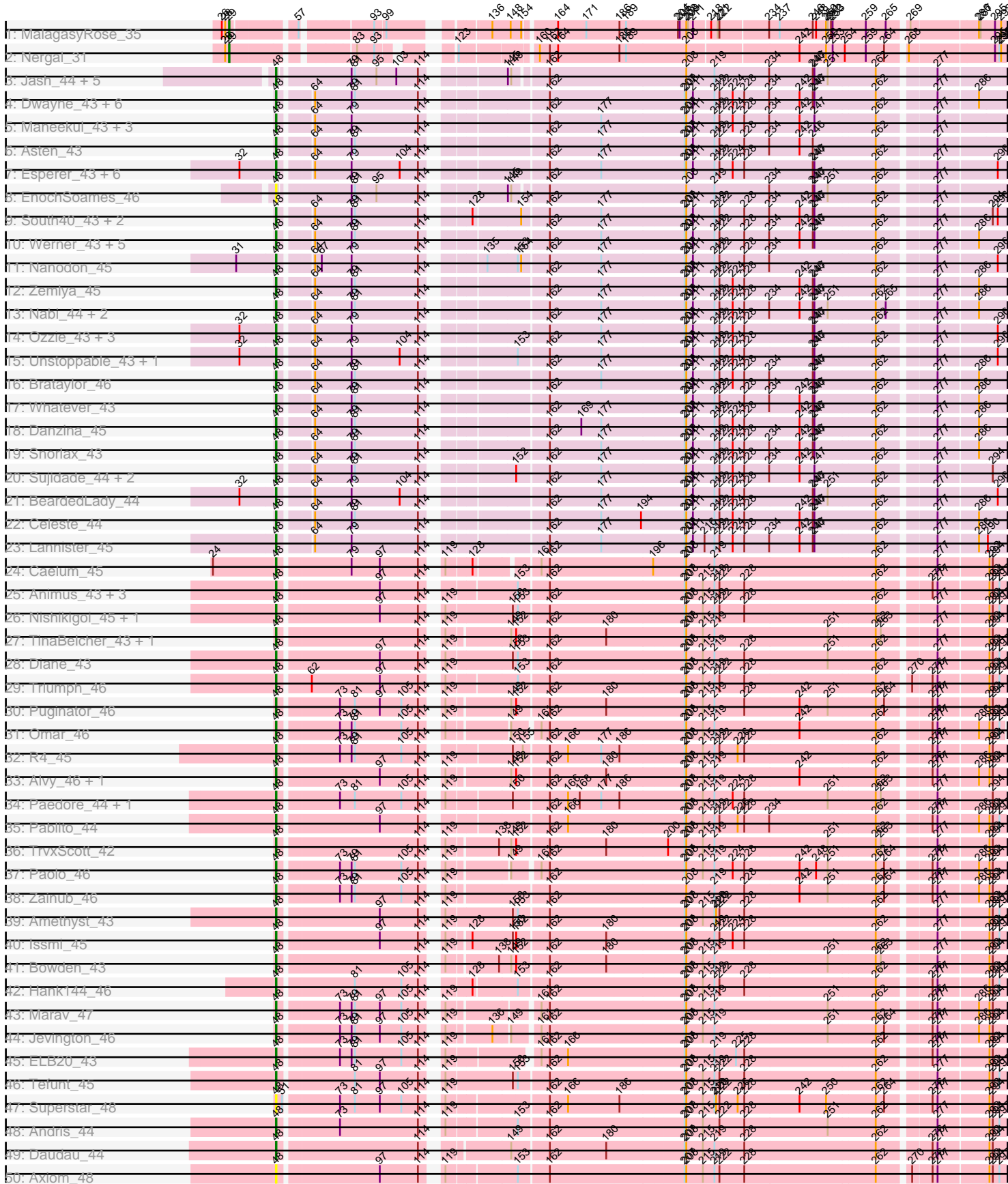
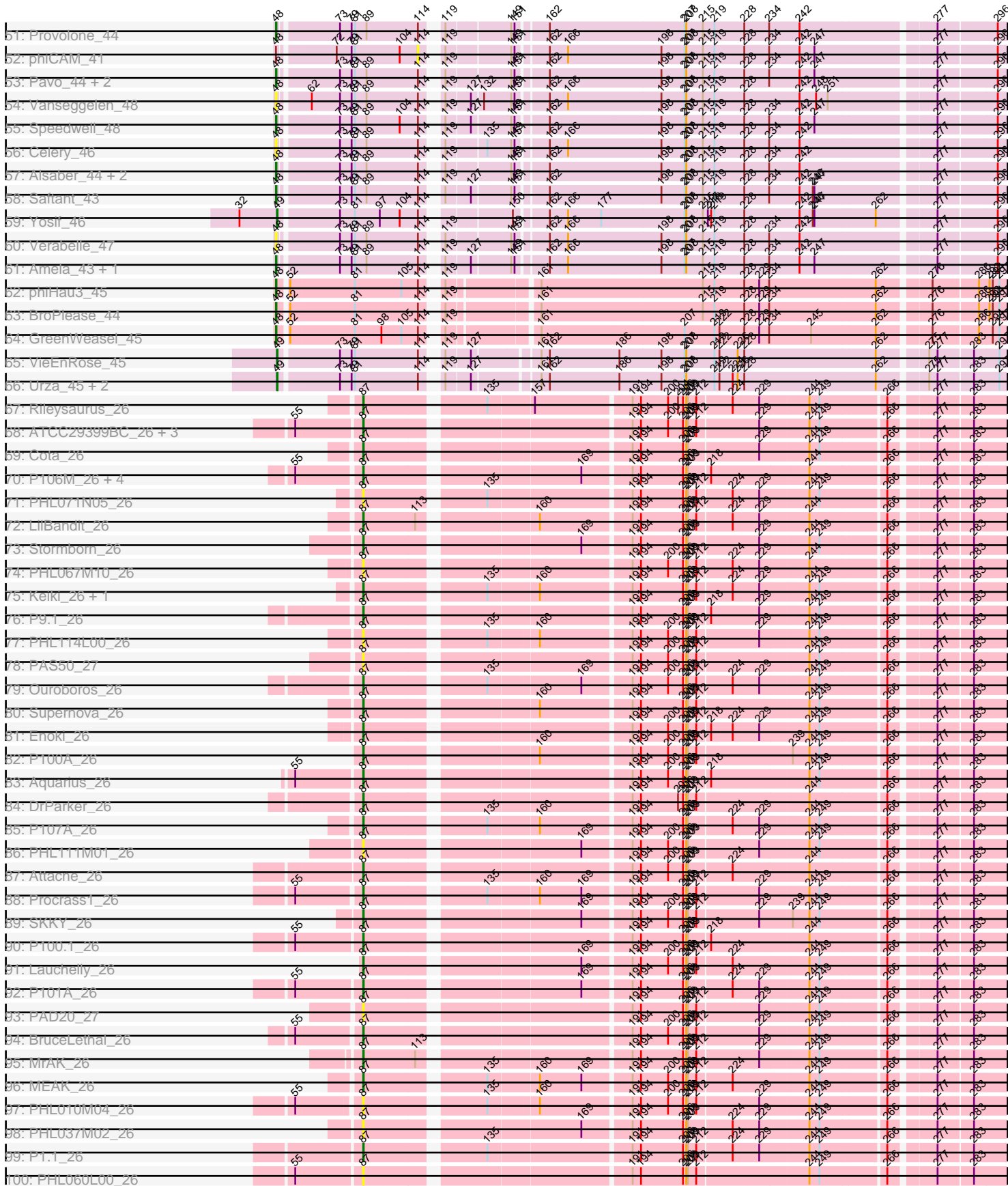


