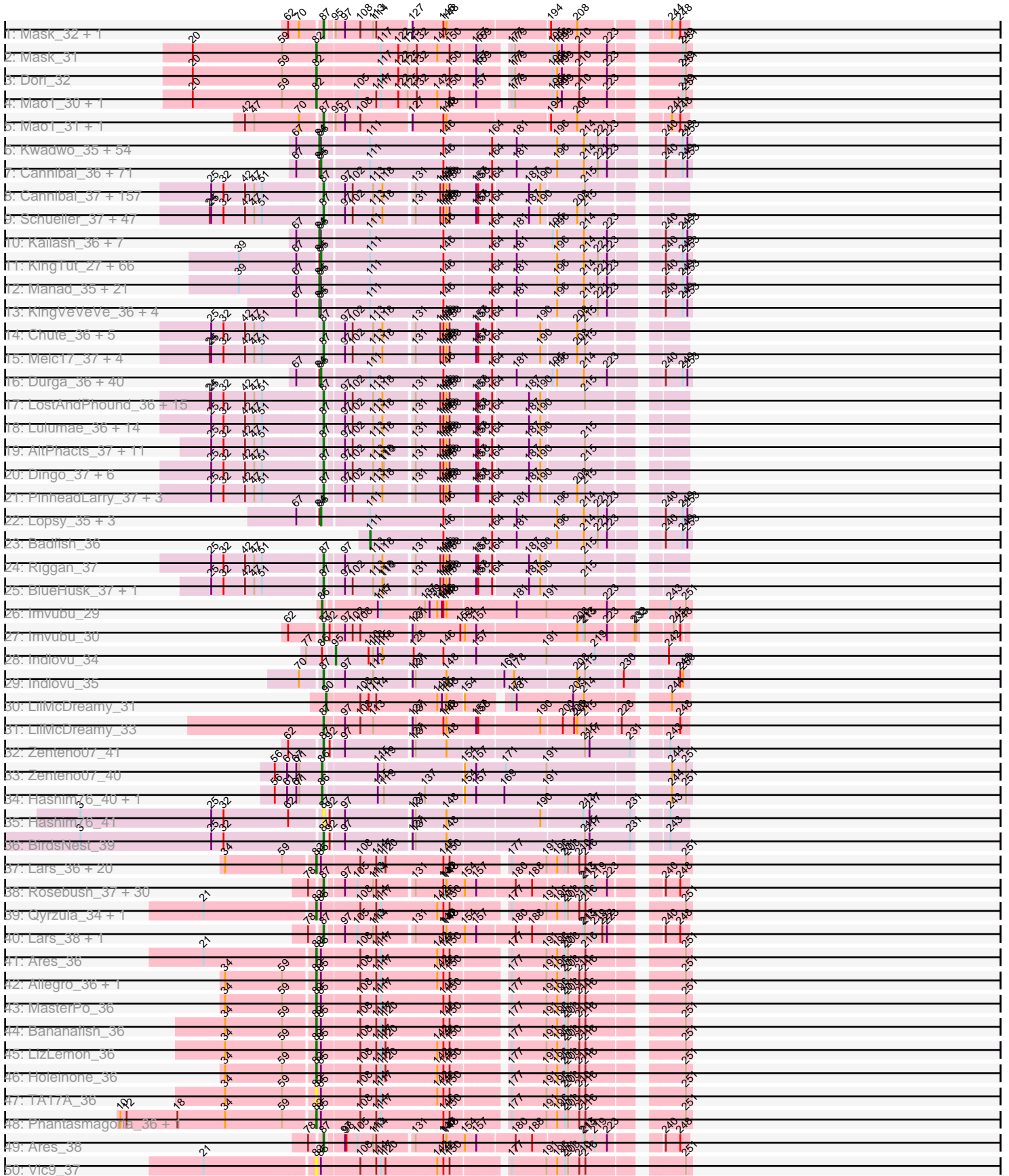
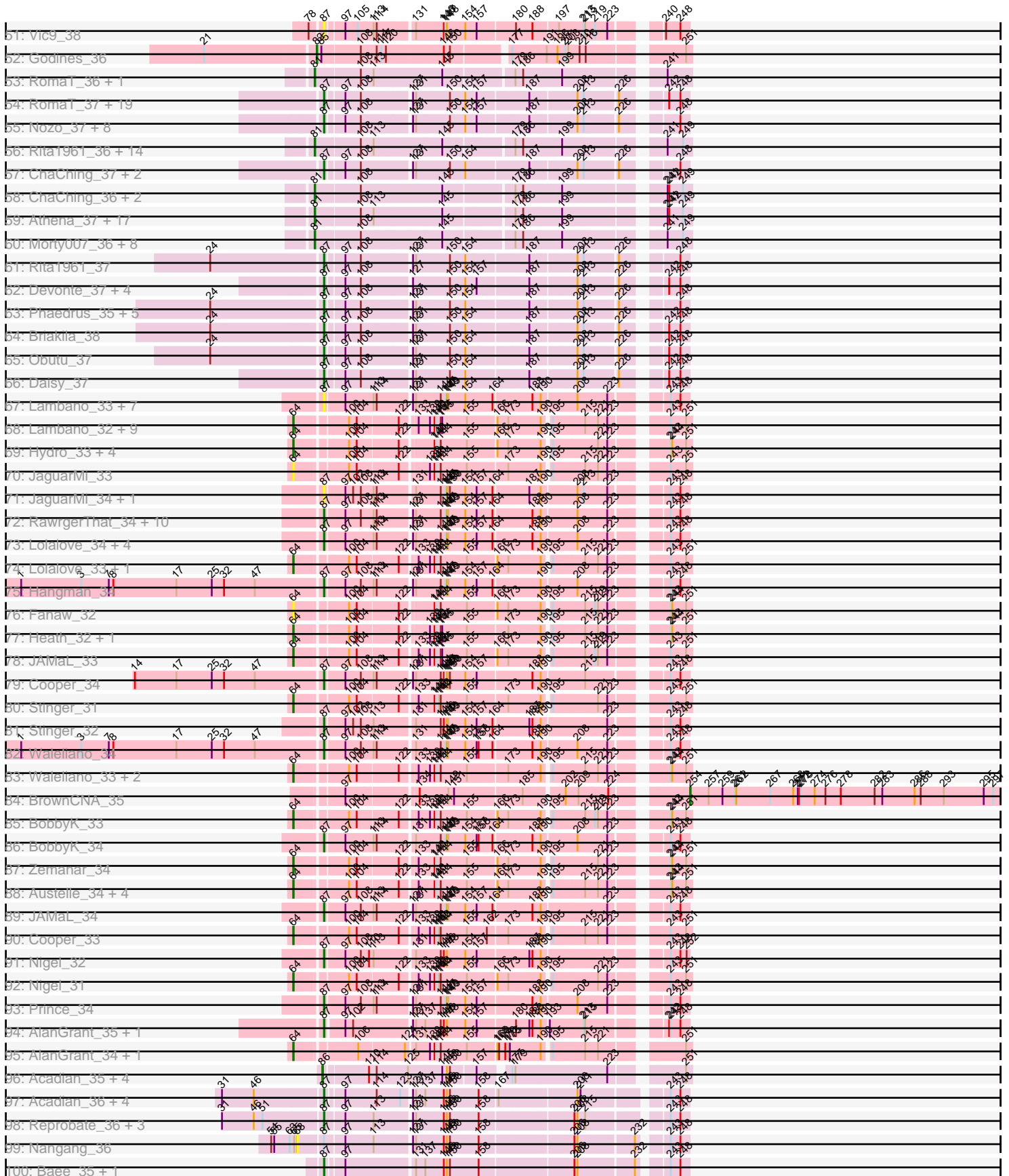


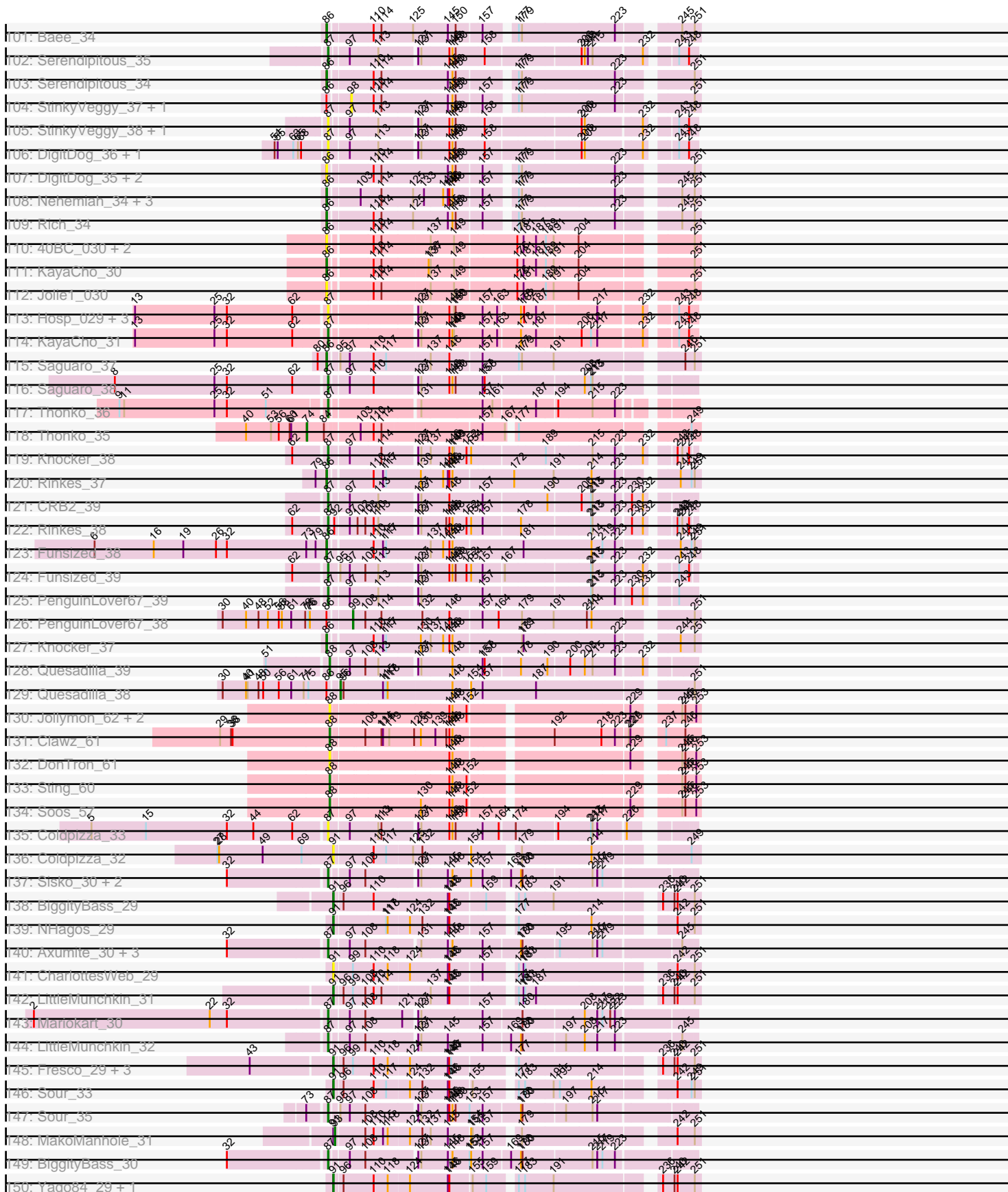
Pham 193613



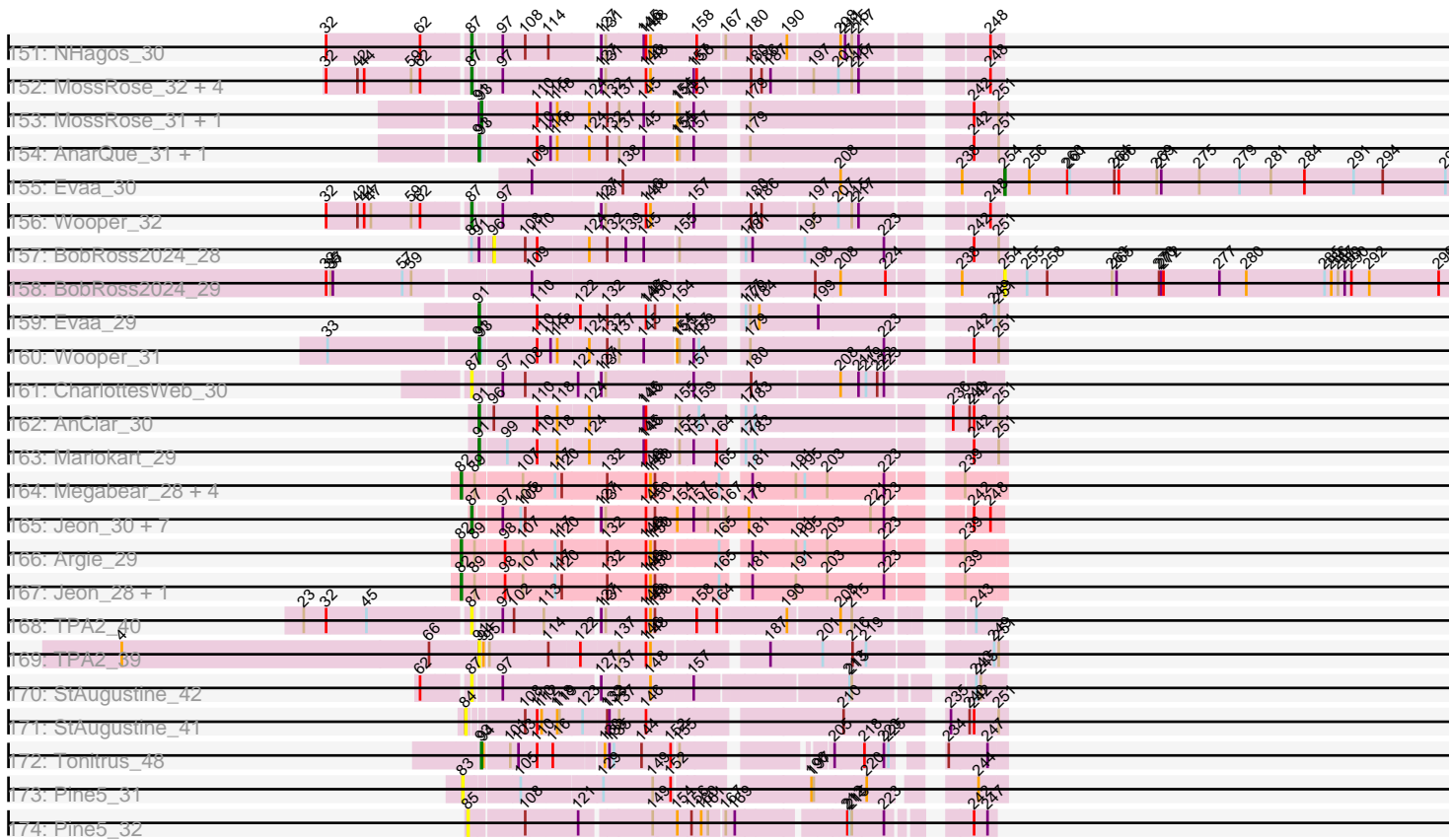
Pham 193613



Pham 193613



Pham 193613



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 193613 Report

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

Pham number 193613 has 940 members, 100 are drafts.

Phages represented in each track:

- Track 1 : Mask\_32, Dori\_33
- Track 2 : Mask\_31
- Track 3 : Dori\_32
- Track 4 : Mao1\_30, Sejanus\_31
- Track 5 : Mao1\_31, Sejanus\_32
- Track 6 : Kwadwo\_35, Mana\_35, Fang\_36, IsaacEli\_36, Scoot17C\_36, Lasso\_36, Mesh1\_36, UAch1\_36, MitKao\_36, TomBombadil\_36, Xavier\_35, FriarPreacher\_36, PinheadLarry\_36, Harvey\_36, Vortex\_36, Chah\_37, Hertubise\_36, QueenBeane\_36, Held\_36, Chunky\_36, Vaticameos\_36, YouGoGlencoco\_36, Cosmolli16\_35, Gyarad\_0036, LuckyMarjie\_35, TallGrassMM\_36, Piglet\_0035, JacAttac\_36, OSmaximus\_36, Puhltonio\_36, Dione\_35, UncleHowie\_36, Squid\_36, Daffy\_36, Phamished\_36, Vista\_36, ABU\_36, FluffyNinja\_36, Mosaic\_35, Serendipity\_36, Serpentine\_0036, Murdoc\_36, Haimas\_36, Sophia\_35, Nicole21\_36, Surely\_36, ThreeOh3D2\_36, Megatron\_36, Kikipoo\_36, CamL\_36, Yoshand\_36, Magic8\_36, Swish\_36, Gareth\_35, Waterdiva\_36
- Track 7 : Cannibal\_36, Schueller\_36, Morgushi\_36, Freya\_35, Olak\_35, Childish\_35, BlackStallion\_36, Mcshane\_35, LostAndPhound\_35, Mecca\_35, Samaymay\_36, Haleema\_35, Timmi\_35, Bishoperium\_35, Orion\_36, Potter\_35, PhrodoBaggins\_35, Phareon\_36, Pacifista\_35, Fozzie\_35, Omniscient\_36, Banjo\_35, Iridoclysis\_36, Adriana\_36, Lego3393\_36, Kimbrough\_36, Lumine\_35, LeeLot\_36, Oosterbaan\_36, Matalotodo\_36, Sigman\_36, LeiMonet\_36, Inverness\_36, Eugenia\_36, LemonSlice\_36, DonSanchon\_35, MRabcd\_35, HighStump\_35, Dice\_35, Cher\_35, Boehler\_36, Pherdinand\_36, Gwilliam\_36, Katniss\_36, Squiggle\_36, True\_35, Newman\_36, PhatCats2014\_36, Simielle\_35, Morty\_36, PG1\_36, Phunky\_36, Legolas\_35, Thora\_36, Toni\_35, Hetaeria\_36, Mutante\_35, Hamish\_36, Orfeu\_35, Placalicious\_35, DelRivs\_35, SassyCat97\_35, Chorkpop\_36, Solosis\_35, Scrick\_36, Maru\_35, Inchworm\_36, Selr12\_36, Ricotta\_35, Soile\_36, Mulan\_35, FugateOSU\_35
- Track 8 : Cannibal\_37, KingTut\_28, Manad\_36, Mana\_36, Morgushi\_37, Freya\_36, Olak\_36, Childish\_36, Scoot17C\_37, BlackStallion\_37, Waterdiva\_37, Puhltonio\_37, Lasso\_37, Mcshane\_36, UAch1\_37, Mecca\_36, Lumine\_36, Samaymay\_37, Schadenfreude\_36, Haleema\_36, Scrick\_37, Timmi\_36, TomBombadil\_37, Bishoperium\_36, Craff\_37, Phipps\_37, Altwerkus\_36, Lulwa\_37, PhrodoBaggins\_36, Megatron\_37, FriarPreacher\_37, LeeLot\_37, Kwadwo\_36, Murdoc\_37, Podrick\_37, Bluephacebaby\_36, Antonia\_36, Lopsy\_36, Pops\_37, Harvey\_37, Anderson\_37, SassyCat97\_36, Vortex\_37, Chah\_38, Hertubise\_37, RedMaple\_36, Telesworld\_36, QueenBeane\_37, Fozzie\_36, Nyala\_36, Banjo\_36, Phareon\_37, Iridoclysis\_37,

Badfish\_37, Fringe\_37, Adriana\_37, Lego3393\_37, Giraffe\_37, Kimbrough\_37, Oosterbaan\_37, Colbert\_37, Matalotodo\_37, Kahve\_36, SilverBell\_37, Pacifista\_36, YouGoGlencoco\_37, Zelda\_37, Cosmolli16\_36, LemonSlice\_37, Usavi\_37, DonSanchon\_36, Legolas\_36, Mesh1\_37, Eremos\_37, Apizium\_36, Beaglebox\_36, Daka\_37, Dice\_36, Orfeu\_36, Cher\_36, Carthage\_35, JacAttac\_37, Morty\_37, OSmaximus\_37, Dione\_36, Eugenia\_37, Daffy\_37, Skippy\_37, Katniss\_37, Squiggle\_37, Plmatters\_37, True\_36, PG1\_37, Gophee\_37, Kloppinator\_37, IsaacEli\_37, PhatCats2014\_37, HenryJackson\_36, Squid\_37, Zaider\_38, CamL\_37, Phunky\_37, Cornobble\_36, FugateOSU\_36, ABU\_37, Numberten\_37, Tooj\_37, Hamish\_37, LuckyMarjie\_36, Aelin\_36, Thora\_37, Vaishali24\_36, HighStump\_36, Hetaeria\_37, Swish\_37, Vivaldi\_37, Mutante\_36, Serendipity\_37, Andre\_37, TallGrassMM\_37, CharlieGBrown\_36, Placalicious\_36, Haimas\_37, Suffolk\_37, Xavier\_36, Jillium\_36, Sophia\_36, Grand2040\_36, Surely\_37, Slatt\_37, Vista\_37, Solosis\_36, Virapocalypse\_37, Fang\_37, Maru\_36, ThreeOh3D2\_37, Kikipoo\_37, Sigman\_37, FluffyNinja\_37, Burr\_36, Yoshand\_37, Selr12\_37, UncleHowie\_37, Ricotta\_36, Prickles\_37, Pherdinand\_37, JangoPhett\_37, Boehler\_37, Phamished\_37, DoesntMatter\_37, KLucky39\_37, Pipsqueak\_37, Buckeye\_37, Omniscient\_37, Gareth\_36, Quisquiliae\_37, Robyn\_36, Orion\_37

- Track 9 : Schueller\_37, Kailash\_37, BatteryCK\_36, DaddyDaniels\_37, Durga\_37, Ashraf\_36, Emiris\_37, Jiraiya\_37, Cobra\_37, JDog\_36, Etaye\_37, Doddsville\_37, Kwksand96\_36, CampRoach\_37, GeneCoco\_37, Brilliant\_37, Jiminy\_36, Mag7\_36, Longacauda\_36, Hartsy\_37, Hocus\_36, Veritas\_36, Swiphy\_38, Trypo\_37, JakeO\_36, Struggle\_36, Pinkman\_36, ImtiyazSitla\_36, PhatLouie\_37, PhrankReynolds\_36, Labeouficaum\_36, DelRivs\_36, Phergie\_36, PhenghisKhan\_36, Rimu\_38, DuchessDung\_35, Phleuron\_36, MrPhizzler\_36, Soile\_37, Wallhey\_36, Maskar\_36, Derpp\_36, TyrionL\_36, Zonia\_37, Thunderbird\_36, LasagnaCat\_37, Duggie\_36, MichaelPhcott\_36
- Track 10 : Kailash\_36, Cobra\_36, GeneCoco\_36, Derpp\_35, Wallhey\_35, Hocus\_35, TyrionL\_35, MichaelPhcott\_35
- Track 11 : KingTut\_27, Chute\_35, Sheila\_36, Schadenfreude\_35, Basato\_37, Aelin\_35, Lulumae\_35, AltPhacts\_36, Phipps\_36, Lulwa\_36, CheetO\_36, Dingo\_36, HenryJackson\_35, Podrick\_36, Beaglebox\_35, Robyn\_35, Bluephacebaby\_35, ProfessorX\_36, Chaelin\_36, Anderson\_36, Tomlarah\_36, Charles1\_36, RedMaple\_35, DirtJuice\_36, Pops\_36, Nyala\_35, Kahve\_35, SilverBell\_36, Zelda\_36, Frankicide\_36, Skippy\_36, Coletti\_35, Plmatters\_36, Megamind20\_36, Soto\_36, Zaider\_37, Roscoe\_37, Cornobble\_35, Fringe\_36, Numberten\_36, Vaishali24\_35, BlueHusk\_36, OliverWalter\_36, Windsor\_35, Kloppinator\_36, Virgeve\_35, HSavage\_36, Andre\_36, Roy17\_36, KlimbOn\_36, Suffolk\_36, Mikota\_36, Slatt\_36, Virapocalypse\_36, Crownjwl\_36, Burr\_35, Valjean\_36, Olive\_36, MiniBoss\_36, Prickles\_36, Orwigg\_36, Horchata\_36, DoesntMatter\_36, Gophee\_36, Pipsqueak\_36, Buckeye\_36, Quisquiliae\_36
- Track 12 : Manad\_35, Riggan\_36, Craff\_36, ShiVal\_36, Roliet\_36, Telesworld\_35, EmpTee\_36, Apizium\_35, Altwerkus\_35, Carthage\_34, Antonia\_35, JakeO\_35, Keitherie\_36, Vivaldi\_36, Nacho\_0036, CharlieGBrown\_35, Spartan300\_36, Jillium\_35, JangoPhett\_36, KLucky39\_36, AbsoluteMadLad\_35, SDcharge11\_36
- Track 13 : KingVeVeVe\_36, Colbert\_36, Eremos\_36, Daka\_36, Grand2040\_35
- Track 14 : Chute\_36, Chaelin\_37, Coletti\_36, Windsor\_36, Keitherie\_37, Virgeve\_36
- Track 15 : Melc17\_37, MelsMeow\_36, Weher20\_37, Dati\_37, Oline\_36
- Track 16 : Durga\_36, MelsMeow\_35, Brilliant\_36, Ashraf\_35, Doddsville\_36, Emiris\_36, Jiraiya\_36, Kwksand96\_35, CampRoach\_36, Jiminy\_35, Longacauda\_35, Mag7\_35, Hartsy\_36, LasagnaCat\_36, Rimu\_37, Veritas\_35, Swiphy\_37, Etaye\_36, Trypo\_36, Struggle\_35, Weher20\_36, Pinkman\_35, PhrankReynolds\_35, Melc17\_36,

Labeouficaum\_35, Phergie\_35, PhenghisKhan\_35, DuchessDung\_34, Phleuron\_35,  
 Dati\_36, MrPhizzler\_35, DaddyDaniels\_36, BatteryCK\_35, Oline\_35, Maskar\_35,  
 ImtiyazSitla\_35, PhatLouie\_36, Zonia\_36, Thunderbird\_35, Duggie\_35, JDog\_35  
 • Track 17 : LostAndPhound\_36, Potter\_36, Held\_37, Chunky\_37, LeiMonet\_37,  
 Inverness\_37, Gyarad\_0037, Gwilliam\_37, Newman\_37, Piglet\_0036, MRabcd\_36,  
 Mosaic\_36, MitKao\_37, Serpentine\_0037, Chorkpop\_37, Mulan\_36  
 • Track 18 : Lulumae\_36, ProfessorX\_37, Tomlarah\_37, Megamind20\_37,  
 EmpTee\_37, ShiVal\_37, Charles1\_37, Simielle\_36, Roscoe\_38, Toni\_36, Roy17\_37,  
 Spartan300\_37, Valjean\_37, Olive\_37, Orwigg\_37  
 • Track 19 : AltPhacts\_37, Roliet\_37, Horchata\_37, KingVeVeVe\_37, Frankicide\_37,  
 Soto\_37, Nacho\_0037, Crownjwl\_37, HSavage\_37, DirtJuice\_37, KlimbOn\_37,  
 SDcharge11\_37  
 • Track 20 : Dingo\_37, CheetO\_37, Basato\_38, Sheila\_37, OliverWalter\_37,  
 Mikota\_37, AbsoluteMadLad\_36  
 • Track 21 : PinheadLarry\_37, Nicole21\_37, Inchworm\_37, Magic8\_37  
 • Track 22 : Lopsy\_35, Tooj\_36, Giraffe\_36, Usavi\_36  
 • Track 23 : Badfish\_36  
 • Track 24 : Riggan\_37  
 • Track 25 : BlueHusk\_37, MiniBoss\_37  
 • Track 26 : Imvubu\_29  
 • Track 27 : Imvubu\_30  
 • Track 28 : Indlovu\_34  
 • Track 29 : Indlovu\_35  
 • Track 30 : LilMcDreamy\_31  
 • Track 31 : LilMcDreamy\_33  
 • Track 32 : Zenteno07\_41  
 • Track 33 : Zenteno07\_40  
 • Track 34 : Hashim76\_40, BirdsNest\_38  
 • Track 35 : Hashim76\_41  
 • Track 36 : BirdsNest\_39  
 • Track 37 : Lars\_36, Rosebush\_36, Kaleb\_36, West99\_36, Coffee\_36, Glass\_36,  
 Arbiter\_36, Sabella\_36, Boyle\_36, Kheth\_36, Hedgerow\_36, Opia\_36, Blocker23\_36,  
 ItsyBitsy1\_36, Lephleur\_36, Tres\_36, FrenchFry\_36, Calamitous\_36, Rhinoforte\_36,  
 Tinciduntolum\_37, Brownie5\_36  
 • Track 38 : Rosebush\_37, Kaleb\_38, TA17A\_38, Qyrzula\_35, Glass\_38, Opia\_38,  
 Allegro\_38, Sabella\_37, Coffee\_38, Bananafish\_38, Boyle\_38, Eaglehorse\_38,  
 Hedgerow\_38, Blocker23\_38, ItsyBitsy1\_38, Arbiter\_37, West99\_38, MasterPo\_38,  
 Lephleur\_38, FrenchFry\_38, Calamitous\_38, Rhinoforte\_38, Phantasmagoria\_38,  
 Holeinone\_38, Laurie\_37, Tinciduntolum\_39, Tres\_38, Faze9\_37, Godines\_38,  
 Kheth\_38, Brownie5\_38  
 • Track 39 : Qyrzula\_34, Laurie\_36  
 • Track 40 : Lars\_38, LizLemon\_38  
 • Track 41 : Ares\_36  
 • Track 42 : Allegro\_36, Eaglehorse\_36  
 • Track 43 : MasterPo\_36  
 • Track 44 : Bananafish\_36  
 • Track 45 : LizLemon\_36  
 • Track 46 : Holeinone\_36  
 • Track 47 : TA17A\_36  
 • Track 48 : Phantasmagoria\_36, Faze9\_36  
 • Track 49 : Ares\_38  
 • Track 50 : Vic9\_37  
 • Track 51 : Vic9\_38



- Track 52 : Godines\_36
- Track 53 : RomaT\_36, Daisy\_36
- Track 54 : RomaT\_37, Jackstina\_34, Gervas\_37, Phlyer\_37, Mortcellus\_36, Yahalom\_37, SlippinJimmy\_37, Casbah\_36, Marley1013\_37, Audrey\_37, MmasiCarm\_37, Morty007\_37, Philly\_36, Pipefish\_39, LestyG\_37, Compostia\_38, Kronus\_36, Bernardo\_37, Corofin\_37, Ben11\_36
- Track 55 : Nozo\_37, Tydolla\_37, Heathcliff\_37, Phayeta\_38, Deenasa\_37, Baloo\_37, GlenHope\_38, Neos5\_37, OrangeOswald\_37
- Track 56 : Rita1961\_36, Mortcellus\_35, SlippinJimmy\_36, Casbah\_35, Phlyer\_36, GlenHope\_37, Obutu\_36, Compostia\_37, Pipefish\_38, Jackstina\_33, Briakila\_37, Ben11\_35, Philly\_35, Kronus\_35, Yahalom\_36
- Track 57 : ChaChing\_37, Athena\_38, Halfpint\_36
- Track 58 : ChaChing\_36, Halfpint\_35, MmasiCarm\_36
- Track 59 : Athena\_37, Gervas\_36, Tydolla\_36, Heathcliff\_36, Devonte\_36, Audrey\_36, Chandler\_36, LestyG\_36, Abinghost\_36, Deenasa\_36, Baloo\_36, RagingRooster\_36, Corofin\_36, SynergyX\_36, Neos5\_36, Bernardo\_36, OrangeOswald\_36, Nozo\_36
- Track 60 : Morty007\_36, Marley1013\_36, Phaedrus\_34, Phayeta\_37, Akoma\_36, Gadget\_37, Kamiyu\_36, HarveySr\_36, Yinz\_36
- Track 61 : Rita1961\_37
- Track 62 : Devonte\_37, Abinghost\_37, RagingRooster\_37, Chandler\_37, SynergyX\_37
- Track 63 : Phaedrus\_35, Akoma\_37, Gadget\_38, Yinz\_37, Kamiyu\_37, HarveySr\_37
- Track 64 : Briakila\_38
- Track 65 : Obutu\_37
- Track 66 : Daisy\_37
- Track 67 : Lambano\_33, GinPorsche\_33, Antihero\_33, Ahwei\_33, Nanao\_33, Hally898\_33, Epah\_33, Poster\_33
- Track 68 : Lambano\_32, GinPorsche\_32, Prince\_33, Antihero\_32, Ahwei\_32, Nanao\_32, ChrisnMich\_32, Hally898\_32, Epah\_32, Poster\_32
- Track 69 : Hydro\_33, Mithril\_33, RawrgerThat\_33, VioletZ\_33, Fortunato\_33
- Track 70 : JaguarMi\_33
- Track 71 : JaguarMi\_34, Xincheng\_33
- Track 72 : RawrgerThat\_34, Mithril\_34, Fortunato\_34, Hydro\_34, Austelle\_35, Zemanar\_35, VioletZ\_34, Apex\_34, Magpie\_33, Mudslide\_34, Frederick\_34
- Track 73 : Lolalove\_34, Fanaw\_33, Heath\_33, QueenPie\_33, ChrisnMich\_33
- Track 74 : Lolalove\_33, Xincheng\_32
- Track 75 : Hangman\_34
- Track 76 : Fanaw\_32
- Track 77 : Heath\_32, QueenPie\_32
- Track 78 : JAMaL\_33
- Track 79 : Cooper\_34
- Track 80 : Stinger\_31
- Track 81 : Stinger\_32
- Track 82 : Waleliano\_34
- Track 83 : Waleliano\_33, Hangman\_33, BrownCNA\_34
- Track 84 : BrownCNA\_35
- Track 85 : BobbyK\_33
- Track 86 : BobbyK\_34
- Track 87 : Zemanar\_34
- Track 88 : Austelle\_34, Magpie\_32, Apex\_33, Mudslide\_33, Frederick\_33
- Track 89 : JAMaL\_34
- Track 90 : Cooper\_33



- Track 91 : Nigel\_32
- Track 92 : Nigel\_31
- Track 93 : Prince\_34
- Track 94 : AlanGrant\_35, Vincenzo\_35
- Track 95 : AlanGrant\_34, Vincenzo\_34
- Track 96 : Acadian\_35, Suigeneris\_35, SirJeffery\_35, EastView9101\_34, Donny\_35
- Track 97 : Acadian\_36, EastView9101\_35, Donny\_36, Suigeneris\_36, SirJeffery\_36
- Track 98 : Reprobate\_36, Nehemiah\_36, Phelemich\_36, Mysterious\_38
- Track 99 : Nangang\_36
- Track 100 : Bae\_35, Rich\_35
- Track 101 : Bae\_34
- Track 102 : Serendipitous\_35
- Track 103 : Serendipitous\_34
- Track 104 : StinkyVeggy\_37, KarasumaRum\_37
- Track 105 : StinkyVeggy\_38, KarasumaRum\_38
- Track 106 : DigitDog\_36, Shenyu\_36
- Track 107 : DigitDog\_35, Nangang\_35, Shenyu\_35
- Track 108 : Nehemiah\_34, Phelemich\_35, Mysterious\_36, Reprobate\_35
- Track 109 : Rich\_34
- Track 110 : 40BC\_030, Hosp\_028, 39HC\_030
- Track 111 : KayaCho\_30
- Track 112 : Jolie1\_030
- Track 113 : Hosp\_029, 39HC\_031, Jolie1\_031, 40BC\_031
- Track 114 : KayaCho\_31
- Track 115 : Saguaro\_37
- Track 116 : Saguaro\_38
- Track 117 : Thonko\_36
- Track 118 : Thonko\_35
- Track 119 : Knocker\_38
- Track 120 : Rinkes\_37
- Track 121 : CRB2\_39
- Track 122 : Rinkes\_38
- Track 123 : Funsized\_38
- Track 124 : Funsized\_39
- Track 125 : PenguinLover67\_39
- Track 126 : PenguinLover67\_38
- Track 127 : Knocker\_37
- Track 128 : Quesadilla\_39
- Track 129 : Quesadilla\_38
- Track 130 : Jollymon\_62, KingstonB\_62, ColdSoup\_62
- Track 131 : Clawz\_61
- Track 132 : DonTron\_61
- Track 133 : Sting\_60
- Track 134 : Soos\_57
- Track 135 : Coldpizza\_33
- Track 136 : Coldpizza\_32
- Track 137 : Sisko\_30, Yago84\_30, AnClar\_31
- Track 138 : BiggityBass\_29
- Track 139 : NHagos\_29
- Track 140 : Axumite\_30, Ligma\_30, Fresco\_30, Shatter\_30
- Track 141 : CharlottesWeb\_29
- Track 142 : LittleMunchkin\_31
- Track 143 : Mariokart\_30

- Track 144 : LittleMunchkin\_32
- Track 145 : Fresco\_29, Axumite\_29, Shatter\_29, Ligma\_29
- Track 146 : Sour\_33
- Track 147 : Sour\_35
- Track 148 : MakoManhole\_31
- Track 149 : BiggityBass\_30
- Track 150 : Yago84\_29, Sisko\_29
- Track 151 : NHagos\_30
- Track 152 : MossRose\_32, AnarQue\_32, MakoManhole\_32, CaiB\_32, CloverMinnie\_32
- Track 153 : MossRose\_31, CaiB\_31
- Track 154 : AnarQue\_31, CloverMinnie\_31
- Track 155 : Evaa\_30
- Track 156 : Wooper\_32
- Track 157 : BobRoss2024\_28
- Track 158 : BobRoss2024\_29
- Track 159 : Evaa\_29
- Track 160 : Wooper\_31
- Track 161 : CharlottesWeb\_30
- Track 162 : AnClar\_30
- Track 163 : Mariokart\_29
- Track 164 : Megabear\_28, D12\_28, Cepens\_28, PR\_28, Taptic\_28
- Track 165 : Jeon\_30, Argie\_31, Cepens\_30, GodPhather\_31, D12\_29, PR\_30, Taptic\_30, Megabear\_30
- Track 166 : Argie\_29
- Track 167 : Jeon\_28, GodPhather\_29
- Track 168 : TPA2\_40
- Track 169 : TPA2\_39
- Track 170 : StAugustine\_42
- Track 171 : StAugustine\_41
- Track 172 : Tonitrus\_48
- Track 173 : Pine5\_31
- Track 174 : Pine5\_32

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

The start number called the most often in the published annotations is 87, it was called in 415 of the 840 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 39HC\_031, 40BC\_031, ABU\_37, Abinghost\_37, AbsoluteMadLad\_36, Acadian\_36, Adriana\_37, Aelin\_36, Ahwei\_33, Akoma\_37, AlanGrant\_35, Allegro\_38, AltPhacts\_37, Altwerkus\_36, AnClar\_31, AnarQue\_32, Anderson\_37, Andre\_37, Antihero\_33, Antonia\_36, Apex\_34, Apizium\_36, Arbiter\_37, Ares\_38, Argie\_31, Ashraf\_36, Athena\_38, Audrey\_37, Austelle\_35, Axumite\_30, Badfish\_37, Bae\_35, Baloo\_37, Bananafish\_38, Banjo\_36, Basato\_38, BatteryCK\_36, Beaglebox\_36, Ben11\_36, Bernardo\_37, BiggityBass\_30, BirdsNest\_39, Bishoperium\_36, BlackStallion\_37, Blocker23\_38, BlueHusk\_37, Bluephacebaby\_36, BobbyK\_34, Boehler\_37, Boyle\_38, Briakila\_38, Brilliant\_37, Brownie5\_38, Buckeye\_37, Burr\_36, CRB2\_39, CaiB\_32, Calamitous\_38, CamL\_37, CampRoach\_37, Cannibal\_37,

Carthage\_35, Casbah\_36, Cepens\_30, ChaChing\_37, Chaelin\_37, Chah\_38, Chandler\_37, Charles1\_37, CharlieGBrown\_36, CharlottesWeb\_30, CheetO\_37, Cher\_36, Childish\_36, Chorkpop\_37, ChrisnMich\_33, Chunky\_37, Chute\_36, CloverMinnie\_32, Cobra\_37, Coffee\_38, Colbert\_37, Coldpizza\_33, Coletti\_36, Compostia\_38, Cooper\_34, Cornobble\_36, Corofin\_37, Cosmolli16\_36, Craff\_37, Crownjwl\_37, D12\_29, DaddyDaniels\_37, Daffy\_37, Daisy\_37, Daka\_37, Dati\_37, Deenasa\_37, DelRivs\_36, Derpp\_36, Devonte\_37, Dice\_36, DigitDog\_36, Dingo\_37, Dione\_36, DirtJuice\_37, Doddsville\_37, DoesntMatter\_37, DonSanchon\_36, Donny\_36, Dori\_33, DuchessDung\_35, Duggie\_36, Durga\_37, Eaglehorse\_38, EastView9101\_35, Emiris\_37, EmpTee\_37, Epah\_33, Eremos\_37, Etaye\_37, Eugenia\_37, Fanaw\_33, Fang\_37, Faze9\_37, FluffyNinja\_37, Fortunato\_34, Fozzie\_36, Frankicide\_37, Frederick\_34, FrenchFry\_38, Fresco\_30, Freya\_36, FriarPreacher\_37, Fringe\_37, FugateOSU\_36, Funsized\_39, Gadget\_38, Gareth\_36, GeneCoco\_37, Gervas\_37, GinPorsche\_33, Giraffe\_37, Glass\_38, GlenHope\_38, GodPhather\_31, Godines\_38, Gophee\_37, Grand2040\_36, Gwilliam\_37, Gyarad\_0037, HSavage\_37, Haimas\_37, Haleema\_36, Halfpint\_36, Hally898\_33, Hamish\_37, Hangman\_34, Hartsy\_37, HarveySr\_37, Harvey\_37, Hashim76\_41, Heath\_33, Heathcliff\_37, Hedgerow\_38, Held\_37, HenryJackson\_36, Hertubise\_37, Hetaeria\_37, HighStump\_36, Hocus\_36, Holeinone\_38, Horchata\_37, Hosp\_029, Hydro\_34, ImtiyazSitla\_36, Imvubu\_30, Inchworm\_37, Indlovu\_35, Inverness\_37, Iridoclysis\_37, IsaacEli\_37, ItsyBitsy1\_38, JAMaL\_34, JDog\_36, JacAttac\_37, Jackstina\_34, JaguarMi\_34, JakeO\_36, JangoPhett\_37, Jeon\_30, Jillium\_36, Jiminy\_36, Jiraiya\_37, Jolie1\_031, KLucky39\_37, Kahve\_36, Kailash\_37, Kaleb\_38, Kamiyu\_37, KarasumaRum\_38, Katniss\_37, KayaCho\_31, Keitherie\_37, Kheth\_38, Kikipoo\_37, Kimbrough\_37, KingTut\_28, KingVeVeVe\_37, KlimbOn\_37, Kloppinator\_37, Knocker\_38, Kronus\_36, Kwadwo\_36, Kwksand96\_36, Labeouficaum\_36, Lambano\_33, Lars\_38, LasagnaCat\_37, Lasso\_37, Laurie\_37, LeeLot\_37, Lego3393\_37, Legolas\_36, LeiMonet\_37, LemonSlice\_37, Lephleur\_38, LestyG\_37, Ligma\_30, LilMcDreamy\_33, LittleMunchkin\_32, LizLemon\_38, Lolalove\_34, Longacauda\_36, Lopsy\_36, LostAndPhound\_36, LuckyMarjie\_36, Lulumae\_36, Lulwa\_37, Lumine\_36, MRabcd\_36, Mag7\_36, Magic8\_37, Magpie\_33, MakoManhole\_32, Mana\_36, Manad\_36, Mao1\_31, Mariokart\_30, Marley1013\_37, Maru\_36, Mask\_32, Maskar\_36, MasterPo\_38, Matalotodo\_37, Mcshane\_36, Mecca\_36, Megabear\_30, Megamind20\_37, Megatron\_37, Melc17\_37, MelsMeow\_36, Mesh1\_37, MichaelPhcott\_36, Mikota\_37, MiniBoss\_37, MitKao\_37, Mithril\_34, MmasiCarm\_37, Morgushi\_37, Mortcellus\_36, Morty007\_37, Morty\_37, Mosaic\_36, MossRose\_32, MrPhizzler\_36, Mudslide\_34, Mulan\_36, Murdoc\_37, Mutante\_36, Mysterious\_38, NHagos\_30, Nacho\_0037, Nanao\_33, Nehemiah\_36, Neos5\_37, Newman\_37, Nicole21\_37, Nigel\_32, Nozo\_37, Numberben\_37, Nyala\_36, OSmaximus\_37, Obutu\_37, Olak\_36, Oline\_36, Olive\_37, OliverWalter\_37, Omniscient\_37, Oosterbaan\_37, Opia\_38, OrangeOswald\_37, Orfeu\_36, Orion\_37, Orwigg\_37, PG1\_37, PR\_30, Pacifista\_36, PenguinLover67\_39, Phaedrus\_35, Phamished\_37, Phantasmagoria\_38, Phareon\_37, PhatCats2014\_37, PhatLouie\_37, Phayeta\_38, Phelemich\_36, PhenghisKhan\_36, Pherdinand\_37, Phergie\_36, Philly\_36, Phipps\_37, Phleuron\_36, Phlyer\_37, PhrankReynolds\_36, PhrodoBaggins\_36, Phunky\_37, Piglet\_0036, PinheadLarry\_37, Pinkman\_36, Pipefish\_39, Pipsqueak\_37, Placalicious\_36, Plmatters\_37, Podrick\_37, Pops\_37, Poster\_33, Potter\_36, Prickles\_37, Prince\_34, ProfessorX\_37, Puhltonio\_37, QueenBeane\_37, QueenPie\_33, Quisquilliae\_37, Qyrzula\_35, RagingRooster\_37, RawrgerThat\_34, RedMaple\_36, Reprobate\_36, Rhinoforte\_38, Rich\_35, Ricotta\_36, Riggan\_37, Rimu\_38, Rinkes\_38, Rita1961\_37, Robyn\_36, Roliet\_37, RomaT\_37, Roscoe\_38, Rosebush\_37, Roy17\_37, SDcharge11\_37, Sabella\_37, Saguaro\_38, Samaymay\_37, SassyCat97\_36, Schadenfreude\_36, Schueller\_37, Scoot17C\_37,

Scrick\_37, Sejanus\_32, Selr12\_37, Serendipitous\_35, Serendipity\_37, Serpentine\_0037, Shatter\_30, Sheila\_37, Shenyu\_36, ShiVal\_37, Sigman\_37, SilverBell\_37, Simielle\_36, SirJeffery\_36, Sisko\_30, Skippy\_37, Slatt\_37, SlippinJimmy\_37, Soile\_37, Solosis\_36, Sophia\_36, Soto\_37, Sour\_35, Spartan300\_37, Squid\_37, Squiggle\_37, StAugustine\_42, Stinger\_32, StinkyVeggy\_38, Struggle\_36, Suffolk\_37, Suigeneris\_36, Surely\_37, Swiphy\_38, Swish\_37, SynergyX\_37, TA17A\_38, TPA2\_40, TallGrassMM\_37, Taptic\_30, Telesworld\_36, Thonko\_36, Thora\_37, ThreeOh3D2\_37, Thunderbird\_36, Timmi\_36, Tinciduntolum\_39, TomBombadil\_37, Tomlarah\_37, Toni\_36, Tooj\_37, Tres\_38, True\_36, Trypo\_37, Tydolla\_37, TyrionL\_36, UAch1\_37, UncleHowie\_37, Usavi\_37, Vaishali24\_36, Valjean\_37, Veritas\_36, Vic9\_38, Vincenzo\_35, VioletZ\_34, Virapocalypse\_37, Virgeve\_36, Vista\_37, Vivaldi\_37, Vortex\_37, Waleliano\_34, Wallhey\_36, Waterdiva\_37, Weher20\_37, West99\_38, Windsor\_36, Wooper\_32, Xavier\_36, Xincheng\_33, Yago84\_30, Yahalom\_37, Yinz\_37, Yoshand\_37, YouGoGlencoco\_37, Zaider\_38, Zelda\_37, Zemanar\_35, Zenteno07\_41, Zonia\_37,

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

- BobRoss2024\_28, Nangang\_36,

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

- 39HC\_030, 40BC\_030, ABU\_36, Abinghost\_36, AbsoluteMadLad\_35, Acadian\_35, Adriana\_36, Aelin\_35, Ahwei\_32, Akoma\_36, AlanGrant\_34, Allegro\_36, AltPhacts\_36, Altwerkus\_35, AnClar\_30, AnarQue\_31, Anderson\_36, Andre\_36, Antihero\_32, Antonia\_35, Apex\_33, Apizium\_35, Arbiter\_36, Ares\_36, Argie\_29, Ashraf\_35, Athena\_37, Audrey\_36, Austelle\_34, Axumite\_29, Badfish\_36, Bae\_34, Baloo\_36, Bananafish\_36, Banjo\_35, Basato\_37, BatteryCK\_35, Beaglebox\_35, Ben11\_35, Bernardo\_36, BiggityBass\_29, BirdsNest\_38, Bishoperium\_35, BlackStallion\_36, Blocker23\_36, BlueHusk\_36, Bluephacebaby\_35, BobRoss2024\_29, BobbyK\_33, Boehler\_36, Boyle\_36, Briakila\_37, Brilliant\_36, BrownCNA\_34, BrownCNA\_35, Brownie5\_36, Buckeye\_36, Burr\_35, CaiB\_31, Calamitous\_36, CamL\_36, CampRoach\_36, Cannibal\_36, Carthage\_34, Casbah\_35, Cepens\_28, ChaChing\_36, Chaelin\_36, Chah\_37, Chandler\_36, Charles1\_36, CharlieGBrown\_35, CharlottesWeb\_29, CheetO\_36, Cher\_35, Childish\_35, Chorkpop\_36, ChrisnMich\_32, Chunky\_36, Chute\_35, Clawz\_61, CloverMinnie\_31, Cobra\_36, Coffee\_36, Colbert\_36, ColdSoup\_62, Coldpizza\_32, Coletti\_35, Compostia\_37, Cooper\_33, Cornobble\_35, Corofin\_36, Cosmolli16\_35, Craff\_36, Crownjwl\_36, D12\_28, DaddyDaniels\_36, Daffy\_36, Daisy\_36, Daka\_36, Dati\_36, Deenasa\_36, DelRivs\_35, Derpp\_35, Devonte\_36, Dice\_35, DigitDog\_35, Dingo\_36, Dione\_35, DirtJuice\_36, Doddsville\_36, DoesntMatter\_36, DonSanchon\_35, DonTron\_61, Donny\_35, Dori\_32, DuchessDung\_34, Duggie\_35, Durga\_36, Eaglehorse\_36, EastView9101\_34, Emiris\_36, EmpTee\_36, Epah\_32, Eremos\_36, Etaye\_36, Eugenia\_36, Evaa\_29, Evaa\_30, Fanaw\_32, Fang\_36, Faze9\_36, FluffyNinja\_36, Fortunato\_33, Fozzie\_35, Frankicide\_36, Frederick\_33, FrenchFry\_36, Fresco\_29, Freya\_35, FriarPreacher\_36, Fringe\_36, FugateOSU\_35, Funsized\_38, Gadget\_37, Gareth\_35, GeneCoco\_36, Gervas\_36, GinPorsche\_32, Giraffe\_36, Glass\_36, GlenHope\_37, GodPhather\_29, Godines\_36, Gophee\_36, Grand2040\_35, Gwilliam\_36, Gyarad\_0036, HSavage\_36, Haimas\_36, Haleema\_35, Halfpint\_35, Hally898\_32, Hamish\_36, Hangman\_33, Hartsy\_36, HarveySr\_36, Harvey\_36, Hashim76\_40, Heath\_32, Heathcliff\_36, Hedgerow\_36, Held\_36, HenryJackson\_35, Hertubise\_36, Hetaeria\_36, HighStump\_35, Hocus\_35, Holeinone\_36, Horchata\_36, Hosp\_028, Hydro\_33, ImtiyazSitla\_35, Imvubu\_29, Inchworm\_36, Indlovu\_34, Inverness\_36, Iridoclysis\_36, IsaacEli\_36, ItsyBitsy1\_36, JAMaL\_33, JDog\_35, JacAttac\_36, Jackstina\_33, JaguarMi\_33, JakeO\_35,

JangoPhett\_36, Jeon\_28, Jillium\_35, Jiminy\_35, Jiraiya\_36, Jolie1\_030, Jollymon\_62, KLucky39\_36, Kahve\_35, Kailash\_36, Kaleb\_36, Kamiyu\_36, KarasumaRum\_37, Katniss\_36, KayaCho\_30, Keitherie\_36, Kheth\_36, Kikipoo\_36, Kimbrough\_36, KingTut\_27, KingVeVeVe\_36, KingstonB\_62, KlimbOn\_36, Kloppinator\_36, Knocker\_37, Kronus\_35, Kwadwo\_35, Kwksand96\_35, Labeouficaum\_35, Lambano\_32, Lars\_36, LasagnaCat\_36, Lasso\_36, Laurie\_36, LeeLot\_36, Lego3393\_36, Legolas\_35, LeiMonet\_36, LemonSlice\_36, Lephleur\_36, LestyG\_36, Ligma\_29, LilMcDreamy\_31, LittleMunchkin\_31, LizLemon\_36, Lolalove\_33, Longacauda\_35, Lopsy\_35, LostAndPhound\_35, LuckyMarjie\_35, Lulumae\_35, Lulwa\_36, Lumine\_35, MRabcd\_35, Mag7\_35, Magic8\_36, Magpie\_32, MakoManhole\_31, Mana\_35, Manad\_35, Mao1\_30, Mariokart\_29, Marley1013\_36, Maru\_35, Mask\_31, Maskar\_35, MasterPo\_36, Matalotodo\_36, Mcshane\_35, Mecca\_35, Megabear\_28, Megamind20\_36, Megatron\_36, Melc17\_36, MelsMeow\_35, Mesh1\_36, MichaelPhcott\_35, Mikota\_36, MiniBoss\_36, MitKao\_36, Mithril\_33, MmasiCarm\_36, Morgushi\_36, Mortcellus\_35, Morty007\_36, Morty\_36, Mosaic\_35, MossRose\_31, MrPhizzler\_35, Mudslide\_33, Mulan\_35, Murdoc\_36, Mutante\_35, Mysterious\_36, NHagos\_29, Nacho\_0036, Nanao\_32, Nangang\_35, Nehemiah\_34, Neos5\_36, Newman\_36, Nicole21\_36, Nigel\_31, Nozo\_36, Numberbert\_36, Nyala\_35, OSmaximus\_36, Obutu\_36, Olak\_35, Oline\_35, Olive\_36, OliverWalter\_36, Omniscient\_36, Oosterbaan\_36, Opia\_36, OrangeOswald\_36, Orfeu\_35, Orion\_36, Orwigg\_36, PG1\_36, PR\_28, Pacifista\_35, PenguinLover67\_38, Phaedrus\_34, Phamished\_36, Phantasmagoria\_36, Phareon\_36, PhatCats2014\_36, PhatLouie\_36, Phayeta\_37, Phelemich\_35, PhenghisKhan\_35, Pherdinand\_36, Phergie\_35, Philly\_35, Phipps\_36, Phleuron\_35, Phlyer\_36, PhrankReynolds\_35, PhrodoBaggins\_35, Phunky\_36, Piglet\_0035, Pine5\_31, Pine5\_32, PinheadLarry\_36, Pinkman\_35, Pipefish\_38, Pipsqueak\_36, Placalicious\_35, Plmatters\_36, Podrick\_36, Pops\_36, Poster\_32, Potter\_35, Prickles\_36, Prince\_33, ProfessorX\_36, Puhltonio\_36, QueenBeane\_36, QueenPie\_32, Quesadilla\_38, Quesadilla\_39, Quisquilliae\_36, Qyrzula\_34, RagingRooster\_36, RawrgerThat\_33, RedMaple\_35, Reprobate\_35, Rhinoforte\_36, Rich\_34, Ricotta\_35, Riggan\_36, Rimu\_37, Rinkes\_37, Rita1961\_36, Robyn\_35, Roliet\_36, RomaT\_36, Roscoe\_37, Rosebush\_36, Roy17\_36, SDcharge11\_36, Sabella\_36, Saguaro\_37, Samaymay\_36, SassyCat97\_35, Schadenfreude\_35, Schueller\_36, Scoot17C\_36, Scrick\_36, Sejanus\_31, Selr12\_36, Serendipitous\_34, Serendipity\_36, Serpentine\_0036, Shatter\_29, Sheila\_36, Shenyu\_35, ShiVal\_36, Sigman\_36, SilverBell\_36, Simielle\_35, SirJeffery\_35, Sisko\_29, Skippy\_36, Slatt\_36, SlippinJimmy\_36, Soile\_36, Solosis\_35, Soos\_57, Sophia\_35, Soto\_36, Sour\_33, Spartan300\_36, Squid\_36, Squiggle\_36, StAugustine\_41, Sting\_60, Stinger\_31, StinkyVeggy\_37, Struggle\_35, Suffolk\_36, Suigeneris\_35, Surely\_36, Swiphy\_37, Swish\_36, SynergyX\_36, TA17A\_36, TPA2\_39, TallGrassMM\_36, Taptic\_28, Telesworld\_35, Thonko\_35, Thora\_36, ThreeOh3D2\_36, Thunderbird\_35, Timmi\_35, Tinciduntolum\_37, TomBombadil\_36, Tomlarah\_36, Toni\_35, Tonitrus\_48, Tooj\_36, Tres\_36, True\_35, Trypo\_36, Tydolla\_36, TyrionL\_35, UAch1\_36, UncleHowie\_36, Usavi\_36, Vaishali24\_35, Valjean\_36, Vaticameos\_36, Veritas\_35, Vic9\_37, Vincenzo\_34, VioletZ\_33, Virapocalypse\_36, Virgeve\_35, Vista\_36, Vivaldi\_36, Vortex\_36, Waleliano\_33, Wallhey\_35, Waterdiva\_36, Weher20\_36, West99\_36, Windsor\_35, Wooper\_31, Xavier\_35, Xincheng\_32, Yago84\_29, Yahalom\_36, Yinz\_36, Yoshand\_36, YouGoGlencoco\_36, Zaider\_37, Zelda\_36, Zemanar\_34, Zenteno07\_40, Zonia\_36,

### Summary by start number:

Start 64:

- Found in 37 of 940 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 25 of 840
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ahwei\_32 (B4), AlanGrant\_34 (B4), Antihero\_32 (B4), Apex\_33 (B4), Austelle\_34 (B4), BobbyK\_33 (B4), BrownCNA\_34 (B4), ChrisnMich\_32 (B4), Cooper\_33 (B4), Epah\_32 (B4), Fanaw\_32 (B4), Fortunato\_33 (B4), Frederick\_33 (B4), GinPorsche\_32 (B4), Hally898\_32 (B4), Hangman\_33 (B4), Heath\_32 (B4), Hydro\_33 (B4), JAMaL\_33 (B4), JaguarMi\_33 (B4), Lambano\_32 (B4), Lolalove\_33 (B4), Magpie\_32 (B4), Mithril\_33 (B4), Mudslide\_33 (B4), Nanao\_32 (B4), Nigel\_31 (B4), Poster\_32 (B4), Prince\_33 (B4), QueenPie\_32 (B4), RawrgerThat\_33 (B4), Stinger\_31 (B4), Vincenzo\_34 (B4), VioletZ\_33 (B4), Waleliano\_33 (B4), Xincheng\_32 (B4), Zemanar\_34 (B4),

#### Start 68:

- Found in 3 of 940 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Nangang\_36 (B5),

#### Start 74:

- Found in 1 of 940 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 840
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Thonko\_35 (B8),

#### Start 81:

- Found in 47 of 940 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 45 of 840
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost\_36 (B3), Akoma\_36 (B3), Athena\_37 (B3), Audrey\_36 (B3), Baloo\_36 (B3), Ben11\_35 (B3), Bernardo\_36 (B3), Briakila\_37 (B3), Casbah\_35 (B3), ChaChing\_36 (B3), Chandler\_36 (B3), Compostia\_37 (B3), Corofin\_36 (B3), Daisy\_36 (B3), Deenasa\_36 (B3), Devonte\_36 (B3), Gadget\_37 (B3), Gervas\_36 (B3), GlenHope\_37 (B3), Halfpint\_35 (B3), HarveySr\_36 (B3), Heathcliff\_36 (B3), Jackstina\_33 (B3), Kamiyu\_36 (B3), Kronus\_35 (B3), LestyG\_36 (B3), Marley1013\_36 (B3), MmasiCarm\_36 (B3), Mortcellus\_35 (B3), Morty007\_36 (B3), Neos5\_36 (B3), Nozo\_36 (B3), Obutu\_36 (B3), OrangeOswald\_36 (B3), Phaedrus\_34 (B3), Phayeta\_37 (B3), Philly\_35 (B3), Phlyer\_36 (B3), Pipefish\_38 (B3), RagingRooster\_36 (B3), Rita1961\_36 (B3), RomaT\_36 (B3), SlippinJimmy\_36 (B3), SynergyX\_36 (B3), Tydolla\_36 (B3), Yahalom\_36 (B3), Yinz\_36 (B3),

#### Start 82:

- Found in 47 of 940 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 44 of 840
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Allegro\_36 (B2), Arbiter\_36 (B2), Ares\_36 (B2), Argie\_29 (W), Bananafish\_36 (B2), Blocker23\_36 (B2), Boyle\_36 (B2), Brownie5\_36 (B2), Calamitous\_36 (B2), Cepens\_28 (W), Coffee\_36 (B2), D12\_28 (W), Dori\_32 (AD), Eaglehorse\_36 (B2), Faze9\_36 (B2), FrenchFry\_36 (B2), Glass\_36 (B2), GodPhather\_29 (W), Godines\_36 (B2), Hedgerow\_36 (B2), Holeinone\_36 (B2), ItsyBitsy1\_36 (B2), Jeon\_28 (W), Kaleb\_36 (B2), Kheth\_36 (B2), Lars\_36 (B2), Laurie\_36 (B2), Lephleur\_36 (B2), LizLemon\_36 (B2), Mao1\_30 (AD),

Mask\_31 (AD), MasterPo\_36 (B2), Megabear\_28 (W), Opia\_36 (B2), PR\_28 (W), Phantasmagoria\_36 (B2), Qyrzula\_34 (B2), Rhinoforte\_36 (B2), Rosebush\_36 (B2), Sabella\_36 (B2), Sejanus\_31 (AD), TA17A\_36 (B2), Taptic\_28 (W), Tinciduntolum\_37 (B2), Tres\_36 (B2), Vic9\_37 (B2), West99\_36 (B2),

#### Start 83:

- Found in 1 of 940 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pine5\_31 (singleton),

#### Start 84:

- Found in 276 of 940 ( 29.4% ) of genes in pham
- Manual Annotations of this start: 90 of 840
- Called 33.0% of time when present
- Phage (with cluster) where this start called: ABU\_36 (B1), AbsoluteMadLad\_35 (B1), Altwerkus\_35 (B1), Antonia\_35 (B1), Apizium\_35 (B1), CamL\_36 (B1), Carthage\_34 (B1), Chah\_37 (B1), CharlieGBrown\_35 (B1), Chunky\_36 (B1), Cobra\_36 (B1), Colbert\_36 (B1), Cosmolli16\_35 (B1), Craff\_36 (B1), Daffy\_36 (B1), Daka\_36 (B1), Derpp\_35 (B1), Dione\_35 (B1), EmpTee\_36 (B1), Eremos\_36 (B1), Fang\_36 (B1), FluffyNinja\_36 (B1), FriarPreacher\_36 (B1), Gareth\_35 (B1), GeneCoco\_36 (B1), Grand2040\_35 (B1), Gyarad\_0036 (B1), Haimas\_36 (B1), Harvey\_36 (B1), Held\_36 (B1), Hertubise\_36 (B1), Hocus\_35 (B1), IsaacEli\_36 (B1), JacAttac\_36 (B1), JakeO\_35 (B1), JangoPhett\_36 (B1), Jillium\_35 (B1), KLucky39\_36 (B1), Kailash\_36 (B1), Keitherie\_36 (B1), Kikipoo\_36 (B1), KingVeVeVe\_36 (B1), Kwadwo\_35 (B1), Lasso\_36 (B1), LuckyMarjie\_35 (B1), Magic8\_36 (B1), Mana\_35 (B1), Manad\_35 (B1), Megatron\_36 (B1), Mesh1\_36 (B1), MichaelPhcott\_35 (B1), MitKao\_36 (B1), Mosaic\_35 (B1), Murdoc\_36 (B1), Nacho\_0036 (B1), Nicole21\_36 (B1), OSmaximus\_36 (B1), Phamished\_36 (B1), Piglet\_0035 (B1), PinheadLarry\_36 (B1), Puhltonio\_36 (B1), QueenBeane\_36 (B1), Riggan\_36 (B1), Roliet\_36 (B1), SDcharge11\_36 (B1), Scoot17C\_36 (B1), Serendipity\_36 (B1), Serpentine\_0036 (B1), ShiVal\_36 (B1), Sophia\_35 (B1), Spartan300\_36 (B1), Squid\_36 (B1), StAugustine\_41 (singleton), Surely\_36 (B1), Swish\_36 (B1), TallGrassMM\_36 (B1), Telesworld\_35 (B1), ThreeOh3D2\_36 (B1), TomBombadil\_36 (B1), TyrionL\_35 (B1), UAch1\_36 (B1), UncleHowie\_36 (B1), Vaticameos\_36 (B1), Vista\_36 (B1), Vivaldi\_36 (B1), Vortex\_36 (B1), Wallhey\_35 (B1), Waterdiva\_36 (B1), Xavier\_35 (B1), Yoshand\_36 (B1), YouGoGlencoco\_36 (B1),

