 9749), (312, 9893), (316, 9905), (324, 9935), (374, 10103),

Gene: Surely\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Surely\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: SwainyDoc\_11 Start: 6312, Stop: 8216, Start Num: 16

Candidate Starts for SwainyDoc\_11:

(Start: 16 @6312 has 401 MA's), (22, 6339), (60, 6420), (74, 6483), (83, 6549), (89, 6582), (118, 6690), (140, 6780), (158, 6858), (172, 6915), (178, 6969), (190, 7050), (194, 7071), (200, 7098), (219, 7149), (220, 7158), (223, 7167), (254, 7344), (256, 7356), (267, 7431), (272, 7455), (276, 7476), (294, 7560), (313, 7698), (319, 7716), (326, 7743), (337, 7767), (396, 7932), (398, 7941), (421, 8046), (422, 8055), (427, 8082), (447, 8172), (448, 8175), (454, 8196), (459, 8208),

Gene: Swiphy\_8 Start: 4552, Stop: 6360, Start Num: 62

Candidate Starts for Swiphy\_8:

(Start: 16 @4441 has 401 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Swish\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Swish\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: SynergyX\_11 Start: 6315, Stop: 8219, Start Num: 16

Candidate Starts for SynergyX\_11:

(Start: 16 @6315 has 401 MA's), (22, 6342), (60, 6423), (74, 6486), (83, 6552), (89, 6585), (118, 6693), (140, 6783), (158, 6861), (172, 6918), (178, 6972), (190, 7053), (194, 7074), (200, 7101), (219, 7152), (220, 7161), (223, 7170), (254, 7347), (256, 7359), (267, 7434), (272, 7458), (276, 7479), (294, 7563), (313, 7701), (319, 7719), (326, 7746), (337, 7770), (398, 7944), (421, 8049), (422, 8058), (427, 8085), (447, 8175), (454, 8199), (459, 8211),

Gene: TA17A\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for TA17A\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (134, 8172), (143, 8193), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: TPA2\_17 Start: 7975, Stop: 9807, Start Num: 16

Candidate Starts for TPA2\_17:

(Start: 16 @7975 has 401 MA's), (Start: 32 @8026 has 2 MA's), (41, 8044), (73, 8143), (82, 8203), (97, 8272), (108, 8284), (122, 8353), (127, 8374), (128, 8377), (154, 8434), (170, 8506), (172, 8515), (183, 8593), (190, 8650), (191, 8653), (193, 8659), (194, 8671), (213, 8719), (223, 8758), (240, 8833), (244, 8857), (249, 8893), (256, 8947), (264, 9001), (267, 9019), (270, 9034), (277, 9076), (281, 9088), (289, 9124), (298, 9202), (340, 9361), (394, 9523), (397, 9532), (398, 9535), (400, 9538), (416, 9613), (421, 9634), (422, 9643), (424, 9658), (425, 9661), (436, 9715), (439, 9736), (443, 9748), (447, 9760), (450, 9772), (451, 9775),

Gene: TallGrassMM\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for TallGrassMM\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Tangent\_10 Start: 6017, Stop: 7639, Start Num: 4

Candidate Starts for Tangent\_10:

(Start: 4 @6017 has 98 MA's), (50, 6176), (58, 6215), (72, 6278), (86, 6371), (90, 6398), (102, 6437), (145, 6557), (149, 6566), (160, 6626), (175, 6695), (177, 6716), (180, 6734), (183, 6749), (184, 6755), (193, 6818), (224, 6878), (227, 6890), (234, 6929), (237, 6941), (240, 6950), (246, 6995), (250, 7025), (255, 7070), (257, 7085), (258, 7088), (263, 7124), (272, 7172), (274, 7181), (278, 7208), (307, 7385), (324, 7442), (327, 7448), (334, 7463), (343, 7484), (344, 7490), (363, 7526), (368, 7553),

Gene: Tangerine\_12 Start: 6284, Stop: 7912, Start Num: 4

Candidate Starts for Tangerine\_12:

(Start: 4 @6284 has 98 MA's), (29, 6407), (38, 6428), (58, 6485), (72, 6548), (77, 6578), (86, 6641), (90, 6668), (149, 6836), (167, 6923), (174, 6962), (177, 6986), (180, 7004), (183, 7019), (184, 7025), (193, 7088), (227, 7160), (234, 7199), (246, 7265), (250, 7295), (255, 7340), (257, 7355), (258, 7358), (263, 7394), (272, 7442), (274, 7451), (278, 7478), (285, 7505), (294, 7550), (299, 7607), (302, 7625), (307, 7655), (310, 7673), (324, 7712), (327, 7718), (334, 7733), (343, 7754), (344, 7760), (363, 7796), (369, 7829),

Gene: Taptic\_6 Start: 3328, Stop: 5202, Start Num: 13

Candidate Starts for Taptic\_6:

(Start: 13 @3328 has 3 MA's), (Start: 17 @3346 has 3 MA's), (Start: 35 @3403 has 2 MA's), (79, 3541), (82, 3571), (95, 3625), (122, 3736), (155, 3865), (170, 3922), (172, 3931), (177, 3976), (180, 3994), (192, 4072), (193, 4075), (223, 4159), (230, 4183), (233, 4207), (254, 4336), (256, 4348), (261, 4372), (267, 4423), (277, 4480), (281, 4492), (308, 4666), (326, 4735), (414, 4987), (441, 5128), (444, 5140), (456, 5182),

Gene: Tardus\_14 Start: 5997, Stop: 7670, Start Num: 4

Candidate Starts for Tardus\_14:

(Start: 4 @5997 has 98 MA's), (Start: 15 @6072 has 4 MA's), (27, 6120), (55, 6207), (72, 6288), (77, 6318), (105, 6450), (114, 6495), (145, 6567), (149, 6576), (173, 6687), (177, 6726), (180, 6744), (182, 6756), (183, 6759), (184, 6765), (194, 6840), (227, 6900), (247, 7020), (250, 7035), (255, 7080), (262, 7119), (269, 7170), (276, 7203), (277, 7215), (278, 7218), (285, 7245), (290, 7269), (299, 7347), (307, 7398), (314, 7428), (316, 7434), (335, 7491), (352, 7536),

Gene: Teamocil\_20 Start: 7583, Stop: 9301, Start Num: 10

Candidate Starts for Teamocil\_20:

(Start: 10 @7583 has 37 MA's), (Start: 11 @7592 has 13 MA's), (49, 7712), (73, 7817), (76, 7829), (90, 7928), (94, 7946), (106, 8000), (110, 8018), (120, 8069), (125, 8093), (139, 8123), (150, 8153), (151, 8159), (152, 8168), (159, 8204), (172, 8267), (180, 8330), (185, 8357), (190, 8402), (227, 8504), (228, 8507), (237, 8555), (240, 8564), (246, 8597), (252, 8636), (261, 8702), (262, 8711), (263, 8726), (265, 8735), (267, 8750), (269, 8762), (274, 8783), (280, 8816), (282, 8822), (286, 8852), (295, 8897), (308, 9005), (314, 9029), (324, 9065), (325, 9068), (333, 9089), (341, 9110), (375, 9245), (378, 9257), (385, 9284),

Gene: Telesworld\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Telesworld\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Terij\_13 Start: 6017, Stop: 7762, Start Num: 11

Candidate Starts for Terij\_13:

(Start: 10 @6008 has 37 MA's), (Start: 11 @6017 has 13 MA's), (34, 6098), (43, 6119), (56, 6155), (61, 6170), (73, 6233), (76, 6245), (77, 6254), (90, 6344), (121, 6488), (134, 6539), (145, 6584), (149, 6593), (155, 6632), (164, 6668), (168, 6689), (170, 6695), (172, 6704), (180, 6767), (185, 6794), (227, 6941), (235, 6983), (237, 6992), (240, 7001), (242, 7016), (246, 7034), (252, 7073), (261, 7139), (262, 7148), (265, 7172), (266, 7184), (267, 7187), (282, 7259), (289, 7310), (292, 7325), (298, 7388), (312, 7469), (318, 7487), (341, 7556), (343, 7559), (359, 7604),

Gene: Thing3\_13 Start: 7104, Stop: 8729, Start Num: 4

Candidate Starts for Thing3\_13:

(Start: 4 @7104 has 98 MA's), (50, 7263), (58, 7302), (72, 7365), (90, 7485), (102, 7524), (149, 7653), (160, 7713), (175, 7782), (177, 7803), (180, 7821), (183, 7836), (184, 7842), (193, 7905), (224, 7965), (227, 7977), (234, 8016), (237, 8028), (240, 8037), (243, 8070), (246, 8082), (250, 8112), (255, 8157), (257, 8172), (258, 8175), (263, 8211), (272, 8259), (274, 8268), (278, 8295), (307, 8472), (324, 8529), (327, 8535), (334, 8550), (343, 8571), (344, 8577), (363, 8613), (368, 8643),

Gene: Thonko\_7 Start: 3729, Stop: 5618, Start Num: 16

Candidate Starts for Thonko\_7:

(Start: 16 @3729 has 401 MA's), (39, 3795), (Start: 66 @3852 has 2 MA's), (73, 3897), (115, 4095), (124, 4137), (177, 4347), (178, 4356), (183, 4380), (190, 4437), (193, 4446), (194, 4458), (208, 4506), (219, 4539), (232, 4602), (240, 4632), (267, 4821), (319, 5106), (390, 5325), (397, 5343), (414, 5418), (421, 5445), (450, 5583),

Gene: Thora\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Thora\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: ThreeOh3D2\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for ThreeOh3D2\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Thunderbird\_8 Start: 4551, Stop: 6359, Start Num: 62

Candidate Starts for Thunderbird\_8:

(Start: 16 @4440 has 401 MA's), (Start: 62 @4551 has 5 MA's), (67, 4566), (83, 4677), (115, 4809), (121, 4833), (122, 4839), (124, 4851), (128, 4863), (171, 5028), (188, 5154), (189, 5157), (190, 5169), (193, 5178), (194, 5190), (211, 5253), (214, 5262), (223, 5298), (228, 5316), (231, 5325), (240, 5373), (253, 5469), (254, 5475), (261, 5511), (267, 5559), (272, 5583), (305, 5778), (326, 5871), (408, 6123), (434, 6258), (443, 6300), (447, 6312),

Gene: Tiamoceli\_14 Start: 6640, Stop: 8316, Start Num: 4

Candidate Starts for Tiamoceli\_14:

(Start: 4 @6640 has 98 MA's), (7, 6673), (23, 6751), (40, 6805), (72, 6937), (77, 6967), (88, 7045), (91, 7063), (114, 7144), (145, 7216), (149, 7225), (160, 7285), (180, 7393), (182, 7405), (183, 7408), (184, 7414), (227, 7549), (228, 7552), (240, 7609), (250, 7684), (255, 7729), (258, 7747), (262, 7768), (267, 7807), (272, 7831), (276, 7852), (278, 7867), (290, 7918), (294, 7939), (307, 8044), (314, 8074), (323, 8098), (324, 8101), (352, 8179),

Gene: TillyBobJoe\_12 Start: 5270, Stop: 6856, Start Num: 4

Candidate Starts for TillyBobJoe\_12:

(Start: 4 @5270 has 98 MA's), (29, 5384), (78, 5552), (105, 5672), (109, 5690), (111, 5705), (162, 5855), (171, 5885), (178, 5945), (179, 5948), (186, 5987), (198, 6059), (227, 6119), (228, 6122), (229, 6125), (235, 6161), (237, 6170), (239, 6176), (240, 6179), (250, 6242), (255, 6287), (261, 6317), (267, 6365), (278, 6422), (284, 6443), (285, 6449), (289, 6470), (290, 6473), (295, 6500), (299, 6551), (307, 6599),

Gene: Timmi\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Timmi\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Tinciduntolum\_13 Start: 7844, Stop: 9733, Start Num: 16

Candidate Starts for Tinciduntolum\_13:

(Start: 16 @7844 has 401 MA's), (31, 7892), (41, 7916), (53, 7934), (Start: 66 @7967 has 2 MA's), (82, 8075), (103, 8159), (118, 8222), (126, 8258), (143, 8309), (148, 8321), (152, 8342), (170, 8420), (172, 8429), (177, 8474), (190, 8564), (191, 8567), (193, 8573), (194, 8585), (199, 8600), (201, 8612), (226, 8696), (232, 8729), (236, 8747), (246, 8792), (254, 8861), (256, 8873), (267, 8948), (272, 8972), (273, 8978), (277, 9005), (281, 9017), (283, 9023), (289, 9053), (290, 9056), (295, 9083), (301, 9149), (303, 9158), (319, 9233), (329, 9269), (355, 9314), (394, 9452), (396, 9455), (400, 9467), (419, 9554), (421, 9563), (422, 9572), (424, 9587), (430, 9617), (434, 9635), (437, 9650), (443, 9677), (447, 9689), (461, 9725),

Gene: TinyTerror\_11 Start: 6317, Stop: 8221, Start Num: 16

Candidate Starts for TinyTerror\_11:

(Start: 16 @6317 has 401 MA's), (22, 6344), (60, 6425), (74, 6488), (83, 6554), (89, 6587), (118, 6695), (140, 6785), (158, 6863), (172, 6920), (178, 6974), (190, 7055), (194, 7076), (200, 7103), (219, 7154), (220, 7163), (223, 7172), (254, 7349), (256, 7361), (267, 7436), (272, 7460), (276, 7481), (294, 7565), (313, 7703), (319, 7721), (326, 7748), (337, 7772), (396, 7937), (398, 7946), (421, 8051), (422, 8060), (427, 8087), (447, 8177), (448, 8180), (454, 8201), (459, 8213),

Gene: Togo\_12 Start: 5434, Stop: 7020, Start Num: 4

Candidate Starts for Togo\_12:

(Start: 4 @5434 has 98 MA's), (73, 5686), (78, 5716), (102, 5833), (109, 5854), (111, 5869), (169, 6043), (176, 6085), (178, 6109), (179, 6112), (186, 6151), (198, 6223), (227, 6283), (228, 6286), (229, 6289), (235, 6325), (237, 6334), (239, 6340), (240, 6343), (250, 6406), (255, 6451), (261, 6481), (267, 6529), (278, 6586), (284, 6607), (289, 6634), (290, 6637), (295, 6664), (299, 6715), (307, 6763),

Gene: TomBombadil\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for TomBombadil\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Tomlarah\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Tomlarah\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Toni\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Toni\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Tonitrus\_26 Start: 14379, Stop: 16331, Start Num: 15

Candidate Starts for Tonitrus\_26:

(Start: 15 @14379 has 4 MA's), (28, 14427), (53, 14487), (63, 14514), (76, 14577), (78, 14595), (79, 14598), (115, 14748), (118, 14760), (122, 14778), (124, 14790), (137, 14829), (155, 14889), (177, 15000), (183, 15033), (191, 15093), (195, 15117), (221, 15270), (222, 15273), (225, 15285), (238, 15348), (250, 15417), (251, 15420), (262, 15501), (272, 15564), (277, 15597), (281, 15609), (283, 15615), (288, 15645), (295, 15678), (298, 15726), (301, 15744), (311, 15804), (347, 15900), (372, 15960), (407, 16083), (413, 16113), (421, 16149), (426, 16182), (429, 16191), (438, 16239), (439, 16251), (449, 16290), (458, 16320), (460, 16323),

Gene: TooFast2Furius\_10 Start: 4787, Stop: 6595, Start Num: 62

Candidate Starts for TooFast2Furius\_10:

(Start: 16 @4676 has 401 MA's), (Start: 21 @4691 has 5 MA's), (Start: 62 @4787 has 5 MA's), (67, 4802), (83, 4913), (115, 5045), (121, 5069), (122, 5075), (124, 5087), (128, 5099), (171, 5264), (188, 5390), (189, 5393), (190, 5405), (193, 5414), (194, 5426), (211, 5489), (214, 5498), (223, 5534), (228, 5552), (231, 5561), (240, 5609), (253, 5705), (254, 5711), (261, 5747), (267, 5795), (272, 5819), (305, 6014), (326, 6107), (408, 6359), (434, 6494), (443, 6536), (447, 6548),

Gene: Tooj\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Tooj\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Tres\_12 Start: 7728, Stop: 9617, Start Num: 16

Candidate Starts for Tres\_12:

(Start: 16 @7728 has 401 MA's), (31, 7776), (41, 7800), (53, 7818), (Start: 66 @7851 has 2 MA's), (82, 7959), (103, 8043), (118, 8106), (126, 8142), (143, 8193), (152, 8226), (170, 8304), (172, 8313), (177, 8358), (190, 8448), (191, 8451), (193, 8457), (194, 8469), (199, 8484), (201, 8496), (226, 8580), (232, 8613), (236, 8631), (246, 8676), (254, 8745), (256, 8757), (267, 8832), (272, 8856), (273, 8862), (277, 8889), (281, 8901), (283, 8907), (289, 8937), (290, 8940), (295, 8967), (301, 9033), (303, 9042), (319, 9117), (329, 9153), (355, 9198), (394, 9336), (396, 9339), (400, 9351), (419, 9438), (421, 9447), (422, 9456), (424, 9471), (430, 9501), (434, 9519), (437, 9534), (443, 9561), (447, 9573), (461, 9609),