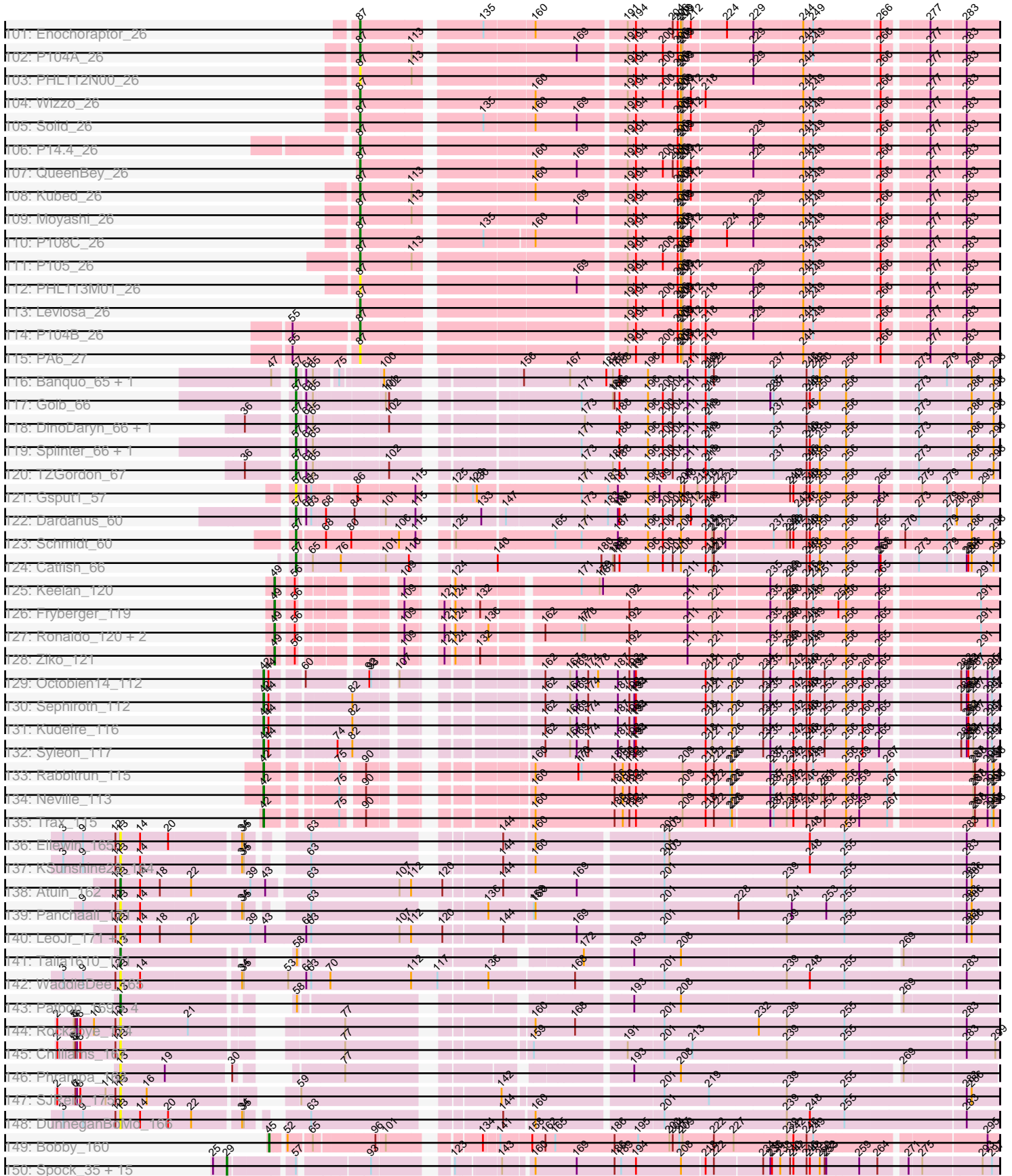
Pham 215701



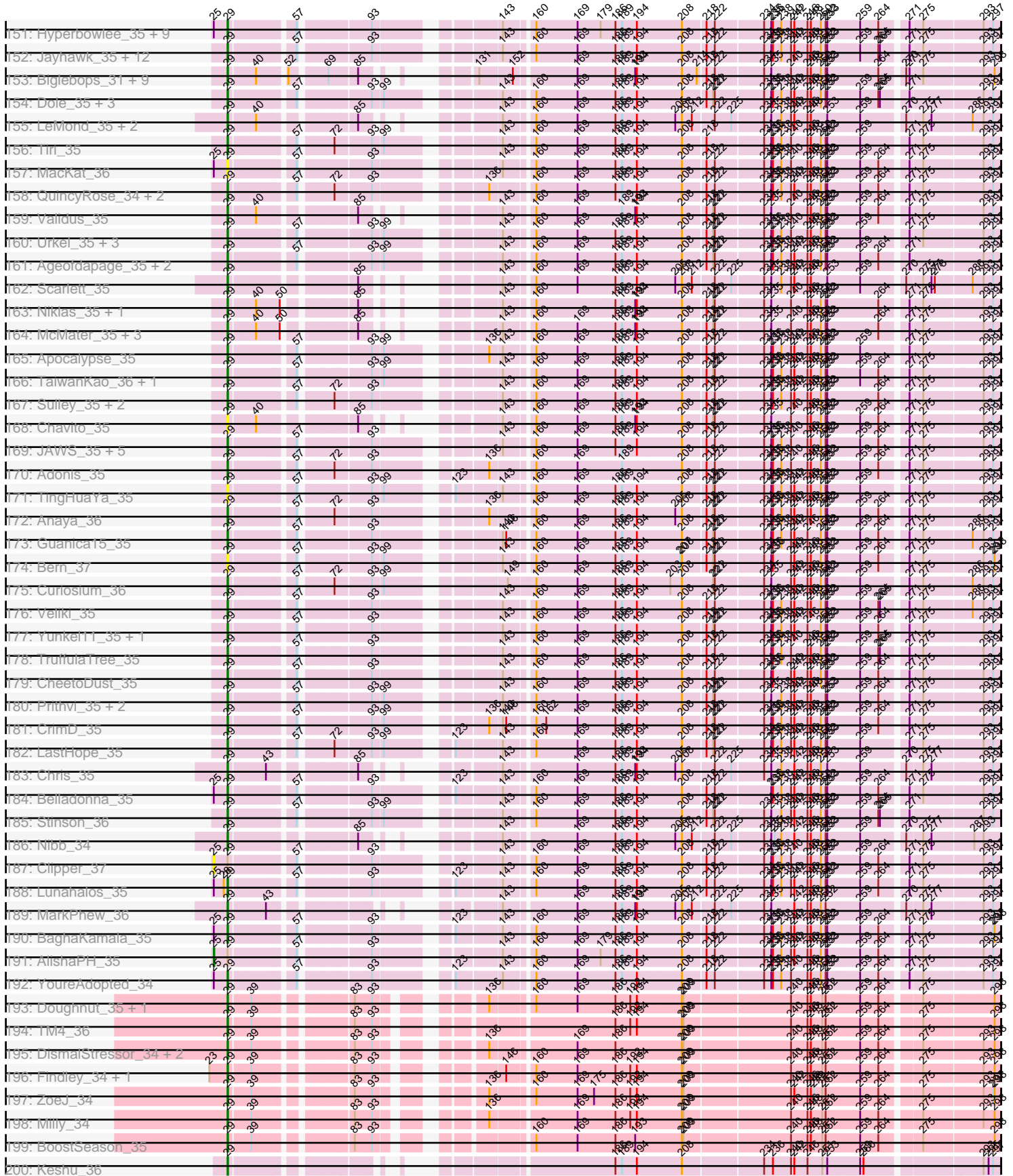
Pham 215701



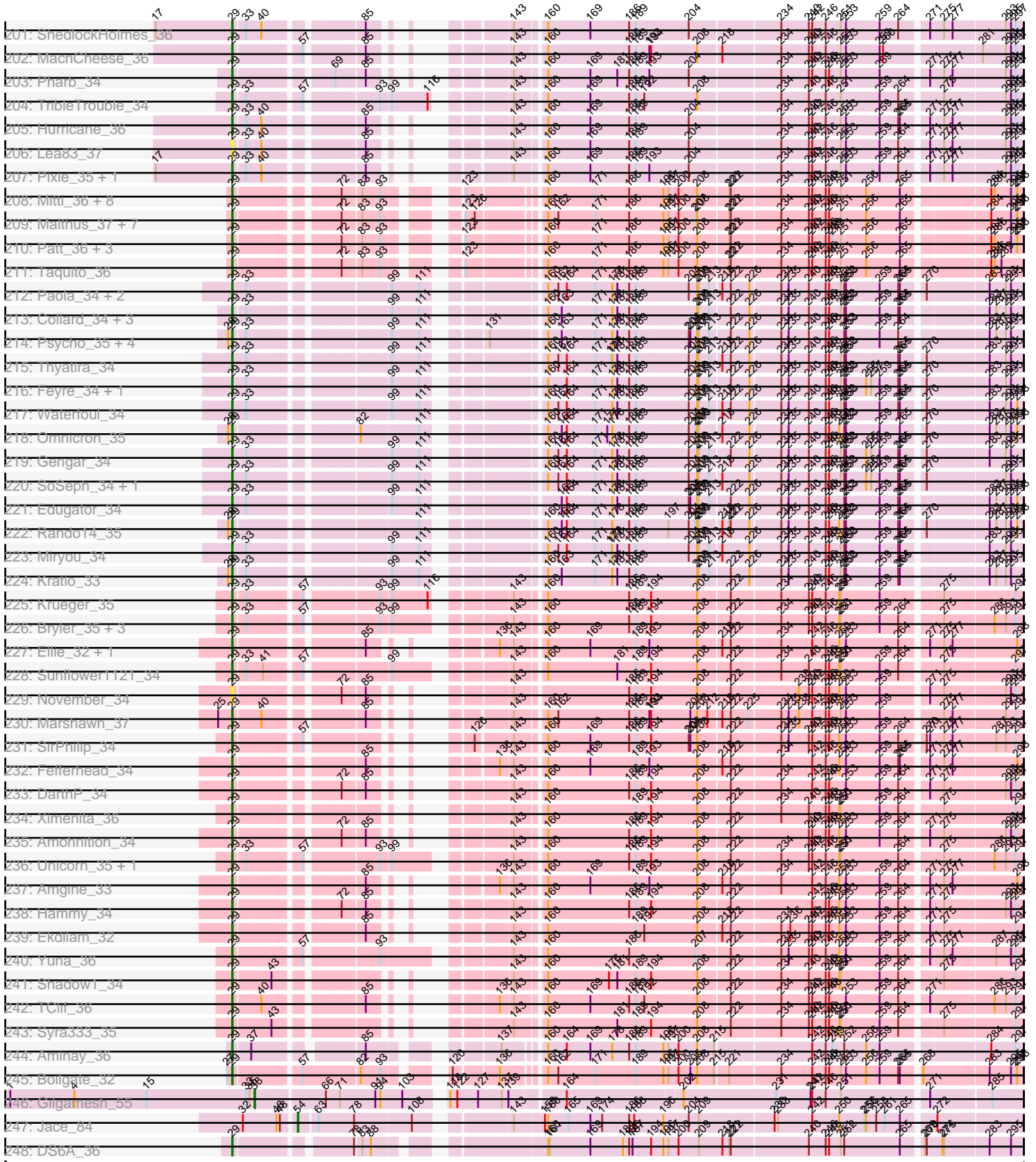
Pham 215701



Pham 215701



Pham 215701



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 215701 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 215701 has 426 members, 55 are drafts.

Phages represented in each track:

- Track 1 : MalagasyRose\_35
- Track 2 : Nergal\_31
- Track 3 : Jash\_44, Oliynyk\_44, Izzy\_44, Eddasa\_44, BryanRecycles\_44, Rusticus\_44
- Track 4 : Dwayne\_43, Emaanora\_46, SarahRose\_43, Hippo\_43, TagePhighter\_45, OzzyJ\_44, Chucky\_43
- Track 5 : Maneekul\_43, Ejemplo\_42, Yasdnil\_43, TuanPN\_42
- Track 6 : Asten\_43
- Track 7 : Esperer\_43, Indigo\_42, Nerdos\_42, Phettuccine\_43, Aaronocolus\_43, Leviticus\_43, Bovely\_43