#### Start 85:

- Found in 310 of 940 ( 33.0% ) of genes in pham
- Manual Annotations of this start: 172 of 840
- Called 59.7% of time when present
- Phage (with cluster) where this start called: Adriana\_36 (B1), Aelin\_35 (B1), AltPhacts\_36 (B1), Anderson\_36 (B1), Andre\_36 (B1), Ashraf\_35 (B1), Banjo\_35 (B1), Basato\_37 (B1), BatteryCK\_35 (B1), Beaglebox\_35 (B1), Bishoperium\_35 (B1), BlackStallion\_36 (B1), BlueHusk\_36 (B1), Bluephacebaby\_35 (B1), Boehler\_36 (B1), Brilliant\_36 (B1), Buckeye\_36 (B1), Burr\_35 (B1), CampRoach\_36 (B1), Cannibal\_36 (B1), Chaelin\_36 (B1), Charles1\_36 (B1), CheetO\_36 (B1), Cher\_35 (B1), Childish\_35 (B1), Chorkpop\_36 (B1), Chute\_35 (B1), Coletti\_35 (B1), Cornobble\_35 (B1), Crownjwl\_36 (B1), DaddyDaniels\_36 (B1), Dati\_36 (B1), DelRivs\_35 (B1), Dice\_35 (B1), Dingo\_36 (B1), DirtJuice\_36 (B1), Doddsville\_36 (B1), DoesntMatter\_36 (B1), DonSanchon\_35 (B1), DuchessDung\_34 (B1), Duggie\_35



(B1), Durga\_36 (B1), Emiris\_36 (B1), Etaye\_36 (B1), Eugenia\_36 (B1), Fozzie\_35 (B1), Frankicide\_36 (B1), Freya\_35 (B1), Fringe\_36 (B1), FugateOSU\_35 (B1), Giraffe\_36 (B1), Gophee\_36 (B1), Gwilliam\_36 (B1), HSavage\_36 (B1), Haleema\_35 (B1), Hamish\_36 (B1), Hartsy\_36 (B1), HenryJackson\_35 (B1), Hetaeria\_36 (B1), HighStump\_35 (B1), Horchata\_36 (B1), ImtiyazSitla\_35 (B1), Inchworm\_36 (B1), Inverness\_36 (B1), Iridoclysis\_36 (B1), JDog\_35 (B1), Jiminy\_35 (B1), Jiraiya\_36 (B1), Kahve\_35 (B1), Katniss\_36 (B1), Kimbrough\_36 (B1), KingTut\_27 (B1), KlimbOn\_36 (B1), Kloppinator\_36 (B1), Kwksand96\_35 (B1), Labeouficaum\_35 (B1), LasagnaCat\_36 (B1), LeeLot\_36 (B1), Lego3393\_36 (B1), Legolas\_35 (B1), LeiMonet\_36 (B1), LemonSlice\_36 (B1), Longacauda\_35 (B1), Lopsy\_35 (B1), LostAndPhound\_35 (B1), Lulumae\_35 (B1), Lulwa\_36 (B1), Lumine\_35 (B1), MRabcd\_35 (B1), Mag7\_35 (B1), Maru\_35 (B1), Maskar\_35 (B1), Matalotodo\_36 (B1), Mcshane\_35 (B1), Mecca\_35 (B1), Megamind20\_36 (B1), Melc17\_36 (B1), MelsMeow\_35 (B1), Mikota\_36 (B1), MiniBoss\_36 (B1), Morgushi\_36 (B1), Morty\_36 (B1), MrPhizzler\_35 (B1), Mulan\_35 (B1), Mutante\_35 (B1), Newman\_36 (B1), Numberten\_36 (B1), Nyala\_35 (B1), Olak\_35 (B1), Oline\_35 (B1), Olive\_36 (B1), OliverWalter\_36 (B1), Omniscient\_36 (B1), Oosterbaan\_36 (B1), Orfeu\_35 (B1), Orion\_36 (B1), Orwigg\_36 (B1), PG1\_36 (B1), Pacifista\_35 (B1), Phareon\_36 (B1), PhatCats2014\_36 (B1), PhatLouie\_36 (B1), PhenghisKhan\_35 (B1), Pherdinand\_36 (B1), Phergie\_35 (B1), Phipps\_36 (B1), Phleuron\_35 (B1), PhrankReynolds\_35 (B1), PhrodoBaggins\_35 (B1), Phunky\_36 (B1), Pine5\_32 (singleton), Pinkman\_35 (B1), Pipsqueak\_36 (B1), Placalicious\_35 (B1), Plmatters\_36 (B1), Podrick\_36 (B1), Pops\_36 (B1), Potter\_35 (B1), Prickles\_36 (B1), ProfessorX\_36 (B1), Quisquilliae\_36 (B1), RedMaple\_35 (B1), Ricotta\_35 (B1), Rimu\_37 (B1), Robyn\_35 (B1), Roscoe\_37 (B1), Roy17\_36 (B1), Samaymay\_36 (B1), SassyCat97\_35 (B1), Schadenfreude\_35 (B1), Schueller\_36 (B1), Scrick\_36 (B1), Selr12\_36 (B1), Sheila\_36 (B1), Sigman\_36 (B1), SilverBell\_36 (B1), Simielle\_35 (B1), Skippy\_36 (B1), Slatt\_36 (B1), Soile\_36 (B1), Solosis\_35 (B1), Soto\_36 (B1), Squiggle\_36 (B1), Struggle\_35 (B1), Suffolk\_36 (B1), Swiphy\_37 (B1), Thora\_36 (B1), Thunderbird\_35 (B1), Timmi\_35 (B1), Tomlarah\_36 (B1), Toni\_35 (B1), Tooj\_36 (B1), True\_35 (B1), Trypo\_36 (B1), Usavi\_36 (B1), Vaishali24\_35 (B1), Valjean\_36 (B1), Veritas\_35 (B1), Virapocalypse\_36 (B1), Virgeve\_35 (B1), Weher20\_36 (B1), Windsor\_35 (B1), Zaider\_37 (B1), Zelda\_36 (B1), Zonia\_36 (B1),

#### Start 86:

- Found in 33 of 940 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 17 of 840
- Called 84.8% of time when present
- Phage (with cluster) where this start called: 39HC\_030 (B6), 40BC\_030 (B6), Acadian\_35 (B5), Bae\_34 (B5), BirdsNest\_38 (B13), DigitDog\_35 (B5), Donny\_35 (B5), EastView9101\_34 (B5), Funsized\_38 (B9), Hashim76\_40 (B13), Hosp\_028 (B6), Imvubu\_29 (B10), Jolie1\_030 (B6), KayaCho\_30 (B6), Knocker\_37 (B9), Mysterious\_36 (B5), Nangang\_35 (B5), Nehemiah\_34 (B5), Phelemich\_35 (B5), Reprobate\_35 (B5), Rich\_34 (B5), Rinkes\_37 (B9), Saguario\_37 (B7), Serendipitous\_34 (B5), Shenyu\_35 (B5), SirJeffery\_35 (B5), Suigeneris\_35 (B5), Zenteno07\_40 (B13),

#### Start 87:

- Found in 462 of 940 ( 49.1% ) of genes in pham
- Manual Annotations of this start: 415 of 840
- Called 99.6% of time when present
- Phage (with cluster) where this start called: 39HC\_031 (B6), 40BC\_031 (B6), ABU\_37 (B1), Abinghost\_37 (B3), AbsoluteMadLad\_36 (B1), Acadian\_36 (B5),

Adriana\_37 (B1), Aelin\_36 (B1), Ahwei\_33 (B4), Akoma\_37 (B3), AlanGrant\_35 (B4), Allegro\_38 (B2), AltPhacts\_37 (B1), Altwerkus\_36 (B1), AnClar\_31 (DR), AnarQue\_32 (DR), Anderson\_37 (B1), Andre\_37 (B1), Antihero\_33 (B4), Antonia\_36 (B1), Apex\_34 (B4), Apizium\_36 (B1), Arbiter\_37 (B2), Ares\_38 (B2), Argie\_31 (W), Ashraf\_36 (B1), Athena\_38 (B3), Audrey\_37 (B3), Austelle\_35 (B4), Axumite\_30 (DR), Badfish\_37 (B1), Bae\_35 (B5), Baloo\_37 (B3), Bananafish\_38 (B2), Banjo\_36 (B1), Basato\_38 (B1), BatteryCK\_36 (B1), Beaglebox\_36 (B1), Ben11\_36 (B3), Bernardo\_37 (B3), BiggityBass\_30 (DR), BirdsNest\_39 (B13), Bishoperium\_36 (B1), BlackStallion\_37 (B1), Blocker23\_38 (B2), BlueHusk\_37 (B1), Bluephacebaby\_36 (B1), BobbyK\_34 (B4), Boehler\_37 (B1), Boyle\_38 (B2), Briakila\_38 (B3), Brilliant\_37 (B1), Brownie5\_38 (B2), Buckeye\_37 (B1), Burr\_36 (B1), CRB2\_39 (B9), CaiB\_32 (DR), Calamitous\_38 (B2), CamL\_37 (B1), CampRoach\_37 (B1), Cannibal\_37 (B1), Carthage\_35 (B1), Casbah\_36 (B3), Cepens\_30 (W), ChaChing\_37 (B3), Chaelin\_37 (B1), Chah\_38 (B1), Chandler\_37 (B3), Charles1\_37 (B1), CharlieGBrown\_36 (B1), CharlottesWeb\_30 (DR), CheetO\_37 (B1), Cher\_36 (B1), Childish\_36 (B1), Chorkpop\_37 (B1), ChrisnMich\_33 (B4), Chunky\_37 (B1), Chute\_36 (B1), CloverMinnie\_32 (DR), Cobra\_37 (B1), Coffee\_38 (B2), Colbert\_37 (B1), Coldpizza\_33 (DR), Coletti\_36 (B1), Compostia\_38 (B3), Cooper\_34 (B4), Cornobble\_36 (B1), Corofin\_37 (B3), Cosmolli16\_36 (B1), Craff\_37 (B1), Crownjwl\_37 (B1), D12\_29 (W), DaddyDaniels\_37 (B1), Daffy\_37 (B1), Daisy\_37 (B3), Daka\_37 (B1), Dati\_37 (B1), Deenasa\_37 (B3), DelRivs\_36 (B1), Derpp\_36 (B1), Devonte\_37 (B3), Dice\_36 (B1), DigitDog\_36 (B5), Dingo\_37 (B1), Dione\_36 (B1), DirtJuice\_37 (B1), Doddsville\_37 (B1), DoesntMatter\_37 (B1), DonSanchon\_36 (B1), Donny\_36 (B5), Dori\_33 (AD), DuchessDung\_35 (B1), Duggie\_36 (B1), Durga\_37 (B1), Eaglehorse\_38 (B2), EastView9101\_35 (B5), Emiris\_37 (B1), EmpTee\_37 (B1), Epah\_33 (B4), Eremos\_37 (B1), Etaye\_37 (B1), Eugenia\_37 (B1), Fanaw\_33 (B4), Fang\_37 (B1), Faze9\_37 (B2), FluffyNinja\_37 (B1), Fortunato\_34 (B4), Fozzie\_36 (B1), Frankicide\_37 (B1), Frederick\_34 (B4), FrenchFry\_38 (B2), Fresco\_30 (DR), Freya\_36 (B1), FriarPreacher\_37 (B1), Fringe\_37 (B1), FugateOSU\_36 (B1), Funsized\_39 (B9), Gadget\_38 (B3), Gareth\_36 (B1), GeneCoco\_37 (B1), Gervas\_37 (B3), GinPorsche\_33 (B4), Giraffe\_37 (B1), Glass\_38 (B2), GlenHope\_38 (B3), GodPhather\_31 (W), Godines\_38 (B2), Gophee\_37 (B1), Grand2040\_36 (B1), Gwilliam\_37 (B1), Gyrad\_0037 (B1), HSavage\_37 (B1), Haimas\_37 (B1), Haleema\_36 (B1), Halfpint\_36 (B3), Hally898\_33 (B4), Hamish\_37 (B1), Hangman\_34 (B4), Hartsy\_37 (B1), HarveySr\_37 (B3), Harvey\_37 (B1), Hashim76\_41 (B13), Heath\_33 (B4), Heathcliff\_37 (B3), Hedgerow\_38 (B2), Held\_37 (B1), HenryJackson\_36 (B1), Hertubise\_37 (B1), Hetaeria\_37 (B1), HighStump\_36 (B1), Hocus\_36 (B1), Holeinone\_38 (B2), Horchata\_37 (B1), Hosp\_029 (B6), Hydro\_34 (B4), ImtiyazSitla\_36 (B1), Imvubu\_30 (B10), Inchworm\_37 (B1), Indlovu\_35 (B11), Inverness\_37 (B1), Iridoclysis\_37 (B1), IsaacEli\_37 (B1), ItsyBitsy1\_38 (B2), JAMaL\_34 (B4), JDog\_36 (B1), JacAttac\_37 (B1), Jackstina\_34 (B3), JaguarMi\_34 (B4), JakeO\_36 (B1), JangoPhett\_37 (B1), Jeon\_30 (W), Jillium\_36 (B1), Jiminy\_36 (B1), Jiraiya\_37 (B1), Jolie1\_031 (B6), KLucky39\_37 (B1), Kahve\_36 (B1), Kailash\_37 (B1), Kaleb\_38 (B2), Kamiyu\_37 (B3), KarasumaRum\_38 (B5), Katniss\_37 (B1), KayaCho\_31 (B6), Keitherie\_37 (B1), Kheth\_38 (B2), Kikipoo\_37 (B1), Kimbrough\_37 (B1), KingTut\_28 (B1), KingVeVeVe\_37 (B1), KlimbOn\_37 (B1), Kloppinator\_37 (B1), Knocker\_38 (B9), Kronus\_36 (B3), Kwadwo\_36 (B1), Kwksand96\_36 (B1), Labeouficaum\_36 (B1), Lambano\_33 (B4), Lars\_38 (B2), LasagnaCat\_37 (B1), Lasso\_37 (B1), Laurie\_37 (B2), LeeLot\_37 (B1), Lego3393\_37 (B1), Legolas\_36 (B1), LeiMonet\_37 (B1), LemonSlice\_37 (B1), Lephleur\_38 (B2), LestyG\_37 (B3), Ligma\_30 (DR), LilMcDreamy\_33 (B12), LittleMunchkin\_32 (DR), LizLemon\_38 (B2), Lolalove\_34 (B4), Longacauda\_36 (B1), Lopsy\_36 (B1), LostAndPhound\_36 (B1), LuckyMarjie\_36

(B1), Lulumae\_36 (B1), Lulwa\_37 (B1), Lumine\_36 (B1), MRabcd\_36 (B1), Mag7\_36 (B1), Magic8\_37 (B1), Magpie\_33 (B4), MakoManhole\_32 (DR), Mana\_36 (B1), Manad\_36 (B1), Mao1\_31 (AD), Mariokart\_30 (DR), Marley1013\_37 (B3), Maru\_36 (B1), Mask\_32 (AD), Maskar\_36 (B1), MasterPo\_38 (B2), Matalotodo\_37 (B1), Mcshane\_36 (B1), Mecca\_36 (B1), Megabear\_30 (W), Megamind20\_37 (B1), Megatron\_37 (B1), Melc17\_37 (B1), MelsMeow\_36 (B1), Mesh1\_37 (B1), MichaelPhcott\_36 (B1), Mikota\_37 (B1), MiniBoss\_37 (B1), MitKao\_37 (B1), Mithril\_34 (B4), MmasiCarm\_37 (B3), Morgushi\_37 (B1), Mortcellus\_36 (B3), Morty007\_37 (B3), Morty\_37 (B1), Mosaic\_36 (B1), MossRose\_32 (DR), MrPhizzler\_36 (B1), Mudslide\_34 (B4), Mulan\_36 (B1), Murdoc\_37 (B1), Mutante\_36 (B1), Mysterious\_38 (B5), NHagos\_30 (DR), Nacho\_0037 (B1), Nanao\_33 (B4), Nehemiah\_36 (B5), Neos5\_37 (B3), Newman\_37 (B1), Nicole21\_37 (B1), Nigel\_32 (B4), Nozo\_37 (B3), Numberten\_37 (B1), Nyala\_36 (B1), OSmaximus\_37 (B1), Obutu\_37 (B3), Olak\_36 (B1), Oline\_36 (B1), Olive\_37 (B1), OliverWalter\_37 (B1), Omniscient\_37 (B1), Oosterbaan\_37 (B1), Opia\_38 (B2), OrangeOswald\_37 (B3), Orfeu\_36 (B1), Orion\_37 (B1), Orwigg\_37 (B1), PG1\_37 (B1), PR\_30 (W), Pacifista\_36 (B1), PenguinLover67\_39 (B9), Phaedrus\_35 (B3), Phamished\_37 (B1), Phantasmagoria\_38 (B2), Phareon\_37 (B1), PhatCats2014\_37 (B1), PhatLouie\_37 (B1), Phayeta\_38 (B3), Phelemich\_36 (B5), PhenghisKhan\_36 (B1), Pherdinand\_37 (B1), Phergie\_36 (B1), Philly\_36 (B3), Phipps\_37 (B1), Phleuron\_36 (B1), Phlyer\_37 (B3), PhrankReynolds\_36 (B1), PhrodoBaggins\_36 (B1), Punky\_37 (B1), Piglet\_0036 (B1), PinheadLarry\_37 (B1), Pinkman\_36 (B1), Pipefish\_39 (B3), Pipsqueak\_37 (B1), Placalicious\_36 (B1), Plmatters\_37 (B1), Podrick\_37 (B1), Pops\_37 (B1), Poster\_33 (B4), Potter\_36 (B1), Prickles\_37 (B1), Prince\_34 (B4), ProfessorX\_37 (B1), Puhltonio\_37 (B1), QueenBeane\_37 (B1), QueenPie\_33 (B4), Quisquillae\_37 (B1), Qyrzula\_35 (B2), RagingRooster\_37 (B3), RawrgerThat\_34 (B4), RedMaple\_36 (B1), Reprobate\_36 (B5), Rhinoforte\_38 (B2), Rich\_35 (B5), Ricotta\_36 (B1), Riggan\_37 (B1), Rimu\_38 (B1), Rinkes\_38 (B9), Rita1961\_37 (B3), Robyn\_36 (B1), Roliet\_37 (B1), RomaT\_37 (B3), Roscoe\_38 (B1), Rosebush\_37 (B2), Roy17\_37 (B1), SDcharge11\_37 (B1), Sabella\_37 (B2), Saguaro\_38 (B7), Samaymay\_37 (B1), SassyCat97\_36 (B1), Schadenfreude\_36 (B1), Schueller\_37 (B1), Scoot17C\_37 (B1), Scrick\_37 (B1), Sejanus\_32 (AD), Selr12\_37 (B1), Serendipitous\_35 (B5), Serendipity\_37 (B1), Serpentine\_0037 (B1), Shatter\_30 (DR), Sheila\_37 (B1), Shenyu\_36 (B5), ShiVal\_37 (B1), Sigman\_37 (B1), SilverBell\_37 (B1), Simielle\_36 (B1), SirJeffery\_36 (B5), Sisko\_30 (DR), Skippy\_37 (B1), Slatt\_37 (B1), SlippinJimmy\_37 (B3), Soile\_37 (B1), Solosis\_36 (B1), Sophia\_36 (B1), Soto\_37 (B1), Sour\_35 (DR), Spartan300\_37 (B1), Squid\_37 (B1), Squiggle\_37 (B1), StAugustine\_42 (singleton), Stinger\_32 (B4), StinkyVeggy\_38 (B5), Struggle\_36 (B1), Suffolk\_37 (B1), Suigeneris\_36 (B5), Surely\_37 (B1), Swiphy\_38 (B1), Swish\_37 (B1), SynergyX\_37 (B3), TA17A\_38 (B2), TPA2\_40 (singleton), TallGrassMM\_37 (B1), Taptic\_30 (W), Telesworld\_36 (B1), Thonko\_36 (B8), Thora\_37 (B1), ThreeOh3D2\_37 (B1), Thunderbird\_36 (B1), Timmi\_36 (B1), Tinciduntolum\_39 (B2), TomBombadil\_37 (B1), Tomlarah\_37 (B1), Toni\_36 (B1), Tooj\_37 (B1), Tres\_38 (B2), True\_36 (B1), Trypo\_37 (B1), Tydolla\_37 (B3), TyrionL\_36 (B1), UAch1\_37 (B1), UncleHowie\_37 (B1), Usavi\_37 (B1), Vaishali24\_36 (B1), Valjean\_37 (B1), Veritas\_36 (B1), Vic9\_38 (B2), Vincenzo\_35 (B4), VioletZ\_34 (B4), Virapocalypse\_37 (B1), Virgeve\_36 (B1), Vista\_37 (B1), Vivaldi\_37 (B1), Vortex\_37 (B1), Waleliano\_34 (B4), Wallhey\_36 (B1), Waterdiva\_37 (B1), Weher20\_37 (B1), West99\_38 (B2), Windsor\_36 (B1), Wooper\_32 (DR), Xavier\_36 (B1), Xincheng\_33 (B4), Yago84\_30 (DR), Yahalom\_37 (B3), Yinz\_37 (B3), Yoshand\_37 (B1), YouGoGlencoco\_37 (B1), Zaider\_38 (B1), Zelda\_37 (B1), Zemanar\_35 (B4), Zenteno07\_41 (B13), Zonia\_37 (B1),

Start 88:

- Found in 8 of 940 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 4 of 840
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Clawz\_61 (CP), ColdSoup\_62 (CP), DonTron\_61 (CP), Jollymon\_62 (CP), KingstonB\_62 (CP), Quesadilla\_39 (B9), Soos\_57 (CP), Sting\_60 (CP),

Start 90:

- Found in 1 of 940 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 840
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMcDreamy\_31 (B12),

Start 91:

- Found in 23 of 940 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 16 of 840
- Called 82.6% of time when present
- Phage (with cluster) where this start called: AnClar\_30 (DR), AnarQue\_31 (DR), Axumite\_29 (DR), BiggityBass\_29 (DR), CharlottesWeb\_29 (DR), CloverMinnie\_31 (DR), Coldpizza\_32 (DR), Evaa\_29 (DR), Fresco\_29 (DR), Ligma\_29 (DR), LittleMunchkin\_31 (DR), Mariokart\_29 (DR), NHagos\_29 (DR), Shatter\_29 (DR), Sisko\_29 (DR), Sour\_33 (DR), TPA2\_39 (singleton), Wooper\_31 (DR), Yago84\_29 (DR),

Start 93:

- Found in 7 of 940 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 4 of 840
- Called 57.1% of time when present
- Phage (with cluster) where this start called: CaiB\_31 (DR), MakoManhole\_31 (DR), MossRose\_31 (DR), Tonitrus\_48 (singleton),

Start 95:

- Found in 10 of 940 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 2 of 840
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Indlovu\_34 (B11), Quesadilla\_38 (B9),

Start 96:

- Found in 12 of 940 ( 1.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 8.3% of time when present
- Phage (with cluster) where this start called: BobRoss2024\_28 (DR),

Start 98:

- Found in 6 of 940 ( 0.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: KarasumaRum\_37 (B5), StinkyVeggy\_37 (B5),

Start 99:

- Found in 8 of 940 ( 0.9% ) of genes in pham

- Manual Annotations of this start: 1 of 840
- Called 12.5% of time when present
- Phage (with cluster) where this start called: PenguinLover67\_38 (B9),

Start 111:

- Found in 275 of 940 ( 29.3% ) of genes in pham
- Manual Annotations of this start: 1 of 840
- Called 0.4% of time when present
- Phage (with cluster) where this start called: Badfish\_36 (B1),

Start 254:

- Found in 3 of 940 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 840
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BobRoss2024\_29 (DR), BrownCNA\_35 (B4), Evaa\_30 (DR),

### **Summary by clusters:**

There are 18 clusters represented in this pham: singleton, B2, B10, B8, B11, B4, B5, B6, B7, B13, B1, W, B3, B12, CP, DR, B9, AD,

Info for manual annotations of cluster AD:

- Start number 82 was manually annotated 4 times for cluster AD.
- Start number 87 was manually annotated 4 times for cluster AD.

Info for manual annotations of cluster B1:

- Start number 84 was manually annotated 90 times for cluster B1.
- Start number 85 was manually annotated 172 times for cluster B1.
- Start number 87 was manually annotated 262 times for cluster B1.
- Start number 111 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B10:

- Start number 86 was manually annotated 1 time for cluster B10.
- Start number 87 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 87 was manually annotated 1 time for cluster B11.
- Start number 95 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 87 was manually annotated 1 time for cluster B12.
- Start number 90 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 86 was manually annotated 2 times for cluster B13.
- Start number 87 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 82 was manually annotated 32 times for cluster B2.
- Start number 87 was manually annotated 32 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 81 was manually annotated 45 times for cluster B3.
- Start number 87 was manually annotated 45 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 64 was manually annotated 25 times for cluster B4.
- Start number 87 was manually annotated 24 times for cluster B4.
- Start number 254 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:

- Start number 86 was manually annotated 9 times for cluster B5.
- Start number 87 was manually annotated 9 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 86 was manually annotated 1 time for cluster B6.
- Start number 87 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 86 was manually annotated 1 time for cluster B7.
- Start number 87 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 74 was manually annotated 1 time for cluster B8.
- Start number 87 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 86 was manually annotated 3 times for cluster B9.
- Start number 87 was manually annotated 5 times for cluster B9.
- Start number 88 was manually annotated 1 time for cluster B9.
- Start number 95 was manually annotated 1 time for cluster B9.
- Start number 99 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster CP:

- Start number 88 was manually annotated 3 times for cluster CP.

Info for manual annotations of cluster DR:

- Start number 87 was manually annotated 18 times for cluster DR.
- Start number 91 was manually annotated 16 times for cluster DR.
- Start number 93 was manually annotated 3 times for cluster DR.
- Start number 254 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster W:

- Start number 82 was manually annotated 8 times for cluster W.
- Start number 87 was manually annotated 8 times for cluster W.

### ***Gene Information:***

Gene: 39HC\_031 Start: 32716, Stop: 33324, Start Num: 87

Candidate Starts for 39HC\_031:

(13, 32362), (25, 32515), (32, 32539), (62, 32662), (Start: 87 @32716 has 415 MA's), (127, 32860), (131, 32866), (146, 32917), (149, 32926), (150, 32929), (157, 32974), (163, 33001), (178, 33037), (182, 33043), (187, 33064), (217, 33172), (232, 33250), (243, 33292), (248, 33310),

Gene: 39HC\_030 Start: 32075, Stop: 32719, Start Num: 86

Candidate Starts for 39HC\_030:

(Start: 86 @32075 has 17 MA's), (110, 32150), (114, 32162), (137, 32252), (149, 32297), (176, 32411), (181, 32423), (187, 32447), (189, 32465), (191, 32480), (204, 32528), (251, 32708),

Gene: 40BC\_030 Start: 32075, Stop: 32719, Start Num: 86

Candidate Starts for 40BC\_030:

(Start: 86 @32075 has 17 MA's), (110, 32150), (114, 32162), (137, 32252), (149, 32297), (176, 32411), (181, 32423), (187, 32447), (189, 32465), (191, 32480), (204, 32528), (251, 32708),

Gene: 40BC\_031 Start: 32716, Stop: 33324, Start Num: 87

Candidate Starts for 40BC\_031:

(13, 32362), (25, 32515), (32, 32539), (62, 32662), (Start: 87 @32716 has 415 MA's), (127, 32860), (131, 32866), (146, 32917), (149, 32926), (150, 32929), (157, 32974), (163, 33001), (178, 33037), (182, 33043), (187, 33064), (217, 33172), (232, 33250), (243, 33292), (248, 33310),

Gene: ABU\_37 Start: 34983, Stop: 35582, Start Num: 87

Candidate Starts for ABU\_37:

(25, 34779), (32, 34803), (42, 34845), (47, 34863), (51, 34878), (Start: 87 @34983 has 415 MA's), (97, 35013), (102, 35025), (113, 35064), (118, 35079), (131, 35133), (144, 35178), (146, 35184), (148, 35190), (150, 35196), (157, 35241), (158, 35244), (164, 35271), (187, 35331), (190, 35352), (215, 35430),

Gene: ABU\_36 Start: 34336, Stop: 34986, Start Num: 84

Candidate Starts for ABU\_36:

(67, 34300), (Start: 84 @34336 has 90 MA's), (Start: 85 @34339 has 172 MA's), (Start: 111 @34420 has 1 MA's), (146, 34555), (164, 34642), (181, 34687), (196, 34765), (214, 34816), (221, 34843), (223, 34861), (240, 34939), (249, 34972), (253, 34978),

Gene: Abinghost\_36 Start: 34276, Stop: 34929, Start Num: 81

Candidate Starts for Abinghost\_36:

(Start: 81 @34276 has 45 MA's), (108, 34357), (113, 34381), (145, 34504), (179, 34630), (186, 34645), (199, 34720), (241, 34885), (242, 34888), (249, 34915),

Gene: Abinghost\_37 Start: 34926, Stop: 35525, Start Num: 87

Candidate Starts for Abinghost\_37:

(Start: 87 @34926 has 415 MA's), (97, 34956), (108, 34983), (127, 35070), (150, 35139), (154, 35163), (157, 35184), (187, 35274), (208, 35358), (213, 35370), (226, 35430), (242, 35490), (248, 35511),

Gene: AbsoluteMadLad\_36 Start: 34992, Stop: 35591, Start Num: 87

Candidate Starts for AbsoluteMadLad\_36:

(25, 34788), (32, 34812), (42, 34854), (47, 34872), (51, 34887), (Start: 87 @34992 has 415 MA's), (97, 35022), (102, 35034), (113, 35073), (118, 35088), (119, 35091), (131, 35142), (144, 35187), (146, 35193), (148, 35199), (150, 35205), (157, 35250), (158, 35253), (164, 35280), (187, 35340), (190, 35361), (215, 35439),

Gene: AbsoluteMadLad\_35 Start: 34345, Stop: 34995, Start Num: 84

Candidate Starts for AbsoluteMadLad\_35:

(39, 34198), (67, 34309), (Start: 84 @34345 has 90 MA's), (Start: 85 @34348 has 172 MA's), (Start: 111 @34429 has 1 MA's), (146, 34564), (164, 34651), (181, 34696), (196, 34774), (214, 34825), (221, 34852), (223, 34870), (240, 34948), (249, 34981), (253, 34987),



Gene: Acadian\_35 Start: 34957, Stop: 35586, Start Num: 86

Candidate Starts for Acadian\_35:

(Start: 86 @34957 has 17 MA's), (110, 35035), (114, 35047), (125, 35107), (145, 35173), (148, 35182), (150, 35188), (157, 35233), (177, 35281), (179, 35287), (223, 35461), (251, 35575),

Gene: Acadian\_36 Start: 35583, Stop: 36191, Start Num: 87

Candidate Starts for Acadian\_36:

(31, 35406), (46, 35463), (Start: 87 @35583 has 415 MA's), (97, 35613), (114, 35667), (123, 35712), (127, 35727), (131, 35733), (137, 35748), (146, 35784), (148, 35790), (150, 35796), (158, 35844), (167, 35877), (208, 36015), (211, 36021), (243, 36159), (248, 36177),

Gene: Adriana\_37 Start: 34981, Stop: 35580, Start Num: 87

Candidate Starts for Adriana\_37:

(25, 34777), (32, 34801), (42, 34843), (47, 34861), (51, 34876), (Start: 87 @34981 has 415 MA's), (97, 35011), (102, 35023), (113, 35062), (118, 35077), (131, 35131), (144, 35176), (146, 35182), (148, 35188), (150, 35194), (157, 35239), (158, 35242), (164, 35269), (187, 35329), (190, 35350), (215, 35428),

Gene: Adriana\_36 Start: 34337, Stop: 34984, Start Num: 85

Candidate Starts for Adriana\_36:

(67, 34298), (Start: 84 @34334 has 90 MA's), (Start: 85 @34337 has 172 MA's), (Start: 111 @34418 has 1 MA's), (146, 34553), (164, 34640), (181, 34685), (196, 34763), (214, 34814), (221, 34841), (223, 34859), (240, 34937), (249, 34970), (253, 34976),

Gene: Aelin\_35 Start: 33903, Stop: 34550, Start Num: 85

Candidate Starts for Aelin\_35:

(39, 33753), (67, 33864), (Start: 84 @33900 has 90 MA's), (Start: 85 @33903 has 172 MA's), (Start: 111 @33984 has 1 MA's), (146, 34119), (164, 34206), (181, 34251), (196, 34329), (214, 34380), (221, 34407), (223, 34425), (240, 34503), (249, 34536), (253, 34542),

Gene: Aelin\_36 Start: 34547, Stop: 35146, Start Num: 87

Candidate Starts for Aelin\_36:

(25, 34343), (32, 34367), (42, 34409), (47, 34427), (51, 34442), (Start: 87 @34547 has 415 MA's), (97, 34577), (102, 34589), (113, 34628), (118, 34643), (131, 34697), (144, 34742), (146, 34748), (148, 34754), (150, 34760), (157, 34805), (158, 34808), (164, 34835), (187, 34895), (190, 34916), (215, 34994),

Gene: Ahwei\_33 Start: 34150, Stop: 34755, Start Num: 87

Candidate Starts for Ahwei\_33:

(Start: 87 @34150 has 415 MA's), (97, 34186), (113, 34237), (114, 34240), (127, 34300), (131, 34306), (144, 34351), (147, 34360), (148, 34363), (149, 34366), (154, 34393), (164, 34444), (188, 34510), (190, 34525), (208, 34588), (223, 34645), (243, 34723), (248, 34741),

Gene: Ahwei\_32 Start: 33506, Stop: 34153, Start Num: 64

Candidate Starts for Ahwei\_32:

(Start: 64 @33506 has 25 MA's), (100, 33584), (104, 33596), (122, 33668), (133, 33692), (139, 33713), (140, 33722), (141, 33725), (144, 33734), (145, 33737), (155, 33782), (166, 33836), (173, 33854), (190, 33914), (195, 33926), (215, 33986), (221, 34010), (223, 34028), (243, 34115), (251, 34142),

Gene: Akoma\_36 Start: 34280, Stop: 34933, Start Num: 81

Candidate Starts for Akoma\_36:

(Start: 81 @34280 has 45 MA's), (108, 34361), (145, 34508), (179, 34634), (186, 34649), (199, 34724), (241, 34889), (249, 34919),

Gene: Akoma\_37 Start: 34930, Stop: 35529, Start Num: 87

Candidate Starts for Akoma\_37:

(24, 34726), (Start: 87 @34930 has 415 MA's), (97, 34960), (108, 34987), (127, 35074), (131, 35080), (150, 35143), (154, 35167), (187, 35278), (208, 35362), (213, 35374), (226, 35434), (248, 35515),

Gene: AlanGrant\_35 Start: 35904, Stop: 36506, Start Num: 87

Candidate Starts for AlanGrant\_35:

(Start: 87 @35904 has 415 MA's), (97, 35937), (102, 35949), (127, 36051), (131, 36057), (137, 36072), (144, 36102), (146, 36108), (148, 36114), (154, 36144), (157, 36165), (180, 36231), (187, 36255), (188, 36261), (190, 36276), (193, 36288), (213, 36351), (215, 36354), (242, 36471), (243, 36474), (248, 36492),

Gene: AlanGrant\_34 Start: 35254, Stop: 35907, Start Num: 64

Candidate Starts for AlanGrant\_34:

(Start: 64 @35254 has 25 MA's), (106, 35347), (124, 35428), (131, 35443), (139, 35467), (140, 35476), (141, 35479), (144, 35488), (155, 35536), (166, 35590), (168, 35593), (170, 35602), (173, 35608), (175, 35611), (190, 35668), (195, 35680), (215, 35740), (221, 35764), (251, 35896),

Gene: Allegro\_38 Start: 35466, Stop: 36065, Start Num: 87

Candidate Starts for Allegro\_38:

(78, 35445), (Start: 87 @35466 has 415 MA's), (97, 35496), (105, 35517), (113, 35547), (114, 35550), (131, 35616), (146, 35667), (147, 35670), (148, 35673), (154, 35703), (157, 35724), (180, 35790), (188, 35820), (213, 35910), (215, 35913), (219, 35931), (223, 35955), (240, 36024), (248, 36051),

Gene: Allegro\_36 Start: 34676, Stop: 35320, Start Num: 82

Candidate Starts for Allegro\_36:

(34, 34511), (59, 34622), (Start: 82 @34676 has 44 MA's), (Start: 85 @34685 has 172 MA's), (108, 34754), (114, 34781), (117, 34790), (142, 34895), (146, 34907), (150, 34919), (177, 35012), (191, 35078), (196, 35099), (201, 35114), (203, 35120), (210, 35141), (216, 35153), (251, 35309),

Gene: AltPhacts\_37 Start: 34970, Stop: 35569, Start Num: 87

Candidate Starts for AltPhacts\_37:

(25, 34766), (32, 34790), (42, 34832), (47, 34850), (51, 34865), (Start: 87 @34970 has 415 MA's), (97, 35000), (102, 35012), (113, 35051), (118, 35066), (131, 35120), (144, 35165), (146, 35171), (148, 35177), (150, 35183), (157, 35228), (158, 35231), (164, 35258), (187, 35318), (190, 35339), (215, 35417),

Gene: AltPhacts\_36 Start: 34326, Stop: 34973, Start Num: 85

Candidate Starts for AltPhacts\_36:

(39, 34176), (67, 34287), (Start: 84 @34323 has 90 MA's), (Start: 85 @34326 has 172 MA's), (Start: 111 @34407 has 1 MA's), (146, 34542), (164, 34629), (181, 34674), (196, 34752), (214, 34803), (221, 34830), (223, 34848), (240, 34926), (249, 34959), (253, 34965),

Gene: Altwerkus\_36 Start: 34671, Stop: 35270, Start Num: 87

Candidate Starts for Altwerkus\_36:

(25, 34467), (32, 34491), (42, 34533), (47, 34551), (51, 34566), (Start: 87 @34671 has 415 MA's), (97, 34701), (102, 34713), (113, 34752), (118, 34767), (131, 34821), (144, 34866), (146, 34872), (148, 34878), (150, 34884), (157, 34929), (158, 34932), (164, 34959), (187, 35019), (190, 35040), (215, 35118),

Gene: Altwerkus\_35 Start: 34024, Stop: 34674, Start Num: 84

Candidate Starts for Altwerkus\_35:

(39, 33877), (67, 33988), (Start: 84 @34024 has 90 MA's), (Start: 85 @34027 has 172 MA's), (Start: 111 @34108 has 1 MA's), (146, 34243), (164, 34330), (181, 34375), (196, 34453), (214, 34504), (221, 34531), (223, 34549), (240, 34627), (249, 34660), (253, 34666),

Gene: AnClar\_31 Start: 30955, Stop: 31584, Start Num: 87

Candidate Starts for AnClar\_31:

(32, 30778), (Start: 87 @30955 has 415 MA's), (97, 30985), (108, 31012), (127, 31099), (131, 31105), (145, 31153), (148, 31162), (154, 31192), (157, 31213), (169, 31258), (178, 31276), (180, 31279), (215, 31402), (217, 31411), (219, 31420),

Gene: AnClar\_30 Start: 30344, Stop: 30958, Start Num: 91

Candidate Starts for AnClar\_30:

(Start: 91 @30344 has 16 MA's), (96, 30359), (110, 30413), (118, 30437), (124, 30476), (145, 30545), (146, 30548), (155, 30587), (159, 30611), (177, 30653), (183, 30665), (236, 30890), (240, 30911), (242, 30917), (251, 30947),

Gene: AnarQue\_32 Start: 30081, Stop: 30677, Start Num: 87

Candidate Starts for AnarQue\_32:

(32, 29904), (42, 29943), (44, 29952), (59, 30015), (62, 30027), (Start: 87 @30081 has 415 MA's), (97, 30111), (127, 30225), (131, 30231), (146, 30282), (148, 30288), (157, 30339), (158, 30342), (180, 30405), (186, 30417), (187, 30429), (197, 30480), (207, 30510), (215, 30528), (217, 30537), (248, 30663),

Gene: AnarQue\_31 Start: 29470, Stop: 30084, Start Num: 91

Candidate Starts for AnarQue\_31:

(Start: 91 @29470 has 16 MA's), (Start: 93 @29473 has 4 MA's), (110, 29539), (115, 29554), (118, 29563), (124, 29602), (132, 29623), (137, 29638), (145, 29671), (154, 29710), (155, 29713), (157, 29731), (179, 29785), (242, 30043), (251, 30073),

Gene: Anderson\_36 Start: 34332, Stop: 34979, Start Num: 85

Candidate Starts for Anderson\_36:

(39, 34182), (67, 34293), (Start: 84 @34329 has 90 MA's), (Start: 85 @34332 has 172 MA's), (Start: 111 @34413 has 1 MA's), (146, 34548), (164, 34635), (181, 34680), (196, 34758), (214, 34809), (221, 34836), (223, 34854), (240, 34932), (249, 34965), (253, 34971),

Gene: Anderson\_37 Start: 34976, Stop: 35575, Start Num: 87

Candidate Starts for Anderson\_37:

(25, 34772), (32, 34796), (42, 34838), (47, 34856), (51, 34871), (Start: 87 @34976 has 415 MA's), (97, 35006), (102, 35018), (113, 35057), (118, 35072), (131, 35126), (144, 35171), (146, 35177), (148, 35183), (150, 35189), (157, 35234), (158, 35237), (164, 35264), (187, 35324), (190, 35345), (215, 35423),

Gene: Andre\_37 Start: 34975, Stop: 35574, Start Num: 87

Candidate Starts for Andre\_37:

(25, 34771), (32, 34795), (42, 34837), (47, 34855), (51, 34870), (Start: 87 @34975 has 415 MA's), (97, 35005), (102, 35017), (113, 35056), (118, 35071), (131, 35125), (144, 35170), (146, 35176), (148, 35182), (150, 35188), (157, 35233), (158, 35236), (164, 35263), (187, 35323), (190, 35344), (215, 35422),

Gene: Andre\_36 Start: 34331, Stop: 34978, Start Num: 85

Candidate Starts for Andre\_36:

(39, 34181), (67, 34292), (Start: 84 @34328 has 90 MA's), (Start: 85 @34331 has 172 MA's), (Start: 111 @34412 has 1 MA's), (146, 34547), (164, 34634), (181, 34679), (196, 34757), (214, 34808), (221, 34835), (223, 34853), (240, 34931), (249, 34964), (253, 34970),

Gene: Antihero\_32 Start: 33506, Stop: 34153, Start Num: 64

Candidate Starts for Antihero\_32:

(Start: 64 @33506 has 25 MA's), (100, 33584), (104, 33596), (122, 33668), (133, 33692), (139, 33713), (140, 33722), (141, 33725), (144, 33734), (145, 33737), (155, 33782), (166, 33836), (173, 33854), (190, 33914), (195, 33926), (215, 33986), (221, 34010), (223, 34028), (243, 34115), (251, 34142),

Gene: Antihero\_33 Start: 34150, Stop: 34755, Start Num: 87

Candidate Starts for Antihero\_33:

(Start: 87 @34150 has 415 MA's), (97, 34186), (113, 34237), (114, 34240), (127, 34300), (131, 34306), (144, 34351), (147, 34360), (148, 34363), (149, 34366), (154, 34393), (164, 34444), (188, 34510), (190, 34525), (208, 34588), (223, 34645), (243, 34723), (248, 34741),

Gene: Antonia\_36 Start: 34547, Stop: 35146, Start Num: 87

Candidate Starts for Antonia\_36:

(25, 34343), (32, 34367), (42, 34409), (47, 34427), (51, 34442), (Start: 87 @34547 has 415 MA's), (97, 34577), (102, 34589), (113, 34628), (118, 34643), (131, 34697), (144, 34742), (146, 34748), (148, 34754), (150, 34760), (157, 34805), (158, 34808), (164, 34835), (187, 34895), (190, 34916), (215, 34994),

Gene: Antonia\_35 Start: 33900, Stop: 34550, Start Num: 84

Candidate Starts for Antonia\_35:

(39, 33753), (67, 33864), (Start: 84 @33900 has 90 MA's), (Start: 85 @33903 has 172 MA's), (Start: 111 @33984 has 1 MA's), (146, 34119), (164, 34206), (181, 34251), (196, 34329), (214, 34380), (221, 34407), (223, 34425), (240, 34503), (249, 34536), (253, 34542),

Gene: Apex\_33 Start: 34712, Stop: 35359, Start Num: 64

Candidate Starts for Apex\_33:

(Start: 64 @34712 has 25 MA's), (100, 34790), (104, 34802), (122, 34874), (133, 34898), (140, 34928), (141, 34931), (144, 34940), (155, 34988), (166, 35042), (173, 35060), (190, 35120), (195, 35132), (215, 35192), (221, 35216), (223, 35234), (243, 35321), (244, 35324), (251, 35348),

Gene: Apex\_34 Start: 35356, Stop: 35961, Start Num: 87

Candidate Starts for Apex\_34:

(Start: 87 @35356 has 415 MA's), (97, 35392), (108, 35419), (113, 35443), (114, 35446), (127, 35506), (131, 35512), (144, 35557), (147, 35566), (148, 35569), (149, 35572), (154, 35599), (157, 35620), (164, 35650), (188, 35716), (190, 35731), (208, 35794), (223, 35851), (243, 35929), (248, 35947),

Gene: Apizium\_35 Start: 34092, Stop: 34742, Start Num: 84

Candidate Starts for Apizium\_35:

(39, 33945), (67, 34056), (Start: 84 @34092 has 90 MA's), (Start: 85 @34095 has 172 MA's), (Start: 111 @34176 has 1 MA's), (146, 34311), (164, 34398), (181, 34443), (196, 34521), (214, 34572), (221, 34599), (223, 34617), (240, 34695), (249, 34728), (253, 34734),

Gene: Apizium\_36 Start: 34739, Stop: 35338, Start Num: 87

Candidate Starts for Apizium\_36:

(25, 34535), (32, 34559), (42, 34601), (47, 34619), (51, 34634), (Start: 87 @34739 has 415 MA's), (97, 34769), (102, 34781), (113, 34820), (118, 34835), (131, 34889), (144, 34934), (146, 34940), (148,

34946), (150, 34952), (157, 34997), (158, 35000), (164, 35027), (187, 35087), (190, 35108), (215, 35186),

Gene: Arbiter\_36 Start: 34765, Stop: 35409, Start Num: 82

Candidate Starts for Arbiter\_36:

(34, 34600), (59, 34711), (Start: 82 @34765 has 44 MA's), (Start: 85 @34774 has 172 MA's), (108, 34843), (114, 34870), (117, 34879), (120, 34888), (146, 34996), (150, 35008), (177, 35101), (191, 35167), (196, 35188), (201, 35203), (203, 35209), (210, 35230), (216, 35242), (251, 35398),

Gene: Arbiter\_37 Start: 35555, Stop: 36154, Start Num: 87

Candidate Starts for Arbiter\_37:

(78, 35534), (Start: 87 @35555 has 415 MA's), (97, 35585), (105, 35606), (113, 35636), (114, 35639), (131, 35705), (146, 35756), (147, 35759), (148, 35762), (154, 35792), (157, 35813), (180, 35879), (188, 35909), (213, 35999), (215, 36002), (219, 36020), (223, 36044), (240, 36113), (248, 36140),

Gene: Ares\_36 Start: 34749, Stop: 35393, Start Num: 82

Candidate Starts for Ares\_36:

(21, 34548), (Start: 82 @34749 has 44 MA's), (Start: 85 @34758 has 172 MA's), (108, 34827), (114, 34854), (117, 34863), (142, 34968), (146, 34980), (150, 34992), (177, 35085), (191, 35151), (196, 35172), (201, 35187), (203, 35193), (216, 35226), (251, 35382),

Gene: Ares\_38 Start: 35539, Stop: 36138, Start Num: 87

Candidate Starts for Ares\_38:

(78, 35518), (Start: 87 @35539 has 415 MA's), (97, 35569), (98, 35572), (105, 35590), (113, 35620), (114, 35623), (131, 35689), (146, 35740), (147, 35743), (148, 35746), (154, 35776), (157, 35797), (180, 35863), (188, 35893), (213, 35983), (215, 35986), (219, 36004), (223, 36028), (240, 36097), (248, 36124),

Gene: Argie\_31 Start: 32516, Stop: 33115, Start Num: 87

Candidate Starts for Argie\_31:

(Start: 87 @32516 has 415 MA's), (97, 32546), (105, 32567), (108, 32573), (127, 32660), (131, 32666), (146, 32717), (150, 32729), (154, 32753), (157, 32774), (161, 32792), (167, 32810), (178, 32837), (221, 32987), (223, 33005), (242, 33080), (248, 33101),

Gene: Argie\_29 Start: 31722, Stop: 32366, Start Num: 82

Candidate Starts for Argie\_29:

(Start: 82 @31722 has 44 MA's), (89, 31740), (98, 31773), (107, 31797), (117, 31836), (120, 31845), (132, 31902), (146, 31953), (148, 31959), (150, 31965), (165, 32040), (181, 32067), (191, 32124), (195, 32136), (203, 32166), (223, 32241), (239, 32313),

Gene: Ashraf\_35 Start: 33899, Stop: 34546, Start Num: 85

Candidate Starts for Ashraf\_35:

(67, 33860), (Start: 84 @33896 has 90 MA's), (Start: 85 @33899 has 172 MA's), (Start: 111 @33980 has 1 MA's), (146, 34115), (164, 34202), (181, 34247), (195, 34316), (196, 34325), (214, 34376), (223, 34421), (240, 34499), (249, 34532), (253, 34538),

Gene: Ashraf\_36 Start: 34543, Stop: 35142, Start Num: 87

Candidate Starts for Ashraf\_36:

(24, 34336), (25, 34339), (32, 34363), (42, 34405), (47, 34423), (51, 34438), (Start: 87 @34543 has 415 MA's), (97, 34573), (102, 34585), (113, 34624), (118, 34639), (131, 34693), (144, 34738), (146, 34744), (148, 34750), (150, 34756), (157, 34801), (158, 34804), (164, 34831), (187, 34891), (190, 34912), (208, 34975), (215, 34990),

Gene: Athena\_38 Start: 35677, Stop: 36276, Start Num: 87

Candidate Starts for Athena\_38:

(Start: 87 @35677 has 415 MA's), (97, 35707), (108, 35734), (127, 35821), (131, 35827), (150, 35890), (154, 35914), (187, 36025), (208, 36109), (213, 36121), (226, 36181), (248, 36262),

Gene: Athena\_37 Start: 35027, Stop: 35680, Start Num: 81

Candidate Starts for Athena\_37:

(Start: 81 @35027 has 45 MA's), (108, 35108), (113, 35132), (145, 35255), (179, 35381), (186, 35396), (199, 35471), (241, 35636), (242, 35639), (249, 35666),

Gene: Audrey\_36 Start: 34276, Stop: 34929, Start Num: 81

Candidate Starts for Audrey\_36:

(Start: 81 @34276 has 45 MA's), (108, 34357), (113, 34381), (145, 34504), (179, 34630), (186, 34645), (199, 34720), (241, 34885), (242, 34888), (249, 34915),

Gene: Audrey\_37 Start: 34926, Stop: 35525, Start Num: 87

Candidate Starts for Audrey\_37:

(Start: 87 @34926 has 415 MA's), (97, 34956), (108, 34983), (127, 35070), (131, 35076), (150, 35139), (154, 35163), (157, 35184), (187, 35274), (208, 35358), (213, 35370), (226, 35430), (242, 35490), (248, 35511),

Gene: Austelle\_35 Start: 35812, Stop: 36417, Start Num: 87

Candidate Starts for Austelle\_35:

(Start: 87 @35812 has 415 MA's), (97, 35848), (108, 35875), (113, 35899), (114, 35902), (127, 35962), (131, 35968), (144, 36013), (147, 36022), (148, 36025), (149, 36028), (154, 36055), (157, 36076), (164, 36106), (188, 36172), (190, 36187), (208, 36250), (223, 36307), (243, 36385), (248, 36403),

Gene: Austelle\_34 Start: 35168, Stop: 35815, Start Num: 64

Candidate Starts for Austelle\_34:

(Start: 64 @35168 has 25 MA's), (100, 35246), (104, 35258), (122, 35330), (133, 35354), (140, 35384), (141, 35387), (144, 35396), (155, 35444), (166, 35498), (173, 35516), (190, 35576), (195, 35588), (215, 35648), (221, 35672), (223, 35690), (243, 35777), (244, 35780), (251, 35804),

Gene: Axumite\_30 Start: 28099, Stop: 28731, Start Num: 87

Candidate Starts for Axumite\_30:

(32, 27922), (Start: 87 @28099 has 415 MA's), (97, 28132), (108, 28159), (131, 28252), (145, 28300), (148, 28309), (157, 28360), (178, 28423), (180, 28426), (195, 28489), (215, 28549), (217, 28558), (219, 28567), (245, 28705),

Gene: Axumite\_29 Start: 27488, Stop: 28102, Start Num: 91

Candidate Starts for Axumite\_29:

(43, 27338), (Start: 91 @27488 has 16 MA's), (96, 27503), (Start: 99 @27521 has 1 MA's), (110, 27557), (118, 27581), (124, 27620), (145, 27689), (146, 27692), (147, 27695), (177, 27797), (236, 28034), (240, 28055), (242, 28061), (251, 28091),

Gene: Badfish\_36 Start: 34443, Stop: 35009, Start Num: 111

Candidate Starts for Badfish\_36:

(Start: 111 @34443 has 1 MA's), (146, 34578), (164, 34665), (181, 34710), (196, 34788), (214, 34839), (221, 34866), (223, 34884), (240, 34962), (249, 34995), (253, 35001),

Gene: Badfish\_37 Start: 35006, Stop: 35605, Start Num: 87

Candidate Starts for Badfish\_37:

(25, 34802), (32, 34826), (42, 34868), (47, 34886), (51, 34901), (Start: 87 @35006 has 415 MA's), (97, 35036), (102, 35048), (113, 35087), (118, 35102), (131, 35156), (144, 35201), (146, 35207), (148, 35213), (150, 35219), (157, 35264), (158, 35267), (164, 35294), (187, 35354), (190, 35375), (215, 35453),

Gene: Bae\_35 Start: 35510, Stop: 36118, Start Num: 87

Candidate Starts for Bae\_35:

(Start: 87 @35510 has 415 MA's), (97, 35540), (131, 35660), (137, 35675), (146, 35711), (148, 35717), (150, 35723), (158, 35771), (206, 35936), (208, 35942), (232, 36044), (243, 36086), (248, 36104),

Gene: Bae\_34 Start: 34774, Stop: 35403, Start Num: 86

Candidate Starts for Bae\_34:

(Start: 86 @34774 has 17 MA's), (110, 34852), (114, 34864), (125, 34924), (145, 34990), (150, 35005), (157, 35050), (177, 35098), (179, 35104), (223, 35278), (245, 35371), (251, 35392),

Gene: Baloo\_36 Start: 34279, Stop: 34932, Start Num: 81

Candidate Starts for Baloo\_36:

(Start: 81 @34279 has 45 MA's), (108, 34360), (113, 34384), (145, 34507), (179, 34633), (186, 34648), (199, 34723), (241, 34888), (242, 34891), (249, 34918),

Gene: Baloo\_37 Start: 34929, Stop: 35528, Start Num: 87

Candidate Starts for Baloo\_37:

(Start: 87 @34929 has 415 MA's), (97, 34959), (108, 34986), (127, 35073), (131, 35079), (150, 35142), (154, 35166), (157, 35187), (187, 35277), (208, 35361), (213, 35373), (226, 35433), (248, 35514),

Gene: Bananafish\_36 Start: 34685, Stop: 35329, Start Num: 82

Candidate Starts for Bananafish\_36:

(34, 34520), (59, 34631), (Start: 82 @34685 has 44 MA's), (Start: 85 @34694 has 172 MA's), (108, 34763), (114, 34790), (117, 34799), (120, 34808), (146, 34916), (150, 34928), (177, 35021), (191, 35087), (196, 35108), (201, 35123), (203, 35129), (210, 35150), (216, 35162), (251, 35318),

Gene: Bananafish\_38 Start: 35475, Stop: 36074, Start Num: 87

Candidate Starts for Bananafish\_38:

(78, 35454), (Start: 87 @35475 has 415 MA's), (97, 35505), (105, 35526), (113, 35556), (114, 35559), (131, 35625), (146, 35676), (147, 35679), (148, 35682), (154, 35712), (157, 35733), (180, 35799), (188, 35829), (213, 35919), (215, 35922), (219, 35940), (223, 35964), (240, 36033), (248, 36060),

Gene: Banjo\_36 Start: 34681, Stop: 35280, Start Num: 87

Candidate Starts for Banjo\_36:

(25, 34477), (32, 34501), (42, 34543), (47, 34561), (51, 34576), (Start: 87 @34681 has 415 MA's), (97, 34711), (102, 34723), (113, 34762), (118, 34777), (131, 34831), (144, 34876), (146, 34882), (148, 34888), (150, 34894), (157, 34939), (158, 34942), (164, 34969), (187, 35029), (190, 35050), (215, 35128),

Gene: Banjo\_35 Start: 34037, Stop: 34684, Start Num: 85

Candidate Starts for Banjo\_35:

(67, 33998), (Start: 84 @34034 has 90 MA's), (Start: 85 @34037 has 172 MA's), (Start: 111 @34118 has 1 MA's), (146, 34253), (164, 34340), (181, 34385), (196, 34463), (214, 34514), (221, 34541), (223, 34559), (240, 34637), (249, 34670), (253, 34676),

Gene: Basato\_37 Start: 34616, Stop: 35263, Start Num: 85



Candidate Starts for Basato\_37:

(39, 34466), (67, 34577), (Start: 84 @34613 has 90 MA's), (Start: 85 @34616 has 172 MA's), (Start: 111 @34697 has 1 MA's), (146, 34832), (164, 34919), (181, 34964), (196, 35042), (214, 35093), (221, 35120), (223, 35138), (240, 35216), (249, 35249), (253, 35255),

Gene: Basato\_38 Start: 35260, Stop: 35859, Start Num: 87

Candidate Starts for Basato\_38:

(25, 35056), (32, 35080), (42, 35122), (47, 35140), (51, 35155), (Start: 87 @35260 has 415 MA's), (97, 35290), (102, 35302), (113, 35341), (118, 35356), (119, 35359), (131, 35410), (144, 35455), (146, 35461), (148, 35467), (150, 35473), (157, 35518), (158, 35521), (164, 35548), (187, 35608), (190, 35629), (215, 35707),

Gene: BatteryCK\_36 Start: 34600, Stop: 35199, Start Num: 87

Candidate Starts for BatteryCK\_36:

(24, 34393), (25, 34396), (32, 34420), (42, 34462), (47, 34480), (51, 34495), (Start: 87 @34600 has 415 MA's), (97, 34630), (102, 34642), (113, 34681), (118, 34696), (131, 34750), (144, 34795), (146, 34801), (148, 34807), (150, 34813), (157, 34858), (158, 34861), (164, 34888), (187, 34948), (190, 34969), (208, 35032), (215, 35047),

Gene: BatteryCK\_35 Start: 33956, Stop: 34603, Start Num: 85

Candidate Starts for BatteryCK\_35:

(67, 33917), (Start: 84 @33953 has 90 MA's), (Start: 85 @33956 has 172 MA's), (Start: 111 @34037 has 1 MA's), (146, 34172), (164, 34259), (181, 34304), (195, 34373), (196, 34382), (214, 34433), (223, 34478), (240, 34556), (249, 34589), (253, 34595),

Gene: Beaglebox\_35 Start: 34058, Stop: 34705, Start Num: 85

Candidate Starts for Beaglebox\_35:

(39, 33908), (67, 34019), (Start: 84 @34055 has 90 MA's), (Start: 85 @34058 has 172 MA's), (Start: 111 @34139 has 1 MA's), (146, 34274), (164, 34361), (181, 34406), (196, 34484), (214, 34535), (221, 34562), (223, 34580), (240, 34658), (249, 34691), (253, 34697),

Gene: Beaglebox\_36 Start: 34702, Stop: 35301, Start Num: 87

Candidate Starts for Beaglebox\_36:

(25, 34498), (32, 34522), (42, 34564), (47, 34582), (51, 34597), (Start: 87 @34702 has 415 MA's), (97, 34732), (102, 34744), (113, 34783), (118, 34798), (131, 34852), (144, 34897), (146, 34903), (148, 34909), (150, 34915), (157, 34960), (158, 34963), (164, 34990), (187, 35050), (190, 35071), (215, 35149),

Gene: Ben11\_36 Start: 34748, Stop: 35347, Start Num: 87

Candidate Starts for Ben11\_36:

(Start: 87 @34748 has 415 MA's), (97, 34778), (108, 34805), (127, 34892), (131, 34898), (150, 34961), (154, 34985), (157, 35006), (187, 35096), (208, 35180), (213, 35192), (226, 35252), (242, 35312), (248, 35333),

Gene: Ben11\_35 Start: 34098, Stop: 34751, Start Num: 81

Candidate Starts for Ben11\_35:

(Start: 81 @34098 has 45 MA's), (108, 34179), (113, 34203), (145, 34326), (179, 34452), (186, 34467), (199, 34542), (241, 34707), (249, 34737),

Gene: Bernardo\_37 Start: 35016, Stop: 35615, Start Num: 87

Candidate Starts for Bernardo\_37:

(Start: 87 @35016 has 415 MA's), (97, 35046), (108, 35073), (127, 35160), (131, 35166), (150, 35229), (154, 35253), (157, 35274), (187, 35364), (208, 35448), (213, 35460), (226, 35520), (242,

35580), (248, 35601),

Gene: Bernardo\_36 Start: 34366, Stop: 35019, Start Num: 81

Candidate Starts for Bernardo\_36:

(Start: 81 @34366 has 45 MA's), (108, 34447), (113, 34471), (145, 34594), (179, 34720), (186, 34735), (199, 34810), (241, 34975), (242, 34978), (249, 35005),

Gene: BiggityBass\_29 Start: 29751, Stop: 30365, Start Num: 91

Candidate Starts for BiggityBass\_29:

(Start: 91 @29751 has 16 MA's), (96, 29766), (110, 29820), (145, 29952), (146, 29955), (159, 30018), (177, 30060), (183, 30072), (191, 30126), (236, 30297), (240, 30318), (242, 30324), (251, 30354),

Gene: BiggityBass\_30 Start: 30362, Stop: 30991, Start Num: 87

Candidate Starts for BiggityBass\_30:

(32, 30185), (Start: 87 @30362 has 415 MA's), (97, 30392), (108, 30419), (127, 30506), (131, 30512), (145, 30560), (148, 30569), (153, 30596), (154, 30599), (157, 30620), (169, 30665), (178, 30683), (180, 30686), (215, 30809), (217, 30818), (219, 30827), (223, 30851),

Gene: BirdsNest\_38 Start: 33284, Stop: 33928, Start Num: 86

Candidate Starts for BirdsNest\_38:

(56, 33194), (61, 33218), (67, 33236), (71, 33242), (Start: 86 @33284 has 17 MA's), (115, 33377), (119, 33389), (137, 33464), (154, 33536), (157, 33557), (169, 33608), (191, 33689), (244, 33893), (251, 33917),

Gene: BirdsNest\_39 Start: 33925, Stop: 34533, Start Num: 87

Candidate Starts for BirdsNest\_39:

(3, 33469), (25, 33724), (32, 33748), (Start: 87 @33925 has 415 MA's), (92, 33931), (97, 33955), (127, 34069), (131, 34075), (148, 34132), (215, 34372), (217, 34381), (231, 34459), (243, 34501),

Gene: Bishoperium\_35 Start: 34046, Stop: 34693, Start Num: 85

Candidate Starts for Bishoperium\_35:

(67, 34007), (Start: 84 @34043 has 90 MA's), (Start: 85 @34046 has 172 MA's), (Start: 111 @34127 has 1 MA's), (146, 34262), (164, 34349), (181, 34394), (196, 34472), (214, 34523), (221, 34550), (223, 34568), (240, 34646), (249, 34679), (253, 34685),

Gene: Bishoperium\_36 Start: 34690, Stop: 35289, Start Num: 87

Candidate Starts for Bishoperium\_36:

(25, 34486), (32, 34510), (42, 34552), (47, 34570), (51, 34585), (Start: 87 @34690 has 415 MA's), (97, 34720), (102, 34732), (113, 34771), (118, 34786), (131, 34840), (144, 34885), (146, 34891), (148, 34897), (150, 34903), (157, 34948), (158, 34951), (164, 34978), (187, 35038), (190, 35059), (215, 35137),

Gene: BlackStallion\_36 Start: 34348, Stop: 34995, Start Num: 85

Candidate Starts for BlackStallion\_36:

(67, 34309), (Start: 84 @34345 has 90 MA's), (Start: 85 @34348 has 172 MA's), (Start: 111 @34429 has 1 MA's), (146, 34564), (164, 34651), (181, 34696), (196, 34774), (214, 34825), (221, 34852), (223, 34870), (240, 34948), (249, 34981), (253, 34987),

Gene: BlackStallion\_37 Start: 34992, Stop: 35591, Start Num: 87

Candidate Starts for BlackStallion\_37:

(25, 34788), (32, 34812), (42, 34854), (47, 34872), (51, 34887), (Start: 87 @34992 has 415 MA's), (97, 35022), (102, 35034), (113, 35073), (118, 35088), (131, 35142), (144, 35187), (146, 35193), (148, 35199), (150, 35205), (157, 35250), (158, 35253), (164, 35280), (187, 35340), (190, 35361), (215,