Gene: True\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for True\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Trypo\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Trypo\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Twister6\_12 Start: 5366, Stop: 6952, Start Num: 4

Candidate Starts for Twister6\_12:

(Start: 4 @5366 has 98 MA's), (73, 5618), (78, 5648), (102, 5765), (109, 5786), (111, 5801), (169, 5975), (176, 6017), (178, 6041), (179, 6044), (186, 6083), (198, 6155), (227, 6215), (228, 6218), (229, 6221), (235, 6257), (237, 6266), (239, 6272), (240, 6275), (250, 6338), (255, 6383), (261, 6413), (267, 6461), (278, 6518), (284, 6539), (289, 6566), (290, 6569), (295, 6596), (299, 6647), (307, 6695),

Gene: Twonlo\_11 Start: 5257, Stop: 6933, Start Num: 4

Candidate Starts for Twonlo\_11:

(Start: 4 @5257 has 98 MA's), (7, 5290), (23, 5368), (40, 5422), (72, 5554), (77, 5584), (88, 5662), (91, 5680), (114, 5761), (145, 5833), (149, 5842), (160, 5902), (180, 6010), (182, 6022), (183, 6025), (184, 6031), (227, 6166), (228, 6169), (240, 6226), (250, 6301), (255, 6346), (258, 6364), (262, 6385), (267, 6424), (272, 6448), (276, 6469), (278, 6484), (290, 6535), (294, 6556), (307, 6661), (314, 6691), (323, 6715), (324, 6718), (352, 6796),

Gene: Tycho\_12 Start: 6284, Stop: 7912, Start Num: 4

Candidate Starts for Tycho\_12:

(Start: 4 @6284 has 98 MA's), (29, 6407), (38, 6428), (58, 6485), (72, 6548), (77, 6578), (86, 6641), (90, 6668), (145, 6827), (149, 6836), (167, 6923), (174, 6962), (177, 6986), (180, 7004), (183, 7019), (184, 7025), (193, 7088), (227, 7160), (234, 7199), (246, 7265), (250, 7295), (255, 7340), (257, 7355), (258, 7358), (263, 7394), (272, 7442), (274, 7451), (278, 7478), (285, 7505), (294, 7550), (302, 7625), (307, 7655), (310, 7673), (324, 7712), (327, 7718), (334, 7733), (343, 7754), (344, 7760), (363, 7796), (369, 7829),

Gene: Tydolla\_11 Start: 7076, Stop: 8980, Start Num: 16

Candidate Starts for Tydolla\_11:

(Start: 16 @7076 has 401 MA's), (22, 7103), (60, 7184), (74, 7247), (83, 7313), (89, 7346), (118, 7454), (140, 7544), (158, 7622), (172, 7679), (178, 7733), (190, 7814), (194, 7835), (200, 7862), (219, 7913), (220, 7922), (223, 7931), (254, 8108), (256, 8120), (267, 8195), (272, 8219), (276, 8240), (294, 8324), (313, 8462), (319, 8480), (326, 8507), (337, 8531), (396, 8696), (398, 8705), (421, 8810), (422, 8819), (427, 8846), (447, 8936), (454, 8960), (459, 8972),

Gene: TyrionL\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for TyrionL\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Tyrumbra\_18 Start: 7432, Stop: 9117, Start Num: 11

Candidate Starts for Tyrumbra\_18:

(Start: 10 @7423 has 37 MA's), (Start: 11 @7432 has 13 MA's), (49, 7555), (73, 7660), (76, 7672), (90, 7771), (106, 7843), (110, 7861), (139, 7966), (145, 7984), (150, 7996), (151, 8002), (152, 8011), (159, 8047), (172, 8110), (180, 8173), (185, 8200), (190, 8245), (193, 8254), (214, 8296), (227, 8347), (228, 8350), (235, 8389), (237, 8398), (240, 8407), (246, 8440), (252, 8479), (261, 8545), (262, 8554), (263, 8569), (267, 8593), (280, 8659), (282, 8665), (286, 8692), (308, 8845), (319, 8884), (324, 8905), (341,

8950), (359, 8986), (361, 8992), (378, 9097),

Gene: UAch1\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for UAch1\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: UncleHowie\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for UncleHowie\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Usavi\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Usavi\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Vaishali24\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Vaishali24\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Valary\_13 Start: 5819, Stop: 7405, Start Num: 4

Candidate Starts for Valary\_13:

(Start: 4 @5819 has 98 MA's), (29, 5933), (69, 6035), (78, 6101), (82, 6134), (105, 6221), (109, 6239), (111, 6254), (171, 6434), (178, 6494), (179, 6497), (186, 6536), (198, 6608), (227, 6668), (228, 6671), (229, 6674), (235, 6710), (237, 6719), (239, 6725), (240, 6728), (250, 6791), (255, 6836), (261, 6866), (267, 6914), (278, 6971), (284, 6992), (289, 7019), (290, 7022), (295, 7049), (299, 7100), (307, 7148),

Gene: Valjean\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Valjean\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: VanDeWege\_13 Start: 5747, Stop: 7333, Start Num: 4

Candidate Starts for VanDeWege\_13:

(Start: 4 @5747 has 98 MA's), (29, 5861), (69, 5963), (78, 6029), (82, 6062), (105, 6149), (109, 6167), (111, 6182), (171, 6362), (178, 6422), (179, 6425), (186, 6464), (198, 6536), (227, 6596), (228, 6599),