- Track 8 : EnochSoames\_46
- Track 9 : South40\_43, Katalie\_43, RedBear\_44
- Track 10 : Werner\_43, BarryBee\_46, Dattran\_45, Triste\_43, Goby\_43, Toma\_43
- Track 11 : Nanodon\_45
- Track 12 : Zemlya\_45
- Track 13 : Nabi\_44, Rana\_44, Lorelei\_44
- Track 14 : Ozzie\_43, Legacy\_43, SunsetPointe\_43, Hydra\_45
- Track 15 : Unstoppable\_43, Caliburn\_43
- Track 16 : Brataylor\_46
- Track 17 : Whatever\_43
- Track 18 : Danzina\_45
- Track 19 : Snorlax\_43
- Track 20 : Sujidade\_44, Godpower\_44, Lika\_43
- Track 21 : BeardedLady\_44
- Track 22 : Celeste\_44
- Track 23 : Lannister\_45
- Track 24 : Caelum\_45
- Track 25 : Animus\_43, SqueakyClean\_43, GirlDinner\_43, Janus\_44
- Track 26 : Nishikigoi\_45, Haizum\_45
- Track 27 : TinaBelcher\_43, Thestral\_45
- Track 28 : Diane\_43
- Track 29 : Triumph\_46
- Track 30 : Puginator\_46

