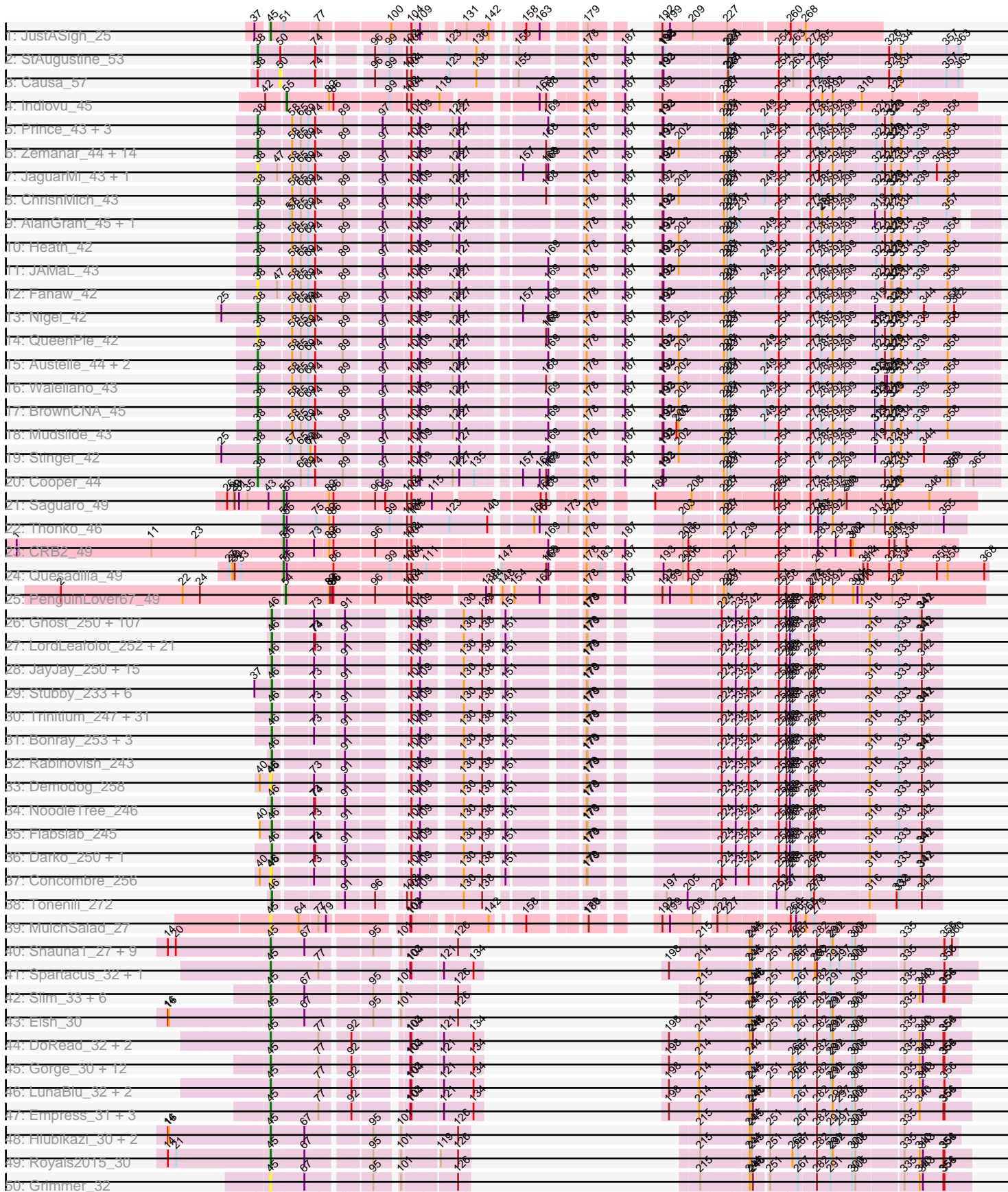
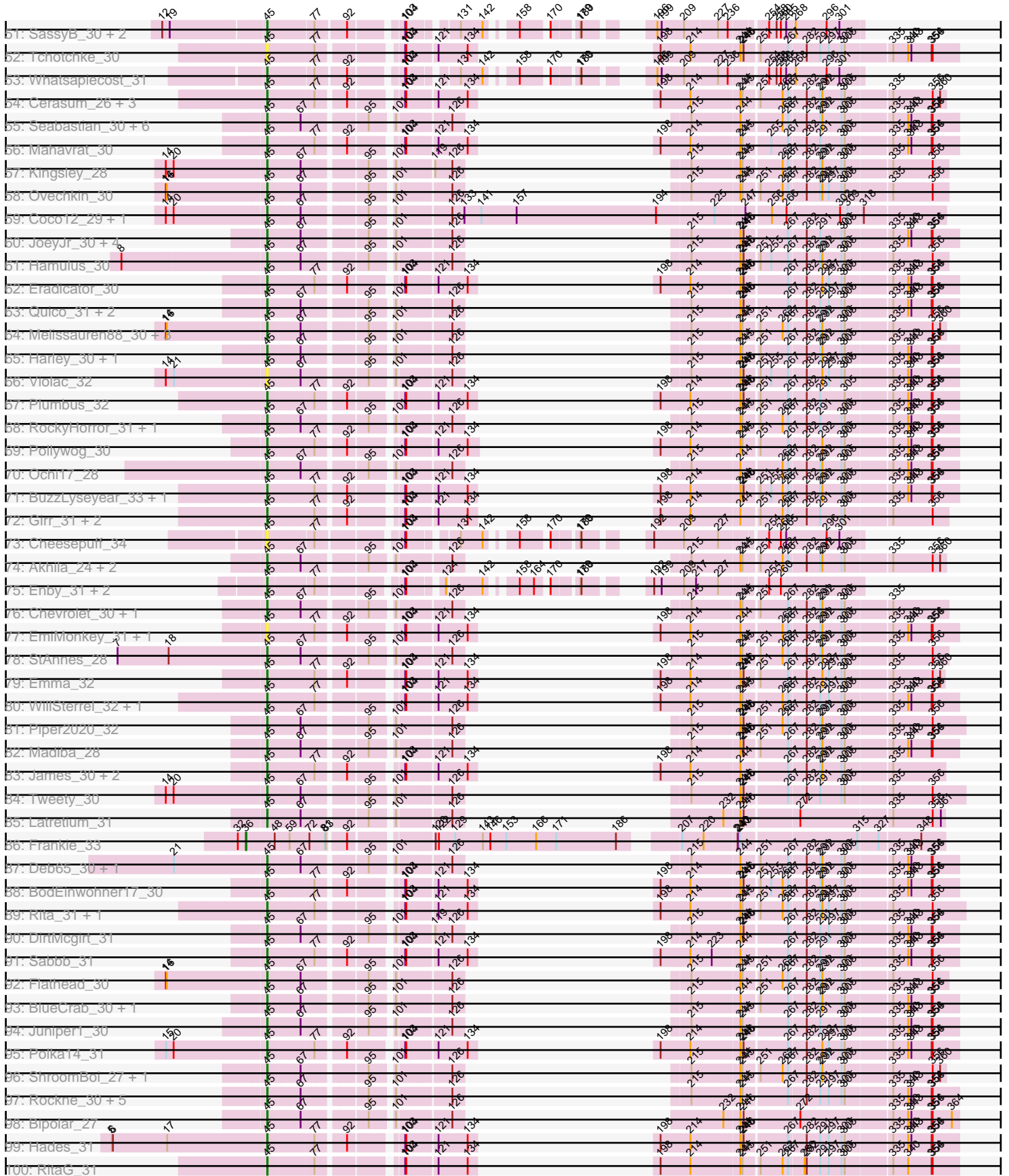


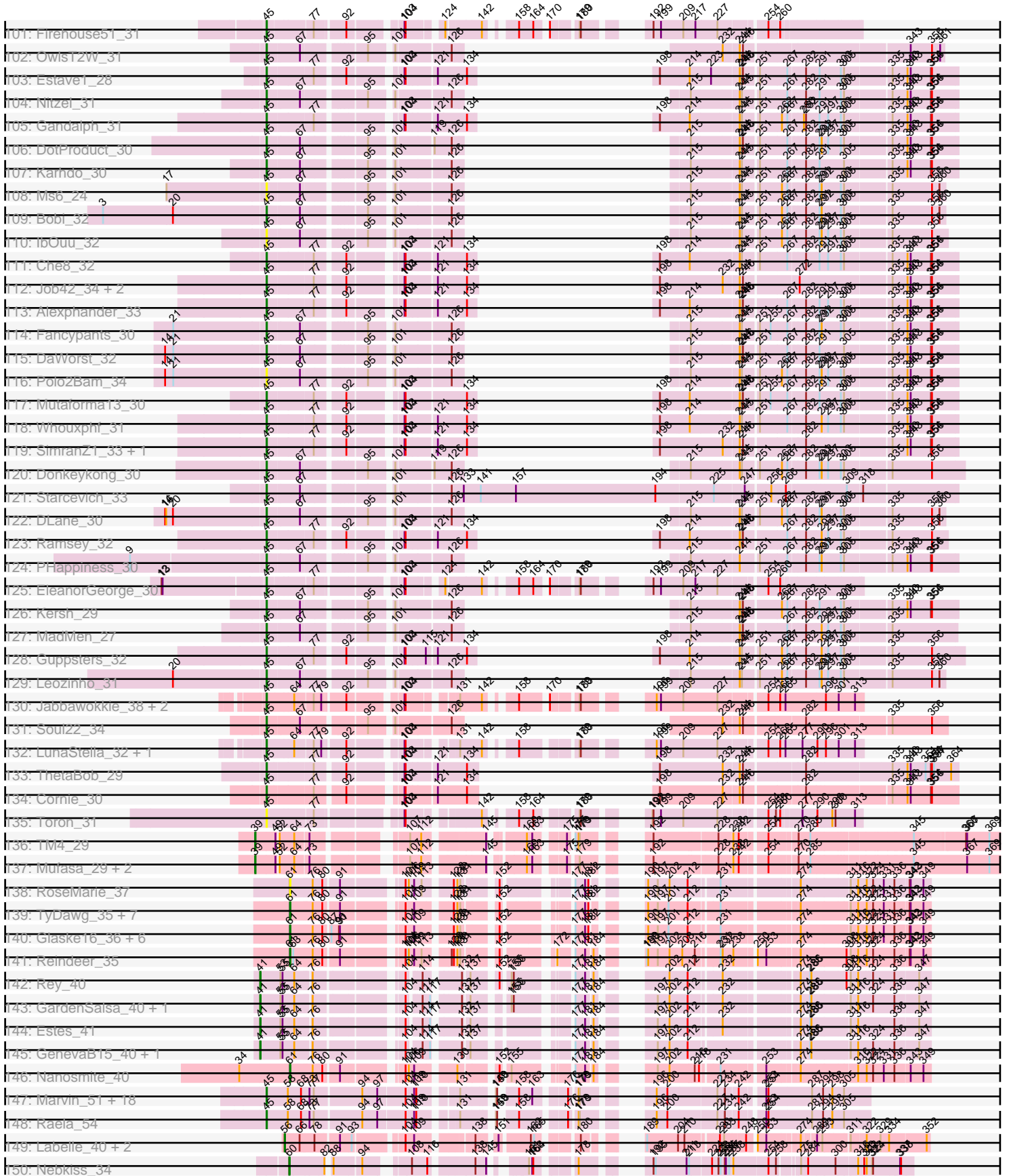
Pham 224154



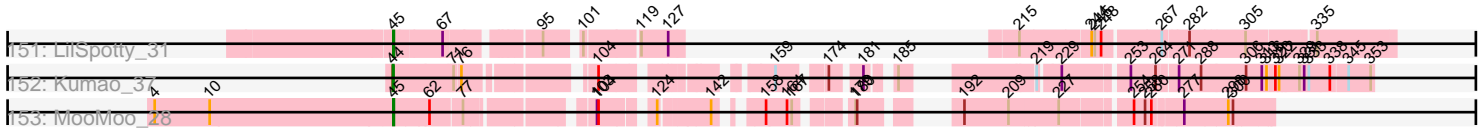
Pham 224154



Pham 224154



Pham 224154



A series of horizontal lines, likely representing a template or a set of data points, extending across the width of the page. The lines are evenly spaced and cover the majority of the lower half of the image.

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 224154 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224154 has 482 members, 64 are drafts.

Phages represented in each track:

- Track 1 : JustASigh\_25
- Track 2 : StAugustine\_53
- Track 3 : Causa\_57
- Track 4 : Indlovu\_45
- Track 5 : Prince\_43, Hydro\_43, VioletZ\_45, Apex\_44
- Track 6 : Zemanar\_44, Lambano\_42, Fortunato\_44, Epah\_42, Nanao\_42, GinPorsche\_42, Hally898\_42, Antihero\_42, BobbyK\_44, Magpie\_42, Lolalove\_44, RawrgerThat\_44, Ahwei\_42, Frederick\_44, Poster\_42
- Track 7 : JaguarMi\_43, Xincheng\_42
- Track 8 : ChrisnMich\_43
- Track 9 : AlanGrant\_45, Vincenzo\_44
- Track 10 : Heath\_42
- Track 11 : JAMaL\_43
- Track 12 : Fanaw\_42
- Track 13 : Nigel\_42
- Track 14 : QueenPie\_42
- Track 15 : Austelle\_44, Hangman\_43, Mithril\_43
- Track 16 : Waleliano\_43
- Track 17 : BrownCNA\_45
- Track 18 : Mudslide\_43
- Track 19 : Stinger\_42
- Track 20 : Cooper\_44
- Track 21 : Saguaro\_49
- Track 22 : Thonko\_46
- Track 23 : CRB2\_49
- Track 24 : Quesadilla\_49
- Track 25 : PenguinLover67\_49
- Track 26 : Ghost\_250, Pier\_249, Pivoine\_251, ScottMcG\_242, EmmaElysia\_255, Naija\_251, QBert\_242, Roots515\_253, Catera\_239, LolaVinca\_246, Phusco\_249, Atlantean\_250, Shnickers\_249, Sprinklers\_248, ChickenPhender\_246, MikeLiesIn\_251, Cali\_240, DirtMonster\_239, BackyardAgain\_245, InigoMontoya\_254, Gamgam\_252, Grungle\_232, YemiJoy2021\_251, Tortoise16\_248, ShiaLabeouf\_248, Dietrick\_239, Momo\_252, Quasimodo\_253, Kboogie\_254, I3\_260, Pio\_257, ArcherS7\_251, Adlitam\_250, ParkTD\_249, Derek\_246, SmallFry\_251, Rahel\_252, Bipolarisk\_248, JustHall\_244, Babyland\_253, BigCity\_258, SilverDipper\_255, Caravan\_240, NuevoMundo\_252, Halldule\_242, Littleton\_254, Spud\_242, EggyFarm\_258, Matsumoto\_248, ValleyTerrace\_251, BeanWater\_243, Spec\_244,

Ewok\_249, DTDevon\_251, Drazdys\_247, Breeniome\_250, LRRHood\_242, Melpomini\_245, Loanshark\_247, Jedediah\_252, EasyJones\_251, Latch\_250, Mangeria\_250, Izajani\_246, Burrough\_251, JigglyPuff\_256, NedWong\_249, Grasshills\_257, Amataga\_251, Jaygup\_247, DrPhinkDaddy\_247, Turret\_241, ChaylaJr\_249, Capablanca\_255, Phlegm\_255, Zeenon\_251, Megamind\_247, Iota\_247, Delilah\_248, Jemmno\_250, Pleione\_254, Norm\_250, Gabriel\_253, Fongie\_250, Zalkecks\_249, Bangla1971\_251, Tyke\_247, Bxz1\_236, LifeSavor\_251, Koguma\_249, Daffodil\_256, Delyiah\_252, YoungMoneyMata\_250, Shelob\_251, Audrick\_253, Wally\_248, Jezreel\_246, Napoleon13\_247, Ngannou\_245, Fludd\_250, Ava3\_247, Chomp\_249, Phox\_251, Rizal\_239, GlutenPhree\_249, Essence\_248, Sauce\_247, Willis\_251

- Track 27 : LordLeafolot\_252, RoMag\_245, MoMoMixon\_246, Nappy\_249, StephanieG\_244, Dandelion\_256, Bigswole\_255, Domi\_244, Guwapp\_246, Naval22\_255, InterFolia\_252, Nidhogg\_251, BadAgartude\_244, IkeLoa\_244, Lethe\_251, CindyLou\_251, Lukilu\_239, Tainan\_250, Patter\_252, Kamryn\_249, FrayBell\_253, Mikro\_244
- Track 28 : JayJay\_250, Jessibeth14\_250, Shaqnato\_241, Colt\_240, JulietS\_242, Khaleesi\_249, Blubba\_237, CharlieB\_245, McWolfish\_247, Cane17\_239, HyRo\_235, Shifa\_226, Blackdragon\_245, DeejaClivia\_237, SVoro\_246, Sebata\_250
- Track 29 : Stubby\_233, Pinkcreek\_230, Yassified\_246, ET08\_236, LinStu\_247, Alice\_236, Ronan\_246
- Track 30 : Trinitium\_247, Chargie21\_248, Yucca\_251, Specks\_255, FoxtrotP1\_249, FudgeTart\_246, SrishMeg2525\_248, McGee\_252, JPickles\_248, ZygoTaiga\_247, TinyTim\_249, Ablatia\_249, Gizmo\_256, Morizzled23\_248, Janiyra\_254, Ading\_253, Cactojaque\_245, Teardrop\_249, StubbySaigey\_257, Blackbrain\_249, Belieber\_244, Lee7\_251, ErnieJ\_244, Primadonna\_246, Maby2021\_251, Basquiat\_248, Bread\_247, Astraea\_246, Erdmann\_252, Shrimp\_253, Salacia\_252, EmToTheThree\_251
- Track 31 : Bonray\_253, Asterius\_251, PurduePete\_251, Issimir\_244
- Track 32 : Rabinovish\_243
- Track 33 : Demodog\_258
- Track 34 : NoodleTree\_246
- Track 35 : Flabslab\_245
- Track 36 : Darko\_250, BananaFence\_248
- Track 37 : Concombre\_256
- Track 38 : Tonenili\_272
- Track 39 : MulchSalad\_27
- Track 40 : Shauna1\_27, MilleniumForce\_31, Brookers\_28, Ardmore\_29, DeadP\_30, Kenuha5\_27, Brushbloom\_32, Phanphagia\_27, Taj\_30, Wee\_31
- Track 41 : Spartacus\_32, Bubbles123\_32
- Track 42 : Slim\_33, Emmaloid\_33, GigiOuiOui\_30, Phasih\_31, Veteran\_30, Mantra\_30, GUmbie\_30
- Track 43 : Eish\_30
- Track 44 : DoRead\_32, LittleShirley\_33, Rialto\_34
- Track 45 : Gorge\_30, Cabrinians\_30, Saal\_30, Spoonbill\_30, Sparkdehlily\_30, DRBy19\_30, FreddyB\_30, Totinger\_31, Radiance\_30, OlympiaSaint\_30, Philus\_30, Priscilla\_30, TDanisky\_30
- Track 46 : LunaBlu\_32, Galactic\_31, MinionDave\_32
- Track 47 : Empress\_31, Sandalphon\_31, OldBen\_30, Dante\_30
- Track 48 : Hlubikazi\_30, Mandlovu\_30, Strokeseat\_30
- Track 49 : Royals2015\_30
- Track 50 : Grimmer\_32
- Track 51 : SassyB\_30, Seagreen\_31, PopTart\_30

- Track 52 : Tchotchke\_30
- Track 53 : Whatsapiecost\_31
- Track 54 : Cerasum\_26, Sarma624\_26, BigPhil\_26, Velveteen\_26
- Track 55 : Seabastian\_30, Jinglebell\_29, OfUltron\_30, Llama\_30, Modragons\_30, Oksu\_31, AlpineSix\_31
- Track 56 : Mahavrat\_30
- Track 57 : Kingsley\_28
- Track 58 : Ovechkin\_30
- Track 59 : Coco12\_29, JalFarm20\_32
- Track 60 : JoeyJr\_30, Poenanya\_30, Scottish\_31, Doomphist\_30, Daenerys\_30
- Track 61 : Hamulus\_30
- Track 62 : Eradicator\_30
- Track 63 : Quico\_31, Girafales\_31, Florinda\_30
- Track 64 : Melissauren88\_30, Fruitloop\_29, Batiatus\_30, Filuzino\_30
- Track 65 : Harley\_30, Ibhubesi\_30
- Track 66 : Violac\_32
- Track 67 : Plumbus\_32
- Track 68 : RockyHorror\_31, Zerg\_30
- Track 69 : Pollywog\_30
- Track 70 : Ochi17\_28
- Track 71 : BuzzLyseyear\_33, Spikelee\_32
- Track 72 : Girr\_31, Ruby\_31, MisterCuddles\_31
- Track 73 : Cheesepuff\_34
- Track 74 : Akhila\_24, KingMidas\_31, MilanaBonita\_24
- Track 75 : Enby\_31, SG4\_30, Lorde\_31
- Track 76 : Chevrolet\_30, ArcusAngelus\_30
- Track 77 : EmiMonkey\_31, PhlipPhlop\_31
- Track 78 : StAnnes\_28
- Track 79 : Emma\_32
- Track 80 : WillSterrel\_32, IrishSherpFalk\_32
- Track 81 : Piper2020\_32
- Track 82 : Madiba\_28
- Track 83 : James\_30, Mattes\_30, BobaPhett\_30
- Track 84 : Tweety\_30
- Track 85 : Latretium\_31
- Track 86 : Frankie\_33
- Track 87 : Deb65\_30, Geralt\_30
- Track 88 : BodEinwohner17\_30
- Track 89 : Rita\_31, SuperGrey\_31
- Track 90 : DirtMcgirt\_31
- Track 91 : Sabbb\_31
- Track 92 : Flathead\_30
- Track 93 : BlueCrab\_30, Nimbo\_30
- Track 94 : Juniper1\_30
- Track 95 : Polka14\_31
- Track 96 : ShroomBoi\_27, Mova\_31
- Track 97 : Rockne\_30, Phatniss\_31, UncleRicky\_33, Llij\_30, Drago\_31, PMC\_30
- Track 98 : Bipolar\_27
- Track 99 : Hades\_31
- Track 100 : RitaG\_31
- Track 101 : Firehouse51\_31
- Track 102 : OwlsT2W\_31
- Track 103 : Estave1\_28

- Track 104 : Nitzel\_31
- Track 105 : Gandalph\_31
- Track 106 : DotProduct\_30
- Track 107 : Karhdo\_30
- Track 108 : Ms6\_24
- Track 109 : Bobi\_32
- Track 110 : IbOuu\_32
- Track 111 : Che8\_32
- Track 112 : Job42\_34, DosHalletts\_32, Minnie\_32
- Track 113 : Alexphander\_33
- Track 114 : Fancypants\_30
- Track 115 : DaWorst\_32
- Track 116 : Polo2Bam\_34
- Track 117 : Mutaforma13\_30
- Track 118 : Whouxphf\_31
- Track 119 : SimranZ1\_33, Boomer\_32
- Track 120 : Donkeykong\_30
- Track 121 : Starceвич\_33
- Track 122 : DLane\_30
- Track 123 : Ramsey\_32
- Track 124 : PHappiness\_30
- Track 125 : EleanorGeorge\_30
- Track 126 : Kersh\_29
- Track 127 : MadMen\_27
- Track 128 : Guppsters\_32
- Track 129 : Leozinho\_31
- Track 130 : Jabbawokkie\_38, Zapner\_37, Demsculpinboyz\_35
- Track 131 : Soul22\_34
- Track 132 : LunaStella\_32, TChen\_30
- Track 133 : ThetaBob\_29
- Track 134 : Cornie\_30
- Track 135 : Toron\_31
- Track 136 : TM4\_29
- Track 137 : Mufasa\_29, BoostSeason\_29, Doughnut\_29
- Track 138 : RoseMarie\_37
- Track 139 : TyDawg\_35, FreakyGoo\_35, Skinny\_36, LilhomieP\_34, Bongo\_35, Bricole\_35, IPhane7\_35, PegLeg\_35
- Track 140 : Glaske16\_36, Dulcita\_36, Auspice\_35, SlimJimmy\_34, Diminimus\_36, Izel\_34, KleverKiS\_35
- Track 141 : Reindeer\_35
- Track 142 : Rey\_40
- Track 143 : GardenSalsa\_40, MrMagoo\_40
- Track 144 : Estes\_41
- Track 145 : GenevaB15\_40, Aziz\_40
- Track 146 : Nanosmite\_40
- Track 147 : Marvin\_51, Poise\_54, Beelzebub\_58, Pringar\_54, Blackbeetle\_54, Huphlepuuff\_56, MosMoris\_52, Tesla\_52, Clarkson\_55, GoongGoong\_53, Gattaca\_53, Lilbit\_55, RedRaider77\_53, Corazon\_52, JoieB\_55, VasuNzinga\_54, Caprice\_51, FeliMaine\_56, LittleLaf\_54
- Track 148 : Raela\_54
- Track 149 : Labelle\_40, Patience\_41, Madruga\_39
- Track 150 : Nebkiss\_34
- Track 151 : LilSpotty\_31



- Track 152 : Kumao\_37
- Track 153 : MooMoo\_28

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

The start number called the most often in the published annotations is 45, it was called in 185 of the 418 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_24, Alexphander\_33, AlpineSix\_31, ArcusAngelus\_30, Ardmore\_29, Batiatus\_30, Beelzebub\_58, BigPhil\_26, Bipolar\_27, Blackbeetle\_54, BlueCrab\_30, BobaPhett\_30, Bobi\_32, BodEinwohner17\_30, Boomer\_32, Brookers\_28, Brushbloom\_32, Bubbles123\_32, BuzzLyseyear\_33, Cabrinians\_30, Caprice\_51, Cerasum\_26, Che8\_32, CheesePuff\_34, Chevrolet\_30, Clarkson\_55, Coco12\_29, Concombre\_256, Corazon\_52, Cornie\_30, DLane\_30, DRBy19\_30, DaWorst\_32, Daenerys\_30, Dante\_30, DeadP\_30, Deb65\_30, Demodog\_258, Demsculpinboyz\_35, DirtMcGirt\_31, DoRead\_32, Donkeykong\_30, Doomphist\_30, DosHalletts\_32, DotProduct\_30, Drago\_31, Eish\_30, EleanorGeorge\_30, EmiMonkey\_31, Emma\_32, Emmaloid\_33, Empress\_31, Enby\_31, Eradicator\_30, Estave1\_28, Fancypants\_30, FeliMaine\_56, Filuzino\_30, Firehouse51\_31, Flathead\_30, Florinda\_30, FreddyB\_30, Fruitloop\_29, GUmbe\_30, Galactic\_31, Gandolph\_31, Gattaca\_53, Geralt\_30, GigiOuiOui\_30, Girafales\_31, Girr\_31, GoongGoong\_53, Gorge\_30, Grimmer\_32, Guppsters\_32, Hades\_31, Hamulus\_30, Harley\_30, Hlubikazi\_30, HuphlePuff\_56, IbOuu\_32, Ibhubes\_30, IrishSherpFalk\_32, Jabbawokkie\_38, JalFarm20\_32, James\_30, Jinglebell\_29, Job42\_34, JoeyJr\_30, JoieB\_55, Juniper1\_30, JustASigh\_25, Karhdo\_30, Kenuha5\_27, Kersh\_29, KingMidas\_31, Kingsley\_28, Latretium\_31, Leozinho\_31, LilSpotty\_31, Lilbit\_55, LittleLaf\_54, LittleShirley\_33, Llama\_30, Llij\_30, Lorde\_31, LunaBlu\_32, LunaStella\_32, MadMen\_27, Madiba\_28, Mahavrat\_30, Mandlovu\_30, Mantra\_30, Marvin\_51, Mattes\_30, Melissauren88\_30, MilanaBonita\_24, MilleniumForce\_31, MinionDave\_32, Minnie\_32, MisterCuddles\_31, Modragons\_30, MooMoo\_28, MosMoris\_52, Mova\_31, Ms6\_24, MulchSalad\_27, Mutaforma13\_30, Nimbo\_30, Nitzel\_31, Ochi17\_28, OfUltron\_30, Oksu\_31, OldBen\_30, OlympiaSaint\_30, Ovechkin\_30, OwlsT2W\_31, PHappiness\_30, PMC\_30, Phanphagia\_27, Phasih\_31, Phatniss\_31, Philus\_30, PhilipPhlop\_31, Piper2020\_32, Plumbus\_32, Poenanya\_30, Poise\_54, Polka14\_31, Pollywog\_30, Polo2Bam\_34, PopTart\_30, Pringar\_54, Priscilla\_30, Quico\_31, Radiance\_30, Raela\_54, Ramsey\_32, RedRaider77\_53, Rialto\_34, RitaG\_31, Rita\_31, Rockne\_30, RockyHorror\_31, Royals2015\_30, Ruby\_31, SG4\_30, Saal\_30, Sabbb\_31, Sandalphon\_31, Sarma624\_26, SassyB\_30, Scottish\_31, Sebastian\_30, Seagreen\_31, Shauna1\_27, ShroomBoi\_27, SimranZ1\_33, Slim\_33, Soul22\_34, Sparkdehlily\_30, Spartacus\_32, Spikelee\_32, Spoonbill\_30, StAnnes\_28, Starcevich\_33, StrokeSeat\_30, SuperGrey\_31, TChen\_30, TDanisky\_30, Taj\_30, Tchotchke\_30, Tesla\_52, ThetaBob\_29, Toron\_31, Totinger\_31, Tweety\_30, UncleRicky\_33, VasuNzinga\_54, Velveteen\_26, Veteran\_30, Violac\_32, Wee\_31, Whatsapiecost\_31, Whouxphf\_31, WillSterrel\_32, Zapner\_37, Zerg\_30,

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

-

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

- Ablatia\_249, Ading\_253, Adlitam\_250, Ahwei\_42, AlanGrant\_45, Alice\_236, Amataga\_251, Antihero\_42, Apex\_44, ArcherS7\_251, Asterius\_251, Astraea\_246, Atlantean\_250, Audrick\_253, Auspice\_35, Austelle\_44, Ava3\_247, Aziz\_40, Babyland\_253, BackyardAgain\_245, BadAgartude\_244, BananaFence\_248, Bangla1971\_251, Basquiat\_248, BeanWater\_243, Belieber\_244, BigCity\_258, Bigswole\_255, Bipolarisk\_248, Blackbrain\_249, Blackdragon\_245, Blubba\_237, BobbyK\_44, Bongo\_35, Bonray\_253, BoostSeason\_29, Bread\_247, Breeniome\_250, Bricole\_35, BrownCNA\_45, Burrough\_251, Bxz1\_236, CRB2\_49, Cactojaque\_245, Cali\_240, Cane17\_239, Capablanca\_255, Caravan\_240, Catera\_239, Causa\_57, Chargie21\_248, CharlieB\_245, ChaylaJr\_249, ChickenPhender\_246, Chomp\_249, ChrisnMich\_43, CindyLou\_251, Colt\_240, Cooper\_44, DTDevon\_251, Daffodil\_256, Dandelion\_256, Darko\_250, DeejaClivia\_237, Delilah\_248, Delylah\_252, Derek\_246, Dietrick\_239, Diminimus\_36, DirtMonster\_239, Domi\_244, Doughnut\_29, DrPhinkDaddy\_247, Drazdys\_247, Dulcita\_36, ET08\_236, EasyJones\_251, EggyFarm\_258, EmToTheThree\_251, EmmaElysia\_255, Epah\_42, Erdmann\_252, ErnieJ\_244, Essence\_248, Estes\_41, Ewok\_249, Fanaw\_42, Flabslab\_245, Fludd\_250, Fongie\_250, Fortunato\_44, FoxtrotP1\_249, Frankie\_33, FrayBell\_253, FreakyGoo\_35, Frederick\_44, FudgeTart\_246, Gabriel\_253, Gamgam\_252, GardenSalsa\_40, GenevaB15\_40, Ghost\_250, GinPorsche\_42, Gizmo\_256, Glaske16\_36, GlutenPhree\_249, Grasshills\_257, Grungle\_232, Guwapp\_246, Halldule\_242, Hally898\_42, Hangman\_43, Heath\_42, HyRo\_235, Hydro\_43, I3\_260, IPhane7\_35, IkeLoa\_244, Indlovu\_45, InigoMontoya\_254, InterFolia\_252, Iota\_247, Issimir\_244, Izajani\_246, Izel\_34, JAMaL\_43, JPickles\_248, JaguarMi\_43, Janiyra\_254, JayJay\_250, Jaygup\_247, Jedediah\_252, Jemmno\_250, Jessibeth14\_250, Jezreel\_246, JigglyPuff\_256, JulietS\_242, JustHall\_244, Kamryn\_249, Kboogie\_254, Khaleesi\_249, KleverKiS\_35, Koguma\_249, Kumao\_37, LRRHood\_242, Labelle\_40, Lambano\_42, Latch\_250, Lee7\_251, Lethe\_251, LifeSavor\_251, LilhomieP\_34, LinStu\_247, Littleton\_254, Loanshark\_247, LolaVinca\_246, Lolalove\_44, LordLeafolot\_252, Lukilu\_239, Maby2021\_251, Madrugá\_39, Magpie\_42, Mangeria\_250, Matsumoto\_248, McGee\_252, McWolfish\_247, Megamind\_247, Melpomini\_245, MikeLiesIn\_251, Mikro\_244, Mithril\_43, MoMoMixon\_246, Momo\_252, Morizzled23\_248, MrMagoo\_40, Mudslide\_43, Mufasa\_29, Naija\_251, Nanao\_42, Nanosmite\_40, Napoleon13\_247, Nappy\_249, Naval22\_255, Nebkiss\_34, NedWong\_249, Ngannou\_245, Nidhogg\_251, Nigel\_42, NoodleTree\_246, Norm\_250, NuevoMundo\_252, ParkTD\_249, Patience\_41, Patter\_252, PegLeg\_35, PenguinLover67\_49, Phlegm\_255, Phox\_251, Phusco\_249, Pier\_249, Pinkcreek\_230, Pio\_257, Pivoine\_251, Pleione\_254, Poster\_42, Primadonna\_246, Prince\_43, PurduePete\_251, QBert\_242, Quasimodo\_253, QueenPie\_42, Quesadilla\_49, Rabinovich\_243, Rahel\_252, RawrgerThat\_44, Reindeer\_35, Rey\_40, Rizal\_239, RoMag\_245, Ronan\_246, Roots515\_253, RoseMarie\_37, SVoro\_246, Saguaro\_49, Salacia\_252, Sauce\_247, ScottMcG\_242, Sebata\_250, Shaqnato\_241, Shelob\_251, ShiaLabeouf\_248, Shifa\_226, Shnickers\_249, Shrimp\_253, SilverDipper\_255, Skinny\_36, SlimJimmy\_34, SmallFry\_251, Spec\_244, Specks\_255, Sprinklers\_248, Spud\_242, SrishMeg2525\_248, StAugustine\_53, StephanieG\_244, Stinger\_42, StubbySaigey\_257, Stubby\_233, TM4\_29, Tainan\_250, Teardrop\_249, Thonko\_46, TinyTim\_249, Tonenili\_272, Tortoise16\_248, Trinitium\_247, Turret\_241, TyDawg\_35, Tyke\_247, ValleyTerrace\_251, Vincenzo\_44, VioletZ\_45, Waleliano\_43, Wally\_248, Willis\_251, Xincheng\_42, Yassified\_246, YemiJoy2021\_251, YoungMoneyMata\_250, Yucca\_251, Zalkecks\_249, Zeenon\_251, Zemanar\_44, ZygoTaiga\_247,

**Summary by start number:**

Start 36:

- Found in 1 of 482 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Frankie\_33 (F1),

Start 38:

- Found in 39 of 482 ( 8.1% ) of genes in pham
- Manual Annotations of this start: 26 of 418
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Ahwei\_42 (B4), AlanGrant\_45 (B4), Antihero\_42 (B4), Apex\_44 (B4), Austelle\_44 (B4), BobbyK\_44 (B4), BrownCNA\_45 (B4), ChrisnMich\_43 (B4), Cooper\_44 (B4), Epah\_42 (B4), Fanaw\_42 (B4), Fortunato\_44 (B4), Frederick\_44 (B4), GinPorsche\_42 (B4), Hally898\_42 (B4), Hangman\_43 (B4), Heath\_42 (B4), Hydro\_43 (B4), JAMaL\_43 (B4), JaguarMi\_43 (B4), Lambano\_42 (B4), Lolalove\_44 (B4), Magpie\_42 (B4), Mithril\_43 (B4), Mudslide\_43 (B4), Nanao\_42 (B4), Nigel\_42 (B4), Poster\_42 (B4), Prince\_43 (B4), QueenPie\_42 (B4), RawrgerThat\_44 (B4), StAugustine\_53 (A1), Stinger\_42 (B4), Vincenzo\_44 (B4), VioletZ\_45 (B4), Waleliano\_43 (B4), Xincheng\_42 (B4), Zemanar\_44 (B4),

Start 39:

- Found in 4 of 482 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason\_29 (K2), Doughnut\_29 (K2), Mufasa\_29 (K2), TM4\_29 (K2),

Start 41:

- Found in 6 of 482 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 6 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aziz\_40 (M2), Estes\_41 (M2), GardenSalsa\_40 (M2), GenevaB15\_40 (M2), MrMagoo\_40 (M2), Rey\_40 (M2),

Start 44:

- Found in 1 of 482 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumao\_37 (singleton),

Start 45:

- Found in 208 of 482 ( 43.2% ) of genes in pham
- Manual Annotations of this start: 185 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akhila\_24 (F1), Alexphander\_33 (F1), AlpineSix\_31 (F1), ArcusAngelus\_30 (F1), Ardmore\_29 (F1), Batiatus\_30 (F1), Beelzebub\_58 (S), BigPhil\_26 (F1), Bipolar\_27 (F1), Blackbeetle\_54 (S), BlueCrab\_30 (F1), BobaPhett\_30 (F1), Bobi\_32 (F1), BodEinwohner17\_30 (F1), Boomer\_32 (F1), Brookers\_28 (F1), Brushbloom\_32 (F1), Bubbles123\_32 (F1), BuzzLyseyear\_33 (F1), Cabrinians\_30 (F1), Caprice\_51 (S), Cerasum\_26 (F1), Che8\_32 (F1), Cheese puff\_34 (F1), Chevrolet\_30 (F1), Clarkson\_55 (S), Coco12\_29