(229, 6602), (234, 6635), (235, 6638), (237, 6647), (239, 6653), (240, 6656), (250, 6719), (255, 6764), (261, 6794), (267, 6842), (278, 6899), (284, 6920), (289, 6947), (290, 6950), (295, 6977), (299, 7028), (307, 7076),

Gene: Vaticameos\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Vaticameos\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: Veritas\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Veritas\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Verity\_14 Start: 7230, Stop: 8897, Start Num: 4

Candidate Starts for Verity\_14:

(Start: 4 @7230 has 98 MA's), (Start: 15 @7305 has 4 MA's), (20, 7326), (27, 7353), (55, 7440), (72, 7521), (77, 7551), (91, 7647), (97, 7662), (105, 7683), (110, 7704), (114, 7728), (145, 7800), (149, 7809), (173, 7920), (174, 7935), (177, 7959), (180, 7977), (183, 7992), (184, 7998), (194, 8073), (227, 8133), (250, 8268), (255, 8313), (262, 8352), (269, 8403), (276, 8436), (277, 8448), (278, 8451), (282, 8463), (285, 8478), (290, 8502), (294, 8523), (299, 8580), (307, 8631), (314, 8661), (316, 8667), (335, 8724), (352, 8769), (368, 8817),

Gene: ViaConlectus\_14 Start: 6957, Stop: 8627, Start Num: 4

Candidate Starts for ViaConlectus\_14:

(Start: 4 @6957 has 98 MA's), (Start: 15 @7032 has 4 MA's), (20, 7053), (27, 7080), (55, 7167), (72, 7248), (77, 7278), (78, 7287), (89, 7362), (91, 7374), (105, 7410), (114, 7455), (145, 7527), (149, 7536), (173, 7647), (177, 7686), (178, 7695), (180, 7704), (182, 7716), (183, 7719), (184, 7725), (194, 7800), (224, 7848), (227, 7860), (247, 7980), (250, 7995), (255, 8040), (262, 8079), (269, 8130), (276, 8163), (277, 8175), (278, 8178), (285, 8205), (290, 8229), (299, 8307), (307, 8358), (314, 8388), (316, 8394), (335, 8451), (352, 8496),

Gene: Vic9\_00012 Start: 8171, Stop: 10060, Start Num: 16

Candidate Starts for Vic9\_00012:

(Start: 16 @8171 has 401 MA's), (31, 8219), (41, 8243), (53, 8261), (Start: 66 @8294 has 2 MA's), (82, 8402), (103, 8486), (118, 8549), (126, 8585), (143, 8636), (148, 8648), (152, 8669), (170, 8747), (172, 8756), (177, 8801), (190, 8891), (191, 8894), (193, 8900), (194, 8912), (199, 8927), (201, 8939), (226, 9023), (232, 9056), (236, 9074), (246, 9119), (254, 9188), (255, 9194), (256, 9200), (267, 9275), (272, 9299), (273, 9305), (277, 9332), (281, 9344), (283, 9350), (289, 9380), (290, 9383), (295, 9410), (301, 9476), (303, 9485), (319, 9560), (329, 9596), (355, 9641), (394, 9779), (396, 9782), (400, 9794), (419, 9881), (421, 9890), (422, 9899), (424, 9914), (430, 9944), (434, 9962), (437, 9977), (443, 10004), (447, 10016), (461, 10052),

Gene: Vincenzo\_10 Start: 7459, Stop: 9357, Start Num: 16

Candidate Starts for Vincenzo\_10:

(Start: 16 @7459 has 401 MA's), (53, 7540), (74, 7621), (75, 7627), (82, 7681), (106, 7768), (110, 7786), (122, 7846), (127, 7867), (150, 7927), (170, 8023), (177, 8077), (190, 8167), (196, 8194), (211,

8245), (231, 8317), (240, 8365), (242, 8380), (249, 8425), (254, 8467), (272, 8578), (273, 8584), (277, 8611), (289, 8659), (320, 8842), (352, 8917), (384, 9037), (390, 9046), (392, 9049), (406, 9106), (408, 9112), (421, 9175), (422, 9184), (452, 9328), (461, 9349),

Gene: VioletZ\_9 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for VioletZ\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (267, 7840), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (295, 7975), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (457, 8623), (461, 8629),

Gene: Virapocalypse\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Virapocalypse\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Virgeve\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Virgeve\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Vista\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Vista\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Vivaldi\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Vivaldi\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Vivi2\_11 Start: 6178, Stop: 7800, Start Num: 4

Candidate Starts for Vivi2\_11:

(Start: 4 @6178 has 98 MA's), (50, 6337), (58, 6376), (72, 6439), (86, 6532), (90, 6559), (102, 6598), (149, 6727), (160, 6787), (175, 6856), (177, 6877), (180, 6895), (183, 6910), (184, 6916), (193, 6979), (224, 7039), (227, 7051), (234, 7090), (237, 7102), (240, 7111), (243, 7144), (246, 7156), (250, 7186), (255, 7231), (257, 7246), (258, 7249), (263, 7285), (272, 7333), (274, 7342), (278, 7369), (307, 7546), (324, 7603), (327, 7609), (334, 7624), (343, 7645), (344, 7651), (363, 7687), (368, 7714),

Gene: Vortex\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Vortex\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Waleliano\_9 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for Waleliano\_9:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (236, 7639), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (450, 8602), (461, 8629),

Gene: Wallhey\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Wallhey\_8:

(Start: 16 @4438 has 401 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (128, 4861), (158, 4975), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (420, 6181), (434, 6256), (443, 6298), (447, 6310),

Gene: Waterdiva\_8 Start: 4442, Stop: 6361, Start Num: 16

Candidate Starts for Waterdiva\_8:

(Start: 16 @4442 has 401 MA's), (Start: 21 @4457 has 5 MA's), (Start: 62 @4553 has 5 MA's), (67, 4568), (83, 4679), (115, 4811), (121, 4835), (122, 4841), (124, 4853), (128, 4865), (171, 5030), (188, 5156), (189, 5159), (190, 5171), (193, 5180), (194, 5192), (211, 5255), (214, 5264), (223, 5300), (228, 5318), (231, 5327), (240, 5375), (253, 5471), (254, 5477), (261, 5513), (267, 5561), (272, 5585), (305, 5780), (326, 5873), (408, 6125), (434, 6260), (443, 6302), (447, 6314),

Gene: Weher20\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for Weher20\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: West99\_12 Start: 7845, Stop: 9734, Start Num: 16

Candidate Starts for West99\_12:

(Start: 16 @7845 has 401 MA's), (31, 7893), (41, 7917), (53, 7935), (Start: 66 @7968 has 2 MA's), (82, 8076), (103, 8160), (118, 8223), (126, 8259), (143, 8310), (148, 8322), (152, 8343), (170, 8421), (172, 8430), (177, 8475), (190, 8565), (191, 8568), (193, 8574), (194, 8586), (199, 8601), (201, 8613), (226, 8697), (232, 8730), (236, 8748), (246, 8793), (254, 8862), (256, 8874), (267, 8949), (272, 8973), (273, 8979), (277, 9006), (281, 9018), (283, 9024), (289, 9054), (290, 9057), (295, 9084), (301, 9150), (303, 9159), (319, 9234), (329, 9270), (355, 9315), (394, 9453), (396, 9456), (400, 9468), (419, 9555), (421, 9564), (422, 9573), (424, 9588), (430, 9618), (434, 9636), (437, 9651), (443, 9678), (447, 9690), (461, 9726),

Gene: Windsor\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Windsor\_8:

(Start: 16 @4439 has 401 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (128, 4862), (158, 4976), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: Wizard\_12 Start: 5562, Stop: 7145, Start Num: 4

Candidate Starts for Wizard\_12:

(Start: 4 @5562 has 98 MA's), (29, 5676), (78, 5844), (105, 5964), (109, 5982), (111, 5997), (162, 6147), (171, 6177), (178, 6237), (179, 6240), (186, 6279), (198, 6351), (227, 6411), (228, 6414), (229, 6417), (235, 6453), (237, 6462), (239, 6468), (240, 6471), (250, 6534), (255, 6579), (261, 6609), (267, 6657), (278, 6714), (284, 6735), (285, 6741), (289, 6762), (295, 6792), (299, 6843), (307, 6891),

Gene: Wooper\_10 Start: 6780, Stop: 8627, Start Num: 16

Candidate Starts for Wooper\_10:

(Start: 16 @6780 has 401 MA's), (Start: 66 @6894 has 2 MA's), (73, 6936), (82, 6999), (96, 7065), (126, 7170), (133, 7194), (166, 7293), (167, 7299), (170, 7308), (172, 7317), (191, 7455), (194, 7473), (228, 7614), (232, 7641), (236, 7659), (240, 7671), (248, 7722), (254, 7773), (267, 7860), (272, 7884), (319, 8142), (345, 8202), (347, 8211), (397, 8352), (398, 8355), (414, 8427), (416, 8433), (421, 8454), (431, 8511), (433, 8523), (439, 8556), (443, 8568), (447, 8580), (450, 8592), (454, 8604), (456, 8607),

Gene: Xavier\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Xavier\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Xincheng\_9 Start: 6587, Stop: 8458, Start Num: 21

Candidate Starts for Xincheng\_9:

(Start: 16 @6572 has 401 MA's), (Start: 21 @6587 has 5 MA's), (59, 6668), (64, 6683), (74, 6734), (76, 6743), (82, 6794), (110, 6899), (122, 6959), (152, 7055), (169, 7133), (170, 7136), (172, 7145), (177, 7190), (190, 7280), (191, 7283), (213, 7361), (217, 7373), (223, 7400), (240, 7475), (249, 7535), (254, 7577), (256, 7589), (259, 7604), (272, 7688), (273, 7694), (277, 7721), (279, 7727), (282, 7736), (289, 7769), (384, 8138), (390, 8147), (392, 8150), (397, 8165), (408, 8213), (421, 8276), (422, 8285), (443, 8399), (457, 8444), (461, 8450),

Gene: Yago84\_7 Start: 5116, Stop: 6957, Start Num: 16

Candidate Starts for Yago84\_7:

(Start: 16 @5116 has 401 MA's), (Start: 66 @5230 has 2 MA's), (73, 5272), (82, 5335), (118, 5467), (122, 5485), (148, 5539), (152, 5560), (177, 5692), (183, 5725), (190, 5782), (191, 5785), (194, 5803), (204, 5854), (211, 5875), (236, 5983), (240, 5995), (254, 6097), (278, 6244), (281, 6253), (293, 6310), (370, 6589), (396, 6676), (397, 6682), (414, 6757), (416, 6763), (421, 6784), (436, 6865), (443, 6898), (447, 6910), (454, 6934), (456, 6937),

Gene: Yahalom\_11 Start: 6315, Stop: 8219, Start Num: 16

Candidate Starts for Yahalom\_11:

(Start: 16 @6315 has 401 MA's), (22, 6342), (60, 6423), (74, 6486), (83, 6552), (89, 6585), (118, 6693), (140, 6783), (158, 6861), (172, 6918), (178, 6972), (190, 7053), (194, 7074), (200, 7101), (219, 7152), (220, 7161), (223, 7170), (254, 7347), (256, 7359), (267, 7434), (272, 7458), (276, 7479), (294, 7563), (313, 7701), (319, 7719), (326, 7746), (337, 7770), (396, 7935), (398, 7944), (421, 8049), (422, 8058),