- Track 31 : Omar\_46
- Track 32 : R4\_45
- Track 33 : Alvy\_46, BartholomewSD\_46
- Track 34 : Paedore\_44, Loofah\_45
- Track 35 : Pablito\_44
- Track 36 : TrvxScott\_42
- Track 37 : Paolo\_46
- Track 38 : Zainub\_46
- Track 39 : Amethyst\_43
- Track 40 : Issmi\_45
- Track 41 : Bowden\_43
- Track 42 : Hank144\_46
- Track 43 : Marav\_47
- Track 44 : Jevington\_46
- Track 45 : ELB20\_43
- Track 46 : Tefunt\_45
- Track 47 : Superstar\_48
- Track 48 : Andris\_44
- Track 49 : Daudau\_44
- Track 50 : Axiom\_48
- Track 51 : Provolone\_44
- Track 52 : phiCAM\_41
- Track 53 : Pavo\_44, Conan\_44, ElGato\_44
- Track 54 : Vanseggelen\_48
- Track 55 : Speedwell\_48
- Track 56 : Celery\_46
- Track 57 : Alsaber\_44, Dexers\_42, Kaine\_43
- Track 58 : Saftant\_43
- Track 59 : Yosif\_46
- Track 60 : Verabelle\_47
- Track 61 : Amela\_43, Verse\_43
- Track 62 : phiHau3\_45
- Track 63 : BroPlease\_44
- Track 64 : GreenWeasel\_45
- Track 65 : VieEnRose\_45
- Track 66 : Urza\_45, Itza\_45, Celia\_45
- Track 67 : Rileysaurus\_26
- Track 68 : ATCC29399BC\_26, ATCC29399BT\_26, P100D\_26, P107C\_26
- Track 69 : Cota\_26
- Track 70 : P106M\_26, P106A\_26, P106I\_26, P106C\_27, P106L\_26
- Track 71 : PHL071N05\_26
- Track 72 : LilBandit\_26
- Track 73 : Stormborn\_26
- Track 74 : PHL067M10\_26
- Track 75 : Keiki\_26, Pirate\_26
- Track 76 : P9.1\_26
- Track 77 : PHL114L00\_26
- Track 78 : PAS50\_27
- Track 79 : Ouroboros\_26
- Track 80 : Supernova\_26
- Track 81 : Enoki\_26
- Track 82 : P100A\_26
- Track 83 : Aquarius\_26

- Track 84 : DrParker\_26
- Track 85 : P107A\_26
- Track 86 : PHL111M01\_26
- Track 87 : Attacne\_26
- Track 88 : Procrass1\_26
- Track 89 : SKKY\_26
- Track 90 : P100.1\_26
- Track 91 : Lauchelly\_26
- Track 92 : P101A\_26
- Track 93 : PAD20\_27
- Track 94 : BruceLethal\_26
- Track 95 : MrAK\_26
- Track 96 : MEAK\_26
- Track 97 : PHL010M04\_26
- Track 98 : PHL037M02\_26
- Track 99 : P1.1\_26
- Track 100 : PHL060L00\_26
- Track 101 : Enochoraptor\_26
- Track 102 : P104A\_26
- Track 103 : PHL112N00\_26
- Track 104 : Wizzo\_26
- Track 105 : Solid\_26
- Track 106 : P14.4\_26
- Track 107 : QueenBey\_26
- Track 108 : Kubed\_26
- Track 109 : Moyashi\_26
- Track 110 : P108C\_26
- Track 111 : P105\_26
- Track 112 : PHL113M01\_26
- Track 113 : Leviosa\_26
- Track 114 : P104B\_26
- Track 115 : PA6\_27
- Track 116 : Banquo\_65, TinaLin\_65
- Track 117 : Goib\_66
- Track 118 : DinoDaryn\_66, Huffy\_66
- Track 119 : Splinter\_66, Vendetta\_66
- Track 120 : TZGordon\_67
- Track 121 : Gspat1\_57
- Track 122 : Dardanus\_60
- Track 123 : Schmidt\_60
- Track 124 : Catfish\_66
- Track 125 : Keelan\_120
- Track 126 : Fryberger\_119
- Track 127 : Ronaldo\_120, Guey18\_123, Volt\_123
- Track 128 : Ziko\_121
- Track 129 : Octobien14\_112
- Track 130 : Sephiroth\_112
- Track 131 : Kudrefre\_116
- Track 132 : Syleon\_117
- Track 133 : Rabbitrun\_115
- Track 134 : Neville\_113
- Track 135 : Trax\_115
- Track 136 : Ellewin\_165



- Track 137 : KSunshine22\_164
- Track 138 : Atuin\_162
- Track 139 : Panchaali\_171
- Track 140 : LeoJr\_171, ReginaGlobina\_175
- Track 141 : Talia1610\_171
- Track 142 : WaddleDee\_165
- Track 143 : Patbob\_169, GoldenEssence\_158, Bloom\_174, Racecar\_171, Mimi\_170
- Track 144 : Rockabye\_174
- Track 145 : Chilliams\_167
- Track 146 : Phrampa\_163
- Track 147 : SJReid\_175
- Track 148 : DunneganBoMo\_166
- Track 149 : Bobby\_160
- Track 150 : Spock\_35, Topper\_35, Twitch\_35, Llorens\_35, Homura\_35, Joy99\_35, Dalmuri\_35, Jeckyll\_35, Peel\_35, CREW\_35, Rosmarinus\_35, Inky\_35, BGIlluviae\_35, Capricorn\_35, CallaLilly\_36, Jarvi\_35
- Track 151 : Hyperbowlee\_35, Padfoot\_35, Asayake\_35, CaseJules\_35, Blizzard\_35, BEEST\_35, ShiaSurprise\_35, Piatt\_35, Durfee\_35, Boiiii\_35
- Track 152 : Jayhawk\_35, Slimphazie\_35, Emerson\_35, ActinUp\_35, BarrelRoll\_35, Padpat\_35, HedwigODU\_35, Atiba\_35, Adephagia\_35, Tachez\_35, Zabiza\_35, Beezoo\_35, Rapunzel97\_35
- Track 153 : Binglebops\_31, Torres\_31, Nikao\_31, LilPharaoh\_31, SgtBeansprout\_31, Nutello\_31, Mdavu\_31, Teejan\_31, Enkosi\_31, Amelie\_31
- Track 154 : Dole\_35, Devera\_35, Illumine\_35, LaterM\_35
- Track 155 : LeMond\_35, KiSi\_35, Oscar\_35
- Track 156 : Tiri\_35
- Track 157 : MacKat\_36
- Track 158 : QuincyRose\_34, MeaningOfLife\_35, Ganymede\_36
- Track 159 : Validus\_35
- Track 160 : Urkel\_35, SamuelLPlaqson\_35, DrHayes\_35, TiniBug\_35
- Track 161 : Ageofdapage\_35, Bella96\_35, Murucutumbu\_35
- Track 162 : Scarlett\_35
- Track 163 : Niklas\_35, Shaobing\_35
- Track 164 : McMater\_35, Richo\_35, Dartin\_35, Peanam\_35
- Track 165 : Apocalypse\_35
- Track 166 : TaiwanKao\_36, Megsy\_35
- Track 167 : Sulley\_35, Angelica\_35, Deby\_35
- Track 168 : Chavito\_35
- Track 169 : JAWS\_35, Mynx\_35, Zavala\_35, Geraldini\_35, Ramen\_35, Pokerus\_34
- Track 170 : Adonis\_35
- Track 171 : TingHuaYa\_35
- Track 172 : Anaya\_36
- Track 173 : Guanica15\_35
- Track 174 : Bern\_37
- Track 175 : Curiosium\_36
- Track 176 : Veliki\_35
- Track 177 : Yunkel11\_35, Efra2\_35
- Track 178 : TruffulaTree\_35
- Track 179 : CheetoDust\_35
- Track 180 : Prithvi\_35, LindNT\_35, TreyKay\_35
- Track 181 : CrimD\_35
- Track 182 : LastHope\_35