35439),

Gene: Blocker23\_36 Start: 34803, Stop: 35447, Start Num: 82

Candidate Starts for Blocker23\_36:

(34, 34638), (59, 34749), (Start: 82 @34803 has 44 MA's), (Start: 85 @34812 has 172 MA's), (108, 34881), (114, 34908), (117, 34917), (120, 34926), (146, 35034), (150, 35046), (177, 35139), (191, 35205), (196, 35226), (201, 35241), (203, 35247), (210, 35268), (216, 35280), (251, 35436),

Gene: Blocker23\_38 Start: 35593, Stop: 36192, Start Num: 87

Candidate Starts for Blocker23\_38:

(78, 35572), (Start: 87 @35593 has 415 MA's), (97, 35623), (105, 35644), (113, 35674), (114, 35677), (131, 35743), (146, 35794), (147, 35797), (148, 35800), (154, 35830), (157, 35851), (180, 35917), (188, 35947), (213, 36037), (215, 36040), (219, 36058), (223, 36082), (240, 36151), (248, 36178),

Gene: BlueHusk\_37 Start: 34489, Stop: 35088, Start Num: 87

Candidate Starts for BlueHusk\_37:

(25, 34285), (32, 34309), (42, 34351), (47, 34369), (51, 34384), (Start: 87 @34489 has 415 MA's), (97, 34519), (102, 34531), (113, 34570), (118, 34585), (119, 34588), (131, 34639), (144, 34684), (146, 34690), (148, 34696), (150, 34702), (157, 34747), (158, 34750), (164, 34777), (187, 34837), (190, 34858), (215, 34936),

Gene: BlueHusk\_36 Start: 33845, Stop: 34492, Start Num: 85

Candidate Starts for BlueHusk\_36:

(39, 33695), (67, 33806), (Start: 84 @33842 has 90 MA's), (Start: 85 @33845 has 172 MA's), (Start: 111 @33926 has 1 MA's), (146, 34061), (164, 34148), (181, 34193), (196, 34271), (214, 34322), (221, 34349), (223, 34367), (240, 34445), (249, 34478), (253, 34484),

Gene: Bluephacebaby\_36 Start: 34687, Stop: 35286, Start Num: 87

Candidate Starts for Bluephacebaby\_36:

(25, 34483), (32, 34507), (42, 34549), (47, 34567), (51, 34582), (Start: 87 @34687 has 415 MA's), (97, 34717), (102, 34729), (113, 34768), (118, 34783), (131, 34837), (144, 34882), (146, 34888), (148, 34894), (150, 34900), (157, 34945), (158, 34948), (164, 34975), (187, 35035), (190, 35056), (215, 35134),

Gene: Bluephacebaby\_35 Start: 34043, Stop: 34690, Start Num: 85

Candidate Starts for Bluephacebaby\_35:

(39, 33893), (67, 34004), (Start: 84 @34040 has 90 MA's), (Start: 85 @34043 has 172 MA's), (Start: 111 @34124 has 1 MA's), (146, 34259), (164, 34346), (181, 34391), (196, 34469), (214, 34520), (221, 34547), (223, 34565), (240, 34643), (249, 34676), (253, 34682),

Gene: BobRoss2024\_28 Start: 27520, Stop: 28119, Start Num: 96

Candidate Starts for BobRoss2024\_28:

(Start: 87 @27499 has 415 MA's), (Start: 91 @27505 has 16 MA's), (96, 27520), (108, 27559), (110, 27574), (124, 27637), (132, 27658), (139, 27682), (145, 27706), (155, 27748), (177, 27814), (181, 27823), (195, 27892), (223, 27994), (242, 28078), (251, 28108),

Gene: BobRoss2024\_29 Start: 28116, Stop: 28712, Start Num: 254

Candidate Starts for BobRoss2024\_29:

(32, 27312), (35, 27318), (37, 27321), (57, 27414), (59, 27426), (109, 27567), (198, 27906), (208, 27939), (224, 27996), (238, 28062), (Start: 254 @28116 has 2 MA's), (255, 28146), (258, 28173), (263, 28260), (265, 28266), (270, 28323), (271, 28326), (272, 28329), (277, 28404), (280, 28440), (285, 28545), (286, 28554), (287, 28563), (289, 28572), (290, 28581), (292, 28605), (296, 28698),

Gene: BobbyK\_33 Start: 34537, Stop: 35184, Start Num: 64

Candidate Starts for BobbyK\_33:

(Start: 64 @34537 has 25 MA's), (100, 34615), (104, 34627), (122, 34699), (133, 34723), (139, 34744), (140, 34753), (141, 34756), (144, 34765), (155, 34813), (166, 34867), (173, 34885), (190, 34945), (195, 34957), (215, 35017), (219, 35035), (221, 35041), (223, 35059), (243, 35146), (244, 35149), (251, 35173),

Gene: BobbyK\_34 Start: 35181, Stop: 35786, Start Num: 87

Candidate Starts for BobbyK\_34:

(Start: 87 @35181 has 415 MA's), (97, 35217), (113, 35268), (114, 35271), (131, 35337), (144, 35382), (147, 35391), (148, 35394), (149, 35397), (154, 35424), (157, 35445), (158, 35448), (164, 35475), (188, 35541), (190, 35556), (208, 35619), (223, 35676), (243, 35754), (248, 35772),

Gene: Boehler\_36 Start: 34349, Stop: 34996, Start Num: 85

Candidate Starts for Boehler\_36:

(67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: Boehler\_37 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for Boehler\_37:

(25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Boyle\_38 Start: 35594, Stop: 36193, Start Num: 87

Candidate Starts for Boyle\_38:

(78, 35573), (Start: 87 @35594 has 415 MA's), (97, 35624), (105, 35645), (113, 35675), (114, 35678), (131, 35744), (146, 35795), (147, 35798), (148, 35801), (154, 35831), (157, 35852), (180, 35918), (188, 35948), (213, 36038), (215, 36041), (219, 36059), (223, 36083), (240, 36152), (248, 36179),

Gene: Boyle\_36 Start: 34804, Stop: 35448, Start Num: 82

Candidate Starts for Boyle\_36:

(34, 34639), (59, 34750), (Start: 82 @34804 has 44 MA's), (Start: 85 @34813 has 172 MA's), (108, 34882), (114, 34909), (117, 34918), (120, 34927), (146, 35035), (150, 35047), (177, 35140), (191, 35206), (196, 35227), (201, 35242), (203, 35248), (210, 35269), (216, 35281), (251, 35437),

Gene: Briakila\_38 Start: 35696, Stop: 36295, Start Num: 87

Candidate Starts for Briakila\_38:

(24, 35492), (Start: 87 @35696 has 415 MA's), (97, 35726), (108, 35753), (127, 35840), (131, 35846), (150, 35909), (154, 35933), (187, 36044), (208, 36128), (213, 36140), (226, 36200), (242, 36260), (248, 36281),

Gene: Briakila\_37 Start: 35046, Stop: 35699, Start Num: 81

Candidate Starts for Briakila\_37:

(Start: 81 @35046 has 45 MA's), (108, 35127), (113, 35151), (145, 35274), (179, 35400), (186, 35415), (199, 35490), (241, 35655), (249, 35685),

Gene: Brilliant\_36 Start: 34054, Stop: 34701, Start Num: 85

Candidate Starts for Brilliant\_36:

(67, 34015), (Start: 84 @34051 has 90 MA's), (Start: 85 @34054 has 172 MA's), (Start: 111 @34135 has 1 MA's), (146, 34270), (164, 34357), (181, 34402), (195, 34471), (196, 34480), (214, 34531), (223,

34576), (240, 34654), (249, 34687), (253, 34693),

Gene: Brilliant\_37 Start: 34698, Stop: 35297, Start Num: 87

Candidate Starts for Brilliant\_37:

(24, 34491), (25, 34494), (32, 34518), (42, 34560), (47, 34578), (51, 34593), (Start: 87 @34698 has 415 MA's), (97, 34728), (102, 34740), (113, 34779), (118, 34794), (131, 34848), (144, 34893), (146, 34899), (148, 34905), (150, 34911), (157, 34956), (158, 34959), (164, 34986), (187, 35046), (190, 35067), (208, 35130), (215, 35145),

Gene: BrownCNA\_34 Start: 34798, Stop: 35445, Start Num: 64

Candidate Starts for BrownCNA\_34:

(Start: 64 @34798 has 25 MA's), (100, 34876), (104, 34888), (122, 34960), (133, 34984), (139, 35005), (140, 35014), (141, 35017), (144, 35026), (155, 35074), (173, 35146), (190, 35206), (195, 35218), (215, 35278), (221, 35302), (223, 35320), (243, 35407), (244, 35410), (251, 35434),

Gene: BrownCNA\_35 Start: 35442, Stop: 36047, Start Num: 254

Candidate Starts for BrownCNA\_35:

(97, 34869), (134, 34986), (149, 35040), (151, 35049), (185, 35172), (202, 35241), (209, 35265), (224, 35322), (Start: 254 @35442 has 2 MA's), (257, 35478), (259, 35505), (261, 35529), (262, 35532), (267, 35598), (268, 35643), (271, 35652), (272, 35655), (273, 35658), (274, 35685), (276, 35706), (278, 35736), (282, 35802), (283, 35817), (286, 35880), (288, 35892), (293, 35937), (295, 36015), (297, 36033),

Gene: Brownie5\_38 Start: 35600, Stop: 36199, Start Num: 87

Candidate Starts for Brownie5\_38:

(78, 35579), (Start: 87 @35600 has 415 MA's), (97, 35630), (105, 35651), (113, 35681), (114, 35684), (131, 35750), (146, 35801), (147, 35804), (148, 35807), (154, 35837), (157, 35858), (180, 35924), (188, 35954), (213, 36044), (215, 36047), (219, 36065), (223, 36089), (240, 36158), (248, 36185),

Gene: Brownie5\_36 Start: 34810, Stop: 35454, Start Num: 82

Candidate Starts for Brownie5\_36:

(34, 34645), (59, 34756), (Start: 82 @34810 has 44 MA's), (Start: 85 @34819 has 172 MA's), (108, 34888), (114, 34915), (117, 34924), (120, 34933), (146, 35041), (150, 35053), (177, 35146), (191, 35212), (196, 35233), (201, 35248), (203, 35254), (210, 35275), (216, 35287), (251, 35443),

Gene: Buckeye\_37 Start: 35010, Stop: 35609, Start Num: 87

Candidate Starts for Buckeye\_37:

(25, 34806), (32, 34830), (42, 34872), (47, 34890), (51, 34905), (Start: 87 @35010 has 415 MA's), (97, 35040), (102, 35052), (113, 35091), (118, 35106), (131, 35160), (144, 35205), (146, 35211), (148, 35217), (150, 35223), (157, 35268), (158, 35271), (164, 35298), (187, 35358), (190, 35379), (215, 35457),

Gene: Buckeye\_36 Start: 34366, Stop: 35013, Start Num: 85

Candidate Starts for Buckeye\_36:

(39, 34216), (67, 34327), (Start: 84 @34363 has 90 MA's), (Start: 85 @34366 has 172 MA's), (Start: 111 @34447 has 1 MA's), (146, 34582), (164, 34669), (181, 34714), (196, 34792), (214, 34843), (221, 34870), (223, 34888), (240, 34966), (249, 34999), (253, 35005),

Gene: Burr\_35 Start: 34043, Stop: 34690, Start Num: 85

Candidate Starts for Burr\_35:

(39, 33893), (67, 34004), (Start: 84 @34040 has 90 MA's), (Start: 85 @34043 has 172 MA's), (Start: 111 @34124 has 1 MA's), (146, 34259), (164, 34346), (181, 34391), (196, 34469), (214, 34520), (221, 34547), (223, 34565), (240, 34643), (249, 34676), (253, 34682),

Gene: Burr\_36 Start: 34687, Stop: 35286, Start Num: 87

Candidate Starts for Burr\_36:

(25, 34483), (32, 34507), (42, 34549), (47, 34567), (51, 34582), (Start: 87 @34687 has 415 MA's), (97, 34717), (102, 34729), (113, 34768), (118, 34783), (131, 34837), (144, 34882), (146, 34888), (148, 34894), (150, 34900), (157, 34945), (158, 34948), (164, 34975), (187, 35035), (190, 35056), (215, 35134),

Gene: CRB2\_39 Start: 37622, Stop: 38230, Start Num: 87

Candidate Starts for CRB2\_39:

(Start: 87 @37622 has 415 MA's), (97, 37652), (113, 37703), (127, 37766), (131, 37772), (146, 37823), (157, 37880), (190, 37991), (206, 38048), (213, 38066), (215, 38069), (223, 38111), (230, 38135), (232, 38156),

Gene: CaiB\_31 Start: 29459, Stop: 30070, Start Num: 93

Candidate Starts for CaiB\_31:

(Start: 91 @29456 has 16 MA's), (Start: 93 @29459 has 4 MA's), (110, 29525), (115, 29540), (118, 29549), (124, 29588), (132, 29609), (137, 29624), (145, 29657), (154, 29696), (155, 29699), (157, 29717), (179, 29771), (242, 30029), (251, 30059),

Gene: CaiB\_32 Start: 30067, Stop: 30663, Start Num: 87

Candidate Starts for CaiB\_32:

(32, 29890), (42, 29929), (44, 29938), (59, 30001), (62, 30013), (Start: 87 @30067 has 415 MA's), (97, 30097), (127, 30211), (131, 30217), (146, 30268), (148, 30274), (157, 30325), (158, 30328), (180, 30391), (186, 30403), (187, 30415), (197, 30466), (207, 30496), (215, 30514), (217, 30523), (248, 30649),

Gene: Calamitous\_38 Start: 35480, Stop: 36079, Start Num: 87

Candidate Starts for Calamitous\_38:

(78, 35459), (Start: 87 @35480 has 415 MA's), (97, 35510), (105, 35531), (113, 35561), (114, 35564), (131, 35630), (146, 35681), (147, 35684), (148, 35687), (154, 35717), (157, 35738), (180, 35804), (188, 35834), (213, 35924), (215, 35927), (219, 35945), (223, 35969), (240, 36038), (248, 36065),

Gene: Calamitous\_36 Start: 34690, Stop: 35334, Start Num: 82

Candidate Starts for Calamitous\_36:

(34, 34525), (59, 34636), (Start: 82 @34690 has 44 MA's), (Start: 85 @34699 has 172 MA's), (108, 34768), (114, 34795), (117, 34804), (120, 34813), (146, 34921), (150, 34933), (177, 35026), (191, 35092), (196, 35113), (201, 35128), (203, 35134), (210, 35155), (216, 35167), (251, 35323),

Gene: CamL\_37 Start: 34988, Stop: 35587, Start Num: 87

Candidate Starts for CamL\_37:

(25, 34784), (32, 34808), (42, 34850), (47, 34868), (51, 34883), (Start: 87 @34988 has 415 MA's), (97, 35018), (102, 35030), (113, 35069), (118, 35084), (131, 35138), (144, 35183), (146, 35189), (148, 35195), (150, 35201), (157, 35246), (158, 35249), (164, 35276), (187, 35336), (190, 35357), (215, 35435),

Gene: CamL\_36 Start: 34341, Stop: 34991, Start Num: 84

Candidate Starts for CamL\_36:

(67, 34305), (Start: 84 @34341 has 90 MA's), (Start: 85 @34344 has 172 MA's), (Start: 111 @34425 has 1 MA's), (146, 34560), (164, 34647), (181, 34692), (196, 34770), (214, 34821), (221, 34848), (223, 34866), (240, 34944), (249, 34977), (253, 34983),

Gene: CampRoach\_37 Start: 34978, Stop: 35577, Start Num: 87

Candidate Starts for CampRoach\_37:

(24, 34771), (25, 34774), (32, 34798), (42, 34840), (47, 34858), (51, 34873), (Start: 87 @34978 has 415 MA's), (97, 35008), (102, 35020), (113, 35059), (118, 35074), (131, 35128), (144, 35173), (146, 35179), (148, 35185), (150, 35191), (157, 35236), (158, 35239), (164, 35266), (187, 35326), (190, 35347), (208, 35410), (215, 35425),

Gene: CampRoach\_36 Start: 34334, Stop: 34981, Start Num: 85

Candidate Starts for CampRoach\_36:

(67, 34295), (Start: 84 @34331 has 90 MA's), (Start: 85 @34334 has 172 MA's), (Start: 111 @34415 has 1 MA's), (146, 34550), (164, 34637), (181, 34682), (195, 34751), (196, 34760), (214, 34811), (223, 34856), (240, 34934), (249, 34967), (253, 34973),

Gene: Cannibal\_36 Start: 34327, Stop: 34974, Start Num: 85

Candidate Starts for Cannibal\_36:

(67, 34288), (Start: 84 @34324 has 90 MA's), (Start: 85 @34327 has 172 MA's), (Start: 111 @34408 has 1 MA's), (146, 34543), (164, 34630), (181, 34675), (196, 34753), (214, 34804), (221, 34831), (223, 34849), (240, 34927), (249, 34960), (253, 34966),

Gene: Cannibal\_37 Start: 34971, Stop: 35570, Start Num: 87

Candidate Starts for Cannibal\_37:

(25, 34767), (32, 34791), (42, 34833), (47, 34851), (51, 34866), (Start: 87 @34971 has 415 MA's), (97, 35001), (102, 35013), (113, 35052), (118, 35067), (131, 35121), (144, 35166), (146, 35172), (148, 35178), (150, 35184), (157, 35229), (158, 35232), (164, 35259), (187, 35319), (190, 35340), (215, 35418),

Gene: Carthage\_35 Start: 33900, Stop: 34499, Start Num: 87

Candidate Starts for Carthage\_35:

(25, 33696), (32, 33720), (42, 33762), (47, 33780), (51, 33795), (Start: 87 @33900 has 415 MA's), (97, 33930), (102, 33942), (113, 33981), (118, 33996), (131, 34050), (144, 34095), (146, 34101), (148, 34107), (150, 34113), (157, 34158), (158, 34161), (164, 34188), (187, 34248), (190, 34269), (215, 34347),

Gene: Carthage\_34 Start: 33253, Stop: 33903, Start Num: 84

Candidate Starts for Carthage\_34:

(39, 33106), (67, 33217), (Start: 84 @33253 has 90 MA's), (Start: 85 @33256 has 172 MA's), (Start: 111 @33337 has 1 MA's), (146, 33472), (164, 33559), (181, 33604), (196, 33682), (214, 33733), (221, 33760), (223, 33778), (240, 33856), (249, 33889), (253, 33895),

Gene: Casbah\_35 Start: 34128, Stop: 34781, Start Num: 81

Candidate Starts for Casbah\_35:

(Start: 81 @34128 has 45 MA's), (108, 34209), (113, 34233), (145, 34356), (179, 34482), (186, 34497), (199, 34572), (241, 34737), (249, 34767),

Gene: Casbah\_36 Start: 34778, Stop: 35377, Start Num: 87

Candidate Starts for Casbah\_36:

(Start: 87 @34778 has 415 MA's), (97, 34808), (108, 34835), (127, 34922), (131, 34928), (150, 34991), (154, 35015), (157, 35036), (187, 35126), (208, 35210), (213, 35222), (226, 35282), (242, 35342), (248, 35363),

Gene: Cepens\_30 Start: 32231, Stop: 32830, Start Num: 87

Candidate Starts for Cepens\_30:

(Start: 87 @32231 has 415 MA's), (97, 32261), (105, 32282), (108, 32288), (127, 32375), (131, 32381), (146, 32432), (150, 32444), (154, 32468), (157, 32489), (161, 32507), (167, 32525), (178,

32552), (221, 32702), (223, 32720), (242, 32795), (248, 32816),

Gene: Cepens\_28 Start: 31437, Stop: 32081, Start Num: 82

Candidate Starts for Cepens\_28:

(Start: 82 @31437 has 44 MA's), (89, 31455), (107, 31512), (117, 31551), (120, 31560), (132, 31617), (146, 31668), (148, 31674), (150, 31680), (165, 31755), (181, 31782), (191, 31839), (195, 31851), (203, 31881), (223, 31956), (239, 32028),

Gene: ChaChing\_37 Start: 34941, Stop: 35540, Start Num: 87

Candidate Starts for ChaChing\_37:

(Start: 87 @34941 has 415 MA's), (97, 34971), (108, 34998), (127, 35085), (131, 35091), (150, 35154), (154, 35178), (187, 35289), (208, 35373), (213, 35385), (226, 35445), (248, 35526),

Gene: ChaChing\_36 Start: 34291, Stop: 34944, Start Num: 81

Candidate Starts for ChaChing\_36:

(Start: 81 @34291 has 45 MA's), (108, 34372), (145, 34519), (179, 34645), (186, 34660), (199, 34735), (241, 34900), (242, 34903), (249, 34930),

Gene: Chaelin\_37 Start: 34685, Stop: 35284, Start Num: 87

Candidate Starts for Chaelin\_37:

(25, 34481), (32, 34505), (42, 34547), (47, 34565), (51, 34580), (Start: 87 @34685 has 415 MA's), (97, 34715), (102, 34727), (113, 34766), (118, 34781), (131, 34835), (144, 34880), (146, 34886), (148, 34892), (150, 34898), (157, 34943), (158, 34946), (164, 34973), (190, 35054), (208, 35117), (215, 35132),

Gene: Chaelin\_36 Start: 34041, Stop: 34688, Start Num: 85

Candidate Starts for Chaelin\_36:

(39, 33891), (67, 34002), (Start: 84 @34038 has 90 MA's), (Start: 85 @34041 has 172 MA's), (Start: 111 @34122 has 1 MA's), (146, 34257), (164, 34344), (181, 34389), (196, 34467), (214, 34518), (221, 34545), (223, 34563), (240, 34641), (249, 34674), (253, 34680),

Gene: Chah\_38 Start: 35005, Stop: 35604, Start Num: 87

Candidate Starts for Chah\_38:

(25, 34801), (32, 34825), (42, 34867), (47, 34885), (51, 34900), (Start: 87 @35005 has 415 MA's), (97, 35035), (102, 35047), (113, 35086), (118, 35101), (131, 35155), (144, 35200), (146, 35206), (148, 35212), (150, 35218), (157, 35263), (158, 35266), (164, 35293), (187, 35353), (190, 35374), (215, 35452),

Gene: Chah\_37 Start: 34358, Stop: 35008, Start Num: 84

Candidate Starts for Chah\_37:

(67, 34322), (Start: 84 @34358 has 90 MA's), (Start: 85 @34361 has 172 MA's), (Start: 111 @34442 has 1 MA's), (146, 34577), (164, 34664), (181, 34709), (196, 34787), (214, 34838), (221, 34865), (223, 34883), (240, 34961), (249, 34994), (253, 35000),

Gene: Chandler\_36 Start: 35059, Stop: 35712, Start Num: 81

Candidate Starts for Chandler\_36:

(Start: 81 @35059 has 45 MA's), (108, 35140), (113, 35164), (145, 35287), (179, 35413), (186, 35428), (199, 35503), (241, 35668), (242, 35671), (249, 35698),

Gene: Chandler\_37 Start: 35709, Stop: 36308, Start Num: 87

Candidate Starts for Chandler\_37:

(Start: 87 @35709 has 415 MA's), (97, 35739), (108, 35766), (127, 35853), (150, 35922), (154, 35946), (157, 35967), (187, 36057), (208, 36141), (213, 36153), (226, 36213), (242, 36273), (248,



36294),

Gene: Charles1\_36 Start: 34329, Stop: 34976, Start Num: 85

Candidate Starts for Charles1\_36:

(39, 34179), (67, 34290), (Start: 84 @34326 has 90 MA's), (Start: 85 @34329 has 172 MA's), (Start: 111 @34410 has 1 MA's), (146, 34545), (164, 34632), (181, 34677), (196, 34755), (214, 34806), (221, 34833), (223, 34851), (240, 34929), (249, 34962), (253, 34968),

Gene: Charles1\_37 Start: 34973, Stop: 35572, Start Num: 87

Candidate Starts for Charles1\_37:

(25, 34769), (32, 34793), (42, 34835), (47, 34853), (51, 34868), (Start: 87 @34973 has 415 MA's), (97, 35003), (102, 35015), (113, 35054), (118, 35069), (131, 35123), (144, 35168), (146, 35174), (148, 35180), (150, 35186), (157, 35231), (158, 35234), (164, 35261), (187, 35321), (190, 35342),

Gene: CharlieGBrown\_35 Start: 33916, Stop: 34566, Start Num: 84

Candidate Starts for CharlieGBrown\_35:

(39, 33769), (67, 33880), (Start: 84 @33916 has 90 MA's), (Start: 85 @33919 has 172 MA's), (Start: 111 @34000 has 1 MA's), (146, 34135), (164, 34222), (181, 34267), (196, 34345), (214, 34396), (221, 34423), (223, 34441), (240, 34519), (249, 34552), (253, 34558),

Gene: CharlieGBrown\_36 Start: 34563, Stop: 35162, Start Num: 87

Candidate Starts for CharlieGBrown\_36:

(25, 34359), (32, 34383), (42, 34425), (47, 34443), (51, 34458), (Start: 87 @34563 has 415 MA's), (97, 34593), (102, 34605), (113, 34644), (118, 34659), (131, 34713), (144, 34758), (146, 34764), (148, 34770), (150, 34776), (157, 34821), (158, 34824), (164, 34851), (187, 34911), (190, 34932), (215, 35010),

Gene: CharlottesWeb\_29 Start: 27428, Stop: 28042, Start Num: 91

Candidate Starts for CharlottesWeb\_29:

(Start: 91 @27428 has 16 MA's), (Start: 99 @27461 has 1 MA's), (110, 27497), (118, 27521), (124, 27560), (145, 27629), (146, 27632), (157, 27689), (177, 27737), (181, 27746), (183, 27749), (242, 28001), (251, 28031),

Gene: CharlottesWeb\_30 Start: 28039, Stop: 28671, Start Num: 87

Candidate Starts for CharlottesWeb\_30:

(Start: 87 @28039 has 415 MA's), (97, 28072), (108, 28099), (121, 28165), (127, 28186), (131, 28192), (157, 28300), (180, 28366), (208, 28474), (217, 28498), (219, 28507), (222, 28522), (223, 28531),

Gene: CheetO\_36 Start: 34343, Stop: 34990, Start Num: 85

Candidate Starts for CheetO\_36:

(39, 34193), (67, 34304), (Start: 84 @34340 has 90 MA's), (Start: 85 @34343 has 172 MA's), (Start: 111 @34424 has 1 MA's), (146, 34559), (164, 34646), (181, 34691), (196, 34769), (214, 34820), (221, 34847), (223, 34865), (240, 34943), (249, 34976), (253, 34982),

Gene: CheetO\_37 Start: 34987, Stop: 35586, Start Num: 87

Candidate Starts for CheetO\_37:

(25, 34783), (32, 34807), (42, 34849), (47, 34867), (51, 34882), (Start: 87 @34987 has 415 MA's), (97, 35017), (102, 35029), (113, 35068), (118, 35083), (119, 35086), (131, 35137), (144, 35182), (146, 35188), (148, 35194), (150, 35200), (157, 35245), (158, 35248), (164, 35275), (187, 35335), (190, 35356), (215, 35434),

Gene: Cher\_36 Start: 34710, Stop: 35309, Start Num: 87

Candidate Starts for Cher\_36:

(25, 34506), (32, 34530), (42, 34572), (47, 34590), (51, 34605), (Start: 87 @34710 has 415 MA's), (97, 34740), (102, 34752), (113, 34791), (118, 34806), (131, 34860), (144, 34905), (146, 34911), (148, 34917), (150, 34923), (157, 34968), (158, 34971), (164, 34998), (187, 35058), (190, 35079), (215, 35157),

Gene: Cher\_35 Start: 34066, Stop: 34713, Start Num: 85

Candidate Starts for Cher\_35:

(67, 34027), (Start: 84 @34063 has 90 MA's), (Start: 85 @34066 has 172 MA's), (Start: 111 @34147 has 1 MA's), (146, 34282), (164, 34369), (181, 34414), (196, 34492), (214, 34543), (221, 34570), (223, 34588), (240, 34666), (249, 34699), (253, 34705),

Gene: Childish\_35 Start: 34069, Stop: 34716, Start Num: 85

Candidate Starts for Childish\_35:

(67, 34030), (Start: 84 @34066 has 90 MA's), (Start: 85 @34069 has 172 MA's), (Start: 111 @34150 has 1 MA's), (146, 34285), (164, 34372), (181, 34417), (196, 34495), (214, 34546), (221, 34573), (223, 34591), (240, 34669), (249, 34702), (253, 34708),

Gene: Childish\_36 Start: 34713, Stop: 35312, Start Num: 87

Candidate Starts for Childish\_36:

(25, 34509), (32, 34533), (42, 34575), (47, 34593), (51, 34608), (Start: 87 @34713 has 415 MA's), (97, 34743), (102, 34755), (113, 34794), (118, 34809), (131, 34863), (144, 34908), (146, 34914), (148, 34920), (150, 34926), (157, 34971), (158, 34974), (164, 35001), (187, 35061), (190, 35082), (215, 35160),

Gene: Chorkpop\_36 Start: 34065, Stop: 34712, Start Num: 85

Candidate Starts for Chorkpop\_36:

(67, 34026), (Start: 84 @34062 has 90 MA's), (Start: 85 @34065 has 172 MA's), (Start: 111 @34146 has 1 MA's), (146, 34281), (164, 34368), (181, 34413), (196, 34491), (214, 34542), (221, 34569), (223, 34587), (240, 34665), (249, 34698), (253, 34704),

Gene: Chorkpop\_37 Start: 34709, Stop: 35308, Start Num: 87

Candidate Starts for Chorkpop\_37:

(24, 34502), (25, 34505), (32, 34529), (42, 34571), (47, 34589), (51, 34604), (Start: 87 @34709 has 415 MA's), (97, 34739), (102, 34751), (113, 34790), (118, 34805), (131, 34859), (144, 34904), (146, 34910), (148, 34916), (150, 34922), (157, 34967), (158, 34970), (164, 34997), (187, 35057), (190, 35078), (215, 35156),

Gene: ChrisnMich\_32 Start: 33498, Stop: 34145, Start Num: 64

Candidate Starts for ChrisnMich\_32:

(Start: 64 @33498 has 25 MA's), (100, 33576), (104, 33588), (122, 33660), (133, 33684), (139, 33705), (140, 33714), (141, 33717), (144, 33726), (145, 33729), (155, 33774), (166, 33828), (173, 33846), (190, 33906), (195, 33918), (215, 33978), (221, 34002), (223, 34020), (243, 34107), (251, 34134),

Gene: ChrisnMich\_33 Start: 34142, Stop: 34747, Start Num: 87

Candidate Starts for ChrisnMich\_33:

(Start: 87 @34142 has 415 MA's), (97, 34178), (113, 34229), (114, 34232), (127, 34292), (131, 34298), (144, 34343), (147, 34352), (148, 34355), (149, 34358), (154, 34385), (157, 34406), (164, 34436), (188, 34502), (190, 34517), (208, 34580), (223, 34637), (243, 34715), (248, 34733),

Gene: Chunky\_36 Start: 34349, Stop: 34999, Start Num: 84

Candidate Starts for Chunky\_36:

(67, 34313), (Start: 84 @34349 has 90 MA's), (Start: 85 @34352 has 172 MA's), (Start: 111 @34433 has 1 MA's), (146, 34568), (164, 34655), (181, 34700), (196, 34778), (214, 34829), (221, 34856), (223, 34874), (240, 34952), (249, 34985), (253, 34991),

Gene: Chunky\_37 Start: 34996, Stop: 35595, Start Num: 87

Candidate Starts for Chunky\_37:

(24, 34789), (25, 34792), (32, 34816), (42, 34858), (47, 34876), (51, 34891), (Start: 87 @34996 has 415 MA's), (97, 35026), (102, 35038), (113, 35077), (118, 35092), (131, 35146), (144, 35191), (146, 35197), (148, 35203), (150, 35209), (157, 35254), (158, 35257), (164, 35284), (187, 35344), (190, 35365), (215, 35443),

Gene: Chute\_35 Start: 34390, Stop: 35037, Start Num: 85

Candidate Starts for Chute\_35:

(39, 34240), (67, 34351), (Start: 84 @34387 has 90 MA's), (Start: 85 @34390 has 172 MA's), (Start: 111 @34471 has 1 MA's), (146, 34606), (164, 34693), (181, 34738), (196, 34816), (214, 34867), (221, 34894), (223, 34912), (240, 34990), (249, 35023), (253, 35029),

Gene: Chute\_36 Start: 35034, Stop: 35633, Start Num: 87

Candidate Starts for Chute\_36:

(25, 34830), (32, 34854), (42, 34896), (47, 34914), (51, 34929), (Start: 87 @35034 has 415 MA's), (97, 35064), (102, 35076), (113, 35115), (118, 35130), (131, 35184), (144, 35229), (146, 35235), (148, 35241), (150, 35247), (157, 35292), (158, 35295), (164, 35322), (190, 35403), (208, 35466), (215, 35481),

Gene: Clawz\_61 Start: 38961, Stop: 39584, Start Num: 88

Candidate Starts for Clawz\_61:

(29, 38751), (36, 38772), (38, 38775), (Start: 88 @38961 has 4 MA's), (108, 39018), (114, 39045), (115, 39048), (119, 39060), (126, 39108), (130, 39120), (139, 39147), (144, 39168), (146, 39174), (148, 39180), (192, 39348), (218, 39438), (223, 39462), (227, 39480), (229, 39483), (237, 39522), (246, 39558),

Gene: CloverMinnie\_32 Start: 30007, Stop: 30603, Start Num: 87

Candidate Starts for CloverMinnie\_32:

(32, 29830), (42, 29869), (44, 29878), (59, 29941), (62, 29953), (Start: 87 @30007 has 415 MA's), (97, 30037), (127, 30151), (131, 30157), (146, 30208), (148, 30214), (157, 30265), (158, 30268), (180, 30331), (186, 30343), (187, 30355), (197, 30406), (207, 30436), (215, 30454), (217, 30463), (248, 30589),

Gene: CloverMinnie\_31 Start: 29396, Stop: 30010, Start Num: 91

Candidate Starts for CloverMinnie\_31:

(Start: 91 @29396 has 16 MA's), (Start: 93 @29399 has 4 MA's), (110, 29465), (115, 29480), (118, 29489), (124, 29528), (132, 29549), (137, 29564), (145, 29597), (154, 29636), (155, 29639), (157, 29657), (179, 29711), (242, 29969), (251, 29999),

Gene: Cobra\_36 Start: 34347, Stop: 34997, Start Num: 84

Candidate Starts for Cobra\_36:

(67, 34311), (Start: 84 @34347 has 90 MA's), (Start: 85 @34350 has 172 MA's), (Start: 111 @34431 has 1 MA's), (146, 34566), (164, 34653), (181, 34698), (195, 34767), (196, 34776), (214, 34827), (223, 34872), (240, 34950), (249, 34983), (253, 34989),

Gene: Cobra\_37 Start: 34994, Stop: 35593, Start Num: 87

Candidate Starts for Cobra\_37:

(24, 34787), (25, 34790), (32, 34814), (42, 34856), (47, 34874), (51, 34889), (Start: 87 @34994 has 415 MA's), (97, 35024), (102, 35036), (113, 35075), (118, 35090), (131, 35144), (144, 35189), (146, 35195), (148, 35201), (150, 35207), (157, 35252), (158, 35255), (164, 35282), (187, 35342), (190, 35363), (208, 35426), (215, 35441),

Gene: Coffee\_36 Start: 34793, Stop: 35437, Start Num: 82

Candidate Starts for Coffee\_36:

(34, 34628), (59, 34739), (Start: 82 @34793 has 44 MA's), (Start: 85 @34802 has 172 MA's), (108, 34871), (114, 34898), (117, 34907), (120, 34916), (146, 35024), (150, 35036), (177, 35129), (191, 35195), (196, 35216), (201, 35231), (203, 35237), (210, 35258), (216, 35270), (251, 35426),

Gene: Coffee\_38 Start: 35583, Stop: 36182, Start Num: 87

Candidate Starts for Coffee\_38:

(78, 35562), (Start: 87 @35583 has 415 MA's), (97, 35613), (105, 35634), (113, 35664), (114, 35667), (131, 35733), (146, 35784), (147, 35787), (148, 35790), (154, 35820), (157, 35841), (180, 35907), (188, 35937), (213, 36027), (215, 36030), (219, 36048), (223, 36072), (240, 36141), (248, 36168),

Gene: Colbert\_36 Start: 34402, Stop: 35052, Start Num: 84

Candidate Starts for Colbert\_36:

(67, 34366), (Start: 84 @34402 has 90 MA's), (Start: 85 @34405 has 172 MA's), (Start: 111 @34486 has 1 MA's), (146, 34621), (164, 34708), (181, 34753), (196, 34831), (214, 34882), (221, 34909), (223, 34927), (240, 35005), (249, 35038), (253, 35044),

Gene: Colbert\_37 Start: 35049, Stop: 35648, Start Num: 87

Candidate Starts for Colbert\_37:

(25, 34845), (32, 34869), (42, 34911), (47, 34929), (51, 34944), (Start: 87 @35049 has 415 MA's), (97, 35079), (102, 35091), (113, 35130), (118, 35145), (131, 35199), (144, 35244), (146, 35250), (148, 35256), (150, 35262), (157, 35307), (158, 35310), (164, 35337), (187, 35397), (190, 35418), (215, 35496),

Gene: ColdSoup\_62 Start: 39166, Stop: 39789, Start Num: 88

Candidate Starts for ColdSoup\_62:

(Start: 88 @39166 has 4 MA's), (146, 39379), (148, 39385), (152, 39412), (229, 39688), (245, 39757), (246, 39763), (253, 39781),

Gene: Coldpizza\_33 Start: 32536, Stop: 33132, Start Num: 87

Candidate Starts for Coldpizza\_33:

(5, 32098), (15, 32203), (32, 32359), (44, 32407), (62, 32482), (Start: 87 @32536 has 415 MA's), (97, 32569), (113, 32620), (114, 32623), (127, 32683), (131, 32689), (146, 32740), (148, 32746), (150, 32752), (157, 32797), (164, 32827), (174, 32851), (194, 32923), (213, 32983), (215, 32986), (217, 32995), (226, 33043),

Gene: Coldpizza\_32 Start: 31925, Stop: 32539, Start Num: 91

Candidate Starts for Coldpizza\_32:

(27, 31706), (28, 31709), (49, 31793), (69, 31868), (Start: 91 @31925 has 16 MA's), (110, 31994), (117, 32015), (125, 32063), (132, 32078), (154, 32165), (179, 32240), (214, 32372), (249, 32525),

Gene: Coletti\_36 Start: 35034, Stop: 35633, Start Num: 87

Candidate Starts for Coletti\_36:

(25, 34830), (32, 34854), (42, 34896), (47, 34914), (51, 34929), (Start: 87 @35034 has 415 MA's), (97, 35064), (102, 35076), (113, 35115), (118, 35130), (131, 35184), (144, 35229), (146, 35235), (148, 35241), (150, 35247), (157, 35292), (158, 35295), (164, 35322), (190, 35403), (208, 35466), (215, 35481),

Gene: Coletti\_35 Start: 34390, Stop: 35037, Start Num: 85

Candidate Starts for Coletti\_35:

(39, 34240), (67, 34351), (Start: 84 @34387 has 90 MA's), (Start: 85 @34390 has 172 MA's), (Start: 111 @34471 has 1 MA's), (146, 34606), (164, 34693), (181, 34738), (196, 34816), (214, 34867), (221, 34894), (223, 34912), (240, 34990), (249, 35023), (253, 35029),

Gene: Compostia\_37 Start: 34707, Stop: 35360, Start Num: 81

Candidate Starts for Compostia\_37:

(Start: 81 @34707 has 45 MA's), (108, 34788), (113, 34812), (145, 34935), (179, 35061), (186, 35076), (199, 35151), (241, 35316), (249, 35346),

Gene: Compostia\_38 Start: 35357, Stop: 35956, Start Num: 87

Candidate Starts for Compostia\_38:

(Start: 87 @35357 has 415 MA's), (97, 35387), (108, 35414), (127, 35501), (131, 35507), (150, 35570), (154, 35594), (157, 35615), (187, 35705), (208, 35789), (213, 35801), (226, 35861), (242, 35921), (248, 35942),

Gene: Cooper\_34 Start: 34360, Stop: 34965, Start Num: 87

Candidate Starts for Cooper\_34:

(14, 34009), (17, 34090), (25, 34159), (32, 34183), (47, 34240), (Start: 87 @34360 has 415 MA's), (97, 34396), (108, 34423), (113, 34447), (114, 34450), (127, 34510), (131, 34516), (144, 34561), (146, 34567), (147, 34570), (148, 34573), (149, 34576), (150, 34579), (154, 34603), (157, 34624), (188, 34720), (190, 34735), (215, 34813), (243, 34933), (248, 34951),

Gene: Cooper\_33 Start: 33716, Stop: 34363, Start Num: 64

Candidate Starts for Cooper\_33:

(Start: 64 @33716 has 25 MA's), (100, 33794), (104, 33806), (122, 33878), (133, 33902), (139, 33923), (140, 33932), (141, 33935), (143, 33941), (144, 33944), (155, 33992), (162, 34031), (173, 34064), (190, 34124), (195, 34136), (215, 34196), (221, 34220), (223, 34238), (243, 34325), (251, 34352),

Gene: Cornobble\_35 Start: 33904, Stop: 34551, Start Num: 85

Candidate Starts for Cornobble\_35:

(39, 33754), (67, 33865), (Start: 84 @33901 has 90 MA's), (Start: 85 @33904 has 172 MA's), (Start: 111 @33985 has 1 MA's), (146, 34120), (164, 34207), (181, 34252), (196, 34330), (214, 34381), (221, 34408), (223, 34426), (240, 34504), (249, 34537), (253, 34543),

Gene: Cornobble\_36 Start: 34548, Stop: 35147, Start Num: 87

Candidate Starts for Cornobble\_36:

(25, 34344), (32, 34368), (42, 34410), (47, 34428), (51, 34443), (Start: 87 @34548 has 415 MA's), (97, 34578), (102, 34590), (113, 34629), (118, 34644), (131, 34698), (144, 34743), (146, 34749), (148, 34755), (150, 34761), (157, 34806), (158, 34809), (164, 34836), (187, 34896), (190, 34917), (215, 34995),

Gene: Corofin\_36 Start: 34302, Stop: 34955, Start Num: 81

Candidate Starts for Corofin\_36:

(Start: 81 @34302 has 45 MA's), (108, 34383), (113, 34407), (145, 34530), (179, 34656), (186, 34671), (199, 34746), (241, 34911), (242, 34914), (249, 34941),

Gene: Corofin\_37 Start: 34952, Stop: 35551, Start Num: 87

Candidate Starts for Corofin\_37:

(Start: 87 @34952 has 415 MA's), (97, 34982), (108, 35009), (127, 35096), (131, 35102), (150, 35165), (154, 35189), (157, 35210), (187, 35300), (208, 35384), (213, 35396), (226, 35456), (242, 35516), (248, 35537),

Gene: Cosmolli16\_35 Start: 34051, Stop: 34701, Start Num: 84

Candidate Starts for Cosmolli16\_35:

(67, 34015), (Start: 84 @34051 has 90 MA's), (Start: 85 @34054 has 172 MA's), (Start: 111 @34135 has 1 MA's), (146, 34270), (164, 34357), (181, 34402), (196, 34480), (214, 34531), (221, 34558), (223, 34576), (240, 34654), (249, 34687), (253, 34693),

Gene: Cosmolli16\_36 Start: 34698, Stop: 35297, Start Num: 87

Candidate Starts for Cosmolli16\_36:

(25, 34494), (32, 34518), (42, 34560), (47, 34578), (51, 34593), (Start: 87 @34698 has 415 MA's), (97, 34728), (102, 34740), (113, 34779), (118, 34794), (131, 34848), (144, 34893), (146, 34899), (148, 34905), (150, 34911), (157, 34956), (158, 34959), (164, 34986), (187, 35046), (190, 35067), (215, 35145),

Gene: Craff\_37 Start: 34991, Stop: 35590, Start Num: 87

Candidate Starts for Craff\_37:

(25, 34787), (32, 34811), (42, 34853), (47, 34871), (51, 34886), (Start: 87 @34991 has 415 MA's), (97, 35021), (102, 35033), (113, 35072), (118, 35087), (131, 35141), (144, 35186), (146, 35192), (148, 35198), (150, 35204), (157, 35249), (158, 35252), (164, 35279), (187, 35339), (190, 35360), (215, 35438),

Gene: Craff\_36 Start: 34344, Stop: 34994, Start Num: 84

Candidate Starts for Craff\_36:

(39, 34197), (67, 34308), (Start: 84 @34344 has 90 MA's), (Start: 85 @34347 has 172 MA's), (Start: 111 @34428 has 1 MA's), (146, 34563), (164, 34650), (181, 34695), (196, 34773), (214, 34824), (221, 34851), (223, 34869), (240, 34947), (249, 34980), (253, 34986),

Gene: Crownjwl\_36 Start: 34120, Stop: 34767, Start Num: 85

Candidate Starts for Crownjwl\_36:

(39, 33970), (67, 34081), (Start: 84 @34117 has 90 MA's), (Start: 85 @34120 has 172 MA's), (Start: 111 @34201 has 1 MA's), (146, 34336), (164, 34423), (181, 34468), (196, 34546), (214, 34597), (221, 34624), (223, 34642), (240, 34720), (249, 34753), (253, 34759),

Gene: Crownjwl\_37 Start: 34764, Stop: 35363, Start Num: 87

Candidate Starts for Crownjwl\_37:

(25, 34560), (32, 34584), (42, 34626), (47, 34644), (51, 34659), (Start: 87 @34764 has 415 MA's), (97, 34794), (102, 34806), (113, 34845), (118, 34860), (131, 34914), (144, 34959), (146, 34965), (148, 34971), (150, 34977), (157, 35022), (158, 35025), (164, 35052), (187, 35112), (190, 35133), (215, 35211),

Gene: D12\_29 Start: 32801, Stop: 33400, Start Num: 87

Candidate Starts for D12\_29:

(Start: 87 @32801 has 415 MA's), (97, 32831), (105, 32852), (108, 32858), (127, 32945), (131, 32951), (146, 33002), (150, 33014), (154, 33038), (157, 33059), (161, 33077), (167, 33095), (178, 33122), (221, 33272), (223, 33290), (242, 33365), (248, 33386),

Gene: D12\_28 Start: 32007, Stop: 32651, Start Num: 82

Candidate Starts for D12\_28:

(Start: 82 @32007 has 44 MA's), (89, 32025), (107, 32082), (117, 32121), (120, 32130), (132, 32187), (146, 32238), (148, 32244), (150, 32250), (165, 32325), (181, 32352), (191, 32409), (195, 32421),

(203, 32451), (223, 32526), (239, 32598),

Gene: DaddyDaniels\_37 Start: 34682, Stop: 35281, Start Num: 87

Candidate Starts for DaddyDaniels\_37:

(24, 34475), (25, 34478), (32, 34502), (42, 34544), (47, 34562), (51, 34577), (Start: 87 @34682 has 415 MA's), (97, 34712), (102, 34724), (113, 34763), (118, 34778), (131, 34832), (144, 34877), (146, 34883), (148, 34889), (150, 34895), (157, 34940), (158, 34943), (164, 34970), (187, 35030), (190, 35051), (208, 35114), (215, 35129),

Gene: DaddyDaniels\_36 Start: 34038, Stop: 34685, Start Num: 85

Candidate Starts for DaddyDaniels\_36:

(67, 33999), (Start: 84 @34035 has 90 MA's), (Start: 85 @34038 has 172 MA's), (Start: 111 @34119 has 1 MA's), (146, 34254), (164, 34341), (181, 34386), (195, 34455), (196, 34464), (214, 34515), (223, 34560), (240, 34638), (249, 34671), (253, 34677),

Gene: Daffy\_37 Start: 34713, Stop: 35312, Start Num: 87

Candidate Starts for Daffy\_37:

(25, 34509), (32, 34533), (42, 34575), (47, 34593), (51, 34608), (Start: 87 @34713 has 415 MA's), (97, 34743), (102, 34755), (113, 34794), (118, 34809), (131, 34863), (144, 34908), (146, 34914), (148, 34920), (150, 34926), (157, 34971), (158, 34974), (164, 35001), (187, 35061), (190, 35082), (215, 35160),

Gene: Daffy\_36 Start: 34066, Stop: 34716, Start Num: 84

Candidate Starts for Daffy\_36:

(67, 34030), (Start: 84 @34066 has 90 MA's), (Start: 85 @34069 has 172 MA's), (Start: 111 @34150 has 1 MA's), (146, 34285), (164, 34372), (181, 34417), (196, 34495), (214, 34546), (221, 34573), (223, 34591), (240, 34669), (249, 34702), (253, 34708),

Gene: Daisy\_36 Start: 34303, Stop: 34956, Start Num: 81

Candidate Starts for Daisy\_36:

(Start: 81 @34303 has 45 MA's), (108, 34384), (113, 34408), (145, 34531), (179, 34657), (186, 34672), (199, 34747), (241, 34912),

Gene: Daisy\_37 Start: 34953, Stop: 35552, Start Num: 87

Candidate Starts for Daisy\_37:

(Start: 87 @34953 has 415 MA's), (97, 34983), (108, 35010), (127, 35097), (131, 35103), (150, 35166), (154, 35190), (187, 35301), (208, 35385), (213, 35397), (226, 35457), (242, 35517), (248, 35538),

Gene: Daka\_37 Start: 34987, Stop: 35586, Start Num: 87

Candidate Starts for Daka\_37:

(25, 34783), (32, 34807), (42, 34849), (47, 34867), (51, 34882), (Start: 87 @34987 has 415 MA's), (97, 35017), (102, 35029), (113, 35068), (118, 35083), (131, 35137), (144, 35182), (146, 35188), (148, 35194), (150, 35200), (157, 35245), (158, 35248), (164, 35275), (187, 35335), (190, 35356), (215, 35434),

Gene: Daka\_36 Start: 34340, Stop: 34990, Start Num: 84

Candidate Starts for Daka\_36:

(67, 34304), (Start: 84 @34340 has 90 MA's), (Start: 85 @34343 has 172 MA's), (Start: 111 @34424 has 1 MA's), (146, 34559), (164, 34646), (181, 34691), (196, 34769), (214, 34820), (221, 34847), (223, 34865), (240, 34943), (249, 34976), (253, 34982),

Gene: Dati\_36 Start: 34063, Stop: 34710, Start Num: 85

Candidate Starts for Dati\_36:

(67, 34024), (Start: 84 @34060 has 90 MA's), (Start: 85 @34063 has 172 MA's), (Start: 111 @34144 has 1 MA's), (146, 34279), (164, 34366), (181, 34411), (195, 34480), (196, 34489), (214, 34540), (223, 34585), (240, 34663), (249, 34696), (253, 34702),

Gene: Dati\_37 Start: 34707, Stop: 35306, Start Num: 87

Candidate Starts for Dati\_37:

(24, 34500), (25, 34503), (32, 34527), (42, 34569), (47, 34587), (51, 34602), (Start: 87 @34707 has 415 MA's), (97, 34737), (102, 34749), (113, 34788), (118, 34803), (131, 34857), (144, 34902), (146, 34908), (148, 34914), (150, 34920), (157, 34965), (158, 34968), (164, 34995), (190, 35076), (208, 35139), (215, 35154),

Gene: Deenasa\_36 Start: 35042, Stop: 35695, Start Num: 81

Candidate Starts for Deenasa\_36:

(Start: 81 @35042 has 45 MA's), (108, 35123), (113, 35147), (145, 35270), (179, 35396), (186, 35411), (199, 35486), (241, 35651), (242, 35654), (249, 35681),

Gene: Deenasa\_37 Start: 35692, Stop: 36291, Start Num: 87

Candidate Starts for Deenasa\_37:

(Start: 87 @35692 has 415 MA's), (97, 35722), (108, 35749), (127, 35836), (131, 35842), (150, 35905), (154, 35929), (157, 35950), (187, 36040), (208, 36124), (213, 36136), (226, 36196), (248, 36277),

Gene: DelRivs\_35 Start: 34064, Stop: 34711, Start Num: 85

Candidate Starts for DelRivs\_35:

(67, 34025), (Start: 84 @34061 has 90 MA's), (Start: 85 @34064 has 172 MA's), (Start: 111 @34145 has 1 MA's), (146, 34280), (164, 34367), (181, 34412), (196, 34490), (214, 34541), (221, 34568), (223, 34586), (240, 34664), (249, 34697), (253, 34703),

Gene: DelRivs\_36 Start: 34708, Stop: 35307, Start Num: 87

Candidate Starts for DelRivs\_36:

(24, 34501), (25, 34504), (32, 34528), (42, 34570), (47, 34588), (51, 34603), (Start: 87 @34708 has 415 MA's), (97, 34738), (102, 34750), (113, 34789), (118, 34804), (131, 34858), (144, 34903), (146, 34909), (148, 34915), (150, 34921), (157, 34966), (158, 34969), (164, 34996), (187, 35056), (190, 35077), (208, 35140), (215, 35155),

Gene: Derpp\_35 Start: 33905, Stop: 34555, Start Num: 84

Candidate Starts for Derpp\_35:

(67, 33869), (Start: 84 @33905 has 90 MA's), (Start: 85 @33908 has 172 MA's), (Start: 111 @33989 has 1 MA's), (146, 34124), (164, 34211), (181, 34256), (195, 34325), (196, 34334), (214, 34385), (223, 34430), (240, 34508), (249, 34541), (253, 34547),

Gene: Derpp\_36 Start: 34552, Stop: 35151, Start Num: 87

Candidate Starts for Derpp\_36:

(24, 34345), (25, 34348), (32, 34372), (42, 34414), (47, 34432), (51, 34447), (Start: 87 @34552 has 415 MA's), (97, 34582), (102, 34594), (113, 34633), (118, 34648), (131, 34702), (144, 34747), (146, 34753), (148, 34759), (150, 34765), (157, 34810), (158, 34813), (164, 34840), (187, 34900), (190, 34921), (208, 34984), (215, 34999),

Gene: Devonte\_36 Start: 34267, Stop: 34920, Start Num: 81

Candidate Starts for Devonte\_36:

(Start: 81 @34267 has 45 MA's), (108, 34348), (113, 34372), (145, 34495), (179, 34621), (186, 34636), (199, 34711), (241, 34876), (242, 34879), (249, 34906),



Gene: Devonte\_37 Start: 34917, Stop: 35516, Start Num: 87

Candidate Starts for Devonte\_37:

(Start: 87 @34917 has 415 MA's), (97, 34947), (108, 34974), (127, 35061), (150, 35130), (154, 35154), (157, 35175), (187, 35265), (208, 35349), (213, 35361), (226, 35421), (242, 35481), (248, 35502),

Gene: Dice\_35 Start: 34043, Stop: 34690, Start Num: 85

Candidate Starts for Dice\_35:

(67, 34004), (Start: 84 @34040 has 90 MA's), (Start: 85 @34043 has 172 MA's), (Start: 111 @34124 has 1 MA's), (146, 34259), (164, 34346), (181, 34391), (196, 34469), (214, 34520), (221, 34547), (223, 34565), (240, 34643), (249, 34676), (253, 34682),

Gene: Dice\_36 Start: 34687, Stop: 35286, Start Num: 87

Candidate Starts for Dice\_36:

(25, 34483), (32, 34507), (42, 34549), (47, 34567), (51, 34582), (Start: 87 @34687 has 415 MA's), (97, 34717), (102, 34729), (113, 34768), (118, 34783), (131, 34837), (144, 34882), (146, 34888), (148, 34894), (150, 34900), (157, 34945), (158, 34948), (164, 34975), (187, 35035), (190, 35056), (215, 35134),

Gene: DigitDog\_36 Start: 35292, Stop: 35903, Start Num: 87

Candidate Starts for DigitDog\_36:

(54, 35199), (55, 35205), (63, 35235), (65, 35244), (68, 35250), (Start: 87 @35292 has 415 MA's), (97, 35325), (113, 35376), (127, 35439), (131, 35445), (146, 35496), (148, 35502), (150, 35508), (158, 35556), (206, 35721), (208, 35727), (232, 35829), (243, 35871), (248, 35889),

Gene: DigitDog\_35 Start: 34556, Stop: 35185, Start Num: 86

Candidate Starts for DigitDog\_35:

(Start: 86 @34556 has 17 MA's), (110, 34634), (114, 34646), (145, 34772), (148, 34781), (150, 34787), (157, 34832), (177, 34880), (179, 34886), (223, 35060), (251, 35174),

Gene: Dingo\_36 Start: 34326, Stop: 34973, Start Num: 85

Candidate Starts for Dingo\_36:

(39, 34176), (67, 34287), (Start: 84 @34323 has 90 MA's), (Start: 85 @34326 has 172 MA's), (Start: 111 @34407 has 1 MA's), (146, 34542), (164, 34629), (181, 34674), (196, 34752), (214, 34803), (221, 34830), (223, 34848), (240, 34926), (249, 34959), (253, 34965),

Gene: Dingo\_37 Start: 34970, Stop: 35569, Start Num: 87

Candidate Starts for Dingo\_37:

(25, 34766), (32, 34790), (42, 34832), (47, 34850), (51, 34865), (Start: 87 @34970 has 415 MA's), (97, 35000), (102, 35012), (113, 35051), (118, 35066), (119, 35069), (131, 35120), (144, 35165), (146, 35171), (148, 35177), (150, 35183), (157, 35228), (158, 35231), (164, 35258), (187, 35318), (190, 35339), (215, 35417),

Gene: Dione\_35 Start: 34045, Stop: 34695, Start Num: 84

Candidate Starts for Dione\_35:

(67, 34009), (Start: 84 @34045 has 90 MA's), (Start: 85 @34048 has 172 MA's), (Start: 111 @34129 has 1 MA's), (146, 34264), (164, 34351), (181, 34396), (196, 34474), (214, 34525), (221, 34552), (223, 34570), (240, 34648), (249, 34681), (253, 34687),

Gene: Dione\_36 Start: 34692, Stop: 35291, Start Num: 87

Candidate Starts for Dione\_36:

(25, 34488), (32, 34512), (42, 34554), (47, 34572), (51, 34587), (Start: 87 @34692 has 415 MA's), (97, 34722), (102, 34734), (113, 34773), (118, 34788), (131, 34842), (144, 34887), (146, 34893), (148, 34899), (150, 34905), (157, 34950), (158, 34953), (164, 34980), (187, 35040), (190, 35061), (215, 35139),

Gene: DirtJuice\_36 Start: 34332, Stop: 34979, Start Num: 85

Candidate Starts for DirtJuice\_36:

(39, 34182), (67, 34293), (Start: 84 @34329 has 90 MA's), (Start: 85 @34332 has 172 MA's), (Start: 111 @34413 has 1 MA's), (146, 34548), (164, 34635), (181, 34680), (196, 34758), (214, 34809), (221, 34836), (223, 34854), (240, 34932), (249, 34965), (253, 34971),

Gene: DirtJuice\_37 Start: 34976, Stop: 35575, Start Num: 87

Candidate Starts for DirtJuice\_37:

(25, 34772), (32, 34796), (42, 34838), (47, 34856), (51, 34871), (Start: 87 @34976 has 415 MA's), (97, 35006), (102, 35018), (113, 35057), (118, 35072), (131, 35126), (144, 35171), (146, 35177), (148, 35183), (150, 35189), (157, 35234), (158, 35237), (164, 35264), (187, 35324), (190, 35345), (215, 35423),

Gene: Doddsville\_36 Start: 34062, Stop: 34709, Start Num: 85

Candidate Starts for Doddsville\_36:

(67, 34023), (Start: 84 @34059 has 90 MA's), (Start: 85 @34062 has 172 MA's), (Start: 111 @34143 has 1 MA's), (146, 34278), (164, 34365), (181, 34410), (195, 34479), (196, 34488), (214, 34539), (223, 34584), (240, 34662), (249, 34695), (253, 34701),

Gene: Doddsville\_37 Start: 34706, Stop: 35305, Start Num: 87

Candidate Starts for Doddsville\_37:

(24, 34499), (25, 34502), (32, 34526), (42, 34568), (47, 34586), (51, 34601), (Start: 87 @34706 has 415 MA's), (97, 34736), (102, 34748), (113, 34787), (118, 34802), (131, 34856), (144, 34901), (146, 34907), (148, 34913), (150, 34919), (157, 34964), (158, 34967), (164, 34994), (187, 35054), (190, 35075), (208, 35138), (215, 35153),

Gene: DoesntMatter\_36 Start: 34335, Stop: 34982, Start Num: 85

Candidate Starts for DoesntMatter\_36:

(39, 34185), (67, 34296), (Start: 84 @34332 has 90 MA's), (Start: 85 @34335 has 172 MA's), (Start: 111 @34416 has 1 MA's), (146, 34551), (164, 34638), (181, 34683), (196, 34761), (214, 34812), (221, 34839), (223, 34857), (240, 34935), (249, 34968), (253, 34974),

Gene: DoesntMatter\_37 Start: 34979, Stop: 35578, Start Num: 87

Candidate Starts for DoesntMatter\_37:

(25, 34775), (32, 34799), (42, 34841), (47, 34859), (51, 34874), (Start: 87 @34979 has 415 MA's), (97, 35009), (102, 35021), (113, 35060), (118, 35075), (131, 35129), (144, 35174), (146, 35180), (148, 35186), (150, 35192), (157, 35237), (158, 35240), (164, 35267), (187, 35327), (190, 35348), (215, 35426),

Gene: DonSanchon\_36 Start: 34686, Stop: 35285, Start Num: 87

Candidate Starts for DonSanchon\_36:

(25, 34482), (32, 34506), (42, 34548), (47, 34566), (51, 34581), (Start: 87 @34686 has 415 MA's), (97, 34716), (102, 34728), (113, 34767), (118, 34782), (131, 34836), (144, 34881), (146, 34887), (148, 34893), (150, 34899), (157, 34944), (158, 34947), (164, 34974), (187, 35034), (190, 35055), (215, 35133),

Gene: DonSanchon\_35 Start: 34042, Stop: 34689, Start Num: 85

Candidate Starts for DonSanchon\_35:

(67, 34003), (Start: 84 @34039 has 90 MA's), (Start: 85 @34042 has 172 MA's), (Start: 111 @34123 has 1 MA's), (146, 34258), (164, 34345), (181, 34390), (196, 34468), (214, 34519), (221, 34546), (223, 34564), (240, 34642), (249, 34675), (253, 34681),

Gene: DonTron\_61 Start: 39207, Stop: 39830, Start Num: 88

Candidate Starts for DonTron\_61:

(Start: 88 @39207 has 4 MA's), (146, 39420), (148, 39426), (229, 39729), (245, 39798), (246, 39804), (253, 39822),

Gene: Donny\_36 Start: 35588, Stop: 36196, Start Num: 87

Candidate Starts for Donny\_36:

(31, 35411), (46, 35468), (Start: 87 @35588 has 415 MA's), (97, 35618), (114, 35672), (123, 35717), (127, 35732), (131, 35738), (137, 35753), (146, 35789), (148, 35795), (150, 35801), (158, 35849), (167, 35882), (208, 36020), (211, 36026), (243, 36164), (248, 36182),

Gene: Donny\_35 Start: 34962, Stop: 35591, Start Num: 86

Candidate Starts for Donny\_35:

(Start: 86 @34962 has 17 MA's), (110, 35040), (114, 35052), (125, 35112), (145, 35178), (148, 35187), (150, 35193), (157, 35238), (177, 35286), (179, 35292), (223, 35466), (251, 35580),

Gene: Dori\_32 Start: 30878, Stop: 31522, Start Num: 82

Candidate Starts for Dori\_32:

(20, 30638), (59, 30812), (Start: 82 @30878 has 44 MA's), (117, 30992), (122, 31025), (125, 31043), (132, 31058), (150, 31121), (157, 31166), (159, 31172), (177, 31214), (179, 31220), (195, 31292), (196, 31301), (199, 31310), (210, 31343), (223, 31397), (249, 31508), (251, 31511),

Gene: Dori\_33 Start: 31519, Stop: 32118, Start Num: 87

Candidate Starts for Dori\_33:

(62, 31465), (70, 31483), (Start: 87 @31519 has 415 MA's), (Start: 95 @31531 has 2 MA's), (97, 31549), (108, 31576), (113, 31600), (114, 31603), (127, 31663), (146, 31720), (148, 31726), (194, 31903), (208, 31951), (244, 32089), (248, 32104),

Gene: DuchessDung\_34 Start: 33199, Stop: 33846, Start Num: 85

Candidate Starts for DuchessDung\_34:

(67, 33160), (Start: 84 @33196 has 90 MA's), (Start: 85 @33199 has 172 MA's), (Start: 111 @33280 has 1 MA's), (146, 33415), (164, 33502), (181, 33547), (195, 33616), (196, 33625), (214, 33676), (223, 33721), (240, 33799), (249, 33832), (253, 33838),

Gene: DuchessDung\_35 Start: 33843, Stop: 34442, Start Num: 87

Candidate Starts for DuchessDung\_35:

(24, 33636), (25, 33639), (32, 33663), (42, 33705), (47, 33723), (51, 33738), (Start: 87 @33843 has 415 MA's), (97, 33873), (102, 33885), (113, 33924), (118, 33939), (131, 33993), (144, 34038), (146, 34044), (148, 34050), (150, 34056), (157, 34101), (158, 34104), (164, 34131), (187, 34191), (190, 34212), (208, 34275), (215, 34290),

Gene: Duggie\_35 Start: 34064, Stop: 34711, Start Num: 85

Candidate Starts for Duggie\_35:

(67, 34025), (Start: 84 @34061 has 90 MA's), (Start: 85 @34064 has 172 MA's), (Start: 111 @34145 has 1 MA's), (146, 34280), (164, 34367), (181, 34412), (195, 34481), (196, 34490), (214, 34541), (223, 34586), (240, 34664), (249, 34697), (253, 34703),

Gene: Duggie\_36 Start: 34708, Stop: 35307, Start Num: 87

Candidate Starts for Duggie\_36:

(24, 34501), (25, 34504), (32, 34528), (42, 34570), (47, 34588), (51, 34603), (Start: 87 @34708 has 415 MA's), (97, 34738), (102, 34750), (113, 34789), (118, 34804), (131, 34858), (144, 34903), (146, 34909), (148, 34915), (150, 34921), (157, 34966), (158, 34969), (164, 34996), (187, 35056), (190, 35077), (208, 35140), (215, 35155),

Gene: Durga\_36 Start: 34362, Stop: 35009, Start Num: 85

Candidate Starts for Durga\_36:

(67, 34323), (Start: 84 @34359 has 90 MA's), (Start: 85 @34362 has 172 MA's), (Start: 111 @34443 has 1 MA's), (146, 34578), (164, 34665), (181, 34710), (195, 34779), (196, 34788), (214, 34839), (223, 34884), (240, 34962), (249, 34995), (253, 35001),

Gene: Durga\_37 Start: 35006, Stop: 35605, Start Num: 87

Candidate Starts for Durga\_37:

(24, 34799), (25, 34802), (32, 34826), (42, 34868), (47, 34886), (51, 34901), (Start: 87 @35006 has 415 MA's), (97, 35036), (102, 35048), (113, 35087), (118, 35102), (131, 35156), (144, 35201), (146, 35207), (148, 35213), (150, 35219), (157, 35264), (158, 35267), (164, 35294), (187, 35354), (190, 35375), (208, 35438), (215, 35453),

Gene: Eaglehorse\_38 Start: 35507, Stop: 36106, Start Num: 87

Candidate Starts for Eaglehorse\_38:

(78, 35486), (Start: 87 @35507 has 415 MA's), (97, 35537), (105, 35558), (113, 35588), (114, 35591), (131, 35657), (146, 35708), (147, 35711), (148, 35714), (154, 35744), (157, 35765), (180, 35831), (188, 35861), (213, 35951), (215, 35954), (219, 35972), (223, 35996), (240, 36065), (248, 36092),

Gene: Eaglehorse\_36 Start: 34717, Stop: 35361, Start Num: 82

Candidate Starts for Eaglehorse\_36:

(34, 34552), (59, 34663), (Start: 82 @34717 has 44 MA's), (Start: 85 @34726 has 172 MA's), (108, 34795), (114, 34822), (117, 34831), (142, 34936), (146, 34948), (150, 34960), (177, 35053), (191, 35119), (196, 35140), (201, 35155), (203, 35161), (210, 35182), (216, 35194), (251, 35350),

Gene: EastView9101\_35 Start: 35238, Stop: 35846, Start Num: 87

Candidate Starts for EastView9101\_35:

(31, 35061), (46, 35118), (Start: 87 @35238 has 415 MA's), (97, 35268), (114, 35322), (123, 35367), (127, 35382), (131, 35388), (137, 35403), (146, 35439), (148, 35445), (150, 35451), (158, 35499), (167, 35532), (208, 35670), (211, 35676), (243, 35814), (248, 35832),

Gene: EastView9101\_34 Start: 34612, Stop: 35241, Start Num: 86

Candidate Starts for EastView9101\_34:

(Start: 86 @34612 has 17 MA's), (110, 34690), (114, 34702), (125, 34762), (145, 34828), (148, 34837), (150, 34843), (157, 34888), (177, 34936), (179, 34942), (223, 35116), (251, 35230),

Gene: Emiris\_37 Start: 34977, Stop: 35576, Start Num: 87

Candidate Starts for Emiris\_37:

(24, 34770), (25, 34773), (32, 34797), (42, 34839), (47, 34857), (51, 34872), (Start: 87 @34977 has 415 MA's), (97, 35007), (102, 35019), (113, 35058), (118, 35073), (131, 35127), (144, 35172), (146, 35178), (148, 35184), (150, 35190), (157, 35235), (158, 35238), (164, 35265), (187, 35325), (190, 35346), (208, 35409), (215, 35424),

Gene: Emiris\_36 Start: 34333, Stop: 34980, Start Num: 85

Candidate Starts for Emiris\_36:

(67, 34294), (Start: 84 @34330 has 90 MA's), (Start: 85 @34333 has 172 MA's), (Start: 111 @34414 has 1 MA's), (146, 34549), (164, 34636), (181, 34681), (195, 34750), (196, 34759), (214, 34810), (223, 34855), (240, 34933), (249, 34966), (253, 34972),

Gene: EmpTee\_36 Start: 34339, Stop: 34989, Start Num: 84

Candidate Starts for EmpTee\_36:

(39, 34192), (67, 34303), (Start: 84 @34339 has 90 MA's), (Start: 85 @34342 has 172 MA's), (Start: 111 @34423 has 1 MA's), (146, 34558), (164, 34645), (181, 34690), (196, 34768), (214, 34819), (221, 34846), (223, 34864), (240, 34942), (249, 34975), (253, 34981),

Gene: EmpTee\_37 Start: 34986, Stop: 35585, Start Num: 87

Candidate Starts for EmpTee\_37:

(25, 34782), (32, 34806), (42, 34848), (47, 34866), (51, 34881), (Start: 87 @34986 has 415 MA's), (97, 35016), (102, 35028), (113, 35067), (118, 35082), (131, 35136), (144, 35181), (146, 35187), (148, 35193), (150, 35199), (157, 35244), (158, 35247), (164, 35274), (187, 35334), (190, 35355),

Gene: Epah\_32 Start: 33506, Stop: 34153, Start Num: 64

Candidate Starts for Epah\_32:

(Start: 64 @33506 has 25 MA's), (100, 33584), (104, 33596), (122, 33668), (133, 33692), (139, 33713), (140, 33722), (141, 33725), (144, 33734), (145, 33737), (155, 33782), (166, 33836), (173, 33854), (190, 33914), (195, 33926), (215, 33986), (221, 34010), (223, 34028), (243, 34115), (251, 34142),

Gene: Epah\_33 Start: 34150, Stop: 34755, Start Num: 87

Candidate Starts for Epah\_33:

(Start: 87 @34150 has 415 MA's), (97, 34186), (113, 34237), (114, 34240), (127, 34300), (131, 34306), (144, 34351), (147, 34360), (148, 34363), (149, 34366), (154, 34393), (164, 34444), (188, 34510), (190, 34525), (208, 34588), (223, 34645), (243, 34723), (248, 34741),

Gene: Eremos\_37 Start: 34985, Stop: 35584, Start Num: 87

Candidate Starts for Eremos\_37:

(25, 34781), (32, 34805), (42, 34847), (47, 34865), (51, 34880), (Start: 87 @34985 has 415 MA's), (97, 35015), (102, 35027), (113, 35066), (118, 35081), (131, 35135), (144, 35180), (146, 35186), (148, 35192), (150, 35198), (157, 35243), (158, 35246), (164, 35273), (187, 35333), (190, 35354), (215, 35432),

Gene: Eremos\_36 Start: 34338, Stop: 34988, Start Num: 84

Candidate Starts for Eremos\_36:

(67, 34302), (Start: 84 @34338 has 90 MA's), (Start: 85 @34341 has 172 MA's), (Start: 111 @34422 has 1 MA's), (146, 34557), (164, 34644), (181, 34689), (196, 34767), (214, 34818), (221, 34845), (223, 34863), (240, 34941), (249, 34974), (253, 34980),

Gene: Etaye\_37 Start: 34976, Stop: 35575, Start Num: 87

Candidate Starts for Etaye\_37:

(24, 34769), (25, 34772), (32, 34796), (42, 34838), (47, 34856), (51, 34871), (Start: 87 @34976 has 415 MA's), (97, 35006), (102, 35018), (113, 35057), (118, 35072), (131, 35126), (144, 35171), (146, 35177), (148, 35183), (150, 35189), (157, 35234), (158, 35237), (164, 35264), (187, 35324), (190, 35345), (208, 35408), (215, 35423),

Gene: Etaye\_36 Start: 34332, Stop: 34979, Start Num: 85

Candidate Starts for Etaye\_36:

(67, 34293), (Start: 84 @34329 has 90 MA's), (Start: 85 @34332 has 172 MA's), (Start: 111 @34413 has 1 MA's), (146, 34548), (164, 34635), (181, 34680), (195, 34749), (196, 34758), (214, 34809), (223, 34854), (240, 34932), (249, 34965), (253, 34971),

Gene: Eugenia\_36 Start: 34351, Stop: 34998, Start Num: 85

Candidate Starts for Eugenia\_36:

(67, 34312), (Start: 84 @34348 has 90 MA's), (Start: 85 @34351 has 172 MA's), (Start: 111 @34432 has 1 MA's), (146, 34567), (164, 34654), (181, 34699), (196, 34777), (214, 34828), (221, 34855), (223, 34873), (240, 34951), (249, 34984), (253, 34990),

Gene: Eugenia\_37 Start: 34995, Stop: 35594, Start Num: 87

Candidate Starts for Eugenia\_37:

(25, 34791), (32, 34815), (42, 34857), (47, 34875), (51, 34890), (Start: 87 @34995 has 415 MA's), (97, 35025), (102, 35037), (113, 35076), (118, 35091), (131, 35145), (144, 35190), (146, 35196), (148, 35202), (150, 35208), (157, 35253), (158, 35256), (164, 35283), (187, 35343), (190, 35364), (215, 35442),

Gene: Evaa\_30 Start: 28903, Stop: 29499, Start Num: 254

Candidate Starts for Evaa\_30:

(109, 28354), (138, 28465), (208, 28726), (238, 28849), (Start: 254 @28903 has 2 MA's), (256, 28936), (260, 28987), (261, 28990), (264, 29050), (266, 29056), (269, 29107), (271, 29113), (275, 29164), (279, 29218), (281, 29260), (284, 29305), (291, 29371), (294, 29410), (297, 29494),

Gene: Evaa\_29 Start: 28292, Stop: 28906, Start Num: 91

Candidate Starts for Evaa\_29:

(Start: 91 @28292 has 16 MA's), (110, 28361), (122, 28412), (132, 28445), (146, 28496), (147, 28499), (150, 28508), (154, 28532), (177, 28601), (179, 28607), (184, 28619), (199, 28697), (249, 28892), (251, 28895),

Gene: Fanaw\_32 Start: 34203, Stop: 34850, Start Num: 64

Candidate Starts for Fanaw\_32:

(Start: 64 @34203 has 25 MA's), (100, 34281), (104, 34293), (122, 34365), (140, 34419), (141, 34422), (144, 34431), (155, 34479), (166, 34533), (173, 34551), (190, 34611), (195, 34623), (215, 34683), (219, 34701), (221, 34707), (223, 34725), (243, 34812), (244, 34815), (251, 34839),

Gene: Fanaw\_33 Start: 34847, Stop: 35452, Start Num: 87

Candidate Starts for Fanaw\_33:

(Start: 87 @34847 has 415 MA's), (97, 34883), (113, 34934), (114, 34937), (127, 34997), (131, 35003), (144, 35048), (147, 35057), (148, 35060), (149, 35063), (154, 35090), (157, 35111), (164, 35141), (188, 35207), (190, 35222), (208, 35285), (223, 35342), (243, 35420), (248, 35438),

Gene: Fang\_36 Start: 34352, Stop: 35002, Start Num: 84

Candidate Starts for Fang\_36:

(67, 34316), (Start: 84 @34352 has 90 MA's), (Start: 85 @34355 has 172 MA's), (Start: 111 @34436 has 1 MA's), (146, 34571), (164, 34658), (181, 34703), (196, 34781), (214, 34832), (221, 34859), (223, 34877), (240, 34955), (249, 34988), (253, 34994),

Gene: Fang\_37 Start: 34999, Stop: 35598, Start Num: 87

Candidate Starts for Fang\_37:

(25, 34795), (32, 34819), (42, 34861), (47, 34879), (51, 34894), (Start: 87 @34999 has 415 MA's), (97, 35029), (102, 35041), (113, 35080), (118, 35095), (131, 35149), (144, 35194), (146, 35200), (148, 35206), (150, 35212), (157, 35257), (158, 35260), (164, 35287), (187, 35347), (190, 35368), (215, 35446),

Gene: Faze9\_36 Start: 34813, Stop: 35457, Start Num: 82

Candidate Starts for Faze9\_36:

(10, 34444), (12, 34456), (18, 34555), (34, 34648), (59, 34759), (Start: 82 @34813 has 44 MA's), (Start: 85 @34822 has 172 MA's), (108, 34891), (114, 34918), (117, 34927), (146, 35044), (150,

35056), (177, 35149), (191, 35215), (196, 35236), (201, 35251), (203, 35257), (210, 35278), (216, 35290), (251, 35446),

Gene: Faze9\_37 Start: 35603, Stop: 36202, Start Num: 87

Candidate Starts for Faze9\_37:

(78, 35582), (Start: 87 @35603 has 415 MA's), (97, 35633), (105, 35654), (113, 35684), (114, 35687), (131, 35753), (146, 35804), (147, 35807), (148, 35810), (154, 35840), (157, 35861), (180, 35927), (188, 35957), (213, 36047), (215, 36050), (219, 36068), (223, 36092), (240, 36161), (248, 36188),

Gene: FluffyNinja\_36 Start: 34345, Stop: 34995, Start Num: 84

Candidate Starts for FluffyNinja\_36:

(67, 34309), (Start: 84 @34345 has 90 MA's), (Start: 85 @34348 has 172 MA's), (Start: 111 @34429 has 1 MA's), (146, 34564), (164, 34651), (181, 34696), (196, 34774), (214, 34825), (221, 34852), (223, 34870), (240, 34948), (249, 34981), (253, 34987),

Gene: FluffyNinja\_37 Start: 34992, Stop: 35591, Start Num: 87

Candidate Starts for FluffyNinja\_37:

(25, 34788), (32, 34812), (42, 34854), (47, 34872), (51, 34887), (Start: 87 @34992 has 415 MA's), (97, 35022), (102, 35034), (113, 35073), (118, 35088), (131, 35142), (144, 35187), (146, 35193), (148, 35199), (150, 35205), (157, 35250), (158, 35253), (164, 35280), (187, 35340), (190, 35361), (215, 35439),

Gene: Fortunato\_34 Start: 35175, Stop: 35780, Start Num: 87

Candidate Starts for Fortunato\_34:

(Start: 87 @35175 has 415 MA's), (97, 35211), (108, 35238), (113, 35262), (114, 35265), (127, 35325), (131, 35331), (144, 35376), (147, 35385), (148, 35388), (149, 35391), (154, 35418), (157, 35439), (164, 35469), (188, 35535), (190, 35550), (208, 35613), (223, 35670), (243, 35748), (248, 35766),

Gene: Fortunato\_33 Start: 34531, Stop: 35178, Start Num: 64

Candidate Starts for Fortunato\_33:

(Start: 64 @34531 has 25 MA's), (100, 34609), (104, 34621), (122, 34693), (140, 34747), (141, 34750), (144, 34759), (155, 34807), (166, 34861), (173, 34879), (190, 34939), (195, 34951), (221, 35035), (223, 35053), (243, 35140), (244, 35143), (251, 35167),

Gene: Fozzie\_35 Start: 34364, Stop: 35011, Start Num: 85

Candidate Starts for Fozzie\_35:

(67, 34325), (Start: 84 @34361 has 90 MA's), (Start: 85 @34364 has 172 MA's), (Start: 111 @34445 has 1 MA's), (146, 34580), (164, 34667), (181, 34712), (196, 34790), (214, 34841), (221, 34868), (223, 34886), (240, 34964), (249, 34997), (253, 35003),

Gene: Fozzie\_36 Start: 35008, Stop: 35607, Start Num: 87

Candidate Starts for Fozzie\_36:

(25, 34804), (32, 34828), (42, 34870), (47, 34888), (51, 34903), (Start: 87 @35008 has 415 MA's), (97, 35038), (102, 35050), (113, 35089), (118, 35104), (131, 35158), (144, 35203), (146, 35209), (148, 35215), (150, 35221), (157, 35266), (158, 35269), (164, 35296), (187, 35356), (190, 35377), (215, 35455),

Gene: Frankicide\_36 Start: 34360, Stop: 35007, Start Num: 85

Candidate Starts for Frankicide\_36:

(39, 34210), (67, 34321), (Start: 84 @34357 has 90 MA's), (Start: 85 @34360 has 172 MA's), (Start: 111 @34441 has 1 MA's), (146, 34576), (164, 34663), (181, 34708), (196, 34786), (214, 34837), (221, 34864), (223, 34882), (240, 34960), (249, 34993), (253, 34999),

Gene: Frankicide\_37 Start: 35004, Stop: 35603, Start Num: 87

Candidate Starts for Frankicide\_37:

(25, 34800), (32, 34824), (42, 34866), (47, 34884), (51, 34899), (Start: 87 @35004 has 415 MA's), (97, 35034), (102, 35046), (113, 35085), (118, 35100), (131, 35154), (144, 35199), (146, 35205), (148, 35211), (150, 35217), (157, 35262), (158, 35265), (164, 35292), (187, 35352), (190, 35373), (215, 35451),

Gene: Frederick\_34 Start: 35181, Stop: 35786, Start Num: 87

Candidate Starts for Frederick\_34:

(Start: 87 @35181 has 415 MA's), (97, 35217), (108, 35244), (113, 35268), (114, 35271), (127, 35331), (131, 35337), (144, 35382), (147, 35391), (148, 35394), (149, 35397), (154, 35424), (157, 35445), (164, 35475), (188, 35541), (190, 35556), (208, 35619), (223, 35676), (243, 35754), (248, 35772),

Gene: Frederick\_33 Start: 34537, Stop: 35184, Start Num: 64

Candidate Starts for Frederick\_33:

(Start: 64 @34537 has 25 MA's), (100, 34615), (104, 34627), (122, 34699), (133, 34723), (140, 34753), (141, 34756), (144, 34765), (155, 34813), (166, 34867), (173, 34885), (190, 34945), (195, 34957), (215, 35017), (221, 35041), (223, 35059), (243, 35146), (244, 35149), (251, 35173),

Gene: FrenchFry\_38 Start: 35597, Stop: 36196, Start Num: 87

Candidate Starts for FrenchFry\_38:

(78, 35576), (Start: 87 @35597 has 415 MA's), (97, 35627), (105, 35648), (113, 35678), (114, 35681), (131, 35747), (146, 35798), (147, 35801), (148, 35804), (154, 35834), (157, 35855), (180, 35921), (188, 35951), (213, 36041), (215, 36044), (219, 36062), (223, 36086), (240, 36155), (248, 36182),

Gene: FrenchFry\_36 Start: 34807, Stop: 35451, Start Num: 82

Candidate Starts for FrenchFry\_36:

(34, 34642), (59, 34753), (Start: 82 @34807 has 44 MA's), (Start: 85 @34816 has 172 MA's), (108, 34885), (114, 34912), (117, 34921), (120, 34930), (146, 35038), (150, 35050), (177, 35143), (191, 35209), (196, 35230), (201, 35245), (203, 35251), (210, 35272), (216, 35284), (251, 35440),

Gene: Fresco\_29 Start: 27488, Stop: 28102, Start Num: 91

Candidate Starts for Fresco\_29:

(43, 27338), (Start: 91 @27488 has 16 MA's), (96, 27503), (Start: 99 @27521 has 1 MA's), (110, 27557), (118, 27581), (124, 27620), (145, 27689), (146, 27692), (147, 27695), (177, 27797), (236, 28034), (240, 28055), (242, 28061), (251, 28091),

Gene: Fresco\_30 Start: 28099, Stop: 28731, Start Num: 87

Candidate Starts for Fresco\_30:

(32, 27922), (Start: 87 @28099 has 415 MA's), (97, 28132), (108, 28159), (131, 28252), (145, 28300), (148, 28309), (157, 28360), (178, 28423), (180, 28426), (195, 28489), (215, 28549), (217, 28558), (219, 28567), (245, 28705),

Gene: Freya\_35 Start: 34039, Stop: 34686, Start Num: 85

Candidate Starts for Freya\_35:

(67, 34000), (Start: 84 @34036 has 90 MA's), (Start: 85 @34039 has 172 MA's), (Start: 111 @34120 has 1 MA's), (146, 34255), (164, 34342), (181, 34387), (196, 34465), (214, 34516), (221, 34543), (223, 34561), (240, 34639), (249, 34672), (253, 34678),

Gene: Freya\_36 Start: 34683, Stop: 35282, Start Num: 87

Candidate Starts for Freya\_36:



(25, 34479), (32, 34503), (42, 34545), (47, 34563), (51, 34578), (Start: 87 @34683 has 415 MA's), (97, 34713), (102, 34725), (113, 34764), (118, 34779), (131, 34833), (144, 34878), (146, 34884), (148, 34890), (150, 34896), (157, 34941), (158, 34944), (164, 34971), (187, 35031), (190, 35052), (215, 35130),

Gene: FriarPreacher\_37 Start: 35010, Stop: 35609, Start Num: 87

Candidate Starts for FriarPreacher\_37:

(25, 34806), (32, 34830), (42, 34872), (47, 34890), (51, 34905), (Start: 87 @35010 has 415 MA's), (97, 35040), (102, 35052), (113, 35091), (118, 35106), (131, 35160), (144, 35205), (146, 35211), (148, 35217), (150, 35223), (157, 35268), (158, 35271), (164, 35298), (187, 35358), (190, 35379), (215, 35457),

Gene: FriarPreacher\_36 Start: 34363, Stop: 35013, Start Num: 84

Candidate Starts for FriarPreacher\_36:

(67, 34327), (Start: 84 @34363 has 90 MA's), (Start: 85 @34366 has 172 MA's), (Start: 111 @34447 has 1 MA's), (146, 34582), (164, 34669), (181, 34714), (196, 34792), (214, 34843), (221, 34870), (223, 34888), (240, 34966), (249, 34999), (253, 35005),

Gene: Fringe\_37 Start: 34975, Stop: 35574, Start Num: 87

Candidate Starts for Fringe\_37:

(25, 34771), (32, 34795), (42, 34837), (47, 34855), (51, 34870), (Start: 87 @34975 has 415 MA's), (97, 35005), (102, 35017), (113, 35056), (118, 35071), (131, 35125), (144, 35170), (146, 35176), (148, 35182), (150, 35188), (157, 35233), (158, 35236), (164, 35263), (187, 35323), (190, 35344), (215, 35422),

Gene: Fringe\_36 Start: 34331, Stop: 34978, Start Num: 85

Candidate Starts for Fringe\_36:

(39, 34181), (67, 34292), (Start: 84 @34328 has 90 MA's), (Start: 85 @34331 has 172 MA's), (Start: 111 @34412 has 1 MA's), (146, 34547), (164, 34634), (181, 34679), (196, 34757), (214, 34808), (221, 34835), (223, 34853), (240, 34931), (249, 34964), (253, 34970),

Gene: FugateOSU\_36 Start: 34688, Stop: 35287, Start Num: 87

Candidate Starts for FugateOSU\_36:

(25, 34484), (32, 34508), (42, 34550), (47, 34568), (51, 34583), (Start: 87 @34688 has 415 MA's), (97, 34718), (102, 34730), (113, 34769), (118, 34784), (131, 34838), (144, 34883), (146, 34889), (148, 34895), (150, 34901), (157, 34946), (158, 34949), (164, 34976), (187, 35036), (190, 35057), (215, 35135),

Gene: FugateOSU\_35 Start: 34044, Stop: 34691, Start Num: 85

Candidate Starts for FugateOSU\_35:

(67, 34005), (Start: 84 @34041 has 90 MA's), (Start: 85 @34044 has 172 MA's), (Start: 111 @34125 has 1 MA's), (146, 34260), (164, 34347), (181, 34392), (196, 34470), (214, 34521), (221, 34548), (223, 34566), (240, 34644), (249, 34677), (253, 34683),

Gene: Funsized\_38 Start: 37106, Stop: 37753, Start Num: 86

Candidate Starts for Funsized\_38:

(6, 36659), (16, 36773), (19, 36830), (26, 36893), (32, 36914), (73, 37067), (79, 37085), (Start: 86 @37106 has 17 MA's), (110, 37181), (115, 37199), (117, 37205), (137, 37286), (142, 37310), (146, 37322), (148, 37328), (181, 37457), (214, 37586), (219, 37604), (223, 37628), (244, 37718), (249, 37739), (251, 37742),

Gene: Funsized\_39 Start: 37750, Stop: 38358, Start Num: 87

Candidate Starts for Funsized\_39:

(62, 37696), (Start: 87 @37750 has 415 MA's), (Start: 95 @37765 has 2 MA's), (97, 37783), (108, 37810), (113, 37834), (127, 37897), (131, 37903), (146, 37954), (148, 37960), (150, 37966), (152, 37984), (154, 37990), (157, 38011), (167, 38047), (213, 38197), (215, 38200), (223, 38242), (232, 38287), (243, 38329), (248, 38347),

Gene: Gadget\_38 Start: 34940, Stop: 35539, Start Num: 87

Candidate Starts for Gadget\_38:

(24, 34736), (Start: 87 @34940 has 415 MA's), (97, 34970), (108, 34997), (127, 35084), (131, 35090), (150, 35153), (154, 35177), (187, 35288), (208, 35372), (213, 35384), (226, 35444), (248, 35525),

Gene: Gadget\_37 Start: 34290, Stop: 34943, Start Num: 81

Candidate Starts for Gadget\_37:

(Start: 81 @34290 has 45 MA's), (108, 34371), (145, 34518), (179, 34644), (186, 34659), (199, 34734), (241, 34899), (249, 34929),

Gene: Gareth\_36 Start: 34691, Stop: 35290, Start Num: 87

Candidate Starts for Gareth\_36:

(25, 34487), (32, 34511), (42, 34553), (47, 34571), (51, 34586), (Start: 87 @34691 has 415 MA's), (97, 34721), (102, 34733), (113, 34772), (118, 34787), (131, 34841), (144, 34886), (146, 34892), (148, 34898), (150, 34904), (157, 34949), (158, 34952), (164, 34979), (187, 35039), (190, 35060), (215, 35138),

Gene: Gareth\_35 Start: 34044, Stop: 34694, Start Num: 84

Candidate Starts for Gareth\_35:

(67, 34008), (Start: 84 @34044 has 90 MA's), (Start: 85 @34047 has 172 MA's), (Start: 111 @34128 has 1 MA's), (146, 34263), (164, 34350), (181, 34395), (196, 34473), (214, 34524), (221, 34551), (223, 34569), (240, 34647), (249, 34680), (253, 34686),

Gene: GeneCoco\_37 Start: 35000, Stop: 35599, Start Num: 87

Candidate Starts for GeneCoco\_37:

(24, 34793), (25, 34796), (32, 34820), (42, 34862), (47, 34880), (51, 34895), (Start: 87 @35000 has 415 MA's), (97, 35030), (102, 35042), (113, 35081), (118, 35096), (131, 35150), (144, 35195), (146, 35201), (148, 35207), (150, 35213), (157, 35258), (158, 35261), (164, 35288), (187, 35348), (190, 35369), (208, 35432), (215, 35447),

Gene: GeneCoco\_36 Start: 34353, Stop: 35003, Start Num: 84

Candidate Starts for GeneCoco\_36:

(67, 34317), (Start: 84 @34353 has 90 MA's), (Start: 85 @34356 has 172 MA's), (Start: 111 @34437 has 1 MA's), (146, 34572), (164, 34659), (181, 34704), (195, 34773), (196, 34782), (214, 34833), (223, 34878), (240, 34956), (249, 34989), (253, 34995),

Gene: Gervas\_36 Start: 34257, Stop: 34910, Start Num: 81

Candidate Starts for Gervas\_36:

(Start: 81 @34257 has 45 MA's), (108, 34338), (113, 34362), (145, 34485), (179, 34611), (186, 34626), (199, 34701), (241, 34866), (242, 34869), (249, 34896),

Gene: Gervas\_37 Start: 34907, Stop: 35506, Start Num: 87

Candidate Starts for Gervas\_37:

(Start: 87 @34907 has 415 MA's), (97, 34937), (108, 34964), (127, 35051), (131, 35057), (150, 35120), (154, 35144), (157, 35165), (187, 35255), (208, 35339), (213, 35351), (226, 35411), (242, 35471), (248, 35492),

Gene: GinPorsche\_32 Start: 33506, Stop: 34153, Start Num: 64

Candidate Starts for GinPorsche\_32:

(Start: 64 @33506 has 25 MA's), (100, 33584), (104, 33596), (122, 33668), (133, 33692), (139, 33713), (140, 33722), (141, 33725), (144, 33734), (145, 33737), (155, 33782), (166, 33836), (173, 33854), (190, 33914), (195, 33926), (215, 33986), (221, 34010), (223, 34028), (243, 34115), (251, 34142),

Gene: GinPorsche\_33 Start: 34150, Stop: 34755, Start Num: 87

Candidate Starts for GinPorsche\_33:

(Start: 87 @34150 has 415 MA's), (97, 34186), (113, 34237), (114, 34240), (127, 34300), (131, 34306), (144, 34351), (147, 34360), (148, 34363), (149, 34366), (154, 34393), (164, 34444), (188, 34510), (190, 34525), (208, 34588), (223, 34645), (243, 34723), (248, 34741),

Gene: Giraffe\_37 Start: 34694, Stop: 35293, Start Num: 87

Candidate Starts for Giraffe\_37:

(25, 34490), (32, 34514), (42, 34556), (47, 34574), (51, 34589), (Start: 87 @34694 has 415 MA's), (97, 34724), (102, 34736), (113, 34775), (118, 34790), (131, 34844), (144, 34889), (146, 34895), (148, 34901), (150, 34907), (157, 34952), (158, 34955), (164, 34982), (187, 35042), (190, 35063), (215, 35141),

Gene: Giraffe\_36 Start: 34050, Stop: 34697, Start Num: 85

Candidate Starts for Giraffe\_36:

(67, 34011), (Start: 84 @34047 has 90 MA's), (Start: 85 @34050 has 172 MA's), (Start: 111 @34131 has 1 MA's), (146, 34266), (164, 34353), (181, 34398), (196, 34476), (214, 34527), (221, 34554), (223, 34572), (240, 34650), (249, 34683), (253, 34689),

Gene: Glass\_38 Start: 35597, Stop: 36196, Start Num: 87

Candidate Starts for Glass\_38:

(78, 35576), (Start: 87 @35597 has 415 MA's), (97, 35627), (105, 35648), (113, 35678), (114, 35681), (131, 35747), (146, 35798), (147, 35801), (148, 35804), (154, 35834), (157, 35855), (180, 35921), (188, 35951), (213, 36041), (215, 36044), (219, 36062), (223, 36086), (240, 36155), (248, 36182),

Gene: Glass\_36 Start: 34807, Stop: 35451, Start Num: 82

Candidate Starts for Glass\_36:

(34, 34642), (59, 34753), (Start: 82 @34807 has 44 MA's), (Start: 85 @34816 has 172 MA's), (108, 34885), (114, 34912), (117, 34921), (120, 34930), (146, 35038), (150, 35050), (177, 35143), (191, 35209), (196, 35230), (201, 35245), (203, 35251), (210, 35272), (216, 35284), (251, 35440),

Gene: GlenHope\_37 Start: 34270, Stop: 34923, Start Num: 81

Candidate Starts for GlenHope\_37:

(Start: 81 @34270 has 45 MA's), (108, 34351), (113, 34375), (145, 34498), (179, 34624), (186, 34639), (199, 34714), (241, 34879), (249, 34909),

Gene: GlenHope\_38 Start: 34920, Stop: 35519, Start Num: 87

Candidate Starts for GlenHope\_38:

(Start: 87 @34920 has 415 MA's), (97, 34950), (108, 34977), (127, 35064), (131, 35070), (150, 35133), (154, 35157), (157, 35178), (187, 35268), (208, 35352), (213, 35364), (226, 35424), (248, 35505),

Gene: GodPhather\_31 Start: 32995, Stop: 33594, Start Num: 87

Candidate Starts for GodPhather\_31:

(Start: 87 @32995 has 415 MA's), (97, 33025), (105, 33046), (108, 33052), (127, 33139), (131, 33145), (146, 33196), (150, 33208), (154, 33232), (157, 33253), (161, 33271), (167, 33289), (178, 33316), (221, 33466), (223, 33484), (242, 33559), (248, 33580),

Gene: GodPhather\_29 Start: 32201, Stop: 32845, Start Num: 82

Candidate Starts for GodPhather\_29:

(Start: 82 @32201 has 44 MA's), (89, 32219), (98, 32252), (107, 32276), (117, 32315), (120, 32324), (132, 32381), (146, 32432), (148, 32438), (150, 32444), (165, 32519), (181, 32546), (191, 32603), (203, 32645), (223, 32720), (239, 32792),

Gene: Godines\_36 Start: 34749, Stop: 35393, Start Num: 82

Candidate Starts for Godines\_36:

(21, 34548), (Start: 82 @34749 has 44 MA's), (Start: 85 @34758 has 172 MA's), (108, 34827), (114, 34854), (117, 34863), (120, 34872), (146, 34980), (150, 34992), (177, 35085), (191, 35151), (196, 35172), (201, 35187), (203, 35193), (210, 35214), (216, 35226), (251, 35382),

Gene: Godines\_38 Start: 35539, Stop: 36138, Start Num: 87

Candidate Starts for Godines\_38:

(78, 35518), (Start: 87 @35539 has 415 MA's), (97, 35569), (105, 35590), (113, 35620), (114, 35623), (131, 35689), (146, 35740), (147, 35743), (148, 35746), (154, 35776), (157, 35797), (180, 35863), (188, 35893), (213, 35983), (215, 35986), (219, 36004), (223, 36028), (240, 36097), (248, 36124),

Gene: Gophee\_37 Start: 34977, Stop: 35576, Start Num: 87

Candidate Starts for Gophee\_37:

(25, 34773), (32, 34797), (42, 34839), (47, 34857), (51, 34872), (Start: 87 @34977 has 415 MA's), (97, 35007), (102, 35019), (113, 35058), (118, 35073), (131, 35127), (144, 35172), (146, 35178), (148, 35184), (150, 35190), (157, 35235), (158, 35238), (164, 35265), (187, 35325), (190, 35346), (215, 35424),

Gene: Gophee\_36 Start: 34333, Stop: 34980, Start Num: 85

Candidate Starts for Gophee\_36:

(39, 34183), (67, 34294), (Start: 84 @34330 has 90 MA's), (Start: 85 @34333 has 172 MA's), (Start: 111 @34414 has 1 MA's), (146, 34549), (164, 34636), (181, 34681), (196, 34759), (214, 34810), (221, 34837), (223, 34855), (240, 34933), (249, 34966), (253, 34972),

Gene: Grand2040\_35 Start: 34062, Stop: 34712, Start Num: 84

Candidate Starts for Grand2040\_35:

(67, 34026), (Start: 84 @34062 has 90 MA's), (Start: 85 @34065 has 172 MA's), (Start: 111 @34146 has 1 MA's), (146, 34281), (164, 34368), (181, 34413), (196, 34491), (214, 34542), (221, 34569), (223, 34587), (240, 34665), (249, 34698), (253, 34704),

Gene: Grand2040\_36 Start: 34709, Stop: 35308, Start Num: 87

Candidate Starts for Grand2040\_36:

(25, 34505), (32, 34529), (42, 34571), (47, 34589), (51, 34604), (Start: 87 @34709 has 415 MA's), (97, 34739), (102, 34751), (113, 34790), (118, 34805), (131, 34859), (144, 34904), (146, 34910), (148, 34916), (150, 34922), (157, 34967), (158, 34970), (164, 34997), (187, 35057), (190, 35078), (215, 35156),

Gene: Gwilliam\_36 Start: 34345, Stop: 34992, Start Num: 85

Candidate Starts for Gwilliam\_36:

(67, 34306), (Start: 84 @34342 has 90 MA's), (Start: 85 @34345 has 172 MA's), (Start: 111 @34426 has 1 MA's), (146, 34561), (164, 34648), (181, 34693), (196, 34771), (214, 34822), (221, 34849), (223, 34867), (240, 34945), (249, 34978), (253, 34984),

Gene: Gwilliam\_37 Start: 34989, Stop: 35588, Start Num: 87

Candidate Starts for Gwilliam\_37:

(24, 34782), (25, 34785), (32, 34809), (42, 34851), (47, 34869), (51, 34884), (Start: 87 @34989 has 415 MA's), (97, 35019), (102, 35031), (113, 35070), (118, 35085), (131, 35139), (144, 35184), (146, 35190), (148, 35196), (150, 35202), (157, 35247), (158, 35250), (164, 35277), (187, 35337), (190, 35358), (215, 35436),

Gene: Gyarad\_0037 Start: 34991, Stop: 35590, Start Num: 87

Candidate Starts for Gyarad\_0037:

(24, 34784), (25, 34787), (32, 34811), (42, 34853), (47, 34871), (51, 34886), (Start: 87 @34991 has 415 MA's), (97, 35021), (102, 35033), (113, 35072), (118, 35087), (131, 35141), (144, 35186), (146, 35192), (148, 35198), (150, 35204), (157, 35249), (158, 35252), (164, 35279), (187, 35339), (190, 35360), (215, 35438),

Gene: Gyarad\_0036 Start: 34344, Stop: 34994, Start Num: 84

Candidate Starts for Gyarad\_0036:

(67, 34308), (Start: 84 @34344 has 90 MA's), (Start: 85 @34347 has 172 MA's), (Start: 111 @34428 has 1 MA's), (146, 34563), (164, 34650), (181, 34695), (196, 34773), (214, 34824), (221, 34851), (223, 34869), (240, 34947), (249, 34980), (253, 34986),

Gene: HSavage\_36 Start: 34351, Stop: 34998, Start Num: 85

Candidate Starts for HSavage\_36:

(39, 34201), (67, 34312), (Start: 84 @34348 has 90 MA's), (Start: 85 @34351 has 172 MA's), (Start: 111 @34432 has 1 MA's), (146, 34567), (164, 34654), (181, 34699), (196, 34777), (214, 34828), (221, 34855), (223, 34873), (240, 34951), (249, 34984), (253, 34990),

Gene: HSavage\_37 Start: 34995, Stop: 35594, Start Num: 87

Candidate Starts for HSavage\_37:

(25, 34791), (32, 34815), (42, 34857), (47, 34875), (51, 34890), (Start: 87 @34995 has 415 MA's), (97, 35025), (102, 35037), (113, 35076), (118, 35091), (131, 35145), (144, 35190), (146, 35196), (148, 35202), (150, 35208), (157, 35253), (158, 35256), (164, 35283), (187, 35343), (190, 35364), (215, 35442),

Gene: Haimas\_37 Start: 34986, Stop: 35585, Start Num: 87

Candidate Starts for Haimas\_37:

(25, 34782), (32, 34806), (42, 34848), (47, 34866), (51, 34881), (Start: 87 @34986 has 415 MA's), (97, 35016), (102, 35028), (113, 35067), (118, 35082), (131, 35136), (144, 35181), (146, 35187), (148, 35193), (150, 35199), (157, 35244), (158, 35247), (164, 35274), (187, 35334), (190, 35355), (215, 35433),

Gene: Haimas\_36 Start: 34339, Stop: 34989, Start Num: 84

Candidate Starts for Haimas\_36:

(67, 34303), (Start: 84 @34339 has 90 MA's), (Start: 85 @34342 has 172 MA's), (Start: 111 @34423 has 1 MA's), (146, 34558), (164, 34645), (181, 34690), (196, 34768), (214, 34819), (221, 34846), (223, 34864), (240, 34942), (249, 34975), (253, 34981),

Gene: Haleema\_36 Start: 34709, Stop: 35308, Start Num: 87

Candidate Starts for Haleema\_36:

(25, 34505), (32, 34529), (42, 34571), (47, 34589), (51, 34604), (Start: 87 @34709 has 415 MA's), (97, 34739), (102, 34751), (113, 34790), (118, 34805), (131, 34859), (144, 34904), (146, 34910), (148, 34916), (150, 34922), (157, 34967), (158, 34970), (164, 34997), (187, 35057), (190, 35078), (215, 35156),

Gene: Haleema\_35 Start: 34065, Stop: 34712, Start Num: 85

Candidate Starts for Haleema\_35:

(67, 34026), (Start: 84 @34062 has 90 MA's), (Start: 85 @34065 has 172 MA's), (Start: 111 @34146 has 1 MA's), (146, 34281), (164, 34368), (181, 34413), (196, 34491), (214, 34542), (221, 34569), (223, 34587), (240, 34665), (249, 34698), (253, 34704),

Gene: Halfpint\_35 Start: 34096, Stop: 34749, Start Num: 81

Candidate Starts for Halfpint\_35:

(Start: 81 @34096 has 45 MA's), (108, 34177), (145, 34324), (179, 34450), (186, 34465), (199, 34540), (241, 34705), (242, 34708), (249, 34735),

Gene: Halfpint\_36 Start: 34746, Stop: 35345, Start Num: 87

Candidate Starts for Halfpint\_36:

(Start: 87 @34746 has 415 MA's), (97, 34776), (108, 34803), (127, 34890), (131, 34896), (150, 34959), (154, 34983), (187, 35094), (208, 35178), (213, 35190), (226, 35250), (248, 35331),

Gene: Hally898\_33 Start: 34162, Stop: 34767, Start Num: 87

Candidate Starts for Hally898\_33:

(Start: 87 @34162 has 415 MA's), (97, 34198), (113, 34249), (114, 34252), (127, 34312), (131, 34318), (144, 34363), (147, 34372), (148, 34375), (149, 34378), (154, 34405), (164, 34456), (188, 34522), (190, 34537), (208, 34600), (223, 34657), (243, 34735), (248, 34753),

Gene: Hally898\_32 Start: 33518, Stop: 34165, Start Num: 64

Candidate Starts for Hally898\_32:

(Start: 64 @33518 has 25 MA's), (100, 33596), (104, 33608), (122, 33680), (133, 33704), (139, 33725), (140, 33734), (141, 33737), (144, 33746), (145, 33749), (155, 33794), (166, 33848), (173, 33866), (190, 33926), (195, 33938), (215, 33998), (221, 34022), (223, 34040), (243, 34127), (251, 34154),

Gene: Hamish\_37 Start: 34978, Stop: 35577, Start Num: 87

Candidate Starts for Hamish\_37:

(25, 34774), (32, 34798), (42, 34840), (47, 34858), (51, 34873), (Start: 87 @34978 has 415 MA's), (97, 35008), (102, 35020), (113, 35059), (118, 35074), (131, 35128), (144, 35173), (146, 35179), (148, 35185), (150, 35191), (157, 35236), (158, 35239), (164, 35266), (187, 35326), (190, 35347), (215, 35425),

Gene: Hamish\_36 Start: 34334, Stop: 34981, Start Num: 85

Candidate Starts for Hamish\_36:

(67, 34295), (Start: 84 @34331 has 90 MA's), (Start: 85 @34334 has 172 MA's), (Start: 111 @34415 has 1 MA's), (146, 34550), (164, 34637), (181, 34682), (196, 34760), (214, 34811), (221, 34838), (223, 34856), (240, 34934), (249, 34967), (253, 34973),

Gene: Hangman\_34 Start: 35173, Stop: 35778, Start Num: 87

Candidate Starts for Hangman\_34:

(1, 34600), (3, 34717), (7, 34771), (8, 34780), (17, 34903), (25, 34972), (32, 34996), (47, 35053), (Start: 87 @35173 has 415 MA's), (97, 35209), (108, 35236), (113, 35260), (114, 35263), (127, 35323), (131, 35329), (144, 35374), (147, 35383), (148, 35386), (149, 35389), (154, 35416), (157, 35437), (164, 35467), (190, 35548), (208, 35611), (223, 35668), (243, 35746), (248, 35764),

Gene: Hangman\_33 Start: 34529, Stop: 35176, Start Num: 64

Candidate Starts for Hangman\_33:

(Start: 64 @34529 has 25 MA's), (100, 34607), (104, 34619), (122, 34691), (133, 34715), (139, 34736), (140, 34745), (141, 34748), (144, 34757), (155, 34805), (173, 34877), (190, 34937), (195, 34949), (215, 35009), (221, 35033), (223, 35051), (243, 35138), (244, 35141), (251, 35165),

Gene: Hartsy\_36 Start: 34385, Stop: 35032, Start Num: 85

Candidate Starts for Hartsy\_36:

(67, 34346), (Start: 84 @34382 has 90 MA's), (Start: 85 @34385 has 172 MA's), (Start: 111 @34466 has 1 MA's), (146, 34601), (164, 34688), (181, 34733), (195, 34802), (196, 34811), (214, 34862), (223, 34907), (240, 34985), (249, 35018), (253, 35024),

Gene: Hartsy\_37 Start: 35029, Stop: 35628, Start Num: 87

Candidate Starts for Hartsy\_37:

(24, 34822), (25, 34825), (32, 34849), (42, 34891), (47, 34909), (51, 34924), (Start: 87 @35029 has 415 MA's), (97, 35059), (102, 35071), (113, 35110), (118, 35125), (131, 35179), (144, 35224), (146, 35230), (148, 35236), (150, 35242), (157, 35287), (158, 35290), (164, 35317), (187, 35377), (190, 35398), (208, 35461), (215, 35476),

Gene: Harvey\_37 Start: 35004, Stop: 35603, Start Num: 87

Candidate Starts for Harvey\_37:

(25, 34800), (32, 34824), (42, 34866), (47, 34884), (51, 34899), (Start: 87 @35004 has 415 MA's), (97, 35034), (102, 35046), (113, 35085), (118, 35100), (131, 35154), (144, 35199), (146, 35205), (148, 35211), (150, 35217), (157, 35262), (158, 35265), (164, 35292), (187, 35352), (190, 35373), (215, 35451),

Gene: Harvey\_36 Start: 34357, Stop: 35007, Start Num: 84

Candidate Starts for Harvey\_36:

(67, 34321), (Start: 84 @34357 has 90 MA's), (Start: 85 @34360 has 172 MA's), (Start: 111 @34441 has 1 MA's), (146, 34576), (164, 34663), (181, 34708), (196, 34786), (214, 34837), (221, 34864), (223, 34882), (240, 34960), (249, 34993), (253, 34999),

Gene: HarveySr\_36 Start: 34263, Stop: 34916, Start Num: 81

Candidate Starts for HarveySr\_36:

(Start: 81 @34263 has 45 MA's), (108, 34344), (145, 34491), (179, 34617), (186, 34632), (199, 34707), (241, 34872), (249, 34902),

Gene: HarveySr\_37 Start: 34913, Stop: 35512, Start Num: 87

Candidate Starts for HarveySr\_37:

(24, 34709), (Start: 87 @34913 has 415 MA's), (97, 34943), (108, 34970), (127, 35057), (131, 35063), (150, 35126), (154, 35150), (187, 35261), (208, 35345), (213, 35357), (226, 35417), (248, 35498),

Gene: Hashim76\_40 Start: 33766, Stop: 34410, Start Num: 86

Candidate Starts for Hashim76\_40:

(56, 33676), (61, 33700), (67, 33718), (71, 33724), (Start: 86 @33766 has 17 MA's), (115, 33859), (119, 33871), (137, 33946), (154, 34018), (157, 34039), (169, 34090), (191, 34171), (244, 34375), (251, 34399),

Gene: Hashim76\_41 Start: 34407, Stop: 35015, Start Num: 87

Candidate Starts for Hashim76\_41:

(3, 33951), (25, 34206), (32, 34230), (62, 34353), (Start: 87 @34407 has 415 MA's), (92, 34413), (97, 34437), (127, 34551), (131, 34557), (148, 34614), (190, 34776), (213, 34851), (217, 34863), (231, 34941), (243, 34983),

Gene: Heath\_33 Start: 34780, Stop: 35385, Start Num: 87

Candidate Starts for Heath\_33:

(Start: 87 @34780 has 415 MA's), (97, 34816), (113, 34867), (114, 34870), (127, 34930), (131, 34936), (144, 34981), (147, 34990), (148, 34993), (149, 34996), (154, 35023), (157, 35044), (164, 35074), (188, 35140), (190, 35155), (208, 35218), (223, 35275), (243, 35353), (248, 35371),

Gene: Heath\_32 Start: 34136, Stop: 34783, Start Num: 64

Candidate Starts for Heath\_32:

(Start: 64 @34136 has 25 MA's), (100, 34214), (104, 34226), (122, 34298), (139, 34343), (140, 34352), (141, 34355), (144, 34364), (145, 34367), (155, 34412), (173, 34484), (190, 34544), (195, 34556), (215, 34616), (221, 34640), (223, 34658), (243, 34745), (244, 34748), (251, 34772),

Gene: Heathcliff\_36 Start: 34241, Stop: 34894, Start Num: 81

Candidate Starts for Heathcliff\_36:

(Start: 81 @34241 has 45 MA's), (108, 34322), (113, 34346), (145, 34469), (179, 34595), (186, 34610), (199, 34685), (241, 34850), (242, 34853), (249, 34880),

Gene: Heathcliff\_37 Start: 34891, Stop: 35490, Start Num: 87

Candidate Starts for Heathcliff\_37:

(Start: 87 @34891 has 415 MA's), (97, 34921), (108, 34948), (127, 35035), (131, 35041), (150, 35104), (154, 35128), (157, 35149), (187, 35239), (208, 35323), (213, 35335), (226, 35395), (248, 35476),

Gene: Hedgerow\_36 Start: 34789, Stop: 35433, Start Num: 82

Candidate Starts for Hedgerow\_36:

(34, 34624), (59, 34735), (Start: 82 @34789 has 44 MA's), (Start: 85 @34798 has 172 MA's), (108, 34867), (114, 34894), (117, 34903), (120, 34912), (146, 35020), (150, 35032), (177, 35125), (191, 35191), (196, 35212), (201, 35227), (203, 35233), (210, 35254), (216, 35266), (251, 35422),

Gene: Hedgerow\_38 Start: 35579, Stop: 36178, Start Num: 87

Candidate Starts for Hedgerow\_38:

(78, 35558), (Start: 87 @35579 has 415 MA's), (97, 35609), (105, 35630), (113, 35660), (114, 35663), (131, 35729), (146, 35780), (147, 35783), (148, 35786), (154, 35816), (157, 35837), (180, 35903), (188, 35933), (213, 36023), (215, 36026), (219, 36044), (223, 36068), (240, 36137), (248, 36164),

Gene: Held\_37 Start: 34693, Stop: 35292, Start Num: 87

Candidate Starts for Held\_37:

(24, 34486), (25, 34489), (32, 34513), (42, 34555), (47, 34573), (51, 34588), (Start: 87 @34693 has 415 MA's), (97, 34723), (102, 34735), (113, 34774), (118, 34789), (131, 34843), (144, 34888), (146, 34894), (148, 34900), (150, 34906), (157, 34951), (158, 34954), (164, 34981), (187, 35041), (190, 35062), (215, 35140),

Gene: Held\_36 Start: 34046, Stop: 34696, Start Num: 84

Candidate Starts for Held\_36:

(67, 34010), (Start: 84 @34046 has 90 MA's), (Start: 85 @34049 has 172 MA's), (Start: 111 @34130 has 1 MA's), (146, 34265), (164, 34352), (181, 34397), (196, 34475), (214, 34526), (221, 34553), (223, 34571), (240, 34649), (249, 34682), (253, 34688),

Gene: HenryJackson\_35 Start: 34065, Stop: 34712, Start Num: 85

Candidate Starts for HenryJackson\_35:

(39, 33915), (67, 34026), (Start: 84 @34062 has 90 MA's), (Start: 85 @34065 has 172 MA's), (Start: 111 @34146 has 1 MA's), (146, 34281), (164, 34368), (181, 34413), (196, 34491), (214, 34542), (221, 34569), (223, 34587), (240, 34665), (249, 34698), (253, 34704),

Gene: HenryJackson\_36 Start: 34709, Stop: 35308, Start Num: 87

Candidate Starts for HenryJackson\_36:

(25, 34505), (32, 34529), (42, 34571), (47, 34589), (51, 34604), (Start: 87 @34709 has 415 MA's), (97, 34739), (102, 34751), (113, 34790), (118, 34805), (131, 34859), (144, 34904), (146, 34910), (148,



34916), (150, 34922), (157, 34967), (158, 34970), (164, 34997), (187, 35057), (190, 35078), (215, 35156),

Gene: Hertubise\_36 Start: 34353, Stop: 35003, Start Num: 84

Candidate Starts for Hertubise\_36:

(67, 34317), (Start: 84 @34353 has 90 MA's), (Start: 85 @34356 has 172 MA's), (Start: 111 @34437 has 1 MA's), (146, 34572), (164, 34659), (181, 34704), (196, 34782), (214, 34833), (221, 34860), (223, 34878), (240, 34956), (249, 34989), (253, 34995),

Gene: Hertubise\_37 Start: 35000, Stop: 35599, Start Num: 87

Candidate Starts for Hertubise\_37:

(25, 34796), (32, 34820), (42, 34862), (47, 34880), (51, 34895), (Start: 87 @35000 has 415 MA's), (97, 35030), (102, 35042), (113, 35081), (118, 35096), (131, 35150), (144, 35195), (146, 35201), (148, 35207), (150, 35213), (157, 35258), (158, 35261), (164, 35288), (187, 35348), (190, 35369), (215, 35447),

Gene: Hetaeria\_37 Start: 35002, Stop: 35601, Start Num: 87

Candidate Starts for Hetaeria\_37:

(25, 34798), (32, 34822), (42, 34864), (47, 34882), (51, 34897), (Start: 87 @35002 has 415 MA's), (97, 35032), (102, 35044), (113, 35083), (118, 35098), (131, 35152), (144, 35197), (146, 35203), (148, 35209), (150, 35215), (157, 35260), (158, 35263), (164, 35290), (187, 35350), (190, 35371), (215, 35449),

Gene: Hetaeria\_36 Start: 34358, Stop: 35005, Start Num: 85

Candidate Starts for Hetaeria\_36:

(67, 34319), (Start: 84 @34355 has 90 MA's), (Start: 85 @34358 has 172 MA's), (Start: 111 @34439 has 1 MA's), (146, 34574), (164, 34661), (181, 34706), (196, 34784), (214, 34835), (221, 34862), (223, 34880), (240, 34958), (249, 34991), (253, 34997),

Gene: HighStump\_35 Start: 34048, Stop: 34695, Start Num: 85

Candidate Starts for HighStump\_35:

(67, 34009), (Start: 84 @34045 has 90 MA's), (Start: 85 @34048 has 172 MA's), (Start: 111 @34129 has 1 MA's), (146, 34264), (164, 34351), (181, 34396), (196, 34474), (214, 34525), (221, 34552), (223, 34570), (240, 34648), (249, 34681), (253, 34687),

Gene: HighStump\_36 Start: 34692, Stop: 35291, Start Num: 87

Candidate Starts for HighStump\_36:

(25, 34488), (32, 34512), (42, 34554), (47, 34572), (51, 34587), (Start: 87 @34692 has 415 MA's), (97, 34722), (102, 34734), (113, 34773), (118, 34788), (131, 34842), (144, 34887), (146, 34893), (148, 34899), (150, 34905), (157, 34950), (158, 34953), (164, 34980), (187, 35040), (190, 35061), (215, 35139),

Gene: Hocus\_36 Start: 34701, Stop: 35300, Start Num: 87

Candidate Starts for Hocus\_36:

(24, 34494), (25, 34497), (32, 34521), (42, 34563), (47, 34581), (51, 34596), (Start: 87 @34701 has 415 MA's), (97, 34731), (102, 34743), (113, 34782), (118, 34797), (131, 34851), (144, 34896), (146, 34902), (148, 34908), (150, 34914), (157, 34959), (158, 34962), (164, 34989), (187, 35049), (190, 35070), (208, 35133), (215, 35148),

Gene: Hocus\_35 Start: 34054, Stop: 34704, Start Num: 84

Candidate Starts for Hocus\_35:

(67, 34018), (Start: 84 @34054 has 90 MA's), (Start: 85 @34057 has 172 MA's), (Start: 111 @34138 has 1 MA's), (146, 34273), (164, 34360), (181, 34405), (195, 34474), (196, 34483), (214, 34534), (223,

34579), (240, 34657), (249, 34690), (253, 34696),

Gene: Holeinone\_36 Start: 34669, Stop: 35313, Start Num: 82

Candidate Starts for Holeinone\_36:

(34, 34504), (59, 34615), (Start: 82 @34669 has 44 MA's), (Start: 85 @34678 has 172 MA's), (108, 34747), (114, 34774), (117, 34783), (120, 34792), (142, 34888), (146, 34900), (150, 34912), (177, 35005), (191, 35071), (196, 35092), (201, 35107), (203, 35113), (210, 35134), (216, 35146), (251, 35302),

Gene: Holeinone\_38 Start: 35459, Stop: 36058, Start Num: 87

Candidate Starts for Holeinone\_38:

(78, 35438), (Start: 87 @35459 has 415 MA's), (97, 35489), (105, 35510), (113, 35540), (114, 35543), (131, 35609), (146, 35660), (147, 35663), (148, 35666), (154, 35696), (157, 35717), (180, 35783), (188, 35813), (213, 35903), (215, 35906), (219, 35924), (223, 35948), (240, 36017), (248, 36044),

Gene: Horchata\_37 Start: 34980, Stop: 35579, Start Num: 87

Candidate Starts for Horchata\_37:

(25, 34776), (32, 34800), (42, 34842), (47, 34860), (51, 34875), (Start: 87 @34980 has 415 MA's), (97, 35010), (102, 35022), (113, 35061), (118, 35076), (131, 35130), (144, 35175), (146, 35181), (148, 35187), (150, 35193), (157, 35238), (158, 35241), (164, 35268), (187, 35328), (190, 35349), (215, 35427),

Gene: Horchata\_36 Start: 34336, Stop: 34983, Start Num: 85

Candidate Starts for Horchata\_36:

(39, 34186), (67, 34297), (Start: 84 @34333 has 90 MA's), (Start: 85 @34336 has 172 MA's), (Start: 111 @34417 has 1 MA's), (146, 34552), (164, 34639), (181, 34684), (196, 34762), (214, 34813), (221, 34840), (223, 34858), (240, 34936), (249, 34969), (253, 34975),

Gene: Hosp\_029 Start: 30909, Stop: 31517, Start Num: 87

Candidate Starts for Hosp\_029:

(13, 30555), (25, 30708), (32, 30732), (62, 30855), (Start: 87 @30909 has 415 MA's), (127, 31053), (131, 31059), (146, 31110), (149, 31119), (150, 31122), (157, 31167), (163, 31194), (178, 31230), (182, 31236), (187, 31257), (217, 31365), (232, 31443), (243, 31485), (248, 31503),

Gene: Hosp\_028 Start: 30268, Stop: 30912, Start Num: 86

Candidate Starts for Hosp\_028:

(Start: 86 @30268 has 17 MA's), (110, 30343), (114, 30355), (137, 30445), (149, 30490), (176, 30604), (181, 30616), (187, 30640), (189, 30658), (191, 30673), (204, 30721), (251, 30901),

Gene: Hydro\_33 Start: 34546, Stop: 35193, Start Num: 64

Candidate Starts for Hydro\_33:

(Start: 64 @34546 has 25 MA's), (100, 34624), (104, 34636), (122, 34708), (140, 34762), (141, 34765), (144, 34774), (155, 34822), (166, 34876), (173, 34894), (190, 34954), (195, 34966), (221, 35050), (223, 35068), (243, 35155), (244, 35158), (251, 35182),

Gene: Hydro\_34 Start: 35190, Stop: 35795, Start Num: 87

Candidate Starts for Hydro\_34:

(Start: 87 @35190 has 415 MA's), (97, 35226), (108, 35253), (113, 35277), (114, 35280), (127, 35340), (131, 35346), (144, 35391), (147, 35400), (148, 35403), (149, 35406), (154, 35433), (157, 35454), (164, 35484), (188, 35550), (190, 35565), (208, 35628), (223, 35685), (243, 35763), (248, 35781),

Gene: ImtiyazSitla\_36 Start: 34543, Stop: 35142, Start Num: 87

Candidate Starts for ImtiyazSitla\_36:

(24, 34336), (25, 34339), (32, 34363), (42, 34405), (47, 34423), (51, 34438), (Start: 87 @34543 has 415 MA's), (97, 34573), (102, 34585), (113, 34624), (118, 34639), (131, 34693), (144, 34738), (146, 34744), (148, 34750), (150, 34756), (157, 34801), (158, 34804), (164, 34831), (187, 34891), (190, 34912), (208, 34975), (215, 34990),

Gene: ImtiyazSitla\_35 Start: 33899, Stop: 34546, Start Num: 85

Candidate Starts for ImtiyazSitla\_35:

(67, 33860), (Start: 84 @33896 has 90 MA's), (Start: 85 @33899 has 172 MA's), (Start: 111 @33980 has 1 MA's), (146, 34115), (164, 34202), (181, 34247), (195, 34316), (196, 34325), (214, 34376), (223, 34421), (240, 34499), (249, 34532), (253, 34538),

Gene: Imvubu\_29 Start: 31242, Stop: 31886, Start Num: 86

Candidate Starts for Imvubu\_29:

(Start: 86 @31242 has 17 MA's), (115, 31332), (117, 31338), (137, 31419), (139, 31428), (142, 31443), (145, 31452), (146, 31455), (148, 31461), (181, 31590), (191, 31647), (223, 31761), (243, 31848), (251, 31875),

Gene: Imvubu\_30 Start: 31883, Stop: 32482, Start Num: 87

Candidate Starts for Imvubu\_30:

(62, 31829), (Start: 87 @31883 has 415 MA's), (92, 31889), (97, 31913), (102, 31925), (108, 31940), (127, 32027), (131, 32033), (152, 32114), (154, 32120), (157, 32141), (208, 32315), (213, 32327), (215, 32330), (223, 32372), (232, 32417), (233, 32420), (245, 32465), (248, 32471),

Gene: Inchworm\_37 Start: 34978, Stop: 35577, Start Num: 87

Candidate Starts for Inchworm\_37:

(25, 34774), (32, 34798), (42, 34840), (47, 34858), (51, 34873), (Start: 87 @34978 has 415 MA's), (97, 35008), (102, 35020), (113, 35059), (118, 35074), (131, 35128), (144, 35173), (146, 35179), (148, 35185), (150, 35191), (157, 35236), (158, 35239), (164, 35266), (187, 35326), (190, 35347), (208, 35410), (215, 35425),

Gene: Inchworm\_36 Start: 34334, Stop: 34981, Start Num: 85

Candidate Starts for Inchworm\_36:

(67, 34295), (Start: 84 @34331 has 90 MA's), (Start: 85 @34334 has 172 MA's), (Start: 111 @34415 has 1 MA's), (146, 34550), (164, 34637), (181, 34682), (196, 34760), (214, 34811), (221, 34838), (223, 34856), (240, 34934), (249, 34967), (253, 34973),

Gene: Indlovu\_34 Start: 33760, Stop: 34392, Start Num: 95

Candidate Starts for Indlovu\_34:

(77, 33715), (Start: 86 @33745 has 17 MA's), (Start: 95 @33760 has 2 MA's), (110, 33823), (113, 33832), (115, 33838), (118, 33847), (128, 33904), (146, 33961), (157, 34018), (191, 34153), (219, 34243), (242, 34351),

Gene: Indlovu\_35 Start: 34389, Stop: 35000, Start Num: 87

Candidate Starts for Indlovu\_35:

(70, 34353), (Start: 87 @34389 has 415 MA's), (97, 34419), (113, 34470), (127, 34533), (131, 34539), (148, 34596), (169, 34692), (178, 34710), (208, 34821), (215, 34836), (230, 34902), (248, 34983), (250, 34989),

Gene: Inverness\_36 Start: 34348, Stop: 34995, Start Num: 85

Candidate Starts for Inverness\_36:

(67, 34309), (Start: 84 @34345 has 90 MA's), (Start: 85 @34348 has 172 MA's), (Start: 111 @34429 has 1 MA's), (146, 34564), (164, 34651), (181, 34696), (196, 34774), (214, 34825), (221, 34852), (223,

34870), (240, 34948), (249, 34981), (253, 34987),

Gene: Inverness\_37 Start: 34992, Stop: 35591, Start Num: 87

Candidate Starts for Inverness\_37:

(24, 34785), (25, 34788), (32, 34812), (42, 34854), (47, 34872), (51, 34887), (Start: 87 @34992 has 415 MA's), (97, 35022), (102, 35034), (113, 35073), (118, 35088), (131, 35142), (144, 35187), (146, 35193), (148, 35199), (150, 35205), (157, 35250), (158, 35253), (164, 35280), (187, 35340), (190, 35361), (215, 35439),

Gene: Iridoclysis\_37 Start: 34972, Stop: 35571, Start Num: 87

Candidate Starts for Iridoclysis\_37:

(25, 34768), (32, 34792), (42, 34834), (47, 34852), (51, 34867), (Start: 87 @34972 has 415 MA's), (97, 35002), (102, 35014), (113, 35053), (118, 35068), (131, 35122), (144, 35167), (146, 35173), (148, 35179), (150, 35185), (157, 35230), (158, 35233), (164, 35260), (187, 35320), (190, 35341), (215, 35419),

Gene: Iridoclysis\_36 Start: 34328, Stop: 34975, Start Num: 85

Candidate Starts for Iridoclysis\_36:

(67, 34289), (Start: 84 @34325 has 90 MA's), (Start: 85 @34328 has 172 MA's), (Start: 111 @34409 has 1 MA's), (146, 34544), (164, 34631), (181, 34676), (196, 34754), (214, 34805), (221, 34832), (223, 34850), (240, 34928), (249, 34961), (253, 34967),

Gene: IsaacEli\_36 Start: 34349, Stop: 34999, Start Num: 84

Candidate Starts for IsaacEli\_36:

(67, 34313), (Start: 84 @34349 has 90 MA's), (Start: 85 @34352 has 172 MA's), (Start: 111 @34433 has 1 MA's), (146, 34568), (164, 34655), (181, 34700), (196, 34778), (214, 34829), (221, 34856), (223, 34874), (240, 34952), (249, 34985), (253, 34991),

Gene: IsaacEli\_37 Start: 34996, Stop: 35595, Start Num: 87

Candidate Starts for IsaacEli\_37:

(25, 34792), (32, 34816), (42, 34858), (47, 34876), (51, 34891), (Start: 87 @34996 has 415 MA's), (97, 35026), (102, 35038), (113, 35077), (118, 35092), (131, 35146), (144, 35191), (146, 35197), (148, 35203), (150, 35209), (157, 35254), (158, 35257), (164, 35284), (187, 35344), (190, 35365), (215, 35443),

Gene: ItsyBitsy1\_38 Start: 35461, Stop: 36060, Start Num: 87

Candidate Starts for ItsyBitsy1\_38:

(78, 35440), (Start: 87 @35461 has 415 MA's), (97, 35491), (105, 35512), (113, 35542), (114, 35545), (131, 35611), (146, 35662), (147, 35665), (148, 35668), (154, 35698), (157, 35719), (180, 35785), (188, 35815), (213, 35905), (215, 35908), (219, 35926), (223, 35950), (240, 36019), (248, 36046),

Gene: ItsyBitsy1\_36 Start: 34671, Stop: 35315, Start Num: 82

Candidate Starts for ItsyBitsy1\_36:

(34, 34506), (59, 34617), (Start: 82 @34671 has 44 MA's), (Start: 85 @34680 has 172 MA's), (108, 34749), (114, 34776), (117, 34785), (120, 34794), (146, 34902), (150, 34914), (177, 35007), (191, 35073), (196, 35094), (201, 35109), (203, 35115), (210, 35136), (216, 35148), (251, 35304),

Gene: JAMaL\_33 Start: 34717, Stop: 35364, Start Num: 64

Candidate Starts for JAMaL\_33:

(Start: 64 @34717 has 25 MA's), (100, 34795), (104, 34807), (122, 34879), (133, 34903), (139, 34924), (140, 34933), (141, 34936), (144, 34945), (145, 34948), (155, 34993), (166, 35047), (173, 35065), (190, 35125), (195, 35137), (215, 35197), (219, 35215), (221, 35221), (223, 35239), (243, 35326), (251, 35353),

Gene: JAMaL\_34 Start: 35361, Stop: 35966, Start Num: 87

Candidate Starts for JAMaL\_34:

(Start: 87 @35361 has 415 MA's), (97, 35397), (108, 35424), (113, 35448), (114, 35451), (127, 35511), (131, 35517), (144, 35562), (147, 35571), (148, 35574), (149, 35577), (154, 35604), (157, 35625), (164, 35655), (188, 35721), (190, 35736), (223, 35856), (243, 35934), (248, 35952),

Gene: JDog\_36 Start: 34709, Stop: 35308, Start Num: 87

Candidate Starts for JDog\_36:

(24, 34502), (25, 34505), (32, 34529), (42, 34571), (47, 34589), (51, 34604), (Start: 87 @34709 has 415 MA's), (97, 34739), (102, 34751), (113, 34790), (118, 34805), (131, 34859), (144, 34904), (146, 34910), (148, 34916), (150, 34922), (157, 34967), (158, 34970), (164, 34997), (187, 35057), (190, 35078), (208, 35141), (215, 35156),

Gene: JDog\_35 Start: 34065, Stop: 34712, Start Num: 85

Candidate Starts for JDog\_35:

(67, 34026), (Start: 84 @34062 has 90 MA's), (Start: 85 @34065 has 172 MA's), (Start: 111 @34146 has 1 MA's), (146, 34281), (164, 34368), (181, 34413), (195, 34482), (196, 34491), (214, 34542), (223, 34587), (240, 34665), (249, 34698), (253, 34704),

Gene: JacAttac\_37 Start: 34978, Stop: 35577, Start Num: 87

Candidate Starts for JacAttac\_37:

(25, 34774), (32, 34798), (42, 34840), (47, 34858), (51, 34873), (Start: 87 @34978 has 415 MA's), (97, 35008), (102, 35020), (113, 35059), (118, 35074), (131, 35128), (144, 35173), (146, 35179), (148, 35185), (150, 35191), (157, 35236), (158, 35239), (164, 35266), (187, 35326), (190, 35347), (215, 35425),

Gene: JacAttac\_36 Start: 34331, Stop: 34981, Start Num: 84

Candidate Starts for JacAttac\_36:

(67, 34295), (Start: 84 @34331 has 90 MA's), (Start: 85 @34334 has 172 MA's), (Start: 111 @34415 has 1 MA's), (146, 34550), (164, 34637), (181, 34682), (196, 34760), (214, 34811), (221, 34838), (223, 34856), (240, 34934), (249, 34967), (253, 34973),

Gene: Jackstina\_34 Start: 34850, Stop: 35449, Start Num: 87

Candidate Starts for Jackstina\_34:

(Start: 87 @34850 has 415 MA's), (97, 34880), (108, 34907), (127, 34994), (131, 35000), (150, 35063), (154, 35087), (157, 35108), (187, 35198), (208, 35282), (213, 35294), (226, 35354), (242, 35414), (248, 35435),

Gene: Jackstina\_33 Start: 34200, Stop: 34853, Start Num: 81

Candidate Starts for Jackstina\_33:

(Start: 81 @34200 has 45 MA's), (108, 34281), (113, 34305), (145, 34428), (179, 34554), (186, 34569), (199, 34644), (241, 34809), (249, 34839),

Gene: JaguarMi\_33 Start: 34011, Stop: 34658, Start Num: 64

Candidate Starts for JaguarMi\_33:

(Start: 64 @34011 has 25 MA's), (100, 34089), (104, 34101), (122, 34173), (139, 34218), (140, 34227), (141, 34230), (144, 34239), (155, 34287), (173, 34359), (190, 34419), (195, 34431), (215, 34491), (221, 34515), (223, 34533), (243, 34620), (251, 34647),

Gene: JaguarMi\_34 Start: 34655, Stop: 35260, Start Num: 87

Candidate Starts for JaguarMi\_34:

(Start: 87 @34655 has 415 MA's), (97, 34691), (102, 34703), (108, 34718), (113, 34742), (114, 34745), (131, 34811), (144, 34856), (147, 34865), (148, 34868), (149, 34871), (150, 34874), (154, 34898), (157, 34919), (164, 34949), (187, 35009), (190, 35030), (208, 35093), (213, 35105), (223, 35150), (243, 35228), (248, 35246),

Gene: JakeO\_36 Start: 34711, Stop: 35310, Start Num: 87

Candidate Starts for JakeO\_36:

(24, 34504), (25, 34507), (32, 34531), (42, 34573), (47, 34591), (51, 34606), (Start: 87 @34711 has 415 MA's), (97, 34741), (102, 34753), (113, 34792), (118, 34807), (131, 34861), (144, 34906), (146, 34912), (148, 34918), (150, 34924), (157, 34969), (158, 34972), (164, 34999), (187, 35059), (190, 35080), (208, 35143), (215, 35158),

Gene: JakeO\_35 Start: 34064, Stop: 34714, Start Num: 84

Candidate Starts for JakeO\_35:

(39, 33917), (67, 34028), (Start: 84 @34064 has 90 MA's), (Start: 85 @34067 has 172 MA's), (Start: 111 @34148 has 1 MA's), (146, 34283), (164, 34370), (181, 34415), (196, 34493), (214, 34544), (221, 34571), (223, 34589), (240, 34667), (249, 34700), (253, 34706),

Gene: JangoPhett\_36 Start: 34333, Stop: 34983, Start Num: 84

Candidate Starts for JangoPhett\_36:

(39, 34186), (67, 34297), (Start: 84 @34333 has 90 MA's), (Start: 85 @34336 has 172 MA's), (Start: 111 @34417 has 1 MA's), (146, 34552), (164, 34639), (181, 34684), (196, 34762), (214, 34813), (221, 34840), (223, 34858), (240, 34936), (249, 34969), (253, 34975),

Gene: JangoPhett\_37 Start: 34980, Stop: 35579, Start Num: 87

Candidate Starts for JangoPhett\_37:

(25, 34776), (32, 34800), (42, 34842), (47, 34860), (51, 34875), (Start: 87 @34980 has 415 MA's), (97, 35010), (102, 35022), (113, 35061), (118, 35076), (131, 35130), (144, 35175), (146, 35181), (148, 35187), (150, 35193), (157, 35238), (158, 35241), (164, 35268), (187, 35328), (190, 35349), (215, 35427),

Gene: Jeon\_30 Start: 32737, Stop: 33336, Start Num: 87

Candidate Starts for Jeon\_30:

(Start: 87 @32737 has 415 MA's), (97, 32767), (105, 32788), (108, 32794), (127, 32881), (131, 32887), (146, 32938), (150, 32950), (154, 32974), (157, 32995), (161, 33013), (167, 33031), (178, 33058), (221, 33208), (223, 33226), (242, 33301), (248, 33322),

Gene: Jeon\_28 Start: 31943, Stop: 32587, Start Num: 82

Candidate Starts for Jeon\_28:

(Start: 82 @31943 has 44 MA's), (89, 31961), (98, 31994), (107, 32018), (117, 32057), (120, 32066), (132, 32123), (146, 32174), (148, 32180), (150, 32186), (165, 32261), (181, 32288), (191, 32345), (203, 32387), (223, 32462), (239, 32534),

Gene: Jillium\_35 Start: 34055, Stop: 34705, Start Num: 84

Candidate Starts for Jillium\_35:

(39, 33908), (67, 34019), (Start: 84 @34055 has 90 MA's), (Start: 85 @34058 has 172 MA's), (Start: 111 @34139 has 1 MA's), (146, 34274), (164, 34361), (181, 34406), (196, 34484), (214, 34535), (221, 34562), (223, 34580), (240, 34658), (249, 34691), (253, 34697),

Gene: Jillium\_36 Start: 34702, Stop: 35301, Start Num: 87

Candidate Starts for Jillium\_36:

(25, 34498), (32, 34522), (42, 34564), (47, 34582), (51, 34597), (Start: 87 @34702 has 415 MA's), (97, 34732), (102, 34744), (113, 34783), (118, 34798), (131, 34852), (144, 34897), (146, 34903), (148,

34909), (150, 34915), (157, 34960), (158, 34963), (164, 34990), (187, 35050), (190, 35071), (215, 35149),

Gene: Jiminy\_36 Start: 34546, Stop: 35145, Start Num: 87

Candidate Starts for Jiminy\_36:

(24, 34339), (25, 34342), (32, 34366), (42, 34408), (47, 34426), (51, 34441), (Start: 87 @34546 has 415 MA's), (97, 34576), (102, 34588), (113, 34627), (118, 34642), (131, 34696), (144, 34741), (146, 34747), (148, 34753), (150, 34759), (157, 34804), (158, 34807), (164, 34834), (187, 34894), (190, 34915), (208, 34978), (215, 34993),

Gene: Jiminy\_35 Start: 33902, Stop: 34549, Start Num: 85

Candidate Starts for Jiminy\_35:

(67, 33863), (Start: 84 @33899 has 90 MA's), (Start: 85 @33902 has 172 MA's), (Start: 111 @33983 has 1 MA's), (146, 34118), (164, 34205), (181, 34250), (195, 34319), (196, 34328), (214, 34379), (223, 34424), (240, 34502), (249, 34535), (253, 34541),

Gene: Jiraiya\_36 Start: 34055, Stop: 34702, Start Num: 85

Candidate Starts for Jiraiya\_36:

(67, 34016), (Start: 84 @34052 has 90 MA's), (Start: 85 @34055 has 172 MA's), (Start: 111 @34136 has 1 MA's), (146, 34271), (164, 34358), (181, 34403), (195, 34472), (196, 34481), (214, 34532), (223, 34577), (240, 34655), (249, 34688), (253, 34694),

Gene: Jiraiya\_37 Start: 34699, Stop: 35298, Start Num: 87

Candidate Starts for Jiraiya\_37:

(24, 34492), (25, 34495), (32, 34519), (42, 34561), (47, 34579), (51, 34594), (Start: 87 @34699 has 415 MA's), (97, 34729), (102, 34741), (113, 34780), (118, 34795), (131, 34849), (144, 34894), (146, 34900), (148, 34906), (150, 34912), (157, 34957), (158, 34960), (164, 34987), (187, 35047), (190, 35068), (208, 35131), (215, 35146),

Gene: Jolie1\_030 Start: 32055, Stop: 32699, Start Num: 86

Candidate Starts for Jolie1\_030:

(Start: 86 @32055 has 17 MA's), (110, 32130), (114, 32142), (137, 32232), (149, 32277), (176, 32391), (181, 32403), (189, 32445), (191, 32460), (204, 32508), (251, 32688),

Gene: Jolie1\_031 Start: 32696, Stop: 33304, Start Num: 87

Candidate Starts for Jolie1\_031:

(13, 32342), (25, 32495), (32, 32519), (62, 32642), (Start: 87 @32696 has 415 MA's), (127, 32840), (131, 32846), (146, 32897), (149, 32906), (150, 32909), (157, 32954), (163, 32981), (178, 33017), (182, 33023), (187, 33044), (217, 33152), (232, 33230), (243, 33272), (248, 33290),

Gene: Jollymon\_62 Start: 39166, Stop: 39789, Start Num: 88

Candidate Starts for Jollymon\_62:

(Start: 88 @39166 has 4 MA's), (146, 39379), (148, 39385), (152, 39412), (229, 39688), (245, 39757), (246, 39763), (253, 39781),

Gene: KLucky39\_37 Start: 34990, Stop: 35589, Start Num: 87

Candidate Starts for KLucky39\_37:

(25, 34786), (32, 34810), (42, 34852), (47, 34870), (51, 34885), (Start: 87 @34990 has 415 MA's), (97, 35020), (102, 35032), (113, 35071), (118, 35086), (131, 35140), (144, 35185), (146, 35191), (148, 35197), (150, 35203), (157, 35248), (158, 35251), (164, 35278), (187, 35338), (190, 35359), (215, 35437),

Gene: KLucky39\_36 Start: 34343, Stop: 34993, Start Num: 84

Candidate Starts for KLucky39\_36:

(39, 34196), (67, 34307), (Start: 84 @34343 has 90 MA's), (Start: 85 @34346 has 172 MA's), (Start: 111 @34427 has 1 MA's), (146, 34562), (164, 34649), (181, 34694), (196, 34772), (214, 34823), (221, 34850), (223, 34868), (240, 34946), (249, 34979), (253, 34985),

Gene: Kahve\_35 Start: 34062, Stop: 34709, Start Num: 85

Candidate Starts for Kahve\_35:

(39, 33912), (67, 34023), (Start: 84 @34059 has 90 MA's), (Start: 85 @34062 has 172 MA's), (Start: 111 @34143 has 1 MA's), (146, 34278), (164, 34365), (181, 34410), (196, 34488), (214, 34539), (221, 34566), (223, 34584), (240, 34662), (249, 34695), (253, 34701),

Gene: Kahve\_36 Start: 34706, Stop: 35305, Start Num: 87

Candidate Starts for Kahve\_36:

(25, 34502), (32, 34526), (42, 34568), (47, 34586), (51, 34601), (Start: 87 @34706 has 415 MA's), (97, 34736), (102, 34748), (113, 34787), (118, 34802), (131, 34856), (144, 34901), (146, 34907), (148, 34913), (150, 34919), (157, 34964), (158, 34967), (164, 34994), (187, 35054), (190, 35075), (215, 35153),

Gene: Kailash\_36 Start: 34397, Stop: 35047, Start Num: 84

Candidate Starts for Kailash\_36:

(67, 34361), (Start: 84 @34397 has 90 MA's), (Start: 85 @34400 has 172 MA's), (Start: 111 @34481 has 1 MA's), (146, 34616), (164, 34703), (181, 34748), (195, 34817), (196, 34826), (214, 34877), (223, 34922), (240, 35000), (249, 35033), (253, 35039),

Gene: Kailash\_37 Start: 35044, Stop: 35643, Start Num: 87

Candidate Starts for Kailash\_37:

(24, 34837), (25, 34840), (32, 34864), (42, 34906), (47, 34924), (51, 34939), (Start: 87 @35044 has 415 MA's), (97, 35074), (102, 35086), (113, 35125), (118, 35140), (131, 35194), (144, 35239), (146, 35245), (148, 35251), (150, 35257), (157, 35302), (158, 35305), (164, 35332), (187, 35392), (190, 35413), (208, 35476), (215, 35491),

Gene: Kaleb\_36 Start: 34804, Stop: 35448, Start Num: 82

Candidate Starts for Kaleb\_36:

(34, 34639), (59, 34750), (Start: 82 @34804 has 44 MA's), (Start: 85 @34813 has 172 MA's), (108, 34882), (114, 34909), (117, 34918), (120, 34927), (146, 35035), (150, 35047), (177, 35140), (191, 35206), (196, 35227), (201, 35242), (203, 35248), (210, 35269), (216, 35281), (251, 35437),

Gene: Kaleb\_38 Start: 35594, Stop: 36193, Start Num: 87

Candidate Starts for Kaleb\_38:

(78, 35573), (Start: 87 @35594 has 415 MA's), (97, 35624), (105, 35645), (113, 35675), (114, 35678), (131, 35744), (146, 35795), (147, 35798), (148, 35801), (154, 35831), (157, 35852), (180, 35918), (188, 35948), (213, 36038), (215, 36041), (219, 36059), (223, 36083), (240, 36152), (248, 36179),

Gene: Kamiyu\_36 Start: 34249, Stop: 34902, Start Num: 81

Candidate Starts for Kamiyu\_36:

(Start: 81 @34249 has 45 MA's), (108, 34330), (145, 34477), (179, 34603), (186, 34618), (199, 34693), (241, 34858), (249, 34888),

Gene: Kamiyu\_37 Start: 34899, Stop: 35498, Start Num: 87

Candidate Starts for Kamiyu\_37:

(24, 34695), (Start: 87 @34899 has 415 MA's), (97, 34929), (108, 34956), (127, 35043), (131, 35049), (150, 35112), (154, 35136), (187, 35247), (208, 35331), (213, 35343), (226, 35403), (248, 35484),



Gene: KarasumaRum\_37 Start: 35147, Stop: 35740, Start Num: 98

Candidate Starts for KarasumaRum\_37:

(Start: 86 @35111 has 17 MA's), (98, 35147), (110, 35189), (114, 35201), (145, 35327), (148, 35336), (150, 35342), (157, 35387), (177, 35435), (179, 35441), (223, 35615), (251, 35729),

Gene: KarasumaRum\_38 Start: 35737, Stop: 36345, Start Num: 87

Candidate Starts for KarasumaRum\_38:

(Start: 87 @35737 has 415 MA's), (97, 35767), (113, 35818), (127, 35881), (131, 35887), (146, 35938), (148, 35944), (150, 35950), (158, 35998), (206, 36163), (208, 36169), (232, 36271), (243, 36313), (248, 36331),

Gene: Katniss\_36 Start: 34361, Stop: 35008, Start Num: 85

Candidate Starts for Katniss\_36:

(67, 34322), (Start: 84 @34358 has 90 MA's), (Start: 85 @34361 has 172 MA's), (Start: 111 @34442 has 1 MA's), (146, 34577), (164, 34664), (181, 34709), (196, 34787), (214, 34838), (221, 34865), (223, 34883), (240, 34961), (249, 34994), (253, 35000),

Gene: Katniss\_37 Start: 35005, Stop: 35604, Start Num: 87

Candidate Starts for Katniss\_37:

(25, 34801), (32, 34825), (42, 34867), (47, 34885), (51, 34900), (Start: 87 @35005 has 415 MA's), (97, 35035), (102, 35047), (113, 35086), (118, 35101), (131, 35155), (144, 35200), (146, 35206), (148, 35212), (150, 35218), (157, 35263), (158, 35266), (164, 35293), (187, 35353), (190, 35374), (215, 35452),

Gene: KayaCho\_30 Start: 32051, Stop: 32695, Start Num: 86

Candidate Starts for KayaCho\_30:

(Start: 86 @32051 has 17 MA's), (110, 32126), (114, 32138), (136, 32225), (137, 32228), (149, 32273), (176, 32387), (181, 32399), (187, 32423), (189, 32441), (191, 32456), (204, 32504), (251, 32684),

Gene: KayaCho\_31 Start: 32692, Stop: 33300, Start Num: 87

Candidate Starts for KayaCho\_31:

(13, 32338), (25, 32491), (32, 32515), (62, 32638), (Start: 87 @32692 has 415 MA's), (127, 32836), (131, 32842), (146, 32893), (148, 32899), (149, 32902), (157, 32950), (163, 32977), (178, 33013), (187, 33040), (206, 33118), (213, 33136), (217, 33148), (232, 33226), (243, 33268), (248, 33286),

Gene: Keitherie\_37 Start: 35043, Stop: 35642, Start Num: 87

Candidate Starts for Keitherie\_37:

(25, 34839), (32, 34863), (42, 34905), (47, 34923), (51, 34938), (Start: 87 @35043 has 415 MA's), (97, 35073), (102, 35085), (113, 35124), (118, 35139), (131, 35193), (144, 35238), (146, 35244), (148, 35250), (150, 35256), (157, 35301), (158, 35304), (164, 35331), (190, 35412), (208, 35475), (215, 35490),

Gene: Keitherie\_36 Start: 34396, Stop: 35046, Start Num: 84

Candidate Starts for Keitherie\_36:

(39, 34249), (67, 34360), (Start: 84 @34396 has 90 MA's), (Start: 85 @34399 has 172 MA's), (Start: 111 @34480 has 1 MA's), (146, 34615), (164, 34702), (181, 34747), (196, 34825), (214, 34876), (221, 34903), (223, 34921), (240, 34999), (249, 35032), (253, 35038),

Gene: Kheth\_36 Start: 34692, Stop: 35336, Start Num: 82

Candidate Starts for Kheth\_36:

(34, 34527), (59, 34638), (Start: 82 @34692 has 44 MA's), (Start: 85 @34701 has 172 MA's), (108, 34770), (114, 34797), (117, 34806), (120, 34815), (146, 34923), (150, 34935), (177, 35028), (191,

35094), (196, 35115), (201, 35130), (203, 35136), (210, 35157), (216, 35169), (251, 35325),

Gene: Kheth\_38 Start: 35482, Stop: 36081, Start Num: 87

Candidate Starts for Kheth\_38:

(78, 35461), (Start: 87 @35482 has 415 MA's), (97, 35512), (105, 35533), (113, 35563), (114, 35566), (131, 35632), (146, 35683), (147, 35686), (148, 35689), (154, 35719), (157, 35740), (180, 35806), (188, 35836), (213, 35926), (215, 35929), (219, 35947), (223, 35971), (240, 36040), (248, 36067),

Gene: Kikipoo\_37 Start: 34996, Stop: 35595, Start Num: 87

Candidate Starts for Kikipoo\_37:

(25, 34792), (32, 34816), (42, 34858), (47, 34876), (51, 34891), (Start: 87 @34996 has 415 MA's), (97, 35026), (102, 35038), (113, 35077), (118, 35092), (131, 35146), (144, 35191), (146, 35197), (148, 35203), (150, 35209), (157, 35254), (158, 35257), (164, 35284), (187, 35344), (190, 35365), (215, 35443),

Gene: Kikipoo\_36 Start: 34349, Stop: 34999, Start Num: 84

Candidate Starts for Kikipoo\_36:

(67, 34313), (Start: 84 @34349 has 90 MA's), (Start: 85 @34352 has 172 MA's), (Start: 111 @34433 has 1 MA's), (146, 34568), (164, 34655), (181, 34700), (196, 34778), (214, 34829), (221, 34856), (223, 34874), (240, 34952), (249, 34985), (253, 34991),

Gene: Kimbrough\_37 Start: 34698, Stop: 35297, Start Num: 87

Candidate Starts for Kimbrough\_37:

(25, 34494), (32, 34518), (42, 34560), (47, 34578), (51, 34593), (Start: 87 @34698 has 415 MA's), (97, 34728), (102, 34740), (113, 34779), (118, 34794), (131, 34848), (144, 34893), (146, 34899), (148, 34905), (150, 34911), (157, 34956), (158, 34959), (164, 34986), (187, 35046), (190, 35067), (215, 35145),

Gene: Kimbrough\_36 Start: 34054, Stop: 34701, Start Num: 85

Candidate Starts for Kimbrough\_36:

(67, 34015), (Start: 84 @34051 has 90 MA's), (Start: 85 @34054 has 172 MA's), (Start: 111 @34135 has 1 MA's), (146, 34270), (164, 34357), (181, 34402), (196, 34480), (214, 34531), (221, 34558), (223, 34576), (240, 34654), (249, 34687), (253, 34693),

Gene: KingTut\_28 Start: 30367, Stop: 30966, Start Num: 87

Candidate Starts for KingTut\_28:

(25, 30163), (32, 30187), (42, 30229), (47, 30247), (51, 30262), (Start: 87 @30367 has 415 MA's), (97, 30397), (102, 30409), (113, 30448), (118, 30463), (131, 30517), (144, 30562), (146, 30568), (148, 30574), (150, 30580), (157, 30625), (158, 30628), (164, 30655), (187, 30715), (190, 30736), (215, 30814),

Gene: KingTut\_27 Start: 29723, Stop: 30370, Start Num: 85

Candidate Starts for KingTut\_27:

(39, 29573), (67, 29684), (Start: 84 @29720 has 90 MA's), (Start: 85 @29723 has 172 MA's), (Start: 111 @29804 has 1 MA's), (146, 29939), (164, 30026), (181, 30071), (196, 30149), (214, 30200), (221, 30227), (223, 30245), (240, 30323), (249, 30356), (253, 30362),

Gene: KingVeVeVe\_36 Start: 34324, Stop: 34974, Start Num: 84

Candidate Starts for KingVeVeVe\_36:

(67, 34288), (Start: 84 @34324 has 90 MA's), (Start: 85 @34327 has 172 MA's), (Start: 111 @34408 has 1 MA's), (146, 34543), (164, 34630), (181, 34675), (196, 34753), (214, 34804), (221, 34831), (223, 34849), (240, 34927), (249, 34960), (253, 34966),

Gene: KingVeVeVe\_37 Start: 34971, Stop: 35570, Start Num: 87

Candidate Starts for KingVeVeVe\_37:

(25, 34767), (32, 34791), (42, 34833), (47, 34851), (51, 34866), (Start: 87 @34971 has 415 MA's), (97, 35001), (102, 35013), (113, 35052), (118, 35067), (131, 35121), (144, 35166), (146, 35172), (148, 35178), (150, 35184), (157, 35229), (158, 35232), (164, 35259), (187, 35319), (190, 35340), (215, 35418),

Gene: KingstonB\_62 Start: 38645, Stop: 39268, Start Num: 88

Candidate Starts for KingstonB\_62:

(Start: 88 @38645 has 4 MA's), (146, 38858), (148, 38864), (152, 38891), (229, 39167), (245, 39236), (246, 39242), (253, 39260),

Gene: KlimbOn\_36 Start: 34340, Stop: 34987, Start Num: 85

Candidate Starts for KlimbOn\_36:

(39, 34190), (67, 34301), (Start: 84 @34337 has 90 MA's), (Start: 85 @34340 has 172 MA's), (Start: 111 @34421 has 1 MA's), (146, 34556), (164, 34643), (181, 34688), (196, 34766), (214, 34817), (221, 34844), (223, 34862), (240, 34940), (249, 34973), (253, 34979),

Gene: KlimbOn\_37 Start: 34984, Stop: 35583, Start Num: 87

Candidate Starts for KlimbOn\_37:

(25, 34780), (32, 34804), (42, 34846), (47, 34864), (51, 34879), (Start: 87 @34984 has 415 MA's), (97, 35014), (102, 35026), (113, 35065), (118, 35080), (131, 35134), (144, 35179), (146, 35185), (148, 35191), (150, 35197), (157, 35242), (158, 35245), (164, 35272), (187, 35332), (190, 35353), (215, 35431),

Gene: Kloppinator\_37 Start: 35007, Stop: 35606, Start Num: 87

Candidate Starts for Kloppinator\_37:

(25, 34803), (32, 34827), (42, 34869), (47, 34887), (51, 34902), (Start: 87 @35007 has 415 MA's), (97, 35037), (102, 35049), (113, 35088), (118, 35103), (131, 35157), (144, 35202), (146, 35208), (148, 35214), (150, 35220), (157, 35265), (158, 35268), (164, 35295), (187, 35355), (190, 35376), (215, 35454),

Gene: Kloppinator\_36 Start: 34363, Stop: 35010, Start Num: 85

Candidate Starts for Kloppinator\_36:

(39, 34213), (67, 34324), (Start: 84 @34360 has 90 MA's), (Start: 85 @34363 has 172 MA's), (Start: 111 @34444 has 1 MA's), (146, 34579), (164, 34666), (181, 34711), (196, 34789), (214, 34840), (221, 34867), (223, 34885), (240, 34963), (249, 34996), (253, 35002),

Gene: Knocker\_38 Start: 36842, Stop: 37450, Start Num: 87

Candidate Starts for Knocker\_38:

(62, 36788), (Start: 87 @36842 has 415 MA's), (97, 36875), (114, 36929), (127, 36989), (131, 36995), (137, 37010), (146, 37046), (148, 37052), (149, 37055), (152, 37076), (154, 37082), (189, 37211), (215, 37292), (223, 37334), (232, 37379), (242, 37418), (245, 37427), (248, 37439),

Gene: Knocker\_37 Start: 36198, Stop: 36845, Start Num: 86

Candidate Starts for Knocker\_37:

(Start: 86 @36198 has 17 MA's), (110, 36273), (115, 36291), (117, 36297), (130, 36360), (137, 36378), (142, 36402), (146, 36414), (148, 36420), (179, 36546), (181, 36549), (223, 36720), (244, 36810), (251, 36834),

Gene: Kronus\_36 Start: 35509, Stop: 36108, Start Num: 87

Candidate Starts for Kronus\_36:

(Start: 87 @35509 has 415 MA's), (97, 35539), (108, 35566), (127, 35653), (131, 35659), (150, 35722), (154, 35746), (157, 35767), (187, 35857), (208, 35941), (213, 35953), (226, 36013), (242, 36073), (248, 36094),

Gene: Kronus\_35 Start: 34859, Stop: 35512, Start Num: 81

Candidate Starts for Kronus\_35:

(Start: 81 @34859 has 45 MA's), (108, 34940), (113, 34964), (145, 35087), (179, 35213), (186, 35228), (199, 35303), (241, 35468), (249, 35498),

Gene: Kwadwo\_35 Start: 34041, Stop: 34691, Start Num: 84

Candidate Starts for Kwadwo\_35:

(67, 34005), (Start: 84 @34041 has 90 MA's), (Start: 85 @34044 has 172 MA's), (Start: 111 @34125 has 1 MA's), (146, 34260), (164, 34347), (181, 34392), (196, 34470), (214, 34521), (221, 34548), (223, 34566), (240, 34644), (249, 34677), (253, 34683),

Gene: Kwadwo\_36 Start: 34688, Stop: 35287, Start Num: 87

Candidate Starts for Kwadwo\_36:

(25, 34484), (32, 34508), (42, 34550), (47, 34568), (51, 34583), (Start: 87 @34688 has 415 MA's), (97, 34718), (102, 34730), (113, 34769), (118, 34784), (131, 34838), (144, 34883), (146, 34889), (148, 34895), (150, 34901), (157, 34946), (158, 34949), (164, 34976), (187, 35036), (190, 35057), (215, 35135),

Gene: Kwksand96\_36 Start: 34557, Stop: 35156, Start Num: 87

Candidate Starts for Kwksand96\_36:

(24, 34350), (25, 34353), (32, 34377), (42, 34419), (47, 34437), (51, 34452), (Start: 87 @34557 has 415 MA's), (97, 34587), (102, 34599), (113, 34638), (118, 34653), (131, 34707), (144, 34752), (146, 34758), (148, 34764), (150, 34770), (157, 34815), (158, 34818), (164, 34845), (187, 34905), (190, 34926), (208, 34989), (215, 35004),

Gene: Kwksand96\_35 Start: 33913, Stop: 34560, Start Num: 85

Candidate Starts for Kwksand96\_35:

(67, 33874), (Start: 84 @33910 has 90 MA's), (Start: 85 @33913 has 172 MA's), (Start: 111 @33994 has 1 MA's), (146, 34129), (164, 34216), (181, 34261), (195, 34330), (196, 34339), (214, 34390), (223, 34435), (240, 34513), (249, 34546), (253, 34552),

Gene: Labeouficaum\_36 Start: 34552, Stop: 35151, Start Num: 87

Candidate Starts for Labeouficaum\_36:

(24, 34345), (25, 34348), (32, 34372), (42, 34414), (47, 34432), (51, 34447), (Start: 87 @34552 has 415 MA's), (97, 34582), (102, 34594), (113, 34633), (118, 34648), (131, 34702), (144, 34747), (146, 34753), (148, 34759), (150, 34765), (157, 34810), (158, 34813), (164, 34840), (187, 34900), (190, 34921), (208, 34984), (215, 34999),

Gene: Labeouficaum\_35 Start: 33908, Stop: 34555, Start Num: 85

Candidate Starts for Labeouficaum\_35:

(67, 33869), (Start: 84 @33905 has 90 MA's), (Start: 85 @33908 has 172 MA's), (Start: 111 @33989 has 1 MA's), (146, 34124), (164, 34211), (181, 34256), (195, 34325), (196, 34334), (214, 34385), (223, 34430), (240, 34508), (249, 34541), (253, 34547),

Gene: Lambano\_33 Start: 34162, Stop: 34767, Start Num: 87

Candidate Starts for Lambano\_33:

(Start: 87 @34162 has 415 MA's), (97, 34198), (113, 34249), (114, 34252), (127, 34312), (131, 34318), (144, 34363), (147, 34372), (148, 34375), (149, 34378), (154, 34405), (164, 34456), (188, 34522), (190, 34537), (208, 34600), (223, 34657), (243, 34735), (248, 34753),

Gene: Lambano\_32 Start: 33518, Stop: 34165, Start Num: 64

Candidate Starts for Lambano\_32:

(Start: 64 @33518 has 25 MA's), (100, 33596), (104, 33608), (122, 33680), (133, 33704), (139, 33725), (140, 33734), (141, 33737), (144, 33746), (145, 33749), (155, 33794), (166, 33848), (173, 33866), (190, 33926), (195, 33938), (215, 33998), (221, 34022), (223, 34040), (243, 34127), (251, 34154),

Gene: Lars\_36 Start: 34794, Stop: 35438, Start Num: 82

Candidate Starts for Lars\_36:

(34, 34629), (59, 34740), (Start: 82 @34794 has 44 MA's), (Start: 85 @34803 has 172 MA's), (108, 34872), (114, 34899), (117, 34908), (120, 34917), (146, 35025), (150, 35037), (177, 35130), (191, 35196), (196, 35217), (201, 35232), (203, 35238), (210, 35259), (216, 35271), (251, 35427),

Gene: Lars\_38 Start: 35584, Stop: 36183, Start Num: 87

Candidate Starts for Lars\_38:

(78, 35563), (Start: 87 @35584 has 415 MA's), (97, 35614), (105, 35635), (113, 35665), (114, 35668), (131, 35734), (146, 35785), (147, 35788), (148, 35791), (154, 35821), (157, 35842), (180, 35908), (188, 35938), (213, 36028), (215, 36031), (219, 36049), (222, 36064), (223, 36073), (240, 36142), (248, 36169),

Gene: LasagnaCat\_36 Start: 34346, Stop: 34993, Start Num: 85

Candidate Starts for LasagnaCat\_36:

(67, 34307), (Start: 84 @34343 has 90 MA's), (Start: 85 @34346 has 172 MA's), (Start: 111 @34427 has 1 MA's), (146, 34562), (164, 34649), (181, 34694), (195, 34763), (196, 34772), (214, 34823), (223, 34868), (240, 34946), (249, 34979), (253, 34985),

Gene: LasagnaCat\_37 Start: 34990, Stop: 35589, Start Num: 87

Candidate Starts for LasagnaCat\_37:

(24, 34783), (25, 34786), (32, 34810), (42, 34852), (47, 34870), (51, 34885), (Start: 87 @34990 has 415 MA's), (97, 35020), (102, 35032), (113, 35071), (118, 35086), (131, 35140), (144, 35185), (146, 35191), (148, 35197), (150, 35203), (157, 35248), (158, 35251), (164, 35278), (187, 35338), (190, 35359), (208, 35422), (215, 35437),

Gene: Lasso\_37 Start: 34963, Stop: 35562, Start Num: 87

Candidate Starts for Lasso\_37:

(25, 34759), (32, 34783), (42, 34825), (47, 34843), (51, 34858), (Start: 87 @34963 has 415 MA's), (97, 34993), (102, 35005), (113, 35044), (118, 35059), (131, 35113), (144, 35158), (146, 35164), (148, 35170), (150, 35176), (157, 35221), (158, 35224), (164, 35251), (187, 35311), (190, 35332), (215, 35410),

Gene: Lasso\_36 Start: 34316, Stop: 34966, Start Num: 84

Candidate Starts for Lasso\_36:

(67, 34280), (Start: 84 @34316 has 90 MA's), (Start: 85 @34319 has 172 MA's), (Start: 111 @34400 has 1 MA's), (146, 34535), (164, 34622), (181, 34667), (196, 34745), (214, 34796), (221, 34823), (223, 34841), (240, 34919), (249, 34952), (253, 34958),

Gene: Laurie\_37 Start: 34980, Stop: 35579, Start Num: 87

Candidate Starts for Laurie\_37:

(78, 34959), (Start: 87 @34980 has 415 MA's), (97, 35010), (105, 35031), (113, 35061), (114, 35064), (131, 35130), (146, 35181), (147, 35184), (148, 35187), (154, 35217), (157, 35238), (180, 35304), (188, 35334), (213, 35424), (215, 35427), (219, 35445), (223, 35469), (240, 35538), (248, 35565),

Gene: Laurie\_36 Start: 34190, Stop: 34834, Start Num: 82

Candidate Starts for Laurie\_36:

(21, 33989), (Start: 82 @34190 has 44 MA's), (Start: 85 @34199 has 172 MA's), (108, 34268), (114, 34295), (117, 34304), (142, 34409), (146, 34421), (150, 34433), (177, 34526), (191, 34592), (196, 34613), (201, 34628), (203, 34634), (210, 34655), (216, 34667), (251, 34823),

Gene: LeeLot\_37 Start: 34994, Stop: 35593, Start Num: 87

Candidate Starts for LeeLot\_37:

(25, 34790), (32, 34814), (42, 34856), (47, 34874), (51, 34889), (Start: 87 @34994 has 415 MA's), (97, 35024), (102, 35036), (113, 35075), (118, 35090), (131, 35144), (144, 35189), (146, 35195), (148, 35201), (150, 35207), (157, 35252), (158, 35255), (164, 35282), (187, 35342), (190, 35363), (215, 35441),

Gene: LeeLot\_36 Start: 34350, Stop: 34997, Start Num: 85

Candidate Starts for LeeLot\_36:

(67, 34311), (Start: 84 @34347 has 90 MA's), (Start: 85 @34350 has 172 MA's), (Start: 111 @34431 has 1 MA's), (146, 34566), (164, 34653), (181, 34698), (196, 34776), (214, 34827), (221, 34854), (223, 34872), (240, 34950), (249, 34983), (253, 34989),

Gene: Lego3393\_37 Start: 34999, Stop: 35598, Start Num: 87

Candidate Starts for Lego3393\_37:

(25, 34795), (32, 34819), (42, 34861), (47, 34879), (51, 34894), (Start: 87 @34999 has 415 MA's), (97, 35029), (102, 35041), (113, 35080), (118, 35095), (131, 35149), (144, 35194), (146, 35200), (148, 35206), (150, 35212), (157, 35257), (158, 35260), (164, 35287), (187, 35347), (190, 35368), (215, 35446),

Gene: Lego3393\_36 Start: 34355, Stop: 35002, Start Num: 85

Candidate Starts for Lego3393\_36:

(67, 34316), (Start: 84 @34352 has 90 MA's), (Start: 85 @34355 has 172 MA's), (Start: 111 @34436 has 1 MA's), (146, 34571), (164, 34658), (181, 34703), (196, 34781), (214, 34832), (221, 34859), (223, 34877), (240, 34955), (249, 34988), (253, 34994),

Gene: Legolas\_36 Start: 34704, Stop: 35303, Start Num: 87

Candidate Starts for Legolas\_36:

(25, 34500), (32, 34524), (42, 34566), (47, 34584), (51, 34599), (Start: 87 @34704 has 415 MA's), (97, 34734), (102, 34746), (113, 34785), (118, 34800), (131, 34854), (144, 34899), (146, 34905), (148, 34911), (150, 34917), (157, 34962), (158, 34965), (164, 34992), (187, 35052), (190, 35073), (215, 35151),

Gene: Legolas\_35 Start: 34060, Stop: 34707, Start Num: 85

Candidate Starts for Legolas\_35:

(67, 34021), (Start: 84 @34057 has 90 MA's), (Start: 85 @34060 has 172 MA's), (Start: 111 @34141 has 1 MA's), (146, 34276), (164, 34363), (181, 34408), (196, 34486), (214, 34537), (221, 34564), (223, 34582), (240, 34660), (249, 34693), (253, 34699),

Gene: LeiMonet\_37 Start: 34695, Stop: 35294, Start Num: 87

Candidate Starts for LeiMonet\_37:

(24, 34488), (25, 34491), (32, 34515), (42, 34557), (47, 34575), (51, 34590), (Start: 87 @34695 has 415 MA's), (97, 34725), (102, 34737), (113, 34776), (118, 34791), (131, 34845), (144, 34890), (146, 34896), (148, 34902), (150, 34908), (157, 34953), (158, 34956), (164, 34983), (187, 35043), (190, 35064), (215, 35142),

Gene: LeiMonet\_36 Start: 34051, Stop: 34698, Start Num: 85

Candidate Starts for LeiMonet\_36:

(67, 34012), (Start: 84 @34048 has 90 MA's), (Start: 85 @34051 has 172 MA's), (Start: 111 @34132 has 1 MA's), (146, 34267), (164, 34354), (181, 34399), (196, 34477), (214, 34528), (221, 34555), (223, 34573), (240, 34651), (249, 34684), (253, 34690),

Gene: LemonSlice\_37 Start: 34691, Stop: 35290, Start Num: 87

Candidate Starts for LemonSlice\_37:

(25, 34487), (32, 34511), (42, 34553), (47, 34571), (51, 34586), (Start: 87 @34691 has 415 MA's), (97, 34721), (102, 34733), (113, 34772), (118, 34787), (131, 34841), (144, 34886), (146, 34892), (148, 34898), (150, 34904), (157, 34949), (158, 34952), (164, 34979), (187, 35039), (190, 35060), (215, 35138),

Gene: LemonSlice\_36 Start: 34047, Stop: 34694, Start Num: 85

Candidate Starts for LemonSlice\_36:

(67, 34008), (Start: 84 @34044 has 90 MA's), (Start: 85 @34047 has 172 MA's), (Start: 111 @34128 has 1 MA's), (146, 34263), (164, 34350), (181, 34395), (196, 34473), (214, 34524), (221, 34551), (223, 34569), (240, 34647), (249, 34680), (253, 34686),

Gene: Lephleur\_36 Start: 34687, Stop: 35331, Start Num: 82

Candidate Starts for Lephleur\_36:

(34, 34522), (59, 34633), (Start: 82 @34687 has 44 MA's), (Start: 85 @34696 has 172 MA's), (108, 34765), (114, 34792), (117, 34801), (120, 34810), (146, 34918), (150, 34930), (177, 35023), (191, 35089), (196, 35110), (201, 35125), (203, 35131), (210, 35152), (216, 35164), (251, 35320),

Gene: Lephleur\_38 Start: 35477, Stop: 36076, Start Num: 87

Candidate Starts for Lephleur\_38:

(78, 35456), (Start: 87 @35477 has 415 MA's), (97, 35507), (105, 35528), (113, 35558), (114, 35561), (131, 35627), (146, 35678), (147, 35681), (148, 35684), (154, 35714), (157, 35735), (180, 35801), (188, 35831), (213, 35921), (215, 35924), (219, 35942), (223, 35966), (240, 36035), (248, 36062),

Gene: LestyG\_36 Start: 34280, Stop: 34933, Start Num: 81

Candidate Starts for LestyG\_36:

(Start: 81 @34280 has 45 MA's), (108, 34361), (113, 34385), (145, 34508), (179, 34634), (186, 34649), (199, 34724), (241, 34889), (242, 34892), (249, 34919),

Gene: LestyG\_37 Start: 34930, Stop: 35529, Start Num: 87

Candidate Starts for LestyG\_37:

(Start: 87 @34930 has 415 MA's), (97, 34960), (108, 34987), (127, 35074), (131, 35080), (150, 35143), (154, 35167), (157, 35188), (187, 35278), (208, 35362), (213, 35374), (226, 35434), (242, 35494), (248, 35515),

Gene: Ligma\_30 Start: 28099, Stop: 28731, Start Num: 87

Candidate Starts for Ligma\_30:

(32, 27922), (Start: 87 @28099 has 415 MA's), (97, 28132), (108, 28159), (131, 28252), (145, 28300), (148, 28309), (157, 28360), (178, 28423), (180, 28426), (195, 28489), (215, 28549), (217, 28558), (219, 28567), (245, 28705),

Gene: Ligma\_29 Start: 27488, Stop: 28102, Start Num: 91

Candidate Starts for Ligma\_29:

(43, 27338), (Start: 91 @27488 has 16 MA's), (96, 27503), (Start: 99 @27521 has 1 MA's), (110, 27557), (118, 27581), (124, 27620), (145, 27689), (146, 27692), (147, 27695), (177, 27797), (236, 28034), (240, 28055), (242, 28061), (251, 28091),

Gene: LilMcDreamy\_31 Start: 33700, Stop: 34323, Start Num: 90

Candidate Starts for LilMcDreamy\_31:

(Start: 90 @33700 has 1 MA's), (108, 33760), (110, 33775), (114, 33787), (142, 33904), (145, 33913), (148, 33922), (154, 33952), (177, 34021), (181, 34030), (205, 34138), (214, 34159), (244, 34291),

Gene: LilMcDreamy\_33 Start: 34699, Stop: 35310, Start Num: 87

Candidate Starts for LilMcDreamy\_33:

(Start: 87 @34699 has 415 MA's), (97, 34732), (108, 34759), (113, 34783), (127, 34846), (131, 34852), (146, 34903), (148, 34909), (157, 34960), (158, 34963), (190, 35071), (200, 35107), (206, 35128), (208, 35134), (215, 35149), (228, 35212), (248, 35296),

Gene: LittleMunchkin\_31 Start: 30916, Stop: 31530, Start Num: 91

Candidate Starts for LittleMunchkin\_31:

(Start: 91 @30916 has 16 MA's), (96, 30931), (Start: 99 @30949 has 1 MA's), (108, 30970), (110, 30985), (114, 30997), (137, 31084), (145, 31117), (146, 31120), (177, 31225), (181, 31234), (183, 31237), (187, 31258), (236, 31462), (240, 31483), (242, 31489), (251, 31519),

Gene: LittleMunchkin\_32 Start: 31527, Stop: 32156, Start Num: 87

Candidate Starts for LittleMunchkin\_32:

(Start: 87 @31527 has 415 MA's), (97, 31557), (108, 31584), (127, 31671), (131, 31677), (145, 31725), (157, 31785), (169, 31830), (178, 31848), (180, 31851), (197, 31926), (208, 31959), (217, 31983), (223, 32016), (245, 32130),

Gene: LizLemon\_36 Start: 34803, Stop: 35447, Start Num: 82

Candidate Starts for LizLemon\_36:

(34, 34638), (59, 34749), (Start: 82 @34803 has 44 MA's), (Start: 85 @34812 has 172 MA's), (108, 34881), (114, 34908), (117, 34917), (120, 34926), (142, 35022), (146, 35034), (150, 35046), (177, 35139), (191, 35205), (196, 35226), (201, 35241), (203, 35247), (210, 35268), (216, 35280), (251, 35436),

Gene: LizLemon\_38 Start: 35593, Stop: 36192, Start Num: 87

Candidate Starts for LizLemon\_38:

(78, 35572), (Start: 87 @35593 has 415 MA's), (97, 35623), (105, 35644), (113, 35674), (114, 35677), (131, 35743), (146, 35794), (147, 35797), (148, 35800), (154, 35830), (157, 35851), (180, 35917), (188, 35947), (213, 36037), (215, 36040), (219, 36058), (222, 36073), (223, 36082), (240, 36151), (248, 36178),

Gene: Lolalove\_34 Start: 35187, Stop: 35792, Start Num: 87

Candidate Starts for Lolalove\_34:

(Start: 87 @35187 has 415 MA's), (97, 35223), (113, 35274), (114, 35277), (127, 35337), (131, 35343), (144, 35388), (147, 35397), (148, 35400), (149, 35403), (154, 35430), (157, 35451), (164, 35481), (188, 35547), (190, 35562), (208, 35625), (223, 35682), (243, 35760), (248, 35778),

Gene: Lolalove\_33 Start: 34543, Stop: 35190, Start Num: 64

Candidate Starts for Lolalove\_33:

(Start: 64 @34543 has 25 MA's), (100, 34621), (104, 34633), (122, 34705), (133, 34729), (139, 34750), (140, 34759), (141, 34762), (144, 34771), (155, 34819), (166, 34873), (173, 34891), (190, 34951), (195, 34963), (215, 35023), (221, 35047), (223, 35065), (243, 35152), (251, 35179),

Gene: Longacauda\_36 Start: 34696, Stop: 35295, Start Num: 87

Candidate Starts for Longacauda\_36:

(24, 34489), (25, 34492), (32, 34516), (42, 34558), (47, 34576), (51, 34591), (Start: 87 @34696 has 415 MA's), (97, 34726), (102, 34738), (113, 34777), (118, 34792), (131, 34846), (144, 34891), (146,



34897), (148, 34903), (150, 34909), (157, 34954), (158, 34957), (164, 34984), (187, 35044), (190, 35065), (208, 35128), (215, 35143),

Gene: Longacauda\_35 Start: 34052, Stop: 34699, Start Num: 85

Candidate Starts for Longacauda\_35:

(67, 34013), (Start: 84 @34049 has 90 MA's), (Start: 85 @34052 has 172 MA's), (Start: 111 @34133 has 1 MA's), (146, 34268), (164, 34355), (181, 34400), (195, 34469), (196, 34478), (214, 34529), (223, 34574), (240, 34652), (249, 34685), (253, 34691),

Gene: Lopsy\_36 Start: 34546, Stop: 35145, Start Num: 87

Candidate Starts for Lopsy\_36:

(25, 34342), (32, 34366), (42, 34408), (47, 34426), (51, 34441), (Start: 87 @34546 has 415 MA's), (97, 34576), (102, 34588), (113, 34627), (118, 34642), (131, 34696), (144, 34741), (146, 34747), (148, 34753), (150, 34759), (157, 34804), (158, 34807), (164, 34834), (187, 34894), (190, 34915), (215, 34993),

Gene: Lopsy\_35 Start: 33902, Stop: 34549, Start Num: 85

Candidate Starts for Lopsy\_35:

(67, 33863), (Start: 84 @33899 has 90 MA's), (Start: 85 @33902 has 172 MA's), (Start: 111 @33983 has 1 MA's), (146, 34118), (164, 34205), (181, 34250), (196, 34328), (214, 34379), (221, 34406), (223, 34424), (240, 34502), (249, 34535), (253, 34541),

Gene: LostAndPhound\_35 Start: 34053, Stop: 34700, Start Num: 85

Candidate Starts for LostAndPhound\_35:

(67, 34014), (Start: 84 @34050 has 90 MA's), (Start: 85 @34053 has 172 MA's), (Start: 111 @34134 has 1 MA's), (146, 34269), (164, 34356), (181, 34401), (196, 34479), (214, 34530), (221, 34557), (223, 34575), (240, 34653), (249, 34686), (253, 34692),

Gene: LostAndPhound\_36 Start: 34697, Stop: 35296, Start Num: 87

Candidate Starts for LostAndPhound\_36:

(24, 34490), (25, 34493), (32, 34517), (42, 34559), (47, 34577), (51, 34592), (Start: 87 @34697 has 415 MA's), (97, 34727), (102, 34739), (113, 34778), (118, 34793), (131, 34847), (144, 34892), (146, 34898), (148, 34904), (150, 34910), (157, 34955), (158, 34958), (164, 34985), (187, 35045), (190, 35066), (215, 35144),

Gene: LuckyMarjie\_35 Start: 34059, Stop: 34709, Start Num: 84

Candidate Starts for LuckyMarjie\_35:

(67, 34023), (Start: 84 @34059 has 90 MA's), (Start: 85 @34062 has 172 MA's), (Start: 111 @34143 has 1 MA's), (146, 34278), (164, 34365), (181, 34410), (196, 34488), (214, 34539), (221, 34566), (223, 34584), (240, 34662), (249, 34695), (253, 34701),

Gene: LuckyMarjie\_36 Start: 34706, Stop: 35305, Start Num: 87

Candidate Starts for LuckyMarjie\_36:

(25, 34502), (32, 34526), (42, 34568), (47, 34586), (51, 34601), (Start: 87 @34706 has 415 MA's), (97, 34736), (102, 34748), (113, 34787), (118, 34802), (131, 34856), (144, 34901), (146, 34907), (148, 34913), (150, 34919), (157, 34964), (158, 34967), (164, 34994), (187, 35054), (190, 35075), (215, 35153),

Gene: Lulumae\_36 Start: 34688, Stop: 35287, Start Num: 87

Candidate Starts for Lulumae\_36:

(25, 34484), (32, 34508), (42, 34550), (47, 34568), (51, 34583), (Start: 87 @34688 has 415 MA's), (97, 34718), (102, 34730), (113, 34769), (118, 34784), (131, 34838), (144, 34883), (146, 34889), (148, 34895), (150, 34901), (157, 34946), (158, 34949), (164, 34976), (187, 35036), (190, 35057),

Gene: Lulumae\_35 Start: 34044, Stop: 34691, Start Num: 85

Candidate Starts for Lulumae\_35:

(39, 33894), (67, 34005), (Start: 84 @34041 has 90 MA's), (Start: 85 @34044 has 172 MA's), (Start: 111 @34125 has 1 MA's), (146, 34260), (164, 34347), (181, 34392), (196, 34470), (214, 34521), (221, 34548), (223, 34566), (240, 34644), (249, 34677), (253, 34683),

Gene: Lulwa\_36 Start: 34331, Stop: 34978, Start Num: 85

Candidate Starts for Lulwa\_36:

(39, 34181), (67, 34292), (Start: 84 @34328 has 90 MA's), (Start: 85 @34331 has 172 MA's), (Start: 111 @34412 has 1 MA's), (146, 34547), (164, 34634), (181, 34679), (196, 34757), (214, 34808), (221, 34835), (223, 34853), (240, 34931), (249, 34964), (253, 34970),

Gene: Lulwa\_37 Start: 34975, Stop: 35574, Start Num: 87

Candidate Starts for Lulwa\_37:

(25, 34771), (32, 34795), (42, 34837), (47, 34855), (51, 34870), (Start: 87 @34975 has 415 MA's), (97, 35005), (102, 35017), (113, 35056), (118, 35071), (131, 35125), (144, 35170), (146, 35176), (148, 35182), (150, 35188), (157, 35233), (158, 35236), (164, 35263), (187, 35323), (190, 35344), (215, 35422),

Gene: Lumine\_36 Start: 34684, Stop: 35283, Start Num: 87

Candidate Starts for Lumine\_36:

(25, 34480), (32, 34504), (42, 34546), (47, 34564), (51, 34579), (Start: 87 @34684 has 415 MA's), (97, 34714), (102, 34726), (113, 34765), (118, 34780), (131, 34834), (144, 34879), (146, 34885), (148, 34891), (150, 34897), (157, 34942), (158, 34945), (164, 34972), (187, 35032), (190, 35053), (215, 35131),

Gene: Lumine\_35 Start: 34040, Stop: 34687, Start Num: 85

Candidate Starts for Lumine\_35:

(67, 34001), (Start: 84 @34037 has 90 MA's), (Start: 85 @34040 has 172 MA's), (Start: 111 @34121 has 1 MA's), (146, 34256), (164, 34343), (181, 34388), (196, 34466), (214, 34517), (221, 34544), (223, 34562), (240, 34640), (249, 34673), (253, 34679),

Gene: MRabcd\_35 Start: 34044, Stop: 34691, Start Num: 85

Candidate Starts for MRabcd\_35:

(67, 34005), (Start: 84 @34041 has 90 MA's), (Start: 85 @34044 has 172 MA's), (Start: 111 @34125 has 1 MA's), (146, 34260), (164, 34347), (181, 34392), (196, 34470), (214, 34521), (221, 34548), (223, 34566), (240, 34644), (249, 34677), (253, 34683),

Gene: MRabcd\_36 Start: 34688, Stop: 35287, Start Num: 87

Candidate Starts for MRabcd\_36:

(24, 34481), (25, 34484), (32, 34508), (42, 34550), (47, 34568), (51, 34583), (Start: 87 @34688 has 415 MA's), (97, 34718), (102, 34730), (113, 34769), (118, 34784), (131, 34838), (144, 34883), (146, 34889), (148, 34895), (150, 34901), (157, 34946), (158, 34949), (164, 34976), (187, 35036), (190, 35057), (215, 35135),

Gene: Mag7\_36 Start: 34594, Stop: 35193, Start Num: 87

Candidate Starts for Mag7\_36:

(24, 34387), (25, 34390), (32, 34414), (42, 34456), (47, 34474), (51, 34489), (Start: 87 @34594 has 415 MA's), (97, 34624), (102, 34636), (113, 34675), (118, 34690), (131, 34744), (144, 34789), (146, 34795), (148, 34801), (150, 34807), (157, 34852), (158, 34855), (164, 34882), (187, 34942), (190, 34963), (208, 35026), (215, 35041),

Gene: Mag7\_35 Start: 33950, Stop: 34597, Start Num: 85

Candidate Starts for Mag7\_35:

(67, 33911), (Start: 84 @33947 has 90 MA's), (Start: 85 @33950 has 172 MA's), (Start: 111 @34031 has 1 MA's), (146, 34166), (164, 34253), (181, 34298), (195, 34367), (196, 34376), (214, 34427), (223, 34472), (240, 34550), (249, 34583), (253, 34589),

Gene: Magic8\_37 Start: 35029, Stop: 35628, Start Num: 87

Candidate Starts for Magic8\_37:

(25, 34825), (32, 34849), (42, 34891), (47, 34909), (51, 34924), (Start: 87 @35029 has 415 MA's), (97, 35059), (102, 35071), (113, 35110), (118, 35125), (131, 35179), (144, 35224), (146, 35230), (148, 35236), (150, 35242), (157, 35287), (158, 35290), (164, 35317), (187, 35377), (190, 35398), (208, 35461), (215, 35476),

Gene: Magic8\_36 Start: 34382, Stop: 35032, Start Num: 84

Candidate Starts for Magic8\_36:

(67, 34346), (Start: 84 @34382 has 90 MA's), (Start: 85 @34385 has 172 MA's), (Start: 111 @34466 has 1 MA's), (146, 34601), (164, 34688), (181, 34733), (196, 34811), (214, 34862), (221, 34889), (223, 34907), (240, 34985), (249, 35018), (253, 35024),

Gene: Magpie\_32 Start: 34379, Stop: 35026, Start Num: 64

Candidate Starts for Magpie\_32:

(Start: 64 @34379 has 25 MA's), (100, 34457), (104, 34469), (122, 34541), (133, 34565), (140, 34595), (141, 34598), (144, 34607), (155, 34655), (166, 34709), (173, 34727), (190, 34787), (195, 34799), (215, 34859), (221, 34883), (223, 34901), (243, 34988), (244, 34991), (251, 35015),

Gene: Magpie\_33 Start: 35023, Stop: 35628, Start Num: 87

Candidate Starts for Magpie\_33:

(Start: 87 @35023 has 415 MA's), (97, 35059), (108, 35086), (113, 35110), (114, 35113), (127, 35173), (131, 35179), (144, 35224), (147, 35233), (148, 35236), (149, 35239), (154, 35266), (157, 35287), (164, 35317), (188, 35383), (190, 35398), (208, 35461), (223, 35518), (243, 35596), (248, 35614),

Gene: MakoManhole\_31 Start: 29477, Stop: 30088, Start Num: 93

Candidate Starts for MakoManhole\_31:

(Start: 91 @29474 has 16 MA's), (Start: 93 @29477 has 4 MA's), (108, 29528), (110, 29543), (115, 29558), (118, 29567), (124, 29606), (132, 29627), (137, 29642), (145, 29675), (154, 29714), (155, 29717), (157, 29735), (179, 29789), (242, 30047), (251, 30077),

Gene: MakoManhole\_32 Start: 30085, Stop: 30681, Start Num: 87

Candidate Starts for MakoManhole\_32:

(32, 29908), (42, 29947), (44, 29956), (59, 30019), (62, 30031), (Start: 87 @30085 has 415 MA's), (97, 30115), (127, 30229), (131, 30235), (146, 30286), (148, 30292), (157, 30343), (158, 30346), (180, 30409), (186, 30421), (187, 30433), (197, 30484), (207, 30514), (215, 30532), (217, 30541), (248, 30667),

Gene: Mana\_35 Start: 34056, Stop: 34706, Start Num: 84

Candidate Starts for Mana\_35:

(67, 34020), (Start: 84 @34056 has 90 MA's), (Start: 85 @34059 has 172 MA's), (Start: 111 @34140 has 1 MA's), (146, 34275), (164, 34362), (181, 34407), (196, 34485), (214, 34536), (221, 34563), (223, 34581), (240, 34659), (249, 34692), (253, 34698),

Gene: Mana\_36 Start: 34703, Stop: 35302, Start Num: 87

Candidate Starts for Mana\_36:

(25, 34499), (32, 34523), (42, 34565), (47, 34583), (51, 34598), (Start: 87 @34703 has 415 MA's), (97, 34733), (102, 34745), (113, 34784), (118, 34799), (131, 34853), (144, 34898), (146, 34904), (148, 34910), (150, 34916), (157, 34961), (158, 34964), (164, 34991), (187, 35051), (190, 35072), (215, 35150),

Gene: Manad\_35 Start: 33898, Stop: 34548, Start Num: 84

Candidate Starts for Manad\_35:

(39, 33751), (67, 33862), (Start: 84 @33898 has 90 MA's), (Start: 85 @33901 has 172 MA's), (Start: 111 @33982 has 1 MA's), (146, 34117), (164, 34204), (181, 34249), (196, 34327), (214, 34378), (221, 34405), (223, 34423), (240, 34501), (249, 34534), (253, 34540),

Gene: Manad\_36 Start: 34545, Stop: 35144, Start Num: 87

Candidate Starts for Manad\_36:

(25, 34341), (32, 34365), (42, 34407), (47, 34425), (51, 34440), (Start: 87 @34545 has 415 MA's), (97, 34575), (102, 34587), (113, 34626), (118, 34641), (131, 34695), (144, 34740), (146, 34746), (148, 34752), (150, 34758), (157, 34803), (158, 34806), (164, 34833), (187, 34893), (190, 34914), (215, 34992),

Gene: Mao1\_30 Start: 30794, Stop: 31438, Start Num: 82

Candidate Starts for Mao1\_30:

(20, 30554), (59, 30728), (Start: 82 @30794 has 44 MA's), (105, 30866), (114, 30899), (117, 30908), (122, 30941), (125, 30959), (132, 30974), (142, 31013), (150, 31037), (157, 31082), (177, 31130), (179, 31136), (195, 31208), (196, 31217), (199, 31226), (210, 31259), (223, 31313), (249, 31424), (251, 31427),

Gene: Mao1\_31 Start: 31435, Stop: 32034, Start Num: 87

Candidate Starts for Mao1\_31:

(42, 31297), (47, 31315), (70, 31399), (Start: 87 @31435 has 415 MA's), (Start: 95 @31447 has 2 MA's), (97, 31465), (108, 31492), (127, 31579), (146, 31636), (148, 31642), (194, 31819), (208, 31867), (244, 32005), (248, 32020),

Gene: Mariokart\_30 Start: 28038, Stop: 28670, Start Num: 87

Candidate Starts for Mariokart\_30:

(2, 27489), (22, 27828), (32, 27861), (Start: 87 @28038 has 415 MA's), (97, 28071), (108, 28098), (121, 28164), (127, 28185), (131, 28191), (157, 28299), (180, 28365), (208, 28473), (217, 28497), (219, 28506), (222, 28521), (223, 28530),

Gene: Mariokart\_29 Start: 27427, Stop: 28041, Start Num: 91

Candidate Starts for Mariokart\_29:

(Start: 91 @27427 has 16 MA's), (Start: 99 @27460 has 1 MA's), (110, 27496), (118, 27520), (124, 27559), (145, 27628), (146, 27631), (155, 27670), (157, 27688), (164, 27718), (177, 27736), (183, 27748), (242, 28000), (251, 28030),

Gene: Marley1013\_37 Start: 35708, Stop: 36307, Start Num: 87

Candidate Starts for Marley1013\_37:

(Start: 87 @35708 has 415 MA's), (97, 35738), (108, 35765), (127, 35852), (131, 35858), (150, 35921), (154, 35945), (157, 35966), (187, 36056), (208, 36140), (213, 36152), (226, 36212), (242, 36272), (248, 36293),

Gene: Marley1013\_36 Start: 35058, Stop: 35711, Start Num: 81

Candidate Starts for Marley1013\_36:

(Start: 81 @35058 has 45 MA's), (108, 35139), (145, 35286), (179, 35412), (186, 35427), (199, 35502), (241, 35667), (249, 35697),

Gene: Maru\_35 Start: 34002, Stop: 34649, Start Num: 85

Candidate Starts for Maru\_35:

(67, 33963), (Start: 84 @33999 has 90 MA's), (Start: 85 @34002 has 172 MA's), (Start: 111 @34083 has 1 MA's), (146, 34218), (164, 34305), (181, 34350), (196, 34428), (214, 34479), (221, 34506), (223, 34524), (240, 34602), (249, 34635), (253, 34641),

Gene: Maru\_36 Start: 34646, Stop: 35245, Start Num: 87

Candidate Starts for Maru\_36:

(25, 34442), (32, 34466), (42, 34508), (47, 34526), (51, 34541), (Start: 87 @34646 has 415 MA's), (97, 34676), (102, 34688), (113, 34727), (118, 34742), (131, 34796), (144, 34841), (146, 34847), (148, 34853), (150, 34859), (157, 34904), (158, 34907), (164, 34934), (187, 34994), (190, 35015), (215, 35093),

Gene: Mask\_32 Start: 31428, Stop: 32027, Start Num: 87

Candidate Starts for Mask\_32:

(62, 31374), (70, 31392), (Start: 87 @31428 has 415 MA's), (Start: 95 @31440 has 2 MA's), (97, 31458), (108, 31485), (113, 31509), (114, 31512), (127, 31572), (146, 31629), (148, 31635), (194, 31812), (208, 31860), (244, 31998), (248, 32013),

Gene: Mask\_31 Start: 30787, Stop: 31431, Start Num: 82

Candidate Starts for Mask\_31:

(20, 30547), (59, 30721), (Start: 82 @30787 has 44 MA's), (117, 30901), (122, 30934), (125, 30952), (132, 30967), (142, 31006), (150, 31030), (157, 31075), (159, 31081), (177, 31123), (179, 31129), (195, 31201), (196, 31210), (199, 31219), (210, 31252), (223, 31306), (249, 31417), (251, 31420),

Gene: Maskar\_36 Start: 34543, Stop: 35142, Start Num: 87

Candidate Starts for Maskar\_36:

(24, 34336), (25, 34339), (32, 34363), (42, 34405), (47, 34423), (51, 34438), (Start: 87 @34543 has 415 MA's), (97, 34573), (102, 34585), (113, 34624), (118, 34639), (131, 34693), (144, 34738), (146, 34744), (148, 34750), (150, 34756), (157, 34801), (158, 34804), (164, 34831), (187, 34891), (190, 34912), (208, 34975), (215, 34990),

Gene: Maskar\_35 Start: 33899, Stop: 34546, Start Num: 85

Candidate Starts for Maskar\_35:

(67, 33860), (Start: 84 @33896 has 90 MA's), (Start: 85 @33899 has 172 MA's), (Start: 111 @33980 has 1 MA's), (146, 34115), (164, 34202), (181, 34247), (195, 34316), (196, 34325), (214, 34376), (223, 34421), (240, 34499), (249, 34532), (253, 34538),

Gene: MasterPo\_36 Start: 34690, Stop: 35334, Start Num: 82

Candidate Starts for MasterPo\_36:

(34, 34525), (59, 34636), (Start: 82 @34690 has 44 MA's), (Start: 85 @34699 has 172 MA's), (108, 34768), (114, 34795), (117, 34804), (146, 34921), (150, 34933), (177, 35026), (191, 35092), (196, 35113), (201, 35128), (203, 35134), (210, 35155), (216, 35167), (251, 35323),

Gene: MasterPo\_38 Start: 35480, Stop: 36079, Start Num: 87

Candidate Starts for MasterPo\_38:

(78, 35459), (Start: 87 @35480 has 415 MA's), (97, 35510), (105, 35531), (113, 35561), (114, 35564), (131, 35630), (146, 35681), (147, 35684), (148, 35687), (154, 35717), (157, 35738), (180, 35804), (188, 35834), (213, 35924), (215, 35927), (219, 35945), (223, 35969), (240, 36038), (248, 36065),

Gene: Matalotodo\_36 Start: 34345, Stop: 34992, Start Num: 85

Candidate Starts for Matalotodo\_36:

(67, 34306), (Start: 84 @34342 has 90 MA's), (Start: 85 @34345 has 172 MA's), (Start: 111 @34426 has 1 MA's), (146, 34561), (164, 34648), (181, 34693), (196, 34771), (214, 34822), (221, 34849), (223, 34867), (240, 34945), (249, 34978), (253, 34984),

Gene: Matalotodo\_37 Start: 34989, Stop: 35588, Start Num: 87

Candidate Starts for Matalotodo\_37:

(25, 34785), (32, 34809), (42, 34851), (47, 34869), (51, 34884), (Start: 87 @34989 has 415 MA's), (97, 35019), (102, 35031), (113, 35070), (118, 35085), (131, 35139), (144, 35184), (146, 35190), (148, 35196), (150, 35202), (157, 35247), (158, 35250), (164, 35277), (187, 35337), (190, 35358), (215, 35436),

Gene: Mcshane\_35 Start: 34042, Stop: 34689, Start Num: 85

Candidate Starts for Mcshane\_35:

(67, 34003), (Start: 84 @34039 has 90 MA's), (Start: 85 @34042 has 172 MA's), (Start: 111 @34123 has 1 MA's), (146, 34258), (164, 34345), (181, 34390), (196, 34468), (214, 34519), (221, 34546), (223, 34564), (240, 34642), (249, 34675), (253, 34681),

Gene: Mcshane\_36 Start: 34686, Stop: 35285, Start Num: 87

Candidate Starts for Mcshane\_36:

(25, 34482), (32, 34506), (42, 34548), (47, 34566), (51, 34581), (Start: 87 @34686 has 415 MA's), (97, 34716), (102, 34728), (113, 34767), (118, 34782), (131, 34836), (144, 34881), (146, 34887), (148, 34893), (150, 34899), (157, 34944), (158, 34947), (164, 34974), (187, 35034), (190, 35055), (215, 35133),

Gene: Mecca\_36 Start: 34689, Stop: 35288, Start Num: 87

Candidate Starts for Mecca\_36:

(25, 34485), (32, 34509), (42, 34551), (47, 34569), (51, 34584), (Start: 87 @34689 has 415 MA's), (97, 34719), (102, 34731), (113, 34770), (118, 34785), (131, 34839), (144, 34884), (146, 34890), (148, 34896), (150, 34902), (157, 34947), (158, 34950), (164, 34977), (187, 35037), (190, 35058), (215, 35136),

Gene: Mecca\_35 Start: 34045, Stop: 34692, Start Num: 85

Candidate Starts for Mecca\_35:

(67, 34006), (Start: 84 @34042 has 90 MA's), (Start: 85 @34045 has 172 MA's), (Start: 111 @34126 has 1 MA's), (146, 34261), (164, 34348), (181, 34393), (196, 34471), (214, 34522), (221, 34549), (223, 34567), (240, 34645), (249, 34678), (253, 34684),

Gene: Megabear\_28 Start: 31380, Stop: 32024, Start Num: 82

Candidate Starts for Megabear\_28:

(Start: 82 @31380 has 44 MA's), (89, 31398), (107, 31455), (117, 31494), (120, 31503), (132, 31560), (146, 31611), (148, 31617), (150, 31623), (165, 31698), (181, 31725), (191, 31782), (195, 31794), (203, 31824), (223, 31899), (239, 31971),

Gene: Megabear\_30 Start: 32174, Stop: 32773, Start Num: 87

Candidate Starts for Megabear\_30:

(Start: 87 @32174 has 415 MA's), (97, 32204), (105, 32225), (108, 32231), (127, 32318), (131, 32324), (146, 32375), (150, 32387), (154, 32411), (157, 32432), (161, 32450), (167, 32468), (178, 32495), (221, 32645), (223, 32663), (242, 32738), (248, 32759),

Gene: Megamind20\_37 Start: 34711, Stop: 35310, Start Num: 87

Candidate Starts for Megamind20\_37:

(25, 34507), (32, 34531), (42, 34573), (47, 34591), (51, 34606), (Start: 87 @34711 has 415 MA's), (97, 34741), (102, 34753), (113, 34792), (118, 34807), (131, 34861), (144, 34906), (146, 34912), (148,

34918), (150, 34924), (157, 34969), (158, 34972), (164, 34999), (187, 35059), (190, 35080),

Gene: Megamind20\_36 Start: 34067, Stop: 34714, Start Num: 85

Candidate Starts for Megamind20\_36:

(39, 33917), (67, 34028), (Start: 84 @34064 has 90 MA's), (Start: 85 @34067 has 172 MA's), (Start: 111 @34148 has 1 MA's), (146, 34283), (164, 34370), (181, 34415), (196, 34493), (214, 34544), (221, 34571), (223, 34589), (240, 34667), (249, 34700), (253, 34706),

Gene: Megatron\_37 Start: 34987, Stop: 35586, Start Num: 87

Candidate Starts for Megatron\_37:

(25, 34783), (32, 34807), (42, 34849), (47, 34867), (51, 34882), (Start: 87 @34987 has 415 MA's), (97, 35017), (102, 35029), (113, 35068), (118, 35083), (131, 35137), (144, 35182), (146, 35188), (148, 35194), (150, 35200), (157, 35245), (158, 35248), (164, 35275), (187, 35335), (190, 35356), (215, 35434),

Gene: Megatron\_36 Start: 34340, Stop: 34990, Start Num: 84

Candidate Starts for Megatron\_36:

(67, 34304), (Start: 84 @34340 has 90 MA's), (Start: 85 @34343 has 172 MA's), (Start: 111 @34424 has 1 MA's), (146, 34559), (164, 34646), (181, 34691), (196, 34769), (214, 34820), (221, 34847), (223, 34865), (240, 34943), (249, 34976), (253, 34982),

Gene: Melc17\_37 Start: 34984, Stop: 35583, Start Num: 87

Candidate Starts for Melc17\_37:

(24, 34777), (25, 34780), (32, 34804), (42, 34846), (47, 34864), (51, 34879), (Start: 87 @34984 has 415 MA's), (97, 35014), (102, 35026), (113, 35065), (118, 35080), (131, 35134), (144, 35179), (146, 35185), (148, 35191), (150, 35197), (157, 35242), (158, 35245), (164, 35272), (190, 35353), (208, 35416), (215, 35431),

Gene: Melc17\_36 Start: 34340, Stop: 34987, Start Num: 85

Candidate Starts for Melc17\_36:

(67, 34301), (Start: 84 @34337 has 90 MA's), (Start: 85 @34340 has 172 MA's), (Start: 111 @34421 has 1 MA's), (146, 34556), (164, 34643), (181, 34688), (195, 34757), (196, 34766), (214, 34817), (223, 34862), (240, 34940), (249, 34973), (253, 34979),

Gene: MelsMeow\_35 Start: 33948, Stop: 34595, Start Num: 85

Candidate Starts for MelsMeow\_35:

(67, 33909), (Start: 84 @33945 has 90 MA's), (Start: 85 @33948 has 172 MA's), (Start: 111 @34029 has 1 MA's), (146, 34164), (164, 34251), (181, 34296), (195, 34365), (196, 34374), (214, 34425), (223, 34470), (240, 34548), (249, 34581), (253, 34587),

Gene: MelsMeow\_36 Start: 34592, Stop: 35191, Start Num: 87

Candidate Starts for MelsMeow\_36:

(24, 34385), (25, 34388), (32, 34412), (42, 34454), (47, 34472), (51, 34487), (Start: 87 @34592 has 415 MA's), (97, 34622), (102, 34634), (113, 34673), (118, 34688), (131, 34742), (144, 34787), (146, 34793), (148, 34799), (150, 34805), (157, 34850), (158, 34853), (164, 34880), (190, 34961), (208, 35024), (215, 35039),

Gene: Mesh1\_36 Start: 34354, Stop: 35004, Start Num: 84

Candidate Starts for Mesh1\_36:

(67, 34318), (Start: 84 @34354 has 90 MA's), (Start: 85 @34357 has 172 MA's), (Start: 111 @34438 has 1 MA's), (146, 34573), (164, 34660), (181, 34705), (196, 34783), (214, 34834), (221, 34861), (223, 34879), (240, 34957), (249, 34990), (253, 34996),

Gene: Mesh1\_37 Start: 35001, Stop: 35600, Start Num: 87

Candidate Starts for Mesh1\_37:

(25, 34797), (32, 34821), (42, 34863), (47, 34881), (51, 34896), (Start: 87 @35001 has 415 MA's), (97, 35031), (102, 35043), (113, 35082), (118, 35097), (131, 35151), (144, 35196), (146, 35202), (148, 35208), (150, 35214), (157, 35259), (158, 35262), (164, 35289), (187, 35349), (190, 35370), (215, 35448),

Gene: MichaelPhcott\_36 Start: 34591, Stop: 35190, Start Num: 87

Candidate Starts for MichaelPhcott\_36:

(24, 34384), (25, 34387), (32, 34411), (42, 34453), (47, 34471), (51, 34486), (Start: 87 @34591 has 415 MA's), (97, 34621), (102, 34633), (113, 34672), (118, 34687), (131, 34741), (144, 34786), (146, 34792), (148, 34798), (150, 34804), (157, 34849), (158, 34852), (164, 34879), (187, 34939), (190, 34960), (208, 35023), (215, 35038),

Gene: MichaelPhcott\_35 Start: 33944, Stop: 34594, Start Num: 84

Candidate Starts for MichaelPhcott\_35:

(67, 33908), (Start: 84 @33944 has 90 MA's), (Start: 85 @33947 has 172 MA's), (Start: 111 @34028 has 1 MA's), (146, 34163), (164, 34250), (181, 34295), (195, 34364), (196, 34373), (214, 34424), (223, 34469), (240, 34547), (249, 34580), (253, 34586),

Gene: Mikota\_37 Start: 34974, Stop: 35573, Start Num: 87

Candidate Starts for Mikota\_37:

(25, 34770), (32, 34794), (42, 34836), (47, 34854), (51, 34869), (Start: 87 @34974 has 415 MA's), (97, 35004), (102, 35016), (113, 35055), (118, 35070), (119, 35073), (131, 35124), (144, 35169), (146, 35175), (148, 35181), (150, 35187), (157, 35232), (158, 35235), (164, 35262), (187, 35322), (190, 35343), (215, 35421),

Gene: Mikota\_36 Start: 34330, Stop: 34977, Start Num: 85

Candidate Starts for Mikota\_36:

(39, 34180), (67, 34291), (Start: 84 @34327 has 90 MA's), (Start: 85 @34330 has 172 MA's), (Start: 111 @34411 has 1 MA's), (146, 34546), (164, 34633), (181, 34678), (196, 34756), (214, 34807), (221, 34834), (223, 34852), (240, 34930), (249, 34963), (253, 34969),

Gene: MiniBoss\_36 Start: 34336, Stop: 34983, Start Num: 85

Candidate Starts for MiniBoss\_36:

(39, 34186), (67, 34297), (Start: 84 @34333 has 90 MA's), (Start: 85 @34336 has 172 MA's), (Start: 111 @34417 has 1 MA's), (146, 34552), (164, 34639), (181, 34684), (196, 34762), (214, 34813), (221, 34840), (223, 34858), (240, 34936), (249, 34969), (253, 34975),

Gene: MiniBoss\_37 Start: 34980, Stop: 35579, Start Num: 87

Candidate Starts for MiniBoss\_37:

(25, 34776), (32, 34800), (42, 34842), (47, 34860), (51, 34875), (Start: 87 @34980 has 415 MA's), (97, 35010), (102, 35022), (113, 35061), (118, 35076), (119, 35079), (131, 35130), (144, 35175), (146, 35181), (148, 35187), (150, 35193), (157, 35238), (158, 35241), (164, 35268), (187, 35328), (190, 35349), (215, 35427),

Gene: MitKao\_36 Start: 34048, Stop: 34698, Start Num: 84

Candidate Starts for MitKao\_36:

(67, 34012), (Start: 84 @34048 has 90 MA's), (Start: 85 @34051 has 172 MA's), (Start: 111 @34132 has 1 MA's), (146, 34267), (164, 34354), (181, 34399), (196, 34477), (214, 34528), (221, 34555), (223, 34573), (240, 34651), (249, 34684), (253, 34690),

Gene: MitKao\_37 Start: 34695, Stop: 35294, Start Num: 87



Candidate Starts for MitKao\_37:

(24, 34488), (25, 34491), (32, 34515), (42, 34557), (47, 34575), (51, 34590), (Start: 87 @34695 has 415 MA's), (97, 34725), (102, 34737), (113, 34776), (118, 34791), (131, 34845), (144, 34890), (146, 34896), (148, 34902), (150, 34908), (157, 34953), (158, 34956), (164, 34983), (187, 35043), (190, 35064), (215, 35142),

Gene: Mithril\_33 Start: 34547, Stop: 35194, Start Num: 64

Candidate Starts for Mithril\_33:

(Start: 64 @34547 has 25 MA's), (100, 34625), (104, 34637), (122, 34709), (140, 34763), (141, 34766), (144, 34775), (155, 34823), (166, 34877), (173, 34895), (190, 34955), (195, 34967), (221, 35051), (223, 35069), (243, 35156), (244, 35159), (251, 35183),

Gene: Mithril\_34 Start: 35191, Stop: 35796, Start Num: 87

Candidate Starts for Mithril\_34:

(Start: 87 @35191 has 415 MA's), (97, 35227), (108, 35254), (113, 35278), (114, 35281), (127, 35341), (131, 35347), (144, 35392), (147, 35401), (148, 35404), (149, 35407), (154, 35434), (157, 35455), (164, 35485), (188, 35551), (190, 35566), (208, 35629), (223, 35686), (243, 35764), (248, 35782),

Gene: MmasiCarm\_37 Start: 34912, Stop: 35511, Start Num: 87

Candidate Starts for MmasiCarm\_37:

(Start: 87 @34912 has 415 MA's), (97, 34942), (108, 34969), (127, 35056), (131, 35062), (150, 35125), (154, 35149), (157, 35170), (187, 35260), (208, 35344), (213, 35356), (226, 35416), (242, 35476), (248, 35497),

Gene: MmasiCarm\_36 Start: 34262, Stop: 34915, Start Num: 81

Candidate Starts for MmasiCarm\_36:

(Start: 81 @34262 has 45 MA's), (108, 34343), (145, 34490), (179, 34616), (186, 34631), (199, 34706), (241, 34871), (242, 34874), (249, 34901),

Gene: Morgushi\_36 Start: 34052, Stop: 34699, Start Num: 85

Candidate Starts for Morgushi\_36:

(67, 34013), (Start: 84 @34049 has 90 MA's), (Start: 85 @34052 has 172 MA's), (Start: 111 @34133 has 1 MA's), (146, 34268), (164, 34355), (181, 34400), (196, 34478), (214, 34529), (221, 34556), (223, 34574), (240, 34652), (249, 34685), (253, 34691),

Gene: Morgushi\_37 Start: 34696, Stop: 35295, Start Num: 87

Candidate Starts for Morgushi\_37:

(25, 34492), (32, 34516), (42, 34558), (47, 34576), (51, 34591), (Start: 87 @34696 has 415 MA's), (97, 34726), (102, 34738), (113, 34777), (118, 34792), (131, 34846), (144, 34891), (146, 34897), (148, 34903), (150, 34909), (157, 34954), (158, 34957), (164, 34984), (187, 35044), (190, 35065), (215, 35143),

Gene: Mortcellus\_36 Start: 35564, Stop: 36163, Start Num: 87

Candidate Starts for Mortcellus\_36:

(Start: 87 @35564 has 415 MA's), (97, 35594), (108, 35621), (127, 35708), (131, 35714), (150, 35777), (154, 35801), (157, 35822), (187, 35912), (208, 35996), (213, 36008), (226, 36068), (242, 36128), (248, 36149),

Gene: Mortcellus\_35 Start: 34914, Stop: 35567, Start Num: 81

Candidate Starts for Mortcellus\_35:

(Start: 81 @34914 has 45 MA's), (108, 34995), (113, 35019), (145, 35142), (179, 35268), (186, 35283), (199, 35358), (241, 35523), (249, 35553),

Gene: Morty\_37 Start: 34996, Stop: 35595, Start Num: 87

Candidate Starts for Morty\_37:

(25, 34792), (32, 34816), (42, 34858), (47, 34876), (51, 34891), (Start: 87 @34996 has 415 MA's), (97, 35026), (102, 35038), (113, 35077), (118, 35092), (131, 35146), (144, 35191), (146, 35197), (148, 35203), (150, 35209), (157, 35254), (158, 35257), (164, 35284), (187, 35344), (190, 35365), (215, 35443),

Gene: Morty\_36 Start: 34352, Stop: 34999, Start Num: 85

Candidate Starts for Morty\_36:

(67, 34313), (Start: 84 @34349 has 90 MA's), (Start: 85 @34352 has 172 MA's), (Start: 111 @34433 has 1 MA's), (146, 34568), (164, 34655), (181, 34700), (196, 34778), (214, 34829), (221, 34856), (223, 34874), (240, 34952), (249, 34985), (253, 34991),

Gene: Morty007\_36 Start: 35058, Stop: 35711, Start Num: 81

Candidate Starts for Morty007\_36:

(Start: 81 @35058 has 45 MA's), (108, 35139), (145, 35286), (179, 35412), (186, 35427), (199, 35502), (241, 35667), (249, 35697),

Gene: Morty007\_37 Start: 35708, Stop: 36307, Start Num: 87

Candidate Starts for Morty007\_37:

(Start: 87 @35708 has 415 MA's), (97, 35738), (108, 35765), (127, 35852), (131, 35858), (150, 35921), (154, 35945), (157, 35966), (187, 36056), (208, 36140), (213, 36152), (226, 36212), (242, 36272), (248, 36293),

Gene: Mosaic\_35 Start: 34054, Stop: 34704, Start Num: 84

Candidate Starts for Mosaic\_35:

(67, 34018), (Start: 84 @34054 has 90 MA's), (Start: 85 @34057 has 172 MA's), (Start: 111 @34138 has 1 MA's), (146, 34273), (164, 34360), (181, 34405), (196, 34483), (214, 34534), (221, 34561), (223, 34579), (240, 34657), (249, 34690), (253, 34696),

Gene: Mosaic\_36 Start: 34701, Stop: 35300, Start Num: 87

Candidate Starts for Mosaic\_36:

(24, 34494), (25, 34497), (32, 34521), (42, 34563), (47, 34581), (51, 34596), (Start: 87 @34701 has 415 MA's), (97, 34731), (102, 34743), (113, 34782), (118, 34797), (131, 34851), (144, 34896), (146, 34902), (148, 34908), (150, 34914), (157, 34959), (158, 34962), (164, 34989), (187, 35049), (190, 35070), (215, 35148),

Gene: MossRose\_32 Start: 30064, Stop: 30660, Start Num: 87

Candidate Starts for MossRose\_32:

(32, 29887), (42, 29926), (44, 29935), (59, 29998), (62, 30010), (Start: 87 @30064 has 415 MA's), (97, 30094), (127, 30208), (131, 30214), (146, 30265), (148, 30271), (157, 30322), (158, 30325), (180, 30388), (186, 30400), (187, 30412), (197, 30463), (207, 30493), (215, 30511), (217, 30520), (248, 30646),

Gene: MossRose\_31 Start: 29456, Stop: 30067, Start Num: 93

Candidate Starts for MossRose\_31:

(Start: 91 @29453 has 16 MA's), (Start: 93 @29456 has 4 MA's), (110, 29522), (115, 29537), (118, 29546), (124, 29585), (132, 29606), (137, 29621), (145, 29654), (154, 29693), (155, 29696), (157, 29714), (179, 29768), (242, 30026), (251, 30056),

Gene: MrPhizzler\_35 Start: 34060, Stop: 34707, Start Num: 85

Candidate Starts for MrPhizzler\_35:

(67, 34021), (Start: 84 @34057 has 90 MA's), (Start: 85 @34060 has 172 MA's), (Start: 111 @34141 has 1 MA's), (146, 34276), (164, 34363), (181, 34408), (195, 34477), (196, 34486), (214, 34537), (223, 34582), (240, 34660), (249, 34693), (253, 34699),

Gene: MrPhizzler\_36 Start: 34704, Stop: 35303, Start Num: 87

Candidate Starts for MrPhizzler\_36:

(24, 34497), (25, 34500), (32, 34524), (42, 34566), (47, 34584), (51, 34599), (Start: 87 @34704 has 415 MA's), (97, 34734), (102, 34746), (113, 34785), (118, 34800), (131, 34854), (144, 34899), (146, 34905), (148, 34911), (150, 34917), (157, 34962), (158, 34965), (164, 34992), (187, 35052), (190, 35073), (208, 35136), (215, 35151),

Gene: Mudslide\_34 Start: 35423, Stop: 36028, Start Num: 87

Candidate Starts for Mudslide\_34:

(Start: 87 @35423 has 415 MA's), (97, 35459), (108, 35486), (113, 35510), (114, 35513), (127, 35573), (131, 35579), (144, 35624), (147, 35633), (148, 35636), (149, 35639), (154, 35666), (157, 35687), (164, 35717), (188, 35783), (190, 35798), (208, 35861), (223, 35918), (243, 35996), (248, 36014),

Gene: Mudslide\_33 Start: 34779, Stop: 35426, Start Num: 64

Candidate Starts for Mudslide\_33:

(Start: 64 @34779 has 25 MA's), (100, 34857), (104, 34869), (122, 34941), (133, 34965), (140, 34995), (141, 34998), (144, 35007), (155, 35055), (166, 35109), (173, 35127), (190, 35187), (195, 35199), (215, 35259), (221, 35283), (223, 35301), (243, 35388), (244, 35391), (251, 35415),

Gene: Mulan\_35 Start: 34069, Stop: 34716, Start Num: 85

Candidate Starts for Mulan\_35:

(67, 34030), (Start: 84 @34066 has 90 MA's), (Start: 85 @34069 has 172 MA's), (Start: 111 @34150 has 1 MA's), (146, 34285), (164, 34372), (181, 34417), (196, 34495), (214, 34546), (221, 34573), (223, 34591), (240, 34669), (249, 34702), (253, 34708),

Gene: Mulan\_36 Start: 34713, Stop: 35312, Start Num: 87

Candidate Starts for Mulan\_36:

(24, 34506), (25, 34509), (32, 34533), (42, 34575), (47, 34593), (51, 34608), (Start: 87 @34713 has 415 MA's), (97, 34743), (102, 34755), (113, 34794), (118, 34809), (131, 34863), (144, 34908), (146, 34914), (148, 34920), (150, 34926), (157, 34971), (158, 34974), (164, 35001), (187, 35061), (190, 35082), (215, 35160),

Gene: Murdoc\_37 Start: 34988, Stop: 35587, Start Num: 87

Candidate Starts for Murdoc\_37:

(25, 34784), (32, 34808), (42, 34850), (47, 34868), (51, 34883), (Start: 87 @34988 has 415 MA's), (97, 35018), (102, 35030), (113, 35069), (118, 35084), (131, 35138), (144, 35183), (146, 35189), (148, 35195), (150, 35201), (157, 35246), (158, 35249), (164, 35276), (187, 35336), (190, 35357), (215, 35435),

Gene: Murdoc\_36 Start: 34341, Stop: 34991, Start Num: 84

Candidate Starts for Murdoc\_36:

(67, 34305), (Start: 84 @34341 has 90 MA's), (Start: 85 @34344 has 172 MA's), (Start: 111 @34425 has 1 MA's), (146, 34560), (164, 34647), (181, 34692), (196, 34770), (214, 34821), (221, 34848), (223, 34866), (240, 34944), (249, 34977), (253, 34983),

Gene: Mutante\_35 Start: 34051, Stop: 34698, Start Num: 85

Candidate Starts for Mutante\_35:

(67, 34012), (Start: 84 @34048 has 90 MA's), (Start: 85 @34051 has 172 MA's), (Start: 111 @34132 has 1 MA's), (146, 34267), (164, 34354), (181, 34399), (196, 34477), (214, 34528), (221, 34555), (223, 34573), (240, 34651), (249, 34684), (253, 34690),

Gene: Mutante\_36 Start: 34695, Stop: 35294, Start Num: 87

Candidate Starts for Mutante\_36:

(25, 34491), (32, 34515), (42, 34557), (47, 34575), (51, 34590), (Start: 87 @34695 has 415 MA's), (97, 34725), (102, 34737), (113, 34776), (118, 34791), (131, 34845), (144, 34890), (146, 34896), (148, 34902), (150, 34908), (157, 34953), (158, 34956), (164, 34983), (187, 35043), (190, 35064), (215, 35142),

Gene: Mysterious\_36 Start: 35234, Stop: 35863, Start Num: 86

Candidate Starts for Mysterious\_36:

(Start: 86 @35234 has 17 MA's), (103, 35288), (114, 35324), (125, 35384), (133, 35405), (142, 35441), (145, 35450), (146, 35453), (148, 35459), (157, 35510), (177, 35558), (179, 35564), (223, 35738), (245, 35831), (251, 35852),

Gene: Mysterious\_38 Start: 35860, Stop: 36471, Start Num: 87

Candidate Starts for Mysterious\_38:

(31, 35683), (46, 35740), (51, 35755), (Start: 87 @35860 has 415 MA's), (97, 35893), (113, 35944), (127, 36007), (131, 36013), (146, 36064), (148, 36070), (150, 36076), (158, 36124), (206, 36289), (208, 36295), (215, 36310), (243, 36439), (248, 36457),

Gene: NHagos\_29 Start: 27986, Stop: 28600, Start Num: 91

Candidate Starts for NHagos\_29:

(Start: 91 @27986 has 16 MA's), (117, 28076), (118, 28079), (124, 28118), (132, 28139), (145, 28187), (146, 28190), (177, 28295), (214, 28433), (242, 28559), (251, 28589),

Gene: NHagos\_30 Start: 28597, Stop: 29193, Start Num: 87

Candidate Starts for NHagos\_30:

(32, 28420), (62, 28543), (Start: 87 @28597 has 415 MA's), (97, 28627), (108, 28654), (114, 28681), (127, 28741), (131, 28747), (145, 28795), (146, 28798), (148, 28804), (158, 28858), (167, 28891), (180, 28921), (190, 28966), (208, 29029), (211, 29035), (215, 29044), (217, 29053), (248, 29179),

Gene: Nacho\_0036 Start: 34343, Stop: 34993, Start Num: 84

Candidate Starts for Nacho\_0036:

(39, 34196), (67, 34307), (Start: 84 @34343 has 90 MA's), (Start: 85 @34346 has 172 MA's), (Start: 111 @34427 has 1 MA's), (146, 34562), (164, 34649), (181, 34694), (196, 34772), (214, 34823), (221, 34850), (223, 34868), (240, 34946), (249, 34979), (253, 34985),

Gene: Nacho\_0037 Start: 34990, Stop: 35589, Start Num: 87

Candidate Starts for Nacho\_0037:

(25, 34786), (32, 34810), (42, 34852), (47, 34870), (51, 34885), (Start: 87 @34990 has 415 MA's), (97, 35020), (102, 35032), (113, 35071), (118, 35086), (131, 35140), (144, 35185), (146, 35191), (148, 35197), (150, 35203), (157, 35248), (158, 35251), (164, 35278), (187, 35338), (190, 35359), (215, 35437),

Gene: Nanao\_32 Start: 33505, Stop: 34152, Start Num: 64

Candidate Starts for Nanao\_32:

(Start: 64 @33505 has 25 MA's), (100, 33583), (104, 33595), (122, 33667), (133, 33691), (139, 33712), (140, 33721), (141, 33724), (144, 33733), (145, 33736), (155, 33781), (166, 33835), (173, 33853), (190, 33913), (195, 33925), (215, 33985), (221, 34009), (223, 34027), (243, 34114), (251, 34141),

Gene: Nanao\_33 Start: 34149, Stop: 34754, Start Num: 87

Candidate Starts for Nanao\_33:

(Start: 87 @34149 has 415 MA's), (97, 34185), (113, 34236), (114, 34239), (127, 34299), (131, 34305), (144, 34350), (147, 34359), (148, 34362), (149, 34365), (154, 34392), (164, 34443), (188, 34509), (190, 34524), (208, 34587), (223, 34644), (243, 34722), (248, 34740),

Gene: Nangang\_36 Start: 35615, Stop: 36268, Start Num: 68

Candidate Starts for Nangang\_36:

(54, 35564), (55, 35570), (63, 35600), (65, 35609), (68, 35615), (Start: 87 @35657 has 415 MA's), (97, 35690), (113, 35741), (127, 35804), (131, 35810), (146, 35861), (148, 35867), (150, 35873), (158, 35921), (206, 36086), (208, 36092), (232, 36194), (243, 36236), (248, 36254),

Gene: Nangang\_35 Start: 34921, Stop: 35550, Start Num: 86

Candidate Starts for Nangang\_35:

(Start: 86 @34921 has 17 MA's), (110, 34999), (114, 35011), (145, 35137), (148, 35146), (150, 35152), (157, 35197), (177, 35245), (179, 35251), (223, 35425), (251, 35539),

Gene: Nehemiah\_34 Start: 35234, Stop: 35863, Start Num: 86

Candidate Starts for Nehemiah\_34:

(Start: 86 @35234 has 17 MA's), (103, 35288), (114, 35324), (125, 35384), (133, 35405), (142, 35441), (145, 35450), (146, 35453), (148, 35459), (157, 35510), (177, 35558), (179, 35564), (223, 35738), (245, 35831), (251, 35852),

Gene: Nehemiah\_36 Start: 35860, Stop: 36471, Start Num: 87

Candidate Starts for Nehemiah\_36:

(31, 35683), (46, 35740), (51, 35755), (Start: 87 @35860 has 415 MA's), (97, 35893), (113, 35944), (127, 36007), (131, 36013), (146, 36064), (148, 36070), (150, 36076), (158, 36124), (206, 36289), (208, 36295), (215, 36310), (243, 36439), (248, 36457),

Gene: Neos5\_37 Start: 35727, Stop: 36326, Start Num: 87

Candidate Starts for Neos5\_37:

(Start: 87 @35727 has 415 MA's), (97, 35757), (108, 35784), (127, 35871), (131, 35877), (150, 35940), (154, 35964), (157, 35985), (187, 36075), (208, 36159), (213, 36171), (226, 36231), (248, 36312),

Gene: Neos5\_36 Start: 35077, Stop: 35730, Start Num: 81

Candidate Starts for Neos5\_36:

(Start: 81 @35077 has 45 MA's), (108, 35158), (113, 35182), (145, 35305), (179, 35431), (186, 35446), (199, 35521), (241, 35686), (242, 35689), (249, 35716),

Gene: Newman\_36 Start: 34343, Stop: 34990, Start Num: 85

Candidate Starts for Newman\_36:

(67, 34304), (Start: 84 @34340 has 90 MA's), (Start: 85 @34343 has 172 MA's), (Start: 111 @34424 has 1 MA's), (146, 34559), (164, 34646), (181, 34691), (196, 34769), (214, 34820), (221, 34847), (223, 34865), (240, 34943), (249, 34976), (253, 34982),

Gene: Newman\_37 Start: 34987, Stop: 35586, Start Num: 87

Candidate Starts for Newman\_37:

(24, 34780), (25, 34783), (32, 34807), (42, 34849), (47, 34867), (51, 34882), (Start: 87 @34987 has 415 MA's), (97, 35017), (102, 35029), (113, 35068), (118, 35083), (131, 35137), (144, 35182), (146, 35188), (148, 35194), (150, 35200), (157, 35245), (158, 35248), (164, 35275), (187, 35335), (190, 35356), (215, 35434),

Gene: Nicole21\_37 Start: 34985, Stop: 35584, Start Num: 87

Candidate Starts for Nicole21\_37:

(25, 34781), (32, 34805), (42, 34847), (47, 34865), (51, 34880), (Start: 87 @34985 has 415 MA's), (97, 35015), (102, 35027), (113, 35066), (118, 35081), (131, 35135), (144, 35180), (146, 35186), (148, 35192), (150, 35198), (157, 35243), (158, 35246), (164, 35273), (187, 35333), (190, 35354), (208, 35417), (215, 35432),

Gene: Nicole21\_36 Start: 34338, Stop: 34988, Start Num: 84

Candidate Starts for Nicole21\_36:

(67, 34302), (Start: 84 @34338 has 90 MA's), (Start: 85 @34341 has 172 MA's), (Start: 111 @34422 has 1 MA's), (146, 34557), (164, 34644), (181, 34689), (196, 34767), (214, 34818), (221, 34845), (223, 34863), (240, 34941), (249, 34974), (253, 34980),

Gene: Nigel\_32 Start: 34065, Stop: 34670, Start Num: 87

Candidate Starts for Nigel\_32:

(Start: 87 @34065 has 415 MA's), (97, 34101), (108, 34128), (110, 34143), (113, 34152), (131, 34221), (144, 34266), (146, 34272), (148, 34278), (154, 34308), (157, 34329), (187, 34419), (188, 34425), (190, 34440), (243, 34638), (248, 34656), (252, 34665),

Gene: Nigel\_31 Start: 33421, Stop: 34068, Start Num: 64

Candidate Starts for Nigel\_31:

(Start: 64 @33421 has 25 MA's), (100, 33499), (104, 33511), (122, 33583), (133, 33607), (139, 33628), (140, 33637), (141, 33640), (143, 33646), (144, 33649), (155, 33697), (166, 33751), (173, 33769), (190, 33829), (195, 33841), (221, 33925), (223, 33943), (243, 34030), (251, 34057),

Gene: Nozo\_37 Start: 35688, Stop: 36287, Start Num: 87

Candidate Starts for Nozo\_37:

(Start: 87 @35688 has 415 MA's), (97, 35718), (108, 35745), (127, 35832), (131, 35838), (150, 35901), (154, 35925), (157, 35946), (187, 36036), (208, 36120), (213, 36132), (226, 36192), (248, 36273),

Gene: Nozo\_36 Start: 35038, Stop: 35691, Start Num: 81

Candidate Starts for Nozo\_36:

(Start: 81 @35038 has 45 MA's), (108, 35119), (113, 35143), (145, 35266), (179, 35392), (186, 35407), (199, 35482), (241, 35647), (242, 35650), (249, 35677),

Gene: Numberten\_37 Start: 34994, Stop: 35593, Start Num: 87

Candidate Starts for Numberten\_37:

(25, 34790), (32, 34814), (42, 34856), (47, 34874), (51, 34889), (Start: 87 @34994 has 415 MA's), (97, 35024), (102, 35036), (113, 35075), (118, 35090), (131, 35144), (144, 35189), (146, 35195), (148, 35201), (150, 35207), (157, 35252), (158, 35255), (164, 35282), (187, 35342), (190, 35363), (215, 35441),

Gene: Numberten\_36 Start: 34350, Stop: 34997, Start Num: 85

Candidate Starts for Numberten\_36:

(39, 34200), (67, 34311), (Start: 84 @34347 has 90 MA's), (Start: 85 @34350 has 172 MA's), (Start: 111 @34431 has 1 MA's), (146, 34566), (164, 34653), (181, 34698), (196, 34776), (214, 34827), (221, 34854), (223, 34872), (240, 34950), (249, 34983), (253, 34989),

Gene: Nyala\_36 Start: 34687, Stop: 35286, Start Num: 87

Candidate Starts for Nyala\_36:

(25, 34483), (32, 34507), (42, 34549), (47, 34567), (51, 34582), (Start: 87 @34687 has 415 MA's), (97, 34717), (102, 34729), (113, 34768), (118, 34783), (131, 34837), (144, 34882), (146, 34888), (148, 34894), (150, 34900), (157, 34945), (158, 34948), (164, 34975), (187, 35035), (190, 35056), (215, 35134),

Gene: Nyala\_35 Start: 34043, Stop: 34690, Start Num: 85

Candidate Starts for Nyala\_35:

(39, 33893), (67, 34004), (Start: 84 @34040 has 90 MA's), (Start: 85 @34043 has 172 MA's), (Start: 111 @34124 has 1 MA's), (146, 34259), (164, 34346), (181, 34391), (196, 34469), (214, 34520), (221, 34547), (223, 34565), (240, 34643), (249, 34676), (253, 34682),

Gene: OSmaximus\_37 Start: 35029, Stop: 35628, Start Num: 87

Candidate Starts for OSmaximus\_37:

(25, 34825), (32, 34849), (42, 34891), (47, 34909), (51, 34924), (Start: 87 @35029 has 415 MA's), (97, 35059), (102, 35071), (113, 35110), (118, 35125), (131, 35179), (144, 35224), (146, 35230), (148, 35236), (150, 35242), (157, 35287), (158, 35290), (164, 35317), (187, 35377), (190, 35398), (215, 35476),

Gene: OSmaximus\_36 Start: 34382, Stop: 35032, Start Num: 84

Candidate Starts for OSmaximus\_36:

(67, 34346), (Start: 84 @34382 has 90 MA's), (Start: 85 @34385 has 172 MA's), (Start: 111 @34466 has 1 MA's), (146, 34601), (164, 34688), (181, 34733), (196, 34811), (214, 34862), (221, 34889), (223, 34907), (240, 34985), (249, 35018), (253, 35024),

Gene: Obutu\_36 Start: 34262, Stop: 34915, Start Num: 81

Candidate Starts for Obutu\_36:

(Start: 81 @34262 has 45 MA's), (108, 34343), (113, 34367), (145, 34490), (179, 34616), (186, 34631), (199, 34706), (241, 34871), (249, 34901),

Gene: Obutu\_37 Start: 34912, Stop: 35511, Start Num: 87

Candidate Starts for Obutu\_37:

(24, 34708), (Start: 87 @34912 has 415 MA's), (97, 34942), (108, 34969), (127, 35056), (131, 35062), (150, 35125), (154, 35149), (187, 35260), (208, 35344), (213, 35356), (226, 35416), (242, 35476), (248, 35497),

Gene: Olak\_35 Start: 34046, Stop: 34693, Start Num: 85

Candidate Starts for Olak\_35:

(67, 34007), (Start: 84 @34043 has 90 MA's), (Start: 85 @34046 has 172 MA's), (Start: 111 @34127 has 1 MA's), (146, 34262), (164, 34349), (181, 34394), (196, 34472), (214, 34523), (221, 34550), (223, 34568), (240, 34646), (249, 34679), (253, 34685),

Gene: Olak\_36 Start: 34690, Stop: 35289, Start Num: 87

Candidate Starts for Olak\_36:

(25, 34486), (32, 34510), (42, 34552), (47, 34570), (51, 34585), (Start: 87 @34690 has 415 MA's), (97, 34720), (102, 34732), (113, 34771), (118, 34786), (131, 34840), (144, 34885), (146, 34891), (148, 34897), (150, 34903), (157, 34948), (158, 34951), (164, 34978), (187, 35038), (190, 35059), (215, 35137),

Gene: Oline\_36 Start: 34556, Stop: 35155, Start Num: 87

Candidate Starts for Oline\_36:

(24, 34349), (25, 34352), (32, 34376), (42, 34418), (47, 34436), (51, 34451), (Start: 87 @34556 has 415 MA's), (97, 34586), (102, 34598), (113, 34637), (118, 34652), (131, 34706), (144, 34751), (146, 34757), (148, 34763), (150, 34769), (157, 34814), (158, 34817), (164, 34844), (190, 34925), (208,

34988), (215, 35003),

Gene: Oline\_35 Start: 33912, Stop: 34559, Start Num: 85

Candidate Starts for Oline\_35:

(67, 33873), (Start: 84 @33909 has 90 MA's), (Start: 85 @33912 has 172 MA's), (Start: 111 @33993 has 1 MA's), (146, 34128), (164, 34215), (181, 34260), (195, 34329), (196, 34338), (214, 34389), (223, 34434), (240, 34512), (249, 34545), (253, 34551),

Gene: Olive\_36 Start: 34333, Stop: 34980, Start Num: 85

Candidate Starts for Olive\_36:

(39, 34183), (67, 34294), (Start: 84 @34330 has 90 MA's), (Start: 85 @34333 has 172 MA's), (Start: 111 @34414 has 1 MA's), (146, 34549), (164, 34636), (181, 34681), (196, 34759), (214, 34810), (221, 34837), (223, 34855), (240, 34933), (249, 34966), (253, 34972),

Gene: Olive\_37 Start: 34977, Stop: 35576, Start Num: 87

Candidate Starts for Olive\_37:

(25, 34773), (32, 34797), (42, 34839), (47, 34857), (51, 34872), (Start: 87 @34977 has 415 MA's), (97, 35007), (102, 35019), (113, 35058), (118, 35073), (131, 35127), (144, 35172), (146, 35178), (148, 35184), (150, 35190), (157, 35235), (158, 35238), (164, 35265), (187, 35325), (190, 35346),

Gene: OliverWalter\_36 Start: 34355, Stop: 35002, Start Num: 85

Candidate Starts for OliverWalter\_36:

(39, 34205), (67, 34316), (Start: 84 @34352 has 90 MA's), (Start: 85 @34355 has 172 MA's), (Start: 111 @34436 has 1 MA's), (146, 34571), (164, 34658), (181, 34703), (196, 34781), (214, 34832), (221, 34859), (223, 34877), (240, 34955), (249, 34988), (253, 34994),

Gene: OliverWalter\_37 Start: 34999, Stop: 35598, Start Num: 87

Candidate Starts for OliverWalter\_37:

(25, 34795), (32, 34819), (42, 34861), (47, 34879), (51, 34894), (Start: 87 @34999 has 415 MA's), (97, 35029), (102, 35041), (113, 35080), (118, 35095), (119, 35098), (131, 35149), (144, 35194), (146, 35200), (148, 35206), (150, 35212), (157, 35257), (158, 35260), (164, 35287), (187, 35347), (190, 35368), (215, 35446),

Gene: Omniscient\_36 Start: 34352, Stop: 34999, Start Num: 85

Candidate Starts for Omniscient\_36:

(67, 34313), (Start: 84 @34349 has 90 MA's), (Start: 85 @34352 has 172 MA's), (Start: 111 @34433 has 1 MA's), (146, 34568), (164, 34655), (181, 34700), (196, 34778), (214, 34829), (221, 34856), (223, 34874), (240, 34952), (249, 34985), (253, 34991),

Gene: Omniscient\_37 Start: 34996, Stop: 35595, Start Num: 87

Candidate Starts for Omniscient\_37:

(25, 34792), (32, 34816), (42, 34858), (47, 34876), (51, 34891), (Start: 87 @34996 has 415 MA's), (97, 35026), (102, 35038), (113, 35077), (118, 35092), (131, 35146), (144, 35191), (146, 35197), (148, 35203), (150, 35209), (157, 35254), (158, 35257), (164, 35284), (187, 35344), (190, 35365), (215, 35443),

Gene: Oosterbaan\_36 Start: 34343, Stop: 34990, Start Num: 85

Candidate Starts for Oosterbaan\_36:

(67, 34304), (Start: 84 @34340 has 90 MA's), (Start: 85 @34343 has 172 MA's), (Start: 111 @34424 has 1 MA's), (146, 34559), (164, 34646), (181, 34691), (196, 34769), (214, 34820), (221, 34847), (223, 34865), (240, 34943), (249, 34976), (253, 34982),

Gene: Oosterbaan\_37 Start: 34987, Stop: 35586, Start Num: 87



Candidate Starts for Oosterbaan\_37:

(25, 34783), (32, 34807), (42, 34849), (47, 34867), (51, 34882), (Start: 87 @34987 has 415 MA's), (97, 35017), (102, 35029), (113, 35068), (118, 35083), (131, 35137), (144, 35182), (146, 35188), (148, 35194), (150, 35200), (157, 35245), (158, 35248), (164, 35275), (187, 35335), (190, 35356), (215, 35434),

Gene: Opia\_38 Start: 35466, Stop: 36065, Start Num: 87

Candidate Starts for Opia\_38:

(78, 35445), (Start: 87 @35466 has 415 MA's), (97, 35496), (105, 35517), (113, 35547), (114, 35550), (131, 35616), (146, 35667), (147, 35670), (148, 35673), (154, 35703), (157, 35724), (180, 35790), (188, 35820), (213, 35910), (215, 35913), (219, 35931), (223, 35955), (240, 36024), (248, 36051),

Gene: Opia\_36 Start: 34676, Stop: 35320, Start Num: 82

Candidate Starts for Opia\_36:

(34, 34511), (59, 34622), (Start: 82 @34676 has 44 MA's), (Start: 85 @34685 has 172 MA's), (108, 34754), (114, 34781), (117, 34790), (120, 34799), (146, 34907), (150, 34919), (177, 35012), (191, 35078), (196, 35099), (201, 35114), (203, 35120), (210, 35141), (216, 35153), (251, 35309),

Gene: OrangeOswald\_36 Start: 34279, Stop: 34932, Start Num: 81

Candidate Starts for OrangeOswald\_36:

(Start: 81 @34279 has 45 MA's), (108, 34360), (113, 34384), (145, 34507), (179, 34633), (186, 34648), (199, 34723), (241, 34888), (242, 34891), (249, 34918),

Gene: OrangeOswald\_37 Start: 34929, Stop: 35528, Start Num: 87

Candidate Starts for OrangeOswald\_37:

(Start: 87 @34929 has 415 MA's), (97, 34959), (108, 34986), (127, 35073), (131, 35079), (150, 35142), (154, 35166), (157, 35187), (187, 35277), (208, 35361), (213, 35373), (226, 35433), (248, 35514),

Gene: Orfeu\_36 Start: 34695, Stop: 35294, Start Num: 87

Candidate Starts for Orfeu\_36:

(25, 34491), (32, 34515), (42, 34557), (47, 34575), (51, 34590), (Start: 87 @34695 has 415 MA's), (97, 34725), (102, 34737), (113, 34776), (118, 34791), (131, 34845), (144, 34890), (146, 34896), (148, 34902), (150, 34908), (157, 34953), (158, 34956), (164, 34983), (187, 35043), (190, 35064), (215, 35142),

Gene: Orfeu\_35 Start: 34051, Stop: 34698, Start Num: 85

Candidate Starts for Orfeu\_35:

(67, 34012), (Start: 84 @34048 has 90 MA's), (Start: 85 @34051 has 172 MA's), (Start: 111 @34132 has 1 MA's), (146, 34267), (164, 34354), (181, 34399), (196, 34477), (214, 34528), (221, 34555), (223, 34573), (240, 34651), (249, 34684), (253, 34690),

Gene: Orion\_36 Start: 34341, Stop: 34988, Start Num: 85

Candidate Starts for Orion\_36:

(67, 34302), (Start: 84 @34338 has 90 MA's), (Start: 85 @34341 has 172 MA's), (Start: 111 @34422 has 1 MA's), (146, 34557), (164, 34644), (181, 34689), (196, 34767), (214, 34818), (221, 34845), (223, 34863), (240, 34941), (249, 34974), (253, 34980),

Gene: Orion\_37 Start: 34985, Stop: 35584, Start Num: 87

Candidate Starts for Orion\_37:

(25, 34781), (32, 34805), (42, 34847), (47, 34865), (51, 34880), (Start: 87 @34985 has 415 MA's), (97, 35015), (102, 35027), (113, 35066), (118, 35081), (131, 35135), (144, 35180), (146, 35186), (148, 35192), (150, 35198), (157, 35243), (158, 35246), (164, 35273), (187, 35333), (190, 35354), (215,

35432),

Gene: Orwigg\_37 Start: 34683, Stop: 35282, Start Num: 87

Candidate Starts for Orwigg\_37:

(25, 34479), (32, 34503), (42, 34545), (47, 34563), (51, 34578), (Start: 87 @34683 has 415 MA's), (97, 34713), (102, 34725), (113, 34764), (118, 34779), (131, 34833), (144, 34878), (146, 34884), (148, 34890), (150, 34896), (157, 34941), (158, 34944), (164, 34971), (187, 35031), (190, 35052),

Gene: Orwigg\_36 Start: 34039, Stop: 34686, Start Num: 85

Candidate Starts for Orwigg\_36:

(39, 33889), (67, 34000), (Start: 84 @34036 has 90 MA's), (Start: 85 @34039 has 172 MA's), (Start: 111 @34120 has 1 MA's), (146, 34255), (164, 34342), (181, 34387), (196, 34465), (214, 34516), (221, 34543), (223, 34561), (240, 34639), (249, 34672), (253, 34678),

Gene: PG1\_37 Start: 34998, Stop: 35597, Start Num: 87

Candidate Starts for PG1\_37:

(25, 34794), (32, 34818), (42, 34860), (47, 34878), (51, 34893), (Start: 87 @34998 has 415 MA's), (97, 35028), (102, 35040), (113, 35079), (118, 35094), (131, 35148), (144, 35193), (146, 35199), (148, 35205), (150, 35211), (157, 35256), (158, 35259), (164, 35286), (187, 35346), (190, 35367), (215, 35445),

Gene: PG1\_36 Start: 34354, Stop: 35001, Start Num: 85

Candidate Starts for PG1\_36:

(67, 34315), (Start: 84 @34351 has 90 MA's), (Start: 85 @34354 has 172 MA's), (Start: 111 @34435 has 1 MA's), (146, 34570), (164, 34657), (181, 34702), (196, 34780), (214, 34831), (221, 34858), (223, 34876), (240, 34954), (249, 34987), (253, 34993),

Gene: PR\_30 Start: 32778, Stop: 33377, Start Num: 87

Candidate Starts for PR\_30:

(Start: 87 @32778 has 415 MA's), (97, 32808), (105, 32829), (108, 32835), (127, 32922), (131, 32928), (146, 32979), (150, 32991), (154, 33015), (157, 33036), (161, 33054), (167, 33072), (178, 33099), (221, 33249), (223, 33267), (242, 33342), (248, 33363),

Gene: PR\_28 Start: 31984, Stop: 32628, Start Num: 82

Candidate Starts for PR\_28:

(Start: 82 @31984 has 44 MA's), (89, 32002), (107, 32059), (117, 32098), (120, 32107), (132, 32164), (146, 32215), (148, 32221), (150, 32227), (165, 32302), (181, 32329), (191, 32386), (195, 32398), (203, 32428), (223, 32503), (239, 32575),

Gene: Pacifista\_35 Start: 34045, Stop: 34692, Start Num: 85

Candidate Starts for Pacifista\_35:

(67, 34006), (Start: 84 @34042 has 90 MA's), (Start: 85 @34045 has 172 MA's), (Start: 111 @34126 has 1 MA's), (146, 34261), (164, 34348), (181, 34393), (196, 34471), (214, 34522), (221, 34549), (223, 34567), (240, 34645), (249, 34678), (253, 34684),

Gene: Pacifista\_36 Start: 34689, Stop: 35288, Start Num: 87

Candidate Starts for Pacifista\_36:

(25, 34485), (32, 34509), (42, 34551), (47, 34569), (51, 34584), (Start: 87 @34689 has 415 MA's), (97, 34719), (102, 34731), (113, 34770), (118, 34785), (131, 34839), (144, 34884), (146, 34890), (148, 34896), (150, 34902), (157, 34947), (158, 34950), (164, 34977), (187, 35037), (190, 35058), (215, 35136),

Gene: PenguinLover67\_39 Start: 36861, Stop: 37469, Start Num: 87

Candidate Starts for PenguinLover67\_39:

(Start: 87 @36861 has 415 MA's), (97, 36891), (113, 36942), (127, 37005), (131, 37011), (157, 37119), (213, 37305), (215, 37308), (223, 37350), (230, 37374), (232, 37395), (243, 37437),

Gene: PenguinLover67\_38 Start: 36256, Stop: 36864, Start Num: 99

Candidate Starts for PenguinLover67\_38:

(30, 36019), (40, 36064), (48, 36088), (52, 36106), (56, 36127), (58, 36133), (61, 36151), (72, 36178), (75, 36184), (76, 36187), (Start: 86 @36217 has 17 MA's), (Start: 99 @36256 has 1 MA's), (108, 36280), (114, 36307), (132, 36382), (146, 36433), (157, 36490), (164, 36520), (179, 36562), (191, 36622), (210, 36685), (214, 36694), (251, 36853),

Gene: Phaedrus\_34 Start: 34199, Stop: 34852, Start Num: 81

Candidate Starts for Phaedrus\_34:

(Start: 81 @34199 has 45 MA's), (108, 34280), (145, 34427), (179, 34553), (186, 34568), (199, 34643), (241, 34808), (249, 34838),

Gene: Phaedrus\_35 Start: 34849, Stop: 35448, Start Num: 87

Candidate Starts for Phaedrus\_35:

(24, 34645), (Start: 87 @34849 has 415 MA's), (97, 34879), (108, 34906), (127, 34993), (131, 34999), (150, 35062), (154, 35086), (187, 35197), (208, 35281), (213, 35293), (226, 35353), (248, 35434),

Gene: Phamished\_36 Start: 34346, Stop: 34996, Start Num: 84

Candidate Starts for Phamished\_36:

(67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: Phamished\_37 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for Phamished\_37:

(25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Phantasmagoria\_36 Start: 34688, Stop: 35332, Start Num: 82

Candidate Starts for Phantasmagoria\_36:

(10, 34319), (12, 34331), (18, 34430), (34, 34523), (59, 34634), (Start: 82 @34688 has 44 MA's), (Start: 85 @34697 has 172 MA's), (108, 34766), (114, 34793), (117, 34802), (146, 34919), (150, 34931), (177, 35024), (191, 35090), (196, 35111), (201, 35126), (203, 35132), (210, 35153), (216, 35165), (251, 35321),

Gene: Phantasmagoria\_38 Start: 35478, Stop: 36077, Start Num: 87

Candidate Starts for Phantasmagoria\_38:

(78, 35457), (Start: 87 @35478 has 415 MA's), (97, 35508), (105, 35529), (113, 35559), (114, 35562), (131, 35628), (146, 35679), (147, 35682), (148, 35685), (154, 35715), (157, 35736), (180, 35802), (188, 35832), (213, 35922), (215, 35925), (219, 35943), (223, 35967), (240, 36036), (248, 36063),

Gene: Phareon\_36 Start: 34053, Stop: 34700, Start Num: 85

Candidate Starts for Phareon\_36:

(67, 34014), (Start: 84 @34050 has 90 MA's), (Start: 85 @34053 has 172 MA's), (Start: 111 @34134 has 1 MA's), (146, 34269), (164, 34356), (181, 34401), (196, 34479), (214, 34530), (221, 34557), (223, 34575), (240, 34653), (249, 34686), (253, 34692),

Gene: Phareon\_37 Start: 34697, Stop: 35296, Start Num: 87

Candidate Starts for Phareon\_37:

(25, 34493), (32, 34517), (42, 34559), (47, 34577), (51, 34592), (Start: 87 @34697 has 415 MA's), (97, 34727), (102, 34739), (113, 34778), (118, 34793), (131, 34847), (144, 34892), (146, 34898), (148, 34904), (150, 34910), (157, 34955), (158, 34958), (164, 34985), (187, 35045), (190, 35066), (215, 35144),

Gene: PhatCats2014\_37 Start: 35002, Stop: 35601, Start Num: 87

Candidate Starts for PhatCats2014\_37:

(25, 34798), (32, 34822), (42, 34864), (47, 34882), (51, 34897), (Start: 87 @35002 has 415 MA's), (97, 35032), (102, 35044), (113, 35083), (118, 35098), (131, 35152), (144, 35197), (146, 35203), (148, 35209), (150, 35215), (157, 35260), (158, 35263), (164, 35290), (187, 35350), (190, 35371), (215, 35449),

Gene: PhatCats2014\_36 Start: 34358, Stop: 35005, Start Num: 85

Candidate Starts for PhatCats2014\_36:

(67, 34319), (Start: 84 @34355 has 90 MA's), (Start: 85 @34358 has 172 MA's), (Start: 111 @34439 has 1 MA's), (146, 34574), (164, 34661), (181, 34706), (196, 34784), (214, 34835), (221, 34862), (223, 34880), (240, 34958), (249, 34991), (253, 34997),

Gene: PhatLouie\_37 Start: 34991, Stop: 35590, Start Num: 87

Candidate Starts for PhatLouie\_37:

(24, 34784), (25, 34787), (32, 34811), (42, 34853), (47, 34871), (51, 34886), (Start: 87 @34991 has 415 MA's), (97, 35021), (102, 35033), (113, 35072), (118, 35087), (131, 35141), (144, 35186), (146, 35192), (148, 35198), (150, 35204), (157, 35249), (158, 35252), (164, 35279), (187, 35339), (190, 35360), (208, 35423), (215, 35438),

Gene: PhatLouie\_36 Start: 34347, Stop: 34994, Start Num: 85

Candidate Starts for PhatLouie\_36:

(67, 34308), (Start: 84 @34344 has 90 MA's), (Start: 85 @34347 has 172 MA's), (Start: 111 @34428 has 1 MA's), (146, 34563), (164, 34650), (181, 34695), (195, 34764), (196, 34773), (214, 34824), (223, 34869), (240, 34947), (249, 34980), (253, 34986),

Gene: Phayeta\_37 Start: 34144, Stop: 34797, Start Num: 81

Candidate Starts for Phayeta\_37:

(Start: 81 @34144 has 45 MA's), (108, 34225), (145, 34372), (179, 34498), (186, 34513), (199, 34588), (241, 34753), (249, 34783),

Gene: Phayeta\_38 Start: 34794, Stop: 35393, Start Num: 87

Candidate Starts for Phayeta\_38:

(Start: 87 @34794 has 415 MA's), (97, 34824), (108, 34851), (127, 34938), (131, 34944), (150, 35007), (154, 35031), (157, 35052), (187, 35142), (208, 35226), (213, 35238), (226, 35298), (248, 35379),

Gene: Phelemich\_35 Start: 35233, Stop: 35862, Start Num: 86

Candidate Starts for Phelemich\_35:

(Start: 86 @35233 has 17 MA's), (103, 35287), (114, 35323), (125, 35383), (133, 35404), (142, 35440), (145, 35449), (146, 35452), (148, 35458), (157, 35509), (177, 35557), (179, 35563), (223, 35737), (245, 35830), (251, 35851),

Gene: Phelemich\_36 Start: 35859, Stop: 36470, Start Num: 87

Candidate Starts for Phelemich\_36:

(31, 35682), (46, 35739), (51, 35754), (Start: 87 @35859 has 415 MA's), (97, 35892), (113, 35943), (127, 36006), (131, 36012), (146, 36063), (148, 36069), (150, 36075), (158, 36123), (206, 36288), (208, 36294), (215, 36309), (243, 36438), (248, 36456),

Gene: PhenghisKhan\_36 Start: 34597, Stop: 35196, Start Num: 87

Candidate Starts for PhenghisKhan\_36:

(24, 34390), (25, 34393), (32, 34417), (42, 34459), (47, 34477), (51, 34492), (Start: 87 @34597 has 415 MA's), (97, 34627), (102, 34639), (113, 34678), (118, 34693), (131, 34747), (144, 34792), (146, 34798), (148, 34804), (150, 34810), (157, 34855), (158, 34858), (164, 34885), (187, 34945), (190, 34966), (208, 35029), (215, 35044),

Gene: PhenghisKhan\_35 Start: 33953, Stop: 34600, Start Num: 85

Candidate Starts for PhenghisKhan\_35:

(67, 33914), (Start: 84 @33950 has 90 MA's), (Start: 85 @33953 has 172 MA's), (Start: 111 @34034 has 1 MA's), (146, 34169), (164, 34256), (181, 34301), (195, 34370), (196, 34379), (214, 34430), (223, 34475), (240, 34553), (249, 34586), (253, 34592),

Gene: Pherdinand\_36 Start: 34349, Stop: 34996, Start Num: 85

Candidate Starts for Pherdinand\_36:

(67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: Pherdinand\_37 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for Pherdinand\_37:

(25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Phergie\_35 Start: 33944, Stop: 34591, Start Num: 85

Candidate Starts for Phergie\_35:

(67, 33905), (Start: 84 @33941 has 90 MA's), (Start: 85 @33944 has 172 MA's), (Start: 111 @34025 has 1 MA's), (146, 34160), (164, 34247), (181, 34292), (195, 34361), (196, 34370), (214, 34421), (223, 34466), (240, 34544), (249, 34577), (253, 34583),

Gene: Phergie\_36 Start: 34588, Stop: 35187, Start Num: 87

Candidate Starts for Phergie\_36:

(24, 34381), (25, 34384), (32, 34408), (42, 34450), (47, 34468), (51, 34483), (Start: 87 @34588 has 415 MA's), (97, 34618), (102, 34630), (113, 34669), (118, 34684), (131, 34738), (144, 34783), (146, 34789), (148, 34795), (150, 34801), (157, 34846), (158, 34849), (164, 34876), (187, 34936), (190, 34957), (208, 35020), (215, 35035),

Gene: Philly\_36 Start: 34780, Stop: 35379, Start Num: 87

Candidate Starts for Philly\_36:

(Start: 87 @34780 has 415 MA's), (97, 34810), (108, 34837), (127, 34924), (131, 34930), (150, 34993), (154, 35017), (157, 35038), (187, 35128), (208, 35212), (213, 35224), (226, 35284), (242, 35344), (248, 35365),

Gene: Philly\_35 Start: 34130, Stop: 34783, Start Num: 81

Candidate Starts for Philly\_35:

(Start: 81 @34130 has 45 MA's), (108, 34211), (113, 34235), (145, 34358), (179, 34484), (186, 34499), (199, 34574), (241, 34739), (249, 34769),

Gene: Phipps\_36 Start: 34320, Stop: 34967, Start Num: 85

Candidate Starts for Phipps\_36:

(39, 34170), (67, 34281), (Start: 84 @34317 has 90 MA's), (Start: 85 @34320 has 172 MA's), (Start: 111 @34401 has 1 MA's), (146, 34536), (164, 34623), (181, 34668), (196, 34746), (214, 34797), (221, 34824), (223, 34842), (240, 34920), (249, 34953), (253, 34959),

Gene: Phipps\_37 Start: 34964, Stop: 35563, Start Num: 87

Candidate Starts for Phipps\_37:

(25, 34760), (32, 34784), (42, 34826), (47, 34844), (51, 34859), (Start: 87 @34964 has 415 MA's), (97, 34994), (102, 35006), (113, 35045), (118, 35060), (131, 35114), (144, 35159), (146, 35165), (148, 35171), (150, 35177), (157, 35222), (158, 35225), (164, 35252), (187, 35312), (190, 35333), (215, 35411),

Gene: Phleuron\_36 Start: 34594, Stop: 35193, Start Num: 87

Candidate Starts for Phleuron\_36:

(24, 34387), (25, 34390), (32, 34414), (42, 34456), (47, 34474), (51, 34489), (Start: 87 @34594 has 415 MA's), (97, 34624), (102, 34636), (113, 34675), (118, 34690), (131, 34744), (144, 34789), (146, 34795), (148, 34801), (150, 34807), (157, 34852), (158, 34855), (164, 34882), (187, 34942), (190, 34963), (208, 35026), (215, 35041),

Gene: Phleuron\_35 Start: 33950, Stop: 34597, Start Num: 85

Candidate Starts for Phleuron\_35:

(67, 33911), (Start: 84 @33947 has 90 MA's), (Start: 85 @33950 has 172 MA's), (Start: 111 @34031 has 1 MA's), (146, 34166), (164, 34253), (181, 34298), (195, 34367), (196, 34376), (214, 34427), (223, 34472), (240, 34550), (249, 34583), (253, 34589),

Gene: Phlyer\_37 Start: 35668, Stop: 36267, Start Num: 87

Candidate Starts for Phlyer\_37:

(Start: 87 @35668 has 415 MA's), (97, 35698), (108, 35725), (127, 35812), (131, 35818), (150, 35881), (154, 35905), (157, 35926), (187, 36016), (208, 36100), (213, 36112), (226, 36172), (242, 36232), (248, 36253),

Gene: Phlyer\_36 Start: 35018, Stop: 35671, Start Num: 81

Candidate Starts for Phlyer\_36:

(Start: 81 @35018 has 45 MA's), (108, 35099), (113, 35123), (145, 35246), (179, 35372), (186, 35387), (199, 35462), (241, 35627), (249, 35657),

Gene: PhrankReynolds\_36 Start: 34594, Stop: 35193, Start Num: 87

Candidate Starts for PhrankReynolds\_36:

(24, 34387), (25, 34390), (32, 34414), (42, 34456), (47, 34474), (51, 34489), (Start: 87 @34594 has 415 MA's), (97, 34624), (102, 34636), (113, 34675), (118, 34690), (131, 34744), (144, 34789), (146, 34795), (148, 34801), (150, 34807), (157, 34852), (158, 34855), (164, 34882), (187, 34942), (190, 34963), (208, 35026), (215, 35041),

Gene: PhrankReynolds\_35 Start: 33950, Stop: 34597, Start Num: 85

Candidate Starts for PhrankReynolds\_35:

(67, 33911), (Start: 84 @33947 has 90 MA's), (Start: 85 @33950 has 172 MA's), (Start: 111 @34031 has 1 MA's), (146, 34166), (164, 34253), (181, 34298), (195, 34367), (196, 34376), (214, 34427), (223, 34472), (240, 34550), (249, 34583), (253, 34589),

Gene: PhrodoBaggins\_35 Start: 34337, Stop: 34984, Start Num: 85

Candidate Starts for PhrodoBaggins\_35:

(67, 34298), (Start: 84 @34334 has 90 MA's), (Start: 85 @34337 has 172 MA's), (Start: 111 @34418 has 1 MA's), (146, 34553), (164, 34640), (181, 34685), (196, 34763), (214, 34814), (221, 34841), (223, 34859), (240, 34937), (249, 34970), (253, 34976),

Gene: PhrodoBaggins\_36 Start: 34981, Stop: 35580, Start Num: 87

Candidate Starts for PhrodoBaggins\_36:

(25, 34777), (32, 34801), (42, 34843), (47, 34861), (51, 34876), (Start: 87 @34981 has 415 MA's), (97, 35011), (102, 35023), (113, 35062), (118, 35077), (131, 35131), (144, 35176), (146, 35182), (148, 35188), (150, 35194), (157, 35239), (158, 35242), (164, 35269), (187, 35329), (190, 35350), (215, 35428),

Gene: Phunky\_37 Start: 34994, Stop: 35593, Start Num: 87

Candidate Starts for Phunky\_37:

(25, 34790), (32, 34814), (42, 34856), (47, 34874), (51, 34889), (Start: 87 @34994 has 415 MA's), (97, 35024), (102, 35036), (113, 35075), (118, 35090), (131, 35144), (144, 35189), (146, 35195), (148, 35201), (150, 35207), (157, 35252), (158, 35255), (164, 35282), (187, 35342), (190, 35363), (215, 35441),

Gene: Phunky\_36 Start: 34350, Stop: 34997, Start Num: 85

Candidate Starts for Phunky\_36:

(67, 34311), (Start: 84 @34347 has 90 MA's), (Start: 85 @34350 has 172 MA's), (Start: 111 @34431 has 1 MA's), (146, 34566), (164, 34653), (181, 34698), (196, 34776), (214, 34827), (221, 34854), (223, 34872), (240, 34950), (249, 34983), (253, 34989),

Gene: Piglet\_0035 Start: 34454, Stop: 35104, Start Num: 84

Candidate Starts for Piglet\_0035:

(67, 34418), (Start: 84 @34454 has 90 MA's), (Start: 85 @34457 has 172 MA's), (Start: 111 @34538 has 1 MA's), (146, 34673), (164, 34760), (181, 34805), (196, 34883), (214, 34934), (221, 34961), (223, 34979), (240, 35057), (249, 35090), (253, 35096),

Gene: Piglet\_0036 Start: 35101, Stop: 35700, Start Num: 87

Candidate Starts for Piglet\_0036:

(24, 34894), (25, 34897), (32, 34921), (42, 34963), (47, 34981), (51, 34996), (Start: 87 @35101 has 415 MA's), (97, 35131), (102, 35143), (113, 35182), (118, 35197), (131, 35251), (144, 35296), (146, 35302), (148, 35308), (150, 35314), (157, 35359), (158, 35362), (164, 35389), (187, 35449), (190, 35470), (215, 35548),

Gene: Pine5\_31 Start: 28838, Stop: 29461, Start Num: 83

Candidate Starts for Pine5\_31:

(83, 28838), (105, 28904), (129, 29003), (149, 29069), (152, 29093), (196, 29252), (197, 29255), (220, 29321), (244, 29426),

Gene: Pine5\_32 Start: 29465, Stop: 30058, Start Num: 85

Candidate Starts for Pine5\_32:

(Start: 85 @29465 has 172 MA's), (108, 29531), (121, 29597), (149, 29684), (154, 29711), (156, 29729), (160, 29741), (161, 29750), (167, 29768), (169, 29777), (212, 29906), (213, 29909), (215, 29912), (223, 29954), (242, 30029), (247, 30047),

Gene: PinheadLarry\_37 Start: 34707, Stop: 35306, Start Num: 87

Candidate Starts for PinheadLarry\_37:

(25, 34503), (32, 34527), (42, 34569), (47, 34587), (51, 34602), (Start: 87 @34707 has 415 MA's), (97, 34737), (102, 34749), (113, 34788), (118, 34803), (131, 34857), (144, 34902), (146, 34908), (148, 34914), (150, 34920), (157, 34965), (158, 34968), (164, 34995), (187, 35055), (190, 35076), (208,

35139), (215, 35154),

Gene: PinheadLarry\_36 Start: 34060, Stop: 34710, Start Num: 84

Candidate Starts for PinheadLarry\_36:

(67, 34024), (Start: 84 @34060 has 90 MA's), (Start: 85 @34063 has 172 MA's), (Start: 111 @34144 has 1 MA's), (146, 34279), (164, 34366), (181, 34411), (196, 34489), (214, 34540), (221, 34567), (223, 34585), (240, 34663), (249, 34696), (253, 34702),

Gene: Pinkman\_36 Start: 34550, Stop: 35149, Start Num: 87

Candidate Starts for Pinkman\_36:

(24, 34343), (25, 34346), (32, 34370), (42, 34412), (47, 34430), (51, 34445), (Start: 87 @34550 has 415 MA's), (97, 34580), (102, 34592), (113, 34631), (118, 34646), (131, 34700), (144, 34745), (146, 34751), (148, 34757), (150, 34763), (157, 34808), (158, 34811), (164, 34838), (187, 34898), (190, 34919), (208, 34982), (215, 34997),

Gene: Pinkman\_35 Start: 33906, Stop: 34553, Start Num: 85

Candidate Starts for Pinkman\_35:

(67, 33867), (Start: 84 @33903 has 90 MA's), (Start: 85 @33906 has 172 MA's), (Start: 111 @33987 has 1 MA's), (146, 34122), (164, 34209), (181, 34254), (195, 34323), (196, 34332), (214, 34383), (223, 34428), (240, 34506), (249, 34539), (253, 34545),

Gene: Pipefish\_38 Start: 35671, Stop: 36324, Start Num: 81

Candidate Starts for Pipefish\_38:

(Start: 81 @35671 has 45 MA's), (108, 35752), (113, 35776), (145, 35899), (179, 36025), (186, 36040), (199, 36115), (241, 36280), (249, 36310),

Gene: Pipefish\_39 Start: 36321, Stop: 36920, Start Num: 87

Candidate Starts for Pipefish\_39:

(Start: 87 @36321 has 415 MA's), (97, 36351), (108, 36378), (127, 36465), (131, 36471), (150, 36534), (154, 36558), (157, 36579), (187, 36669), (208, 36753), (213, 36765), (226, 36825), (242, 36885), (248, 36906),

Gene: Pipsqueak\_36 Start: 34348, Stop: 34995, Start Num: 85

Candidate Starts for Pipsqueak\_36:

(39, 34198), (67, 34309), (Start: 84 @34345 has 90 MA's), (Start: 85 @34348 has 172 MA's), (Start: 111 @34429 has 1 MA's), (146, 34564), (164, 34651), (181, 34696), (196, 34774), (214, 34825), (221, 34852), (223, 34870), (240, 34948), (249, 34981), (253, 34987),

Gene: Pipsqueak\_37 Start: 34992, Stop: 35591, Start Num: 87

Candidate Starts for Pipsqueak\_37:

(25, 34788), (32, 34812), (42, 34854), (47, 34872), (51, 34887), (Start: 87 @34992 has 415 MA's), (97, 35022), (102, 35034), (113, 35073), (118, 35088), (131, 35142), (144, 35187), (146, 35193), (148, 35199), (150, 35205), (157, 35250), (158, 35253), (164, 35280), (187, 35340), (190, 35361), (215, 35439),

Gene: Placalicious\_36 Start: 34685, Stop: 35284, Start Num: 87

Candidate Starts for Placalicious\_36:

(25, 34481), (32, 34505), (42, 34547), (47, 34565), (51, 34580), (Start: 87 @34685 has 415 MA's), (97, 34715), (102, 34727), (113, 34766), (118, 34781), (131, 34835), (144, 34880), (146, 34886), (148, 34892), (150, 34898), (157, 34943), (158, 34946), (164, 34973), (187, 35033), (190, 35054), (215, 35132),

Gene: Placalicious\_35 Start: 34041, Stop: 34688, Start Num: 85



Candidate Starts for Placalicious\_35:

(67, 34002), (Start: 84 @34038 has 90 MA's), (Start: 85 @34041 has 172 MA's), (Start: 111 @34122 has 1 MA's), (146, 34257), (164, 34344), (181, 34389), (196, 34467), (214, 34518), (221, 34545), (223, 34563), (240, 34641), (249, 34674), (253, 34680),

Gene: Plmatters\_37 Start: 34991, Stop: 35590, Start Num: 87

Candidate Starts for Plmatters\_37:

(25, 34787), (32, 34811), (42, 34853), (47, 34871), (51, 34886), (Start: 87 @34991 has 415 MA's), (97, 35021), (102, 35033), (113, 35072), (118, 35087), (131, 35141), (144, 35186), (146, 35192), (148, 35198), (150, 35204), (157, 35249), (158, 35252), (164, 35279), (187, 35339), (190, 35360), (215, 35438),

Gene: Plmatters\_36 Start: 34347, Stop: 34994, Start Num: 85

Candidate Starts for Plmatters\_36:

(39, 34197), (67, 34308), (Start: 84 @34344 has 90 MA's), (Start: 85 @34347 has 172 MA's), (Start: 111 @34428 has 1 MA's), (146, 34563), (164, 34650), (181, 34695), (196, 34773), (214, 34824), (221, 34851), (223, 34869), (240, 34947), (249, 34980), (253, 34986),

Gene: Podrick\_37 Start: 34982, Stop: 35581, Start Num: 87

Candidate Starts for Podrick\_37:

(25, 34778), (32, 34802), (42, 34844), (47, 34862), (51, 34877), (Start: 87 @34982 has 415 MA's), (97, 35012), (102, 35024), (113, 35063), (118, 35078), (131, 35132), (144, 35177), (146, 35183), (148, 35189), (150, 35195), (157, 35240), (158, 35243), (164, 35270), (187, 35330), (190, 35351), (215, 35429),

Gene: Podrick\_36 Start: 34338, Stop: 34985, Start Num: 85

Candidate Starts for Podrick\_36:

(39, 34188), (67, 34299), (Start: 84 @34335 has 90 MA's), (Start: 85 @34338 has 172 MA's), (Start: 111 @34419 has 1 MA's), (146, 34554), (164, 34641), (181, 34686), (196, 34764), (214, 34815), (221, 34842), (223, 34860), (240, 34938), (249, 34971), (253, 34977),

Gene: Pops\_37 Start: 35006, Stop: 35605, Start Num: 87

Candidate Starts for Pops\_37:

(25, 34802), (32, 34826), (42, 34868), (47, 34886), (51, 34901), (Start: 87 @35006 has 415 MA's), (97, 35036), (102, 35048), (113, 35087), (118, 35102), (131, 35156), (144, 35201), (146, 35207), (148, 35213), (150, 35219), (157, 35264), (158, 35267), (164, 35294), (187, 35354), (190, 35375), (215, 35453),

Gene: Pops\_36 Start: 34362, Stop: 35009, Start Num: 85

Candidate Starts for Pops\_36:

(39, 34212), (67, 34323), (Start: 84 @34359 has 90 MA's), (Start: 85 @34362 has 172 MA's), (Start: 111 @34443 has 1 MA's), (146, 34578), (164, 34665), (181, 34710), (196, 34788), (214, 34839), (221, 34866), (223, 34884), (240, 34962), (249, 34995), (253, 35001),

Gene: Poster\_33 Start: 34150, Stop: 34755, Start Num: 87

Candidate Starts for Poster\_33:

(Start: 87 @34150 has 415 MA's), (97, 34186), (113, 34237), (114, 34240), (127, 34300), (131, 34306), (144, 34351), (147, 34360), (148, 34363), (149, 34366), (154, 34393), (164, 34444), (188, 34510), (190, 34525), (208, 34588), (223, 34645), (243, 34723), (248, 34741),

Gene: Poster\_32 Start: 33506, Stop: 34153, Start Num: 64

Candidate Starts for Poster\_32:

(Start: 64 @33506 has 25 MA's), (100, 33584), (104, 33596), (122, 33668), (133, 33692), (139, 33713), (140, 33722), (141, 33725), (144, 33734), (145, 33737), (155, 33782), (166, 33836), (173, 33854), (190, 33914), (195, 33926), (215, 33986), (221, 34010), (223, 34028), (243, 34115), (251, 34142),

Gene: Potter\_36 Start: 34706, Stop: 35305, Start Num: 87

Candidate Starts for Potter\_36:

(24, 34499), (25, 34502), (32, 34526), (42, 34568), (47, 34586), (51, 34601), (Start: 87 @34706 has 415 MA's), (97, 34736), (102, 34748), (113, 34787), (118, 34802), (131, 34856), (144, 34901), (146, 34907), (148, 34913), (150, 34919), (157, 34964), (158, 34967), (164, 34994), (187, 35054), (190, 35075), (215, 35153),

Gene: Potter\_35 Start: 34062, Stop: 34709, Start Num: 85

Candidate Starts for Potter\_35:

(67, 34023), (Start: 84 @34059 has 90 MA's), (Start: 85 @34062 has 172 MA's), (Start: 111 @34143 has 1 MA's), (146, 34278), (164, 34365), (181, 34410), (196, 34488), (214, 34539), (221, 34566), (223, 34584), (240, 34662), (249, 34695), (253, 34701),

Gene: Prickles\_37 Start: 34982, Stop: 35581, Start Num: 87

Candidate Starts for Prickles\_37:

(25, 34778), (32, 34802), (42, 34844), (47, 34862), (51, 34877), (Start: 87 @34982 has 415 MA's), (97, 35012), (102, 35024), (113, 35063), (118, 35078), (131, 35132), (144, 35177), (146, 35183), (148, 35189), (150, 35195), (157, 35240), (158, 35243), (164, 35270), (187, 35330), (190, 35351), (215, 35429),

Gene: Prickles\_36 Start: 34338, Stop: 34985, Start Num: 85

Candidate Starts for Prickles\_36:

(39, 34188), (67, 34299), (Start: 84 @34335 has 90 MA's), (Start: 85 @34338 has 172 MA's), (Start: 111 @34419 has 1 MA's), (146, 34554), (164, 34641), (181, 34686), (196, 34764), (214, 34815), (221, 34842), (223, 34860), (240, 34938), (249, 34971), (253, 34977),

Gene: Prince\_33 Start: 34689, Stop: 35336, Start Num: 64

Candidate Starts for Prince\_33:

(Start: 64 @34689 has 25 MA's), (100, 34767), (104, 34779), (122, 34851), (133, 34875), (139, 34896), (140, 34905), (141, 34908), (144, 34917), (145, 34920), (155, 34965), (166, 35019), (173, 35037), (190, 35097), (195, 35109), (215, 35169), (221, 35193), (223, 35211), (243, 35298), (251, 35325),

Gene: Prince\_34 Start: 35333, Stop: 35938, Start Num: 87

Candidate Starts for Prince\_34:

(Start: 87 @35333 has 415 MA's), (97, 35369), (108, 35396), (113, 35420), (114, 35423), (127, 35483), (131, 35489), (144, 35534), (147, 35543), (148, 35546), (149, 35549), (154, 35576), (157, 35597), (188, 35693), (190, 35708), (208, 35771), (223, 35828), (243, 35906), (248, 35924),

Gene: ProfessorX\_37 Start: 34977, Stop: 35576, Start Num: 87

Candidate Starts for ProfessorX\_37:

(25, 34773), (32, 34797), (42, 34839), (47, 34857), (51, 34872), (Start: 87 @34977 has 415 MA's), (97, 35007), (102, 35019), (113, 35058), (118, 35073), (131, 35127), (144, 35172), (146, 35178), (148, 35184), (150, 35190), (157, 35235), (158, 35238), (164, 35265), (187, 35325), (190, 35346),

Gene: ProfessorX\_36 Start: 34333, Stop: 34980, Start Num: 85

Candidate Starts for ProfessorX\_36:

(39, 34183), (67, 34294), (Start: 84 @34330 has 90 MA's), (Start: 85 @34333 has 172 MA's), (Start: 111 @34414 has 1 MA's), (146, 34549), (164, 34636), (181, 34681), (196, 34759), (214, 34810), (221, 34837), (223, 34855), (240, 34933), (249, 34966), (253, 34972),

Gene: Puhltonio\_37 Start: 34998, Stop: 35597, Start Num: 87

Candidate Starts for Puhltonio\_37:

(25, 34794), (32, 34818), (42, 34860), (47, 34878), (51, 34893), (Start: 87 @34998 has 415 MA's), (97, 35028), (102, 35040), (113, 35079), (118, 35094), (131, 35148), (144, 35193), (146, 35199), (148, 35205), (150, 35211), (157, 35256), (158, 35259), (164, 35286), (187, 35346), (190, 35367), (215, 35445),

Gene: Puhltonio\_36 Start: 34351, Stop: 35001, Start Num: 84

Candidate Starts for Puhltonio\_36:

(67, 34315), (Start: 84 @34351 has 90 MA's), (Start: 85 @34354 has 172 MA's), (Start: 111 @34435 has 1 MA's), (146, 34570), (164, 34657), (181, 34702), (196, 34780), (214, 34831), (221, 34858), (223, 34876), (240, 34954), (249, 34987), (253, 34993),

Gene: QueenBeane\_37 Start: 34988, Stop: 35587, Start Num: 87

Candidate Starts for QueenBeane\_37:

(25, 34784), (32, 34808), (42, 34850), (47, 34868), (51, 34883), (Start: 87 @34988 has 415 MA's), (97, 35018), (102, 35030), (113, 35069), (118, 35084), (131, 35138), (144, 35183), (146, 35189), (148, 35195), (150, 35201), (157, 35246), (158, 35249), (164, 35276), (187, 35336), (190, 35357), (215, 35435),

Gene: QueenBeane\_36 Start: 34341, Stop: 34991, Start Num: 84

Candidate Starts for QueenBeane\_36:

(67, 34305), (Start: 84 @34341 has 90 MA's), (Start: 85 @34344 has 172 MA's), (Start: 111 @34425 has 1 MA's), (146, 34560), (164, 34647), (181, 34692), (196, 34770), (214, 34821), (221, 34848), (223, 34866), (240, 34944), (249, 34977), (253, 34983),

Gene: QueenPie\_32 Start: 34630, Stop: 35277, Start Num: 64

Candidate Starts for QueenPie\_32:

(Start: 64 @34630 has 25 MA's), (100, 34708), (104, 34720), (122, 34792), (139, 34837), (140, 34846), (141, 34849), (144, 34858), (145, 34861), (155, 34906), (173, 34978), (190, 35038), (195, 35050), (215, 35110), (221, 35134), (223, 35152), (243, 35239), (244, 35242), (251, 35266),

Gene: QueenPie\_33 Start: 35274, Stop: 35879, Start Num: 87

Candidate Starts for QueenPie\_33:

(Start: 87 @35274 has 415 MA's), (97, 35310), (113, 35361), (114, 35364), (127, 35424), (131, 35430), (144, 35475), (147, 35484), (148, 35487), (149, 35490), (154, 35517), (157, 35538), (164, 35568), (188, 35634), (190, 35649), (208, 35712), (223, 35769), (243, 35847), (248, 35865),

Gene: Quesadilla\_39 Start: 36872, Stop: 37483, Start Num: 88

Candidate Starts for Quesadilla\_39:

(51, 36764), (Start: 88 @36872 has 4 MA's), (97, 36905), (108, 36932), (113, 36956), (127, 37019), (131, 37025), (148, 37082), (157, 37133), (158, 37136), (178, 37196), (190, 37244), (200, 37280), (208, 37307), (215, 37322), (223, 37364), (232, 37409),

Gene: Quesadilla\_38 Start: 36243, Stop: 36872, Start Num: 95

Candidate Starts for Quesadilla\_38:

(30, 36030), (40, 36075), (41, 36078), (48, 36099), (50, 36108), (56, 36138), (61, 36162), (71, 36186), (75, 36195), (Start: 86 @36228 has 17 MA's), (Start: 95 @36243 has 2 MA's), (96, 36249), (115, 36321), (117, 36327), (118, 36330), (148, 36450), (154, 36480), (157, 36501), (187, 36600), (251,

36861),

Gene: Quisquilliae\_37 Start: 35016, Stop: 35615, Start Num: 87

Candidate Starts for Quisquilliae\_37:

(25, 34812), (32, 34836), (42, 34878), (47, 34896), (51, 34911), (Start: 87 @35016 has 415 MA's), (97, 35046), (102, 35058), (113, 35097), (118, 35112), (131, 35166), (144, 35211), (146, 35217), (148, 35223), (150, 35229), (157, 35274), (158, 35277), (164, 35304), (187, 35364), (190, 35385), (215, 35463),

Gene: Quisquilliae\_36 Start: 34372, Stop: 35019, Start Num: 85

Candidate Starts for Quisquilliae\_36:

(39, 34222), (67, 34333), (Start: 84 @34369 has 90 MA's), (Start: 85 @34372 has 172 MA's), (Start: 111 @34453 has 1 MA's), (146, 34588), (164, 34675), (181, 34720), (196, 34798), (214, 34849), (221, 34876), (223, 34894), (240, 34972), (249, 35005), (253, 35011),

Gene: Qyrzula\_35 Start: 35624, Stop: 36223, Start Num: 87

Candidate Starts for Qyrzula\_35:

(78, 35603), (Start: 87 @35624 has 415 MA's), (97, 35654), (105, 35675), (113, 35705), (114, 35708), (131, 35774), (146, 35825), (147, 35828), (148, 35831), (154, 35861), (157, 35882), (180, 35948), (188, 35978), (213, 36068), (215, 36071), (219, 36089), (223, 36113), (240, 36182), (248, 36209),

Gene: Qyrzula\_34 Start: 34834, Stop: 35478, Start Num: 82

Candidate Starts for Qyrzula\_34:

(21, 34633), (Start: 82 @34834 has 44 MA's), (Start: 85 @34843 has 172 MA's), (108, 34912), (114, 34939), (117, 34948), (142, 35053), (146, 35065), (150, 35077), (177, 35170), (191, 35236), (196, 35257), (201, 35272), (203, 35278), (210, 35299), (216, 35311), (251, 35467),

Gene: RagingRooster\_37 Start: 34930, Stop: 35529, Start Num: 87

Candidate Starts for RagingRooster\_37:

(Start: 87 @34930 has 415 MA's), (97, 34960), (108, 34987), (127, 35074), (150, 35143), (154, 35167), (157, 35188), (187, 35278), (208, 35362), (213, 35374), (226, 35434), (242, 35494), (248, 35515),

Gene: RagingRooster\_36 Start: 34280, Stop: 34933, Start Num: 81

Candidate Starts for RagingRooster\_36:

(Start: 81 @34280 has 45 MA's), (108, 34361), (113, 34385), (145, 34508), (179, 34634), (186, 34649), (199, 34724), (241, 34889), (242, 34892), (249, 34919),

Gene: RawrgerThat\_34 Start: 35178, Stop: 35783, Start Num: 87

Candidate Starts for RawrgerThat\_34:

(Start: 87 @35178 has 415 MA's), (97, 35214), (108, 35241), (113, 35265), (114, 35268), (127, 35328), (131, 35334), (144, 35379), (147, 35388), (148, 35391), (149, 35394), (154, 35421), (157, 35442), (164, 35472), (188, 35538), (190, 35553), (208, 35616), (223, 35673), (243, 35751), (248, 35769),

Gene: RawrgerThat\_33 Start: 34534, Stop: 35181, Start Num: 64

Candidate Starts for RawrgerThat\_33:

(Start: 64 @34534 has 25 MA's), (100, 34612), (104, 34624), (122, 34696), (140, 34750), (141, 34753), (144, 34762), (155, 34810), (166, 34864), (173, 34882), (190, 34942), (195, 34954), (221, 35038), (223, 35056), (243, 35143), (244, 35146), (251, 35170),

Gene: RedMaple\_36 Start: 34995, Stop: 35594, Start Num: 87

Candidate Starts for RedMaple\_36:

(25, 34791), (32, 34815), (42, 34857), (47, 34875), (51, 34890), (Start: 87 @34995 has 415 MA's), (97, 35025), (102, 35037), (113, 35076), (118, 35091), (131, 35145), (144, 35190), (146, 35196), (148, 35202), (150, 35208), (157, 35253), (158, 35256), (164, 35283), (187, 35343), (190, 35364), (215, 35442),

Gene: RedMaple\_35 Start: 34351, Stop: 34998, Start Num: 85

Candidate Starts for RedMaple\_35:

(39, 34201), (67, 34312), (Start: 84 @34348 has 90 MA's), (Start: 85 @34351 has 172 MA's), (Start: 111 @34432 has 1 MA's), (146, 34567), (164, 34654), (181, 34699), (196, 34777), (214, 34828), (221, 34855), (223, 34873), (240, 34951), (249, 34984), (253, 34990),

Gene: Reprobate\_36 Start: 35864, Stop: 36475, Start Num: 87

Candidate Starts for Reprobate\_36:

(31, 35687), (46, 35744), (51, 35759), (Start: 87 @35864 has 415 MA's), (97, 35897), (113, 35948), (127, 36011), (131, 36017), (146, 36068), (148, 36074), (150, 36080), (158, 36128), (206, 36293), (208, 36299), (215, 36314), (243, 36443), (248, 36461),

Gene: Reprobate\_35 Start: 35238, Stop: 35867, Start Num: 86

Candidate Starts for Reprobate\_35:

(Start: 86 @35238 has 17 MA's), (103, 35292), (114, 35328), (125, 35388), (133, 35409), (142, 35445), (145, 35454), (146, 35457), (148, 35463), (157, 35514), (177, 35562), (179, 35568), (223, 35742), (245, 35835), (251, 35856),

Gene: Rhinoforte\_38 Start: 35587, Stop: 36186, Start Num: 87

Candidate Starts for Rhinoforte\_38:

(78, 35566), (Start: 87 @35587 has 415 MA's), (97, 35617), (105, 35638), (113, 35668), (114, 35671), (131, 35737), (146, 35788), (147, 35791), (148, 35794), (154, 35824), (157, 35845), (180, 35911), (188, 35941), (213, 36031), (215, 36034), (219, 36052), (223, 36076), (240, 36145), (248, 36172),

Gene: Rhinoforte\_36 Start: 34797, Stop: 35441, Start Num: 82

Candidate Starts for Rhinoforte\_36:

(34, 34632), (59, 34743), (Start: 82 @34797 has 44 MA's), (Start: 85 @34806 has 172 MA's), (108, 34875), (114, 34902), (117, 34911), (120, 34920), (146, 35028), (150, 35040), (177, 35133), (191, 35199), (196, 35220), (201, 35235), (203, 35241), (210, 35262), (216, 35274), (251, 35430),

Gene: Rich\_34 Start: 34744, Stop: 35373, Start Num: 86

Candidate Starts for Rich\_34:

(Start: 86 @34744 has 17 MA's), (110, 34822), (114, 34834), (125, 34894), (145, 34960), (148, 34969), (150, 34975), (157, 35020), (177, 35068), (179, 35074), (223, 35248), (245, 35341), (251, 35362),

Gene: Rich\_35 Start: 35480, Stop: 36088, Start Num: 87

Candidate Starts for Rich\_35:

(Start: 87 @35480 has 415 MA's), (97, 35510), (131, 35630), (137, 35645), (146, 35681), (148, 35687), (150, 35693), (158, 35741), (206, 35906), (208, 35912), (232, 36014), (243, 36056), (248, 36074),

Gene: Ricotta\_35 Start: 34070, Stop: 34717, Start Num: 85

Candidate Starts for Ricotta\_35:

(67, 34031), (Start: 84 @34067 has 90 MA's), (Start: 85 @34070 has 172 MA's), (Start: 111 @34151 has 1 MA's), (146, 34286), (164, 34373), (181, 34418), (196, 34496), (214, 34547), (221, 34574), (223, 34592), (240, 34670), (249, 34703), (253, 34709),

Gene: Ricotta\_36 Start: 34714, Stop: 35313, Start Num: 87

Candidate Starts for Ricotta\_36:

(25, 34510), (32, 34534), (42, 34576), (47, 34594), (51, 34609), (Start: 87 @34714 has 415 MA's), (97, 34744), (102, 34756), (113, 34795), (118, 34810), (131, 34864), (144, 34909), (146, 34915), (148, 34921), (150, 34927), (157, 34972), (158, 34975), (164, 35002), (187, 35062), (190, 35083), (215, 35161),

Gene: Riggan\_36 Start: 34328, Stop: 34978, Start Num: 84

Candidate Starts for Riggan\_36:

(39, 34181), (67, 34292), (Start: 84 @34328 has 90 MA's), (Start: 85 @34331 has 172 MA's), (Start: 111 @34412 has 1 MA's), (146, 34547), (164, 34634), (181, 34679), (196, 34757), (214, 34808), (221, 34835), (223, 34853), (240, 34931), (249, 34964), (253, 34970),

Gene: Riggan\_37 Start: 34975, Stop: 35574, Start Num: 87

Candidate Starts for Riggan\_37:

(25, 34771), (32, 34795), (42, 34837), (47, 34855), (51, 34870), (Start: 87 @34975 has 415 MA's), (97, 35005), (113, 35056), (118, 35071), (131, 35125), (144, 35170), (146, 35176), (148, 35182), (150, 35188), (157, 35233), (158, 35236), (164, 35263), (187, 35323), (190, 35344), (215, 35422),

Gene: Rimu\_37 Start: 34080, Stop: 34727, Start Num: 85

Candidate Starts for Rimu\_37:

(67, 34041), (Start: 84 @34077 has 90 MA's), (Start: 85 @34080 has 172 MA's), (Start: 111 @34161 has 1 MA's), (146, 34296), (164, 34383), (181, 34428), (195, 34497), (196, 34506), (214, 34557), (223, 34602), (240, 34680), (249, 34713), (253, 34719),

Gene: Rimu\_38 Start: 34724, Stop: 35323, Start Num: 87

Candidate Starts for Rimu\_38:

(24, 34517), (25, 34520), (32, 34544), (42, 34586), (47, 34604), (51, 34619), (Start: 87 @34724 has 415 MA's), (97, 34754), (102, 34766), (113, 34805), (118, 34820), (131, 34874), (144, 34919), (146, 34925), (148, 34931), (150, 34937), (157, 34982), (158, 34985), (164, 35012), (187, 35072), (190, 35093), (208, 35156), (215, 35171),

Gene: Rinkes\_37 Start: 35800, Stop: 36447, Start Num: 86

Candidate Starts for Rinkes\_37:

(79, 35779), (Start: 86 @35800 has 17 MA's), (110, 35875), (115, 35893), (117, 35899), (130, 35962), (142, 36004), (145, 36013), (146, 36016), (148, 36022), (172, 36133), (191, 36208), (214, 36280), (223, 36322), (244, 36412), (249, 36433), (251, 36436),

Gene: Rinkes\_38 Start: 36444, Stop: 37049, Start Num: 87

Candidate Starts for Rinkes\_38:

(62, 36390), (Start: 87 @36444 has 415 MA's), (92, 36450), (97, 36474), (102, 36486), (108, 36501), (110, 36516), (113, 36525), (127, 36588), (131, 36594), (144, 36639), (146, 36645), (148, 36651), (152, 36675), (154, 36681), (157, 36702), (178, 36765), (213, 36888), (215, 36891), (223, 36933), (230, 36957), (232, 36978), (242, 37017), (243, 37020), (245, 37026), (248, 37038),

Gene: Rita1961\_36 Start: 34263, Stop: 34916, Start Num: 81

Candidate Starts for Rita1961\_36:

(Start: 81 @34263 has 45 MA's), (108, 34344), (113, 34368), (145, 34491), (179, 34617), (186, 34632), (199, 34707), (241, 34872), (249, 34902),

Gene: Rita1961\_37 Start: 34913, Stop: 35512, Start Num: 87

Candidate Starts for Rita1961\_37:

(24, 34709), (Start: 87 @34913 has 415 MA's), (97, 34943), (108, 34970), (127, 35057), (131, 35063), (150, 35126), (154, 35150), (187, 35261), (208, 35345), (213, 35357), (226, 35417), (248, 35498),

Gene: Robyn\_35 Start: 33915, Stop: 34562, Start Num: 85

Candidate Starts for Robyn\_35:

(39, 33765), (67, 33876), (Start: 84 @33912 has 90 MA's), (Start: 85 @33915 has 172 MA's), (Start: 111 @33996 has 1 MA's), (146, 34131), (164, 34218), (181, 34263), (196, 34341), (214, 34392), (221, 34419), (223, 34437), (240, 34515), (249, 34548), (253, 34554),

Gene: Robyn\_36 Start: 34559, Stop: 35158, Start Num: 87

Candidate Starts for Robyn\_36:

(25, 34355), (32, 34379), (42, 34421), (47, 34439), (51, 34454), (Start: 87 @34559 has 415 MA's), (97, 34589), (102, 34601), (113, 34640), (118, 34655), (131, 34709), (144, 34754), (146, 34760), (148, 34766), (150, 34772), (157, 34817), (158, 34820), (164, 34847), (187, 34907), (190, 34928), (215, 35006),

Gene: Roliet\_37 Start: 34984, Stop: 35583, Start Num: 87

Candidate Starts for Roliet\_37:

(25, 34780), (32, 34804), (42, 34846), (47, 34864), (51, 34879), (Start: 87 @34984 has 415 MA's), (97, 35014), (102, 35026), (113, 35065), (118, 35080), (131, 35134), (144, 35179), (146, 35185), (148, 35191), (150, 35197), (157, 35242), (158, 35245), (164, 35272), (187, 35332), (190, 35353), (215, 35431),

Gene: Roliet\_36 Start: 34337, Stop: 34987, Start Num: 84

Candidate Starts for Roliet\_36:

(39, 34190), (67, 34301), (Start: 84 @34337 has 90 MA's), (Start: 85 @34340 has 172 MA's), (Start: 111 @34421 has 1 MA's), (146, 34556), (164, 34643), (181, 34688), (196, 34766), (214, 34817), (221, 34844), (223, 34862), (240, 34940), (249, 34973), (253, 34979),

Gene: RomaT\_36 Start: 35053, Stop: 35706, Start Num: 81

Candidate Starts for RomaT\_36:

(Start: 81 @35053 has 45 MA's), (108, 35134), (113, 35158), (145, 35281), (179, 35407), (186, 35422), (199, 35497), (241, 35662),

Gene: RomaT\_37 Start: 35703, Stop: 36302, Start Num: 87

Candidate Starts for RomaT\_37:

(Start: 87 @35703 has 415 MA's), (97, 35733), (108, 35760), (127, 35847), (131, 35853), (150, 35916), (154, 35940), (157, 35961), (187, 36051), (208, 36135), (213, 36147), (226, 36207), (242, 36267), (248, 36288),

Gene: Roscoe\_37 Start: 34578, Stop: 35225, Start Num: 85

Candidate Starts for Roscoe\_37:

(39, 34428), (67, 34539), (Start: 84 @34575 has 90 MA's), (Start: 85 @34578 has 172 MA's), (Start: 111 @34659 has 1 MA's), (146, 34794), (164, 34881), (181, 34926), (196, 35004), (214, 35055), (221, 35082), (223, 35100), (240, 35178), (249, 35211), (253, 35217),

Gene: Roscoe\_38 Start: 35222, Stop: 35821, Start Num: 87

Candidate Starts for Roscoe\_38:

(25, 35018), (32, 35042), (42, 35084), (47, 35102), (51, 35117), (Start: 87 @35222 has 415 MA's), (97, 35252), (102, 35264), (113, 35303), (118, 35318), (131, 35372), (144, 35417), (146, 35423), (148, 35429), (150, 35435), (157, 35480), (158, 35483), (164, 35510), (187, 35570), (190, 35591),

Gene: Rosebush\_37 Start: 35594, Stop: 36193, Start Num: 87

Candidate Starts for Rosebush\_37:

(78, 35573), (Start: 87 @35594 has 415 MA's), (97, 35624), (105, 35645), (113, 35675), (114, 35678), (131, 35744), (146, 35795), (147, 35798), (148, 35801), (154, 35831), (157, 35852), (180, 35918), (188, 35948), (213, 36038), (215, 36041), (219, 36059), (223, 36083), (240, 36152), (248, 36179),

Gene: Rosebush\_36 Start: 34804, Stop: 35448, Start Num: 82

Candidate Starts for Rosebush\_36:

(34, 34639), (59, 34750), (Start: 82 @34804 has 44 MA's), (Start: 85 @34813 has 172 MA's), (108, 34882), (114, 34909), (117, 34918), (120, 34927), (146, 35035), (150, 35047), (177, 35140), (191, 35206), (196, 35227), (201, 35242), (203, 35248), (210, 35269), (216, 35281), (251, 35437),

Gene: Roy17\_37 Start: 34688, Stop: 35287, Start Num: 87

Candidate Starts for Roy17\_37:

(25, 34484), (32, 34508), (42, 34550), (47, 34568), (51, 34583), (Start: 87 @34688 has 415 MA's), (97, 34718), (102, 34730), (113, 34769), (118, 34784), (131, 34838), (144, 34883), (146, 34889), (148, 34895), (150, 34901), (157, 34946), (158, 34949), (164, 34976), (187, 35036), (190, 35057),

Gene: Roy17\_36 Start: 34044, Stop: 34691, Start Num: 85

Candidate Starts for Roy17\_36:

(39, 33894), (67, 34005), (Start: 84 @34041 has 90 MA's), (Start: 85 @34044 has 172 MA's), (Start: 111 @34125 has 1 MA's), (146, 34260), (164, 34347), (181, 34392), (196, 34470), (214, 34521), (221, 34548), (223, 34566), (240, 34644), (249, 34677), (253, 34683),

Gene: SDcharge11\_37 Start: 34962, Stop: 35561, Start Num: 87

Candidate Starts for SDcharge11\_37:

(25, 34758), (32, 34782), (42, 34824), (47, 34842), (51, 34857), (Start: 87 @34962 has 415 MA's), (97, 34992), (102, 35004), (113, 35043), (118, 35058), (131, 35112), (144, 35157), (146, 35163), (148, 35169), (150, 35175), (157, 35220), (158, 35223), (164, 35250), (187, 35310), (190, 35331), (215, 35409),

Gene: SDcharge11\_36 Start: 34315, Stop: 34965, Start Num: 84

Candidate Starts for SDcharge11\_36:

(39, 34168), (67, 34279), (Start: 84 @34315 has 90 MA's), (Start: 85 @34318 has 172 MA's), (Start: 111 @34399 has 1 MA's), (146, 34534), (164, 34621), (181, 34666), (196, 34744), (214, 34795), (221, 34822), (223, 34840), (240, 34918), (249, 34951), (253, 34957),

Gene: Sabella\_37 Start: 35471, Stop: 36070, Start Num: 87

Candidate Starts for Sabella\_37:

(78, 35450), (Start: 87 @35471 has 415 MA's), (97, 35501), (105, 35522), (113, 35552), (114, 35555), (131, 35621), (146, 35672), (147, 35675), (148, 35678), (154, 35708), (157, 35729), (180, 35795), (188, 35825), (213, 35915), (215, 35918), (219, 35936), (223, 35960), (240, 36029), (248, 36056),

Gene: Sabella\_36 Start: 34681, Stop: 35325, Start Num: 82

Candidate Starts for Sabella\_36:

(34, 34516), (59, 34627), (Start: 82 @34681 has 44 MA's), (Start: 85 @34690 has 172 MA's), (108, 34759), (114, 34786), (117, 34795), (120, 34804), (146, 34912), (150, 34924), (177, 35017), (191, 35083), (196, 35104), (201, 35119), (203, 35125), (210, 35146), (216, 35158), (251, 35314),

Gene: Saguaro\_37 Start: 35881, Stop: 36525, Start Num: 86

Candidate Starts for Saguaro\_37:

(80, 35872), (Start: 86 @35881 has 17 MA's), (Start: 95 @35896 has 2 MA's), (97, 35914), (110, 35959), (117, 35980), (137, 36061), (146, 36097), (157, 36154), (177, 36220), (179, 36226), (191, 36286), (246, 36499), (251, 36514),



Gene: Saguaro\_38 Start: 36522, Stop: 37121, Start Num: 87

Candidate Starts for Saguaro\_38:

(8, 36129), (25, 36321), (32, 36345), (62, 36468), (Start: 87 @36522 has 415 MA's), (97, 36552), (110, 36594), (127, 36666), (131, 36672), (146, 36723), (148, 36729), (150, 36735), (157, 36780), (158, 36783), (208, 36954), (213, 36966), (215, 36969),

Gene: Samaymay\_36 Start: 34344, Stop: 34991, Start Num: 85

Candidate Starts for Samaymay\_36:

(67, 34305), (Start: 84 @34341 has 90 MA's), (Start: 85 @34344 has 172 MA's), (Start: 111 @34425 has 1 MA's), (146, 34560), (164, 34647), (181, 34692), (196, 34770), (214, 34821), (221, 34848), (223, 34866), (240, 34944), (249, 34977), (253, 34983),

Gene: Samaymay\_37 Start: 34988, Stop: 35587, Start Num: 87

Candidate Starts for Samaymay\_37:

(25, 34784), (32, 34808), (42, 34850), (47, 34868), (51, 34883), (Start: 87 @34988 has 415 MA's), (97, 35018), (102, 35030), (113, 35069), (118, 35084), (131, 35138), (144, 35183), (146, 35189), (148, 35195), (150, 35201), (157, 35246), (158, 35249), (164, 35276), (187, 35336), (190, 35357), (215, 35435),

Gene: SassyCat97\_36 Start: 34694, Stop: 35293, Start Num: 87

Candidate Starts for SassyCat97\_36:

(25, 34490), (32, 34514), (42, 34556), (47, 34574), (51, 34589), (Start: 87 @34694 has 415 MA's), (97, 34724), (102, 34736), (113, 34775), (118, 34790), (131, 34844), (144, 34889), (146, 34895), (148, 34901), (150, 34907), (157, 34952), (158, 34955), (164, 34982), (187, 35042), (190, 35063), (215, 35141),

Gene: SassyCat97\_35 Start: 34050, Stop: 34697, Start Num: 85

Candidate Starts for SassyCat97\_35:

(67, 34011), (Start: 84 @34047 has 90 MA's), (Start: 85 @34050 has 172 MA's), (Start: 111 @34131 has 1 MA's), (146, 34266), (164, 34353), (181, 34398), (196, 34476), (214, 34527), (221, 34554), (223, 34572), (240, 34650), (249, 34683), (253, 34689),

Gene: Schadenfreude\_35 Start: 33901, Stop: 34548, Start Num: 85

Candidate Starts for Schadenfreude\_35:

(39, 33751), (67, 33862), (Start: 84 @33898 has 90 MA's), (Start: 85 @33901 has 172 MA's), (Start: 111 @33982 has 1 MA's), (146, 34117), (164, 34204), (181, 34249), (196, 34327), (214, 34378), (221, 34405), (223, 34423), (240, 34501), (249, 34534), (253, 34540),

Gene: Schadenfreude\_36 Start: 34545, Stop: 35144, Start Num: 87

Candidate Starts for Schadenfreude\_36:

(25, 34341), (32, 34365), (42, 34407), (47, 34425), (51, 34440), (Start: 87 @34545 has 415 MA's), (97, 34575), (102, 34587), (113, 34626), (118, 34641), (131, 34695), (144, 34740), (146, 34746), (148, 34752), (150, 34758), (157, 34803), (158, 34806), (164, 34833), (187, 34893), (190, 34914), (215, 34992),

Gene: Schueller\_36 Start: 34066, Stop: 34713, Start Num: 85

Candidate Starts for Schueller\_36:

(67, 34027), (Start: 84 @34063 has 90 MA's), (Start: 85 @34066 has 172 MA's), (Start: 111 @34147 has 1 MA's), (146, 34282), (164, 34369), (181, 34414), (196, 34492), (214, 34543), (221, 34570), (223, 34588), (240, 34666), (249, 34699), (253, 34705),

Gene: Schueller\_37 Start: 34710, Stop: 35309, Start Num: 87

Candidate Starts for Schueller\_37:

(24, 34503), (25, 34506), (32, 34530), (42, 34572), (47, 34590), (51, 34605), (Start: 87 @34710 has 415 MA's), (97, 34740), (102, 34752), (113, 34791), (118, 34806), (131, 34860), (144, 34905), (146, 34911), (148, 34917), (150, 34923), (157, 34968), (158, 34971), (164, 34998), (187, 35058), (190, 35079), (208, 35142), (215, 35157),

Gene: Scoot17C\_37 Start: 34987, Stop: 35586, Start Num: 87

Candidate Starts for Scoot17C\_37:

(25, 34783), (32, 34807), (42, 34849), (47, 34867), (51, 34882), (Start: 87 @34987 has 415 MA's), (97, 35017), (102, 35029), (113, 35068), (118, 35083), (131, 35137), (144, 35182), (146, 35188), (148, 35194), (150, 35200), (157, 35245), (158, 35248), (164, 35275), (187, 35335), (190, 35356), (215, 35434),

Gene: Scoot17C\_36 Start: 34340, Stop: 34990, Start Num: 84

Candidate Starts for Scoot17C\_36:

(67, 34304), (Start: 84 @34340 has 90 MA's), (Start: 85 @34343 has 172 MA's), (Start: 111 @34424 has 1 MA's), (146, 34559), (164, 34646), (181, 34691), (196, 34769), (214, 34820), (221, 34847), (223, 34865), (240, 34943), (249, 34976), (253, 34982),

Gene: Scrick\_37 Start: 34712, Stop: 35311, Start Num: 87

Candidate Starts for Scrick\_37:

(25, 34508), (32, 34532), (42, 34574), (47, 34592), (51, 34607), (Start: 87 @34712 has 415 MA's), (97, 34742), (102, 34754), (113, 34793), (118, 34808), (131, 34862), (144, 34907), (146, 34913), (148, 34919), (150, 34925), (157, 34970), (158, 34973), (164, 35000), (187, 35060), (190, 35081), (215, 35159),

Gene: Scrick\_36 Start: 34068, Stop: 34715, Start Num: 85

Candidate Starts for Scrick\_36:

(67, 34029), (Start: 84 @34065 has 90 MA's), (Start: 85 @34068 has 172 MA's), (Start: 111 @34149 has 1 MA's), (146, 34284), (164, 34371), (181, 34416), (196, 34494), (214, 34545), (221, 34572), (223, 34590), (240, 34668), (249, 34701), (253, 34707),

Gene: Sejanus\_32 Start: 32369, Stop: 32968, Start Num: 87

Candidate Starts for Sejanus\_32:

(42, 32231), (47, 32249), (70, 32333), (Start: 87 @32369 has 415 MA's), (Start: 95 @32381 has 2 MA's), (97, 32399), (108, 32426), (127, 32513), (146, 32570), (148, 32576), (194, 32753), (208, 32801), (244, 32939), (248, 32954),

Gene: Sejanus\_31 Start: 31728, Stop: 32372, Start Num: 82

Candidate Starts for Sejanus\_31:

(20, 31488), (59, 31662), (Start: 82 @31728 has 44 MA's), (105, 31800), (114, 31833), (117, 31842), (122, 31875), (125, 31893), (132, 31908), (142, 31947), (150, 31971), (157, 32016), (177, 32064), (179, 32070), (195, 32142), (196, 32151), (199, 32160), (210, 32193), (223, 32247), (249, 32358), (251, 32361),

Gene: Selr12\_37 Start: 34715, Stop: 35314, Start Num: 87

Candidate Starts for Selr12\_37:

(25, 34511), (32, 34535), (42, 34577), (47, 34595), (51, 34610), (Start: 87 @34715 has 415 MA's), (97, 34745), (102, 34757), (113, 34796), (118, 34811), (131, 34865), (144, 34910), (146, 34916), (148, 34922), (150, 34928), (157, 34973), (158, 34976), (164, 35003), (187, 35063), (190, 35084), (215, 35162),

Gene: Selr12\_36 Start: 34071, Stop: 34718, Start Num: 85

Candidate Starts for Selr12\_36:

(67, 34032), (Start: 84 @34068 has 90 MA's), (Start: 85 @34071 has 172 MA's), (Start: 111 @34152 has 1 MA's), (146, 34287), (164, 34374), (181, 34419), (196, 34497), (214, 34548), (221, 34575), (223, 34593), (240, 34671), (249, 34704), (253, 34710),

Gene: Serendipitous\_35 Start: 35431, Stop: 36039, Start Num: 87

Candidate Starts for Serendipitous\_35:

(Start: 87 @35431 has 415 MA's), (97, 35461), (113, 35512), (127, 35575), (131, 35581), (146, 35632), (148, 35638), (150, 35644), (158, 35692), (206, 35857), (208, 35863), (211, 35869), (215, 35878), (232, 35965), (243, 36007), (248, 36025),

Gene: Serendipitous\_34 Start: 34805, Stop: 35434, Start Num: 86

Candidate Starts for Serendipitous\_34:

(Start: 86 @34805 has 17 MA's), (110, 34883), (114, 34895), (145, 35021), (148, 35030), (150, 35036), (177, 35129), (179, 35135), (223, 35309), (251, 35423),

Gene: Serendipity\_37 Start: 35012, Stop: 35611, Start Num: 87

Candidate Starts for Serendipity\_37:

(25, 34808), (32, 34832), (42, 34874), (47, 34892), (51, 34907), (Start: 87 @35012 has 415 MA's), (97, 35042), (102, 35054), (113, 35093), (118, 35108), (131, 35162), (144, 35207), (146, 35213), (148, 35219), (150, 35225), (157, 35270), (158, 35273), (164, 35300), (187, 35360), (190, 35381), (215, 35459),

Gene: Serendipity\_36 Start: 34365, Stop: 35015, Start Num: 84

Candidate Starts for Serendipity\_36:

(67, 34329), (Start: 84 @34365 has 90 MA's), (Start: 85 @34368 has 172 MA's), (Start: 111 @34449 has 1 MA's), (146, 34584), (164, 34671), (181, 34716), (196, 34794), (214, 34845), (221, 34872), (223, 34890), (240, 34968), (249, 35001), (253, 35007),

Gene: Serpentine\_0037 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for Serpentine\_0037:

(24, 34786), (25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Serpentine\_0036 Start: 34346, Stop: 34996, Start Num: 84

Candidate Starts for Serpentine\_0036:

(67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: Shatter\_29 Start: 27488, Stop: 28102, Start Num: 91

Candidate Starts for Shatter\_29:

(43, 27338), (Start: 91 @27488 has 16 MA's), (96, 27503), (Start: 99 @27521 has 1 MA's), (110, 27557), (118, 27581), (124, 27620), (145, 27689), (146, 27692), (147, 27695), (177, 27797), (236, 28034), (240, 28055), (242, 28061), (251, 28091),

Gene: Shatter\_30 Start: 28099, Stop: 28731, Start Num: 87

Candidate Starts for Shatter\_30:

(32, 27922), (Start: 87 @28099 has 415 MA's), (97, 28132), (108, 28159), (131, 28252), (145, 28300), (148, 28309), (157, 28360), (178, 28423), (180, 28426), (195, 28489), (215, 28549), (217, 28558), (219, 28567), (245, 28705),

Gene: Sheila\_36 Start: 34386, Stop: 35033, Start Num: 85

Candidate Starts for Sheila\_36:

(39, 34236), (67, 34347), (Start: 84 @34383 has 90 MA's), (Start: 85 @34386 has 172 MA's), (Start: 111 @34467 has 1 MA's), (146, 34602), (164, 34689), (181, 34734), (196, 34812), (214, 34863), (221, 34890), (223, 34908), (240, 34986), (249, 35019), (253, 35025),

Gene: Sheila\_37 Start: 35030, Stop: 35629, Start Num: 87

Candidate Starts for Sheila\_37:

(25, 34826), (32, 34850), (42, 34892), (47, 34910), (51, 34925), (Start: 87 @35030 has 415 MA's), (97, 35060), (102, 35072), (113, 35111), (118, 35126), (119, 35129), (131, 35180), (144, 35225), (146, 35231), (148, 35237), (150, 35243), (157, 35288), (158, 35291), (164, 35318), (187, 35378), (190, 35399), (215, 35477),

Gene: Shenyu\_36 Start: 35657, Stop: 36268, Start Num: 87

Candidate Starts for Shenyu\_36:

(54, 35564), (55, 35570), (63, 35600), (65, 35609), (68, 35615), (Start: 87 @35657 has 415 MA's), (97, 35690), (113, 35741), (127, 35804), (131, 35810), (146, 35861), (148, 35867), (150, 35873), (158, 35921), (206, 36086), (208, 36092), (232, 36194), (243, 36236), (248, 36254),

Gene: Shenyu\_35 Start: 34921, Stop: 35550, Start Num: 86

Candidate Starts for Shenyu\_35:

(Start: 86 @34921 has 17 MA's), (110, 34999), (114, 35011), (145, 35137), (148, 35146), (150, 35152), (157, 35197), (177, 35245), (179, 35251), (223, 35425), (251, 35539),

Gene: ShiVal\_36 Start: 34339, Stop: 34989, Start Num: 84

Candidate Starts for ShiVal\_36:

(39, 34192), (67, 34303), (Start: 84 @34339 has 90 MA's), (Start: 85 @34342 has 172 MA's), (Start: 111 @34423 has 1 MA's), (146, 34558), (164, 34645), (181, 34690), (196, 34768), (214, 34819), (221, 34846), (223, 34864), (240, 34942), (249, 34975), (253, 34981),

Gene: ShiVal\_37 Start: 34986, Stop: 35585, Start Num: 87

Candidate Starts for ShiVal\_37:

(25, 34782), (32, 34806), (42, 34848), (47, 34866), (51, 34881), (Start: 87 @34986 has 415 MA's), (97, 35016), (102, 35028), (113, 35067), (118, 35082), (131, 35136), (144, 35181), (146, 35187), (148, 35193), (150, 35199), (157, 35244), (158, 35247), (164, 35274), (187, 35334), (190, 35355),

Gene: Sigman\_36 Start: 34334, Stop: 34981, Start Num: 85

Candidate Starts for Sigman\_36:

(67, 34295), (Start: 84 @34331 has 90 MA's), (Start: 85 @34334 has 172 MA's), (Start: 111 @34415 has 1 MA's), (146, 34550), (164, 34637), (181, 34682), (196, 34760), (214, 34811), (221, 34838), (223, 34856), (240, 34934), (249, 34967), (253, 34973),

Gene: Sigman\_37 Start: 34978, Stop: 35577, Start Num: 87

Candidate Starts for Sigman\_37:

(25, 34774), (32, 34798), (42, 34840), (47, 34858), (51, 34873), (Start: 87 @34978 has 415 MA's), (97, 35008), (102, 35020), (113, 35059), (118, 35074), (131, 35128), (144, 35173), (146, 35179), (148, 35185), (150, 35191), (157, 35236), (158, 35239), (164, 35266), (187, 35326), (190, 35347), (215, 35425),

Gene: SilverBell\_36 Start: 34364, Stop: 35011, Start Num: 85

Candidate Starts for SilverBell\_36:

(39, 34214), (67, 34325), (Start: 84 @34361 has 90 MA's), (Start: 85 @34364 has 172 MA's), (Start: 111 @34445 has 1 MA's), (146, 34580), (164, 34667), (181, 34712), (196, 34790), (214, 34841), (221, 34868), (223, 34886), (240, 34964), (249, 34997), (253, 35003),

Gene: SilverBell\_37 Start: 35008, Stop: 35607, Start Num: 87

Candidate Starts for SilverBell\_37:

(25, 34804), (32, 34828), (42, 34870), (47, 34888), (51, 34903), (Start: 87 @35008 has 415 MA's), (97, 35038), (102, 35050), (113, 35089), (118, 35104), (131, 35158), (144, 35203), (146, 35209), (148, 35215), (150, 35221), (157, 35266), (158, 35269), (164, 35296), (187, 35356), (190, 35377), (215, 35455),

Gene: Simielle\_36 Start: 34681, Stop: 35280, Start Num: 87

Candidate Starts for Simielle\_36:

(25, 34477), (32, 34501), (42, 34543), (47, 34561), (51, 34576), (Start: 87 @34681 has 415 MA's), (97, 34711), (102, 34723), (113, 34762), (118, 34777), (131, 34831), (144, 34876), (146, 34882), (148, 34888), (150, 34894), (157, 34939), (158, 34942), (164, 34969), (187, 35029), (190, 35050),

Gene: Simielle\_35 Start: 34037, Stop: 34684, Start Num: 85

Candidate Starts for Simielle\_35:

(67, 33998), (Start: 84 @34034 has 90 MA's), (Start: 85 @34037 has 172 MA's), (Start: 111 @34118 has 1 MA's), (146, 34253), (164, 34340), (181, 34385), (196, 34463), (214, 34514), (221, 34541), (223, 34559), (240, 34637), (249, 34670), (253, 34676),

Gene: SirJeffery\_36 Start: 35585, Stop: 36193, Start Num: 87

Candidate Starts for SirJeffery\_36:

(31, 35408), (46, 35465), (Start: 87 @35585 has 415 MA's), (97, 35615), (114, 35669), (123, 35714), (127, 35729), (131, 35735), (137, 35750), (146, 35786), (148, 35792), (150, 35798), (158, 35846), (167, 35879), (208, 36017), (211, 36023), (243, 36161), (248, 36179),

Gene: SirJeffery\_35 Start: 34959, Stop: 35588, Start Num: 86

Candidate Starts for SirJeffery\_35:

(Start: 86 @34959 has 17 MA's), (110, 35037), (114, 35049), (125, 35109), (145, 35175), (148, 35184), (150, 35190), (157, 35235), (177, 35283), (179, 35289), (223, 35463), (251, 35577),

Gene: Sisko\_30 Start: 28962, Stop: 29591, Start Num: 87

Candidate Starts for Sisko\_30:

(32, 28785), (Start: 87 @28962 has 415 MA's), (97, 28992), (108, 29019), (127, 29106), (131, 29112), (145, 29160), (148, 29169), (154, 29199), (157, 29220), (169, 29265), (178, 29283), (180, 29286), (215, 29409), (217, 29418), (219, 29427),

Gene: Sisko\_29 Start: 28351, Stop: 28965, Start Num: 91

Candidate Starts for Sisko\_29:

(Start: 91 @28351 has 16 MA's), (96, 28366), (110, 28420), (118, 28444), (124, 28483), (145, 28552), (146, 28555), (155, 28594), (159, 28618), (177, 28660), (183, 28672), (191, 28726), (236, 28897), (240, 28918), (242, 28924), (251, 28954),

Gene: Skippy\_36 Start: 34332, Stop: 34979, Start Num: 85

Candidate Starts for Skippy\_36:

(39, 34182), (67, 34293), (Start: 84 @34329 has 90 MA's), (Start: 85 @34332 has 172 MA's), (Start: 111 @34413 has 1 MA's), (146, 34548), (164, 34635), (181, 34680), (196, 34758), (214, 34809), (221, 34836), (223, 34854), (240, 34932), (249, 34965), (253, 34971),

Gene: Skippy\_37 Start: 34976, Stop: 35575, Start Num: 87

Candidate Starts for Skippy\_37:

(25, 34772), (32, 34796), (42, 34838), (47, 34856), (51, 34871), (Start: 87 @34976 has 415 MA's), (97, 35006), (102, 35018), (113, 35057), (118, 35072), (131, 35126), (144, 35171), (146, 35177), (148, 35183), (150, 35189), (157, 35234), (158, 35237), (164, 35264), (187, 35324), (190, 35345), (215, 35423),

Gene: Slatt\_37 Start: 35002, Stop: 35601, Start Num: 87

Candidate Starts for Slatt\_37:

(25, 34798), (32, 34822), (42, 34864), (47, 34882), (51, 34897), (Start: 87 @35002 has 415 MA's), (97, 35032), (102, 35044), (113, 35083), (118, 35098), (131, 35152), (144, 35197), (146, 35203), (148, 35209), (150, 35215), (157, 35260), (158, 35263), (164, 35290), (187, 35350), (190, 35371), (215, 35449),

Gene: Slatt\_36 Start: 34358, Stop: 35005, Start Num: 85

Candidate Starts for Slatt\_36:

(39, 34208), (67, 34319), (Start: 84 @34355 has 90 MA's), (Start: 85 @34358 has 172 MA's), (Start: 111 @34439 has 1 MA's), (146, 34574), (164, 34661), (181, 34706), (196, 34784), (214, 34835), (221, 34862), (223, 34880), (240, 34958), (249, 34991), (253, 34997),

Gene: SlippinJimmy\_37 Start: 35695, Stop: 36294, Start Num: 87

Candidate Starts for SlippinJimmy\_37:

(Start: 87 @35695 has 415 MA's), (97, 35725), (108, 35752), (127, 35839), (131, 35845), (150, 35908), (154, 35932), (157, 35953), (187, 36043), (208, 36127), (213, 36139), (226, 36199), (242, 36259), (248, 36280),

Gene: SlippinJimmy\_36 Start: 35045, Stop: 35698, Start Num: 81

Candidate Starts for SlippinJimmy\_36:

(Start: 81 @35045 has 45 MA's), (108, 35126), (113, 35150), (145, 35273), (179, 35399), (186, 35414), (199, 35489), (241, 35654), (249, 35684),

Gene: Soile\_37 Start: 34708, Stop: 35307, Start Num: 87

Candidate Starts for Soile\_37:

(24, 34501), (25, 34504), (32, 34528), (42, 34570), (47, 34588), (51, 34603), (Start: 87 @34708 has 415 MA's), (97, 34738), (102, 34750), (113, 34789), (118, 34804), (131, 34858), (144, 34903), (146, 34909), (148, 34915), (150, 34921), (157, 34966), (158, 34969), (164, 34996), (187, 35056), (190, 35077), (208, 35140), (215, 35155),

Gene: Soile\_36 Start: 34064, Stop: 34711, Start Num: 85

Candidate Starts for Soile\_36:

(67, 34025), (Start: 84 @34061 has 90 MA's), (Start: 85 @34064 has 172 MA's), (Start: 111 @34145 has 1 MA's), (146, 34280), (164, 34367), (181, 34412), (196, 34490), (214, 34541), (221, 34568), (223, 34586), (240, 34664), (249, 34697), (253, 34703),

Gene: Solosis\_36 Start: 34703, Stop: 35302, Start Num: 87

Candidate Starts for Solosis\_36:

(25, 34499), (32, 34523), (42, 34565), (47, 34583), (51, 34598), (Start: 87 @34703 has 415 MA's), (97, 34733), (102, 34745), (113, 34784), (118, 34799), (131, 34853), (144, 34898), (146, 34904), (148, 34910), (150, 34916), (157, 34961), (158, 34964), (164, 34991), (187, 35051), (190, 35072), (215, 35150),

Gene: Solosis\_35 Start: 34059, Stop: 34706, Start Num: 85

Candidate Starts for Solosis\_35:

(67, 34020), (Start: 84 @34056 has 90 MA's), (Start: 85 @34059 has 172 MA's), (Start: 111 @34140 has 1 MA's), (146, 34275), (164, 34362), (181, 34407), (196, 34485), (214, 34536), (221, 34563), (223, 34581), (240, 34659), (249, 34692), (253, 34698),

Gene: Soos\_57 Start: 38374, Stop: 38997, Start Num: 88

Candidate Starts for Soos\_57:

(Start: 88 @38374 has 4 MA's), (130, 38533), (146, 38587), (148, 38593), (152, 38620), (229, 38896), (245, 38965), (246, 38971), (253, 38989),

Gene: Sophia\_35 Start: 34056, Stop: 34706, Start Num: 84

Candidate Starts for Sophia\_35:

(67, 34020), (Start: 84 @34056 has 90 MA's), (Start: 85 @34059 has 172 MA's), (Start: 111 @34140 has 1 MA's), (146, 34275), (164, 34362), (181, 34407), (196, 34485), (214, 34536), (221, 34563), (223, 34581), (240, 34659), (249, 34692), (253, 34698),

Gene: Sophia\_36 Start: 34703, Stop: 35302, Start Num: 87

Candidate Starts for Sophia\_36:

(25, 34499), (32, 34523), (42, 34565), (47, 34583), (51, 34598), (Start: 87 @34703 has 415 MA's), (97, 34733), (102, 34745), (113, 34784), (118, 34799), (131, 34853), (144, 34898), (146, 34904), (148, 34910), (150, 34916), (157, 34961), (158, 34964), (164, 34991), (187, 35051), (190, 35072), (215, 35150),

Gene: Soto\_37 Start: 34996, Stop: 35595, Start Num: 87

Candidate Starts for Soto\_37:

(25, 34792), (32, 34816), (42, 34858), (47, 34876), (51, 34891), (Start: 87 @34996 has 415 MA's), (97, 35026), (102, 35038), (113, 35077), (118, 35092), (131, 35146), (144, 35191), (146, 35197), (148, 35203), (150, 35209), (157, 35254), (158, 35257), (164, 35284), (187, 35344), (190, 35365), (215, 35443),

Gene: Soto\_36 Start: 34352, Stop: 34999, Start Num: 85

Candidate Starts for Soto\_36:

(39, 34202), (67, 34313), (Start: 84 @34349 has 90 MA's), (Start: 85 @34352 has 172 MA's), (Start: 111 @34433 has 1 MA's), (146, 34568), (164, 34655), (181, 34700), (196, 34778), (214, 34829), (221, 34856), (223, 34874), (240, 34952), (249, 34985), (253, 34991),

Gene: Sour\_33 Start: 31671, Stop: 32285, Start Num: 91

Candidate Starts for Sour\_33:

(Start: 91 @31671 has 16 MA's), (96, 31686), (110, 31740), (117, 31761), (124, 31803), (132, 31824), (145, 31872), (146, 31875), (155, 31914), (177, 31980), (183, 31992), (191, 32046), (195, 32058), (214, 32118), (242, 32244), (249, 32271), (251, 32274),

Gene: Sour\_35 Start: 32784, Stop: 33413, Start Num: 87

Candidate Starts for Sour\_35:

(73, 32754), (Start: 87 @32784 has 415 MA's), (Start: 95 @32796 has 2 MA's), (97, 32814), (108, 32841), (127, 32928), (131, 32934), (145, 32982), (146, 32985), (148, 32991), (150, 32997), (153, 33018), (157, 33042), (178, 33105), (180, 33108), (197, 33183), (215, 33231), (217, 33240),

Gene: Spartan300\_36 Start: 34335, Stop: 34985, Start Num: 84

Candidate Starts for Spartan300\_36:

(39, 34188), (67, 34299), (Start: 84 @34335 has 90 MA's), (Start: 85 @34338 has 172 MA's), (Start: 111 @34419 has 1 MA's), (146, 34554), (164, 34641), (181, 34686), (196, 34764), (214, 34815), (221, 34842), (223, 34860), (240, 34938), (249, 34971), (253, 34977),

Gene: Spartan300\_37 Start: 34982, Stop: 35581, Start Num: 87

Candidate Starts for Spartan300\_37:

(25, 34778), (32, 34802), (42, 34844), (47, 34862), (51, 34877), (Start: 87 @34982 has 415 MA's), (97, 35012), (102, 35024), (113, 35063), (118, 35078), (131, 35132), (144, 35177), (146, 35183), (148, 35189), (150, 35195), (157, 35240), (158, 35243), (164, 35270), (187, 35330), (190, 35351),

Gene: Squid\_37 Start: 34694, Stop: 35293, Start Num: 87

Candidate Starts for Squid\_37:

(25, 34490), (32, 34514), (42, 34556), (47, 34574), (51, 34589), (Start: 87 @34694 has 415 MA's), (97, 34724), (102, 34736), (113, 34775), (118, 34790), (131, 34844), (144, 34889), (146, 34895), (148, 34901), (150, 34907), (157, 34952), (158, 34955), (164, 34982), (187, 35042), (190, 35063), (215, 35141),

Gene: Squid\_36 Start: 34047, Stop: 34697, Start Num: 84

Candidate Starts for Squid\_36:

(67, 34011), (Start: 84 @34047 has 90 MA's), (Start: 85 @34050 has 172 MA's), (Start: 111 @34131 has 1 MA's), (146, 34266), (164, 34353), (181, 34398), (196, 34476), (214, 34527), (221, 34554), (223, 34572), (240, 34650), (249, 34683), (253, 34689),

Gene: Squiggle\_37 Start: 34706, Stop: 35305, Start Num: 87

Candidate Starts for Squiggle\_37:

(25, 34502), (32, 34526), (42, 34568), (47, 34586), (51, 34601), (Start: 87 @34706 has 415 MA's), (97, 34736), (102, 34748), (113, 34787), (118, 34802), (131, 34856), (144, 34901), (146, 34907), (148, 34913), (150, 34919), (157, 34964), (158, 34967), (164, 34994), (187, 35054), (190, 35075), (215, 35153),

Gene: Squiggle\_36 Start: 34062, Stop: 34709, Start Num: 85

Candidate Starts for Squiggle\_36:

(67, 34023), (Start: 84 @34059 has 90 MA's), (Start: 85 @34062 has 172 MA's), (Start: 111 @34143 has 1 MA's), (146, 34278), (164, 34365), (181, 34410), (196, 34488), (214, 34539), (221, 34566), (223, 34584), (240, 34662), (249, 34695), (253, 34701),

Gene: StAugustine\_42 Start: 38485, Stop: 39093, Start Num: 87

Candidate Starts for StAugustine\_42:

(62, 38431), (Start: 87 @38485 has 415 MA's), (97, 38515), (127, 38629), (137, 38650), (148, 38692), (157, 38743), (213, 38929), (215, 38932), (243, 39055), (245, 39061),

Gene: StAugustine\_41 Start: 37862, Stop: 38488, Start Num: 84

Candidate Starts for StAugustine\_41:

(Start: 84 @37862 has 90 MA's), (108, 37925), (110, 37940), (112, 37946), (118, 37964), (119, 37967), (123, 37994), (132, 38024), (133, 38027), (137, 38039), (146, 38075), (210, 38309), (235, 38417), (240, 38441), (242, 38447), (251, 38477),

Gene: Sting\_60 Start: 38813, Stop: 39436, Start Num: 88

Candidate Starts for Sting\_60:

(Start: 88 @38813 has 4 MA's), (146, 39026), (148, 39032), (152, 39059), (245, 39404), (246, 39410), (253, 39428),

Gene: Stinger\_31 Start: 33110, Stop: 33757, Start Num: 64

Candidate Starts for Stinger\_31:

(Start: 64 @33110 has 25 MA's), (100, 33188), (104, 33200), (122, 33272), (133, 33296), (140, 33326), (141, 33329), (143, 33335), (144, 33338), (155, 33386), (173, 33458), (190, 33518), (195, 33530), (221, 33614), (223, 33632), (243, 33719), (251, 33746),



Gene: Stinger\_32 Start: 33754, Stop: 34359, Start Num: 87

Candidate Starts for Stinger\_32:

(Start: 87 @33754 has 415 MA's), (97, 33790), (102, 33802), (108, 33817), (113, 33841), (131, 33910), (144, 33955), (146, 33961), (148, 33967), (149, 33970), (154, 33997), (157, 34018), (164, 34048), (187, 34108), (188, 34114), (190, 34129), (223, 34249), (243, 34327), (248, 34345),

Gene: StinkyVeggy\_37 Start: 35147, Stop: 35740, Start Num: 98

Candidate Starts for StinkyVeggy\_37:

(Start: 86 @35111 has 17 MA's), (98, 35147), (110, 35189), (114, 35201), (145, 35327), (148, 35336), (150, 35342), (157, 35387), (177, 35435), (179, 35441), (223, 35615), (251, 35729),

Gene: StinkyVeggy\_38 Start: 35737, Stop: 36345, Start Num: 87

Candidate Starts for StinkyVeggy\_38:

(Start: 87 @35737 has 415 MA's), (97, 35767), (113, 35818), (127, 35881), (131, 35887), (146, 35938), (148, 35944), (150, 35950), (158, 35998), (206, 36163), (208, 36169), (232, 36271), (243, 36313), (248, 36331),

Gene: Struggle\_35 Start: 33900, Stop: 34547, Start Num: 85

Candidate Starts for Struggle\_35:

(67, 33861), (Start: 84 @33897 has 90 MA's), (Start: 85 @33900 has 172 MA's), (Start: 111 @33981 has 1 MA's), (146, 34116), (164, 34203), (181, 34248), (195, 34317), (196, 34326), (214, 34377), (223, 34422), (240, 34500), (249, 34533), (253, 34539),

Gene: Struggle\_36 Start: 34544, Stop: 35143, Start Num: 87

Candidate Starts for Struggle\_36:

(24, 34337), (25, 34340), (32, 34364), (42, 34406), (47, 34424), (51, 34439), (Start: 87 @34544 has 415 MA's), (97, 34574), (102, 34586), (113, 34625), (118, 34640), (131, 34694), (144, 34739), (146, 34745), (148, 34751), (150, 34757), (157, 34802), (158, 34805), (164, 34832), (187, 34892), (190, 34913), (208, 34976), (215, 34991),

Gene: Suffolk\_37 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for Suffolk\_37:

(25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Suffolk\_36 Start: 34349, Stop: 34996, Start Num: 85

Candidate Starts for Suffolk\_36:

(39, 34199), (67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: Suigeneris\_35 Start: 34962, Stop: 35591, Start Num: 86

Candidate Starts for Suigeneris\_35:

(Start: 86 @34962 has 17 MA's), (110, 35040), (114, 35052), (125, 35112), (145, 35178), (148, 35187), (150, 35193), (157, 35238), (177, 35286), (179, 35292), (223, 35466), (251, 35580),

Gene: Suigeneris\_36 Start: 35588, Stop: 36196, Start Num: 87

Candidate Starts for Suigeneris\_36:

(31, 35411), (46, 35468), (Start: 87 @35588 has 415 MA's), (97, 35618), (114, 35672), (123, 35717), (127, 35732), (131, 35738), (137, 35753), (146, 35789), (148, 35795), (150, 35801), (158, 35849),

(167, 35882), (208, 36020), (211, 36026), (243, 36164), (248, 36182),

Gene: Surely\_36 Start: 34349, Stop: 34999, Start Num: 84

Candidate Starts for Surely\_36:

(67, 34313), (Start: 84 @34349 has 90 MA's), (Start: 85 @34352 has 172 MA's), (Start: 111 @34433 has 1 MA's), (146, 34568), (164, 34655), (181, 34700), (196, 34778), (214, 34829), (221, 34856), (223, 34874), (240, 34952), (249, 34985), (253, 34991),

Gene: Surely\_37 Start: 34996, Stop: 35595, Start Num: 87

Candidate Starts for Surely\_37:

(25, 34792), (32, 34816), (42, 34858), (47, 34876), (51, 34891), (Start: 87 @34996 has 415 MA's), (97, 35026), (102, 35038), (113, 35077), (118, 35092), (131, 35146), (144, 35191), (146, 35197), (148, 35203), (150, 35209), (157, 35254), (158, 35257), (164, 35284), (187, 35344), (190, 35365), (215, 35443),

Gene: Swiphy\_37 Start: 34347, Stop: 34994, Start Num: 85

Candidate Starts for Swiphy\_37:

(67, 34308), (Start: 84 @34344 has 90 MA's), (Start: 85 @34347 has 172 MA's), (Start: 111 @34428 has 1 MA's), (146, 34563), (164, 34650), (181, 34695), (195, 34764), (196, 34773), (214, 34824), (223, 34869), (240, 34947), (249, 34980), (253, 34986),

Gene: Swiphy\_38 Start: 34991, Stop: 35590, Start Num: 87

Candidate Starts for Swiphy\_38:

(24, 34784), (25, 34787), (32, 34811), (42, 34853), (47, 34871), (51, 34886), (Start: 87 @34991 has 415 MA's), (97, 35021), (102, 35033), (113, 35072), (118, 35087), (131, 35141), (144, 35186), (146, 35192), (148, 35198), (150, 35204), (157, 35249), (158, 35252), (164, 35279), (187, 35339), (190, 35360), (208, 35423), (215, 35438),

Gene: Swish\_37 Start: 34979, Stop: 35578, Start Num: 87

Candidate Starts for Swish\_37:

(25, 34775), (32, 34799), (42, 34841), (47, 34859), (51, 34874), (Start: 87 @34979 has 415 MA's), (97, 35009), (102, 35021), (113, 35060), (118, 35075), (131, 35129), (144, 35174), (146, 35180), (148, 35186), (150, 35192), (157, 35237), (158, 35240), (164, 35267), (187, 35327), (190, 35348), (215, 35426),

Gene: Swish\_36 Start: 34332, Stop: 34982, Start Num: 84

Candidate Starts for Swish\_36:

(67, 34296), (Start: 84 @34332 has 90 MA's), (Start: 85 @34335 has 172 MA's), (Start: 111 @34416 has 1 MA's), (146, 34551), (164, 34638), (181, 34683), (196, 34761), (214, 34812), (221, 34839), (223, 34857), (240, 34935), (249, 34968), (253, 34974),

Gene: SynergyX\_37 Start: 34930, Stop: 35529, Start Num: 87

Candidate Starts for SynergyX\_37:

(Start: 87 @34930 has 415 MA's), (97, 34960), (108, 34987), (127, 35074), (150, 35143), (154, 35167), (157, 35188), (187, 35278), (208, 35362), (213, 35374), (226, 35434), (242, 35494), (248, 35515),

Gene: SynergyX\_36 Start: 34280, Stop: 34933, Start Num: 81

Candidate Starts for SynergyX\_36:

(Start: 81 @34280 has 45 MA's), (108, 34361), (113, 34385), (145, 34508), (179, 34634), (186, 34649), (199, 34724), (241, 34889), (242, 34892), (249, 34919),

Gene: TA17A\_38 Start: 35461, Stop: 36060, Start Num: 87

Candidate Starts for TA17A\_38:

(78, 35440), (Start: 87 @35461 has 415 MA's), (97, 35491), (105, 35512), (113, 35542), (114, 35545), (131, 35611), (146, 35662), (147, 35665), (148, 35668), (154, 35698), (157, 35719), (180, 35785), (188, 35815), (213, 35905), (215, 35908), (219, 35926), (223, 35950), (240, 36019), (248, 36046),

Gene: TA17A\_36 Start: 34671, Stop: 35315, Start Num: 82

Candidate Starts for TA17A\_36:

(34, 34506), (59, 34617), (Start: 82 @34671 has 44 MA's), (Start: 85 @34680 has 172 MA's), (108, 34749), (114, 34776), (117, 34785), (142, 34890), (146, 34902), (150, 34914), (177, 35007), (191, 35073), (196, 35094), (201, 35109), (203, 35115), (210, 35136), (216, 35148), (251, 35304),

Gene: TPA2\_40 Start: 32816, Stop: 33403, Start Num: 87

Candidate Starts for TPA2\_40:

(23, 32609), (32, 32639), (45, 32690), (Start: 87 @32816 has 415 MA's), (97, 32843), (102, 32855), (113, 32894), (127, 32957), (131, 32963), (146, 33014), (148, 33020), (150, 33026), (158, 33074), (164, 33101), (190, 33182), (208, 33245), (215, 33260), (243, 33374),

Gene: TPA2\_39 Start: 32202, Stop: 32819, Start Num: 91

Candidate Starts for TPA2\_39:

(4, 31728), (66, 32139), (Start: 91 @32202 has 16 MA's), (94, 32208), (Start: 95 @32211 has 2 MA's), (114, 32286), (122, 32325), (137, 32373), (146, 32409), (148, 32415), (187, 32547), (201, 32616), (216, 32652), (219, 32670), (249, 32805), (251, 32808),

Gene: TallGrassMM\_36 Start: 33971, Stop: 34621, Start Num: 84

Candidate Starts for TallGrassMM\_36:

(67, 33935), (Start: 84 @33971 has 90 MA's), (Start: 85 @33974 has 172 MA's), (Start: 111 @34055 has 1 MA's), (146, 34190), (164, 34277), (181, 34322), (196, 34400), (214, 34451), (221, 34478), (223, 34496), (240, 34574), (249, 34607), (253, 34613),

Gene: TallGrassMM\_37 Start: 34618, Stop: 35217, Start Num: 87

Candidate Starts for TallGrassMM\_37:

(25, 34414), (32, 34438), (42, 34480), (47, 34498), (51, 34513), (Start: 87 @34618 has 415 MA's), (97, 34648), (102, 34660), (113, 34699), (118, 34714), (131, 34768), (144, 34813), (146, 34819), (148, 34825), (150, 34831), (157, 34876), (158, 34879), (164, 34906), (187, 34966), (190, 34987), (215, 35065),

Gene: Taptic\_30 Start: 32174, Stop: 32773, Start Num: 87

Candidate Starts for Taptic\_30:

(Start: 87 @32174 has 415 MA's), (97, 32204), (105, 32225), (108, 32231), (127, 32318), (131, 32324), (146, 32375), (150, 32387), (154, 32411), (157, 32432), (161, 32450), (167, 32468), (178, 32495), (221, 32645), (223, 32663), (242, 32738), (248, 32759),

Gene: Taptic\_28 Start: 31380, Stop: 32024, Start Num: 82

Candidate Starts for Taptic\_28:

(Start: 82 @31380 has 44 MA's), (89, 31398), (107, 31455), (117, 31494), (120, 31503), (132, 31560), (146, 31611), (148, 31617), (150, 31623), (165, 31698), (181, 31725), (191, 31782), (195, 31794), (203, 31824), (223, 31899), (239, 31971),

Gene: Telesworld\_36 Start: 34691, Stop: 35290, Start Num: 87

Candidate Starts for Telesworld\_36:

(25, 34487), (32, 34511), (42, 34553), (47, 34571), (51, 34586), (Start: 87 @34691 has 415 MA's), (97, 34721), (102, 34733), (113, 34772), (118, 34787), (131, 34841), (144, 34886), (146, 34892), (148, 34898), (150, 34904), (157, 34949), (158, 34952), (164, 34979), (187, 35039), (190, 35060), (215,

35138),

Gene: Telesworld\_35 Start: 34044, Stop: 34694, Start Num: 84

Candidate Starts for Telesworld\_35:

(39, 33897), (67, 34008), (Start: 84 @34044 has 90 MA's), (Start: 85 @34047 has 172 MA's), (Start: 111 @34128 has 1 MA's), (146, 34263), (164, 34350), (181, 34395), (196, 34473), (214, 34524), (221, 34551), (223, 34569), (240, 34647), (249, 34680), (253, 34686),

Gene: Thonko\_36 Start: 32845, Stop: 33450, Start Num: 87

Candidate Starts for Thonko\_36:

(9, 32461), (11, 32470), (25, 32644), (32, 32668), (51, 32740), (Start: 87 @32845 has 415 MA's), (131, 32995), (157, 33103), (161, 33121), (187, 33193), (194, 33229), (215, 33292), (223, 33334),

Gene: Thonko\_35 Start: 32189, Stop: 32848, Start Num: 74

Candidate Starts for Thonko\_35:

(40, 32072), (53, 32120), (56, 32135), (60, 32156), (61, 32159), (Start: 74 @32189 has 1 MA's), (Start: 84 @32222 has 90 MA's), (103, 32279), (110, 32303), (114, 32315), (157, 32495), (167, 32534), (177, 32543), (249, 32834),

Gene: Thora\_37 Start: 34995, Stop: 35594, Start Num: 87

Candidate Starts for Thora\_37:

(25, 34791), (32, 34815), (42, 34857), (47, 34875), (51, 34890), (Start: 87 @34995 has 415 MA's), (97, 35025), (102, 35037), (113, 35076), (118, 35091), (131, 35145), (144, 35190), (146, 35196), (148, 35202), (150, 35208), (157, 35253), (158, 35256), (164, 35283), (187, 35343), (190, 35364), (215, 35442),

Gene: Thora\_36 Start: 34351, Stop: 34998, Start Num: 85

Candidate Starts for Thora\_36:

(67, 34312), (Start: 84 @34348 has 90 MA's), (Start: 85 @34351 has 172 MA's), (Start: 111 @34432 has 1 MA's), (146, 34567), (164, 34654), (181, 34699), (196, 34777), (214, 34828), (221, 34855), (223, 34873), (240, 34951), (249, 34984), (253, 34990),

Gene: ThreeOh3D2\_36 Start: 34346, Stop: 34996, Start Num: 84

Candidate Starts for ThreeOh3D2\_36:

(67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: ThreeOh3D2\_37 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for ThreeOh3D2\_37:

(25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Thunderbird\_36 Start: 34699, Stop: 35298, Start Num: 87

Candidate Starts for Thunderbird\_36:

(24, 34492), (25, 34495), (32, 34519), (42, 34561), (47, 34579), (51, 34594), (Start: 87 @34699 has 415 MA's), (97, 34729), (102, 34741), (113, 34780), (118, 34795), (131, 34849), (144, 34894), (146, 34900), (148, 34906), (150, 34912), (157, 34957), (158, 34960), (164, 34987), (187, 35047), (190, 35068), (208, 35131), (215, 35146),

Gene: Thunderbird\_35 Start: 34055, Stop: 34702, Start Num: 85

Candidate Starts for Thunderbird\_35:

(67, 34016), (Start: 84 @34052 has 90 MA's), (Start: 85 @34055 has 172 MA's), (Start: 111 @34136 has 1 MA's), (146, 34271), (164, 34358), (181, 34403), (195, 34472), (196, 34481), (214, 34532), (223, 34577), (240, 34655), (249, 34688), (253, 34694),

Gene: Timmi\_35 Start: 34060, Stop: 34707, Start Num: 85

Candidate Starts for Timmi\_35:

(67, 34021), (Start: 84 @34057 has 90 MA's), (Start: 85 @34060 has 172 MA's), (Start: 111 @34141 has 1 MA's), (146, 34276), (164, 34363), (181, 34408), (196, 34486), (214, 34537), (221, 34564), (223, 34582), (240, 34660), (249, 34693), (253, 34699),

Gene: Timmi\_36 Start: 34704, Stop: 35303, Start Num: 87

Candidate Starts for Timmi\_36:

(25, 34500), (32, 34524), (42, 34566), (47, 34584), (51, 34599), (Start: 87 @34704 has 415 MA's), (97, 34734), (102, 34746), (113, 34785), (118, 34800), (131, 34854), (144, 34899), (146, 34905), (148, 34911), (150, 34917), (157, 34962), (158, 34965), (164, 34992), (187, 35052), (190, 35073), (215, 35151),

Gene: Tinciduntolum\_39 Start: 35599, Stop: 36198, Start Num: 87

Candidate Starts for Tinciduntolum\_39:

(78, 35578), (Start: 87 @35599 has 415 MA's), (97, 35629), (105, 35650), (113, 35680), (114, 35683), (131, 35749), (146, 35800), (147, 35803), (148, 35806), (154, 35836), (157, 35857), (180, 35923), (188, 35953), (213, 36043), (215, 36046), (219, 36064), (223, 36088), (240, 36157), (248, 36184),

Gene: Tinciduntolum\_37 Start: 34809, Stop: 35453, Start Num: 82

Candidate Starts for Tinciduntolum\_37:

(34, 34644), (59, 34755), (Start: 82 @34809 has 44 MA's), (Start: 85 @34818 has 172 MA's), (108, 34887), (114, 34914), (117, 34923), (120, 34932), (146, 35040), (150, 35052), (177, 35145), (191, 35211), (196, 35232), (201, 35247), (203, 35253), (210, 35274), (216, 35286), (251, 35442),

Gene: TomBombadil\_37 Start: 34989, Stop: 35588, Start Num: 87

Candidate Starts for TomBombadil\_37:

(25, 34785), (32, 34809), (42, 34851), (47, 34869), (51, 34884), (Start: 87 @34989 has 415 MA's), (97, 35019), (102, 35031), (113, 35070), (118, 35085), (131, 35139), (144, 35184), (146, 35190), (148, 35196), (150, 35202), (157, 35247), (158, 35250), (164, 35277), (187, 35337), (190, 35358), (215, 35436),

Gene: TomBombadil\_36 Start: 34342, Stop: 34992, Start Num: 84

Candidate Starts for TomBombadil\_36:

(67, 34306), (Start: 84 @34342 has 90 MA's), (Start: 85 @34345 has 172 MA's), (Start: 111 @34426 has 1 MA's), (146, 34561), (164, 34648), (181, 34693), (196, 34771), (214, 34822), (221, 34849), (223, 34867), (240, 34945), (249, 34978), (253, 34984),

Gene: Tomlarah\_36 Start: 34336, Stop: 34983, Start Num: 85

Candidate Starts for Tomlarah\_36:

(39, 34186), (67, 34297), (Start: 84 @34333 has 90 MA's), (Start: 85 @34336 has 172 MA's), (Start: 111 @34417 has 1 MA's), (146, 34552), (164, 34639), (181, 34684), (196, 34762), (214, 34813), (221, 34840), (223, 34858), (240, 34936), (249, 34969), (253, 34975),

Gene: Tomlarah\_37 Start: 34980, Stop: 35579, Start Num: 87

Candidate Starts for Tomlarah\_37:

(25, 34776), (32, 34800), (42, 34842), (47, 34860), (51, 34875), (Start: 87 @34980 has 415 MA's), (97, 35010), (102, 35022), (113, 35061), (118, 35076), (131, 35130), (144, 35175), (146, 35181), (148,

35187), (150, 35193), (157, 35238), (158, 35241), (164, 35268), (187, 35328), (190, 35349),

Gene: Toni\_36 Start: 34696, Stop: 35295, Start Num: 87

Candidate Starts for Toni\_36:

(25, 34492), (32, 34516), (42, 34558), (47, 34576), (51, 34591), (Start: 87 @34696 has 415 MA's), (97, 34726), (102, 34738), (113, 34777), (118, 34792), (131, 34846), (144, 34891), (146, 34897), (148, 34903), (150, 34909), (157, 34954), (158, 34957), (164, 34984), (187, 35044), (190, 35065),

Gene: Toni\_35 Start: 34052, Stop: 34699, Start Num: 85

Candidate Starts for Toni\_35:

(67, 34013), (Start: 84 @34049 has 90 MA's), (Start: 85 @34052 has 172 MA's), (Start: 111 @34133 has 1 MA's), (146, 34268), (164, 34355), (181, 34400), (196, 34478), (214, 34529), (221, 34556), (223, 34574), (240, 34652), (249, 34685), (253, 34691),

Gene: Tonitrus\_48 Start: 36438, Stop: 37013, Start Num: 93

Candidate Starts for Tonitrus\_48:

(Start: 93 @36438 has 4 MA's), (94, 36441), (101, 36471), (103, 36480), (110, 36504), (116, 36522), (130, 36582), (133, 36588), (135, 36594), (144, 36630), (152, 36669), (155, 36675), (205, 36837), (218, 36876), (223, 36900), (225, 36906), (234, 36939), (247, 36990),

Gene: Tooj\_36 Start: 34409, Stop: 35056, Start Num: 85

Candidate Starts for Tooj\_36:

(67, 34370), (Start: 84 @34406 has 90 MA's), (Start: 85 @34409 has 172 MA's), (Start: 111 @34490 has 1 MA's), (146, 34625), (164, 34712), (181, 34757), (196, 34835), (214, 34886), (221, 34913), (223, 34931), (240, 35009), (249, 35042), (253, 35048),

Gene: Tooj\_37 Start: 35053, Stop: 35652, Start Num: 87

Candidate Starts for Tooj\_37:

(25, 34849), (32, 34873), (42, 34915), (47, 34933), (51, 34948), (Start: 87 @35053 has 415 MA's), (97, 35083), (102, 35095), (113, 35134), (118, 35149), (131, 35203), (144, 35248), (146, 35254), (148, 35260), (150, 35266), (157, 35311), (158, 35314), (164, 35341), (187, 35401), (190, 35422), (215, 35500),

Gene: Tres\_36 Start: 34684, Stop: 35328, Start Num: 82

Candidate Starts for Tres\_36:

(34, 34519), (59, 34630), (Start: 82 @34684 has 44 MA's), (Start: 85 @34693 has 172 MA's), (108, 34762), (114, 34789), (117, 34798), (120, 34807), (146, 34915), (150, 34927), (177, 35020), (191, 35086), (196, 35107), (201, 35122), (203, 35128), (210, 35149), (216, 35161), (251, 35317),

Gene: Tres\_38 Start: 35474, Stop: 36073, Start Num: 87

Candidate Starts for Tres\_38:

(78, 35453), (Start: 87 @35474 has 415 MA's), (97, 35504), (105, 35525), (113, 35555), (114, 35558), (131, 35624), (146, 35675), (147, 35678), (148, 35681), (154, 35711), (157, 35732), (180, 35798), (188, 35828), (213, 35918), (215, 35921), (219, 35939), (223, 35963), (240, 36032), (248, 36059),

Gene: True\_36 Start: 34693, Stop: 35292, Start Num: 87

Candidate Starts for True\_36:

(25, 34489), (32, 34513), (42, 34555), (47, 34573), (51, 34588), (Start: 87 @34693 has 415 MA's), (97, 34723), (102, 34735), (113, 34774), (118, 34789), (131, 34843), (144, 34888), (146, 34894), (148, 34900), (150, 34906), (157, 34951), (158, 34954), (164, 34981), (187, 35041), (190, 35062), (215, 35140),

Gene: True\_35 Start: 34049, Stop: 34696, Start Num: 85

Candidate Starts for True\_35:

(67, 34010), (Start: 84 @34046 has 90 MA's), (Start: 85 @34049 has 172 MA's), (Start: 111 @34130 has 1 MA's), (146, 34265), (164, 34352), (181, 34397), (196, 34475), (214, 34526), (221, 34553), (223, 34571), (240, 34649), (249, 34682), (253, 34688),

Gene: Trypo\_37 Start: 34989, Stop: 35588, Start Num: 87

Candidate Starts for Trypo\_37:

(24, 34782), (25, 34785), (32, 34809), (42, 34851), (47, 34869), (51, 34884), (Start: 87 @34989 has 415 MA's), (97, 35019), (102, 35031), (113, 35070), (118, 35085), (131, 35139), (144, 35184), (146, 35190), (148, 35196), (150, 35202), (157, 35247), (158, 35250), (164, 35277), (187, 35337), (190, 35358), (208, 35421), (215, 35436),

Gene: Trypo\_36 Start: 34345, Stop: 34992, Start Num: 85

Candidate Starts for Trypo\_36:

(67, 34306), (Start: 84 @34342 has 90 MA's), (Start: 85 @34345 has 172 MA's), (Start: 111 @34426 has 1 MA's), (146, 34561), (164, 34648), (181, 34693), (195, 34762), (196, 34771), (214, 34822), (223, 34867), (240, 34945), (249, 34978), (253, 34984),

Gene: Tydolla\_36 Start: 35014, Stop: 35667, Start Num: 81

Candidate Starts for Tydolla\_36:

(Start: 81 @35014 has 45 MA's), (108, 35095), (113, 35119), (145, 35242), (179, 35368), (186, 35383), (199, 35458), (241, 35623), (242, 35626), (249, 35653),

Gene: Tydolla\_37 Start: 35664, Stop: 36263, Start Num: 87

Candidate Starts for Tydolla\_37:

(Start: 87 @35664 has 415 MA's), (97, 35694), (108, 35721), (127, 35808), (131, 35814), (150, 35877), (154, 35901), (157, 35922), (187, 36012), (208, 36096), (213, 36108), (226, 36168), (248, 36249),

Gene: TyrionL\_36 Start: 34552, Stop: 35151, Start Num: 87

Candidate Starts for TyrionL\_36:

(24, 34345), (25, 34348), (32, 34372), (42, 34414), (47, 34432), (51, 34447), (Start: 87 @34552 has 415 MA's), (97, 34582), (102, 34594), (113, 34633), (118, 34648), (131, 34702), (144, 34747), (146, 34753), (148, 34759), (150, 34765), (157, 34810), (158, 34813), (164, 34840), (187, 34900), (190, 34921), (208, 34984), (215, 34999),

Gene: TyrionL\_35 Start: 33905, Stop: 34555, Start Num: 84

Candidate Starts for TyrionL\_35:

(67, 33869), (Start: 84 @33905 has 90 MA's), (Start: 85 @33908 has 172 MA's), (Start: 111 @33989 has 1 MA's), (146, 34124), (164, 34211), (181, 34256), (195, 34325), (196, 34334), (214, 34385), (223, 34430), (240, 34508), (249, 34541), (253, 34547),

Gene: UACh1\_37 Start: 35002, Stop: 35601, Start Num: 87

Candidate Starts for UACh1\_37:

(25, 34798), (32, 34822), (42, 34864), (47, 34882), (51, 34897), (Start: 87 @35002 has 415 MA's), (97, 35032), (102, 35044), (113, 35083), (118, 35098), (131, 35152), (144, 35197), (146, 35203), (148, 35209), (150, 35215), (157, 35260), (158, 35263), (164, 35290), (187, 35350), (190, 35371), (215, 35449),

Gene: UACh1\_36 Start: 34355, Stop: 35005, Start Num: 84

Candidate Starts for UACh1\_36:

(67, 34319), (Start: 84 @34355 has 90 MA's), (Start: 85 @34358 has 172 MA's), (Start: 111 @34439 has 1 MA's), (146, 34574), (164, 34661), (181, 34706), (196, 34784), (214, 34835), (221, 34862), (223,

34880), (240, 34958), (249, 34991), (253, 34997),

Gene: UncleHowie\_36 Start: 34045, Stop: 34695, Start Num: 84

Candidate Starts for UncleHowie\_36:

(67, 34009), (Start: 84 @34045 has 90 MA's), (Start: 85 @34048 has 172 MA's), (Start: 111 @34129 has 1 MA's), (146, 34264), (164, 34351), (181, 34396), (196, 34474), (214, 34525), (221, 34552), (223, 34570), (240, 34648), (249, 34681), (253, 34687),

Gene: UncleHowie\_37 Start: 34692, Stop: 35291, Start Num: 87

Candidate Starts for UncleHowie\_37:

(25, 34488), (32, 34512), (42, 34554), (47, 34572), (51, 34587), (Start: 87 @34692 has 415 MA's), (97, 34722), (102, 34734), (113, 34773), (118, 34788), (131, 34842), (144, 34887), (146, 34893), (148, 34899), (150, 34905), (157, 34950), (158, 34953), (164, 34980), (187, 35040), (190, 35061), (215, 35139),

Gene: Usavi\_37 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for Usavi\_37:

(25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Usavi\_36 Start: 34349, Stop: 34996, Start Num: 85

Candidate Starts for Usavi\_36:

(67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: Vaishali24\_35 Start: 34010, Stop: 34657, Start Num: 85

Candidate Starts for Vaishali24\_35:

(39, 33860), (67, 33971), (Start: 84 @34007 has 90 MA's), (Start: 85 @34010 has 172 MA's), (Start: 111 @34091 has 1 MA's), (146, 34226), (164, 34313), (181, 34358), (196, 34436), (214, 34487), (221, 34514), (223, 34532), (240, 34610), (249, 34643), (253, 34649),

Gene: Vaishali24\_36 Start: 34654, Stop: 35253, Start Num: 87

Candidate Starts for Vaishali24\_36:

(25, 34450), (32, 34474), (42, 34516), (47, 34534), (51, 34549), (Start: 87 @34654 has 415 MA's), (97, 34684), (102, 34696), (113, 34735), (118, 34750), (131, 34804), (144, 34849), (146, 34855), (148, 34861), (150, 34867), (157, 34912), (158, 34915), (164, 34942), (187, 35002), (190, 35023), (215, 35101),

Gene: Valjean\_36 Start: 34341, Stop: 34988, Start Num: 85

Candidate Starts for Valjean\_36:

(39, 34191), (67, 34302), (Start: 84 @34338 has 90 MA's), (Start: 85 @34341 has 172 MA's), (Start: 111 @34422 has 1 MA's), (146, 34557), (164, 34644), (181, 34689), (196, 34767), (214, 34818), (221, 34845), (223, 34863), (240, 34941), (249, 34974), (253, 34980),

Gene: Valjean\_37 Start: 34985, Stop: 35584, Start Num: 87

Candidate Starts for Valjean\_37:

(25, 34781), (32, 34805), (42, 34847), (47, 34865), (51, 34880), (Start: 87 @34985 has 415 MA's), (97, 35015), (102, 35027), (113, 35066), (118, 35081), (131, 35135), (144, 35180), (146, 35186), (148, 35192), (150, 35198), (157, 35243), (158, 35246), (164, 35273), (187, 35333), (190, 35354),



Gene: Vaticameos\_36 Start: 34036, Stop: 34686, Start Num: 84

Candidate Starts for Vaticameos\_36:

(67, 34000), (Start: 84 @34036 has 90 MA's), (Start: 85 @34039 has 172 MA's), (Start: 111 @34120 has 1 MA's), (146, 34255), (164, 34342), (181, 34387), (196, 34465), (214, 34516), (221, 34543), (223, 34561), (240, 34639), (249, 34672), (253, 34678),

Gene: Veritas\_36 Start: 34555, Stop: 35154, Start Num: 87

Candidate Starts for Veritas\_36:

(24, 34348), (25, 34351), (32, 34375), (42, 34417), (47, 34435), (51, 34450), (Start: 87 @34555 has 415 MA's), (97, 34585), (102, 34597), (113, 34636), (118, 34651), (131, 34705), (144, 34750), (146, 34756), (148, 34762), (150, 34768), (157, 34813), (158, 34816), (164, 34843), (187, 34903), (190, 34924), (208, 34987), (215, 35002),

Gene: Veritas\_35 Start: 33911, Stop: 34558, Start Num: 85

Candidate Starts for Veritas\_35:

(67, 33872), (Start: 84 @33908 has 90 MA's), (Start: 85 @33911 has 172 MA's), (Start: 111 @33992 has 1 MA's), (146, 34127), (164, 34214), (181, 34259), (195, 34328), (196, 34337), (214, 34388), (223, 34433), (240, 34511), (249, 34544), (253, 34550),

Gene: Vic9\_37 Start: 35187, Stop: 35831, Start Num: 82

Candidate Starts for Vic9\_37:

(21, 34986), (Start: 82 @35187 has 44 MA's), (Start: 85 @35196 has 172 MA's), (108, 35265), (114, 35292), (117, 35301), (120, 35310), (142, 35406), (146, 35418), (150, 35430), (177, 35523), (191, 35589), (196, 35610), (201, 35625), (203, 35631), (210, 35652), (216, 35664), (251, 35820),

Gene: Vic9\_38 Start: 35977, Stop: 36576, Start Num: 87

Candidate Starts for Vic9\_38:

(78, 35956), (Start: 87 @35977 has 415 MA's), (97, 36007), (105, 36028), (113, 36058), (114, 36061), (131, 36127), (146, 36178), (147, 36181), (148, 36184), (154, 36214), (157, 36235), (180, 36301), (188, 36331), (197, 36376), (213, 36421), (215, 36424), (219, 36442), (223, 36466), (240, 36535), (248, 36562),

Gene: Vincenzo\_34 Start: 35254, Stop: 35907, Start Num: 64

Candidate Starts for Vincenzo\_34:

(Start: 64 @35254 has 25 MA's), (106, 35347), (124, 35428), (131, 35443), (139, 35467), (140, 35476), (141, 35479), (144, 35488), (155, 35536), (166, 35590), (168, 35593), (170, 35602), (173, 35608), (175, 35611), (190, 35668), (195, 35680), (215, 35740), (221, 35764), (251, 35896),

Gene: Vincenzo\_35 Start: 35904, Stop: 36506, Start Num: 87

Candidate Starts for Vincenzo\_35:

(Start: 87 @35904 has 415 MA's), (97, 35937), (102, 35949), (127, 36051), (131, 36057), (137, 36072), (144, 36102), (146, 36108), (148, 36114), (154, 36144), (157, 36165), (180, 36231), (187, 36255), (188, 36261), (190, 36276), (193, 36288), (213, 36351), (215, 36354), (242, 36471), (243, 36474), (248, 36492),

Gene: VioletZ\_33 Start: 34605, Stop: 35252, Start Num: 64

Candidate Starts for VioletZ\_33:

(Start: 64 @34605 has 25 MA's), (100, 34683), (104, 34695), (122, 34767), (140, 34821), (141, 34824), (144, 34833), (155, 34881), (166, 34935), (173, 34953), (190, 35013), (195, 35025), (221, 35109), (223, 35127), (243, 35214), (244, 35217), (251, 35241),

Gene: VioletZ\_34 Start: 35249, Stop: 35854, Start Num: 87

Candidate Starts for VioletZ\_34:

(Start: 87 @35249 has 415 MA's), (97, 35285), (108, 35312), (113, 35336), (114, 35339), (127, 35399), (131, 35405), (144, 35450), (147, 35459), (148, 35462), (149, 35465), (154, 35492), (157, 35513), (164, 35543), (188, 35609), (190, 35624), (208, 35687), (223, 35744), (243, 35822), (248, 35840),

Gene: Virapocalypse\_37 Start: 34980, Stop: 35579, Start Num: 87

Candidate Starts for Virapocalypse\_37:

(25, 34776), (32, 34800), (42, 34842), (47, 34860), (51, 34875), (Start: 87 @34980 has 415 MA's), (97, 35010), (102, 35022), (113, 35061), (118, 35076), (131, 35130), (144, 35175), (146, 35181), (148, 35187), (150, 35193), (157, 35238), (158, 35241), (164, 35268), (187, 35328), (190, 35349), (215, 35427),

Gene: Virapocalypse\_36 Start: 34336, Stop: 34983, Start Num: 85

Candidate Starts for Virapocalypse\_36:

(39, 34186), (67, 34297), (Start: 84 @34333 has 90 MA's), (Start: 85 @34336 has 172 MA's), (Start: 111 @34417 has 1 MA's), (146, 34552), (164, 34639), (181, 34684), (196, 34762), (214, 34813), (221, 34840), (223, 34858), (240, 34936), (249, 34969), (253, 34975),

Gene: Virgeve\_36 Start: 34760, Stop: 35359, Start Num: 87

Candidate Starts for Virgeve\_36:

(25, 34556), (32, 34580), (42, 34622), (47, 34640), (51, 34655), (Start: 87 @34760 has 415 MA's), (97, 34790), (102, 34802), (113, 34841), (118, 34856), (131, 34910), (144, 34955), (146, 34961), (148, 34967), (150, 34973), (157, 35018), (158, 35021), (164, 35048), (190, 35129), (208, 35192), (215, 35207),

Gene: Virgeve\_35 Start: 34116, Stop: 34763, Start Num: 85

Candidate Starts for Virgeve\_35:

(39, 33966), (67, 34077), (Start: 84 @34113 has 90 MA's), (Start: 85 @34116 has 172 MA's), (Start: 111 @34197 has 1 MA's), (146, 34332), (164, 34419), (181, 34464), (196, 34542), (214, 34593), (221, 34620), (223, 34638), (240, 34716), (249, 34749), (253, 34755),

Gene: Vista\_36 Start: 34346, Stop: 34996, Start Num: 84

Candidate Starts for Vista\_36:

(67, 34310), (Start: 84 @34346 has 90 MA's), (Start: 85 @34349 has 172 MA's), (Start: 111 @34430 has 1 MA's), (146, 34565), (164, 34652), (181, 34697), (196, 34775), (214, 34826), (221, 34853), (223, 34871), (240, 34949), (249, 34982), (253, 34988),

Gene: Vista\_37 Start: 34993, Stop: 35592, Start Num: 87

Candidate Starts for Vista\_37:

(25, 34789), (32, 34813), (42, 34855), (47, 34873), (51, 34888), (Start: 87 @34993 has 415 MA's), (97, 35023), (102, 35035), (113, 35074), (118, 35089), (131, 35143), (144, 35188), (146, 35194), (148, 35200), (150, 35206), (157, 35251), (158, 35254), (164, 35281), (187, 35341), (190, 35362), (215, 35440),

Gene: Vivaldi\_36 Start: 34375, Stop: 35025, Start Num: 84

Candidate Starts for Vivaldi\_36:

(39, 34228), (67, 34339), (Start: 84 @34375 has 90 MA's), (Start: 85 @34378 has 172 MA's), (Start: 111 @34459 has 1 MA's), (146, 34594), (164, 34681), (181, 34726), (196, 34804), (214, 34855), (221, 34882), (223, 34900), (240, 34978), (249, 35011), (253, 35017),

Gene: Vivaldi\_37 Start: 35022, Stop: 35621, Start Num: 87

Candidate Starts for Vivaldi\_37:

(25, 34818), (32, 34842), (42, 34884), (47, 34902), (51, 34917), (Start: 87 @35022 has 415 MA's), (97, 35052), (102, 35064), (113, 35103), (118, 35118), (131, 35172), (144, 35217), (146, 35223), (148, 35229), (150, 35235), (157, 35280), (158, 35283), (164, 35310), (187, 35370), (190, 35391), (215, 35469),

Gene: Vortex\_36 Start: 34052, Stop: 34702, Start Num: 84

Candidate Starts for Vortex\_36:

(67, 34016), (Start: 84 @34052 has 90 MA's), (Start: 85 @34055 has 172 MA's), (Start: 111 @34136 has 1 MA's), (146, 34271), (164, 34358), (181, 34403), (196, 34481), (214, 34532), (221, 34559), (223, 34577), (240, 34655), (249, 34688), (253, 34694),

Gene: Vortex\_37 Start: 34699, Stop: 35298, Start Num: 87

Candidate Starts for Vortex\_37:

(25, 34495), (32, 34519), (42, 34561), (47, 34579), (51, 34594), (Start: 87 @34699 has 415 MA's), (97, 34729), (102, 34741), (113, 34780), (118, 34795), (131, 34849), (144, 34894), (146, 34900), (148, 34906), (150, 34912), (157, 34957), (158, 34960), (164, 34987), (187, 35047), (190, 35068), (215, 35146),

Gene: Waleliano\_34 Start: 35176, Stop: 35781, Start Num: 87

Candidate Starts for Waleliano\_34:

(1, 34603), (3, 34720), (7, 34774), (8, 34783), (17, 34906), (25, 34975), (32, 34999), (47, 35056), (Start: 87 @35176 has 415 MA's), (97, 35212), (108, 35239), (113, 35263), (114, 35266), (131, 35332), (144, 35377), (147, 35386), (148, 35389), (149, 35392), (154, 35419), (157, 35440), (158, 35443), (164, 35470), (188, 35536), (190, 35551), (208, 35614), (223, 35671), (243, 35749), (248, 35767),

Gene: Waleliano\_33 Start: 34532, Stop: 35179, Start Num: 64

Candidate Starts for Waleliano\_33:

(Start: 64 @34532 has 25 MA's), (100, 34610), (104, 34622), (122, 34694), (133, 34718), (139, 34739), (140, 34748), (141, 34751), (144, 34760), (155, 34808), (173, 34880), (190, 34940), (195, 34952), (215, 35012), (221, 35036), (223, 35054), (243, 35141), (244, 35144), (251, 35168),

Gene: Wallhey\_35 Start: 33909, Stop: 34559, Start Num: 84

Candidate Starts for Wallhey\_35:

(67, 33873), (Start: 84 @33909 has 90 MA's), (Start: 85 @33912 has 172 MA's), (Start: 111 @33993 has 1 MA's), (146, 34128), (164, 34215), (181, 34260), (195, 34329), (196, 34338), (214, 34389), (223, 34434), (240, 34512), (249, 34545), (253, 34551),

Gene: Wallhey\_36 Start: 34556, Stop: 35155, Start Num: 87

Candidate Starts for Wallhey\_36:

(24, 34349), (25, 34352), (32, 34376), (42, 34418), (47, 34436), (51, 34451), (Start: 87 @34556 has 415 MA's), (97, 34586), (102, 34598), (113, 34637), (118, 34652), (131, 34706), (144, 34751), (146, 34757), (148, 34763), (150, 34769), (157, 34814), (158, 34817), (164, 34844), (187, 34904), (190, 34925), (208, 34988), (215, 35003),

Gene: Waterdiva\_37 Start: 34985, Stop: 35584, Start Num: 87

Candidate Starts for Waterdiva\_37:

(25, 34781), (32, 34805), (42, 34847), (47, 34865), (51, 34880), (Start: 87 @34985 has 415 MA's), (97, 35015), (102, 35027), (113, 35066), (118, 35081), (131, 35135), (144, 35180), (146, 35186), (148, 35192), (150, 35198), (157, 35243), (158, 35246), (164, 35273), (187, 35333), (190, 35354), (215, 35432),

Gene: Waterdiva\_36 Start: 34338, Stop: 34988, Start Num: 84

Candidate Starts for Waterdiva\_36:

(67, 34302), (Start: 84 @34338 has 90 MA's), (Start: 85 @34341 has 172 MA's), (Start: 111 @34422 has 1 MA's), (146, 34557), (164, 34644), (181, 34689), (196, 34767), (214, 34818), (221, 34845), (223, 34863), (240, 34941), (249, 34974), (253, 34980),

Gene: Weher20\_36 Start: 34340, Stop: 34987, Start Num: 85

Candidate Starts for Weher20\_36:

(67, 34301), (Start: 84 @34337 has 90 MA's), (Start: 85 @34340 has 172 MA's), (Start: 111 @34421 has 1 MA's), (146, 34556), (164, 34643), (181, 34688), (195, 34757), (196, 34766), (214, 34817), (223, 34862), (240, 34940), (249, 34973), (253, 34979),

Gene: Weher20\_37 Start: 34984, Stop: 35583, Start Num: 87

Candidate Starts for Weher20\_37:

(24, 34777), (25, 34780), (32, 34804), (42, 34846), (47, 34864), (51, 34879), (Start: 87 @34984 has 415 MA's), (97, 35014), (102, 35026), (113, 35065), (118, 35080), (131, 35134), (144, 35179), (146, 35185), (148, 35191), (150, 35197), (157, 35242), (158, 35245), (164, 35272), (190, 35353), (208, 35416), (215, 35431),

Gene: West99\_36 Start: 34804, Stop: 35448, Start Num: 82

Candidate Starts for West99\_36:

(34, 34639), (59, 34750), (Start: 82 @34804 has 44 MA's), (Start: 85 @34813 has 172 MA's), (108, 34882), (114, 34909), (117, 34918), (120, 34927), (146, 35035), (150, 35047), (177, 35140), (191, 35206), (196, 35227), (201, 35242), (203, 35248), (210, 35269), (216, 35281), (251, 35437),

Gene: West99\_38 Start: 35594, Stop: 36193, Start Num: 87

Candidate Starts for West99\_38:

(78, 35573), (Start: 87 @35594 has 415 MA's), (97, 35624), (105, 35645), (113, 35675), (114, 35678), (131, 35744), (146, 35795), (147, 35798), (148, 35801), (154, 35831), (157, 35852), (180, 35918), (188, 35948), (213, 36038), (215, 36041), (219, 36059), (223, 36083), (240, 36152), (248, 36179),

Gene: Windsor\_35 Start: 34045, Stop: 34692, Start Num: 85

Candidate Starts for Windsor\_35:

(39, 33895), (67, 34006), (Start: 84 @34042 has 90 MA's), (Start: 85 @34045 has 172 MA's), (Start: 111 @34126 has 1 MA's), (146, 34261), (164, 34348), (181, 34393), (196, 34471), (214, 34522), (221, 34549), (223, 34567), (240, 34645), (249, 34678), (253, 34684),

Gene: Windsor\_36 Start: 34689, Stop: 35288, Start Num: 87

Candidate Starts for Windsor\_36:

(25, 34485), (32, 34509), (42, 34551), (47, 34569), (51, 34584), (Start: 87 @34689 has 415 MA's), (97, 34719), (102, 34731), (113, 34770), (118, 34785), (131, 34839), (144, 34884), (146, 34890), (148, 34896), (150, 34902), (157, 34947), (158, 34950), (164, 34977), (190, 35058), (208, 35121), (215, 35136),

Gene: Wooper\_32 Start: 30073, Stop: 30669, Start Num: 87

Candidate Starts for Wooper\_32:

(32, 29896), (42, 29935), (44, 29944), (47, 29953), (59, 30007), (62, 30019), (Start: 87 @30073 has 415 MA's), (97, 30103), (127, 30217), (131, 30223), (146, 30274), (148, 30280), (157, 30331), (180, 30397), (186, 30409), (197, 30472), (207, 30502), (215, 30520), (217, 30529), (248, 30655),

Gene: Wooper\_31 Start: 29462, Stop: 30076, Start Num: 91

Candidate Starts for Wooper\_31:

(33, 29270), (Start: 91 @29462 has 16 MA's), (Start: 93 @29465 has 4 MA's), (110, 29531), (115, 29546), (118, 29555), (124, 29594), (132, 29615), (137, 29630), (145, 29663), (154, 29702), (155,

29705), (157, 29723), (159, 29729), (179, 29777), (223, 29951), (242, 30035), (251, 30065),

Gene: Xavier\_35 Start: 34059, Stop: 34709, Start Num: 84

Candidate Starts for Xavier\_35:

(67, 34023), (Start: 84 @34059 has 90 MA's), (Start: 85 @34062 has 172 MA's), (Start: 111 @34143 has 1 MA's), (146, 34278), (164, 34365), (181, 34410), (196, 34488), (214, 34539), (221, 34566), (223, 34584), (240, 34662), (249, 34695), (253, 34701),

Gene: Xavier\_36 Start: 34706, Stop: 35305, Start Num: 87

Candidate Starts for Xavier\_36:

(25, 34502), (32, 34526), (42, 34568), (47, 34586), (51, 34601), (Start: 87 @34706 has 415 MA's), (97, 34736), (102, 34748), (113, 34787), (118, 34802), (131, 34856), (144, 34901), (146, 34907), (148, 34913), (150, 34919), (157, 34964), (158, 34967), (164, 34994), (187, 35054), (190, 35075), (215, 35153),

Gene: Xincheng\_32 Start: 33987, Stop: 34634, Start Num: 64

Candidate Starts for Xincheng\_32:

(Start: 64 @33987 has 25 MA's), (100, 34065), (104, 34077), (122, 34149), (133, 34173), (139, 34194), (140, 34203), (141, 34206), (144, 34215), (155, 34263), (166, 34317), (173, 34335), (190, 34395), (195, 34407), (215, 34467), (221, 34491), (223, 34509), (243, 34596), (251, 34623),

Gene: Xincheng\_33 Start: 34631, Stop: 35236, Start Num: 87

Candidate Starts for Xincheng\_33:

(Start: 87 @34631 has 415 MA's), (97, 34667), (102, 34679), (108, 34694), (113, 34718), (114, 34721), (131, 34787), (144, 34832), (147, 34841), (148, 34844), (149, 34847), (150, 34850), (154, 34874), (157, 34895), (164, 34925), (187, 34985), (190, 35006), (208, 35069), (213, 35081), (223, 35126), (243, 35204), (248, 35222),

Gene: Yago84\_29 Start: 28425, Stop: 29039, Start Num: 91

Candidate Starts for Yago84\_29:

(Start: 91 @28425 has 16 MA's), (96, 28440), (110, 28494), (118, 28518), (124, 28557), (145, 28626), (146, 28629), (155, 28668), (159, 28692), (177, 28734), (183, 28746), (191, 28800), (236, 28971), (240, 28992), (242, 28998), (251, 29028),

Gene: Yago84\_30 Start: 29036, Stop: 29665, Start Num: 87

Candidate Starts for Yago84\_30:

(32, 28859), (Start: 87 @29036 has 415 MA's), (97, 29066), (108, 29093), (127, 29180), (131, 29186), (145, 29234), (148, 29243), (154, 29273), (157, 29294), (169, 29339), (178, 29357), (180, 29360), (215, 29483), (217, 29492), (219, 29501),

Gene: Yahalom\_37 Start: 34940, Stop: 35539, Start Num: 87

Candidate Starts for Yahalom\_37:

(Start: 87 @34940 has 415 MA's), (97, 34970), (108, 34997), (127, 35084), (131, 35090), (150, 35153), (154, 35177), (157, 35198), (187, 35288), (208, 35372), (213, 35384), (226, 35444), (242, 35504), (248, 35525),

Gene: Yahalom\_36 Start: 34290, Stop: 34943, Start Num: 81

Candidate Starts for Yahalom\_36:

(Start: 81 @34290 has 45 MA's), (108, 34371), (113, 34395), (145, 34518), (179, 34644), (186, 34659), (199, 34734), (241, 34899), (249, 34929),

Gene: Yinz\_37 Start: 34966, Stop: 35565, Start Num: 87

Candidate Starts for Yinz\_37:

(24, 34762), (Start: 87 @34966 has 415 MA's), (97, 34996), (108, 35023), (127, 35110), (131, 35116), (150, 35179), (154, 35203), (187, 35314), (208, 35398), (213, 35410), (226, 35470), (248, 35551),

Gene: Yinz\_36 Start: 34316, Stop: 34969, Start Num: 81

Candidate Starts for Yinz\_36:

(Start: 81 @34316 has 45 MA's), (108, 34397), (145, 34544), (179, 34670), (186, 34685), (199, 34760), (241, 34925), (249, 34955),

Gene: Yoshand\_37 Start: 34992, Stop: 35591, Start Num: 87

Candidate Starts for Yoshand\_37:

(25, 34788), (32, 34812), (42, 34854), (47, 34872), (51, 34887), (Start: 87 @34992 has 415 MA's), (97, 35022), (102, 35034), (113, 35073), (118, 35088), (131, 35142), (144, 35187), (146, 35193), (148, 35199), (150, 35205), (157, 35250), (158, 35253), (164, 35280), (187, 35340), (190, 35361), (215, 35439),

Gene: Yoshand\_36 Start: 34345, Stop: 34995, Start Num: 84

Candidate Starts for Yoshand\_36:

(67, 34309), (Start: 84 @34345 has 90 MA's), (Start: 85 @34348 has 172 MA's), (Start: 111 @34429 has 1 MA's), (146, 34564), (164, 34651), (181, 34696), (196, 34774), (214, 34825), (221, 34852), (223, 34870), (240, 34948), (249, 34981), (253, 34987),

Gene: YouGoGlencoco\_36 Start: 34340, Stop: 34990, Start Num: 84

Candidate Starts for YouGoGlencoco\_36:

(67, 34304), (Start: 84 @34340 has 90 MA's), (Start: 85 @34343 has 172 MA's), (Start: 111 @34424 has 1 MA's), (146, 34559), (164, 34646), (181, 34691), (196, 34769), (214, 34820), (221, 34847), (223, 34865), (240, 34943), (249, 34976), (253, 34982),

Gene: YouGoGlencoco\_37 Start: 34987, Stop: 35586, Start Num: 87

Candidate Starts for YouGoGlencoco\_37:

(25, 34783), (32, 34807), (42, 34849), (47, 34867), (51, 34882), (Start: 87 @34987 has 415 MA's), (97, 35017), (102, 35029), (113, 35068), (118, 35083), (131, 35137), (144, 35182), (146, 35188), (148, 35194), (150, 35200), (157, 35245), (158, 35248), (164, 35275), (187, 35335), (190, 35356), (215, 35434),

Gene: Zaider\_37 Start: 34573, Stop: 35220, Start Num: 85

Candidate Starts for Zaider\_37:

(39, 34423), (67, 34534), (Start: 84 @34570 has 90 MA's), (Start: 85 @34573 has 172 MA's), (Start: 111 @34654 has 1 MA's), (146, 34789), (164, 34876), (181, 34921), (196, 34999), (214, 35050), (221, 35077), (223, 35095), (240, 35173), (249, 35206), (253, 35212),

Gene: Zaider\_38 Start: 35217, Stop: 35816, Start Num: 87

Candidate Starts for Zaider\_38:

(25, 35013), (32, 35037), (42, 35079), (47, 35097), (51, 35112), (Start: 87 @35217 has 415 MA's), (97, 35247), (102, 35259), (113, 35298), (118, 35313), (131, 35367), (144, 35412), (146, 35418), (148, 35424), (150, 35430), (157, 35475), (158, 35478), (164, 35505), (187, 35565), (190, 35586), (215, 35664),

Gene: Zelda\_37 Start: 35034, Stop: 35633, Start Num: 87

Candidate Starts for Zelda\_37:

(25, 34830), (32, 34854), (42, 34896), (47, 34914), (51, 34929), (Start: 87 @35034 has 415 MA's), (97, 35064), (102, 35076), (113, 35115), (118, 35130), (131, 35184), (144, 35229), (146, 35235), (148, 35241), (150, 35247), (157, 35292), (158, 35295), (164, 35322), (187, 35382), (190, 35403), (215, 35481),

Gene: Zelda\_36 Start: 34390, Stop: 35037, Start Num: 85

Candidate Starts for Zelda\_36:

(39, 34240), (67, 34351), (Start: 84 @34387 has 90 MA's), (Start: 85 @34390 has 172 MA's), (Start: 111 @34471 has 1 MA's), (146, 34606), (164, 34693), (181, 34738), (196, 34816), (214, 34867), (221, 34894), (223, 34912), (240, 34990), (249, 35023), (253, 35029),

Gene: Zemanar\_34 Start: 34535, Stop: 35182, Start Num: 64

Candidate Starts for Zemanar\_34:

(Start: 64 @34535 has 25 MA's), (100, 34613), (104, 34625), (122, 34697), (133, 34721), (140, 34751), (141, 34754), (144, 34763), (155, 34811), (166, 34865), (173, 34883), (190, 34943), (195, 34955), (221, 35039), (223, 35057), (243, 35144), (244, 35147), (251, 35171),

Gene: Zemanar\_35 Start: 35179, Stop: 35784, Start Num: 87

Candidate Starts for Zemanar\_35:

(Start: 87 @35179 has 415 MA's), (97, 35215), (108, 35242), (113, 35266), (114, 35269), (127, 35329), (131, 35335), (144, 35380), (147, 35389), (148, 35392), (149, 35395), (154, 35422), (157, 35443), (164, 35473), (188, 35539), (190, 35554), (208, 35617), (223, 35674), (243, 35752), (248, 35770),

Gene: Zenteno07\_41 Start: 34598, Stop: 35206, Start Num: 87

Candidate Starts for Zenteno07\_41:

(62, 34544), (Start: 87 @34598 has 415 MA's), (92, 34604), (97, 34628), (127, 34742), (131, 34748), (148, 34805), (215, 35045), (217, 35054), (231, 35132), (243, 35174),

Gene: Zenteno07\_40 Start: 33957, Stop: 34601, Start Num: 86

Candidate Starts for Zenteno07\_40:

(56, 33867), (61, 33891), (67, 33909), (71, 33915), (Start: 86 @33957 has 17 MA's), (115, 34050), (119, 34062), (154, 34209), (157, 34230), (171, 34284), (191, 34362), (244, 34566), (251, 34590),

Gene: Zonia\_36 Start: 34362, Stop: 35009, Start Num: 85

Candidate Starts for Zonia\_36:

(67, 34323), (Start: 84 @34359 has 90 MA's), (Start: 85 @34362 has 172 MA's), (Start: 111 @34443 has 1 MA's), (146, 34578), (164, 34665), (181, 34710), (195, 34779), (196, 34788), (214, 34839), (223, 34884), (240, 34962), (249, 34995), (253, 35001),

Gene: Zonia\_37 Start: 35006, Stop: 35605, Start Num: 87

Candidate Starts for Zonia\_37:

(24, 34799), (25, 34802), (32, 34826), (42, 34868), (47, 34886), (51, 34901), (Start: 87 @35006 has 415 MA's), (97, 35036), (102, 35048), (113, 35087), (118, 35102), (131, 35156), (144, 35201), (146, 35207), (148, 35213), (150, 35219), (157, 35264), (158, 35267), (164, 35294), (187, 35354), (190, 35375), (208, 35438), (215, 35453),