(427, 8085), (447, 8175), (454, 8199), (459, 8211),

Gene: Yeshua\_10 Start: 6784, Stop: 8628, Start Num: 16

Candidate Starts for Yeshua\_10:

(Start: 16 @6784 has 401 MA's), (Start: 66 @6898 has 2 MA's), (73, 6940), (82, 7003), (96, 7069), (126, 7174), (148, 7213), (166, 7297), (167, 7303), (170, 7312), (172, 7321), (190, 7456), (191, 7459), (194, 7477), (209, 7549), (228, 7618), (232, 7645), (236, 7663), (240, 7675), (248, 7726), (254, 7777), (267, 7864), (272, 7888), (304, 8077), (319, 8146), (345, 8206), (397, 8353), (398, 8356), (414, 8428), (416, 8434), (421, 8455), (422, 8464), (431, 8512), (433, 8524), (439, 8557), (443, 8569), (447, 8581), (454, 8605), (456, 8608),

Gene: Yeti\_20 Start: 8441, Stop: 10147, Start Num: 10

Candidate Starts for Yeti\_20:

(Start: 10 @8441 has 37 MA's), (Start: 11 @8450 has 13 MA's), (14, 8465), (46, 8564), (49, 8570), (73, 8675), (76, 8687), (90, 8786), (91, 8792), (106, 8858), (110, 8876), (121, 8930), (129, 8960), (145, 8999), (151, 9017), (152, 9026), (159, 9062), (172, 9125), (180, 9188), (185, 9215), (190, 9260), (227, 9362), (228, 9365), (235, 9404), (240, 9422), (252, 9494), (261, 9560), (262, 9569), (267, 9608), (274, 9641), (280, 9674), (282, 9680), (286, 9710), (308, 9863), (311, 9878), (318, 9899), (319, 9902), (376, 10106), (378, 10115),

Gene: Yinz\_11 Start: 6341, Stop: 8248, Start Num: 16

Candidate Starts for Yinz\_11:

(Start: 16 @6341 has 401 MA's), (22, 6368), (60, 6449), (74, 6512), (83, 6578), (89, 6611), (118, 6719), (140, 6809), (158, 6887), (172, 6944), (178, 6998), (190, 7079), (194, 7100), (200, 7127), (219, 7178), (220, 7187), (223, 7196), (254, 7373), (256, 7385), (267, 7460), (272, 7484), (276, 7505), (294, 7589), (313, 7727), (319, 7745), (326, 7772), (337, 7796), (396, 7964), (398, 7973), (421, 8078), (422, 8087), (427, 8114), (447, 8204), (454, 8228), (459, 8240),

Gene: YorkOnyx\_12 Start: 6233, Stop: 7861, Start Num: 4

Candidate Starts for YorkOnyx\_12:

(Start: 4 @6233 has 98 MA's), (29, 6356), (38, 6377), (52, 6407), (58, 6434), (72, 6497), (77, 6527), (86, 6590), (90, 6617), (105, 6659), (149, 6785), (174, 6911), (177, 6935), (180, 6953), (183, 6968), (184, 6974), (193, 7037), (227, 7109), (234, 7148), (246, 7214), (250, 7244), (255, 7289), (257, 7304), (258, 7307), (263, 7343), (272, 7391), (274, 7400), (278, 7427), (285, 7454), (294, 7499), (298, 7553), (299, 7556), (301, 7571), (307, 7604), (310, 7622), (324, 7661), (327, 7667), (334, 7682), (343, 7703), (344, 7709), (363, 7745), (369, 7778),

Gene: Yoshand\_8 Start: 4439, Stop: 6358, Start Num: 16

Candidate Starts for Yoshand\_8:

(Start: 16 @4439 has 401 MA's), (Start: 21 @4454 has 5 MA's), (Start: 62 @4550 has 5 MA's), (67, 4565), (83, 4676), (115, 4808), (121, 4832), (122, 4838), (124, 4850), (128, 4862), (171, 5027), (188, 5153), (189, 5156), (190, 5168), (193, 5177), (194, 5189), (211, 5252), (214, 5261), (223, 5297), (228, 5315), (231, 5324), (240, 5372), (253, 5468), (254, 5474), (261, 5510), (267, 5558), (272, 5582), (305, 5777), (326, 5870), (408, 6122), (434, 6257), (443, 6299), (447, 6311),

Gene: YouGoGlencoco\_8 Start: 4438, Stop: 6357, Start Num: 16

Candidate Starts for YouGoGlencoco\_8:

(Start: 16 @4438 has 401 MA's), (Start: 21 @4453 has 5 MA's), (Start: 62 @4549 has 5 MA's), (67, 4564), (83, 4675), (115, 4807), (121, 4831), (122, 4837), (124, 4849), (128, 4861), (171, 5026), (188, 5152), (189, 5155), (190, 5167), (193, 5176), (194, 5188), (211, 5251), (214, 5260), (223, 5296), (228, 5314), (231, 5323), (240, 5371), (253, 5467), (254, 5473), (261, 5509), (267, 5557), (272, 5581), (305, 5776), (326, 5869), (408, 6121), (434, 6256), (443, 6298), (447, 6310),

Gene: YungMoney\_12 Start: 6514, Stop: 8100, Start Num: 4

Candidate Starts for YungMoney\_12:

(Start: 4 @6514 has 98 MA's), (Start: 15 @6577 has 4 MA's), (73, 6766), (78, 6796), (82, 6829), (102, 6913), (109, 6934), (111, 6949), (169, 7123), (171, 7129), (176, 7165), (178, 7189), (179, 7192), (186, 7231), (198, 7303), (227, 7363), (228, 7366), (229, 7369), (235, 7405), (237, 7414), (239, 7420), (240, 7423), (250, 7486), (255, 7531), (261, 7561), (267, 7609), (278, 7666), (284, 7687), (289, 7714), (290, 7717), (295, 7744), (299, 7795), (307, 7843),