- Track 183 : Chris\_35
- Track 184 : Belladonna\_35
- Track 185 : Stinson\_36
- Track 186 : Nibb\_34
- Track 187 : Clipper\_37
- Track 188 : Lunahalos\_35
- Track 189 : MarkPhew\_36
- Track 190 : BaghaKamala\_35
- Track 191 : AlishaPH\_35
- Track 192 : YoureAdopted\_34
- Track 193 : Doughnut\_35, Mufasa\_35
- Track 194 : TM4\_36
- Track 195 : DismalStressor\_34, Marcoliusprime\_34, DismalFunk\_34
- Track 196 : Findley\_34, Strobilo\_34
- Track 197 : ZoeJ\_34
- Track 198 : Milly\_34
- Track 199 : BoostSeason\_35
- Track 200 : Keshu\_36
- Track 201 : ShedlockHolmes\_36
- Track 202 : MacnCheese\_36
- Track 203 : Pharb\_34
- Track 204 : TribbleTrouble\_34
- Track 205 : Hurricane\_36
- Track 206 : Lea83\_37
- Track 207 : Pixie\_35, TBond007\_35
- Track 208 : Mitti\_36, Wintermute\_36, Cheetobro\_36, Eponine\_38, Chancellor\_36, SamScheppers\_36, Lebo14\_37, Slarp\_36, OmniCritical\_36
- Track 209 : Malthus\_37, JF1\_36, Juliette\_38, Ruthiejr\_37, Y2\_36, Y10\_36, Kraw\_37, Fionnbharth\_36
- Track 210 : Patt\_36, Bobquesha\_37, MissDaisy\_36, Reptar3000\_36
- Track 211 : Taquito\_36
- Track 212 : Paola\_34, Guillsminger\_34, Leston\_34
- Track 213 : Collard\_34, InvictusManeo\_34, ViviJ\_33, Agent47\_34
- Track 214 : Psycho\_35, Larva\_35, Neighly\_35, Dadosky\_35, AlleyCat\_35
- Track 215 : Thyatira\_34
- Track 216 : Feyre\_34, OkiRoe\_34
- Track 217 : Waterfoul\_34
- Track 218 : Omnicron\_35
- Track 219 : Gengar\_34
- Track 220 : SoSeph\_34, Heftyboy\_34
- Track 221 : Edugator\_34
- Track 222 : Rando14\_35
- Track 223 : Miryou\_34
- Track 224 : Kratio\_33
- Track 225 : Krueger\_35
- Track 226 : Bryler\_35, Tierra\_35, Phrank\_35, Cain\_35
- Track 227 : Ellie\_32, Applecrisp\_34
- Track 228 : Sunflower1121\_34
- Track 229 : November\_34
- Track 230 : Marshawn\_37
- Track 231 : SirPhilip\_34
- Track 232 : Fefferhead\_34
- Track 233 : DarthP\_34

- Track 234 : Ximenita\_36
- Track 235 : Amohnition\_34
- Track 236 : Unicorn\_35, PhelpsODU\_35
- Track 237 : Amgine\_33
- Track 238 : Hammy\_34
- Track 239 : Ekdilam\_32
- Track 240 : Yuna\_36
- Track 241 : Shadow1\_34
- Track 242 : TClif\_36
- Track 243 : Syra333\_35
- Track 244 : Aminay\_36
- Track 245 : Boilgate\_32
- Track 246 : Gilgamesh\_55
- Track 247 : Jace\_84
- Track 248 : DS6A\_36

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

The start number called the most often in the published annotations is 29, it was called in 188 of the 371 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_35, Adephegia\_35, Adonis\_35, Agent47\_34, Ageofdapage\_35, AlleyCat\_35, Amelie\_31, Amgine\_33, Aminay\_36, Amohnition\_34, Anaya\_36, Angelica\_35, Apocalypse\_35, Applecrisp\_34, Asayake\_35, Atiba\_35, BEEST\_35, BGlluviae\_35, BaghaKamala\_35, BarrelRoll\_35, Beezoo\_35, Bella96\_35, Belladonna\_35, Bern\_37, Biglebops\_31, Blizzard\_35, Bobquesha\_37, Boiiii\_35, Boilgate\_32, BoostSeason\_35, Bryler\_35, CREW\_35, Cain\_35, CallaLilly\_36, Capricorn\_35, CaseJules\_35, Chancellor\_36, Chavito\_35, CheetoDust\_35, Cheetobro\_36, Chris\_35, Collard\_34, CrimD\_35, Curiosium\_36, DS6A\_36, Dadosky\_35, Dalmuri\_35, DARTH\_34, Dartin\_35, Deby\_35, Devera\_35, DismalFunk\_34, DismalStressor\_34, Dole\_35, Doughnut\_35, DrHayes\_35, Durfee\_35, Edugator\_34, Efra2\_35, Ekdilam\_32, Ellie\_32, Emerson\_35, Enkosi\_31, Eponine\_38, Fefferhead\_34, Feyre\_34, Findley\_34, Fionnbharth\_36, Ganymede\_36, Gengar\_34, Geraldini\_35, Guanica15\_35, Guillsminger\_34, Hammy\_34, HedwigODU\_35, Heftyboy\_34, Homura\_35, Hurricane\_36, Hyperbowlee\_35, Illumine\_35, Inky\_35, InvictusManeo\_34, JAWS\_35, JF1\_36, Jarvi\_35, Jayhawk\_35, Jeckyll\_35, Joy99\_35, Juliette\_38, Keshu\_36, KiSi\_35, Kratio\_33, Kraw\_37, Krueger\_35, Larva\_35, LastHope\_35, LaterM\_35, LeMond\_35, Lea83\_37, Lebo14\_37, Leston\_34, LilPharaoh\_31, LindNT\_35, Llorens\_35, Lunahalos\_35, MacKat\_36, MacnCheese\_36, MalagasyRose\_35, Malthus\_37, Marcoliusprime\_34, MarkPhew\_36, Marshawn\_37, McMater\_35, Mdavu\_31, MeaningOfLife\_35, Megsy\_35, Milly\_34, Miryou\_34, MissDaisy\_36, Mitti\_36, Mufasa\_35, Murucutumbu\_35, Mynx\_35, Neighly\_35, Nergal\_31, Nibb\_34, Nikao\_31, Niklas\_35, November\_34, Nutello\_31, OkiRoe\_34, OmniCritical\_36, Omnicron\_35, Oscar\_35, Padfoot\_35, Padpat\_35, Paola\_34, Patt\_36, Peanam\_35, Peel\_35, Pharb\_34, PhelpsODU\_35, Phrank\_35, Piatt\_35, Pixie\_35, Pokerus\_34, Prithvi\_35, Psycho\_35, QuincyRose\_34, Ramen\_35, Rando14\_35, Rapunzel97\_35, Reptar3000\_36, Richo\_35, Rosmarinus\_35, Ruthiejr\_37, SamScheppers\_36, SamuelLPlaqson\_35, Scarlett\_35, SgtBeansprout\_31, Shadow1\_34, Shaobing\_35, ShedlockHolmes\_36,