(F1), Concombre\_256 (C1), Corazon\_52 (S), Cornie\_30 (F5), DLane\_30 (F1), DRBy19\_30 (F1), DaWorst\_32 (F1), Daenerys\_30 (F1), Dante\_30 (F1), DeadP\_30 (F1), Deb65\_30 (F1), Demodog\_258 (C1), Demsculpinboyz\_35 (F2), DirtMcGirt\_31 (F1), DoRead\_32 (F1), Donkeykong\_30 (F1), Doomphist\_30 (F1), DosHalletts\_32 (F1), DotProduct\_30 (F1), Drago\_31 (F1), Eish\_30 (F1), EleanorGeorge\_30 (F1), EmiMonkey\_31 (F1), Emma\_32 (F1), Emmaloid\_33 (F1), Empress\_31 (F1), Enby\_31 (F1), Eradicator\_30 (F1), Estave1\_28 (F1), Fancypants\_30 (F1), FeliMaine\_56 (S), Filuzino\_30 (F1), Firehouse51\_31 (F1), Flathead\_30 (F1), Florinda\_30 (F1), FreddyB\_30 (F1), Fruitloop\_29 (F1), GUmbie\_30 (F1), Galactic\_31 (F1), Gandolph\_31 (F1), Gattaca\_53 (S), Geralt\_30 (F1), GigiOuiOui\_30 (F1), Girafales\_31 (F1), Girr\_31 (F1), GoongGoong\_53 (S), Gorge\_30 (F1), Grimmer\_32 (F1), Guppsters\_32 (F1), Hades\_31 (F1), Hamulus\_30 (F1), Harley\_30 (F1), Hlubikazi\_30 (F1), Huphlepuuff\_56 (S), IbOuu\_32 (F1), Ibhubesi\_30 (F1), IrishSherpFalk\_32 (F1), Jabbawokkie\_38 (F2), JalFarm20\_32 (F1), James\_30 (F1), Jinglebell\_29 (F1), Job42\_34 (F1), JoeyJr\_30 (F1), JoieB\_55 (S), Juniper1\_30 (F1), JustASigh\_25 (AH), Karhdo\_30 (F1), Kenuha5\_27 (F1), Kersh\_29 (F1), KingMidas\_31 (F1), Kingsley\_28 (F1), Latretium\_31 (F1), Leozinho\_31 (F1), LilSpotty\_31 (singleton), Lilbit\_55 (S), LittleLaf\_54 (S), LittleShirley\_33 (F1), Llama\_30 (F1), Llij\_30 (F1), Lorde\_31 (F1), LunaBlu\_32 (F1), LunaStella\_32 (F4), MadMen\_27 (F1), Madiba\_28 (F1), Mahavrat\_30 (F1), Mandlovu\_30 (F1), Mantra\_30 (F1), Marvin\_51 (S), Mattes\_30 (F1), Melissauren88\_30 (F1), MilanaBonita\_24 (F1), MilleniumForce\_31 (F1), MinionDave\_32 (F1), Minnie\_32 (F1), MisterCuddles\_31 (F1), Modragons\_30 (F1), MooMoo\_28 (singleton), MosMoris\_52 (S), Mova\_31 (F1), Ms6\_24 (F1), MulchSalad\_27 (F), Mutaforma13\_30 (F1), Nimbo\_30 (F1), Nitzel\_31 (F1), Ochi17\_28 (F1), OfUltron\_30 (F1), Oksu\_31 (F1), OldBen\_30 (F1), OlympiaSaint\_30 (F1), Ovechkin\_30 (F1), OwlsT2W\_31 (F1), PHappiness\_30 (F1), PMC\_30 (F1), Phanphagia\_27 (F1), Phasih\_31 (F1), Phatniss\_31 (F1), Philus\_30 (F1), PhilipPhlop\_31 (F1), Piper2020\_32 (F1), Plumbus\_32 (F1), Poenanya\_30 (F1), Poise\_54 (S), Polka14\_31 (F1), Pollywog\_30 (F1), Polo2Bam\_34 (F1), PopTart\_30 (F1), Pringar\_54 (S), Priscilla\_30 (F1), Quico\_31 (F1), Radiance\_30 (F1), Raela\_54 (S), Ramsey\_32 (F1), RedRaider77\_53 (S), Rialto\_34 (F1), RitaG\_31 (F1), Rita\_31 (F1), Rockne\_30 (F1), RockyHorror\_31 (F1), Royals2015\_30 (F1), Ruby\_31 (F1), SG4\_30 (F1), Saal\_30 (F1), Sabbb\_31 (F1), Sandalphon\_31 (F1), Sarma624\_26 (F1), SassyB\_30 (F1), Scottish\_31 (F1), Seabastian\_30 (F1), Seagreen\_31 (F1), Shauna1\_27 (F1), ShroomBoi\_27 (F1), SimranZ1\_33 (F1), Slim\_33 (F1), Soul22\_34 (F2), Sparkdehlily\_30 (F1), Spartacus\_32 (F1), Spikelee\_32 (F1), Spoonbill\_30 (F1), StAnnes\_28 (F1), Starcevich\_33 (F1), Strokeseat\_30 (F1), SuperGrey\_31 (F1), TChen\_30 (F4), TDanisky\_30 (F1), Taj\_30 (F1), Tchotchke\_30 (F1), Tesla\_52 (S), ThetaBob\_29 (F4), Toron\_31 (F6), Totinger\_31 (F1), Tweety\_30 (F1), UncleRicky\_33 (F1), VasuNzinga\_54 (S), Velveteen\_26 (F1), Veteran\_30 (F1), Violac\_32 (F1), Wee\_31 (F1), Whatsapiecost\_31 (F1), Whouxphf\_31 (F1), WillSterrel\_32 (F1), Zapner\_37 (F2), Zerg\_30 (F1),

Start 46:

- Found in 197 of 482 ( 40.9% ) of genes in pham
- Manual Annotations of this start: 172 of 418
- Called 99.0% of time when present
- Phage (with cluster) where this start called: Ablatia\_249 (C1), Ading\_253 (C1), Adlitam\_250 (C1), Alice\_236 (C1), Amataga\_251 (C1), ArcherS7\_251 (C1), Asterius\_251 (C1), Astraea\_246 (C1), Atlantean\_250 (C1), Audrick\_253 (C1), Ava3\_247 (C1), Babyland\_253 (C1), BackyardAgain\_245 (C1), BadAgartude\_244 (C1), BananaFence\_248 (C1), Bangla1971\_251 (C1), Basquiat\_248 (C1), BeanWater\_243 (C1), Belieber\_244 (C1), BigCity\_258 (C1), Bigswole\_255 (C1),

Bipolarisk\_248 (C1), Blackbrain\_249 (C1), Blackdragon\_245 (C1), Blubba\_237 (C1), Bonray\_253 (C1), Bread\_247 (C1), Breeniome\_250 (C1), Burrough\_251 (C1), Bxz1\_236 (C1), Cactojaque\_245 (C1), Cali\_240 (C1), Cane17\_239 (C1), Capablanca\_255 (C1), Caravan\_240 (C1), Catera\_239 (C1), Chargie21\_248 (C1), CharlieB\_245 (C1), ChaylaJr\_249 (C1), ChickenPhender\_246 (C1), Chomp\_249 (C1), CindyLou\_251 (C1), Colt\_240 (C1), DTDevon\_251 (C1), Daffodil\_256 (C1), Dandelion\_256 (C1), Darko\_250 (C1), DeejaClivia\_237 (C1), Delilah\_248 (C1), Delylah\_252 (C1), Derek\_246 (C1), Dietrick\_239 (C1), DirtMonster\_239 (C1), Domi\_244 (C1), DrPhinkDaddy\_247 (C1), Drazdys\_247 (C1), ET08\_236 (C1), EasyJones\_251 (C1), EggyFarm\_258 (C1), EmToTheThree\_251 (C1), EmmaElysia\_255 (C1), Erdmann\_252 (C1), ErnieJ\_244 (C1), Essence\_248 (C1), Ewok\_249 (C1), Flabslab\_245 (C1), Fludd\_250 (C1), Fongie\_250 (C1), FoxtrotP1\_249 (C1), FrayBell\_253 (C1), FudgeTart\_246 (C1), Gabriel\_253 (C1), Gamgam\_252 (C1), Ghost\_250 (C1), Gizmo\_256 (C1), GlutenPhree\_249 (C1), Grasshills\_257 (C1), Grungle\_232 (C1), Guwapp\_246 (C1), Halldule\_242 (C1), HyRo\_235 (C1), I3\_260 (C1), IkeLoa\_244 (C1), InigoMontoya\_254 (C1), InterFolia\_252 (C1), Iota\_247 (C1), Issimir\_244 (C1), Izajani\_246 (C1), JPickles\_248 (C1), Janiyr\_254 (C1), JayJay\_250 (C1), Jaygup\_247 (C1), Jedediah\_252 (C1), Jemmno\_250 (C1), Jessibeth14\_250 (C1), Jezreel\_246 (C1), JigglyPuff\_256 (C1), JulietS\_242 (C1), JustHall\_244 (C1), Kamryn\_249 (C1), Kboogie\_254 (C1), Khaleesi\_249 (C1), Koguma\_249 (C1), LRRHood\_242 (C1), Latch\_250 (C1), Lee7\_251 (C1), Lethe\_251 (C1), LifeSavor\_251 (C1), LinStu\_247 (C1), Littleton\_254 (C1), Loanshark\_247 (C1), LolaVinca\_246 (C1), LordLeafolot\_252 (C1), Lukilu\_239 (C1), Maby2021\_251 (C1), Mangeria\_250 (C1), Matsumoto\_248 (C1), McGee\_252 (C1), McWolfish\_247 (C1), Megamind\_247 (C1), Melpomini\_245 (C1), MikeLiesIn\_251 (C1), Mikro\_244 (C1), MoMoMixon\_246 (C1), Momo\_252 (C1), Morizzled23\_248 (C1), Naija\_251 (C1), Napoleon13\_247 (C1), Nappy\_249 (C1), Naval22\_255 (C1), NedWong\_249 (C1), Ngannou\_245 (C1), Nidhogg\_251 (C1), NoodleTree\_246 (C1), Norm\_250 (C1), NuevoMundo\_252 (C1), ParkTD\_249 (C1), Patter\_252 (C1), Phlegm\_255 (C1), Phox\_251 (C1), Phusco\_249 (C1), Pier\_249 (C1), Pinkcreek\_230 (C1), Pio\_257 (C1), Pivoine\_251 (C1), Pleione\_254 (C1), Primadonna\_246 (C1), PurduePete\_251 (C1), QBert\_242 (C1), Quasimodo\_253 (C1), Rabinovish\_243 (C1), Rahel\_252 (C1), Rizal\_239 (C1), RoMag\_245 (C1), Ronan\_246 (C1), Roots515\_253 (C1), SVoro\_246 (C1), Salacia\_252 (C1), Sauce\_247 (C1), ScottMcG\_242 (C1), Sebata\_250 (C1), Shaqnato\_241 (C1), Shelob\_251 (C1), ShiaLabeouf\_248 (C1), Shifa\_226 (C1), Shnickers\_249 (C1), Shrimp\_253 (C1), SilverDipper\_255 (C1), SmallFry\_251 (C1), Spec\_244 (C1), Specks\_255 (C1), Sprinklers\_248 (C1), Spud\_242 (C1), SrishMeg2525\_248 (C1), StephanieG\_244 (C1), StubbySaigey\_257 (C1), Stubby\_233 (C1), Tainan\_250 (C1), Teardrop\_249 (C1), TinyTim\_249 (C1), Tonenili\_272 (C1), Tortoise16\_248 (C1), Trinitium\_247 (C1), Turret\_241 (C1), Tyke\_247 (C1), ValleyTerrace\_251 (C1), Wally\_248 (C1), Willis\_251 (C1), Yassified\_246 (C1), YemiJoy2021\_251 (C1), YoungMoneyMata\_250 (C1), Yucca\_251 (C1), Zalkecks\_249 (C1), Zeenon\_251 (C1), ZygoTaiga\_247 (C1),

Start 50:

- Found in 2 of 482 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Causa\_57 (A1),

Start 51:

- Found in 5 of 482 ( 1.0% ) of genes in pham

- Manual Annotations of this start: 4 of 418
- Called 80.0% of time when present
- Phage (with cluster) where this start called: CRB2\_49 (B9), Quesadilla\_49 (B9), Saguaro\_49 (B7), Thonko\_46 (B8),

#### Start 54:

- Found in 1 of 482 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67\_49 (B9),

#### Start 55:

- Found in 11 of 482 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 1 of 418
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Indlovu\_45 (B11),

#### Start 56:

- Found in 3 of 482 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 3 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Labelle\_40 (U), Madruga\_39 (U), Patience\_41 (U),

#### Start 60:

- Found in 1 of 482 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nebkiss\_34 (X),

#### Start 61:

- Found in 18 of 482 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 14 of 418
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Auspice\_35 (M1), Bongo\_35 (M1), Bricole\_35 (M1), Diminimus\_36 (M1), Dulcita\_36 (M1), FreakyGoo\_35 (M1), Glaske16\_36 (M1), IPhane7\_35 (M1), Izel\_34 (M1), KleverKiS\_35 (M1), LilhomieP\_34 (M1), Nanosmite\_40 (M3), PegLeg\_35 (M1), Reindeer\_35 (M1), RoseMarie\_37 (M), Skinny\_36 (M1), SlimJimmy\_34 (M1), TyDawg\_35 (M1),

### Summary by clusters:

There are 23 clusters represented in this pham: singleton, B11, K2, M1, M3, M2, C1, F, AI, AH, M, S, U, X, F1, F2, F4, F5, F6, B4, B7, B8, B9,

Info for manual annotations of cluster AH:

- Start number 45 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster AI:

- Start number 38 was manually annotated 1 time for cluster AI.

Info for manual annotations of cluster B11:

- Start number 55 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B4:

- Start number 38 was manually annotated 25 times for cluster B4.

Info for manual annotations of cluster B7:

- Start number 51 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 51 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 51 was manually annotated 2 times for cluster B9.
- Start number 54 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster C1:

- Start number 46 was manually annotated 172 times for cluster C1.

Info for manual annotations of cluster F1:

- Start number 36 was manually annotated 1 time for cluster F1.
- Start number 45 was manually annotated 157 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 45 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 45 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 45 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster K2:

- Start number 39 was manually annotated 3 times for cluster K2.

Info for manual annotations of cluster M1:

- Start number 61 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 41 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 61 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster S:

- Start number 45 was manually annotated 17 times for cluster S.

Info for manual annotations of cluster U:

- Start number 56 was manually annotated 3 times for cluster U.

Info for manual annotations of cluster X:

- Start number 60 was manually annotated 1 time for cluster X.

**Gene Information:**

Gene: Ablatia\_249 Start: 142372, Stop: 143802, Start Num: 46

Candidate Starts for Ablatia\_249:

(Start: 46 @142372 has 172 MA's), (73, 142462), (91, 142525), (104, 142648), (109, 142672), (130, 142756), (138, 142798), (151, 142840), (178, 143005), (179, 143008), (224, 143263), (235, 143302), (242, 143332), (254, 143395), (258, 143416), (259, 143425), (261, 143428), (269, 143461), (278, 143476), (316, 143611), (333, 143686), (341, 143743), (342, 143746),

Gene: Ading\_253 Start: 144805, Stop: 146235, Start Num: 46

Candidate Starts for Ading\_253:

(Start: 46 @144805 has 172 MA's), (73, 144895), (91, 144958), (104, 145081), (109, 145105), (130, 145189), (138, 145231), (151, 145273), (178, 145438), (179, 145441), (224, 145696), (235, 145735), (242, 145765), (254, 145828), (258, 145849), (259, 145858), (261, 145861), (269, 145894), (278, 145909), (316, 146044), (333, 146119), (341, 146176), (342, 146179),

Gene: Adlitam\_250 Start: 142960, Stop: 144390, Start Num: 46

Candidate Starts for Adlitam\_250:

(Start: 46 @142960 has 172 MA's), (73, 143050), (91, 143113), (104, 143236), (109, 143260), (130, 143344), (138, 143386), (151, 143428), (178, 143593), (179, 143596), (224, 143851), (235, 143890), (242, 143920), (254, 143983), (258, 144004), (259, 144013), (261, 144016), (269, 144049), (278, 144064), (316, 144199), (333, 144274), (341, 144331), (342, 144334),

Gene: Ahwei\_42 Start: 39523, Stop: 41259, Start Num: 38

Candidate Starts for Ahwei\_42:

(Start: 38 @39523 has 26 MA's), (58, 39598), (65, 39616), (69, 39637), (74, 39652), (89, 39724), (97, 39817), (104, 39889), (109, 39913), (125, 40000), (127, 40015), (168, 40198), (178, 40279), (187, 40360), (192, 40384), (193, 40387), (202, 40429), (226, 40540), (227, 40549), (231, 40558), (249, 40654), (254, 40693), (272, 40762), (285, 40786), (292, 40813), (299, 40843), (321, 40921), (324, 40945), (328, 40963), (329, 40966), (334, 40990), (339, 41035), (358, 41119),

Gene: Akhila\_24 Start: 22445, Stop: 23599, Start Num: 45

Candidate Starts for Akhila\_24:

(Start: 45 @22445 has 185 MA's), (67, 22529), (95, 22679), (101, 22733), (126, 22874), (215, 22955), (244, 23081), (245, 23087), (251, 23126), (262, 23186), (267, 23201), (282, 23243), (291, 23279), (292, 23282), (303, 23333), (305, 23342), (335, 23456), (356, 23567), (360, 23588),

Gene: AlanGrant\_45 Start: 41174, Stop: 42871, Start Num: 38

Candidate Starts for AlanGrant\_45:

(Start: 38 @41174 has 26 MA's), (57, 41243), (58, 41249), (65, 41267), (69, 41288), (74, 41303), (89, 41375), (97, 41468), (104, 41540), (109, 41564), (127, 41666), (178, 41927), (187, 42008), (192, 42032), (193, 42035), (226, 42188), (227, 42197), (231, 42206), (237, 42230), (254, 42341), (272, 42410), (285, 42434), (286, 42437), (292, 42461), (299, 42491), (319, 42566), (324, 42593), (328, 42611), (334, 42638), (357, 42764),

Gene: Alexphander\_33 Start: 27007, Stop: 28281, Start Num: 45

Candidate Starts for Alexphander\_33:

(Start: 45 @27007 has 185 MA's), (77, 27127), (92, 27199), (103, 27316), (104, 27319), (121, 27397), (134, 27478), (198, 27520), (214, 27598), (244, 27724), (245, 27730), (246, 27733), (267, 27844), (282, 27886), (291, 27922), (297, 27940), (303, 27976), (305, 27985), (335, 28099), (340, 28141),



(343, 28150), (354, 28207), (356, 28210),

Gene: Alice\_236 Start: 140036, Stop: 141466, Start Num: 46

Candidate Starts for Alice\_236:

(37, 139994), (Start: 46 @140036 has 172 MA's), (73, 140126), (91, 140189), (104, 140312), (109, 140336), (130, 140420), (138, 140462), (151, 140504), (178, 140669), (179, 140672), (224, 140927), (235, 140966), (242, 140996), (254, 141059), (258, 141080), (259, 141089), (261, 141092), (269, 141125), (278, 141140), (316, 141275), (333, 141350), (342, 141410),

Gene: AlpineSix\_31 Start: 26536, Stop: 27729, Start Num: 45

Candidate Starts for AlpineSix\_31:

(Start: 45 @26536 has 185 MA's), (67, 26620), (95, 26770), (101, 26824), (126, 26965), (215, 27046), (244, 27172), (262, 27277), (267, 27292), (282, 27334), (291, 27370), (292, 27373), (303, 27424), (305, 27433), (335, 27547), (340, 27589), (343, 27598), (354, 27655), (356, 27658),

Gene: Amataga\_251 Start: 141959, Stop: 143389, Start Num: 46

Candidate Starts for Amataga\_251:

(Start: 46 @141959 has 172 MA's), (73, 142049), (91, 142112), (104, 142235), (109, 142259), (130, 142343), (138, 142385), (151, 142427), (178, 142592), (179, 142595), (224, 142850), (235, 142889), (242, 142919), (254, 142982), (258, 143003), (259, 143012), (261, 143015), (269, 143048), (278, 143063), (316, 143198), (333, 143273), (341, 143330), (342, 143333),

Gene: Antihero\_42 Start: 39523, Stop: 41259, Start Num: 38

Candidate Starts for Antihero\_42:

(Start: 38 @39523 has 26 MA's), (58, 39598), (65, 39616), (69, 39637), (74, 39652), (89, 39724), (97, 39817), (104, 39889), (109, 39913), (125, 40000), (127, 40015), (168, 40198), (178, 40279), (187, 40360), (192, 40384), (193, 40387), (202, 40429), (226, 40540), (227, 40549), (231, 40558), (249, 40654), (254, 40693), (272, 40762), (285, 40786), (292, 40813), (299, 40843), (321, 40921), (324, 40945), (328, 40963), (329, 40966), (334, 40990), (339, 41035), (358, 41119),

Gene: Apex\_44 Start: 40765, Stop: 42501, Start Num: 38

Candidate Starts for Apex\_44:

(Start: 38 @40765 has 26 MA's), (58, 40840), (65, 40858), (69, 40879), (74, 40894), (89, 40966), (97, 41059), (104, 41131), (109, 41155), (125, 41242), (127, 41257), (169, 41446), (178, 41521), (187, 41602), (192, 41626), (193, 41629), (226, 41782), (227, 41791), (231, 41800), (249, 41896), (254, 41935), (272, 42004), (285, 42028), (292, 42055), (299, 42085), (321, 42163), (324, 42187), (328, 42205), (329, 42208), (339, 42277), (358, 42361),

Gene: ArcherS7\_251 Start: 143704, Stop: 145134, Start Num: 46

Candidate Starts for ArcherS7\_251:

(Start: 46 @143704 has 172 MA's), (73, 143794), (91, 143857), (104, 143980), (109, 144004), (130, 144088), (138, 144130), (151, 144172), (178, 144337), (179, 144340), (224, 144595), (235, 144634), (242, 144664), (254, 144727), (258, 144748), (259, 144757), (261, 144760), (269, 144793), (278, 144808), (316, 144943), (333, 145018), (341, 145075), (342, 145078),

Gene: ArcusAngelus\_30 Start: 26307, Stop: 27473, Start Num: 45

Candidate Starts for ArcusAngelus\_30:

(Start: 45 @26307 has 185 MA's), (67, 26391), (95, 26541), (101, 26595), (126, 26736), (215, 26817), (244, 26943), (245, 26949), (251, 26988), (267, 27063), (282, 27105), (291, 27141), (292, 27144), (303, 27195), (305, 27204), (335, 27318),

Gene: Ardmore\_29 Start: 26362, Stop: 27516, Start Num: 45

Candidate Starts for Ardmore\_29:

(14, 26089), (20, 26110), (Start: 45 @26362 has 185 MA's), (67, 26446), (95, 26596), (101, 26650), (126, 26791), (215, 26872), (244, 26998), (245, 27004), (251, 27043), (262, 27103), (267, 27118), (282, 27160), (291, 27196), (292, 27199), (303, 27250), (305, 27259), (335, 27373), (356, 27484), (360, 27505),

Gene: Asterius\_251 Start: 142817, Stop: 144247, Start Num: 46

Candidate Starts for Asterius\_251:

(Start: 46 @142817 has 172 MA's), (73, 142907), (91, 142970), (104, 143093), (109, 143117), (130, 143201), (138, 143243), (151, 143285), (178, 143450), (179, 143453), (224, 143708), (235, 143747), (242, 143777), (254, 143840), (258, 143861), (259, 143870), (261, 143873), (269, 143906), (278, 143921), (316, 144056), (333, 144131), (342, 144191),

Gene: Astraea\_246 Start: 142012, Stop: 143442, Start Num: 46

Candidate Starts for Astraea\_246:

(Start: 46 @142012 has 172 MA's), (73, 142102), (91, 142165), (104, 142288), (109, 142312), (130, 142396), (138, 142438), (151, 142480), (178, 142645), (179, 142648), (224, 142903), (235, 142942), (242, 142972), (254, 143035), (258, 143056), (259, 143065), (261, 143068), (269, 143101), (278, 143116), (316, 143251), (333, 143326), (341, 143383), (342, 143386),

Gene: Atlantean\_250 Start: 141959, Stop: 143389, Start Num: 46

Candidate Starts for Atlantean\_250:

(Start: 46 @141959 has 172 MA's), (73, 142049), (91, 142112), (104, 142235), (109, 142259), (130, 142343), (138, 142385), (151, 142427), (178, 142592), (179, 142595), (224, 142850), (235, 142889), (242, 142919), (254, 142982), (258, 143003), (259, 143012), (261, 143015), (269, 143048), (278, 143063), (316, 143198), (333, 143273), (341, 143330), (342, 143333),

Gene: Audrick\_253 Start: 141849, Stop: 143279, Start Num: 46

Candidate Starts for Audrick\_253:

(Start: 46 @141849 has 172 MA's), (73, 141939), (91, 142002), (104, 142125), (109, 142149), (130, 142233), (138, 142275), (151, 142317), (178, 142482), (179, 142485), (224, 142740), (235, 142779), (242, 142809), (254, 142872), (258, 142893), (259, 142902), (261, 142905), (269, 142938), (278, 142953), (316, 143088), (333, 143163), (341, 143220), (342, 143223),

Gene: Auspice\_35 Start: 29799, Stop: 31166, Start Num: 61

Candidate Starts for Auspice\_35:

(Start: 61 @29799 has 14 MA's), (76, 29856), (80, 29883), (87, 29898), (90, 29919), (91, 29922), (104, 30060), (109, 30084), (128, 30162), (130, 30168), (131, 30171), (152, 30246), (177, 30378), (181, 30405), (182, 30414), (190, 30468), (197, 30495), (201, 30525), (212, 30579), (231, 30651), (274, 30837), (311, 30957), (316, 30978), (322, 30996), (324, 31011), (331, 31041), (336, 31071), (342, 31107), (343, 31110), (349, 31146),

Gene: Austelle\_44 Start: 41215, Stop: 42951, Start Num: 38

Candidate Starts for Austelle\_44:

(Start: 38 @41215 has 26 MA's), (58, 41290), (65, 41308), (69, 41329), (74, 41344), (89, 41416), (97, 41509), (104, 41581), (109, 41605), (125, 41692), (127, 41707), (169, 41896), (178, 41971), (187, 42052), (192, 42076), (193, 42079), (202, 42121), (226, 42232), (227, 42241), (231, 42250), (249, 42346), (254, 42385), (272, 42454), (285, 42478), (292, 42505), (299, 42535), (321, 42613), (324, 42637), (328, 42655), (329, 42658), (334, 42682), (339, 42727), (358, 42811),

Gene: Ava3\_247 Start: 142419, Stop: 143849, Start Num: 46

Candidate Starts for Ava3\_247:

(Start: 46 @142419 has 172 MA's), (73, 142509), (91, 142572), (104, 142695), (109, 142719), (130, 142803), (138, 142845), (151, 142887), (178, 143052), (179, 143055), (224, 143310), (235, 143349),

(242, 143379), (254, 143442), (258, 143463), (259, 143472), (261, 143475), (269, 143508), (278, 143523), (316, 143658), (333, 143733), (341, 143790), (342, 143793),

Gene: Aziz\_40 Start: 30943, Stop: 32358, Start Num: 41

Candidate Starts for Aziz\_40:

(Start: 41 @30943 has 6 MA's), (53, 30997), (Start: 55 @31003 has 1 MA's), (64, 31033), (76, 31069), (104, 31270), (114, 31300), (117, 31318), (132, 31369), (137, 31384), (177, 31573), (181, 31600), (184, 31615), (197, 31690), (202, 31723), (212, 31774), (274, 32029), (285, 32053), (286, 32056), (311, 32149), (316, 32170), (324, 32203), (336, 32263), (347, 32326),

Gene: Babyland\_253 Start: 142736, Stop: 144166, Start Num: 46

Candidate Starts for Babyland\_253:

(Start: 46 @142736 has 172 MA's), (73, 142826), (91, 142889), (104, 143012), (109, 143036), (130, 143120), (138, 143162), (151, 143204), (178, 143369), (179, 143372), (224, 143627), (235, 143666), (242, 143696), (254, 143759), (258, 143780), (259, 143789), (261, 143792), (269, 143825), (278, 143840), (316, 143975), (333, 144050), (341, 144107), (342, 144110),

Gene: BackyardAgain\_245 Start: 140109, Stop: 141539, Start Num: 46

Candidate Starts for BackyardAgain\_245:

(Start: 46 @140109 has 172 MA's), (73, 140199), (91, 140262), (104, 140385), (109, 140409), (130, 140493), (138, 140535), (151, 140577), (178, 140742), (179, 140745), (224, 141000), (235, 141039), (242, 141069), (254, 141132), (258, 141153), (259, 141162), (261, 141165), (269, 141198), (278, 141213), (316, 141348), (333, 141423), (341, 141480), (342, 141483),

Gene: BadAgartude\_244 Start: 142021, Stop: 143451, Start Num: 46

Candidate Starts for BadAgartude\_244:

(Start: 46 @142021 has 172 MA's), (73, 142111), (74, 142114), (91, 142174), (104, 142297), (109, 142321), (130, 142405), (138, 142447), (151, 142489), (178, 142654), (179, 142657), (224, 142912), (235, 142951), (242, 142981), (254, 143044), (258, 143065), (259, 143074), (261, 143077), (269, 143110), (278, 143125), (316, 143260), (333, 143335), (341, 143392), (342, 143395),

Gene: BananaFence\_248 Start: 142641, Stop: 144071, Start Num: 46

Candidate Starts for BananaFence\_248:

(Start: 46 @142641 has 172 MA's), (73, 142731), (74, 142734), (91, 142794), (104, 142917), (109, 142941), (130, 143025), (138, 143067), (151, 143109), (178, 143274), (179, 143277), (224, 143532), (235, 143571), (242, 143601), (254, 143664), (258, 143685), (259, 143694), (261, 143697), (269, 143730), (278, 143745), (316, 143880), (333, 143955), (341, 144012), (342, 144015),

Gene: Bangla1971\_251 Start: 142668, Stop: 144098, Start Num: 46

Candidate Starts for Bangla1971\_251:

(Start: 46 @142668 has 172 MA's), (73, 142758), (91, 142821), (104, 142944), (109, 142968), (130, 143052), (138, 143094), (151, 143136), (178, 143301), (179, 143304), (224, 143559), (235, 143598), (242, 143628), (254, 143691), (258, 143712), (259, 143721), (261, 143724), (269, 143757), (278, 143772), (316, 143907), (333, 143982), (341, 144039), (342, 144042),

Gene: Basquiat\_248 Start: 140927, Stop: 142357, Start Num: 46

Candidate Starts for Basquiat\_248:

(Start: 46 @140927 has 172 MA's), (73, 141017), (91, 141080), (104, 141203), (109, 141227), (130, 141311), (138, 141353), (151, 141395), (178, 141560), (179, 141563), (224, 141818), (235, 141857), (242, 141887), (254, 141950), (258, 141971), (259, 141980), (261, 141983), (269, 142016), (278, 142031), (316, 142166), (333, 142241), (341, 142298), (342, 142301),

Gene: Batiatus\_30 Start: 26355, Stop: 27509, Start Num: 45

Candidate Starts for Batiatus\_30:

(14, 26082), (16, 26085), (Start: 45 @26355 has 185 MA's), (67, 26439), (95, 26589), (101, 26643), (126, 26784), (215, 26865), (244, 26991), (245, 26997), (251, 27036), (262, 27096), (267, 27111), (282, 27153), (291, 27189), (292, 27192), (303, 27243), (305, 27252), (335, 27366), (356, 27477), (360, 27498),

Gene: BeanWater\_243 Start: 141804, Stop: 143234, Start Num: 46

Candidate Starts for BeanWater\_243:

(Start: 46 @141804 has 172 MA's), (73, 141894), (91, 141957), (104, 142080), (109, 142104), (130, 142188), (138, 142230), (151, 142272), (178, 142437), (179, 142440), (224, 142695), (235, 142734), (242, 142764), (254, 142827), (258, 142848), (259, 142857), (261, 142860), (269, 142893), (278, 142908), (316, 143043), (333, 143118), (341, 143175), (342, 143178),

Gene: Beelzebub\_58 Start: 30975, Stop: 32354, Start Num: 45

Candidate Starts for Beelzebub\_58:

(Start: 45 @30975 has 185 MA's), (58, 31032), (68, 31068), (73, 31092), (77, 31104), (94, 31227), (97, 31269), (104, 31341), (109, 31365), (110, 31371), (131, 31452), (149, 31521), (150, 31524), (158, 31560), (163, 31596), (176, 31668), (178, 31686), (179, 31689), (196, 31806), (200, 31836), (227, 31968), (234, 31989), (242, 32022), (253, 32076), (254, 32082), (287, 32202), (294, 32232), (298, 32253), (305, 32283),

Gene: Belieber\_244 Start: 141054, Stop: 142484, Start Num: 46

Candidate Starts for Belieber\_244:

(Start: 46 @141054 has 172 MA's), (73, 141144), (91, 141207), (104, 141330), (109, 141354), (130, 141438), (138, 141480), (151, 141522), (178, 141687), (179, 141690), (224, 141945), (235, 141984), (242, 142014), (254, 142077), (258, 142098), (259, 142107), (261, 142110), (269, 142143), (278, 142158), (316, 142293), (333, 142368), (341, 142425), (342, 142428),

Gene: BigCity\_258 Start: 144559, Stop: 145989, Start Num: 46

Candidate Starts for BigCity\_258:

(Start: 46 @144559 has 172 MA's), (73, 144649), (91, 144712), (104, 144835), (109, 144859), (130, 144943), (138, 144985), (151, 145027), (178, 145192), (179, 145195), (224, 145450), (235, 145489), (242, 145519), (254, 145582), (258, 145603), (259, 145612), (261, 145615), (269, 145648), (278, 145663), (316, 145798), (333, 145873), (341, 145930), (342, 145933),

Gene: BigPhil\_26 Start: 22498, Stop: 23733, Start Num: 45

Candidate Starts for BigPhil\_26:

(Start: 45 @22498 has 185 MA's), (77, 22618), (92, 22690), (103, 22807), (104, 22810), (121, 22888), (134, 22969), (198, 23011), (214, 23089), (244, 23215), (245, 23221), (251, 23260), (262, 23320), (267, 23335), (282, 23377), (291, 23413), (292, 23416), (303, 23467), (305, 23476), (335, 23590), (356, 23701), (360, 23722),

Gene: Bigswole\_255 Start: 144470, Stop: 145900, Start Num: 46

Candidate Starts for Bigswole\_255:

(Start: 46 @144470 has 172 MA's), (73, 144560), (74, 144563), (91, 144623), (104, 144746), (109, 144770), (130, 144854), (138, 144896), (151, 144938), (178, 145103), (179, 145106), (224, 145361), (235, 145400), (242, 145430), (254, 145493), (258, 145514), (259, 145523), (261, 145526), (269, 145559), (278, 145574), (316, 145709), (333, 145784), (341, 145841), (342, 145844),

Gene: Bipolar\_27 Start: 25385, Stop: 26593, Start Num: 45

Candidate Starts for Bipolar\_27:

(Start: 45 @25385 has 185 MA's), (67, 25469), (95, 25619), (101, 25673), (126, 25814), (232, 25991), (244, 26033), (246, 26042), (272, 26180), (335, 26411), (340, 26453), (343, 26462), (354, 26519),

(356, 26522), (364, 26576),

Gene: Bipolarisk\_248 Start: 142687, Stop: 144117, Start Num: 46

Candidate Starts for Bipolarisk\_248:

(Start: 46 @142687 has 172 MA's), (73, 142777), (91, 142840), (104, 142963), (109, 142987), (130, 143071), (138, 143113), (151, 143155), (178, 143320), (179, 143323), (224, 143578), (235, 143617), (242, 143647), (254, 143710), (258, 143731), (259, 143740), (261, 143743), (269, 143776), (278, 143791), (316, 143926), (333, 144001), (341, 144058), (342, 144061),

Gene: Blackbeetle\_54 Start: 30021, Stop: 31400, Start Num: 45

Candidate Starts for Blackbeetle\_54:

(Start: 45 @30021 has 185 MA's), (58, 30078), (68, 30114), (73, 30138), (77, 30150), (94, 30273), (97, 30315), (104, 30387), (109, 30411), (110, 30417), (131, 30498), (149, 30567), (150, 30570), (158, 30606), (163, 30642), (176, 30714), (178, 30732), (179, 30735), (196, 30852), (200, 30882), (227, 31014), (234, 31035), (242, 31068), (253, 31122), (254, 31128), (287, 31248), (294, 31278), (298, 31299), (305, 31329),

Gene: Blackbrain\_249 Start: 142704, Stop: 144134, Start Num: 46

Candidate Starts for Blackbrain\_249:

(Start: 46 @142704 has 172 MA's), (73, 142794), (91, 142857), (104, 142980), (109, 143004), (130, 143088), (138, 143130), (151, 143172), (178, 143337), (179, 143340), (224, 143595), (235, 143634), (242, 143664), (254, 143727), (258, 143748), (259, 143757), (261, 143760), (269, 143793), (278, 143808), (316, 143943), (333, 144018), (341, 144075), (342, 144078),

Gene: Blackdragon\_245 Start: 142252, Stop: 143682, Start Num: 46

Candidate Starts for Blackdragon\_245:

(Start: 46 @142252 has 172 MA's), (73, 142342), (91, 142405), (104, 142528), (109, 142552), (130, 142636), (138, 142678), (151, 142720), (178, 142885), (179, 142888), (224, 143143), (235, 143182), (242, 143212), (254, 143275), (258, 143296), (259, 143305), (261, 143308), (269, 143341), (278, 143356), (316, 143491), (333, 143566), (342, 143626),

Gene: Blubba\_237 Start: 145431, Stop: 146861, Start Num: 46

Candidate Starts for Blubba\_237:

(Start: 46 @145431 has 172 MA's), (73, 145521), (91, 145584), (104, 145707), (109, 145731), (130, 145815), (138, 145857), (151, 145899), (178, 146064), (179, 146067), (224, 146322), (235, 146361), (242, 146391), (254, 146454), (258, 146475), (259, 146484), (261, 146487), (269, 146520), (278, 146535), (316, 146670), (333, 146745), (342, 146805),

Gene: BlueCrab\_30 Start: 26494, Stop: 27687, Start Num: 45

Candidate Starts for BlueCrab\_30:

(Start: 45 @26494 has 185 MA's), (67, 26578), (95, 26728), (101, 26782), (126, 26923), (215, 27004), (244, 27130), (251, 27175), (267, 27250), (282, 27292), (291, 27328), (292, 27331), (303, 27382), (305, 27391), (335, 27505), (340, 27547), (343, 27556), (354, 27613), (356, 27616),

Gene: BobaPhett\_30 Start: 26476, Stop: 27711, Start Num: 45

Candidate Starts for BobaPhett\_30:

(Start: 45 @26476 has 185 MA's), (77, 26593), (92, 26665), (103, 26782), (104, 26785), (121, 26863), (134, 26944), (198, 26986), (214, 27064), (244, 27190), (267, 27310), (282, 27352), (291, 27388), (292, 27391), (303, 27442), (305, 27451), (335, 27565),

Gene: BobbyK\_44 Start: 40560, Stop: 42296, Start Num: 38

Candidate Starts for BobbyK\_44:

(Start: 38 @40560 has 26 MA's), (58, 40635), (65, 40653), (69, 40674), (74, 40689), (89, 40761), (97, 40854), (104, 40926), (109, 40950), (125, 41037), (127, 41052), (168, 41235), (178, 41316), (187, 41397), (192, 41421), (193, 41424), (202, 41466), (226, 41577), (227, 41586), (231, 41595), (249, 41691), (254, 41730), (272, 41799), (285, 41823), (292, 41850), (299, 41880), (321, 41958), (324, 41982), (328, 42000), (329, 42003), (334, 42027), (339, 42072), (358, 42156),

Gene: Bobi\_32 Start: 27069, Stop: 28223, Start Num: 45

Candidate Starts for Bobi\_32:

(3, 26622), (20, 26817), (Start: 45 @27069 has 185 MA's), (67, 27153), (95, 27303), (101, 27357), (126, 27498), (215, 27579), (244, 27705), (245, 27711), (251, 27750), (262, 27810), (267, 27825), (282, 27867), (291, 27903), (292, 27906), (303, 27957), (305, 27966), (335, 28080), (356, 28191), (360, 28212),

Gene: BodEinwohner17\_30 Start: 26635, Stop: 27906, Start Num: 45

Candidate Starts for BodEinwohner17\_30:

(Start: 45 @26635 has 185 MA's), (77, 26752), (92, 26824), (103, 26941), (104, 26944), (121, 27022), (134, 27103), (198, 27145), (214, 27223), (244, 27349), (245, 27355), (246, 27358), (251, 27394), (255, 27424), (262, 27454), (267, 27469), (282, 27511), (291, 27547), (292, 27550), (303, 27601), (305, 27610), (335, 27724), (340, 27766), (343, 27775), (354, 27832), (356, 27835),

Gene: Bongo\_35 Start: 29799, Stop: 31166, Start Num: 61

Candidate Starts for Bongo\_35:

(Start: 61 @29799 has 14 MA's), (76, 29856), (80, 29883), (91, 29922), (104, 30060), (109, 30084), (128, 30162), (130, 30168), (131, 30171), (152, 30246), (177, 30378), (181, 30405), (182, 30414), (190, 30468), (197, 30495), (201, 30525), (212, 30579), (231, 30651), (274, 30837), (311, 30957), (316, 30978), (322, 30996), (324, 31011), (331, 31041), (336, 31071), (342, 31107), (343, 31110), (349, 31146),

Gene: Bonray\_253 Start: 144504, Stop: 145934, Start Num: 46

Candidate Starts for Bonray\_253:

(Start: 46 @144504 has 172 MA's), (73, 144594), (91, 144657), (104, 144780), (109, 144804), (130, 144888), (138, 144930), (151, 144972), (178, 145137), (179, 145140), (224, 145395), (235, 145434), (242, 145464), (254, 145527), (258, 145548), (259, 145557), (261, 145560), (269, 145593), (278, 145608), (316, 145743), (333, 145818), (342, 145878),

Gene: Boomer\_32 Start: 26275, Stop: 27576, Start Num: 45

Candidate Starts for Boomer\_32:

(Start: 45 @26275 has 185 MA's), (77, 26395), (92, 26467), (103, 26584), (104, 26587), (121, 26665), (134, 26746), (198, 26797), (232, 26974), (244, 27016), (246, 27025), (282, 27181), (335, 27394), (340, 27436), (343, 27445), (354, 27502), (356, 27505),

Gene: BoostSeason\_29 Start: 23227, Stop: 24885, Start Num: 39

Candidate Starts for BoostSeason\_29:

(Start: 39 @23227 has 3 MA's), (49, 23278), (52, 23281), (64, 23317), (73, 23353), (107, 23554), (112, 23584), (145, 23722), (160, 23794), (163, 23809), (175, 23875), (179, 23896), (192, 23998), (228, 24169), (238, 24205), (242, 24220), (254, 24283), (270, 24352), (285, 24385), (345, 24640), (367, 24790), (369, 24853),

Gene: Bread\_247 Start: 142471, Stop: 143901, Start Num: 46

Candidate Starts for Bread\_247:

(Start: 46 @142471 has 172 MA's), (73, 142561), (91, 142624), (104, 142747), (109, 142771), (130, 142855), (138, 142897), (151, 142939), (178, 143104), (179, 143107), (224, 143362), (235, 143401), (242, 143431), (254, 143494), (258, 143515), (259, 143524), (261, 143527), (269, 143560), (278,

143575), (316, 143710), (333, 143785), (341, 143842), (342, 143845),

Gene: Breeniome\_250 Start: 141459, Stop: 142889, Start Num: 46

Candidate Starts for Breeniome\_250:

(Start: 46 @141459 has 172 MA's), (73, 141549), (91, 141612), (104, 141735), (109, 141759), (130, 141843), (138, 141885), (151, 141927), (178, 142092), (179, 142095), (224, 142350), (235, 142389), (242, 142419), (254, 142482), (258, 142503), (259, 142512), (261, 142515), (269, 142548), (278, 142563), (316, 142698), (333, 142773), (341, 142830), (342, 142833),

Gene: Bricole\_35 Start: 29785, Stop: 31152, Start Num: 61

Candidate Starts for Bricole\_35:

(Start: 61 @29785 has 14 MA's), (76, 29842), (80, 29869), (91, 29908), (104, 30046), (109, 30070), (128, 30148), (130, 30154), (131, 30157), (152, 30232), (177, 30364), (181, 30391), (182, 30400), (190, 30454), (197, 30481), (201, 30511), (212, 30565), (231, 30637), (274, 30823), (311, 30943), (316, 30964), (322, 30982), (324, 30997), (331, 31027), (336, 31057), (342, 31093), (343, 31096), (349, 31132),

Gene: Brookers\_28 Start: 25304, Stop: 26458, Start Num: 45

Candidate Starts for Brookers\_28:

(14, 25031), (20, 25052), (Start: 45 @25304 has 185 MA's), (67, 25388), (95, 25538), (101, 25592), (126, 25733), (215, 25814), (244, 25940), (245, 25946), (251, 25985), (262, 26045), (267, 26060), (282, 26102), (291, 26138), (292, 26141), (303, 26192), (305, 26201), (335, 26315), (356, 26426), (360, 26447),

Gene: BrownCNA\_45 Start: 40845, Stop: 42581, Start Num: 38

Candidate Starts for BrownCNA\_45:

(Start: 38 @40845 has 26 MA's), (58, 40920), (65, 40938), (69, 40959), (74, 40974), (89, 41046), (97, 41139), (104, 41211), (109, 41235), (125, 41322), (127, 41337), (169, 41526), (178, 41601), (187, 41682), (192, 41706), (193, 41709), (202, 41751), (226, 41862), (227, 41871), (231, 41880), (249, 41976), (254, 42015), (272, 42084), (285, 42108), (292, 42135), (299, 42165), (319, 42240), (321, 42243), (324, 42267), (328, 42285), (329, 42288), (339, 42357), (358, 42441),

Gene: Brushbloom\_32 Start: 26379, Stop: 27533, Start Num: 45

Candidate Starts for Brushbloom\_32:

(14, 26106), (20, 26127), (Start: 45 @26379 has 185 MA's), (67, 26463), (95, 26613), (101, 26667), (126, 26808), (215, 26889), (244, 27015), (245, 27021), (251, 27060), (262, 27120), (267, 27135), (282, 27177), (291, 27213), (292, 27216), (303, 27267), (305, 27276), (335, 27390), (356, 27501), (360, 27522),

Gene: Bubbles123\_32 Start: 27209, Stop: 28501, Start Num: 45

Candidate Starts for Bubbles123\_32:

(Start: 45 @27209 has 185 MA's), (77, 27329), (103, 27518), (104, 27521), (121, 27599), (134, 27680), (198, 27722), (214, 27800), (244, 27926), (245, 27932), (251, 27971), (262, 28031), (267, 28046), (280, 28082), (282, 28088), (291, 28124), (297, 28142), (303, 28178), (305, 28187), (335, 28301), (356, 28412),

Gene: Burrough\_251 Start: 143832, Stop: 145262, Start Num: 46

Candidate Starts for Burrough\_251:

(Start: 46 @143832 has 172 MA's), (73, 143922), (91, 143985), (104, 144108), (109, 144132), (130, 144216), (138, 144258), (151, 144300), (178, 144465), (179, 144468), (224, 144723), (235, 144762), (242, 144792), (254, 144855), (258, 144876), (259, 144885), (261, 144888), (269, 144921), (278, 144936), (316, 145071), (333, 145146), (341, 145203), (342, 145206),

Gene: BuzzLyseyear\_33 Start: 27038, Stop: 28312, Start Num: 45

Candidate Starts for BuzzLyseyear\_33:

(Start: 45 @27038 has 185 MA's), (77, 27158), (92, 27230), (103, 27347), (104, 27350), (121, 27428), (134, 27509), (198, 27551), (214, 27629), (244, 27755), (245, 27761), (246, 27764), (251, 27800), (255, 27830), (262, 27860), (267, 27875), (282, 27917), (291, 27953), (292, 27956), (303, 28007), (305, 28016), (335, 28130), (340, 28172), (343, 28181), (354, 28238), (356, 28241),

Gene: Bxz1\_236 Start: 144036, Stop: 145466, Start Num: 46

Candidate Starts for Bxz1\_236:

(Start: 46 @144036 has 172 MA's), (73, 144126), (91, 144189), (104, 144312), (109, 144336), (130, 144420), (138, 144462), (151, 144504), (178, 144669), (179, 144672), (224, 144927), (235, 144966), (242, 144996), (254, 145059), (258, 145080), (259, 145089), (261, 145092), (269, 145125), (278, 145140), (316, 145275), (333, 145350), (341, 145407), (342, 145410),

Gene: CRB2\_49 Start: 43040, Stop: 44572, Start Num: 51

Candidate Starts for CRB2\_49:

(1, 42311), (11, 42686), (23, 42809), (Start: 51 @43040 has 4 MA's), (Start: 55 @43049 has 1 MA's), (73, 43112), (82, 43148), (86, 43160), (96, 43262), (102, 43334), (104, 43346), (169, 43676), (178, 43751), (187, 43832), (203, 43913), (206, 43928), (227, 44021), (239, 44072), (254, 44165), (283, 44246), (295, 44282), (302, 44321), (304, 44327), (326, 44414), (330, 44429), (336, 44456),

Gene: Cabrinians\_30 Start: 26504, Stop: 27775, Start Num: 45

Candidate Starts for Cabrinians\_30:

(Start: 45 @26504 has 185 MA's), (77, 26621), (92, 26693), (103, 26810), (104, 26813), (121, 26891), (134, 26972), (198, 27014), (214, 27092), (244, 27218), (262, 27323), (267, 27338), (282, 27380), (291, 27416), (292, 27419), (303, 27470), (305, 27479), (335, 27593), (340, 27635), (343, 27644), (354, 27701), (356, 27704),

Gene: Cactojaque\_245 Start: 141650, Stop: 143080, Start Num: 46

Candidate Starts for Cactojaque\_245:

(Start: 46 @141650 has 172 MA's), (73, 141740), (91, 141803), (104, 141926), (109, 141950), (130, 142034), (138, 142076), (151, 142118), (178, 142283), (179, 142286), (224, 142541), (235, 142580), (242, 142610), (254, 142673), (258, 142694), (259, 142703), (261, 142706), (269, 142739), (278, 142754), (316, 142889), (333, 142964), (341, 143021), (342, 143024),

Gene: Cali\_240 Start: 142429, Stop: 143859, Start Num: 46

Candidate Starts for Cali\_240:

(Start: 46 @142429 has 172 MA's), (73, 142519), (91, 142582), (104, 142705), (109, 142729), (130, 142813), (138, 142855), (151, 142897), (178, 143062), (179, 143065), (224, 143320), (235, 143359), (242, 143389), (254, 143452), (258, 143473), (259, 143482), (261, 143485), (269, 143518), (278, 143533), (316, 143668), (333, 143743), (341, 143800), (342, 143803),

Gene: Cane17\_239 Start: 145840, Stop: 147270, Start Num: 46

Candidate Starts for Cane17\_239:

(Start: 46 @145840 has 172 MA's), (73, 145930), (91, 145993), (104, 146116), (109, 146140), (130, 146224), (138, 146266), (151, 146308), (178, 146473), (179, 146476), (224, 146731), (235, 146770), (242, 146800), (254, 146863), (258, 146884), (259, 146893), (261, 146896), (269, 146929), (278, 146944), (316, 147079), (333, 147154), (342, 147214),

Gene: Capablanca\_255 Start: 144683, Stop: 146113, Start Num: 46

Candidate Starts for Capablanca\_255:

(Start: 46 @144683 has 172 MA's), (73, 144773), (91, 144836), (104, 144959), (109, 144983), (130, 145067), (138, 145109), (151, 145151), (178, 145316), (179, 145319), (224, 145574), (235, 145613),



(242, 145643), (254, 145706), (258, 145727), (259, 145736), (261, 145739), (269, 145772), (278, 145787), (316, 145922), (333, 145997), (341, 146054), (342, 146057),

Gene: Caprice\_51 Start: 30334, Stop: 31713, Start Num: 45

Candidate Starts for Caprice\_51:

(Start: 45 @30334 has 185 MA's), (58, 30391), (68, 30427), (73, 30451), (77, 30463), (94, 30586), (97, 30628), (104, 30700), (109, 30724), (110, 30730), (131, 30811), (149, 30880), (150, 30883), (158, 30919), (163, 30955), (176, 31027), (178, 31045), (179, 31048), (196, 31165), (200, 31195), (227, 31327), (234, 31348), (242, 31381), (253, 31435), (254, 31441), (287, 31561), (294, 31591), (298, 31612), (305, 31642),

Gene: Caravan\_240 Start: 142733, Stop: 144163, Start Num: 46

Candidate Starts for Caravan\_240:

(Start: 46 @142733 has 172 MA's), (73, 142823), (91, 142886), (104, 143009), (109, 143033), (130, 143117), (138, 143159), (151, 143201), (178, 143366), (179, 143369), (224, 143624), (235, 143663), (242, 143693), (254, 143756), (258, 143777), (259, 143786), (261, 143789), (269, 143822), (278, 143837), (316, 143972), (333, 144047), (341, 144104), (342, 144107),

Gene: Catera\_239 Start: 141172, Stop: 142602, Start Num: 46

Candidate Starts for Catera\_239:

(Start: 46 @141172 has 172 MA's), (73, 141262), (91, 141325), (104, 141448), (109, 141472), (130, 141556), (138, 141598), (151, 141640), (178, 141805), (179, 141808), (224, 142063), (235, 142102), (242, 142132), (254, 142195), (258, 142216), (259, 142225), (261, 142228), (269, 142261), (278, 142276), (316, 142411), (333, 142486), (341, 142543), (342, 142546),

Gene: Causa\_57 Start: 44415, Stop: 45965, Start Num: 50

Candidate Starts for Causa\_57:

(Start: 38 @44367 has 26 MA's), (50, 44415), (74, 44484), (96, 44586), (99, 44625), (102, 44664), (104, 44676), (123, 44778), (136, 44853), (155, 44931), (178, 45087), (187, 45168), (192, 45192), (193, 45195), (227, 45357), (228, 45360), (231, 45366), (254, 45501), (263, 45540), (272, 45576), (285, 45600), (326, 45774), (334, 45807), (357, 45921), (363, 45954),

Gene: Cerasum\_26 Start: 22498, Stop: 23733, Start Num: 45

Candidate Starts for Cerasum\_26:

(Start: 45 @22498 has 185 MA's), (77, 22618), (92, 22690), (103, 22807), (104, 22810), (121, 22888), (134, 22969), (198, 23011), (214, 23089), (244, 23215), (245, 23221), (251, 23260), (262, 23320), (267, 23335), (282, 23377), (291, 23413), (292, 23416), (303, 23467), (305, 23476), (335, 23590), (356, 23701), (360, 23722),

Gene: Chargie21\_248 Start: 140927, Stop: 142357, Start Num: 46

Candidate Starts for Chargie21\_248:

(Start: 46 @140927 has 172 MA's), (73, 141017), (91, 141080), (104, 141203), (109, 141227), (130, 141311), (138, 141353), (151, 141395), (178, 141560), (179, 141563), (224, 141818), (235, 141857), (242, 141887), (254, 141950), (258, 141971), (259, 141980), (261, 141983), (269, 142016), (278, 142031), (316, 142166), (333, 142241), (341, 142298), (342, 142301),

Gene: CharlieB\_245 Start: 142195, Stop: 143625, Start Num: 46

Candidate Starts for CharlieB\_245:

(Start: 46 @142195 has 172 MA's), (73, 142285), (91, 142348), (104, 142471), (109, 142495), (130, 142579), (138, 142621), (151, 142663), (178, 142828), (179, 142831), (224, 143086), (235, 143125), (242, 143155), (254, 143218), (258, 143239), (259, 143248), (261, 143251), (269, 143284), (278, 143299), (316, 143434), (333, 143509), (342, 143569),

Gene: ChaylaJr\_249 Start: 141869, Stop: 143299, Start Num: 46

Candidate Starts for ChaylaJr\_249:

(Start: 46 @141869 has 172 MA's), (73, 141959), (91, 142022), (104, 142145), (109, 142169), (130, 142253), (138, 142295), (151, 142337), (178, 142502), (179, 142505), (224, 142760), (235, 142799), (242, 142829), (254, 142892), (258, 142913), (259, 142922), (261, 142925), (269, 142958), (278, 142973), (316, 143108), (333, 143183), (341, 143240), (342, 143243),

Gene: Che8\_32 Start: 26683, Stop: 27957, Start Num: 45

Candidate Starts for Che8\_32:

(Start: 45 @26683 has 185 MA's), (77, 26803), (92, 26875), (103, 26992), (104, 26995), (121, 27073), (134, 27154), (198, 27196), (214, 27274), (244, 27400), (245, 27406), (251, 27445), (267, 27520), (282, 27562), (291, 27598), (297, 27616), (303, 27652), (305, 27661), (335, 27775), (340, 27817), (343, 27826), (354, 27883), (356, 27886),

Gene: Cheesepuff\_34 Start: 27483, Stop: 28778, Start Num: 45

Candidate Starts for Cheesepuff\_34:

(Start: 45 @27483 has 185 MA's), (77, 27603), (103, 27792), (104, 27795), (131, 27897), (142, 27954), (158, 28008), (170, 28071), (179, 28134), (180, 28137), (192, 28242), (209, 28326), (227, 28422), (254, 28539), (260, 28572), (265, 28584), (296, 28689), (301, 28722),

Gene: Chevrolet\_30 Start: 26308, Stop: 27474, Start Num: 45

Candidate Starts for Chevrolet\_30:

(Start: 45 @26308 has 185 MA's), (67, 26392), (95, 26542), (101, 26596), (126, 26737), (215, 26818), (244, 26944), (245, 26950), (251, 26989), (267, 27064), (282, 27106), (291, 27142), (292, 27145), (303, 27196), (305, 27205), (335, 27319),

Gene: ChickenPhender\_246 Start: 140625, Stop: 142055, Start Num: 46

Candidate Starts for ChickenPhender\_246:

(Start: 46 @140625 has 172 MA's), (73, 140715), (91, 140778), (104, 140901), (109, 140925), (130, 141009), (138, 141051), (151, 141093), (178, 141258), (179, 141261), (224, 141516), (235, 141555), (242, 141585), (254, 141648), (258, 141669), (259, 141678), (261, 141681), (269, 141714), (278, 141729), (316, 141864), (333, 141939), (341, 141996), (342, 141999),

Gene: Chomp\_249 Start: 144061, Stop: 145491, Start Num: 46

Candidate Starts for Chomp\_249:

(Start: 46 @144061 has 172 MA's), (73, 144151), (91, 144214), (104, 144337), (109, 144361), (130, 144445), (138, 144487), (151, 144529), (178, 144694), (179, 144697), (224, 144952), (235, 144991), (242, 145021), (254, 145084), (258, 145105), (259, 145114), (261, 145117), (269, 145150), (278, 145165), (316, 145300), (333, 145375), (341, 145432), (342, 145435),

Gene: ChrisnMich\_43 Start: 39525, Stop: 41261, Start Num: 38

Candidate Starts for ChrisnMich\_43:

(Start: 38 @39525 has 26 MA's), (58, 39600), (65, 39618), (69, 39639), (74, 39654), (89, 39726), (97, 39819), (104, 39891), (109, 39915), (125, 40002), (127, 40017), (168, 40200), (178, 40281), (187, 40362), (192, 40386), (202, 40431), (226, 40542), (227, 40551), (231, 40560), (249, 40656), (254, 40695), (272, 40764), (285, 40788), (292, 40815), (299, 40845), (321, 40923), (324, 40947), (328, 40965), (329, 40968), (334, 40992), (339, 41037), (358, 41121),

Gene: CindyLou\_251 Start: 144321, Stop: 145751, Start Num: 46

Candidate Starts for CindyLou\_251:

(Start: 46 @144321 has 172 MA's), (73, 144411), (74, 144414), (91, 144474), (104, 144597), (109, 144621), (130, 144705), (138, 144747), (151, 144789), (178, 144954), (179, 144957), (224, 145212), (235, 145251), (242, 145281), (254, 145344), (258, 145365), (259, 145374), (261, 145377), (269,

145410), (278, 145425), (316, 145560), (333, 145635), (341, 145692), (342, 145695),

Gene: Clarkson\_55 Start: 30703, Stop: 32082, Start Num: 45

Candidate Starts for Clarkson\_55:

(Start: 45 @30703 has 185 MA's), (58, 30760), (68, 30796), (73, 30820), (77, 30832), (94, 30955), (97, 30997), (104, 31069), (109, 31093), (110, 31099), (131, 31180), (149, 31249), (150, 31252), (158, 31288), (163, 31324), (176, 31396), (178, 31414), (179, 31417), (196, 31534), (200, 31564), (227, 31696), (234, 31717), (242, 31750), (253, 31804), (254, 31810), (287, 31930), (294, 31960), (298, 31981), (305, 32011),

Gene: Coco12\_29 Start: 25845, Stop: 27582, Start Num: 45

Candidate Starts for Coco12\_29:

(14, 25572), (20, 25593), (Start: 45 @25845 has 185 MA's), (67, 25929), (95, 26079), (101, 26133), (126, 26274), (133, 26307), (141, 26355), (157, 26454), (194, 26847), (225, 27000), (247, 27078), (256, 27141), (266, 27180), (302, 27312), (309, 27333), (318, 27369),

Gene: Colt\_240 Start: 145032, Stop: 146462, Start Num: 46

Candidate Starts for Colt\_240:

(Start: 46 @145032 has 172 MA's), (73, 145122), (91, 145185), (104, 145308), (109, 145332), (130, 145416), (138, 145458), (151, 145500), (178, 145665), (179, 145668), (224, 145923), (235, 145962), (242, 145992), (254, 146055), (258, 146076), (259, 146085), (261, 146088), (269, 146121), (278, 146136), (316, 146271), (333, 146346), (342, 146406),

Gene: Concombres\_256 Start: 144663, Stop: 146096, Start Num: 45

Candidate Starts for Concombres\_256:

(40, 144639), (Start: 45 @144663 has 185 MA's), (Start: 46 @144666 has 172 MA's), (73, 144756), (91, 144819), (104, 144942), (109, 144966), (130, 145050), (138, 145092), (151, 145134), (178, 145299), (179, 145302), (224, 145557), (235, 145596), (242, 145626), (254, 145689), (258, 145710), (259, 145719), (261, 145722), (269, 145755), (278, 145770), (316, 145905), (333, 145980), (341, 146037), (342, 146040),

Gene: Cooper\_44 Start: 39744, Stop: 41456, Start Num: 38

Candidate Starts for Cooper\_44:

(Start: 38 @39744 has 26 MA's), (65, 39837), (69, 39858), (74, 39873), (89, 39945), (97, 40038), (104, 40110), (109, 40134), (125, 40221), (127, 40236), (135, 40266), (157, 40356), (163, 40401), (168, 40419), (169, 40425), (178, 40500), (187, 40581), (192, 40605), (193, 40608), (226, 40761), (227, 40770), (231, 40779), (254, 40914), (272, 40983), (292, 41034), (299, 41064), (324, 41166), (328, 41184), (334, 41211), (358, 41340), (359, 41349), (365, 41394),

Gene: Corazon\_52 Start: 30897, Stop: 32276, Start Num: 45

Candidate Starts for Corazon\_52:

(Start: 45 @30897 has 185 MA's), (58, 30954), (68, 30990), (73, 31014), (77, 31026), (94, 31149), (97, 31191), (104, 31263), (109, 31287), (110, 31293), (131, 31374), (149, 31443), (150, 31446), (158, 31482), (163, 31518), (176, 31590), (178, 31608), (179, 31611), (196, 31728), (200, 31758), (227, 31890), (234, 31911), (242, 31944), (253, 31998), (254, 32004), (287, 32124), (294, 32154), (298, 32175), (305, 32205),

Gene: Cornie\_30 Start: 26720, Stop: 28018, Start Num: 45

Candidate Starts for Cornie\_30:

(Start: 45 @26720 has 185 MA's), (77, 26837), (92, 26909), (103, 27026), (104, 27029), (121, 27107), (134, 27188), (198, 27239), (232, 27416), (244, 27458), (246, 27467), (282, 27623), (335, 27836), (340, 27878), (343, 27887), (354, 27944), (356, 27947),

Gene: DLane\_30 Start: 26332, Stop: 27486, Start Num: 45

Candidate Starts for DLane\_30:

(14, 26059), (16, 26062), (20, 26080), (Start: 45 @26332 has 185 MA's), (67, 26416), (95, 26566), (101, 26620), (126, 26761), (215, 26842), (244, 26968), (245, 26974), (251, 27013), (262, 27073), (267, 27088), (282, 27130), (291, 27166), (292, 27169), (303, 27220), (305, 27229), (335, 27343), (356, 27454), (360, 27475),

Gene: DRBy19\_30 Start: 26346, Stop: 27617, Start Num: 45

Candidate Starts for DRBy19\_30:

(Start: 45 @26346 has 185 MA's), (77, 26463), (92, 26535), (103, 26652), (104, 26655), (121, 26733), (134, 26814), (198, 26856), (214, 26934), (244, 27060), (262, 27165), (267, 27180), (282, 27222), (291, 27258), (292, 27261), (303, 27312), (305, 27321), (335, 27435), (340, 27477), (343, 27486), (354, 27543), (356, 27546),

Gene: DTDevon\_251 Start: 144700, Stop: 146130, Start Num: 46

Candidate Starts for DTDevon\_251:

(Start: 46 @144700 has 172 MA's), (73, 144790), (91, 144853), (104, 144976), (109, 145000), (130, 145084), (138, 145126), (151, 145168), (178, 145333), (179, 145336), (224, 145591), (235, 145630), (242, 145660), (254, 145723), (258, 145744), (259, 145753), (261, 145756), (269, 145789), (278, 145804), (316, 145939), (333, 146014), (341, 146071), (342, 146074),

Gene: DaWorst\_32 Start: 26862, Stop: 28055, Start Num: 45

Candidate Starts for DaWorst\_32:

(14, 26589), (21, 26610), (Start: 45 @26862 has 185 MA's), (67, 26946), (95, 27096), (101, 27150), (126, 27291), (215, 27372), (244, 27498), (245, 27504), (246, 27507), (251, 27543), (267, 27618), (282, 27660), (291, 27696), (305, 27759), (335, 27873), (340, 27915), (343, 27924), (354, 27981), (356, 27984),

Gene: Daenerys\_30 Start: 26326, Stop: 27519, Start Num: 45

Candidate Starts for Daenerys\_30:

(Start: 45 @26326 has 185 MA's), (67, 26410), (95, 26560), (101, 26614), (126, 26755), (215, 26836), (244, 26962), (245, 26968), (246, 26971), (267, 27082), (282, 27124), (291, 27160), (303, 27214), (305, 27223), (335, 27337), (340, 27379), (343, 27388), (354, 27445), (356, 27448),

Gene: Daffodil\_256 Start: 142987, Stop: 144417, Start Num: 46

Candidate Starts for Daffodil\_256:

(Start: 46 @142987 has 172 MA's), (73, 143077), (91, 143140), (104, 143263), (109, 143287), (130, 143371), (138, 143413), (151, 143455), (178, 143620), (179, 143623), (224, 143878), (235, 143917), (242, 143947), (254, 144010), (258, 144031), (259, 144040), (261, 144043), (269, 144076), (278, 144091), (316, 144226), (333, 144301), (341, 144358), (342, 144361),

Gene: Dandelion\_256 Start: 145521, Stop: 146951, Start Num: 46

Candidate Starts for Dandelion\_256:

(Start: 46 @145521 has 172 MA's), (73, 145611), (74, 145614), (91, 145674), (104, 145797), (109, 145821), (130, 145905), (138, 145947), (151, 145989), (178, 146154), (179, 146157), (224, 146412), (235, 146451), (242, 146481), (254, 146544), (258, 146565), (259, 146574), (261, 146577), (269, 146610), (278, 146625), (316, 146760), (333, 146835), (341, 146892), (342, 146895),

Gene: Dante\_30 Start: 26366, Stop: 27637, Start Num: 45

Candidate Starts for Dante\_30:

(Start: 45 @26366 has 185 MA's), (77, 26483), (92, 26555), (103, 26672), (104, 26675), (121, 26753), (134, 26834), (198, 26876), (214, 26954), (244, 27080), (245, 27086), (246, 27089), (267, 27200), (282, 27242), (292, 27281), (297, 27296), (303, 27332), (305, 27341), (335, 27455), (340, 27497),

(354, 27563), (356, 27566),

Gene: Darko\_250 Start: 142645, Stop: 144075, Start Num: 46

Candidate Starts for Darko\_250:

(Start: 46 @142645 has 172 MA's), (73, 142735), (74, 142738), (91, 142798), (104, 142921), (109, 142945), (130, 143029), (138, 143071), (151, 143113), (178, 143278), (179, 143281), (224, 143536), (235, 143575), (242, 143605), (254, 143668), (258, 143689), (259, 143698), (261, 143701), (269, 143734), (278, 143749), (316, 143884), (333, 143959), (341, 144016), (342, 144019),

Gene: DeadP\_30 Start: 26529, Stop: 27683, Start Num: 45

Candidate Starts for DeadP\_30:

(14, 26256), (20, 26277), (Start: 45 @26529 has 185 MA's), (67, 26613), (95, 26763), (101, 26817), (126, 26958), (215, 27039), (244, 27165), (245, 27171), (251, 27210), (262, 27270), (267, 27285), (282, 27327), (291, 27363), (292, 27366), (303, 27417), (305, 27426), (335, 27540), (356, 27651), (360, 27672),

Gene: Deb65\_30 Start: 26328, Stop: 27521, Start Num: 45

Candidate Starts for Deb65\_30:

(21, 26076), (Start: 45 @26328 has 185 MA's), (67, 26412), (95, 26562), (101, 26616), (126, 26757), (215, 26838), (244, 26964), (251, 27009), (267, 27084), (282, 27126), (291, 27162), (292, 27165), (303, 27216), (305, 27225), (335, 27339), (340, 27381), (343, 27390), (354, 27447), (356, 27450),

Gene: DeejaClivia\_237 Start: 140388, Stop: 141818, Start Num: 46

Candidate Starts for DeejaClivia\_237:

(Start: 46 @140388 has 172 MA's), (73, 140478), (91, 140541), (104, 140664), (109, 140688), (130, 140772), (138, 140814), (151, 140856), (178, 141021), (179, 141024), (224, 141279), (235, 141318), (242, 141348), (254, 141411), (258, 141432), (259, 141441), (261, 141444), (269, 141477), (278, 141492), (316, 141627), (333, 141702), (342, 141762),

Gene: Delilah\_248 Start: 143080, Stop: 144510, Start Num: 46

Candidate Starts for Delilah\_248:

(Start: 46 @143080 has 172 MA's), (73, 143170), (91, 143233), (104, 143356), (109, 143380), (130, 143464), (138, 143506), (151, 143548), (178, 143713), (179, 143716), (224, 143971), (235, 144010), (242, 144040), (254, 144103), (258, 144124), (259, 144133), (261, 144136), (269, 144169), (278, 144184), (316, 144319), (333, 144394), (341, 144451), (342, 144454),

Gene: Delylah\_252 Start: 143357, Stop: 144787, Start Num: 46

Candidate Starts for Delylah\_252:

(Start: 46 @143357 has 172 MA's), (73, 143447), (91, 143510), (104, 143633), (109, 143657), (130, 143741), (138, 143783), (151, 143825), (178, 143990), (179, 143993), (224, 144248), (235, 144287), (242, 144317), (254, 144380), (258, 144401), (259, 144410), (261, 144413), (269, 144446), (278, 144461), (316, 144596), (333, 144671), (341, 144728), (342, 144731),

Gene: Demodog\_258 Start: 144673, Stop: 146106, Start Num: 45

Candidate Starts for Demodog\_258:

(40, 144649), (Start: 45 @144673 has 185 MA's), (Start: 46 @144676 has 172 MA's), (73, 144766), (91, 144829), (104, 144952), (109, 144976), (130, 145060), (138, 145102), (151, 145144), (178, 145309), (179, 145312), (224, 145567), (235, 145606), (242, 145636), (254, 145699), (258, 145720), (259, 145729), (261, 145732), (269, 145765), (278, 145780), (316, 145915), (333, 145990), (342, 146050),

Gene: Demsculpinboyz\_35 Start: 25454, Stop: 26752, Start Num: 45

Candidate Starts for Demsculpinboyz\_35:

(Start: 45 @25454 has 185 MA's), (64, 25526), (77, 25574), (79, 25592), (92, 25646), (103, 25763), (104, 25766), (131, 25868), (142, 25925), (158, 25979), (170, 26042), (179, 26105), (180, 26108), (196, 26222), (199, 26234), (209, 26297), (227, 26393), (254, 26510), (260, 26543), (265, 26555), (296, 26660), (301, 26693), (313, 26732),

Gene: Derek\_246 Start: 143338, Stop: 144768, Start Num: 46

Candidate Starts for Derek\_246:

(Start: 46 @143338 has 172 MA's), (73, 143428), (91, 143491), (104, 143614), (109, 143638), (130, 143722), (138, 143764), (151, 143806), (178, 143971), (179, 143974), (224, 144229), (235, 144268), (242, 144298), (254, 144361), (258, 144382), (259, 144391), (261, 144394), (269, 144427), (278, 144442), (316, 144577), (333, 144652), (341, 144709), (342, 144712),

Gene: Dietrick\_239 Start: 141201, Stop: 142631, Start Num: 46

Candidate Starts for Dietrick\_239:

(Start: 46 @141201 has 172 MA's), (73, 141291), (91, 141354), (104, 141477), (109, 141501), (130, 141585), (138, 141627), (151, 141669), (178, 141834), (179, 141837), (224, 142092), (235, 142131), (242, 142161), (254, 142224), (258, 142245), (259, 142254), (261, 142257), (269, 142290), (278, 142305), (316, 142440), (333, 142515), (341, 142572), (342, 142575),

Gene: Diminimus\_36 Start: 29798, Stop: 31165, Start Num: 61

Candidate Starts for Diminimus\_36:

(Start: 61 @29798 has 14 MA's), (76, 29855), (80, 29882), (87, 29897), (90, 29918), (91, 29921), (104, 30059), (109, 30083), (128, 30161), (130, 30167), (131, 30170), (152, 30245), (177, 30377), (181, 30404), (182, 30413), (190, 30467), (197, 30494), (201, 30524), (212, 30578), (231, 30650), (274, 30836), (311, 30956), (316, 30977), (322, 30995), (324, 31010), (331, 31040), (336, 31070), (342, 31106), (343, 31109), (349, 31145),

Gene: DirtMcgirt\_31 Start: 26149, Stop: 27342, Start Num: 45

Candidate Starts for DirtMcgirt\_31:

(Start: 45 @26149 has 185 MA's), (67, 26233), (95, 26383), (101, 26437), (119, 26530), (126, 26578), (215, 26659), (244, 26785), (245, 26791), (246, 26794), (267, 26905), (282, 26947), (291, 26983), (297, 27001), (303, 27037), (305, 27046), (335, 27160), (340, 27202), (343, 27211), (354, 27268), (356, 27271),

Gene: DirtMonster\_239 Start: 141933, Stop: 143363, Start Num: 46

Candidate Starts for DirtMonster\_239:

(Start: 46 @141933 has 172 MA's), (73, 142023), (91, 142086), (104, 142209), (109, 142233), (130, 142317), (138, 142359), (151, 142401), (178, 142566), (179, 142569), (224, 142824), (235, 142863), (242, 142893), (254, 142956), (258, 142977), (259, 142986), (261, 142989), (269, 143022), (278, 143037), (316, 143172), (333, 143247), (341, 143304), (342, 143307),

Gene: DoRead\_32 Start: 26477, Stop: 27751, Start Num: 45

Candidate Starts for DoRead\_32:

(Start: 45 @26477 has 185 MA's), (77, 26597), (92, 26669), (103, 26786), (104, 26789), (121, 26867), (134, 26948), (198, 26990), (214, 27068), (244, 27194), (245, 27200), (246, 27203), (251, 27239), (267, 27314), (282, 27356), (291, 27392), (292, 27395), (303, 27446), (305, 27455), (335, 27569), (340, 27611), (343, 27620), (354, 27677), (356, 27680),

Gene: Domi\_244 Start: 142540, Stop: 143970, Start Num: 46

Candidate Starts for Domi\_244:

(Start: 46 @142540 has 172 MA's), (73, 142630), (74, 142633), (91, 142693), (104, 142816), (109, 142840), (130, 142924), (138, 142966), (151, 143008), (178, 143173), (179, 143176), (224, 143431), (235, 143470), (242, 143500), (254, 143563), (258, 143584), (259, 143593), (261, 143596), (269,

143629), (278, 143644), (316, 143779), (333, 143854), (341, 143911), (342, 143914),

Gene: Donkeykong\_30 Start: 26497, Stop: 27708, Start Num: 45

Candidate Starts for Donkeykong\_30:

(Start: 45 @26497 has 185 MA's), (67, 26581), (95, 26731), (101, 26785), (119, 26878), (126, 26926), (215, 27007), (244, 27133), (245, 27139), (251, 27178), (262, 27238), (267, 27253), (282, 27295), (291, 27331), (292, 27334), (297, 27349), (303, 27385), (305, 27394), (335, 27508), (356, 27619),

Gene: Doomphist\_30 Start: 26448, Stop: 27641, Start Num: 45

Candidate Starts for Doomphist\_30:

(Start: 45 @26448 has 185 MA's), (67, 26532), (95, 26682), (101, 26736), (126, 26877), (215, 26958), (244, 27084), (245, 27090), (246, 27093), (267, 27204), (282, 27246), (291, 27282), (303, 27336), (305, 27345), (335, 27459), (340, 27501), (343, 27510), (354, 27567), (356, 27570),

Gene: DosHalletts\_32 Start: 26602, Stop: 27903, Start Num: 45

Candidate Starts for DosHalletts\_32:

(Start: 45 @26602 has 185 MA's), (77, 26722), (92, 26794), (103, 26911), (104, 26914), (121, 26992), (134, 27073), (198, 27124), (232, 27301), (244, 27343), (246, 27352), (272, 27490), (335, 27721), (340, 27763), (343, 27772), (354, 27829), (356, 27832),

Gene: DotProduct\_30 Start: 26315, Stop: 27508, Start Num: 45

Candidate Starts for DotProduct\_30:

(Start: 45 @26315 has 185 MA's), (67, 26399), (95, 26549), (101, 26603), (119, 26696), (126, 26744), (215, 26825), (244, 26951), (245, 26957), (246, 26960), (251, 26996), (267, 27071), (282, 27113), (291, 27149), (292, 27152), (297, 27167), (303, 27203), (305, 27212), (335, 27326), (340, 27368), (343, 27377), (354, 27434), (356, 27437),

Gene: Doughnut\_29 Start: 23220, Stop: 24878, Start Num: 39

Candidate Starts for Doughnut\_29:

(Start: 39 @23220 has 3 MA's), (49, 23271), (52, 23274), (64, 23310), (73, 23346), (107, 23547), (112, 23577), (145, 23715), (160, 23787), (163, 23802), (175, 23868), (179, 23889), (192, 23991), (228, 24162), (238, 24198), (242, 24213), (254, 24276), (270, 24345), (285, 24378), (345, 24633), (367, 24783), (369, 24846),

Gene: DrPhinkDaddy\_247 Start: 143765, Stop: 145195, Start Num: 46

Candidate Starts for DrPhinkDaddy\_247:

(Start: 46 @143765 has 172 MA's), (73, 143855), (91, 143918), (104, 144041), (109, 144065), (130, 144149), (138, 144191), (151, 144233), (178, 144398), (179, 144401), (224, 144656), (235, 144695), (242, 144725), (254, 144788), (258, 144809), (259, 144818), (261, 144821), (269, 144854), (278, 144869), (316, 145004), (333, 145079), (341, 145136), (342, 145139),

Gene: Drago\_31 Start: 26142, Stop: 27335, Start Num: 45

Candidate Starts for Drago\_31:

(Start: 45 @26142 has 185 MA's), (67, 26226), (95, 26376), (101, 26430), (126, 26571), (215, 26652), (244, 26778), (245, 26784), (267, 26898), (282, 26940), (291, 26976), (297, 26994), (303, 27030), (305, 27039), (335, 27153), (340, 27195), (343, 27204), (354, 27261), (356, 27264),

Gene: Drazdys\_247 Start: 143345, Stop: 144775, Start Num: 46

Candidate Starts for Drazdys\_247:

(Start: 46 @143345 has 172 MA's), (73, 143435), (91, 143498), (104, 143621), (109, 143645), (130, 143729), (138, 143771), (151, 143813), (178, 143978), (179, 143981), (224, 144236), (235, 144275), (242, 144305), (254, 144368), (258, 144389), (259, 144398), (261, 144401), (269, 144434), (278, 144449), (316, 144584), (333, 144659), (341, 144716), (342, 144719),

Gene: Dulcita\_36 Start: 29798, Stop: 31165, Start Num: 61

Candidate Starts for Dulcita\_36:

(Start: 61 @29798 has 14 MA's), (76, 29855), (80, 29882), (87, 29897), (90, 29918), (91, 29921), (104, 30059), (109, 30083), (128, 30161), (130, 30167), (131, 30170), (152, 30245), (177, 30377), (181, 30404), (182, 30413), (190, 30467), (197, 30494), (201, 30524), (212, 30578), (231, 30650), (274, 30836), (311, 30956), (316, 30977), (322, 30995), (324, 31010), (331, 31040), (336, 31070), (342, 31106), (343, 31109), (349, 31145),

Gene: ET08\_236 Start: 141669, Stop: 143099, Start Num: 46

Candidate Starts for ET08\_236:

(37, 141627), (Start: 46 @141669 has 172 MA's), (73, 141759), (91, 141822), (104, 141945), (109, 141969), (130, 142053), (138, 142095), (151, 142137), (178, 142302), (179, 142305), (224, 142560), (235, 142599), (242, 142629), (254, 142692), (258, 142713), (259, 142722), (261, 142725), (269, 142758), (278, 142773), (316, 142908), (333, 142983), (342, 143043),

Gene: EasyJones\_251 Start: 141721, Stop: 143151, Start Num: 46

Candidate Starts for EasyJones\_251:

(Start: 46 @141721 has 172 MA's), (73, 141811), (91, 141874), (104, 141997), (109, 142021), (130, 142105), (138, 142147), (151, 142189), (178, 142354), (179, 142357), (224, 142612), (235, 142651), (242, 142681), (254, 142744), (258, 142765), (259, 142774), (261, 142777), (269, 142810), (278, 142825), (316, 142960), (333, 143035), (341, 143092), (342, 143095),

Gene: EggyFarm\_258 Start: 144560, Stop: 145990, Start Num: 46

Candidate Starts for EggyFarm\_258:

(Start: 46 @144560 has 172 MA's), (73, 144650), (91, 144713), (104, 144836), (109, 144860), (130, 144944), (138, 144986), (151, 145028), (178, 145193), (179, 145196), (224, 145451), (235, 145490), (242, 145520), (254, 145583), (258, 145604), (259, 145613), (261, 145616), (269, 145649), (278, 145664), (316, 145799), (333, 145874), (341, 145931), (342, 145934),

Gene: Eish\_30 Start: 26467, Stop: 27633, Start Num: 45

Candidate Starts for Eish\_30:

(14, 26194), (16, 26197), (Start: 45 @26467 has 185 MA's), (67, 26551), (95, 26701), (101, 26755), (126, 26896), (215, 26977), (244, 27103), (245, 27109), (251, 27148), (262, 27208), (267, 27223), (282, 27265), (291, 27301), (292, 27304), (303, 27355), (305, 27364), (335, 27478),

Gene: EleanorGeorge\_30 Start: 26637, Stop: 27908, Start Num: 45

Candidate Starts for EleanorGeorge\_30:

(12, 26364), (13, 26367), (Start: 45 @26637 has 185 MA's), (77, 26754), (103, 26943), (104, 26946), (124, 27024), (142, 27105), (158, 27156), (164, 27195), (170, 27219), (179, 27282), (180, 27285), (192, 27390), (199, 27411), (209, 27474), (217, 27504), (227, 27561), (254, 27678), (260, 27711),

Gene: EmToTheThree\_251 Start: 143553, Stop: 144983, Start Num: 46

Candidate Starts for EmToTheThree\_251:

(Start: 46 @143553 has 172 MA's), (73, 143643), (91, 143706), (104, 143829), (109, 143853), (130, 143937), (138, 143979), (151, 144021), (178, 144186), (179, 144189), (224, 144444), (235, 144483), (242, 144513), (254, 144576), (258, 144597), (259, 144606), (261, 144609), (269, 144642), (278, 144657), (316, 144792), (333, 144867), (341, 144924), (342, 144927),

Gene: EmiMonkey\_31 Start: 27860, Stop: 29131, Start Num: 45

Candidate Starts for EmiMonkey\_31:

(Start: 45 @27860 has 185 MA's), (77, 27977), (92, 28049), (103, 28166), (104, 28169), (121, 28247), (134, 28328), (198, 28370), (214, 28448), (244, 28574), (262, 28679), (267, 28694), (282, 28736),



(291, 28772), (292, 28775), (303, 28826), (305, 28835), (335, 28949), (340, 28991), (343, 29000), (354, 29057), (356, 29060),

Gene: Emma\_32 Start: 26896, Stop: 28128, Start Num: 45

Candidate Starts for Emma\_32:

(Start: 45 @26896 has 185 MA's), (77, 27013), (92, 27085), (103, 27202), (104, 27205), (121, 27283), (134, 27364), (198, 27406), (214, 27484), (244, 27610), (245, 27616), (246, 27619), (251, 27655), (267, 27730), (282, 27772), (292, 27811), (297, 27826), (303, 27862), (305, 27871), (335, 27985), (356, 28096), (360, 28117),

Gene: EmmaElysia\_255 Start: 144216, Stop: 145646, Start Num: 46

Candidate Starts for EmmaElysia\_255:

(Start: 46 @144216 has 172 MA's), (73, 144306), (91, 144369), (104, 144492), (109, 144516), (130, 144600), (138, 144642), (151, 144684), (178, 144849), (179, 144852), (224, 145107), (235, 145146), (242, 145176), (254, 145239), (258, 145260), (259, 145269), (261, 145272), (269, 145305), (278, 145320), (316, 145455), (333, 145530), (341, 145587), (342, 145590),

Gene: Emmaloid\_33 Start: 27707, Stop: 28900, Start Num: 45

Candidate Starts for Emmaloid\_33:

(Start: 45 @27707 has 185 MA's), (67, 27791), (95, 27941), (101, 27995), (126, 28136), (215, 28217), (244, 28343), (245, 28349), (246, 28352), (251, 28388), (267, 28463), (282, 28505), (291, 28541), (305, 28604), (335, 28718), (340, 28760), (343, 28769), (354, 28826), (356, 28829),

Gene: Empress\_31 Start: 27662, Stop: 28933, Start Num: 45

Candidate Starts for Empress\_31:

(Start: 45 @27662 has 185 MA's), (77, 27779), (92, 27851), (103, 27968), (104, 27971), (121, 28049), (134, 28130), (198, 28172), (214, 28250), (244, 28376), (245, 28382), (246, 28385), (267, 28496), (282, 28538), (292, 28577), (297, 28592), (303, 28628), (305, 28637), (335, 28751), (340, 28793), (354, 28859), (356, 28862),

Gene: Enby\_31 Start: 26166, Stop: 27437, Start Num: 45

Candidate Starts for Enby\_31:

(Start: 45 @26166 has 185 MA's), (77, 26283), (103, 26472), (104, 26475), (124, 26553), (142, 26634), (158, 26685), (164, 26724), (170, 26748), (179, 26811), (180, 26814), (192, 26919), (199, 26940), (209, 27003), (217, 27033), (227, 27090), (254, 27207), (260, 27240),

Gene: Epah\_42 Start: 39523, Stop: 41259, Start Num: 38

Candidate Starts for Epah\_42:

(Start: 38 @39523 has 26 MA's), (58, 39598), (65, 39616), (69, 39637), (74, 39652), (89, 39724), (97, 39817), (104, 39889), (109, 39913), (125, 40000), (127, 40015), (168, 40198), (178, 40279), (187, 40360), (192, 40384), (193, 40387), (202, 40429), (226, 40540), (227, 40549), (231, 40558), (249, 40654), (254, 40693), (272, 40762), (285, 40786), (292, 40813), (299, 40843), (321, 40921), (324, 40945), (328, 40963), (329, 40966), (334, 40990), (339, 41035), (358, 41119),

Gene: Eradicator\_30 Start: 26355, Stop: 27626, Start Num: 45

Candidate Starts for Eradicator\_30:

(Start: 45 @26355 has 185 MA's), (77, 26472), (92, 26544), (103, 26661), (104, 26664), (121, 26742), (134, 26823), (198, 26865), (214, 26943), (244, 27069), (245, 27075), (246, 27078), (267, 27189), (282, 27231), (292, 27270), (297, 27285), (303, 27321), (305, 27330), (335, 27444), (340, 27486), (343, 27495), (354, 27552), (356, 27555),

Gene: Erdmann\_252 Start: 143521, Stop: 144951, Start Num: 46

Candidate Starts for Erdmann\_252:

(Start: 46 @143521 has 172 MA's), (73, 143611), (91, 143674), (104, 143797), (109, 143821), (130, 143905), (138, 143947), (151, 143989), (178, 144154), (179, 144157), (224, 144412), (235, 144451), (242, 144481), (254, 144544), (258, 144565), (259, 144574), (261, 144577), (269, 144610), (278, 144625), (316, 144760), (333, 144835), (341, 144892), (342, 144895),

Gene: ErnieJ\_244 Start: 140349, Stop: 141779, Start Num: 46

Candidate Starts for ErnieJ\_244:

(Start: 46 @140349 has 172 MA's), (73, 140439), (91, 140502), (104, 140625), (109, 140649), (130, 140733), (138, 140775), (151, 140817), (178, 140982), (179, 140985), (224, 141240), (235, 141279), (242, 141309), (254, 141372), (258, 141393), (259, 141402), (261, 141405), (269, 141438), (278, 141453), (316, 141588), (333, 141663), (341, 141720), (342, 141723),

Gene: Essence\_248 Start: 142557, Stop: 143987, Start Num: 46

Candidate Starts for Essence\_248:

(Start: 46 @142557 has 172 MA's), (73, 142647), (91, 142710), (104, 142833), (109, 142857), (130, 142941), (138, 142983), (151, 143025), (178, 143190), (179, 143193), (224, 143448), (235, 143487), (242, 143517), (254, 143580), (258, 143601), (259, 143610), (261, 143613), (269, 143646), (278, 143661), (316, 143796), (333, 143871), (341, 143928), (342, 143931),

Gene: Estave1\_28 Start: 25767, Stop: 27038, Start Num: 45

Candidate Starts for Estave1\_28:

(Start: 45 @25767 has 185 MA's), (77, 25884), (92, 25956), (103, 26073), (104, 26076), (121, 26154), (134, 26235), (198, 26277), (214, 26355), (223, 26409), (244, 26481), (245, 26487), (246, 26490), (251, 26526), (267, 26601), (282, 26643), (291, 26679), (303, 26733), (305, 26742), (335, 26856), (340, 26898), (343, 26907), (354, 26964), (356, 26967),

Gene: Estes\_41 Start: 31074, Stop: 32489, Start Num: 41

Candidate Starts for Estes\_41:

(Start: 41 @31074 has 6 MA's), (53, 31128), (Start: 55 @31134 has 1 MA's), (64, 31164), (76, 31200), (104, 31401), (114, 31431), (117, 31449), (132, 31500), (137, 31515), (177, 31704), (181, 31731), (184, 31746), (197, 31821), (202, 31854), (212, 31905), (232, 31983), (274, 32160), (285, 32184), (286, 32187), (311, 32280), (316, 32301), (336, 32394), (347, 32457),

Gene: Ewok\_249 Start: 143015, Stop: 144445, Start Num: 46

Candidate Starts for Ewok\_249:

(Start: 46 @143015 has 172 MA's), (73, 143105), (91, 143168), (104, 143291), (109, 143315), (130, 143399), (138, 143441), (151, 143483), (178, 143648), (179, 143651), (224, 143906), (235, 143945), (242, 143975), (254, 144038), (258, 144059), (259, 144068), (261, 144071), (269, 144104), (278, 144119), (316, 144254), (333, 144329), (341, 144386), (342, 144389),

Gene: Fanaw\_42 Start: 40220, Stop: 41956, Start Num: 38

Candidate Starts for Fanaw\_42:

(Start: 38 @40220 has 26 MA's), (47, 40265), (58, 40295), (65, 40313), (69, 40334), (74, 40349), (89, 40421), (97, 40514), (104, 40586), (109, 40610), (125, 40697), (127, 40712), (169, 40901), (178, 40976), (187, 41057), (192, 41081), (193, 41084), (226, 41237), (227, 41246), (231, 41255), (249, 41351), (254, 41390), (272, 41459), (285, 41483), (292, 41510), (299, 41540), (321, 41618), (324, 41642), (328, 41660), (329, 41663), (334, 41687), (339, 41732), (358, 41816),

Gene: Fancypants\_30 Start: 26335, Stop: 27528, Start Num: 45

Candidate Starts for Fancypants\_30:

(21, 26083), (Start: 45 @26335 has 185 MA's), (67, 26419), (95, 26569), (101, 26623), (126, 26764), (215, 26845), (244, 26971), (245, 26977), (251, 27016), (255, 27046), (267, 27091), (282, 27133), (291, 27169), (292, 27172), (303, 27223), (305, 27232), (335, 27346), (340, 27388), (343, 27397),

(354, 27454), (356, 27457),

Gene: FeliMaine\_56 Start: 30945, Stop: 32324, Start Num: 45

Candidate Starts for FeliMaine\_56:

(Start: 45 @30945 has 185 MA's), (58, 31002), (68, 31038), (73, 31062), (77, 31074), (94, 31197), (97, 31239), (104, 31311), (109, 31335), (110, 31341), (131, 31422), (149, 31491), (150, 31494), (158, 31530), (163, 31566), (176, 31638), (178, 31656), (179, 31659), (196, 31776), (200, 31806), (227, 31938), (234, 31959), (242, 31992), (253, 32046), (254, 32052), (287, 32172), (294, 32202), (298, 32223), (305, 32253),

Gene: Filuzino\_30 Start: 26324, Stop: 27478, Start Num: 45

Candidate Starts for Filuzino\_30:

(14, 26051), (16, 26054), (Start: 45 @26324 has 185 MA's), (67, 26408), (95, 26558), (101, 26612), (126, 26753), (215, 26834), (244, 26960), (245, 26966), (251, 27005), (262, 27065), (267, 27080), (282, 27122), (291, 27158), (292, 27161), (303, 27212), (305, 27221), (335, 27335), (356, 27446), (360, 27467),

Gene: Firehouse51\_31 Start: 27046, Stop: 28314, Start Num: 45

Candidate Starts for Firehouse51\_31:

(Start: 45 @27046 has 185 MA's), (77, 27163), (92, 27235), (103, 27352), (104, 27355), (124, 27433), (142, 27514), (158, 27565), (164, 27604), (170, 27628), (179, 27691), (180, 27694), (192, 27799), (199, 27820), (209, 27883), (217, 27913), (227, 27970), (254, 28087), (260, 28120),

Gene: Flabslab\_245 Start: 139614, Stop: 141044, Start Num: 46

Candidate Starts for Flabslab\_245:

(40, 139587), (Start: 46 @139614 has 172 MA's), (73, 139704), (91, 139767), (104, 139890), (109, 139914), (130, 139998), (138, 140040), (151, 140082), (178, 140247), (179, 140250), (224, 140505), (235, 140544), (242, 140574), (254, 140637), (258, 140658), (259, 140667), (261, 140670), (269, 140703), (278, 140718), (316, 140853), (333, 140928), (342, 140988),

Gene: Flathead\_30 Start: 26362, Stop: 27528, Start Num: 45

Candidate Starts for Flathead\_30:

(14, 26089), (16, 26092), (Start: 45 @26362 has 185 MA's), (67, 26446), (95, 26596), (101, 26650), (126, 26791), (215, 26872), (244, 26998), (245, 27004), (251, 27043), (262, 27103), (267, 27118), (282, 27160), (291, 27196), (292, 27199), (303, 27250), (305, 27259), (335, 27373), (356, 27484),

Gene: Florinda\_30 Start: 26327, Stop: 27520, Start Num: 45

Candidate Starts for Florinda\_30:

(Start: 45 @26327 has 185 MA's), (67, 26411), (95, 26561), (101, 26615), (126, 26756), (215, 26837), (244, 26963), (245, 26969), (246, 26972), (267, 27083), (282, 27125), (291, 27161), (297, 27179), (303, 27215), (305, 27224), (335, 27338), (340, 27380), (343, 27389), (354, 27446), (356, 27449),

Gene: Fludd\_250 Start: 141433, Stop: 142863, Start Num: 46

Candidate Starts for Fludd\_250:

(Start: 46 @141433 has 172 MA's), (73, 141523), (91, 141586), (104, 141709), (109, 141733), (130, 141817), (138, 141859), (151, 141901), (178, 142066), (179, 142069), (224, 142324), (235, 142363), (242, 142393), (254, 142456), (258, 142477), (259, 142486), (261, 142489), (269, 142522), (278, 142537), (316, 142672), (333, 142747), (341, 142804), (342, 142807),

Gene: Fongie\_250 Start: 143013, Stop: 144443, Start Num: 46

Candidate Starts for Fongie\_250:

(Start: 46 @143013 has 172 MA's), (73, 143103), (91, 143166), (104, 143289), (109, 143313), (130, 143397), (138, 143439), (151, 143481), (178, 143646), (179, 143649), (224, 143904), (235, 143943),

(242, 143973), (254, 144036), (258, 144057), (259, 144066), (261, 144069), (269, 144102), (278, 144117), (316, 144252), (333, 144327), (341, 144384), (342, 144387),

Gene: Fortunato\_44 Start: 40578, Stop: 42314, Start Num: 38

Candidate Starts for Fortunato\_44:

(Start: 38 @40578 has 26 MA's), (58, 40653), (65, 40671), (69, 40692), (74, 40707), (89, 40779), (97, 40872), (104, 40944), (109, 40968), (125, 41055), (127, 41070), (168, 41253), (178, 41334), (187, 41415), (192, 41439), (193, 41442), (202, 41484), (226, 41595), (227, 41604), (231, 41613), (249, 41709), (254, 41748), (272, 41817), (285, 41841), (292, 41868), (299, 41898), (321, 41976), (324, 42000), (328, 42018), (329, 42021), (334, 42045), (339, 42090), (358, 42174),

Gene: FoxtrotP1\_249 Start: 144107, Stop: 145537, Start Num: 46

Candidate Starts for FoxtrotP1\_249:

(Start: 46 @144107 has 172 MA's), (73, 144197), (91, 144260), (104, 144383), (109, 144407), (130, 144491), (138, 144533), (151, 144575), (178, 144740), (179, 144743), (224, 144998), (235, 145037), (242, 145067), (254, 145130), (258, 145151), (259, 145160), (261, 145163), (269, 145196), (278, 145211), (316, 145346), (333, 145421), (341, 145478), (342, 145481),

Gene: Frankie\_33 Start: 26909, Stop: 28665, Start Num: 36

Candidate Starts for Frankie\_33:

(32, 26888), (Start: 36 @26909 has 1 MA's), (48, 26990), (59, 27029), (72, 27080), (81, 27122), (83, 27125), (92, 27170), (120, 27365), (122, 27374), (129, 27419), (143, 27497), (146, 27518), (153, 27563), (166, 27647), (171, 27704), (186, 27872), (207, 27992), (220, 28046), (240, 28133), (241, 28136), (243, 28139), (315, 28433), (327, 28487), (348, 28598),

Gene: FrayBell\_253 Start: 141564, Stop: 142994, Start Num: 46

Candidate Starts for FrayBell\_253:

(Start: 46 @141564 has 172 MA's), (73, 141654), (74, 141657), (91, 141717), (104, 141840), (109, 141864), (130, 141948), (138, 141990), (151, 142032), (178, 142197), (179, 142200), (224, 142455), (235, 142494), (242, 142524), (254, 142587), (258, 142608), (259, 142617), (261, 142620), (269, 142653), (278, 142668), (316, 142803), (333, 142878), (341, 142935), (342, 142938),

Gene: FreakyGoo\_35 Start: 29799, Stop: 31166, Start Num: 61

Candidate Starts for FreakyGoo\_35:

(Start: 61 @29799 has 14 MA's), (76, 29856), (80, 29883), (91, 29922), (104, 30060), (109, 30084), (128, 30162), (130, 30168), (131, 30171), (152, 30246), (177, 30378), (181, 30405), (182, 30414), (190, 30468), (197, 30495), (201, 30525), (212, 30579), (231, 30651), (274, 30837), (311, 30957), (316, 30978), (322, 30996), (324, 31011), (331, 31041), (336, 31071), (342, 31107), (343, 31110), (349, 31146),

Gene: FreddyB\_30 Start: 26513, Stop: 27784, Start Num: 45

Candidate Starts for FreddyB\_30:

(Start: 45 @26513 has 185 MA's), (77, 26630), (92, 26702), (103, 26819), (104, 26822), (121, 26900), (134, 26981), (198, 27023), (214, 27101), (244, 27227), (262, 27332), (267, 27347), (282, 27389), (291, 27425), (292, 27428), (303, 27479), (305, 27488), (335, 27602), (340, 27644), (343, 27653), (354, 27710), (356, 27713),

Gene: Frederick\_44 Start: 40560, Stop: 42290, Start Num: 38

Candidate Starts for Frederick\_44:

(Start: 38 @40560 has 26 MA's), (58, 40635), (65, 40653), (69, 40674), (74, 40689), (89, 40761), (97, 40854), (104, 40914), (109, 40938), (125, 41025), (127, 41040), (168, 41223), (178, 41304), (187, 41385), (192, 41409), (193, 41412), (202, 41454), (226, 41565), (227, 41574), (231, 41583), (249, 41679), (254, 41718), (272, 41787), (285, 41811), (292, 41838), (299, 41868), (321, 41946), (324,

41970), (328, 41988), (329, 41991), (334, 42015), (339, 42060), (358, 42144),

Gene: Fruitloop\_29 Start: 26518, Stop: 27672, Start Num: 45

Candidate Starts for Fruitloop\_29:

(14, 26245), (16, 26248), (Start: 45 @26518 has 185 MA's), (67, 26602), (95, 26752), (101, 26806), (126, 26947), (215, 27028), (244, 27154), (245, 27160), (251, 27199), (262, 27259), (267, 27274), (282, 27316), (291, 27352), (292, 27355), (303, 27406), (305, 27415), (335, 27529), (356, 27640), (360, 27661),

Gene: FudgeTart\_246 Start: 142611, Stop: 144041, Start Num: 46

Candidate Starts for FudgeTart\_246:

(Start: 46 @142611 has 172 MA's), (73, 142701), (91, 142764), (104, 142887), (109, 142911), (130, 142995), (138, 143037), (151, 143079), (178, 143244), (179, 143247), (224, 143502), (235, 143541), (242, 143571), (254, 143634), (258, 143655), (259, 143664), (261, 143667), (269, 143700), (278, 143715), (316, 143850), (333, 143925), (341, 143982), (342, 143985),

Gene: GUmbie\_30 Start: 26344, Stop: 27537, Start Num: 45

Candidate Starts for GUmbie\_30:

(Start: 45 @26344 has 185 MA's), (67, 26428), (95, 26578), (101, 26632), (126, 26773), (215, 26854), (244, 26980), (245, 26986), (246, 26989), (251, 27025), (267, 27100), (282, 27142), (291, 27178), (305, 27241), (335, 27355), (340, 27397), (343, 27406), (354, 27463), (356, 27466),

Gene: Gabriel\_253 Start: 141592, Stop: 143022, Start Num: 46

Candidate Starts for Gabriel\_253:

(Start: 46 @141592 has 172 MA's), (73, 141682), (91, 141745), (104, 141868), (109, 141892), (130, 141976), (138, 142018), (151, 142060), (178, 142225), (179, 142228), (224, 142483), (235, 142522), (242, 142552), (254, 142615), (258, 142636), (259, 142645), (261, 142648), (269, 142681), (278, 142696), (316, 142831), (333, 142906), (341, 142963), (342, 142966),

Gene: Galactic\_31 Start: 26523, Stop: 27770, Start Num: 45

Candidate Starts for Galactic\_31:

(Start: 45 @26523 has 185 MA's), (77, 26643), (92, 26715), (103, 26832), (104, 26835), (121, 26913), (134, 26994), (198, 27036), (214, 27114), (244, 27240), (245, 27246), (251, 27285), (262, 27345), (267, 27360), (282, 27402), (291, 27438), (292, 27441), (303, 27492), (305, 27501), (335, 27615), (340, 27657), (343, 27666), (356, 27726),

Gene: Gamgam\_252 Start: 141949, Stop: 143379, Start Num: 46

Candidate Starts for Gamgam\_252:

(Start: 46 @141949 has 172 MA's), (73, 142039), (91, 142102), (104, 142225), (109, 142249), (130, 142333), (138, 142375), (151, 142417), (178, 142582), (179, 142585), (224, 142840), (235, 142879), (242, 142909), (254, 142972), (258, 142993), (259, 143002), (261, 143005), (269, 143038), (278, 143053), (316, 143188), (333, 143263), (341, 143320), (342, 143323),

Gene: Gandalph\_31 Start: 26586, Stop: 27860, Start Num: 45

Candidate Starts for Gandalph\_31:

(Start: 45 @26586 has 185 MA's), (77, 26706), (103, 26895), (104, 26898), (121, 26976), (134, 27057), (198, 27099), (214, 27177), (244, 27303), (245, 27309), (251, 27348), (262, 27408), (267, 27423), (280, 27459), (282, 27465), (291, 27501), (297, 27519), (303, 27555), (305, 27564), (335, 27678), (340, 27720), (343, 27729), (354, 27786), (356, 27789),

Gene: GardenSalsa\_40 Start: 30898, Stop: 32313, Start Num: 41

Candidate Starts for GardenSalsa\_40:

(Start: 41 @30898 has 6 MA's), (53, 30952), (Start: 55 @30958 has 1 MA's), (64, 30988), (76, 31024), (104, 31225), (114, 31255), (117, 31273), (132, 31324), (137, 31339), (155, 31411), (156, 31417), (177, 31528), (181, 31555), (184, 31570), (197, 31645), (202, 31678), (212, 31729), (232, 31807), (274, 31984), (285, 32008), (286, 32011), (311, 32104), (316, 32125), (324, 32158), (336, 32218), (347, 32281),

Gene: Gattaca\_53 Start: 30124, Stop: 31503, Start Num: 45

Candidate Starts for Gattaca\_53:

(Start: 45 @30124 has 185 MA's), (58, 30181), (68, 30217), (73, 30241), (77, 30253), (94, 30376), (97, 30418), (104, 30490), (109, 30514), (110, 30520), (131, 30601), (149, 30670), (150, 30673), (158, 30709), (163, 30745), (176, 30817), (178, 30835), (179, 30838), (196, 30955), (200, 30985), (227, 31117), (234, 31138), (242, 31171), (253, 31225), (254, 31231), (287, 31351), (294, 31381), (298, 31402), (305, 31432),

Gene: GenevaB15\_40 Start: 30943, Stop: 32358, Start Num: 41

Candidate Starts for GenevaB15\_40:

(Start: 41 @30943 has 6 MA's), (53, 30997), (Start: 55 @31003 has 1 MA's), (64, 31033), (76, 31069), (104, 31270), (114, 31300), (117, 31318), (132, 31369), (137, 31384), (177, 31573), (181, 31600), (184, 31615), (197, 31690), (202, 31723), (212, 31774), (274, 32029), (285, 32053), (286, 32056), (311, 32149), (316, 32170), (324, 32203), (336, 32263), (347, 32326),

Gene: Geralt\_30 Start: 26327, Stop: 27520, Start Num: 45

Candidate Starts for Geralt\_30:

(21, 26075), (Start: 45 @26327 has 185 MA's), (67, 26411), (95, 26561), (101, 26615), (126, 26756), (215, 26837), (244, 26963), (251, 27008), (267, 27083), (282, 27125), (291, 27161), (292, 27164), (303, 27215), (305, 27224), (335, 27338), (340, 27380), (343, 27389), (354, 27446), (356, 27449),

Gene: Ghost\_250 Start: 142573, Stop: 144003, Start Num: 46

Candidate Starts for Ghost\_250:

(Start: 46 @142573 has 172 MA's), (73, 142663), (91, 142726), (104, 142849), (109, 142873), (130, 142957), (138, 142999), (151, 143041), (178, 143206), (179, 143209), (224, 143464), (235, 143503), (242, 143533), (254, 143596), (258, 143617), (259, 143626), (261, 143629), (269, 143662), (278, 143677), (316, 143812), (333, 143887), (341, 143944), (342, 143947),

Gene: GigiOuiOui\_30 Start: 26456, Stop: 27649, Start Num: 45

Candidate Starts for GigiOuiOui\_30:

(Start: 45 @26456 has 185 MA's), (67, 26540), (95, 26690), (101, 26744), (126, 26885), (215, 26966), (244, 27092), (245, 27098), (246, 27101), (251, 27137), (267, 27212), (282, 27254), (291, 27290), (305, 27353), (335, 27467), (340, 27509), (343, 27518), (354, 27575), (356, 27578),

Gene: GinPorsche\_42 Start: 39523, Stop: 41259, Start Num: 38

Candidate Starts for GinPorsche\_42:

(Start: 38 @39523 has 26 MA's), (58, 39598), (65, 39616), (69, 39637), (74, 39652), (89, 39724), (97, 39817), (104, 39889), (109, 39913), (125, 40000), (127, 40015), (168, 40198), (178, 40279), (187, 40360), (192, 40384), (193, 40387), (202, 40429), (226, 40540), (227, 40549), (231, 40558), (249, 40654), (254, 40693), (272, 40762), (285, 40786), (292, 40813), (299, 40843), (321, 40921), (324, 40945), (328, 40963), (329, 40966), (334, 40990), (339, 41035), (358, 41119),

Gene: Girafales\_31 Start: 26135, Stop: 27328, Start Num: 45

Candidate Starts for Girafales\_31:

(Start: 45 @26135 has 185 MA's), (67, 26219), (95, 26369), (101, 26423), (126, 26564), (215, 26645), (244, 26771), (245, 26777), (246, 26780), (267, 26891), (282, 26933), (291, 26969), (297, 26987), (303, 27023), (305, 27032), (335, 27146), (340, 27188), (343, 27197), (354, 27254), (356, 27257),

Gene: Girr\_31 Start: 26444, Stop: 27691, Start Num: 45

Candidate Starts for Girr\_31:

(Start: 45 @26444 has 185 MA's), (77, 26564), (92, 26636), (103, 26753), (104, 26756), (121, 26834), (134, 26915), (198, 26957), (214, 27035), (244, 27161), (251, 27206), (262, 27266), (267, 27281), (282, 27323), (291, 27359), (303, 27413), (305, 27422), (335, 27536), (356, 27647),

Gene: Gizmo\_256 Start: 145438, Stop: 146868, Start Num: 46

Candidate Starts for Gizmo\_256:

(Start: 46 @145438 has 172 MA's), (73, 145528), (91, 145591), (104, 145714), (109, 145738), (130, 145822), (138, 145864), (151, 145906), (178, 146071), (179, 146074), (224, 146329), (235, 146368), (242, 146398), (254, 146461), (258, 146482), (259, 146491), (261, 146494), (269, 146527), (278, 146542), (316, 146677), (333, 146752), (341, 146809), (342, 146812),

Gene: Glaske16\_36 Start: 29798, Stop: 31165, Start Num: 61

Candidate Starts for Glaske16\_36:

(Start: 61 @29798 has 14 MA's), (76, 29855), (80, 29882), (87, 29897), (90, 29918), (91, 29921), (104, 30059), (109, 30083), (128, 30161), (130, 30167), (131, 30170), (152, 30245), (177, 30377), (181, 30404), (182, 30413), (190, 30467), (197, 30494), (201, 30524), (212, 30578), (231, 30650), (274, 30836), (311, 30956), (316, 30977), (322, 30995), (324, 31010), (331, 31040), (336, 31070), (342, 31106), (343, 31109), (349, 31145),

Gene: GlutenPhree\_249 Start: 141960, Stop: 143390, Start Num: 46

Candidate Starts for GlutenPhree\_249:

(Start: 46 @141960 has 172 MA's), (73, 142050), (91, 142113), (104, 142236), (109, 142260), (130, 142344), (138, 142386), (151, 142428), (178, 142593), (179, 142596), (224, 142851), (235, 142890), (242, 142920), (254, 142983), (258, 143004), (259, 143013), (261, 143016), (269, 143049), (278, 143064), (316, 143199), (333, 143274), (341, 143331), (342, 143334),

Gene: GoongGoong\_53 Start: 29923, Stop: 31302, Start Num: 45

Candidate Starts for GoongGoong\_53:

(Start: 45 @29923 has 185 MA's), (58, 29980), (68, 30016), (73, 30040), (77, 30052), (94, 30175), (97, 30217), (104, 30289), (109, 30313), (110, 30319), (131, 30400), (149, 30469), (150, 30472), (158, 30508), (163, 30544), (176, 30616), (178, 30634), (179, 30637), (196, 30754), (200, 30784), (227, 30916), (234, 30937), (242, 30970), (253, 31024), (254, 31030), (287, 31150), (294, 31180), (298, 31201), (305, 31231),

Gene: Gorge\_30 Start: 26480, Stop: 27751, Start Num: 45

Candidate Starts for Gorge\_30:

(Start: 45 @26480 has 185 MA's), (77, 26597), (92, 26669), (103, 26786), (104, 26789), (121, 26867), (134, 26948), (198, 26990), (214, 27068), (244, 27194), (262, 27299), (267, 27314), (282, 27356), (291, 27392), (292, 27395), (303, 27446), (305, 27455), (335, 27569), (340, 27611), (343, 27620), (354, 27677), (356, 27680),

Gene: Grasshills\_257 Start: 144559, Stop: 145989, Start Num: 46

Candidate Starts for Grasshills\_257:

(Start: 46 @144559 has 172 MA's), (73, 144649), (91, 144712), (104, 144835), (109, 144859), (130, 144943), (138, 144985), (151, 145027), (178, 145192), (179, 145195), (224, 145450), (235, 145489), (242, 145519), (254, 145582), (258, 145603), (259, 145612), (261, 145615), (269, 145648), (278, 145663), (316, 145798), (333, 145873), (341, 145930), (342, 145933),

Gene: Grimmer\_32 Start: 27049, Stop: 28242, Start Num: 45

Candidate Starts for Grimmer\_32:

(Start: 45 @27049 has 185 MA's), (67, 27133), (95, 27283), (101, 27337), (126, 27478), (215, 27559), (244, 27685), (245, 27691), (246, 27694), (251, 27730), (267, 27805), (282, 27847), (291, 27883), (303, 27937), (305, 27946), (335, 28060), (340, 28102), (343, 28111), (354, 28168), (356, 28171),

Gene: Grungle\_232 Start: 139838, Stop: 141268, Start Num: 46

Candidate Starts for Grungle\_232:

(Start: 46 @139838 has 172 MA's), (73, 139928), (91, 139991), (104, 140114), (109, 140138), (130, 140222), (138, 140264), (151, 140306), (178, 140471), (179, 140474), (224, 140729), (235, 140768), (242, 140798), (254, 140861), (258, 140882), (259, 140891), (261, 140894), (269, 140927), (278, 140942), (316, 141077), (333, 141152), (341, 141209), (342, 141212),

Gene: Guppsters\_32 Start: 26753, Stop: 28045, Start Num: 45

Candidate Starts for Guppsters\_32:

(Start: 45 @26753 has 185 MA's), (77, 26873), (92, 26945), (103, 27062), (104, 27065), (115, 27119), (121, 27143), (134, 27224), (198, 27266), (214, 27344), (244, 27470), (245, 27476), (251, 27515), (262, 27575), (267, 27590), (282, 27632), (292, 27671), (297, 27686), (303, 27722), (305, 27731), (335, 27845), (356, 27956),

Gene: Guwapp\_246 Start: 141407, Stop: 142837, Start Num: 46

Candidate Starts for Guwapp\_246:

(Start: 46 @141407 has 172 MA's), (73, 141497), (74, 141500), (91, 141560), (104, 141683), (109, 141707), (130, 141791), (138, 141833), (151, 141875), (178, 142040), (179, 142043), (224, 142298), (235, 142337), (242, 142367), (254, 142430), (258, 142451), (259, 142460), (261, 142463), (269, 142496), (278, 142511), (316, 142646), (333, 142721), (341, 142778), (342, 142781),

Gene: Hades\_31 Start: 26579, Stop: 27853, Start Num: 45

Candidate Starts for Hades\_31:

(5, 26147), (6, 26150), (17, 26303), (Start: 45 @26579 has 185 MA's), (77, 26699), (92, 26771), (103, 26888), (104, 26891), (121, 26969), (134, 27050), (198, 27092), (214, 27170), (244, 27296), (245, 27302), (246, 27305), (267, 27416), (282, 27458), (291, 27494), (297, 27512), (303, 27548), (305, 27557), (335, 27671), (340, 27713), (343, 27722), (354, 27779), (356, 27782),

Gene: Halldule\_242 Start: 141020, Stop: 142450, Start Num: 46

Candidate Starts for Halldule\_242:

(Start: 46 @141020 has 172 MA's), (73, 141110), (91, 141173), (104, 141296), (109, 141320), (130, 141404), (138, 141446), (151, 141488), (178, 141653), (179, 141656), (224, 141911), (235, 141950), (242, 141980), (254, 142043), (258, 142064), (259, 142073), (261, 142076), (269, 142109), (278, 142124), (316, 142259), (333, 142334), (341, 142391), (342, 142394),

Gene: Hally898\_42 Start: 39535, Stop: 41271, Start Num: 38

Candidate Starts for Hally898\_42:

(Start: 38 @39535 has 26 MA's), (58, 39610), (65, 39628), (69, 39649), (74, 39664), (89, 39736), (97, 39829), (104, 39901), (109, 39925), (125, 40012), (127, 40027), (168, 40210), (178, 40291), (187, 40372), (192, 40396), (193, 40399), (202, 40441), (226, 40552), (227, 40561), (231, 40570), (249, 40666), (254, 40705), (272, 40774), (285, 40798), (292, 40825), (299, 40855), (321, 40933), (324, 40957), (328, 40975), (329, 40978), (334, 41002), (339, 41047), (358, 41131),

Gene: Hamulus\_30 Start: 26480, Stop: 27646, Start Num: 45

Candidate Starts for Hamulus\_30:

(8, 26087), (Start: 45 @26480 has 185 MA's), (67, 26564), (95, 26714), (101, 26768), (126, 26909), (215, 26990), (244, 27116), (245, 27122), (246, 27125), (251, 27161), (255, 27191), (267, 27236), (282, 27278), (291, 27314), (292, 27317), (303, 27368), (305, 27377), (335, 27491), (356, 27602),



Gene: Hangman\_43 Start: 40576, Stop: 42312, Start Num: 38

Candidate Starts for Hangman\_43:

(Start: 38 @40576 has 26 MA's), (58, 40651), (65, 40669), (69, 40690), (74, 40705), (89, 40777), (97, 40870), (104, 40942), (109, 40966), (125, 41053), (127, 41068), (169, 41257), (178, 41332), (187, 41413), (192, 41437), (193, 41440), (202, 41482), (226, 41593), (227, 41602), (231, 41611), (249, 41707), (254, 41746), (272, 41815), (285, 41839), (292, 41866), (299, 41896), (321, 41974), (324, 41998), (328, 42016), (329, 42019), (334, 42043), (339, 42088), (358, 42172),

Gene: Harley\_30 Start: 26264, Stop: 27457, Start Num: 45

Candidate Starts for Harley\_30:

(Start: 45 @26264 has 185 MA's), (67, 26348), (95, 26498), (101, 26552), (126, 26693), (215, 26774), (244, 26900), (245, 26906), (251, 26945), (267, 27020), (282, 27062), (291, 27098), (292, 27101), (303, 27152), (305, 27161), (335, 27275), (340, 27317), (343, 27326), (354, 27383), (356, 27386),

Gene: Heath\_42 Start: 40183, Stop: 41907, Start Num: 38

Candidate Starts for Heath\_42:

(Start: 38 @40183 has 26 MA's), (58, 40258), (65, 40276), (69, 40297), (74, 40312), (89, 40384), (97, 40477), (104, 40537), (109, 40561), (125, 40648), (127, 40663), (178, 40927), (187, 41008), (192, 41032), (193, 41035), (202, 41077), (226, 41188), (227, 41197), (231, 41206), (249, 41302), (254, 41341), (272, 41410), (285, 41434), (292, 41461), (299, 41491), (321, 41569), (324, 41593), (328, 41611), (329, 41614), (334, 41638), (339, 41683), (358, 41767),

Gene: Hlubikazi\_30 Start: 26587, Stop: 27753, Start Num: 45

Candidate Starts for Hlubikazi\_30:

(14, 26314), (16, 26317), (Start: 45 @26587 has 185 MA's), (67, 26671), (95, 26821), (101, 26875), (126, 27016), (215, 27097), (244, 27223), (245, 27229), (251, 27268), (267, 27343), (282, 27385), (291, 27421), (297, 27439), (303, 27475), (305, 27484), (335, 27598),

Gene: Huphlepuuff\_56 Start: 30508, Stop: 31887, Start Num: 45

Candidate Starts for Huphlepuuff\_56:

(Start: 45 @30508 has 185 MA's), (58, 30565), (68, 30601), (73, 30625), (77, 30637), (94, 30760), (97, 30802), (104, 30874), (109, 30898), (110, 30904), (131, 30985), (149, 31054), (150, 31057), (158, 31093), (163, 31129), (176, 31201), (178, 31219), (179, 31222), (196, 31339), (200, 31369), (227, 31501), (234, 31522), (242, 31555), (253, 31609), (254, 31615), (287, 31735), (294, 31765), (298, 31786), (305, 31816),

Gene: HyRo\_235 Start: 141924, Stop: 143354, Start Num: 46

Candidate Starts for HyRo\_235:

(Start: 46 @141924 has 172 MA's), (73, 142014), (91, 142077), (104, 142200), (109, 142224), (130, 142308), (138, 142350), (151, 142392), (178, 142557), (179, 142560), (224, 142815), (235, 142854), (242, 142884), (254, 142947), (258, 142968), (259, 142977), (261, 142980), (269, 143013), (278, 143028), (316, 143163), (333, 143238), (342, 143298),

Gene: Hydro\_43 Start: 40593, Stop: 42329, Start Num: 38

Candidate Starts for Hydro\_43:

(Start: 38 @40593 has 26 MA's), (58, 40668), (65, 40686), (69, 40707), (74, 40722), (89, 40794), (97, 40887), (104, 40959), (109, 40983), (125, 41070), (127, 41085), (169, 41274), (178, 41349), (187, 41430), (192, 41454), (193, 41457), (226, 41610), (227, 41619), (231, 41628), (249, 41724), (254, 41763), (272, 41832), (285, 41856), (292, 41883), (299, 41913), (321, 41991), (324, 42015), (328, 42033), (329, 42036), (339, 42105), (358, 42189),

Gene: I3\_260 Start: 143715, Stop: 145145, Start Num: 46

Candidate Starts for I3\_260:

(Start: 46 @143715 has 172 MA's), (73, 143805), (91, 143868), (104, 143991), (109, 144015), (130, 144099), (138, 144141), (151, 144183), (178, 144348), (179, 144351), (224, 144606), (235, 144645), (242, 144675), (254, 144738), (258, 144759), (259, 144768), (261, 144771), (269, 144804), (278, 144819), (316, 144954), (333, 145029), (341, 145086), (342, 145089),

Gene: IPhone7\_35 Start: 29799, Stop: 31166, Start Num: 61

Candidate Starts for IPhone7\_35:

(Start: 61 @29799 has 14 MA's), (76, 29856), (80, 29883), (91, 29922), (104, 30060), (109, 30084), (128, 30162), (130, 30168), (131, 30171), (152, 30246), (177, 30378), (181, 30405), (182, 30414), (190, 30468), (197, 30495), (201, 30525), (212, 30579), (231, 30651), (274, 30837), (311, 30957), (316, 30978), (322, 30996), (324, 31011), (331, 31041), (336, 31071), (342, 31107), (343, 31110), (349, 31146),

Gene: lbOuu\_32 Start: 26343, Stop: 27509, Start Num: 45

Candidate Starts for lbOuu\_32:

(Start: 45 @26343 has 185 MA's), (67, 26427), (95, 26577), (101, 26631), (126, 26772), (215, 26853), (244, 26979), (245, 26985), (251, 27024), (262, 27084), (267, 27099), (282, 27141), (291, 27177), (292, 27180), (297, 27195), (303, 27231), (305, 27240), (335, 27354), (356, 27465),

Gene: lbhubesi\_30 Start: 26271, Stop: 27464, Start Num: 45

Candidate Starts for lbhubesi\_30:

(Start: 45 @26271 has 185 MA's), (67, 26355), (95, 26505), (101, 26559), (126, 26700), (215, 26781), (244, 26907), (245, 26913), (251, 26952), (267, 27027), (282, 27069), (291, 27105), (292, 27108), (303, 27159), (305, 27168), (335, 27282), (340, 27324), (343, 27333), (354, 27390), (356, 27393),

Gene: IkeLoa\_244 Start: 142305, Stop: 143735, Start Num: 46

Candidate Starts for IkeLoa\_244:

(Start: 46 @142305 has 172 MA's), (73, 142395), (74, 142398), (91, 142458), (104, 142581), (109, 142605), (130, 142689), (138, 142731), (151, 142773), (178, 142938), (179, 142941), (224, 143196), (235, 143235), (242, 143265), (254, 143328), (258, 143349), (259, 143358), (261, 143361), (269, 143394), (278, 143409), (316, 143544), (333, 143619), (341, 143676), (342, 143679),

Gene: Indlovu\_45 Start: 39904, Stop: 41499, Start Num: 55

Candidate Starts for Indlovu\_45:

(42, 39856), (Start: 55 @39904 has 1 MA's), (82, 40009), (86, 40021), (99, 40162), (102, 40201), (104, 40213), (118, 40288), (163, 40504), (168, 40522), (178, 40588), (187, 40669), (192, 40693), (226, 40837), (227, 40846), (254, 40987), (272, 41074), (286, 41107), (292, 41134), (310, 41200), (329, 41284),

Gene: InigoMontoya\_254 Start: 142623, Stop: 144053, Start Num: 46

Candidate Starts for InigoMontoya\_254:

(Start: 46 @142623 has 172 MA's), (73, 142713), (91, 142776), (104, 142899), (109, 142923), (130, 143007), (138, 143049), (151, 143091), (178, 143256), (179, 143259), (224, 143514), (235, 143553), (242, 143583), (254, 143646), (258, 143667), (259, 143676), (261, 143679), (269, 143712), (278, 143727), (316, 143862), (333, 143937), (341, 143994), (342, 143997),

Gene: InterFolia\_252 Start: 143369, Stop: 144799, Start Num: 46

Candidate Starts for InterFolia\_252:

(Start: 46 @143369 has 172 MA's), (73, 143459), (74, 143462), (91, 143522), (104, 143645), (109, 143669), (130, 143753), (138, 143795), (151, 143837), (178, 144002), (179, 144005), (224, 144260), (235, 144299), (242, 144329), (254, 144392), (258, 144413), (259, 144422), (261, 144425), (269, 144458), (278, 144473), (316, 144608), (333, 144683), (341, 144740), (342, 144743),

Gene: Iota\_247 Start: 142335, Stop: 143765, Start Num: 46

Candidate Starts for Iota\_247:

(Start: 46 @142335 has 172 MA's), (73, 142425), (91, 142488), (104, 142611), (109, 142635), (130, 142719), (138, 142761), (151, 142803), (178, 142968), (179, 142971), (224, 143226), (235, 143265), (242, 143295), (254, 143358), (258, 143379), (259, 143388), (261, 143391), (269, 143424), (278, 143439), (316, 143574), (333, 143649), (341, 143706), (342, 143709),

Gene: IrishSherpFalk\_32 Start: 27838, Stop: 29112, Start Num: 45

Candidate Starts for IrishSherpFalk\_32:

(Start: 45 @27838 has 185 MA's), (77, 27958), (103, 28147), (104, 28150), (121, 28228), (134, 28309), (198, 28351), (214, 28429), (244, 28555), (245, 28561), (262, 28660), (267, 28675), (282, 28717), (291, 28753), (297, 28771), (303, 28807), (305, 28816), (335, 28930), (340, 28972), (343, 28981), (354, 29038), (356, 29041),

Gene: Issimir\_244 Start: 142710, Stop: 144140, Start Num: 46

Candidate Starts for Issimir\_244:

(Start: 46 @142710 has 172 MA's), (73, 142800), (91, 142863), (104, 142986), (109, 143010), (130, 143094), (138, 143136), (151, 143178), (178, 143343), (179, 143346), (224, 143601), (235, 143640), (242, 143670), (254, 143733), (258, 143754), (259, 143763), (261, 143766), (269, 143799), (278, 143814), (316, 143949), (333, 144024), (342, 144084),

Gene: Izajani\_246 Start: 143155, Stop: 144585, Start Num: 46

Candidate Starts for Izajani\_246:

(Start: 46 @143155 has 172 MA's), (73, 143245), (91, 143308), (104, 143431), (109, 143455), (130, 143539), (138, 143581), (151, 143623), (178, 143788), (179, 143791), (224, 144046), (235, 144085), (242, 144115), (254, 144178), (258, 144199), (259, 144208), (261, 144211), (269, 144244), (278, 144259), (316, 144394), (333, 144469), (341, 144526), (342, 144529),

Gene: Izel\_34 Start: 29798, Stop: 31165, Start Num: 61

Candidate Starts for Izel\_34:

(Start: 61 @29798 has 14 MA's), (76, 29855), (80, 29882), (87, 29897), (90, 29918), (91, 29921), (104, 30059), (109, 30083), (128, 30161), (130, 30167), (131, 30170), (152, 30245), (177, 30377), (181, 30404), (182, 30413), (190, 30467), (197, 30494), (201, 30524), (212, 30578), (231, 30650), (274, 30836), (311, 30956), (316, 30977), (322, 30995), (324, 31010), (331, 31040), (336, 31070), (342, 31106), (343, 31109), (349, 31145),

Gene: JAMaL\_43 Start: 40735, Stop: 42471, Start Num: 38

Candidate Starts for JAMaL\_43:

(Start: 38 @40735 has 26 MA's), (58, 40810), (65, 40828), (69, 40849), (74, 40864), (89, 40936), (97, 41029), (104, 41101), (109, 41125), (127, 41227), (169, 41416), (178, 41491), (187, 41572), (192, 41596), (193, 41599), (202, 41641), (226, 41752), (227, 41761), (231, 41770), (249, 41866), (254, 41905), (272, 41974), (285, 41998), (292, 42025), (299, 42055), (321, 42133), (324, 42157), (328, 42175), (329, 42178), (334, 42202), (339, 42247), (358, 42331),

Gene: JPickles\_248 Start: 141760, Stop: 143190, Start Num: 46

Candidate Starts for JPickles\_248:

(Start: 46 @141760 has 172 MA's), (73, 141850), (91, 141913), (104, 142036), (109, 142060), (130, 142144), (138, 142186), (151, 142228), (178, 142393), (179, 142396), (224, 142651), (235, 142690), (242, 142720), (254, 142783), (258, 142804), (259, 142813), (261, 142816), (269, 142849), (278, 142864), (316, 142999), (333, 143074), (341, 143131), (342, 143134),

Gene: Jabbawokkie\_38 Start: 26902, Stop: 28200, Start Num: 45

Candidate Starts for Jabbawokkie\_38:

(Start: 45 @26902 has 185 MA's), (64, 26974), (77, 27022), (79, 27040), (92, 27094), (103, 27211), (104, 27214), (131, 27316), (142, 27373), (158, 27427), (170, 27490), (179, 27553), (180, 27556), (196, 27670), (199, 27682), (209, 27745), (227, 27841), (254, 27958), (260, 27991), (265, 28003), (296, 28108), (301, 28141), (313, 28180),

Gene: JaguarMi\_43 Start: 40036, Stop: 41772, Start Num: 38

Candidate Starts for JaguarMi\_43:

(Start: 38 @40036 has 26 MA's), (47, 40081), (58, 40111), (65, 40129), (69, 40150), (74, 40165), (89, 40237), (97, 40330), (104, 40402), (109, 40426), (125, 40513), (127, 40528), (157, 40648), (168, 40711), (169, 40717), (178, 40792), (187, 40873), (192, 40897), (193, 40900), (226, 41053), (227, 41062), (231, 41071), (254, 41206), (272, 41275), (284, 41293), (292, 41326), (299, 41356), (321, 41434), (324, 41458), (328, 41476), (334, 41503), (339, 41548), (350, 41602), (358, 41632),

Gene: JalFarm20\_32 Start: 26866, Stop: 28603, Start Num: 45

Candidate Starts for JalFarm20\_32:

(14, 26593), (20, 26614), (Start: 45 @26866 has 185 MA's), (67, 26950), (95, 27100), (101, 27154), (126, 27295), (133, 27328), (141, 27376), (157, 27475), (194, 27868), (225, 28021), (247, 28099), (256, 28162), (266, 28201), (302, 28333), (309, 28354), (318, 28390),

Gene: James\_30 Start: 26476, Stop: 27711, Start Num: 45

Candidate Starts for James\_30:

(Start: 45 @26476 has 185 MA's), (77, 26593), (92, 26665), (103, 26782), (104, 26785), (121, 26863), (134, 26944), (198, 26986), (214, 27064), (244, 27190), (267, 27310), (282, 27352), (291, 27388), (292, 27391), (303, 27442), (305, 27451), (335, 27565),

Gene: Janiyra\_254 Start: 143297, Stop: 144727, Start Num: 46

Candidate Starts for Janiyra\_254:

(Start: 46 @143297 has 172 MA's), (73, 143387), (91, 143450), (104, 143573), (109, 143597), (130, 143681), (138, 143723), (151, 143765), (178, 143930), (179, 143933), (224, 144188), (235, 144227), (242, 144257), (254, 144320), (258, 144341), (259, 144350), (261, 144353), (269, 144386), (278, 144401), (316, 144536), (333, 144611), (341, 144668), (342, 144671),

Gene: JayJay\_250 Start: 142096, Stop: 143526, Start Num: 46

Candidate Starts for JayJay\_250:

(Start: 46 @142096 has 172 MA's), (73, 142186), (91, 142249), (104, 142372), (109, 142396), (130, 142480), (138, 142522), (151, 142564), (178, 142729), (179, 142732), (224, 142987), (235, 143026), (242, 143056), (254, 143119), (258, 143140), (259, 143149), (261, 143152), (269, 143185), (278, 143200), (316, 143335), (333, 143410), (342, 143470),

Gene: Jaygup\_247 Start: 142482, Stop: 143912, Start Num: 46

Candidate Starts for Jaygup\_247:

(Start: 46 @142482 has 172 MA's), (73, 142572), (91, 142635), (104, 142758), (109, 142782), (130, 142866), (138, 142908), (151, 142950), (178, 143115), (179, 143118), (224, 143373), (235, 143412), (242, 143442), (254, 143505), (258, 143526), (259, 143535), (261, 143538), (269, 143571), (278, 143586), (316, 143721), (333, 143796), (341, 143853), (342, 143856),

Gene: Jedediah\_252 Start: 143535, Stop: 144965, Start Num: 46

Candidate Starts for Jedediah\_252:

(Start: 46 @143535 has 172 MA's), (73, 143625), (91, 143688), (104, 143811), (109, 143835), (130, 143919), (138, 143961), (151, 144003), (178, 144168), (179, 144171), (224, 144426), (235, 144465), (242, 144495), (254, 144558), (258, 144579), (259, 144588), (261, 144591), (269, 144624), (278, 144639), (316, 144774), (333, 144849), (341, 144906), (342, 144909),

Gene: Jemmno\_250 Start: 142254, Stop: 143684, Start Num: 46

Candidate Starts for Jemmno\_250:

(Start: 46 @142254 has 172 MA's), (73, 142344), (91, 142407), (104, 142530), (109, 142554), (130, 142638), (138, 142680), (151, 142722), (178, 142887), (179, 142890), (224, 143145), (235, 143184), (242, 143214), (254, 143277), (258, 143298), (259, 143307), (261, 143310), (269, 143343), (278, 143358), (316, 143493), (333, 143568), (341, 143625), (342, 143628),

Gene: Jessibeth14\_250 Start: 143730, Stop: 145160, Start Num: 46

Candidate Starts for Jessibeth14\_250:

(Start: 46 @143730 has 172 MA's), (73, 143820), (91, 143883), (104, 144006), (109, 144030), (130, 144114), (138, 144156), (151, 144198), (178, 144363), (179, 144366), (224, 144621), (235, 144660), (242, 144690), (254, 144753), (258, 144774), (259, 144783), (261, 144786), (269, 144819), (278, 144834), (316, 144969), (333, 145044), (342, 145104),

Gene: Jezreel\_246 Start: 142799, Stop: 144229, Start Num: 46

Candidate Starts for Jezreel\_246:

(Start: 46 @142799 has 172 MA's), (73, 142889), (91, 142952), (104, 143075), (109, 143099), (130, 143183), (138, 143225), (151, 143267), (178, 143432), (179, 143435), (224, 143690), (235, 143729), (242, 143759), (254, 143822), (258, 143843), (259, 143852), (261, 143855), (269, 143888), (278, 143903), (316, 144038), (333, 144113), (341, 144170), (342, 144173),

Gene: JigglyPuff\_256 Start: 144225, Stop: 145655, Start Num: 46

Candidate Starts for JigglyPuff\_256:

(Start: 46 @144225 has 172 MA's), (73, 144315), (91, 144378), (104, 144501), (109, 144525), (130, 144609), (138, 144651), (151, 144693), (178, 144858), (179, 144861), (224, 145116), (235, 145155), (242, 145185), (254, 145248), (258, 145269), (259, 145278), (261, 145281), (269, 145314), (278, 145329), (316, 145464), (333, 145539), (341, 145596), (342, 145599),

Gene: Jinglebell\_29 Start: 26535, Stop: 27728, Start Num: 45

Candidate Starts for Jinglebell\_29:

(Start: 45 @26535 has 185 MA's), (67, 26619), (95, 26769), (101, 26823), (126, 26964), (215, 27045), (244, 27171), (262, 27276), (267, 27291), (282, 27333), (291, 27369), (292, 27372), (303, 27423), (305, 27432), (335, 27546), (340, 27588), (343, 27597), (354, 27654), (356, 27657),

Gene: Job42\_34 Start: 28216, Stop: 29517, Start Num: 45

Candidate Starts for Job42\_34:

(Start: 45 @28216 has 185 MA's), (77, 28336), (92, 28408), (103, 28525), (104, 28528), (121, 28606), (134, 28687), (198, 28738), (232, 28915), (244, 28957), (246, 28966), (272, 29104), (335, 29335), (340, 29377), (343, 29386), (354, 29443), (356, 29446),

Gene: JoeyJr\_30 Start: 26494, Stop: 27687, Start Num: 45

Candidate Starts for JoeyJr\_30:

(Start: 45 @26494 has 185 MA's), (67, 26578), (95, 26728), (101, 26782), (126, 26923), (215, 27004), (244, 27130), (245, 27136), (246, 27139), (267, 27250), (282, 27292), (291, 27328), (303, 27382), (305, 27391), (335, 27505), (340, 27547), (343, 27556), (354, 27613), (356, 27616),

Gene: JoieB\_55 Start: 30941, Stop: 32320, Start Num: 45

Candidate Starts for JoieB\_55:

(Start: 45 @30941 has 185 MA's), (58, 30998), (68, 31034), (73, 31058), (77, 31070), (94, 31193), (97, 31235), (104, 31307), (109, 31331), (110, 31337), (131, 31418), (149, 31487), (150, 31490), (158, 31526), (163, 31562), (176, 31634), (178, 31652), (179, 31655), (196, 31772), (200, 31802), (227, 31934), (234, 31955), (242, 31988), (253, 32042), (254, 32048), (287, 32168), (294, 32198), (298, 32219), (305, 32249),

Gene: JulietS\_242 Start: 139834, Stop: 141264, Start Num: 46

Candidate Starts for JulietS\_242:

(Start: 46 @139834 has 172 MA's), (73, 139924), (91, 139987), (104, 140110), (109, 140134), (130, 140218), (138, 140260), (151, 140302), (178, 140467), (179, 140470), (224, 140725), (235, 140764), (242, 140794), (254, 140857), (258, 140878), (259, 140887), (261, 140890), (269, 140923), (278, 140938), (316, 141073), (333, 141148), (342, 141208),

Gene: Juniper1\_30 Start: 26293, Stop: 27486, Start Num: 45

Candidate Starts for Juniper1\_30:

(Start: 45 @26293 has 185 MA's), (67, 26377), (95, 26527), (101, 26581), (126, 26722), (215, 26803), (244, 26929), (245, 26935), (267, 27049), (282, 27091), (291, 27127), (303, 27181), (305, 27190), (335, 27304), (340, 27346), (343, 27355), (354, 27412), (356, 27415),

Gene: JustASigh\_25 Start: 24704, Stop: 26068, Start Num: 45

Candidate Starts for JustASigh\_25:

(37, 24677), (Start: 45 @24704 has 185 MA's), (Start: 51 @24734 has 4 MA's), (77, 24821), (100, 24995), (104, 25046), (109, 25070), (131, 25148), (142, 25205), (158, 25259), (163, 25295), (179, 25385), (192, 25493), (199, 25514), (209, 25577), (227, 25673), (260, 25823), (268, 25865),

Gene: JustHall\_244 Start: 141784, Stop: 143214, Start Num: 46

Candidate Starts for JustHall\_244:

(Start: 46 @141784 has 172 MA's), (73, 141874), (91, 141937), (104, 142060), (109, 142084), (130, 142168), (138, 142210), (151, 142252), (178, 142417), (179, 142420), (224, 142675), (235, 142714), (242, 142744), (254, 142807), (258, 142828), (259, 142837), (261, 142840), (269, 142873), (278, 142888), (316, 143023), (333, 143098), (341, 143155), (342, 143158),

Gene: Kamryn\_249 Start: 143374, Stop: 144804, Start Num: 46

Candidate Starts for Kamryn\_249:

(Start: 46 @143374 has 172 MA's), (73, 143464), (74, 143467), (91, 143527), (104, 143650), (109, 143674), (130, 143758), (138, 143800), (151, 143842), (178, 144007), (179, 144010), (224, 144265), (235, 144304), (242, 144334), (254, 144397), (258, 144418), (259, 144427), (261, 144430), (269, 144463), (278, 144478), (316, 144613), (333, 144688), (341, 144745), (342, 144748),

Gene: Karhdo\_30 Start: 26458, Stop: 27651, Start Num: 45

Candidate Starts for Karhdo\_30:

(Start: 45 @26458 has 185 MA's), (67, 26542), (95, 26692), (101, 26746), (126, 26887), (215, 26968), (244, 27094), (245, 27100), (251, 27139), (267, 27214), (282, 27256), (291, 27292), (305, 27355), (335, 27469), (340, 27511), (343, 27520), (354, 27577), (356, 27580),

Gene: Kboogie\_254 Start: 142413, Stop: 143843, Start Num: 46

Candidate Starts for Kboogie\_254:

(Start: 46 @142413 has 172 MA's), (73, 142503), (91, 142566), (104, 142689), (109, 142713), (130, 142797), (138, 142839), (151, 142881), (178, 143046), (179, 143049), (224, 143304), (235, 143343), (242, 143373), (254, 143436), (258, 143457), (259, 143466), (261, 143469), (269, 143502), (278, 143517), (316, 143652), (333, 143727), (341, 143784), (342, 143787),

Gene: Kenuha5\_27 Start: 25482, Stop: 26636, Start Num: 45

Candidate Starts for Kenuha5\_27:

(14, 25209), (20, 25230), (Start: 45 @25482 has 185 MA's), (67, 25566), (95, 25716), (101, 25770), (126, 25911), (215, 25992), (244, 26118), (245, 26124), (251, 26163), (262, 26223), (267, 26238), (282, 26280), (291, 26316), (292, 26319), (303, 26370), (305, 26379), (335, 26493), (356, 26604), (360, 26625),

Gene: Kersh\_29 Start: 27534, Stop: 28727, Start Num: 45

Candidate Starts for Kersh\_29:

(Start: 45 @27534 has 185 MA's), (67, 27618), (95, 27768), (101, 27822), (126, 27963), (215, 28044), (244, 28170), (245, 28176), (246, 28179), (262, 28275), (267, 28290), (282, 28332), (291, 28368), (303, 28422), (305, 28431), (335, 28545), (340, 28587), (343, 28596), (354, 28653), (356, 28656),

Gene: Khaleesi\_249 Start: 143197, Stop: 144627, Start Num: 46

Candidate Starts for Khaleesi\_249:

(Start: 46 @143197 has 172 MA's), (73, 143287), (91, 143350), (104, 143473), (109, 143497), (130, 143581), (138, 143623), (151, 143665), (178, 143830), (179, 143833), (224, 144088), (235, 144127), (242, 144157), (254, 144220), (258, 144241), (259, 144250), (261, 144253), (269, 144286), (278, 144301), (316, 144436), (333, 144511), (342, 144571),

Gene: KingMidas\_31 Start: 27622, Stop: 28776, Start Num: 45

Candidate Starts for KingMidas\_31:

(Start: 45 @27622 has 185 MA's), (67, 27706), (95, 27856), (101, 27910), (126, 28051), (215, 28132), (244, 28258), (245, 28264), (251, 28303), (262, 28363), (267, 28378), (282, 28420), (291, 28456), (292, 28459), (303, 28510), (305, 28519), (335, 28633), (356, 28744), (360, 28765),

Gene: Kingsley\_28 Start: 25309, Stop: 26475, Start Num: 45

Candidate Starts for Kingsley\_28:

(14, 25036), (20, 25057), (Start: 45 @25309 has 185 MA's), (67, 25393), (95, 25543), (101, 25597), (119, 25690), (126, 25738), (215, 25819), (244, 25945), (245, 25951), (262, 26050), (267, 26065), (282, 26107), (291, 26143), (292, 26146), (303, 26197), (305, 26206), (335, 26320), (356, 26431),

Gene: KleverKiS\_35 Start: 29779, Stop: 31146, Start Num: 61

Candidate Starts for KleverKiS\_35:

(Start: 61 @29779 has 14 MA's), (76, 29836), (80, 29863), (87, 29878), (90, 29899), (91, 29902), (104, 30040), (109, 30064), (128, 30142), (130, 30148), (131, 30151), (152, 30226), (177, 30358), (181, 30385), (182, 30394), (190, 30448), (197, 30475), (201, 30505), (212, 30559), (231, 30631), (274, 30817), (311, 30937), (316, 30958), (322, 30976), (324, 30991), (331, 31021), (336, 31051), (342, 31087), (343, 31090), (349, 31126),

Gene: Koguma\_249 Start: 141996, Stop: 143426, Start Num: 46

Candidate Starts for Koguma\_249:

(Start: 46 @141996 has 172 MA's), (73, 142086), (91, 142149), (104, 142272), (109, 142296), (130, 142380), (138, 142422), (151, 142464), (178, 142629), (179, 142632), (224, 142887), (235, 142926), (242, 142956), (254, 143019), (258, 143040), (259, 143049), (261, 143052), (269, 143085), (278, 143100), (316, 143235), (333, 143310), (341, 143367), (342, 143370),

Gene: Kumao\_37 Start: 32402, Stop: 33853, Start Num: 44

Candidate Starts for Kumao\_37:

(Start: 44 @32402 has 1 MA's), (71, 32510), (76, 32519), (104, 32714), (159, 32951), (174, 33023), (181, 33071), (185, 33101), (219, 33278), (229, 33314), (253, 33422), (264, 33467), (271, 33500), (288, 33542), (306, 33626), (313, 33656), (316, 33665), (320, 33677), (322, 33683), (329, 33719), (331, 33728), (333, 33737), (338, 33776), (345, 33806), (353, 33848),

Gene: LRRHood\_242 Start: 141406, Stop: 142836, Start Num: 46

Candidate Starts for LRRHood\_242:

(Start: 46 @141406 has 172 MA's), (73, 141496), (91, 141559), (104, 141682), (109, 141706), (130, 141790), (138, 141832), (151, 141874), (178, 142039), (179, 142042), (224, 142297), (235, 142336), (242, 142366), (254, 142429), (258, 142450), (259, 142459), (261, 142462), (269, 142495), (278,

142510), (316, 142645), (333, 142720), (341, 142777), (342, 142780),

Gene: Labelle\_40 Start: 33850, Stop: 35241, Start Num: 56

Candidate Starts for Labelle\_40:

(Start: 56 @33850 has 3 MA's), (66, 33889), (78, 33925), (91, 33985), (93, 34015), (104, 34132), (109, 34156), (138, 34273), (151, 34318), (162, 34393), (165, 34402), (180, 34489), (189, 34561), (204, 34648), (210, 34666), (230, 34738), (233, 34750), (248, 34804), (250, 34816), (253, 34840), (274, 34918), (289, 34951), (293, 34966), (311, 35035), (322, 35074), (329, 35113), (334, 35134), (352, 35233),

Gene: Lambano\_42 Start: 39535, Stop: 41271, Start Num: 38

Candidate Starts for Lambano\_42:

(Start: 38 @39535 has 26 MA's), (58, 39610), (65, 39628), (69, 39649), (74, 39664), (89, 39736), (97, 39829), (104, 39901), (109, 39925), (125, 40012), (127, 40027), (168, 40210), (178, 40291), (187, 40372), (192, 40396), (193, 40399), (202, 40441), (226, 40552), (227, 40561), (231, 40570), (249, 40666), (254, 40705), (272, 40774), (285, 40798), (292, 40825), (299, 40855), (321, 40933), (324, 40957), (328, 40975), (329, 40978), (334, 41002), (339, 41047), (358, 41131),

Gene: Latch\_250 Start: 141959, Stop: 143389, Start Num: 46

Candidate Starts for Latch\_250:

(Start: 46 @141959 has 172 MA's), (73, 142049), (91, 142112), (104, 142235), (109, 142259), (130, 142343), (138, 142385), (151, 142427), (178, 142592), (179, 142595), (224, 142850), (235, 142889), (242, 142919), (254, 142982), (258, 143003), (259, 143012), (261, 143015), (269, 143048), (278, 143063), (316, 143198), (333, 143273), (341, 143330), (342, 143333),

Gene: Latretium\_31 Start: 27137, Stop: 28306, Start Num: 45

Candidate Starts for Latretium\_31:

(Start: 45 @27137 has 185 MA's), (67, 27221), (95, 27371), (101, 27425), (126, 27566), (232, 27743), (244, 27785), (246, 27794), (272, 27932), (335, 28163), (356, 28274), (361, 28295),

Gene: Lee7\_251 Start: 145060, Stop: 146490, Start Num: 46

Candidate Starts for Lee7\_251:

(Start: 46 @145060 has 172 MA's), (73, 145150), (91, 145213), (104, 145336), (109, 145360), (130, 145444), (138, 145486), (151, 145528), (178, 145693), (179, 145696), (224, 145951), (235, 145990), (242, 146020), (254, 146083), (258, 146104), (259, 146113), (261, 146116), (269, 146149), (278, 146164), (316, 146299), (333, 146374), (341, 146431), (342, 146434),

Gene: Leozinho\_31 Start: 26186, Stop: 27340, Start Num: 45

Candidate Starts for Leozinho\_31:

(20, 25934), (Start: 45 @26186 has 185 MA's), (67, 26270), (95, 26420), (101, 26474), (126, 26615), (215, 26696), (244, 26822), (245, 26828), (251, 26867), (262, 26927), (267, 26942), (282, 26984), (291, 27020), (292, 27023), (297, 27038), (303, 27074), (305, 27083), (335, 27197), (356, 27308), (360, 27329),

Gene: Lethe\_251 Start: 143781, Stop: 145211, Start Num: 46

Candidate Starts for Lethe\_251:

(Start: 46 @143781 has 172 MA's), (73, 143871), (74, 143874), (91, 143934), (104, 144057), (109, 144081), (130, 144165), (138, 144207), (151, 144249), (178, 144414), (179, 144417), (224, 144672), (235, 144711), (242, 144741), (254, 144804), (258, 144825), (259, 144834), (261, 144837), (269, 144870), (278, 144885), (316, 145020), (333, 145095), (341, 145152), (342, 145155),

Gene: LifeSavor\_251 Start: 143187, Stop: 144617, Start Num: 46

Candidate Starts for LifeSavor\_251:



(Start: 46 @143187 has 172 MA's), (73, 143277), (91, 143340), (104, 143463), (109, 143487), (130, 143571), (138, 143613), (151, 143655), (178, 143820), (179, 143823), (224, 144078), (235, 144117), (242, 144147), (254, 144210), (258, 144231), (259, 144240), (261, 144243), (269, 144276), (278, 144291), (316, 144426), (333, 144501), (341, 144558), (342, 144561),

Gene: LilSpotty\_31 Start: 23805, Stop: 24962, Start Num: 45

Candidate Starts for LilSpotty\_31:

(Start: 45 @23805 has 185 MA's), (67, 23889), (95, 24039), (101, 24093), (119, 24186), (127, 24237), (215, 24315), (244, 24441), (245, 24447), (248, 24459), (267, 24561), (282, 24603), (305, 24702), (335, 24816),

Gene: Lilbit\_55 Start: 30704, Stop: 32083, Start Num: 45

Candidate Starts for Lilbit\_55:

(Start: 45 @30704 has 185 MA's), (58, 30761), (68, 30797), (73, 30821), (77, 30833), (94, 30956), (97, 30998), (104, 31070), (109, 31094), (110, 31100), (131, 31181), (149, 31250), (150, 31253), (158, 31289), (163, 31325), (176, 31397), (178, 31415), (179, 31418), (196, 31535), (200, 31565), (227, 31697), (234, 31718), (242, 31751), (253, 31805), (254, 31811), (287, 31931), (294, 31961), (298, 31982), (305, 32012),

Gene: LilhomieP\_34 Start: 29799, Stop: 31166, Start Num: 61

Candidate Starts for LilhomieP\_34:

(Start: 61 @29799 has 14 MA's), (76, 29856), (80, 29883), (91, 29922), (104, 30060), (109, 30084), (128, 30162), (130, 30168), (131, 30171), (152, 30246), (177, 30378), (181, 30405), (182, 30414), (190, 30468), (197, 30495), (201, 30525), (212, 30579), (231, 30651), (274, 30837), (311, 30957), (316, 30978), (322, 30996), (324, 31011), (331, 31041), (336, 31071), (342, 31107), (343, 31110), (349, 31146),

Gene: LinStu\_247 Start: 141288, Stop: 142718, Start Num: 46

Candidate Starts for LinStu\_247:

(37, 141246), (Start: 46 @141288 has 172 MA's), (73, 141378), (91, 141441), (104, 141564), (109, 141588), (130, 141672), (138, 141714), (151, 141756), (178, 141921), (179, 141924), (224, 142179), (235, 142218), (242, 142248), (254, 142311), (258, 142332), (259, 142341), (261, 142344), (269, 142377), (278, 142392), (316, 142527), (333, 142602), (342, 142662),

Gene: LittleLaf\_54 Start: 30433, Stop: 31812, Start Num: 45

Candidate Starts for LittleLaf\_54:

(Start: 45 @30433 has 185 MA's), (58, 30490), (68, 30526), (73, 30550), (77, 30562), (94, 30685), (97, 30727), (104, 30799), (109, 30823), (110, 30829), (131, 30910), (149, 30979), (150, 30982), (158, 31018), (163, 31054), (176, 31126), (178, 31144), (179, 31147), (196, 31264), (200, 31294), (227, 31426), (234, 31447), (242, 31480), (253, 31534), (254, 31540), (287, 31660), (294, 31690), (298, 31711), (305, 31741),

Gene: LittleShirley\_33 Start: 27885, Stop: 29159, Start Num: 45

Candidate Starts for LittleShirley\_33:

(Start: 45 @27885 has 185 MA's), (77, 28005), (92, 28077), (103, 28194), (104, 28197), (121, 28275), (134, 28356), (198, 28398), (214, 28476), (244, 28602), (245, 28608), (246, 28611), (251, 28647), (267, 28722), (282, 28764), (291, 28800), (292, 28803), (303, 28854), (305, 28863), (335, 28977), (340, 29019), (343, 29028), (354, 29085), (356, 29088),

Gene: Littleton\_254 Start: 143196, Stop: 144626, Start Num: 46

Candidate Starts for Littleton\_254:

(Start: 46 @143196 has 172 MA's), (73, 143286), (91, 143349), (104, 143472), (109, 143496), (130, 143580), (138, 143622), (151, 143664), (178, 143829), (179, 143832), (224, 144087), (235, 144126),

(242, 144156), (254, 144219), (258, 144240), (259, 144249), (261, 144252), (269, 144285), (278, 144300), (316, 144435), (333, 144510), (341, 144567), (342, 144570),

Gene: Llama\_30 Start: 26534, Stop: 27727, Start Num: 45

Candidate Starts for Llama\_30:

(Start: 45 @26534 has 185 MA's), (67, 26618), (95, 26768), (101, 26822), (126, 26963), (215, 27044), (244, 27170), (262, 27275), (267, 27290), (282, 27332), (291, 27368), (292, 27371), (303, 27422), (305, 27431), (335, 27545), (340, 27587), (343, 27596), (354, 27653), (356, 27656),

Gene: Llij\_30 Start: 26306, Stop: 27499, Start Num: 45

Candidate Starts for Llij\_30:

(Start: 45 @26306 has 185 MA's), (67, 26390), (95, 26540), (101, 26594), (126, 26735), (215, 26816), (244, 26942), (245, 26948), (267, 27062), (282, 27104), (291, 27140), (297, 27158), (303, 27194), (305, 27203), (335, 27317), (340, 27359), (343, 27368), (354, 27425), (356, 27428),

Gene: Loanshark\_247 Start: 142546, Stop: 143976, Start Num: 46

Candidate Starts for Loanshark\_247:

(Start: 46 @142546 has 172 MA's), (73, 142636), (91, 142699), (104, 142822), (109, 142846), (130, 142930), (138, 142972), (151, 143014), (178, 143179), (179, 143182), (224, 143437), (235, 143476), (242, 143506), (254, 143569), (258, 143590), (259, 143599), (261, 143602), (269, 143635), (278, 143650), (316, 143785), (333, 143860), (341, 143917), (342, 143920),

Gene: LolaVinca\_246 Start: 142799, Stop: 144229, Start Num: 46

Candidate Starts for LolaVinca\_246:

(Start: 46 @142799 has 172 MA's), (73, 142889), (91, 142952), (104, 143075), (109, 143099), (130, 143183), (138, 143225), (151, 143267), (178, 143432), (179, 143435), (224, 143690), (235, 143729), (242, 143759), (254, 143822), (258, 143843), (259, 143852), (261, 143855), (269, 143888), (278, 143903), (316, 144038), (333, 144113), (341, 144170), (342, 144173),

Gene: Lolalove\_44 Start: 40560, Stop: 42296, Start Num: 38

Candidate Starts for Lolalove\_44:

(Start: 38 @40560 has 26 MA's), (58, 40635), (65, 40653), (69, 40674), (74, 40689), (89, 40761), (97, 40854), (104, 40926), (109, 40950), (125, 41037), (127, 41052), (168, 41235), (178, 41316), (187, 41397), (192, 41421), (193, 41424), (202, 41466), (226, 41577), (227, 41586), (231, 41595), (249, 41691), (254, 41730), (272, 41799), (285, 41823), (292, 41850), (299, 41880), (321, 41958), (324, 41982), (328, 42000), (329, 42003), (334, 42027), (339, 42072), (358, 42156),

Gene: LordLeafolot\_252 Start: 142412, Stop: 143842, Start Num: 46

Candidate Starts for LordLeafolot\_252:

(Start: 46 @142412 has 172 MA's), (73, 142502), (74, 142505), (91, 142565), (104, 142688), (109, 142712), (130, 142796), (138, 142838), (151, 142880), (178, 143045), (179, 143048), (224, 143303), (235, 143342), (242, 143372), (254, 143435), (258, 143456), (259, 143465), (261, 143468), (269, 143501), (278, 143516), (316, 143651), (333, 143726), (341, 143783), (342, 143786),

Gene: Lorde\_31 Start: 26141, Stop: 27412, Start Num: 45

Candidate Starts for Lorde\_31:

(Start: 45 @26141 has 185 MA's), (77, 26258), (103, 26447), (104, 26450), (124, 26528), (142, 26609), (158, 26660), (164, 26699), (170, 26723), (179, 26786), (180, 26789), (192, 26894), (199, 26915), (209, 26978), (217, 27008), (227, 27065), (254, 27182), (260, 27215),

Gene: Lukilu\_239 Start: 143415, Stop: 144845, Start Num: 46

Candidate Starts for Lukilu\_239:

(Start: 46 @143415 has 172 MA's), (73, 143505), (74, 143508), (91, 143568), (104, 143691), (109, 143715), (130, 143799), (138, 143841), (151, 143883), (178, 144048), (179, 144051), (224, 144306), (235, 144345), (242, 144375), (254, 144438), (258, 144459), (259, 144468), (261, 144471), (269, 144504), (278, 144519), (316, 144654), (333, 144729), (341, 144786), (342, 144789),

Gene: LunaBlu\_32 Start: 26697, Stop: 27944, Start Num: 45

Candidate Starts for LunaBlu\_32:

(Start: 45 @26697 has 185 MA's), (77, 26817), (92, 26889), (103, 27006), (104, 27009), (121, 27087), (134, 27168), (198, 27210), (214, 27288), (244, 27414), (245, 27420), (251, 27459), (262, 27519), (267, 27534), (282, 27576), (291, 27612), (292, 27615), (303, 27666), (305, 27675), (335, 27789), (340, 27831), (343, 27840), (356, 27900),

Gene: LunaStella\_32 Start: 26826, Stop: 28124, Start Num: 45

Candidate Starts for LunaStella\_32:

(Start: 45 @26826 has 185 MA's), (64, 26898), (77, 26946), (79, 26964), (92, 27018), (103, 27135), (104, 27138), (131, 27240), (142, 27297), (158, 27351), (179, 27477), (180, 27480), (196, 27594), (199, 27606), (209, 27669), (227, 27765), (254, 27882), (260, 27915), (265, 27927), (277, 27972), (290, 28011), (296, 28032), (301, 28065), (313, 28104),

Gene: Maby2021\_251 Start: 144099, Stop: 145529, Start Num: 46

Candidate Starts for Maby2021\_251:

(Start: 46 @144099 has 172 MA's), (73, 144189), (91, 144252), (104, 144375), (109, 144399), (130, 144483), (138, 144525), (151, 144567), (178, 144732), (179, 144735), (224, 144990), (235, 145029), (242, 145059), (254, 145122), (258, 145143), (259, 145152), (261, 145155), (269, 145188), (278, 145203), (316, 145338), (333, 145413), (341, 145470), (342, 145473),

Gene: MadMen\_27 Start: 25582, Stop: 26772, Start Num: 45

Candidate Starts for MadMen\_27:

(Start: 45 @25582 has 185 MA's), (67, 25666), (95, 25816), (101, 25870), (126, 26011), (215, 26092), (244, 26218), (245, 26224), (246, 26227), (267, 26338), (282, 26380), (292, 26419), (297, 26434), (303, 26470), (305, 26479), (335, 26593),

Gene: Madiba\_28 Start: 25236, Stop: 26429, Start Num: 45

Candidate Starts for Madiba\_28:

(Start: 45 @25236 has 185 MA's), (67, 25320), (95, 25470), (101, 25524), (126, 25665), (215, 25746), (244, 25872), (245, 25878), (246, 25881), (251, 25917), (267, 25992), (282, 26034), (291, 26070), (292, 26073), (303, 26124), (305, 26133), (335, 26247), (340, 26289), (343, 26298), (354, 26355), (356, 26358),

Gene: Madruga\_39 Start: 33518, Stop: 34909, Start Num: 56

Candidate Starts for Madruga\_39:

(Start: 56 @33518 has 3 MA's), (66, 33557), (78, 33593), (91, 33653), (93, 33683), (104, 33800), (109, 33824), (138, 33941), (151, 33986), (162, 34061), (165, 34070), (180, 34157), (189, 34229), (204, 34316), (210, 34334), (230, 34406), (233, 34418), (248, 34472), (250, 34484), (253, 34508), (274, 34586), (289, 34619), (293, 34634), (311, 34703), (322, 34742), (329, 34781), (334, 34802), (352, 34901),

Gene: Magpie\_42 Start: 40402, Stop: 42138, Start Num: 38

Candidate Starts for Magpie\_42:

(Start: 38 @40402 has 26 MA's), (58, 40477), (65, 40495), (69, 40516), (74, 40531), (89, 40603), (97, 40696), (104, 40768), (109, 40792), (125, 40879), (127, 40894), (168, 41077), (178, 41158), (187, 41239), (192, 41263), (193, 41266), (202, 41308), (226, 41419), (227, 41428), (231, 41437), (249, 41533), (254, 41572), (272, 41641), (285, 41665), (292, 41692), (299, 41722), (321, 41800), (324,

41824), (328, 41842), (329, 41845), (334, 41869), (339, 41914), (358, 41998),

Gene: Mahavrat\_30 Start: 26287, Stop: 27558, Start Num: 45

Candidate Starts for Mahavrat\_30:

(Start: 45 @26287 has 185 MA's), (77, 26404), (92, 26476), (103, 26593), (104, 26596), (121, 26674), (134, 26755), (198, 26797), (214, 26875), (244, 27001), (245, 27007), (255, 27076), (267, 27121), (282, 27163), (291, 27199), (303, 27253), (305, 27262), (335, 27376), (340, 27418), (343, 27427), (354, 27484), (356, 27487),

Gene: Mandlovu\_30 Start: 26529, Stop: 27695, Start Num: 45

Candidate Starts for Mandlovu\_30:

(14, 26256), (16, 26259), (Start: 45 @26529 has 185 MA's), (67, 26613), (95, 26763), (101, 26817), (126, 26958), (215, 27039), (244, 27165), (245, 27171), (251, 27210), (267, 27285), (282, 27327), (291, 27363), (297, 27381), (303, 27417), (305, 27426), (335, 27540),

Gene: Mangeria\_250 Start: 143310, Stop: 144740, Start Num: 46

Candidate Starts for Mangeria\_250:

(Start: 46 @143310 has 172 MA's), (73, 143400), (91, 143463), (104, 143586), (109, 143610), (130, 143694), (138, 143736), (151, 143778), (178, 143943), (179, 143946), (224, 144201), (235, 144240), (242, 144270), (254, 144333), (258, 144354), (259, 144363), (261, 144366), (269, 144399), (278, 144414), (316, 144549), (333, 144624), (341, 144681), (342, 144684),

Gene: Mantra\_30 Start: 26425, Stop: 27618, Start Num: 45

Candidate Starts for Mantra\_30:

(Start: 45 @26425 has 185 MA's), (67, 26509), (95, 26659), (101, 26713), (126, 26854), (215, 26935), (244, 27061), (245, 27067), (246, 27070), (251, 27106), (267, 27181), (282, 27223), (291, 27259), (305, 27322), (335, 27436), (340, 27478), (343, 27487), (354, 27544), (356, 27547),

Gene: Marvin\_51 Start: 30191, Stop: 31570, Start Num: 45

Candidate Starts for Marvin\_51:

(Start: 45 @30191 has 185 MA's), (58, 30248), (68, 30284), (73, 30308), (77, 30320), (94, 30443), (97, 30485), (104, 30557), (109, 30581), (110, 30587), (131, 30668), (149, 30737), (150, 30740), (158, 30776), (163, 30812), (176, 30884), (178, 30902), (179, 30905), (196, 31022), (200, 31052), (227, 31184), (234, 31205), (242, 31238), (253, 31292), (254, 31298), (287, 31418), (294, 31448), (298, 31469), (305, 31499),

Gene: Matsumoto\_248 Start: 142401, Stop: 143831, Start Num: 46

Candidate Starts for Matsumoto\_248:

(Start: 46 @142401 has 172 MA's), (73, 142491), (91, 142554), (104, 142677), (109, 142701), (130, 142785), (138, 142827), (151, 142869), (178, 143034), (179, 143037), (224, 143292), (235, 143331), (242, 143361), (254, 143424), (258, 143445), (259, 143454), (261, 143457), (269, 143490), (278, 143505), (316, 143640), (333, 143715), (341, 143772), (342, 143775),

Gene: Mattes\_30 Start: 26476, Stop: 27711, Start Num: 45

Candidate Starts for Mattes\_30:

(Start: 45 @26476 has 185 MA's), (77, 26593), (92, 26665), (103, 26782), (104, 26785), (121, 26863), (134, 26944), (198, 26986), (214, 27064), (244, 27190), (267, 27310), (282, 27352), (291, 27388), (292, 27391), (303, 27442), (305, 27451), (335, 27565),

Gene: McGee\_252 Start: 142747, Stop: 144177, Start Num: 46

Candidate Starts for McGee\_252:

(Start: 46 @142747 has 172 MA's), (73, 142837), (91, 142900), (104, 143023), (109, 143047), (130, 143131), (138, 143173), (151, 143215), (178, 143380), (179, 143383), (224, 143638), (235, 143677),

(242, 143707), (254, 143770), (258, 143791), (259, 143800), (261, 143803), (269, 143836), (278, 143851), (316, 143986), (333, 144061), (341, 144118), (342, 144121),

Gene: McWolfish\_247 Start: 142408, Stop: 143838, Start Num: 46

Candidate Starts for McWolfish\_247:

(Start: 46 @142408 has 172 MA's), (73, 142498), (91, 142561), (104, 142684), (109, 142708), (130, 142792), (138, 142834), (151, 142876), (178, 143041), (179, 143044), (224, 143299), (235, 143338), (242, 143368), (254, 143431), (258, 143452), (259, 143461), (261, 143464), (269, 143497), (278, 143512), (316, 143647), (333, 143722), (342, 143782),

Gene: Megamind\_247 Start: 142733, Stop: 144163, Start Num: 46

Candidate Starts for Megamind\_247:

(Start: 46 @142733 has 172 MA's), (73, 142823), (91, 142886), (104, 143009), (109, 143033), (130, 143117), (138, 143159), (151, 143201), (178, 143366), (179, 143369), (224, 143624), (235, 143663), (242, 143693), (254, 143756), (258, 143777), (259, 143786), (261, 143789), (269, 143822), (278, 143837), (316, 143972), (333, 144047), (341, 144104), (342, 144107),

Gene: Melissauren88\_30 Start: 26514, Stop: 27668, Start Num: 45

Candidate Starts for Melissauren88\_30:

(14, 26241), (16, 26244), (Start: 45 @26514 has 185 MA's), (67, 26598), (95, 26748), (101, 26802), (126, 26943), (215, 27024), (244, 27150), (245, 27156), (251, 27195), (262, 27255), (267, 27270), (282, 27312), (291, 27348), (292, 27351), (303, 27402), (305, 27411), (335, 27525), (356, 27636), (360, 27657),

Gene: Melpomini\_245 Start: 141493, Stop: 142923, Start Num: 46

Candidate Starts for Melpomini\_245:

(Start: 46 @141493 has 172 MA's), (73, 141583), (91, 141646), (104, 141769), (109, 141793), (130, 141877), (138, 141919), (151, 141961), (178, 142126), (179, 142129), (224, 142384), (235, 142423), (242, 142453), (254, 142516), (258, 142537), (259, 142546), (261, 142549), (269, 142582), (278, 142597), (316, 142732), (333, 142807), (341, 142864), (342, 142867),

Gene: MikeLiesIn\_251 Start: 143869, Stop: 145299, Start Num: 46

Candidate Starts for MikeLiesIn\_251:

(Start: 46 @143869 has 172 MA's), (73, 143959), (91, 144022), (104, 144145), (109, 144169), (130, 144253), (138, 144295), (151, 144337), (178, 144502), (179, 144505), (224, 144760), (235, 144799), (242, 144829), (254, 144892), (258, 144913), (259, 144922), (261, 144925), (269, 144958), (278, 144973), (316, 145108), (333, 145183), (341, 145240), (342, 145243),

Gene: Mikro\_244 Start: 144312, Stop: 145742, Start Num: 46

Candidate Starts for Mikro\_244:

(Start: 46 @144312 has 172 MA's), (73, 144402), (74, 144405), (91, 144465), (104, 144588), (109, 144612), (130, 144696), (138, 144738), (151, 144780), (178, 144945), (179, 144948), (224, 145203), (235, 145242), (242, 145272), (254, 145335), (258, 145356), (259, 145365), (261, 145368), (269, 145401), (278, 145416), (316, 145551), (333, 145626), (341, 145683), (342, 145686),

Gene: MilanaBonita\_24 Start: 22445, Stop: 23599, Start Num: 45

Candidate Starts for MilanaBonita\_24:

(Start: 45 @22445 has 185 MA's), (67, 22529), (95, 22679), (101, 22733), (126, 22874), (215, 22955), (244, 23081), (245, 23087), (251, 23126), (262, 23186), (267, 23201), (282, 23243), (291, 23279), (292, 23282), (303, 23333), (305, 23342), (335, 23456), (356, 23567), (360, 23588),

Gene: MilleniumForce\_31 Start: 27306, Stop: 28460, Start Num: 45

Candidate Starts for MilleniumForce\_31:

(14, 27033), (20, 27054), (Start: 45 @27306 has 185 MA's), (67, 27390), (95, 27540), (101, 27594), (126, 27735), (215, 27816), (244, 27942), (245, 27948), (251, 27987), (262, 28047), (267, 28062), (282, 28104), (291, 28140), (292, 28143), (303, 28194), (305, 28203), (335, 28317), (356, 28428), (360, 28449),

Gene: MinionDave\_32 Start: 26855, Stop: 28102, Start Num: 45

Candidate Starts for MinionDave\_32:

(Start: 45 @26855 has 185 MA's), (77, 26975), (92, 27047), (103, 27164), (104, 27167), (121, 27245), (134, 27326), (198, 27368), (214, 27446), (244, 27572), (245, 27578), (251, 27617), (262, 27677), (267, 27692), (282, 27734), (291, 27770), (292, 27773), (303, 27824), (305, 27833), (335, 27947), (340, 27989), (343, 27998), (356, 28058),

Gene: Minnie\_32 Start: 27202, Stop: 28503, Start Num: 45

Candidate Starts for Minnie\_32:

(Start: 45 @27202 has 185 MA's), (77, 27322), (92, 27394), (103, 27511), (104, 27514), (121, 27592), (134, 27673), (198, 27724), (232, 27901), (244, 27943), (246, 27952), (272, 28090), (335, 28321), (340, 28363), (343, 28372), (354, 28429), (356, 28432),

Gene: MisterCuddles\_31 Start: 26444, Stop: 27691, Start Num: 45

Candidate Starts for MisterCuddles\_31:

(Start: 45 @26444 has 185 MA's), (77, 26564), (92, 26636), (103, 26753), (104, 26756), (121, 26834), (134, 26915), (198, 26957), (214, 27035), (244, 27161), (251, 27206), (262, 27266), (267, 27281), (282, 27323), (291, 27359), (303, 27413), (305, 27422), (335, 27536), (356, 27647),

Gene: Mithril\_43 Start: 40570, Stop: 42306, Start Num: 38

Candidate Starts for Mithril\_43:

(Start: 38 @40570 has 26 MA's), (58, 40645), (65, 40663), (69, 40684), (74, 40699), (89, 40771), (97, 40864), (104, 40936), (109, 40960), (125, 41047), (127, 41062), (169, 41251), (178, 41326), (187, 41407), (192, 41431), (193, 41434), (202, 41476), (226, 41587), (227, 41596), (231, 41605), (249, 41701), (254, 41740), (272, 41809), (285, 41833), (292, 41860), (299, 41890), (321, 41968), (324, 41992), (328, 42010), (329, 42013), (334, 42037), (339, 42082), (358, 42166),

Gene: MoMoMixon\_246 Start: 142828, Stop: 144258, Start Num: 46

Candidate Starts for MoMoMixon\_246:

(Start: 46 @142828 has 172 MA's), (73, 142918), (74, 142921), (91, 142981), (104, 143104), (109, 143128), (130, 143212), (138, 143254), (151, 143296), (178, 143461), (179, 143464), (224, 143719), (235, 143758), (242, 143788), (254, 143851), (258, 143872), (259, 143881), (261, 143884), (269, 143917), (278, 143932), (316, 144067), (333, 144142), (341, 144199), (342, 144202),

Gene: Modragons\_30 Start: 26379, Stop: 27572, Start Num: 45

Candidate Starts for Modragons\_30:

(Start: 45 @26379 has 185 MA's), (67, 26463), (95, 26613), (101, 26667), (126, 26808), (215, 26889), (244, 27015), (262, 27120), (267, 27135), (282, 27177), (291, 27213), (292, 27216), (303, 27267), (305, 27276), (335, 27390), (340, 27432), (343, 27441), (354, 27498), (356, 27501),

Gene: Momo\_252 Start: 141959, Stop: 143389, Start Num: 46

Candidate Starts for Momo\_252:

(Start: 46 @141959 has 172 MA's), (73, 142049), (91, 142112), (104, 142235), (109, 142259), (130, 142343), (138, 142385), (151, 142427), (178, 142592), (179, 142595), (224, 142850), (235, 142889), (242, 142919), (254, 142982), (258, 143003), (259, 143012), (261, 143015), (269, 143048), (278, 143063), (316, 143198), (333, 143273), (341, 143330), (342, 143333),

Gene: MooMoo\_28 Start: 25459, Stop: 26733, Start Num: 45

Candidate Starts for MooMoo\_28:

(4, 25009), (10, 25114), (Start: 45 @25459 has 185 MA's), (62, 25522), (77, 25579), (103, 25768), (104, 25771), (124, 25849), (142, 25930), (158, 25981), (164, 26020), (167, 26029), (179, 26107), (180, 26110), (192, 26215), (209, 26299), (227, 26386), (254, 26503), (258, 26524), (260, 26536), (277, 26581), (298, 26659), (300, 26668),

Gene: Morizzled23\_248 Start: 141775, Stop: 143205, Start Num: 46

Candidate Starts for Morizzled23\_248:

(Start: 46 @141775 has 172 MA's), (73, 141865), (91, 141928), (104, 142051), (109, 142075), (130, 142159), (138, 142201), (151, 142243), (178, 142408), (179, 142411), (224, 142666), (235, 142705), (242, 142735), (254, 142798), (258, 142819), (259, 142828), (261, 142831), (269, 142864), (278, 142879), (316, 143014), (333, 143089), (341, 143146), (342, 143149),

Gene: MosMoris\_52 Start: 30124, Stop: 31503, Start Num: 45

Candidate Starts for MosMoris\_52:

(Start: 45 @30124 has 185 MA's), (58, 30181), (68, 30217), (73, 30241), (77, 30253), (94, 30376), (97, 30418), (104, 30490), (109, 30514), (110, 30520), (131, 30601), (149, 30670), (150, 30673), (158, 30709), (163, 30745), (176, 30817), (178, 30835), (179, 30838), (196, 30955), (200, 30985), (227, 31117), (234, 31138), (242, 31171), (253, 31225), (254, 31231), (287, 31351), (294, 31381), (298, 31402), (305, 31432),

Gene: Mova\_31 Start: 26196, Stop: 27350, Start Num: 45

Candidate Starts for Mova\_31:

(Start: 45 @26196 has 185 MA's), (67, 26280), (95, 26430), (101, 26484), (126, 26625), (215, 26706), (244, 26832), (245, 26838), (251, 26877), (262, 26937), (267, 26952), (282, 26994), (291, 27030), (292, 27033), (303, 27084), (305, 27093), (335, 27207), (356, 27318), (360, 27339),

Gene: MrMagoo\_40 Start: 30898, Stop: 32313, Start Num: 41

Candidate Starts for MrMagoo\_40:

(Start: 41 @30898 has 6 MA's), (53, 30952), (Start: 55 @30958 has 1 MA's), (64, 30988), (76, 31024), (104, 31225), (114, 31255), (117, 31273), (132, 31324), (137, 31339), (155, 31411), (156, 31417), (177, 31528), (181, 31555), (184, 31570), (197, 31645), (202, 31678), (212, 31729), (232, 31807), (274, 31984), (285, 32008), (286, 32011), (311, 32104), (316, 32125), (324, 32158), (336, 32218), (347, 32281),

Gene: Ms6\_24 Start: 21977, Stop: 23131, Start Num: 45

Candidate Starts for Ms6\_24:

(17, 21710), (Start: 45 @21977 has 185 MA's), (67, 22061), (95, 22211), (101, 22265), (126, 22406), (215, 22487), (244, 22613), (245, 22619), (251, 22658), (262, 22718), (267, 22733), (282, 22775), (291, 22811), (292, 22814), (303, 22865), (305, 22874), (335, 22988), (356, 23099), (360, 23120),

Gene: Mudslide\_43 Start: 40826, Stop: 42562, Start Num: 38

Candidate Starts for Mudslide\_43:

(Start: 38 @40826 has 26 MA's), (58, 40901), (65, 40919), (69, 40940), (74, 40955), (89, 41027), (97, 41120), (104, 41192), (109, 41216), (125, 41303), (127, 41318), (169, 41507), (178, 41582), (187, 41663), (192, 41687), (193, 41690), (200, 41726), (202, 41732), (226, 41843), (227, 41852), (231, 41861), (249, 41957), (254, 41996), (272, 42065), (285, 42089), (292, 42116), (299, 42146), (319, 42221), (321, 42224), (324, 42248), (328, 42266), (329, 42269), (334, 42293), (339, 42338), (358, 42422),

Gene: Mufasa\_29 Start: 23220, Stop: 24878, Start Num: 39

Candidate Starts for Mufasa\_29:

(Start: 39 @23220 has 3 MA's), (49, 23271), (52, 23274), (64, 23310), (73, 23346), (107, 23547), (112, 23577), (145, 23715), (160, 23787), (163, 23802), (175, 23868), (179, 23889), (192, 23991), (228, 24162), (238, 24198), (242, 24213), (254, 24276), (270, 24345), (285, 24378), (345, 24633), (367, 24783), (369, 24846),

Gene: MulchSalad\_27 Start: 22629, Stop: 23891, Start Num: 45

Candidate Starts for MulchSalad\_27:

(Start: 45 @22629 has 185 MA's), (64, 22701), (77, 22749), (79, 22767), (103, 22938), (104, 22941), (142, 23100), (158, 23154), (179, 23280), (180, 23283), (192, 23388), (199, 23409), (209, 23472), (222, 23508), (227, 23535), (260, 23685), (265, 23697), (268, 23721), (279, 23745),

Gene: Mutaforma13\_30 Start: 26510, Stop: 27781, Start Num: 45

Candidate Starts for Mutaforma13\_30:

(Start: 45 @26510 has 185 MA's), (77, 26627), (92, 26699), (103, 26816), (104, 26819), (134, 26978), (198, 27020), (214, 27098), (244, 27224), (245, 27230), (246, 27233), (251, 27269), (255, 27299), (267, 27344), (282, 27386), (291, 27422), (303, 27476), (305, 27485), (335, 27599), (340, 27641), (343, 27650), (354, 27707), (356, 27710),

Gene: Naija\_251 Start: 142662, Stop: 144092, Start Num: 46

Candidate Starts for Naija\_251:

(Start: 46 @142662 has 172 MA's), (73, 142752), (91, 142815), (104, 142938), (109, 142962), (130, 143046), (138, 143088), (151, 143130), (178, 143295), (179, 143298), (224, 143553), (235, 143592), (242, 143622), (254, 143685), (258, 143706), (259, 143715), (261, 143718), (269, 143751), (278, 143766), (316, 143901), (333, 143976), (341, 144033), (342, 144036),

Gene: Nanao\_42 Start: 39522, Stop: 41258, Start Num: 38

Candidate Starts for Nanao\_42:

(Start: 38 @39522 has 26 MA's), (58, 39597), (65, 39615), (69, 39636), (74, 39651), (89, 39723), (97, 39816), (104, 39888), (109, 39912), (125, 39999), (127, 40014), (168, 40197), (178, 40278), (187, 40359), (192, 40383), (193, 40386), (202, 40428), (226, 40539), (227, 40548), (231, 40557), (249, 40653), (254, 40692), (272, 40761), (285, 40785), (292, 40812), (299, 40842), (321, 40920), (324, 40944), (328, 40962), (329, 40965), (334, 40989), (339, 41034), (358, 41118),

Gene: Nanosmite\_40 Start: 30775, Stop: 32142, Start Num: 61

Candidate Starts for Nanosmite\_40:

(34, 30640), (Start: 61 @30775 has 14 MA's), (76, 30832), (80, 30859), (91, 30898), (104, 31036), (106, 31045), (109, 31060), (130, 31144), (152, 31222), (155, 31240), (177, 31354), (181, 31381), (184, 31396), (197, 31471), (202, 31504), (216, 31573), (218, 31585), (231, 31627), (253, 31735), (274, 31813), (316, 31954), (322, 31972), (324, 31987), (331, 32017), (336, 32047), (343, 32086), (349, 32122),

Gene: Napoleon13\_247 Start: 141691, Stop: 143121, Start Num: 46

Candidate Starts for Napoleon13\_247:

(Start: 46 @141691 has 172 MA's), (73, 141781), (91, 141844), (104, 141967), (109, 141991), (130, 142075), (138, 142117), (151, 142159), (178, 142324), (179, 142327), (224, 142582), (235, 142621), (242, 142651), (254, 142714), (258, 142735), (259, 142744), (261, 142747), (269, 142780), (278, 142795), (316, 142930), (333, 143005), (341, 143062), (342, 143065),

Gene: Nappy\_249 Start: 143768, Stop: 145198, Start Num: 46

Candidate Starts for Nappy\_249:

(Start: 46 @143768 has 172 MA's), (73, 143858), (74, 143861), (91, 143921), (104, 144044), (109, 144068), (130, 144152), (138, 144194), (151, 144236), (178, 144401), (179, 144404), (224, 144659), (235, 144698), (242, 144728), (254, 144791), (258, 144812), (259, 144821), (261, 144824), (269,



144857), (278, 144872), (316, 145007), (333, 145082), (341, 145139), (342, 145142),

Gene: Naval22\_255 Start: 144442, Stop: 145872, Start Num: 46

Candidate Starts for Naval22\_255:

(Start: 46 @144442 has 172 MA's), (73, 144532), (74, 144535), (91, 144595), (104, 144718), (109, 144742), (130, 144826), (138, 144868), (151, 144910), (178, 145075), (179, 145078), (224, 145333), (235, 145372), (242, 145402), (254, 145465), (258, 145486), (259, 145495), (261, 145498), (269, 145531), (278, 145546), (316, 145681), (333, 145756), (341, 145813), (342, 145816),

Gene: Nebkiss\_34 Start: 28982, Stop: 30292, Start Num: 60

Candidate Starts for Nebkiss\_34:

(Start: 60 @28982 has 1 MA's), (82, 29072), (88, 29078), (94, 29147), (108, 29234), (116, 29273), (138, 29369), (145, 29399), (161, 29459), (163, 29468), (164, 29471), (178, 29552), (192, 29657), (195, 29663), (211, 29750), (213, 29756), (224, 29807), (228, 29825), (231, 29831), (234, 29843), (235, 29846), (237, 29855), (238, 29861), (254, 29954), (258, 29975), (275, 30014), (284, 30032), (300, 30101), (316, 30155), (320, 30167), (322, 30173), (323, 30188), (324, 30191), (337, 30257), (338, 30260),

Gene: NedWong\_249 Start: 143120, Stop: 144550, Start Num: 46

Candidate Starts for NedWong\_249:

(Start: 46 @143120 has 172 MA's), (73, 143210), (91, 143273), (104, 143396), (109, 143420), (130, 143504), (138, 143546), (151, 143588), (178, 143753), (179, 143756), (224, 144011), (235, 144050), (242, 144080), (254, 144143), (258, 144164), (259, 144173), (261, 144176), (269, 144209), (278, 144224), (316, 144359), (333, 144434), (341, 144491), (342, 144494),

Gene: Ngannou\_245 Start: 141644, Stop: 143074, Start Num: 46

Candidate Starts for Ngannou\_245:

(Start: 46 @141644 has 172 MA's), (73, 141734), (91, 141797), (104, 141920), (109, 141944), (130, 142028), (138, 142070), (151, 142112), (178, 142277), (179, 142280), (224, 142535), (235, 142574), (242, 142604), (254, 142667), (258, 142688), (259, 142697), (261, 142700), (269, 142733), (278, 142748), (316, 142883), (333, 142958), (341, 143015), (342, 143018),

Gene: Nidhogg\_251 Start: 143488, Stop: 144918, Start Num: 46

Candidate Starts for Nidhogg\_251:

(Start: 46 @143488 has 172 MA's), (73, 143578), (74, 143581), (91, 143641), (104, 143764), (109, 143788), (130, 143872), (138, 143914), (151, 143956), (178, 144121), (179, 144124), (224, 144379), (235, 144418), (242, 144448), (254, 144511), (258, 144532), (259, 144541), (261, 144544), (269, 144577), (278, 144592), (316, 144727), (333, 144802), (341, 144859), (342, 144862),

Gene: Nigel\_42 Start: 39419, Stop: 41152, Start Num: 38

Candidate Starts for Nigel\_42:

(25, 39323), (Start: 38 @39419 has 26 MA's), (58, 39494), (65, 39512), (69, 39533), (70, 39536), (74, 39548), (89, 39620), (97, 39713), (104, 39785), (109, 39809), (125, 39896), (127, 39911), (157, 40031), (169, 40100), (178, 40175), (187, 40256), (192, 40280), (193, 40283), (226, 40436), (227, 40445), (254, 40589), (272, 40655), (285, 40679), (292, 40706), (299, 40736), (319, 40811), (328, 40856), (329, 40859), (334, 40883), (344, 40946), (358, 41012), (362, 41030),

Gene: Nimbo\_30 Start: 26331, Stop: 27524, Start Num: 45

Candidate Starts for Nimbo\_30:

(Start: 45 @26331 has 185 MA's), (67, 26415), (95, 26565), (101, 26619), (126, 26760), (215, 26841), (244, 26967), (251, 27012), (267, 27087), (282, 27129), (291, 27165), (292, 27168), (303, 27219), (305, 27228), (335, 27342), (340, 27384), (343, 27393), (354, 27450), (356, 27453),

Gene: Nitzel\_31 Start: 27046, Stop: 28239, Start Num: 45

Candidate Starts for Nitzel\_31:

(Start: 45 @27046 has 185 MA's), (67, 27130), (95, 27280), (101, 27334), (126, 27475), (215, 27556), (244, 27682), (245, 27688), (251, 27727), (267, 27802), (282, 27844), (291, 27880), (303, 27934), (305, 27943), (335, 28057), (340, 28099), (343, 28108), (354, 28165), (356, 28168),

Gene: NoodleTree\_246 Start: 138239, Stop: 139669, Start Num: 46

Candidate Starts for NoodleTree\_246:

(Start: 46 @138239 has 172 MA's), (73, 138329), (74, 138332), (91, 138392), (104, 138515), (109, 138539), (130, 138623), (138, 138665), (151, 138707), (178, 138872), (179, 138875), (224, 139130), (235, 139169), (242, 139199), (254, 139262), (258, 139283), (259, 139292), (261, 139295), (269, 139328), (278, 139343), (316, 139478), (333, 139553), (342, 139613),

Gene: Norm\_250 Start: 143389, Stop: 144819, Start Num: 46

Candidate Starts for Norm\_250:

(Start: 46 @143389 has 172 MA's), (73, 143479), (91, 143542), (104, 143665), (109, 143689), (130, 143773), (138, 143815), (151, 143857), (178, 144022), (179, 144025), (224, 144280), (235, 144319), (242, 144349), (254, 144412), (258, 144433), (259, 144442), (261, 144445), (269, 144478), (278, 144493), (316, 144628), (333, 144703), (341, 144760), (342, 144763),

Gene: NuevoMundo\_252 Start: 143875, Stop: 145305, Start Num: 46

Candidate Starts for NuevoMundo\_252:

(Start: 46 @143875 has 172 MA's), (73, 143965), (91, 144028), (104, 144151), (109, 144175), (130, 144259), (138, 144301), (151, 144343), (178, 144508), (179, 144511), (224, 144766), (235, 144805), (242, 144835), (254, 144898), (258, 144919), (259, 144928), (261, 144931), (269, 144964), (278, 144979), (316, 145114), (333, 145189), (341, 145246), (342, 145249),

Gene: Ochi17\_28 Start: 25986, Stop: 27179, Start Num: 45

Candidate Starts for Ochi17\_28:

(Start: 45 @25986 has 185 MA's), (67, 26070), (95, 26220), (101, 26274), (126, 26415), (215, 26496), (244, 26622), (262, 26727), (267, 26742), (282, 26784), (291, 26820), (292, 26823), (303, 26874), (305, 26883), (335, 26997), (340, 27039), (343, 27048), (354, 27105), (356, 27108),

Gene: OfUltron\_30 Start: 26535, Stop: 27728, Start Num: 45

Candidate Starts for OfUltron\_30:

(Start: 45 @26535 has 185 MA's), (67, 26619), (95, 26769), (101, 26823), (126, 26964), (215, 27045), (244, 27171), (262, 27276), (267, 27291), (282, 27333), (291, 27369), (292, 27372), (303, 27423), (305, 27432), (335, 27546), (340, 27588), (343, 27597), (354, 27654), (356, 27657),

Gene: Oksu\_31 Start: 26379, Stop: 27572, Start Num: 45

Candidate Starts for Oksu\_31:

(Start: 45 @26379 has 185 MA's), (67, 26463), (95, 26613), (101, 26667), (126, 26808), (215, 26889), (244, 27015), (262, 27120), (267, 27135), (282, 27177), (291, 27213), (292, 27216), (303, 27267), (305, 27276), (335, 27390), (340, 27432), (343, 27441), (354, 27498), (356, 27501),

Gene: OldBen\_30 Start: 26283, Stop: 27554, Start Num: 45

Candidate Starts for OldBen\_30:

(Start: 45 @26283 has 185 MA's), (77, 26400), (92, 26472), (103, 26589), (104, 26592), (121, 26670), (134, 26751), (198, 26793), (214, 26871), (244, 26997), (245, 27003), (246, 27006), (267, 27117), (282, 27159), (292, 27198), (297, 27213), (303, 27249), (305, 27258), (335, 27372), (340, 27414), (354, 27480), (356, 27483),

Gene: OlympiaSaint\_30 Start: 26699, Stop: 27970, Start Num: 45

Candidate Starts for OlympiaSaint\_30:

(Start: 45 @26699 has 185 MA's), (77, 26816), (92, 26888), (103, 27005), (104, 27008), (121, 27086), (134, 27167), (198, 27209), (214, 27287), (244, 27413), (262, 27518), (267, 27533), (282, 27575), (291, 27611), (292, 27614), (303, 27665), (305, 27674), (335, 27788), (340, 27830), (343, 27839), (354, 27896), (356, 27899),

Gene: Ovechkin\_30 Start: 26501, Stop: 27664, Start Num: 45

Candidate Starts for Ovechkin\_30:

(14, 26228), (16, 26231), (Start: 45 @26501 has 185 MA's), (67, 26585), (95, 26735), (101, 26789), (126, 26930), (215, 27008), (244, 27134), (245, 27140), (251, 27179), (262, 27239), (267, 27254), (282, 27296), (291, 27332), (292, 27335), (297, 27350), (303, 27386), (305, 27395), (335, 27509), (356, 27620),

Gene: OwlsT2W\_31 Start: 26780, Stop: 27949, Start Num: 45

Candidate Starts for OwlsT2W\_31:

(Start: 45 @26780 has 185 MA's), (67, 26864), (95, 27014), (101, 27068), (126, 27209), (232, 27386), (244, 27428), (246, 27437), (343, 27857), (356, 27917), (361, 27938),

Gene: PHappiness\_30 Start: 26304, Stop: 27497, Start Num: 45

Candidate Starts for PHappiness\_30:

(9, 25938), (Start: 45 @26304 has 185 MA's), (67, 26388), (95, 26538), (101, 26592), (126, 26733), (215, 26814), (244, 26940), (251, 26985), (267, 27060), (282, 27102), (291, 27138), (292, 27141), (303, 27192), (305, 27201), (335, 27315), (340, 27357), (343, 27366), (354, 27423), (356, 27426),

Gene: PMC\_30 Start: 26306, Stop: 27499, Start Num: 45

Candidate Starts for PMC\_30:

(Start: 45 @26306 has 185 MA's), (67, 26390), (95, 26540), (101, 26594), (126, 26735), (215, 26816), (244, 26942), (245, 26948), (267, 27062), (282, 27104), (291, 27140), (297, 27158), (303, 27194), (305, 27203), (335, 27317), (340, 27359), (343, 27368), (354, 27425), (356, 27428),

Gene: ParkTD\_249 Start: 142959, Stop: 144389, Start Num: 46

Candidate Starts for ParkTD\_249:

(Start: 46 @142959 has 172 MA's), (73, 143049), (91, 143112), (104, 143235), (109, 143259), (130, 143343), (138, 143385), (151, 143427), (178, 143592), (179, 143595), (224, 143850), (235, 143889), (242, 143919), (254, 143982), (258, 144003), (259, 144012), (261, 144015), (269, 144048), (278, 144063), (316, 144198), (333, 144273), (341, 144330), (342, 144333),

Gene: Patience\_41 Start: 34399, Stop: 35790, Start Num: 56

Candidate Starts for Patience\_41:

(Start: 56 @34399 has 3 MA's), (66, 34438), (78, 34474), (91, 34534), (93, 34564), (104, 34681), (109, 34705), (138, 34822), (151, 34867), (162, 34942), (165, 34951), (180, 35038), (189, 35110), (204, 35197), (210, 35215), (230, 35287), (233, 35299), (248, 35353), (250, 35365), (253, 35389), (274, 35467), (289, 35500), (293, 35515), (311, 35584), (322, 35623), (329, 35662), (334, 35683), (352, 35782),

Gene: Patter\_252 Start: 142619, Stop: 144049, Start Num: 46

Candidate Starts for Patter\_252:

(Start: 46 @142619 has 172 MA's), (73, 142709), (74, 142712), (91, 142772), (104, 142895), (109, 142919), (130, 143003), (138, 143045), (151, 143087), (178, 143252), (179, 143255), (224, 143510), (235, 143549), (242, 143579), (254, 143642), (258, 143663), (259, 143672), (261, 143675), (269, 143708), (278, 143723), (316, 143858), (333, 143933), (341, 143990), (342, 143993),

Gene: PegLeg\_35 Start: 29798, Stop: 31165, Start Num: 61

Candidate Starts for PegLeg\_35:

(Start: 61 @29798 has 14 MA's), (76, 29855), (80, 29882), (91, 29921), (104, 30059), (109, 30083), (128, 30161), (130, 30167), (131, 30170), (152, 30245), (177, 30377), (181, 30404), (182, 30413), (190, 30467), (197, 30494), (201, 30524), (212, 30578), (231, 30650), (274, 30836), (311, 30956), (316, 30977), (322, 30995), (324, 31010), (331, 31040), (336, 31070), (342, 31106), (343, 31109), (349, 31145),

Gene: PenguinLover67\_49 Start: 42209, Stop: 43822, Start Num: 54

Candidate Starts for PenguinLover67\_49:

(2, 41603), (22, 41942), (24, 41990), (Start: 54 @42209 has 1 MA's), (82, 42314), (84, 42317), (85, 42323), (86, 42326), (96, 42428), (102, 42500), (104, 42512), (139, 42695), (144, 42710), (148, 42722), (154, 42743), (163, 42812), (178, 42896), (187, 42977), (192, 43001), (199, 43022), (208, 43082), (226, 43145), (227, 43154), (231, 43163), (254, 43292), (258, 43313), (272, 43364), (276, 43370), (286, 43397), (292, 43424), (304, 43475), (307, 43487), (310, 43493), (329, 43577),

Gene: Phanphagia\_27 Start: 25503, Stop: 26657, Start Num: 45

Candidate Starts for Phanphagia\_27:

(14, 25230), (20, 25251), (Start: 45 @25503 has 185 MA's), (67, 25587), (95, 25737), (101, 25791), (126, 25932), (215, 26013), (244, 26139), (245, 26145), (251, 26184), (262, 26244), (267, 26259), (282, 26301), (291, 26337), (292, 26340), (303, 26391), (305, 26400), (335, 26514), (356, 26625), (360, 26646),

Gene: Phasih\_31 Start: 26881, Stop: 28074, Start Num: 45

Candidate Starts for Phasih\_31:

(Start: 45 @26881 has 185 MA's), (67, 26965), (95, 27115), (101, 27169), (126, 27310), (215, 27391), (244, 27517), (245, 27523), (246, 27526), (251, 27562), (267, 27637), (282, 27679), (291, 27715), (305, 27778), (335, 27892), (340, 27934), (343, 27943), (354, 28000), (356, 28003),

Gene: Phatniss\_31 Start: 26823, Stop: 28016, Start Num: 45

Candidate Starts for Phatniss\_31:

(Start: 45 @26823 has 185 MA's), (67, 26907), (95, 27057), (101, 27111), (126, 27252), (215, 27333), (244, 27459), (245, 27465), (267, 27579), (282, 27621), (291, 27657), (297, 27675), (303, 27711), (305, 27720), (335, 27834), (340, 27876), (343, 27885), (354, 27942), (356, 27945),

Gene: Philus\_30 Start: 26322, Stop: 27593, Start Num: 45

Candidate Starts for Philus\_30:

(Start: 45 @26322 has 185 MA's), (77, 26439), (92, 26511), (103, 26628), (104, 26631), (121, 26709), (134, 26790), (198, 26832), (214, 26910), (244, 27036), (262, 27141), (267, 27156), (282, 27198), (291, 27234), (292, 27237), (303, 27288), (305, 27297), (335, 27411), (340, 27453), (343, 27462), (354, 27519), (356, 27522),

Gene: Phlegm\_255 Start: 143365, Stop: 144795, Start Num: 46

Candidate Starts for Phlegm\_255:

(Start: 46 @143365 has 172 MA's), (73, 143455), (91, 143518), (104, 143641), (109, 143665), (130, 143749), (138, 143791), (151, 143833), (178, 143998), (179, 144001), (224, 144256), (235, 144295), (242, 144325), (254, 144388), (258, 144409), (259, 144418), (261, 144421), (269, 144454), (278, 144469), (316, 144604), (333, 144679), (341, 144736), (342, 144739),

Gene: PhlipPhlop\_31 Start: 27860, Stop: 29131, Start Num: 45

Candidate Starts for PhlipPhlop\_31:

(Start: 45 @27860 has 185 MA's), (77, 27977), (92, 28049), (103, 28166), (104, 28169), (121, 28247), (134, 28328), (198, 28370), (214, 28448), (244, 28574), (262, 28679), (267, 28694), (282, 28736), (291, 28772), (292, 28775), (303, 28826), (305, 28835), (335, 28949), (340, 28991), (343, 29000),

(354, 29057), (356, 29060),

Gene: Phox\_251 Start: 142614, Stop: 144044, Start Num: 46

Candidate Starts for Phox\_251:

(Start: 46 @142614 has 172 MA's), (73, 142704), (91, 142767), (104, 142890), (109, 142914), (130, 142998), (138, 143040), (151, 143082), (178, 143247), (179, 143250), (224, 143505), (235, 143544), (242, 143574), (254, 143637), (258, 143658), (259, 143667), (261, 143670), (269, 143703), (278, 143718), (316, 143853), (333, 143928), (341, 143985), (342, 143988),

Gene: Phusco\_249 Start: 142197, Stop: 143627, Start Num: 46

Candidate Starts for Phusco\_249:

(Start: 46 @142197 has 172 MA's), (73, 142287), (91, 142350), (104, 142473), (109, 142497), (130, 142581), (138, 142623), (151, 142665), (178, 142830), (179, 142833), (224, 143088), (235, 143127), (242, 143157), (254, 143220), (258, 143241), (259, 143250), (261, 143253), (269, 143286), (278, 143301), (316, 143436), (333, 143511), (341, 143568), (342, 143571),

Gene: Pier\_249 Start: 143490, Stop: 144920, Start Num: 46

Candidate Starts for Pier\_249:

(Start: 46 @143490 has 172 MA's), (73, 143580), (91, 143643), (104, 143766), (109, 143790), (130, 143874), (138, 143916), (151, 143958), (178, 144123), (179, 144126), (224, 144381), (235, 144420), (242, 144450), (254, 144513), (258, 144534), (259, 144543), (261, 144546), (269, 144579), (278, 144594), (316, 144729), (333, 144804), (341, 144861), (342, 144864),

Gene: Pinkcreek\_230 Start: 139816, Stop: 141246, Start Num: 46

Candidate Starts for Pinkcreek\_230:

(37, 139774), (Start: 46 @139816 has 172 MA's), (73, 139906), (91, 139969), (104, 140092), (109, 140116), (130, 140200), (138, 140242), (151, 140284), (178, 140449), (179, 140452), (224, 140707), (235, 140746), (242, 140776), (254, 140839), (258, 140860), (259, 140869), (261, 140872), (269, 140905), (278, 140920), (316, 141055), (333, 141130), (342, 141190),

Gene: Pio\_257 Start: 144693, Stop: 146123, Start Num: 46

Candidate Starts for Pio\_257:

(Start: 46 @144693 has 172 MA's), (73, 144783), (91, 144846), (104, 144969), (109, 144993), (130, 145077), (138, 145119), (151, 145161), (178, 145326), (179, 145329), (224, 145584), (235, 145623), (242, 145653), (254, 145716), (258, 145737), (259, 145746), (261, 145749), (269, 145782), (278, 145797), (316, 145932), (333, 146007), (341, 146064), (342, 146067),

Gene: Piper2020\_32 Start: 26915, Stop: 28126, Start Num: 45

Candidate Starts for Piper2020\_32:

(Start: 45 @26915 has 185 MA's), (67, 26999), (95, 27149), (101, 27203), (126, 27344), (215, 27425), (244, 27551), (245, 27557), (246, 27560), (251, 27596), (262, 27656), (267, 27671), (282, 27713), (291, 27749), (292, 27752), (303, 27803), (305, 27812), (335, 27926), (356, 28037),

Gene: Pivoine\_251 Start: 142662, Stop: 144092, Start Num: 46

Candidate Starts for Pivoine\_251:

(Start: 46 @142662 has 172 MA's), (73, 142752), (91, 142815), (104, 142938), (109, 142962), (130, 143046), (138, 143088), (151, 143130), (178, 143295), (179, 143298), (224, 143553), (235, 143592), (242, 143622), (254, 143685), (258, 143706), (259, 143715), (261, 143718), (269, 143751), (278, 143766), (316, 143901), (333, 143976), (341, 144033), (342, 144036),

Gene: Pleione\_254 Start: 143425, Stop: 144855, Start Num: 46

Candidate Starts for Pleione\_254:

(Start: 46 @143425 has 172 MA's), (73, 143515), (91, 143578), (104, 143701), (109, 143725), (130, 143809), (138, 143851), (151, 143893), (178, 144058), (179, 144061), (224, 144316), (235, 144355), (242, 144385), (254, 144448), (258, 144469), (259, 144478), (261, 144481), (269, 144514), (278, 144529), (316, 144664), (333, 144739), (341, 144796), (342, 144799),

Gene: Plumbus\_32 Start: 26320, Stop: 27594, Start Num: 45

Candidate Starts for Plumbus\_32:

(Start: 45 @26320 has 185 MA's), (77, 26440), (92, 26512), (103, 26629), (104, 26632), (121, 26710), (134, 26791), (198, 26833), (214, 26911), (244, 27037), (245, 27043), (246, 27046), (251, 27082), (267, 27157), (282, 27199), (291, 27235), (305, 27298), (335, 27412), (340, 27454), (343, 27463), (354, 27520), (356, 27523),

Gene: Poenanya\_30 Start: 26448, Stop: 27641, Start Num: 45

Candidate Starts for Poenanya\_30:

(Start: 45 @26448 has 185 MA's), (67, 26532), (95, 26682), (101, 26736), (126, 26877), (215, 26958), (244, 27084), (245, 27090), (246, 27093), (267, 27204), (282, 27246), (291, 27282), (303, 27336), (305, 27345), (335, 27459), (340, 27501), (343, 27510), (354, 27567), (356, 27570),

Gene: Poise\_54 Start: 30021, Stop: 31400, Start Num: 45

Candidate Starts for Poise\_54:

(Start: 45 @30021 has 185 MA's), (58, 30078), (68, 30114), (73, 30138), (77, 30150), (94, 30273), (97, 30315), (104, 30387), (109, 30411), (110, 30417), (131, 30498), (149, 30567), (150, 30570), (158, 30606), (163, 30642), (176, 30714), (178, 30732), (179, 30735), (196, 30852), (200, 30882), (227, 31014), (234, 31035), (242, 31068), (253, 31122), (254, 31128), (287, 31248), (294, 31278), (298, 31299), (305, 31329),

Gene: Polka14\_31 Start: 26869, Stop: 28140, Start Num: 45

Candidate Starts for Polka14\_31:

(15, 26596), (20, 26617), (Start: 45 @26869 has 185 MA's), (77, 26986), (92, 27058), (103, 27175), (104, 27178), (121, 27256), (134, 27337), (198, 27379), (214, 27457), (244, 27583), (245, 27589), (246, 27592), (267, 27703), (282, 27745), (292, 27784), (297, 27799), (303, 27835), (305, 27844), (335, 27958), (340, 28000), (343, 28009), (354, 28066), (356, 28069),

Gene: Pollywog\_30 Start: 26566, Stop: 27849, Start Num: 45

Candidate Starts for Pollywog\_30:

(Start: 45 @26566 has 185 MA's), (77, 26683), (92, 26755), (103, 26872), (104, 26875), (121, 26953), (134, 27034), (198, 27085), (214, 27163), (244, 27289), (245, 27295), (251, 27334), (267, 27409), (282, 27451), (292, 27490), (303, 27541), (305, 27550), (335, 27667), (340, 27709), (343, 27718), (354, 27775), (356, 27778),

Gene: Polo2Bam\_34 Start: 26505, Stop: 27698, Start Num: 45

Candidate Starts for Polo2Bam\_34:

(14, 26232), (21, 26253), (Start: 45 @26505 has 185 MA's), (67, 26589), (95, 26739), (101, 26793), (126, 26934), (215, 27015), (244, 27141), (245, 27147), (251, 27186), (262, 27246), (267, 27261), (282, 27303), (291, 27339), (292, 27342), (297, 27357), (303, 27393), (305, 27402), (335, 27516), (340, 27558), (343, 27567), (354, 27624), (356, 27627),

Gene: PopTart\_30 Start: 26544, Stop: 27830, Start Num: 45

Candidate Starts for PopTart\_30:

(12, 26271), (19, 26292), (Start: 45 @26544 has 185 MA's), (77, 26664), (92, 26736), (103, 26853), (104, 26856), (131, 26958), (142, 27015), (158, 27069), (170, 27132), (179, 27195), (180, 27198), (196, 27312), (199, 27324), (209, 27387), (227, 27474), (236, 27501), (254, 27591), (258, 27612), (260, 27624), (265, 27636), (268, 27660), (296, 27741), (301, 27774),

Gene: Poster\_42 Start: 39523, Stop: 41259, Start Num: 38

Candidate Starts for Poster\_42:

(Start: 38 @39523 has 26 MA's), (58, 39598), (65, 39616), (69, 39637), (74, 39652), (89, 39724), (97, 39817), (104, 39889), (109, 39913), (125, 40000), (127, 40015), (168, 40198), (178, 40279), (187, 40360), (192, 40384), (193, 40387), (202, 40429), (226, 40540), (227, 40549), (231, 40558), (249, 40654), (254, 40693), (272, 40762), (285, 40786), (292, 40813), (299, 40843), (321, 40921), (324, 40945), (328, 40963), (329, 40966), (334, 40990), (339, 41035), (358, 41119),

Gene: Primadonna\_246 Start: 142774, Stop: 144204, Start Num: 46

Candidate Starts for Primadonna\_246:

(Start: 46 @142774 has 172 MA's), (73, 142864), (91, 142927), (104, 143050), (109, 143074), (130, 143158), (138, 143200), (151, 143242), (178, 143407), (179, 143410), (224, 143665), (235, 143704), (242, 143734), (254, 143797), (258, 143818), (259, 143827), (261, 143830), (269, 143863), (278, 143878), (316, 144013), (333, 144088), (341, 144145), (342, 144148),

Gene: Prince\_43 Start: 40736, Stop: 42472, Start Num: 38

Candidate Starts for Prince\_43:

(Start: 38 @40736 has 26 MA's), (58, 40811), (65, 40829), (69, 40850), (74, 40865), (89, 40937), (97, 41030), (104, 41102), (109, 41126), (125, 41213), (127, 41228), (169, 41417), (178, 41492), (187, 41573), (192, 41597), (193, 41600), (226, 41753), (227, 41762), (231, 41771), (249, 41867), (254, 41906), (272, 41975), (285, 41999), (292, 42026), (299, 42056), (321, 42134), (324, 42158), (328, 42176), (329, 42179), (339, 42248), (358, 42332),

Gene: Pringar\_54 Start: 30309, Stop: 31688, Start Num: 45

Candidate Starts for Pringar\_54:

(Start: 45 @30309 has 185 MA's), (58, 30366), (68, 30402), (73, 30426), (77, 30438), (94, 30561), (97, 30603), (104, 30675), (109, 30699), (110, 30705), (131, 30786), (149, 30855), (150, 30858), (158, 30894), (163, 30930), (176, 31002), (178, 31020), (179, 31023), (196, 31140), (200, 31170), (227, 31302), (234, 31323), (242, 31356), (253, 31410), (254, 31416), (287, 31536), (294, 31566), (298, 31587), (305, 31617),

Gene: Priscilla\_30 Start: 26513, Stop: 27784, Start Num: 45

Candidate Starts for Priscilla\_30:

(Start: 45 @26513 has 185 MA's), (77, 26630), (92, 26702), (103, 26819), (104, 26822), (121, 26900), (134, 26981), (198, 27023), (214, 27101), (244, 27227), (262, 27332), (267, 27347), (282, 27389), (291, 27425), (292, 27428), (303, 27479), (305, 27488), (335, 27602), (340, 27644), (343, 27653), (354, 27710), (356, 27713),

Gene: PurduePete\_251 Start: 144139, Stop: 145569, Start Num: 46

Candidate Starts for PurduePete\_251:

(Start: 46 @144139 has 172 MA's), (73, 144229), (91, 144292), (104, 144415), (109, 144439), (130, 144523), (138, 144565), (151, 144607), (178, 144772), (179, 144775), (224, 145030), (235, 145069), (242, 145099), (254, 145162), (258, 145183), (259, 145192), (261, 145195), (269, 145228), (278, 145243), (316, 145378), (333, 145453), (342, 145513),

Gene: QBert\_242 Start: 141012, Stop: 142442, Start Num: 46

Candidate Starts for QBert\_242:

(Start: 46 @141012 has 172 MA's), (73, 141102), (91, 141165), (104, 141288), (109, 141312), (130, 141396), (138, 141438), (151, 141480), (178, 141645), (179, 141648), (224, 141903), (235, 141942), (242, 141972), (254, 142035), (258, 142056), (259, 142065), (261, 142068), (269, 142101), (278, 142116), (316, 142251), (333, 142326), (341, 142383), (342, 142386),

Gene: Quasimodo\_253 Start: 142998, Stop: 144428, Start Num: 46

Candidate Starts for Quasimodo\_253:

(Start: 46 @142998 has 172 MA's), (73, 143088), (91, 143151), (104, 143274), (109, 143298), (130, 143382), (138, 143424), (151, 143466), (178, 143631), (179, 143634), (224, 143889), (235, 143928), (242, 143958), (254, 144021), (258, 144042), (259, 144051), (261, 144054), (269, 144087), (278, 144102), (316, 144237), (333, 144312), (341, 144369), (342, 144372),

Gene: QueenPie\_42 Start: 40647, Stop: 42371, Start Num: 38

Candidate Starts for QueenPie\_42:

(Start: 38 @40647 has 26 MA's), (58, 40722), (65, 40740), (69, 40761), (74, 40776), (89, 40848), (97, 40941), (104, 41001), (109, 41025), (125, 41112), (127, 41127), (168, 41310), (169, 41316), (178, 41391), (187, 41472), (192, 41496), (202, 41541), (226, 41652), (227, 41661), (231, 41670), (254, 41805), (272, 41874), (285, 41898), (292, 41925), (299, 41955), (319, 42030), (321, 42033), (324, 42057), (328, 42075), (329, 42078), (334, 42102), (339, 42147), (358, 42231),

Gene: Quesadilla\_49 Start: 42178, Stop: 43833, Start Num: 51

Candidate Starts for Quesadilla\_49:

(27, 42043), (28, 42052), (30, 42058), (33, 42076), (Start: 51 @42178 has 4 MA's), (Start: 55 @42187 has 1 MA's), (86, 42301), (99, 42442), (102, 42481), (104, 42493), (111, 42532), (147, 42697), (168, 42811), (169, 42817), (178, 42892), (183, 42931), (187, 42973), (193, 43000), (203, 43054), (206, 43069), (227, 43159), (254, 43303), (281, 43387), (312, 43498), (314, 43510), (326, 43570), (334, 43600), (350, 43690), (358, 43720), (368, 43822),

Gene: Quico\_31 Start: 26135, Stop: 27328, Start Num: 45

Candidate Starts for Quico\_31:

(Start: 45 @26135 has 185 MA's), (67, 26219), (95, 26369), (101, 26423), (126, 26564), (215, 26645), (244, 26771), (245, 26777), (246, 26780), (267, 26891), (282, 26933), (291, 26969), (297, 26987), (303, 27023), (305, 27032), (335, 27146), (340, 27188), (343, 27197), (354, 27254), (356, 27257),

Gene: Rabinovish\_243 Start: 141502, Stop: 142932, Start Num: 46

Candidate Starts for Rabinovish\_243:

(Start: 46 @141502 has 172 MA's), (91, 141655), (104, 141778), (109, 141802), (130, 141886), (138, 141928), (151, 141970), (178, 142135), (179, 142138), (224, 142393), (235, 142432), (242, 142462), (254, 142525), (258, 142546), (259, 142555), (261, 142558), (269, 142591), (278, 142606), (316, 142741), (333, 142816), (341, 142873), (342, 142876),

Gene: Radiance\_30 Start: 26421, Stop: 27692, Start Num: 45

Candidate Starts for Radiance\_30:

(Start: 45 @26421 has 185 MA's), (77, 26538), (92, 26610), (103, 26727), (104, 26730), (121, 26808), (134, 26889), (198, 26931), (214, 27009), (244, 27135), (262, 27240), (267, 27255), (282, 27297), (291, 27333), (292, 27336), (303, 27387), (305, 27396), (335, 27510), (340, 27552), (343, 27561), (354, 27618), (356, 27621),

Gene: Raela\_54 Start: 30576, Stop: 31955, Start Num: 45

Candidate Starts for Raela\_54:

(Start: 45 @30576 has 185 MA's), (58, 30633), (68, 30669), (73, 30693), (77, 30705), (94, 30828), (97, 30870), (104, 30942), (109, 30966), (110, 30972), (131, 31053), (149, 31122), (150, 31125), (158, 31161), (176, 31269), (178, 31287), (179, 31290), (196, 31407), (200, 31437), (227, 31569), (234, 31590), (242, 31623), (253, 31677), (254, 31683), (287, 31803), (294, 31833), (298, 31854), (305, 31884),

Gene: Rahel\_252 Start: 143100, Stop: 144530, Start Num: 46

Candidate Starts for Rahel\_252:



(Start: 46 @143100 has 172 MA's), (73, 143190), (91, 143253), (104, 143376), (109, 143400), (130, 143484), (138, 143526), (151, 143568), (178, 143733), (179, 143736), (224, 143991), (235, 144030), (242, 144060), (254, 144123), (258, 144144), (259, 144153), (261, 144156), (269, 144189), (278, 144204), (316, 144339), (333, 144414), (341, 144471), (342, 144474),

Gene: Ramsey\_32 Start: 26518, Stop: 27765, Start Num: 45

Candidate Starts for Ramsey\_32:

(Start: 45 @26518 has 185 MA's), (77, 26638), (92, 26710), (103, 26827), (104, 26830), (121, 26908), (134, 26989), (198, 27031), (214, 27109), (244, 27235), (245, 27241), (246, 27244), (267, 27355), (282, 27397), (292, 27436), (297, 27451), (303, 27487), (305, 27496), (335, 27610), (356, 27721),

Gene: RawrgerThat\_44 Start: 40581, Stop: 42323, Start Num: 38

Candidate Starts for RawrgerThat\_44:

(Start: 38 @40581 has 26 MA's), (58, 40656), (65, 40674), (69, 40695), (74, 40710), (89, 40782), (97, 40875), (104, 40947), (109, 40971), (125, 41058), (127, 41073), (168, 41256), (178, 41337), (187, 41418), (192, 41442), (193, 41445), (202, 41487), (226, 41598), (227, 41607), (231, 41616), (249, 41712), (254, 41751), (272, 41820), (285, 41844), (292, 41871), (299, 41901), (321, 41979), (324, 42003), (328, 42021), (329, 42024), (334, 42048), (339, 42093), (358, 42177),

Gene: RedRaider77\_53 Start: 29965, Stop: 31344, Start Num: 45

Candidate Starts for RedRaider77\_53:

(Start: 45 @29965 has 185 MA's), (58, 30022), (68, 30058), (73, 30082), (77, 30094), (94, 30217), (97, 30259), (104, 30331), (109, 30355), (110, 30361), (131, 30442), (149, 30511), (150, 30514), (158, 30550), (163, 30586), (176, 30658), (178, 30676), (179, 30679), (196, 30796), (200, 30826), (227, 30958), (234, 30979), (242, 31012), (253, 31066), (254, 31072), (287, 31192), (294, 31222), (298, 31243), (305, 31273),

Gene: Reindeer\_35 Start: 30311, Stop: 31678, Start Num: 61

Candidate Starts for Reindeer\_35:

(Start: 61 @30311 has 14 MA's), (63, 30320), (76, 30368), (80, 30395), (91, 30434), (104, 30572), (105, 30578), (106, 30581), (109, 30596), (113, 30614), (126, 30668), (128, 30674), (130, 30680), (131, 30683), (152, 30758), (172, 30860), (177, 30890), (181, 30917), (184, 30932), (189, 30977), (190, 30980), (197, 31007), (202, 31040), (208, 31076), (216, 31109), (231, 31163), (232, 31169), (238, 31199), (250, 31247), (253, 31271), (274, 31349), (308, 31463), (311, 31469), (316, 31490), (322, 31508), (324, 31523), (336, 31583), (342, 31619), (343, 31622), (349, 31658),

Gene: Rey\_40 Start: 31173, Stop: 32588, Start Num: 41

Candidate Starts for Rey\_40:

(Start: 41 @31173 has 6 MA's), (53, 31227), (Start: 55 @31233 has 1 MA's), (64, 31263), (76, 31299), (104, 31500), (114, 31530), (132, 31599), (137, 31614), (152, 31668), (155, 31686), (156, 31692), (177, 31803), (181, 31830), (184, 31845), (202, 31953), (212, 32004), (232, 32082), (274, 32259), (285, 32283), (286, 32286), (308, 32373), (311, 32379), (316, 32400), (324, 32433), (336, 32493), (347, 32556),

Gene: Rialto\_34 Start: 28576, Stop: 29850, Start Num: 45

Candidate Starts for Rialto\_34:

(Start: 45 @28576 has 185 MA's), (77, 28696), (92, 28768), (103, 28885), (104, 28888), (121, 28966), (134, 29047), (198, 29089), (214, 29167), (244, 29293), (245, 29299), (246, 29302), (251, 29338), (267, 29413), (282, 29455), (291, 29491), (292, 29494), (303, 29545), (305, 29554), (335, 29668), (340, 29710), (343, 29719), (354, 29776), (356, 29779),

Gene: Rita\_31 Start: 26482, Stop: 27774, Start Num: 45

Candidate Starts for Rita\_31:

(Start: 45 @26482 has 185 MA's), (77, 26602), (103, 26791), (104, 26794), (121, 26872), (134, 26953), (198, 26995), (214, 27073), (244, 27199), (245, 27205), (251, 27244), (262, 27304), (267, 27319), (282, 27361), (291, 27397), (292, 27400), (297, 27415), (303, 27451), (305, 27460), (335, 27574), (356, 27685),

Gene: RitaG\_31 Start: 26686, Stop: 27960, Start Num: 45

Candidate Starts for RitaG\_31:

(Start: 45 @26686 has 185 MA's), (77, 26806), (103, 26995), (104, 26998), (121, 27076), (134, 27157), (198, 27199), (214, 27277), (244, 27403), (245, 27409), (251, 27448), (262, 27508), (267, 27523), (280, 27559), (282, 27565), (291, 27601), (297, 27619), (303, 27655), (305, 27664), (335, 27778), (340, 27820), (354, 27886), (356, 27889),

Gene: Rizal\_239 Start: 140915, Stop: 142345, Start Num: 46

Candidate Starts for Rizal\_239:

(Start: 46 @140915 has 172 MA's), (73, 141005), (91, 141068), (104, 141191), (109, 141215), (130, 141299), (138, 141341), (151, 141383), (178, 141548), (179, 141551), (224, 141806), (235, 141845), (242, 141875), (254, 141938), (258, 141959), (259, 141968), (261, 141971), (269, 142004), (278, 142019), (316, 142154), (333, 142229), (341, 142286), (342, 142289),

Gene: RoMag\_245 Start: 142696, Stop: 144126, Start Num: 46

Candidate Starts for RoMag\_245:

(Start: 46 @142696 has 172 MA's), (73, 142786), (74, 142789), (91, 142849), (104, 142972), (109, 142996), (130, 143080), (138, 143122), (151, 143164), (178, 143329), (179, 143332), (224, 143587), (235, 143626), (242, 143656), (254, 143719), (258, 143740), (259, 143749), (261, 143752), (269, 143785), (278, 143800), (316, 143935), (333, 144010), (341, 144067), (342, 144070),

Gene: Rockne\_30 Start: 26306, Stop: 27499, Start Num: 45

Candidate Starts for Rockne\_30:

(Start: 45 @26306 has 185 MA's), (67, 26390), (95, 26540), (101, 26594), (126, 26735), (215, 26816), (244, 26942), (245, 26948), (267, 27062), (282, 27104), (291, 27140), (297, 27158), (303, 27194), (305, 27203), (335, 27317), (340, 27359), (343, 27368), (354, 27425), (356, 27428),

Gene: RockyHorror\_31 Start: 26248, Stop: 27441, Start Num: 45

Candidate Starts for RockyHorror\_31:

(Start: 45 @26248 has 185 MA's), (67, 26332), (95, 26482), (101, 26536), (126, 26677), (215, 26758), (244, 26884), (245, 26890), (251, 26929), (262, 26989), (267, 27004), (282, 27046), (291, 27082), (303, 27136), (305, 27145), (335, 27259), (340, 27301), (343, 27310), (354, 27367), (356, 27370),

Gene: Ronan\_246 Start: 141077, Stop: 142507, Start Num: 46

Candidate Starts for Ronan\_246:

(37, 141035), (Start: 46 @141077 has 172 MA's), (73, 141167), (91, 141230), (104, 141353), (109, 141377), (130, 141461), (138, 141503), (151, 141545), (178, 141710), (179, 141713), (224, 141968), (235, 142007), (242, 142037), (254, 142100), (258, 142121), (259, 142130), (261, 142133), (269, 142166), (278, 142181), (316, 142316), (333, 142391), (342, 142451),

Gene: Roots515\_253 Start: 144241, Stop: 145671, Start Num: 46

Candidate Starts for Roots515\_253:

(Start: 46 @144241 has 172 MA's), (73, 144331), (91, 144394), (104, 144517), (109, 144541), (130, 144625), (138, 144667), (151, 144709), (178, 144874), (179, 144877), (224, 145132), (235, 145171), (242, 145201), (254, 145264), (258, 145285), (259, 145294), (261, 145297), (269, 145330), (278, 145345), (316, 145480), (333, 145555), (341, 145612), (342, 145615),

Gene: RoseMarie\_37 Start: 32244, Stop: 33611, Start Num: 61

Candidate Starts for RoseMarie\_37:

(Start: 61 @32244 has 14 MA's), (76, 32301), (80, 32328), (91, 32367), (104, 32505), (106, 32514), (109, 32529), (113, 32547), (128, 32607), (130, 32613), (131, 32616), (152, 32691), (177, 32823), (181, 32850), (182, 32859), (190, 32913), (197, 32940), (202, 32973), (212, 33024), (231, 33096), (274, 33282), (311, 33402), (316, 33423), (322, 33441), (324, 33456), (331, 33486), (336, 33516), (342, 33552), (343, 33555), (349, 33591),

Gene: Royals2015\_30 Start: 26424, Stop: 27614, Start Num: 45

Candidate Starts for Royals2015\_30:

(14, 26151), (21, 26172), (Start: 45 @26424 has 185 MA's), (67, 26508), (95, 26658), (101, 26712), (119, 26805), (126, 26853), (215, 26931), (244, 27057), (245, 27063), (251, 27102), (262, 27162), (267, 27177), (282, 27219), (291, 27255), (292, 27258), (303, 27309), (305, 27318), (335, 27432), (340, 27474), (343, 27483), (354, 27540), (356, 27543),

Gene: Ruby\_31 Start: 26444, Stop: 27691, Start Num: 45

Candidate Starts for Ruby\_31:

(Start: 45 @26444 has 185 MA's), (77, 26564), (92, 26636), (103, 26753), (104, 26756), (121, 26834), (134, 26915), (198, 26957), (214, 27035), (244, 27161), (251, 27206), (262, 27266), (267, 27281), (282, 27323), (291, 27359), (303, 27413), (305, 27422), (335, 27536), (356, 27647),

Gene: SG4\_30 Start: 26651, Stop: 27922, Start Num: 45

Candidate Starts for SG4\_30:

(Start: 45 @26651 has 185 MA's), (77, 26768), (103, 26957), (104, 26960), (124, 27038), (142, 27119), (158, 27170), (164, 27209), (170, 27233), (179, 27296), (180, 27299), (192, 27404), (199, 27425), (209, 27488), (217, 27518), (227, 27575), (254, 27692), (260, 27725),

Gene: SVoro\_246 Start: 142998, Stop: 144428, Start Num: 46

Candidate Starts for SVoro\_246:

(Start: 46 @142998 has 172 MA's), (73, 143088), (91, 143151), (104, 143274), (109, 143298), (130, 143382), (138, 143424), (151, 143466), (178, 143631), (179, 143634), (224, 143889), (235, 143928), (242, 143958), (254, 144021), (258, 144042), (259, 144051), (261, 144054), (269, 144087), (278, 144102), (316, 144237), (333, 144312), (342, 144372),

Gene: Saal\_30 Start: 26300, Stop: 27571, Start Num: 45

Candidate Starts for Saal\_30:

(Start: 45 @26300 has 185 MA's), (77, 26417), (92, 26489), (103, 26606), (104, 26609), (121, 26687), (134, 26768), (198, 26810), (214, 26888), (244, 27014), (262, 27119), (267, 27134), (282, 27176), (291, 27212), (292, 27215), (303, 27266), (305, 27275), (335, 27389), (340, 27431), (343, 27440), (354, 27497), (356, 27500),

Gene: Sabbb\_31 Start: 26645, Stop: 27916, Start Num: 45

Candidate Starts for Sabbb\_31:

(Start: 45 @26645 has 185 MA's), (77, 26762), (92, 26834), (103, 26951), (104, 26954), (121, 27032), (134, 27113), (198, 27155), (214, 27233), (223, 27287), (244, 27359), (267, 27479), (282, 27521), (291, 27557), (303, 27611), (305, 27620), (335, 27734), (340, 27776), (343, 27785), (354, 27842), (356, 27845),

Gene: Saguaro\_49 Start: 41855, Stop: 43441, Start Num: 51

Candidate Starts for Saguaro\_49:

(26, 41702), (29, 41720), (30, 41723), (31, 41735), (35, 41759), (43, 41813), (Start: 51 @41855 has 4 MA's), (Start: 55 @41864 has 1 MA's), (82, 41969), (86, 41981), (96, 42083), (98, 42110), (102, 42155), (104, 42167), (115, 42221), (164, 42464), (168, 42479), (178, 42545), (188, 42632), (208, 42731), (226, 42794), (227, 42803), (252, 42929), (254, 42941), (272, 43013), (285, 43037), (292,

43064), (299, 43094), (300, 43100), (324, 43196), (328, 43214), (329, 43217), (346, 43313),

Gene: Salacia\_252 Start: 144565, Stop: 145995, Start Num: 46

Candidate Starts for Salacia\_252:

(Start: 46 @144565 has 172 MA's), (73, 144655), (91, 144718), (104, 144841), (109, 144865), (130, 144949), (138, 144991), (151, 145033), (178, 145198), (179, 145201), (224, 145456), (235, 145495), (242, 145525), (254, 145588), (258, 145609), (259, 145618), (261, 145621), (269, 145654), (278, 145669), (316, 145804), (333, 145879), (341, 145936), (342, 145939),

Gene: Sandalphon\_31 Start: 27031, Stop: 28302, Start Num: 45

Candidate Starts for Sandalphon\_31:

(Start: 45 @27031 has 185 MA's), (77, 27148), (92, 27220), (103, 27337), (104, 27340), (121, 27418), (134, 27499), (198, 27541), (214, 27619), (244, 27745), (245, 27751), (246, 27754), (267, 27865), (282, 27907), (292, 27946), (297, 27961), (303, 27997), (305, 28006), (335, 28120), (340, 28162), (354, 28228), (356, 28231),

Gene: Sarma624\_26 Start: 22498, Stop: 23733, Start Num: 45

Candidate Starts for Sarma624\_26:

(Start: 45 @22498 has 185 MA's), (77, 22618), (92, 22690), (103, 22807), (104, 22810), (121, 22888), (134, 22969), (198, 23011), (214, 23089), (244, 23215), (245, 23221), (251, 23260), (262, 23320), (267, 23335), (282, 23377), (291, 23413), (292, 23416), (303, 23467), (305, 23476), (335, 23590), (356, 23701), (360, 23722),

Gene: SassyB\_30 Start: 26544, Stop: 27830, Start Num: 45

Candidate Starts for SassyB\_30:

(12, 26271), (19, 26292), (Start: 45 @26544 has 185 MA's), (77, 26664), (92, 26736), (103, 26853), (104, 26856), (131, 26958), (142, 27015), (158, 27069), (170, 27132), (179, 27195), (180, 27198), (196, 27312), (199, 27324), (209, 27387), (227, 27474), (236, 27501), (254, 27591), (258, 27612), (260, 27624), (265, 27636), (268, 27660), (296, 27741), (301, 27774),

Gene: Sauce\_247 Start: 142424, Stop: 143854, Start Num: 46

Candidate Starts for Sauce\_247:

(Start: 46 @142424 has 172 MA's), (73, 142514), (91, 142577), (104, 142700), (109, 142724), (130, 142808), (138, 142850), (151, 142892), (178, 143057), (179, 143060), (224, 143315), (235, 143354), (242, 143384), (254, 143447), (258, 143468), (259, 143477), (261, 143480), (269, 143513), (278, 143528), (316, 143663), (333, 143738), (341, 143795), (342, 143798),

Gene: ScottMcG\_242 Start: 141625, Stop: 143055, Start Num: 46

Candidate Starts for ScottMcG\_242:

(Start: 46 @141625 has 172 MA's), (73, 141715), (91, 141778), (104, 141901), (109, 141925), (130, 142009), (138, 142051), (151, 142093), (178, 142258), (179, 142261), (224, 142516), (235, 142555), (242, 142585), (254, 142648), (258, 142669), (259, 142678), (261, 142681), (269, 142714), (278, 142729), (316, 142864), (333, 142939), (341, 142996), (342, 142999),

Gene: Scottish\_31 Start: 27627, Stop: 28820, Start Num: 45

Candidate Starts for Scottish\_31:

(Start: 45 @27627 has 185 MA's), (67, 27711), (95, 27861), (101, 27915), (126, 28056), (215, 28137), (244, 28263), (245, 28269), (246, 28272), (267, 28383), (282, 28425), (291, 28461), (303, 28515), (305, 28524), (335, 28638), (340, 28680), (343, 28689), (354, 28746), (356, 28749),

Gene: Seabastian\_30 Start: 26535, Stop: 27728, Start Num: 45

Candidate Starts for Seabastian\_30:

(Start: 45 @26535 has 185 MA's), (67, 26619), (95, 26769), (101, 26823), (126, 26964), (215, 27045), (244, 27171), (262, 27276), (267, 27291), (282, 27333), (291, 27369), (292, 27372), (303, 27423), (305, 27432), (335, 27546), (340, 27588), (343, 27597), (354, 27654), (356, 27657),

Gene: Seagreen\_31 Start: 26351, Stop: 27637, Start Num: 45

Candidate Starts for Seagreen\_31:

(12, 26078), (19, 26099), (Start: 45 @26351 has 185 MA's), (77, 26471), (92, 26543), (103, 26660), (104, 26663), (131, 26765), (142, 26822), (158, 26876), (170, 26939), (179, 27002), (180, 27005), (196, 27119), (199, 27131), (209, 27194), (227, 27281), (236, 27308), (254, 27398), (258, 27419), (260, 27431), (265, 27443), (268, 27467), (296, 27548), (301, 27581),

Gene: Sebata\_250 Start: 143284, Stop: 144714, Start Num: 46

Candidate Starts for Sebata\_250:

(Start: 46 @143284 has 172 MA's), (73, 143374), (91, 143437), (104, 143560), (109, 143584), (130, 143668), (138, 143710), (151, 143752), (178, 143917), (179, 143920), (224, 144175), (235, 144214), (242, 144244), (254, 144307), (258, 144328), (259, 144337), (261, 144340), (269, 144373), (278, 144388), (316, 144523), (333, 144598), (342, 144658),

Gene: Shaqnato\_241 Start: 141833, Stop: 143263, Start Num: 46

Candidate Starts for Shaqnato\_241:

(Start: 46 @141833 has 172 MA's), (73, 141923), (91, 141986), (104, 142109), (109, 142133), (130, 142217), (138, 142259), (151, 142301), (178, 142466), (179, 142469), (224, 142724), (235, 142763), (242, 142793), (254, 142856), (258, 142877), (259, 142886), (261, 142889), (269, 142922), (278, 142937), (316, 143072), (333, 143147), (342, 143207),

Gene: Shauna1\_27 Start: 25506, Stop: 26660, Start Num: 45

Candidate Starts for Shauna1\_27:

(14, 25233), (20, 25254), (Start: 45 @25506 has 185 MA's), (67, 25590), (95, 25740), (101, 25794), (126, 25935), (215, 26016), (244, 26142), (245, 26148), (251, 26187), (262, 26247), (267, 26262), (282, 26304), (291, 26340), (292, 26343), (303, 26394), (305, 26403), (335, 26517), (356, 26628), (360, 26649),

Gene: Shelob\_251 Start: 144559, Stop: 145989, Start Num: 46

Candidate Starts for Shelob\_251:

(Start: 46 @144559 has 172 MA's), (73, 144649), (91, 144712), (104, 144835), (109, 144859), (130, 144943), (138, 144985), (151, 145027), (178, 145192), (179, 145195), (224, 145450), (235, 145489), (242, 145519), (254, 145582), (258, 145603), (259, 145612), (261, 145615), (269, 145648), (278, 145663), (316, 145798), (333, 145873), (341, 145930), (342, 145933),

Gene: ShiaLabeouf\_248 Start: 142418, Stop: 143848, Start Num: 46

Candidate Starts for ShiaLabeouf\_248:

(Start: 46 @142418 has 172 MA's), (73, 142508), (91, 142571), (104, 142694), (109, 142718), (130, 142802), (138, 142844), (151, 142886), (178, 143051), (179, 143054), (224, 143309), (235, 143348), (242, 143378), (254, 143441), (258, 143462), (259, 143471), (261, 143474), (269, 143507), (278, 143522), (316, 143657), (333, 143732), (341, 143789), (342, 143792),

Gene: Shifa\_226 Start: 141892, Stop: 143322, Start Num: 46

Candidate Starts for Shifa\_226:

(Start: 46 @141892 has 172 MA's), (73, 141982), (91, 142045), (104, 142168), (109, 142192), (130, 142276), (138, 142318), (151, 142360), (178, 142525), (179, 142528), (224, 142783), (235, 142822), (242, 142852), (254, 142915), (258, 142936), (259, 142945), (261, 142948), (269, 142981), (278, 142996), (316, 143131), (333, 143206), (342, 143266),

Gene: Shnickers\_249 Start: 142482, Stop: 143912, Start Num: 46

Candidate Starts for Shnickers\_249:

(Start: 46 @142482 has 172 MA's), (73, 142572), (91, 142635), (104, 142758), (109, 142782), (130, 142866), (138, 142908), (151, 142950), (178, 143115), (179, 143118), (224, 143373), (235, 143412), (242, 143442), (254, 143505), (258, 143526), (259, 143535), (261, 143538), (269, 143571), (278, 143586), (316, 143721), (333, 143796), (341, 143853), (342, 143856),

Gene: Shrimp\_253 Start: 144176, Stop: 145606, Start Num: 46

Candidate Starts for Shrimp\_253:

(Start: 46 @144176 has 172 MA's), (73, 144266), (91, 144329), (104, 144452), (109, 144476), (130, 144560), (138, 144602), (151, 144644), (178, 144809), (179, 144812), (224, 145067), (235, 145106), (242, 145136), (254, 145199), (258, 145220), (259, 145229), (261, 145232), (269, 145265), (278, 145280), (316, 145415), (333, 145490), (341, 145547), (342, 145550),

Gene: ShroomBoi\_27 Start: 25443, Stop: 26597, Start Num: 45

Candidate Starts for ShroomBoi\_27:

(Start: 45 @25443 has 185 MA's), (67, 25527), (95, 25677), (101, 25731), (126, 25872), (215, 25953), (244, 26079), (245, 26085), (251, 26124), (262, 26184), (267, 26199), (282, 26241), (291, 26277), (292, 26280), (303, 26331), (305, 26340), (335, 26454), (356, 26565), (360, 26586),

Gene: SilverDipper\_255 Start: 143218, Stop: 144648, Start Num: 46

Candidate Starts for SilverDipper\_255:

(Start: 46 @143218 has 172 MA's), (73, 143308), (91, 143371), (104, 143494), (109, 143518), (130, 143602), (138, 143644), (151, 143686), (178, 143851), (179, 143854), (224, 144109), (235, 144148), (242, 144178), (254, 144241), (258, 144262), (259, 144271), (261, 144274), (269, 144307), (278, 144322), (316, 144457), (333, 144532), (341, 144589), (342, 144592),

Gene: SimranZ1\_33 Start: 26526, Stop: 27818, Start Num: 45

Candidate Starts for SimranZ1\_33:

(Start: 45 @26526 has 185 MA's), (77, 26646), (92, 26718), (103, 26835), (104, 26838), (121, 26916), (134, 26997), (198, 27039), (232, 27216), (244, 27258), (246, 27267), (282, 27423), (335, 27636), (340, 27678), (343, 27687), (354, 27744), (356, 27747),

Gene: Skinny\_36 Start: 30228, Stop: 31595, Start Num: 61

Candidate Starts for Skinny\_36:

(Start: 61 @30228 has 14 MA's), (76, 30285), (80, 30312), (91, 30351), (104, 30489), (109, 30513), (128, 30591), (130, 30597), (131, 30600), (152, 30675), (177, 30807), (181, 30834), (182, 30843), (190, 30897), (197, 30924), (201, 30954), (212, 31008), (231, 31080), (274, 31266), (311, 31386), (316, 31407), (322, 31425), (324, 31440), (331, 31470), (336, 31500), (342, 31536), (343, 31539), (349, 31575),

Gene: SlimJimmy\_34 Start: 29782, Stop: 31149, Start Num: 61

Candidate Starts for SlimJimmy\_34:

(Start: 61 @29782 has 14 MA's), (76, 29839), (80, 29866), (87, 29881), (90, 29902), (91, 29905), (104, 30043), (109, 30067), (128, 30145), (130, 30151), (131, 30154), (152, 30229), (177, 30361), (181, 30388), (182, 30397), (190, 30451), (197, 30478), (201, 30508), (212, 30562), (231, 30634), (274, 30820), (311, 30940), (316, 30961), (322, 30979), (324, 30994), (331, 31024), (336, 31054), (342, 31090), (343, 31093), (349, 31129),

Gene: Slim\_33 Start: 27698, Stop: 28891, Start Num: 45

Candidate Starts for Slim\_33:

(Start: 45 @27698 has 185 MA's), (67, 27782), (95, 27932), (101, 27986), (126, 28127), (215, 28208), (244, 28334), (245, 28340), (246, 28343), (251, 28379), (267, 28454), (282, 28496), (291, 28532),

(305, 28595), (335, 28709), (340, 28751), (343, 28760), (354, 28817), (356, 28820),

Gene: SmallFry\_251 Start: 142576, Stop: 144006, Start Num: 46

Candidate Starts for SmallFry\_251:

(Start: 46 @142576 has 172 MA's), (73, 142666), (91, 142729), (104, 142852), (109, 142876), (130, 142960), (138, 143002), (151, 143044), (178, 143209), (179, 143212), (224, 143467), (235, 143506), (242, 143536), (254, 143599), (258, 143620), (259, 143629), (261, 143632), (269, 143665), (278, 143680), (316, 143815), (333, 143890), (341, 143947), (342, 143950),

Gene: Soul22\_34 Start: 25851, Stop: 27032, Start Num: 45

Candidate Starts for Soul22\_34:

(Start: 45 @25851 has 185 MA's), (67, 25935), (95, 26085), (101, 26139), (126, 26280), (232, 26457), (244, 26499), (246, 26508), (282, 26664), (335, 26877), (356, 26988),

Gene: Sparkdehlily\_30 Start: 26346, Stop: 27617, Start Num: 45

Candidate Starts for Sparkdehlily\_30:

(Start: 45 @26346 has 185 MA's), (77, 26463), (92, 26535), (103, 26652), (104, 26655), (121, 26733), (134, 26814), (198, 26856), (214, 26934), (244, 27060), (262, 27165), (267, 27180), (282, 27222), (291, 27258), (292, 27261), (303, 27312), (305, 27321), (335, 27435), (340, 27477), (343, 27486), (354, 27543), (356, 27546),

Gene: Spartacus\_32 Start: 26738, Stop: 28030, Start Num: 45

Candidate Starts for Spartacus\_32:

(Start: 45 @26738 has 185 MA's), (77, 26858), (103, 27047), (104, 27050), (121, 27128), (134, 27209), (198, 27251), (214, 27329), (244, 27455), (245, 27461), (251, 27500), (262, 27560), (267, 27575), (280, 27611), (282, 27617), (291, 27653), (297, 27671), (303, 27707), (305, 27716), (335, 27830), (356, 27941),

Gene: Spec\_244 Start: 142588, Stop: 144018, Start Num: 46

Candidate Starts for Spec\_244:

(Start: 46 @142588 has 172 MA's), (73, 142678), (91, 142741), (104, 142864), (109, 142888), (130, 142972), (138, 143014), (151, 143056), (178, 143221), (179, 143224), (224, 143479), (235, 143518), (242, 143548), (254, 143611), (258, 143632), (259, 143641), (261, 143644), (269, 143677), (278, 143692), (316, 143827), (333, 143902), (341, 143959), (342, 143962),

Gene: Specks\_255 Start: 143516, Stop: 144946, Start Num: 46

Candidate Starts for Specks\_255:

(Start: 46 @143516 has 172 MA's), (73, 143606), (91, 143669), (104, 143792), (109, 143816), (130, 143900), (138, 143942), (151, 143984), (178, 144149), (179, 144152), (224, 144407), (235, 144446), (242, 144476), (254, 144539), (258, 144560), (259, 144569), (261, 144572), (269, 144605), (278, 144620), (316, 144755), (333, 144830), (341, 144887), (342, 144890),

Gene: Spikelee\_32 Start: 26496, Stop: 27770, Start Num: 45

Candidate Starts for Spikelee\_32:

(Start: 45 @26496 has 185 MA's), (77, 26616), (92, 26688), (103, 26805), (104, 26808), (121, 26886), (134, 26967), (198, 27009), (214, 27087), (244, 27213), (245, 27219), (246, 27222), (251, 27258), (255, 27288), (262, 27318), (267, 27333), (282, 27375), (291, 27411), (292, 27414), (303, 27465), (305, 27474), (335, 27588), (340, 27630), (343, 27639), (354, 27696), (356, 27699),

Gene: Spoonbill\_30 Start: 26510, Stop: 27781, Start Num: 45

Candidate Starts for Spoonbill\_30:

(Start: 45 @26510 has 185 MA's), (77, 26627), (92, 26699), (103, 26816), (104, 26819), (121, 26897), (134, 26978), (198, 27020), (214, 27098), (244, 27224), (262, 27329), (267, 27344), (282, 27386),

(291, 27422), (292, 27425), (303, 27476), (305, 27485), (335, 27599), (340, 27641), (343, 27650), (354, 27707), (356, 27710),

Gene: Sprinklers\_248 Start: 142284, Stop: 143714, Start Num: 46

Candidate Starts for Sprinklers\_248:

(Start: 46 @142284 has 172 MA's), (73, 142374), (91, 142437), (104, 142560), (109, 142584), (130, 142668), (138, 142710), (151, 142752), (178, 142917), (179, 142920), (224, 143175), (235, 143214), (242, 143244), (254, 143307), (258, 143328), (259, 143337), (261, 143340), (269, 143373), (278, 143388), (316, 143523), (333, 143598), (341, 143655), (342, 143658),

Gene: Spud\_242 Start: 142033, Stop: 143463, Start Num: 46

Candidate Starts for Spud\_242:

(Start: 46 @142033 has 172 MA's), (73, 142123), (91, 142186), (104, 142309), (109, 142333), (130, 142417), (138, 142459), (151, 142501), (178, 142666), (179, 142669), (224, 142924), (235, 142963), (242, 142993), (254, 143056), (258, 143077), (259, 143086), (261, 143089), (269, 143122), (278, 143137), (316, 143272), (333, 143347), (341, 143404), (342, 143407),

Gene: SrishMeg2525\_248 Start: 143671, Stop: 145101, Start Num: 46

Candidate Starts for SrishMeg2525\_248:

(Start: 46 @143671 has 172 MA's), (73, 143761), (91, 143824), (104, 143947), (109, 143971), (130, 144055), (138, 144097), (151, 144139), (178, 144304), (179, 144307), (224, 144562), (235, 144601), (242, 144631), (254, 144694), (258, 144715), (259, 144724), (261, 144727), (269, 144760), (278, 144775), (316, 144910), (333, 144985), (341, 145042), (342, 145045),

Gene: StAnnes\_28 Start: 26065, Stop: 27231, Start Num: 45

Candidate Starts for StAnnes\_28:

(7, 25657), (18, 25801), (Start: 45 @26065 has 185 MA's), (67, 26149), (95, 26299), (101, 26353), (126, 26494), (215, 26575), (244, 26701), (245, 26707), (251, 26746), (262, 26806), (267, 26821), (282, 26863), (291, 26899), (292, 26902), (303, 26953), (305, 26962), (335, 27076), (356, 27187),

Gene: StAugustine\_53 Start: 44382, Stop: 45980, Start Num: 38

Candidate Starts for StAugustine\_53:

(Start: 38 @44382 has 26 MA's), (50, 44430), (74, 44499), (96, 44601), (99, 44640), (102, 44679), (104, 44691), (123, 44793), (136, 44868), (155, 44946), (178, 45102), (187, 45183), (192, 45207), (193, 45210), (195, 45213), (227, 45372), (228, 45375), (231, 45381), (254, 45516), (263, 45555), (272, 45591), (285, 45615), (326, 45789), (334, 45822), (357, 45936), (363, 45969),

Gene: Starcevich\_33 Start: 26624, Stop: 28400, Start Num: 45

Candidate Starts for Starcevich\_33:

(Start: 45 @26624 has 185 MA's), (67, 26708), (101, 26912), (126, 27053), (133, 27086), (141, 27134), (157, 27233), (194, 27626), (225, 27779), (247, 27857), (256, 27920), (266, 27959), (309, 28112), (318, 28148),

Gene: StephanieG\_244 Start: 143219, Stop: 144649, Start Num: 46

Candidate Starts for StephanieG\_244:

(Start: 46 @143219 has 172 MA's), (73, 143309), (74, 143312), (91, 143372), (104, 143495), (109, 143519), (130, 143603), (138, 143645), (151, 143687), (178, 143852), (179, 143855), (224, 144110), (235, 144149), (242, 144179), (254, 144242), (258, 144263), (259, 144272), (261, 144275), (269, 144308), (278, 144323), (316, 144458), (333, 144533), (341, 144590), (342, 144593),

Gene: Stinger\_42 Start: 39109, Stop: 40842, Start Num: 38

Candidate Starts for Stinger\_42:



(25, 39013), (Start: 38 @39109 has 26 MA's), (57, 39178), (65, 39202), (69, 39223), (70, 39226), (74, 39238), (89, 39310), (97, 39403), (104, 39475), (109, 39499), (127, 39601), (169, 39790), (178, 39865), (187, 39946), (192, 39970), (193, 39973), (202, 40015), (226, 40126), (227, 40135), (254, 40279), (272, 40345), (285, 40369), (292, 40396), (299, 40426), (319, 40501), (328, 40546), (334, 40573), (344, 40636),

Gene: Strokeseat\_30 Start: 26586, Stop: 27752, Start Num: 45

Candidate Starts for Strokeseat\_30:

(14, 26313), (16, 26316), (Start: 45 @26586 has 185 MA's), (67, 26670), (95, 26820), (101, 26874), (126, 27015), (215, 27096), (244, 27222), (245, 27228), (251, 27267), (267, 27342), (282, 27384), (291, 27420), (297, 27438), (303, 27474), (305, 27483), (335, 27597),

Gene: Stubby\_233 Start: 140004, Stop: 141434, Start Num: 46

Candidate Starts for Stubby\_233:

(37, 139962), (Start: 46 @140004 has 172 MA's), (73, 140094), (91, 140157), (104, 140280), (109, 140304), (130, 140388), (138, 140430), (151, 140472), (178, 140637), (179, 140640), (224, 140895), (235, 140934), (242, 140964), (254, 141027), (258, 141048), (259, 141057), (261, 141060), (269, 141093), (278, 141108), (316, 141243), (333, 141318), (342, 141378),

Gene: StubbySaigey\_257 Start: 143201, Stop: 144631, Start Num: 46

Candidate Starts for StubbySaigey\_257:

(Start: 46 @143201 has 172 MA's), (73, 143291), (91, 143354), (104, 143477), (109, 143501), (130, 143585), (138, 143627), (151, 143669), (178, 143834), (179, 143837), (224, 144092), (235, 144131), (242, 144161), (254, 144224), (258, 144245), (259, 144254), (261, 144257), (269, 144290), (278, 144305), (316, 144440), (333, 144515), (341, 144572), (342, 144575),

Gene: SuperGrey\_31 Start: 27204, Stop: 28496, Start Num: 45

Candidate Starts for SuperGrey\_31:

(Start: 45 @27204 has 185 MA's), (77, 27324), (103, 27513), (104, 27516), (121, 27594), (134, 27675), (198, 27717), (214, 27795), (244, 27921), (245, 27927), (251, 27966), (262, 28026), (267, 28041), (282, 28083), (291, 28119), (292, 28122), (297, 28137), (303, 28173), (305, 28182), (335, 28296), (356, 28407),

Gene: TChen\_30 Start: 26827, Stop: 28125, Start Num: 45

Candidate Starts for TChen\_30:

(Start: 45 @26827 has 185 MA's), (64, 26899), (77, 26947), (79, 26965), (92, 27019), (103, 27136), (104, 27139), (131, 27241), (142, 27298), (158, 27352), (179, 27478), (180, 27481), (196, 27595), (199, 27607), (209, 27670), (227, 27766), (254, 27883), (260, 27916), (265, 27928), (277, 27973), (290, 28012), (296, 28033), (301, 28066), (313, 28105),

Gene: TDanisky\_30 Start: 26346, Stop: 27617, Start Num: 45

Candidate Starts for TDanisky\_30:

(Start: 45 @26346 has 185 MA's), (77, 26463), (92, 26535), (103, 26652), (104, 26655), (121, 26733), (134, 26814), (198, 26856), (214, 26934), (244, 27060), (262, 27165), (267, 27180), (282, 27222), (291, 27258), (292, 27261), (303, 27312), (305, 27321), (335, 27435), (340, 27477), (343, 27486), (354, 27543), (356, 27546),

Gene: TM4\_29 Start: 23341, Stop: 24984, Start Num: 39

Candidate Starts for TM4\_29:

(Start: 39 @23341 has 3 MA's), (49, 23392), (52, 23395), (64, 23431), (73, 23467), (107, 23668), (112, 23698), (145, 23836), (160, 23908), (163, 23923), (175, 23989), (177, 23998), (178, 24007), (179, 24010), (192, 24112), (228, 24283), (238, 24319), (242, 24334), (254, 24397), (270, 24466), (285, 24499), (345, 24754), (366, 24886), (367, 24889), (369, 24952),

Gene: Tainan\_250 Start: 142139, Stop: 143569, Start Num: 46

Candidate Starts for Tainan\_250:

(Start: 46 @142139 has 172 MA's), (73, 142229), (74, 142232), (91, 142292), (104, 142415), (109, 142439), (130, 142523), (138, 142565), (151, 142607), (178, 142772), (179, 142775), (224, 143030), (235, 143069), (242, 143099), (254, 143162), (258, 143183), (259, 143192), (261, 143195), (269, 143228), (278, 143243), (316, 143378), (333, 143453), (341, 143510), (342, 143513),

Gene: Taj\_30 Start: 26531, Stop: 27685, Start Num: 45

Candidate Starts for Taj\_30:

(14, 26258), (20, 26279), (Start: 45 @26531 has 185 MA's), (67, 26615), (95, 26765), (101, 26819), (126, 26960), (215, 27041), (244, 27167), (245, 27173), (251, 27212), (262, 27272), (267, 27287), (282, 27329), (291, 27365), (292, 27368), (303, 27419), (305, 27428), (335, 27542), (356, 27653), (360, 27674),

Gene: Tchotchke\_30 Start: 25845, Stop: 27119, Start Num: 45

Candidate Starts for Tchotchke\_30:

(Start: 45 @25845 has 185 MA's), (77, 25965), (103, 26154), (104, 26157), (121, 26235), (134, 26316), (198, 26358), (214, 26436), (244, 26562), (245, 26568), (246, 26571), (251, 26607), (267, 26682), (282, 26724), (291, 26760), (297, 26778), (303, 26814), (305, 26823), (335, 26937), (340, 26979), (343, 26988), (354, 27045), (356, 27048),

Gene: Teardrop\_249 Start: 142528, Stop: 143958, Start Num: 46

Candidate Starts for Teardrop\_249:

(Start: 46 @142528 has 172 MA's), (73, 142618), (91, 142681), (104, 142804), (109, 142828), (130, 142912), (138, 142954), (151, 142996), (178, 143161), (179, 143164), (224, 143419), (235, 143458), (242, 143488), (254, 143551), (258, 143572), (259, 143581), (261, 143584), (269, 143617), (278, 143632), (316, 143767), (333, 143842), (341, 143899), (342, 143902),

Gene: Tesla\_52 Start: 29814, Stop: 31193, Start Num: 45

Candidate Starts for Tesla\_52:

(Start: 45 @29814 has 185 MA's), (58, 29871), (68, 29907), (73, 29931), (77, 29943), (94, 30066), (97, 30108), (104, 30180), (109, 30204), (110, 30210), (131, 30291), (149, 30360), (150, 30363), (158, 30399), (163, 30435), (176, 30507), (178, 30525), (179, 30528), (196, 30645), (200, 30675), (227, 30807), (234, 30828), (242, 30861), (253, 30915), (254, 30921), (287, 31041), (294, 31071), (298, 31092), (305, 31122),

Gene: ThetaBob\_29 Start: 25694, Stop: 27004, Start Num: 45

Candidate Starts for ThetaBob\_29:

(Start: 45 @25694 has 185 MA's), (77, 25811), (92, 25883), (103, 26000), (104, 26003), (121, 26081), (134, 26162), (198, 26213), (232, 26390), (244, 26432), (246, 26441), (282, 26597), (335, 26819), (340, 26861), (343, 26870), (351, 26912), (354, 26927), (356, 26930), (357, 26936), (364, 26984),

Gene: Thonko\_46 Start: 38334, Stop: 39899, Start Num: 51

Candidate Starts for Thonko\_46:

(Start: 51 @38334 has 4 MA's), (Start: 55 @38343 has 1 MA's), (75, 38418), (82, 38454), (86, 38466), (99, 38607), (102, 38646), (104, 38658), (105, 38664), (123, 38760), (140, 38865), (160, 38952), (163, 38967), (173, 39015), (178, 39051), (203, 39213), (226, 39300), (227, 39309), (254, 39453), (272, 39519), (283, 39534), (285, 39543), (292, 39570), (317, 39672), (324, 39702), (328, 39720), (355, 39846),

Gene: TinyTim\_249 Start: 142495, Stop: 143925, Start Num: 46

Candidate Starts for TinyTim\_249:

(Start: 46 @142495 has 172 MA's), (73, 142585), (91, 142648), (104, 142771), (109, 142795), (130, 142879), (138, 142921), (151, 142963), (178, 143128), (179, 143131), (224, 143386), (235, 143425), (242, 143455), (254, 143518), (258, 143539), (259, 143548), (261, 143551), (269, 143584), (278, 143599), (316, 143734), (333, 143809), (341, 143866), (342, 143869),

Gene: Tonenili\_272 Start: 147835, Stop: 149253, Start Num: 46

Candidate Starts for Tonenili\_272:

(Start: 46 @147835 has 172 MA's), (91, 147988), (96, 148060), (102, 148099), (104, 148111), (109, 148135), (130, 148246), (138, 148288), (197, 148585), (205, 148642), (221, 148702), (253, 148831), (257, 148855), (273, 148918), (278, 148927), (316, 149062), (332, 149131), (333, 149137), (342, 149197),

Gene: Toron\_31 Start: 26744, Stop: 28024, Start Num: 45

Candidate Starts for Toron\_31:

(Start: 45 @26744 has 185 MA's), (77, 26864), (103, 27053), (104, 27056), (142, 27215), (158, 27266), (164, 27305), (179, 27392), (180, 27395), (191, 27497), (192, 27500), (199, 27521), (209, 27584), (227, 27680), (254, 27797), (258, 27818), (260, 27830), (277, 27875), (290, 27914), (298, 27953), (300, 27962), (313, 28007),

Gene: Tortoise16\_248 Start: 142508, Stop: 143938, Start Num: 46

Candidate Starts for Tortoise16\_248:

(Start: 46 @142508 has 172 MA's), (73, 142598), (91, 142661), (104, 142784), (109, 142808), (130, 142892), (138, 142934), (151, 142976), (178, 143141), (179, 143144), (224, 143399), (235, 143438), (242, 143468), (254, 143531), (258, 143552), (259, 143561), (261, 143564), (269, 143597), (278, 143612), (316, 143747), (333, 143822), (341, 143879), (342, 143882),

Gene: Totinger\_31 Start: 26230, Stop: 27501, Start Num: 45

Candidate Starts for Totinger\_31:

(Start: 45 @26230 has 185 MA's), (77, 26347), (92, 26419), (103, 26536), (104, 26539), (121, 26617), (134, 26698), (198, 26740), (214, 26818), (244, 26944), (262, 27049), (267, 27064), (282, 27106), (291, 27142), (292, 27145), (303, 27196), (305, 27205), (335, 27319), (340, 27361), (343, 27370), (354, 27427), (356, 27430),

Gene: Trinitium\_247 Start: 141249, Stop: 142679, Start Num: 46

Candidate Starts for Trinitium\_247:

(Start: 46 @141249 has 172 MA's), (73, 141339), (91, 141402), (104, 141525), (109, 141549), (130, 141633), (138, 141675), (151, 141717), (178, 141882), (179, 141885), (224, 142140), (235, 142179), (242, 142209), (254, 142272), (258, 142293), (259, 142302), (261, 142305), (269, 142338), (278, 142353), (316, 142488), (333, 142563), (341, 142620), (342, 142623),

Gene: Turret\_241 Start: 140382, Stop: 141812, Start Num: 46

Candidate Starts for Turret\_241:

(Start: 46 @140382 has 172 MA's), (73, 140472), (91, 140535), (104, 140658), (109, 140682), (130, 140766), (138, 140808), (151, 140850), (178, 141015), (179, 141018), (224, 141273), (235, 141312), (242, 141342), (254, 141405), (258, 141426), (259, 141435), (261, 141438), (269, 141471), (278, 141486), (316, 141621), (333, 141696), (341, 141753), (342, 141756),

Gene: Tweety\_30 Start: 26532, Stop: 27743, Start Num: 45

Candidate Starts for Tweety\_30:

(14, 26259), (20, 26280), (Start: 45 @26532 has 185 MA's), (67, 26616), (95, 26766), (101, 26820), (126, 26961), (215, 27042), (244, 27168), (245, 27174), (246, 27177), (267, 27288), (282, 27330), (291, 27366), (303, 27420), (305, 27429), (335, 27543), (356, 27654),

Gene: TyDawg\_35 Start: 29799, Stop: 31166, Start Num: 61

Candidate Starts for TyDawg\_35:

(Start: 61 @29799 has 14 MA's), (76, 29856), (80, 29883), (91, 29922), (104, 30060), (109, 30084), (128, 30162), (130, 30168), (131, 30171), (152, 30246), (177, 30378), (181, 30405), (182, 30414), (190, 30468), (197, 30495), (201, 30525), (212, 30579), (231, 30651), (274, 30837), (311, 30957), (316, 30978), (322, 30996), (324, 31011), (331, 31041), (336, 31071), (342, 31107), (343, 31110), (349, 31146),

Gene: Tyke\_247 Start: 144631, Stop: 146061, Start Num: 46

Candidate Starts for Tyke\_247:

(Start: 46 @144631 has 172 MA's), (73, 144721), (91, 144784), (104, 144907), (109, 144931), (130, 145015), (138, 145057), (151, 145099), (178, 145264), (179, 145267), (224, 145522), (235, 145561), (242, 145591), (254, 145654), (258, 145675), (259, 145684), (261, 145687), (269, 145720), (278, 145735), (316, 145870), (333, 145945), (341, 146002), (342, 146005),

Gene: UncleRicky\_33 Start: 27639, Stop: 28832, Start Num: 45

Candidate Starts for UncleRicky\_33:

(Start: 45 @27639 has 185 MA's), (67, 27723), (95, 27873), (101, 27927), (126, 28068), (215, 28149), (244, 28275), (245, 28281), (267, 28395), (282, 28437), (291, 28473), (297, 28491), (303, 28527), (305, 28536), (335, 28650), (340, 28692), (343, 28701), (354, 28758), (356, 28761),

Gene: ValleyTerrace\_251 Start: 141959, Stop: 143389, Start Num: 46

Candidate Starts for ValleyTerrace\_251:

(Start: 46 @141959 has 172 MA's), (73, 142049), (91, 142112), (104, 142235), (109, 142259), (130, 142343), (138, 142385), (151, 142427), (178, 142592), (179, 142595), (224, 142850), (235, 142889), (242, 142919), (254, 142982), (258, 143003), (259, 143012), (261, 143015), (269, 143048), (278, 143063), (316, 143198), (333, 143273), (341, 143330), (342, 143333),

Gene: VasuNzinga\_54 Start: 29883, Stop: 31262, Start Num: 45

Candidate Starts for VasuNzinga\_54:

(Start: 45 @29883 has 185 MA's), (58, 29940), (68, 29976), (73, 30000), (77, 30012), (94, 30135), (97, 30177), (104, 30249), (109, 30273), (110, 30279), (131, 30360), (149, 30429), (150, 30432), (158, 30468), (163, 30504), (176, 30576), (178, 30594), (179, 30597), (196, 30714), (200, 30744), (227, 30876), (234, 30897), (242, 30930), (253, 30984), (254, 30990), (287, 31110), (294, 31140), (298, 31161), (305, 31191),

Gene: Velveteen\_26 Start: 22498, Stop: 23733, Start Num: 45

Candidate Starts for Velveteen\_26:

(Start: 45 @22498 has 185 MA's), (77, 22618), (92, 22690), (103, 22807), (104, 22810), (121, 22888), (134, 22969), (198, 23011), (214, 23089), (244, 23215), (245, 23221), (251, 23260), (262, 23320), (267, 23335), (282, 23377), (291, 23413), (292, 23416), (303, 23467), (305, 23476), (335, 23590), (356, 23701), (360, 23722),

Gene: Veteran\_30 Start: 26344, Stop: 27537, Start Num: 45

Candidate Starts for Veteran\_30:

(Start: 45 @26344 has 185 MA's), (67, 26428), (95, 26578), (101, 26632), (126, 26773), (215, 26854), (244, 26980), (245, 26986), (246, 26989), (251, 27025), (267, 27100), (282, 27142), (291, 27178), (305, 27241), (335, 27355), (340, 27397), (343, 27406), (354, 27463), (356, 27466),

Gene: Vincenzo\_44 Start: 41174, Stop: 42871, Start Num: 38

Candidate Starts for Vincenzo\_44:

(Start: 38 @41174 has 26 MA's), (57, 41243), (58, 41249), (65, 41267), (69, 41288), (74, 41303), (89, 41375), (97, 41468), (104, 41540), (109, 41564), (127, 41666), (178, 41927), (187, 42008), (192,

42032), (193, 42035), (226, 42188), (227, 42197), (231, 42206), (237, 42230), (254, 42341), (272, 42410), (285, 42434), (286, 42437), (292, 42461), (299, 42491), (319, 42566), (324, 42593), (328, 42611), (334, 42638), (357, 42764),

Gene: Violac\_32 Start: 27032, Stop: 28225, Start Num: 45

Candidate Starts for Violac\_32:

(14, 26759), (21, 26780), (Start: 45 @27032 has 185 MA's), (67, 27116), (95, 27266), (101, 27320), (126, 27461), (215, 27542), (244, 27668), (245, 27674), (246, 27677), (251, 27713), (255, 27743), (267, 27788), (282, 27830), (292, 27869), (297, 27884), (303, 27920), (305, 27929), (335, 28043), (340, 28085), (343, 28094), (354, 28151), (356, 28154),

Gene: VioletZ\_45 Start: 40652, Stop: 42388, Start Num: 38

Candidate Starts for VioletZ\_45:

(Start: 38 @40652 has 26 MA's), (58, 40727), (65, 40745), (69, 40766), (74, 40781), (89, 40853), (97, 40946), (104, 41018), (109, 41042), (125, 41129), (127, 41144), (169, 41333), (178, 41408), (187, 41489), (192, 41513), (193, 41516), (226, 41669), (227, 41678), (231, 41687), (249, 41783), (254, 41822), (272, 41891), (285, 41915), (292, 41942), (299, 41972), (321, 42050), (324, 42074), (328, 42092), (329, 42095), (339, 42164), (358, 42248),

Gene: Waleliano\_43 Start: 40576, Stop: 42312, Start Num: 38

Candidate Starts for Waleliano\_43:

(Start: 38 @40576 has 26 MA's), (58, 40651), (65, 40669), (69, 40690), (74, 40705), (89, 40777), (97, 40870), (104, 40942), (109, 40966), (125, 41053), (127, 41068), (168, 41251), (178, 41332), (187, 41413), (192, 41437), (193, 41440), (202, 41482), (226, 41593), (227, 41602), (231, 41611), (249, 41707), (254, 41746), (272, 41815), (285, 41839), (292, 41866), (299, 41896), (319, 41971), (321, 41974), (324, 41998), (325, 42004), (328, 42016), (329, 42019), (334, 42043), (339, 42088), (358, 42172),

Gene: Wally\_248 Start: 141943, Stop: 143373, Start Num: 46

Candidate Starts for Wally\_248:

(Start: 46 @141943 has 172 MA's), (73, 142033), (91, 142096), (104, 142219), (109, 142243), (130, 142327), (138, 142369), (151, 142411), (178, 142576), (179, 142579), (224, 142834), (235, 142873), (242, 142903), (254, 142966), (258, 142987), (259, 142996), (261, 142999), (269, 143032), (278, 143047), (316, 143182), (333, 143257), (341, 143314), (342, 143317),

Gene: Wee\_31 Start: 27069, Stop: 28223, Start Num: 45

Candidate Starts for Wee\_31:

(14, 26796), (20, 26817), (Start: 45 @27069 has 185 MA's), (67, 27153), (95, 27303), (101, 27357), (126, 27498), (215, 27579), (244, 27705), (245, 27711), (251, 27750), (262, 27810), (267, 27825), (282, 27867), (291, 27903), (292, 27906), (303, 27957), (305, 27966), (335, 28080), (356, 28191), (360, 28212),

Gene: Whatsapiecost\_31 Start: 26670, Stop: 27956, Start Num: 45

Candidate Starts for Whatsapiecost\_31:

(Start: 45 @26670 has 185 MA's), (77, 26790), (92, 26862), (103, 26979), (104, 26982), (131, 27084), (142, 27141), (158, 27195), (170, 27258), (179, 27321), (180, 27324), (196, 27438), (199, 27450), (209, 27513), (227, 27600), (236, 27627), (254, 27717), (258, 27738), (260, 27750), (265, 27762), (268, 27786), (296, 27867), (301, 27900),

Gene: Whouxphf\_31 Start: 26736, Stop: 28010, Start Num: 45

Candidate Starts for Whouxphf\_31:

(Start: 45 @26736 has 185 MA's), (77, 26856), (92, 26928), (103, 27045), (104, 27048), (121, 27126), (134, 27207), (198, 27249), (214, 27327), (244, 27453), (245, 27459), (251, 27498), (267, 27573),

(282, 27615), (292, 27654), (297, 27669), (303, 27705), (305, 27714), (335, 27828), (340, 27870), (343, 27879), (354, 27936), (356, 27939),

Gene: WillSterrel\_32 Start: 27871, Stop: 29145, Start Num: 45

Candidate Starts for WillSterrel\_32:

(Start: 45 @27871 has 185 MA's), (77, 27991), (103, 28180), (104, 28183), (121, 28261), (134, 28342), (198, 28384), (214, 28462), (244, 28588), (245, 28594), (262, 28693), (267, 28708), (282, 28750), (291, 28786), (297, 28804), (303, 28840), (305, 28849), (335, 28963), (340, 29005), (343, 29014), (354, 29071), (356, 29074),

Gene: Willis\_251 Start: 142882, Stop: 144312, Start Num: 46

Candidate Starts for Willis\_251:

(Start: 46 @142882 has 172 MA's), (73, 142972), (91, 143035), (104, 143158), (109, 143182), (130, 143266), (138, 143308), (151, 143350), (178, 143515), (179, 143518), (224, 143773), (235, 143812), (242, 143842), (254, 143905), (258, 143926), (259, 143935), (261, 143938), (269, 143971), (278, 143986), (316, 144121), (333, 144196), (341, 144253), (342, 144256),

Gene: Xincheng\_42 Start: 40012, Stop: 41748, Start Num: 38

Candidate Starts for Xincheng\_42:

(Start: 38 @40012 has 26 MA's), (47, 40057), (58, 40087), (65, 40105), (69, 40126), (74, 40141), (89, 40213), (97, 40306), (104, 40378), (109, 40402), (125, 40489), (127, 40504), (157, 40624), (168, 40687), (169, 40693), (178, 40768), (187, 40849), (192, 40873), (193, 40876), (226, 41029), (227, 41038), (231, 41047), (254, 41182), (272, 41251), (284, 41269), (292, 41302), (299, 41332), (321, 41410), (324, 41434), (328, 41452), (334, 41479), (339, 41524), (350, 41578), (358, 41608),

Gene: Yassified\_246 Start: 142078, Stop: 143508, Start Num: 46

Candidate Starts for Yassified\_246:

(37, 142036), (Start: 46 @142078 has 172 MA's), (73, 142168), (91, 142231), (104, 142354), (109, 142378), (130, 142462), (138, 142504), (151, 142546), (178, 142711), (179, 142714), (224, 142969), (235, 143008), (242, 143038), (254, 143101), (258, 143122), (259, 143131), (261, 143134), (269, 143167), (278, 143182), (316, 143317), (333, 143392), (342, 143452),

Gene: YemiJoy2021\_251 Start: 143613, Stop: 145043, Start Num: 46

Candidate Starts for YemiJoy2021\_251:

(Start: 46 @143613 has 172 MA's), (73, 143703), (91, 143766), (104, 143889), (109, 143913), (130, 143997), (138, 144039), (151, 144081), (178, 144246), (179, 144249), (224, 144504), (235, 144543), (242, 144573), (254, 144636), (258, 144657), (259, 144666), (261, 144669), (269, 144702), (278, 144717), (316, 144852), (333, 144927), (341, 144984), (342, 144987),

Gene: YoungMoneyMata\_250 Start: 143074, Stop: 144504, Start Num: 46

Candidate Starts for YoungMoneyMata\_250:

(Start: 46 @143074 has 172 MA's), (73, 143164), (91, 143227), (104, 143350), (109, 143374), (130, 143458), (138, 143500), (151, 143542), (178, 143707), (179, 143710), (224, 143965), (235, 144004), (242, 144034), (254, 144097), (258, 144118), (259, 144127), (261, 144130), (269, 144163), (278, 144178), (316, 144313), (333, 144388), (341, 144445), (342, 144448),

Gene: Yucca\_251 Start: 144054, Stop: 145484, Start Num: 46

Candidate Starts for Yucca\_251:

(Start: 46 @144054 has 172 MA's), (73, 144144), (91, 144207), (104, 144330), (109, 144354), (130, 144438), (138, 144480), (151, 144522), (178, 144687), (179, 144690), (224, 144945), (235, 144984), (242, 145014), (254, 145077), (258, 145098), (259, 145107), (261, 145110), (269, 145143), (278, 145158), (316, 145293), (333, 145368), (341, 145425), (342, 145428),

Gene: Zalkecks\_249 Start: 142711, Stop: 144141, Start Num: 46

Candidate Starts for Zalkecks\_249:

(Start: 46 @142711 has 172 MA's), (73, 142801), (91, 142864), (104, 142987), (109, 143011), (130, 143095), (138, 143137), (151, 143179), (178, 143344), (179, 143347), (224, 143602), (235, 143641), (242, 143671), (254, 143734), (258, 143755), (259, 143764), (261, 143767), (269, 143800), (278, 143815), (316, 143950), (333, 144025), (341, 144082), (342, 144085),

Gene: Zapner\_37 Start: 26903, Stop: 28201, Start Num: 45

Candidate Starts for Zapner\_37:

(Start: 45 @26903 has 185 MA's), (64, 26975), (77, 27023), (79, 27041), (92, 27095), (103, 27212), (104, 27215), (131, 27317), (142, 27374), (158, 27428), (170, 27491), (179, 27554), (180, 27557), (196, 27671), (199, 27683), (209, 27746), (227, 27842), (254, 27959), (260, 27992), (265, 28004), (296, 28109), (301, 28142), (313, 28181),

Gene: Zeenon\_251 Start: 143245, Stop: 144675, Start Num: 46

Candidate Starts for Zeenon\_251:

(Start: 46 @143245 has 172 MA's), (73, 143335), (91, 143398), (104, 143521), (109, 143545), (130, 143629), (138, 143671), (151, 143713), (178, 143878), (179, 143881), (224, 144136), (235, 144175), (242, 144205), (254, 144268), (258, 144289), (259, 144298), (261, 144301), (269, 144334), (278, 144349), (316, 144484), (333, 144559), (341, 144616), (342, 144619),

Gene: Zemanar\_44 Start: 40552, Stop: 42288, Start Num: 38

Candidate Starts for Zemanar\_44:

(Start: 38 @40552 has 26 MA's), (58, 40627), (65, 40645), (69, 40666), (74, 40681), (89, 40753), (97, 40846), (104, 40918), (109, 40942), (125, 41029), (127, 41044), (168, 41227), (178, 41308), (187, 41389), (192, 41413), (193, 41416), (202, 41458), (226, 41569), (227, 41578), (231, 41587), (249, 41683), (254, 41722), (272, 41791), (285, 41815), (292, 41842), (299, 41872), (321, 41950), (324, 41974), (328, 41992), (329, 41995), (334, 42019), (339, 42064), (358, 42148),

Gene: Zerg\_30 Start: 26357, Stop: 27550, Start Num: 45

Candidate Starts for Zerg\_30:

(Start: 45 @26357 has 185 MA's), (67, 26441), (95, 26591), (101, 26645), (126, 26786), (215, 26867), (244, 26993), (245, 26999), (251, 27038), (262, 27098), (267, 27113), (282, 27155), (291, 27191), (303, 27245), (305, 27254), (335, 27368), (340, 27410), (343, 27419), (354, 27476), (356, 27479),

Gene: ZygoTaiga\_247 Start: 144351, Stop: 145781, Start Num: 46

Candidate Starts for ZygoTaiga\_247:

(Start: 46 @144351 has 172 MA's), (73, 144441), (91, 144504), (104, 144627), (109, 144651), (130, 144735), (138, 144777), (151, 144819), (178, 144984), (179, 144987), (224, 145242), (235, 145281), (242, 145311), (254, 145374), (258, 145395), (259, 145404), (261, 145407), (269, 145440), (278, 145455), (316, 145590), (333, 145665), (341, 145722), (342, 145725),