Gene: Zaider\_9 Start: 4671, Stop: 6590, Start Num: 16

Candidate Starts for Zaider\_9:

(Start: 16 @4671 has 401 MA's), (Start: 21 @4686 has 5 MA's), (Start: 62 @4782 has 5 MA's), (67, 4797), (83, 4908), (115, 5040), (121, 5064), (122, 5070), (124, 5082), (128, 5094), (171, 5259), (188, 5385), (189, 5388), (190, 5400), (193, 5409), (194, 5421), (211, 5484), (214, 5493), (223, 5529), (228, 5547), (231, 5556), (240, 5604), (253, 5700), (254, 5706), (261, 5742), (267, 5790), (272, 5814), (305, 6009), (326, 6102), (408, 6354), (434, 6489), (443, 6531), (447, 6543),

Gene: Zelda\_8 Start: 4441, Stop: 6360, Start Num: 16

Candidate Starts for Zelda\_8:

(Start: 16 @4441 has 401 MA's), (Start: 21 @4456 has 5 MA's), (Start: 62 @4552 has 5 MA's), (67, 4567), (83, 4678), (115, 4810), (121, 4834), (122, 4840), (124, 4852), (128, 4864), (171, 5029), (188, 5155), (189, 5158), (190, 5170), (193, 5179), (194, 5191), (211, 5254), (214, 5263), (223, 5299), (228, 5317), (231, 5326), (240, 5374), (253, 5470), (254, 5476), (261, 5512), (267, 5560), (272, 5584), (305, 5779), (326, 5872), (408, 6124), (434, 6259), (443, 6301), (447, 6313),

Gene: Zemanar\_10 Start: 6748, Stop: 8637, Start Num: 16

Candidate Starts for Zemanar\_10:

(Start: 16 @6748 has 401 MA's), (Start: 21 @6763 has 5 MA's), (59, 6844), (64, 6859), (74, 6910), (76, 6919), (82, 6970), (110, 7075), (122, 7135), (152, 7231), (169, 7309), (170, 7312), (172, 7321), (177, 7366), (190, 7456), (191, 7459), (213, 7537), (217, 7549), (240, 7651), (249, 7711), (254, 7753), (256, 7765), (267, 7840), (272, 7864), (273, 7870), (277, 7897), (279, 7903), (282, 7912), (289, 7945), (295, 7975), (384, 8317), (390, 8326), (392, 8329), (408, 8392), (420, 8452), (421, 8455), (422, 8464), (443, 8578), (450, 8602), (461, 8629),

Gene: Zenteno07\_13 Start: 5606, Stop: 7525, Start Num: 16

Candidate Starts for Zenteno07\_13:

(Start: 16 @5606 has 401 MA's), (116, 5981), (119, 5993), (128, 6032), (144, 6083), (173, 6209), (177, 6248), (188, 6323), (189, 6326), (194, 6359), (205, 6407), (208, 6416), (214, 6431), (217, 6440), (231, 6494), (248, 6593), (254, 6644), (261, 6680), (271, 6749), (272, 6752), (313, 6995), (319, 7013), (393, 7229), (397, 7241), (421, 7352), (422, 7361), (424, 7376), (434, 7424), (457, 7511),

Gene: Zipp\_14 Start: 7375, Stop: 9042, Start Num: 4

Candidate Starts for Zipp\_14:

(Start: 4 @7375 has 98 MA's), (Start: 15 @7450 has 4 MA's), (20, 7471), (27, 7498), (55, 7585), (72, 7666), (77, 7696), (91, 7792), (97, 7807), (105, 7828), (108, 7840), (110, 7849), (114, 7873), (145, 7945), (149, 7954), (173, 8065), (174, 8080), (177, 8104), (180, 8122), (183, 8137), (184, 8143), (194, 8218), (227, 8278), (250, 8413), (255, 8458), (262, 8497), (269, 8548), (276, 8581), (277, 8593), (278, 8596), (285, 8623), (290, 8647), (299, 8725), (307, 8776), (314, 8806), (316, 8812), (335, 8869), (352, 8914), (368, 8962),

Gene: Zitch\_15 Start: 6694, Stop: 8367, Start Num: 4

Candidate Starts for Zitch\_15:

(Start: 4 @6694 has 98 MA's), (Start: 15 @6769 has 4 MA's), (27, 6817), (55, 6904), (72, 6985), (77, 7015), (105, 7147), (114, 7192), (145, 7264), (149, 7273), (173, 7384), (177, 7423), (180, 7441), (182,

7453), (183, 7456), (184, 7462), (194, 7537), (224, 7585), (227, 7597), (250, 7732), (255, 7777), (262, 7816), (269, 7867), (276, 7900), (277, 7912), (278, 7915), (285, 7942), (290, 7966), (299, 8044), (307, 8095), (314, 8125), (316, 8131), (323, 8149), (335, 8188), (352, 8233),

Gene: Zonia\_8 Start: 4437, Stop: 6356, Start Num: 16

Candidate Starts for Zonia\_8:

(Start: 16 @4437 has 401 MA's), (Start: 62 @4548 has 5 MA's), (67, 4563), (83, 4674), (115, 4806), (121, 4830), (122, 4836), (124, 4848), (128, 4860), (171, 5025), (188, 5151), (189, 5154), (190, 5166), (193, 5175), (194, 5187), (211, 5250), (214, 5259), (223, 5295), (228, 5313), (231, 5322), (240, 5370), (253, 5466), (254, 5472), (261, 5508), (267, 5556), (272, 5580), (305, 5775), (326, 5868), (408, 6120), (434, 6255), (443, 6297), (447, 6309),