ShiaSurprise\_35, SirPhilip\_34, Slarp\_36, Slimphazie\_35, SoSeph\_34, Spock\_35, Stinson\_36, Strobilo\_34, Sulley\_35, Sunflower1121\_34, Syra333\_35, TBond007\_35, TClif\_36, TM4\_36, Tachez\_35, TaiwanKao\_36, Taquito\_36, Teejan\_31, Thyatira\_34, Tierra\_35, TingHuaYa\_35, TiniBug\_35, Tiri\_35, Topper\_35, Torres\_31, TreyKay\_35, TribbleTrouble\_34, TruffulaTree\_35, Twitch\_35, Unicorn\_35, Urkel\_35, Validus\_35, Veliki\_35, ViviJ\_33, Waterfoul\_34, Wintermute\_36, Ximenita\_36, Y10\_36, Y2\_36, YoureAdopted\_34, Yuna\_36, Yunkel11\_35, Zabiza\_35, Zavala\_35, ZoeJ\_34,

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

- AlishaPH\_35, Clipper\_37,

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

- ATCC29399BC\_26, ATCC29399BT\_26, Aaronocolus\_43, Alsaber\_44, Alvy\_46, Amela\_43, Amethyst\_43, Andris\_44, Animus\_43, Aquarius\_26, Asten\_43, Attacne\_26, Atuin\_162, Axiom\_48, Banquo\_65, BarryBee\_46, BartholomewSD\_46, BeardedLady\_44, Bloom\_174, Bobby\_160, Bovely\_43, Bowden\_43, Brataylor\_46, BroPlease\_44, BruceLethal\_26, BryanRecycles\_44, Caelum\_45, Caliburn\_43, Catfish\_66, Celery\_46, Celeste\_44, Celia\_45, Chilliams\_167, Chucky\_43, Conan\_44, Cota\_26, Danzina\_45, Dardanus\_60, Dattran\_45, Daudau\_44, Dexers\_42, Diane\_43, DinoDaryn\_66, DrParker\_26, DunneganBoMo\_166, Dwayne\_43, ELB20\_43, Eddasa\_44, Ejemplo\_42, ElGato\_44, Ellewin\_165, Emaanora\_46, EnochSoames\_46, Enochoraptor\_26, Enoki\_26, Esperer\_43, Fryberger\_119, Gilgamesh\_55, GirlDinner\_43, Goby\_43, Godpower\_44, Goib\_66, GoldenEssence\_158, GreenWeasel\_45, Gspu1\_57, Guey18\_123, Haizum\_45, Hank144\_46, Hippo\_43, Huffy\_66, Hydra\_45, Indigo\_42, Issmi\_45, Itza\_45, Izzy\_44, Jace\_84, Janus\_44, Jash\_44, Jevington\_46, KSunshine22\_164, Kaine\_43, Katalie\_43, Keelan\_120, Keiki\_26, Kubed\_26, Kudrefre\_116, Lannister\_45, Lauchelly\_26, Legacy\_43, LeoJr\_171, Leviosa\_26, Leviticus\_43, Lika\_43, LilBandit\_26, Loofah\_45, Lorelei\_44, MEAK\_26, Maneekul\_43, Marav\_47, Mimi\_170, Moyashi\_26, MrAK\_26, Nabi\_44, Nanodon\_45, Nerdos\_42, Neville\_113, Nishikigoi\_45, Octobien14\_112, Oliynyk\_44, Omar\_46, Ouroboros\_26, Ozzie\_43, OzzyJ\_44, P1.1\_26, P100.1\_26, P100A\_26, P100D\_26, P101A\_26, P104A\_26, P104B\_26, P105\_26, P106A\_26, P106C\_27, P106L\_26, P106L\_26, P106M\_26, P107A\_26, P107C\_26, P108C\_26, P14.4\_26, P9.1\_26, PA6\_27, PAD20\_27, PAS50\_27, PHL010M04\_26, PHL037M02\_26, PHL060L00\_26, PHL067M10\_26, PHL071N05\_26, PHL111M01\_26, PHL112N00\_26, PHL113M01\_26, PHL114L00\_26, Pablito\_44, Paedore\_44, Panchaali\_171, Paolo\_46, Patbob\_169, Pavo\_44, Phettuccine\_43, Phrampa\_163, Pirate\_26, Procrass1\_26, Provolone\_44, Puginator\_46, QueenBey\_26, R4\_45, Rabbitrun\_115, Racecar\_171, Rana\_44, RedBear\_44, ReginaGlobina\_175, Rileysaurus\_26, Rockabye\_174, Ronaldo\_120, Rusticus\_44, SJReid\_175, SKKY\_26, Saftant\_43, SarahRose\_43, Schmidt\_60, Sephiroth\_112, Snorlax\_43, Solid\_26, South40\_43, Speedwell\_48, Splinter\_66, SqueakyClean\_43, Stormborn\_26, Sujidade\_44, SunsetPointe\_43, Supernova\_26, Superstar\_48, Syleon\_117, TZGordon\_67, TagePhighter\_45, Talia1610\_171, Tefunt\_45, Thestral\_45, TinaBelcher\_43, TinaLin\_65, Toma\_43, Trax\_115, Triste\_43, Triumph\_46, TrvxScott\_42, TuanPN\_42, Unstoppable\_43, Urza\_45, Vanseggelen\_48, Vendetta\_66, Verabelle\_47, Verse\_43, VieEnRose\_45, Volt\_123, WaddleDee\_165, Werner\_43, Whatever\_43, Wizzo\_26, Yasdnil\_43, Yosif\_46, Zainub\_46, Zemlya\_45, Ziko\_121, phiCAM\_41, phiHau3\_45,

### Summary by start number:

Start 13:

- Found in 18 of 426 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 4 of 371
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_162 (FC), Bloom\_174 (FC), Chilliams\_167 (FC), DunneganBoMo\_166 (FC), Ellewin\_165 (FC), GoldenEssence\_158 (FC), KSunshine22\_164 (FC), LeoJr\_171 (FC), Mimi\_170 (FC), Panchaali\_171 (FC), Patbob\_169 (FC), Phrampa\_163 (FC), Racecar\_171 (FC), ReginaGlobina\_175 (FC), Rockabye\_174 (FC), SJReid\_175 (FC), Talia1610\_171 (FC), WaddleDee\_165 (FC),

#### Start 25:

- Found in 34 of 426 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 1 of 371
- Called 5.9% of time when present
- Phage (with cluster) where this start called: AlishaPH\_35 (K1), Clipper\_37 (K1),

#### Start 29:

- Found in 210 of 426 ( 49.3% ) of genes in pham
- Manual Annotations of this start: 188 of 371
- Called 99.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_35 (K1), Adephagia\_35 (K1), Adonis\_35 (K1), Agent47\_34 (K5), Ageofdapage\_35 (K1), AlleyCat\_35 (K5), Amelie\_31 (K1), Amgine\_33 (K6), Aminay\_36 (K7), Amohntion\_34 (K6), Anaya\_36 (K1), Angelica\_35 (K1), Apocalypse\_35 (K1), Applecrisp\_34 (K6), Asayake\_35 (K1), Atiba\_35 (K1), BEEST\_35 (K1), BGlluviae\_35 (K1), BaghaKamala\_35 (K1), BarrelRoll\_35 (K1), Beezoo\_35 (K1), Bella96\_35 (K1), Belladonna\_35 (K1), Bern\_37 (K1), Binglebops\_31 (K1), Blizzard\_35 (K1), Bobquesha\_37 (K4), Boiiii\_35 (K1), Boilgate\_32 (K8), BoostSeason\_35 (K2), Bryler\_35 (K6), CREW\_35 (K1), Cain\_35 (K6), CallaLilly\_36 (K1), Capricorn\_35 (K1), CaseJules\_35 (K1), Chancellor\_36 (K4), Chavito\_35 (K1), CheetoDust\_35 (K1), Cheetobro\_36 (K4), Chris\_35 (K1), Collard\_34 (K5), CrimD\_35 (K1), Curiosium\_36 (K1), DS6A\_36 (singleton), Dadosky\_35 (K5), Dalmuri\_35 (K1), DarthP\_34 (K6), Dartin\_35 (K1), Deby\_35 (K1), Devera\_35 (K1), DismalFunk\_34 (K2), DismalStressor\_34 (K2), Dole\_35 (K1), Doughnut\_35 (K2), DrHayes\_35 (K1), Durfee\_35 (K1), Edugator\_34 (K5), Efra2\_35 (K1), Ekdilam\_32 (K6), Ellie\_32 (K6), Emerson\_35 (K1), Enkosi\_31 (K1), Eponine\_38 (K4), Fefferhead\_34 (K6), Feyre\_34 (K5), Findley\_34 (K2), Fionnbharth\_36 (K4), Ganymede\_36 (K1), Gengar\_34 (K5), Geraldini\_35 (K1), Guanica15\_35 (K1), Guillsminger\_34 (K5), Hammy\_34 (K6), HedwigODU\_35 (K1), Heftyboy\_34 (K5), Homura\_35 (K1), Hurricane\_36 (K3), Hyperbowlee\_35 (K1), Illumine\_35 (K1), Inky\_35 (K1), InvictusManeo\_34 (K5), JAWS\_35 (K1), JF1\_36 (K4), Jarvi\_35 (K1), Jayhawk\_35 (K1), Jeckyll\_35 (K1), Joy99\_35 (K1), Juliette\_38 (K4), Keshu\_36 (K3), KiSi\_35 (K1), Kratio\_33 (K5), Kraw\_37 (K4), Krueger\_35 (K6), Larva\_35 (K5), LastHope\_35 (K1), LaterM\_35 (K1), LeMond\_35 (K1), Lea83\_37 (K3), Lebo14\_37 (K4), Leston\_34 (K5), LilPharaoh\_31 (K1), LindNT\_35 (K1), Llorens\_35 (K1), Lunahalos\_35 (K1), MacKat\_36 (K1), MacnCheese\_36 (K3), MalagasyRose\_35 (AG), Malthus\_37 (K4), Marcoliusprime\_34 (K2), MarkPhew\_36 (K1), Marshawn\_37 (K6), McMater\_35 (K1), Mdavu\_31 (K1), MeaningOfLife\_35 (K1), Megsy\_35 (K1), Milly\_34 (K2), Miryou\_34 (K5), MissDaisy\_36 (K4), Mitti\_36 (K4), Mufasa\_35 (K2), Murucutumbu\_35 (K1), Mynx\_35 (K1), Neighly\_35 (K3), Nergal\_31 (AG), Nibb\_34 (K1), Nikao\_31 (K1), Niklas\_35 (K1), November\_34 (K6), Nutello\_31 (K1), OkiRoe\_34 (K5), OmniCritical\_36 (K4), Omnicron\_35 (K5), Oscar\_35 (K1), Padfoot\_35 (K1), Padpat\_35 (K1), Paola\_34 (K5), Patt\_36 (K4), Peanam\_35 (K1), Peel\_35 (K1), Pharb\_34 (K3), PhelpsODU\_35 (K6), Phrank\_35 (K6), Piatt\_35 (K1), Pixie\_35 (K3),

Pokerus\_34 (K1), Prithvi\_35 (K1), Psycho\_35 (K5), QuincyRose\_34 (K1), Ramen\_35 (K1), Rando14\_35 (K5), Rapunzel97\_35 (K1), Reptar3000\_36 (K4), Richo\_35 (K1), Rosmarinus\_35 (K1), Ruthiejr\_37 (K4), SamScheppers\_36 (K4), SamuelLPlaqson\_35 (K1), Scarlett\_35 (K1), SgtBeansprout\_31 (K1), Shadow1\_34 (K6), Shaobing\_35 (K1), ShedlockHolmes\_36 (K3), ShiaSurprise\_35 (K1), SirPhilip\_34 (K6), Slarp\_36 (K4), Slimphazie\_35 (K1), SoSeph\_34 (K5), Spock\_35 (K1), Stinson\_36 (K1), Strobilo\_34 (K2), Sulley\_35 (K1), Sunflower1121\_34 (K6), Syra333\_35 (K6), TBond007\_35 (K3), TClif\_36 (K6), TM4\_36 (K2), Tachez\_35 (K1), TaiwanKao\_36 (K1), Taquito\_36 (K4), Teejan\_31 (K1), Thyatira\_34 (K5), Tierra\_35 (K6), TingHuaYa\_35 (K1), TiniBug\_35 (K1), Tiri\_35 (K1), Topper\_35 (K1), Torres\_31 (K1), TreyKay\_35 (K1), TribieTrouble\_34 (K3), TruffulaTree\_35 (K1), Twitch\_35 (K1), Unicorn\_35 (K6), Urkel\_35 (K1), Validus\_35 (K1), Veliki\_35 (K1), ViviJ\_33 (K5), Waterfoul\_34 (K5), Wintermute\_36 (K4), Ximenita\_36 (K6), Y10\_36 (K4), Y2\_36 (K4), YoureAdopted\_34 (K1), Yuna\_36 (K6), Yunkel11\_35 (K1), Zabiza\_35 (K1), Zavala\_35 (K1), ZoeJ\_34 (K2),

#### Start 38:

- Found in 1 of 426 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 371
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gilgamesh\_55 (singleton),

#### Start 42:

- Found in 7 of 426 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 7 of 371
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kudrefre\_116 (DU1), Neville\_113 (DU2), Octobien14\_112 (DU1), Rabbitrun\_115 (DU2), Sephiroth\_112 (DU1), Syleon\_117 (DU1), Trax\_115 (DU2),

#### Start 45:

- Found in 1 of 426 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 371
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bobby\_160 (J),

#### Start 48:

- Found in 109 of 426 ( 25.6% ) of genes in pham
- Manual Annotations of this start: 101 of 371
- Called 98.2% of time when present
- Phage (with cluster) where this start called: Aaronocolus\_43 (BD1), Alsaber\_44 (BD3), Alvy\_46 (BD2), Amela\_43 (BD3), Amethyst\_43 (BD2), Andris\_44 (BD2), Animus\_43 (BD2), Asten\_43 (BD1), Axiom\_48 (BD2), BarryBee\_46 (BD1), BartholomewSD\_46 (BD2), BeardedLady\_44 (BD1), Bovely\_43 (BD1), Bowden\_43 (BD2), Brataylor\_46 (BD1), BroPlease\_44 (BD4), BryanRecycles\_44 (BD1), Caelum\_45 (BD2), Caliburn\_43 (BD1), Celery\_46 (BD3), Celeste\_44 (BD1), Chucky\_43 (BD1), Conan\_44 (BD3), Danzina\_45 (BD1), Dattran\_45 (BD1), Daudau\_44 (BD2), Dexers\_42 (BD3), Diane\_43 (BD2), Dwayne\_43 (BD1), ELB20\_43 (BD2), Eddasa\_44 (BD1), Ejemplo\_42 (BD1), ElGato\_44 (BD3), Emaanora\_46 (BD1), EnochSoames\_46 (BD1), Esperer\_43 (BD1), GirlDinner\_43 (BD2), Goby\_43 (BD1), Godpower\_44 (BD1), GreenWeasel\_45 (BD4), Haizum\_45 (BD2), Hank144\_46 (BD2), Hippo\_43 (BD1), Hydra\_45 (BD1), Indigo\_42 (BD1), Issmi\_45 (BD2), Izzy\_44 (BD1), Janus\_44 (BD2), Jash\_44 (BD1), Jevington\_46 (BD2), Kaine\_43 (BD3),

Katalie\_43 (BD1), Lannister\_45 (BD1), Legacy\_43 (BD1), Leviticus\_43 (BD1), Lika\_43 (BD1), Loofah\_45 (BD2), Lorelei\_44 (BD1), Maneekul\_43 (BD1), Marav\_47 (BD2), Nabi\_44 (BD1), Nanodon\_45 (BD1), Nerdos\_42 (BD1), Nishikigoi\_45 (BD2), Oliynyk\_44 (BD1), Omar\_46 (BD2), Ozzie\_43 (BD1), OzzyJ\_44 (BD1), Pablito\_44 (BD2), Paedore\_44 (BD2), Paolo\_46 (BD2), Pavo\_44 (BD3), Phettuccine\_43 (BD1), Provolone\_44 (BD3), Puginator\_46 (BD2), R4\_45 (BD2), Rana\_44 (BD1), RedBear\_44 (BD1), Rusticus\_44 (BD1), Saftant\_43 (BD3), SarahRose\_43 (BD1), Snorlax\_43 (BD1), South40\_43 (BD1), Speedwell\_48 (BD3), SqueakyClean\_43 (BD2), Sujidade\_44 (BD1), SunsetPointe\_43 (BD1), Superstar\_48 (BD2), TagePhighter\_45 (BD1), Tefunt\_45 (BD2), Thestral\_45 (BD2), TinaBelcher\_43 (BD2), Toma\_43 (BD1), Triste\_43 (BD1), Triumph\_46 (BD2), TrvxScott\_42 (BD2), TuanPN\_42 (BD1), Unstoppable\_43 (BD1), Vanseggelen\_48 (BD3), Verabelle\_47 (BD3), Verse\_43 (BD3), Werner\_43 (BD1), Whatever\_43 (BD1), Yasdnii\_43 (BD1), Zainub\_46 (BD2), Zemlya\_45 (BD1), phiHau3\_45 (BD4),

#### Start 49:

- Found in 11 of 426 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 11 of 371
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Celia\_45 (BD6), Fryberger\_119 (DP), Guey18\_123 (DP), Itza\_45 (BD6), Keelan\_120 (DP), Ronaldo\_120 (DP), Urza\_45 (BD6), VieEnRose\_45 (BD6), Volt\_123 (DP), Yosif\_46 (BD3), Ziko\_121 (DP),

#### Start 54:

- Found in 1 of 426 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 371
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace\_84 (singleton),

#### Start 57:

- Found in 116 of 426 ( 27.2% ) of genes in pham
- Manual Annotations of this start: 11 of 371
- Called 10.3% of time when present
- Phage (with cluster) where this start called: Banquo\_65 (CU1), Catfish\_66 (CU5), Dardanus\_60 (CU3), DinoDaryn\_66 (CU1), Goib\_66 (CU1), Gspu1\_57 (CU2), Huffy\_66 (CU1), Schmidt\_60 (CU4), Splinter\_66 (CU1), TZGordon\_67 (CU1), TinaLin\_65 (CU1), Vendetta\_66 (CU1),

#### Start 87:

- Found in 57 of 426 ( 13.4% ) of genes in pham
- Manual Annotations of this start: 45 of 371
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ATCC29399BC\_26 (BU), ATCC29399BT\_26 (BU), Aquarius\_26 (BU), Attacne\_26 (BU), BruceLethal\_26 (BU), Cota\_26 (BU), DrParker\_26 (BU), Enochoraptor\_26 (BU), Enoki\_26 (BU), Keiki\_26 (BU), Kubed\_26 (BU), Lauchelly\_26 (BU), Leviosa\_26 (BU), LilBandit\_26 (BU), MEAK\_26 (BU), Moyashi\_26 (BU), MrAK\_26 (BU), Ouroboros\_26 (BU), P1.1\_26 (BU), P100.1\_26 (BU), P100A\_26 (BU), P100D\_26 (BU), P101A\_26 (BU), P104A\_26 (BU), P104B\_26 (BU), P105\_26 (BU), P106A\_26 (BU), P106C\_27 (BU), P106I\_26 (BU), P106L\_26 (BU), P106M\_26 (BU), P107A\_26 (BU), P107C\_26 (BU), P108C\_26 (BU), P14.4\_26 (BU), P9.1\_26 (BU), PA6\_27 (BU), PAD20\_27 (BU), PAS50\_27 (BU), PHL010M04\_26 (BU), PHL037M02\_26 (BU), PHL060L00\_26 (BU), PHL067M10\_26 (BU), PHL071N05\_26 (BU), PHL111M01\_26 (BU), PHL112N00\_26 (BU),

PHL113M01\_26 (BU), PHL114L00\_26 (BU), Pirate\_26 (BU), Procrass1\_26 (BU), QueenBey\_26 (BU), Rileysaurus\_26 (BU), SKKY\_26 (BU), Solid\_26 (BU), Stormborn\_26 (BU), Supernova\_26 (BU), Wizzo\_26 (BU),

Start 114:

- Found in 113 of 426 ( 26.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.9% of time when present
- Phage (with cluster) where this start called: phiCAM\_41 (BD3),

### **Summary by clusters:**

There are 26 clusters represented in this pham: singleton, K3, BU, K1, FC, K7, K6, K5, K4, K8, DP, CU5, CU4, CU3, CU2, CU1, BD4, BD6, BD1, BD3, BD2, DU1, DU2, AG, J, K2,

Info for manual annotations of cluster AG:

- Start number 29 was manually annotated 2 times for cluster AG.

Info for manual annotations of cluster BD1:

- Start number 48 was manually annotated 55 times for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 48 was manually annotated 32 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 48 was manually annotated 11 times for cluster BD3.
- Start number 49 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 48 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:

- Start number 49 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster BU:

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

Info for manual annotations of cluster CU1:

- Start number 57 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 57 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 57 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 57 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster DP:

- Start number 49 was manually annotated 6 times for cluster DP.



Info for manual annotations of cluster DU1:

- Start number 42 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 42 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster FC:

- Start number 13 was manually annotated 4 times for cluster FC.

Info for manual annotations of cluster J:

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

Info for manual annotations of cluster K1:

- Start number 25 was manually annotated 1 time for cluster K1.
- Start number 29 was manually annotated 102 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 29 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 29 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 29 was manually annotated 19 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 29 was manually annotated 22 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 29 was manually annotated 22 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 29 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 29 was manually annotated 1 time for cluster K8.

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

Gene: ATCC29399BC\_26 Start: 19311, Stop: 18265, Start Num: 87

Candidate Starts for ATCC29399BC\_26:

(55, 19422), (Start: 87 @19311 has 45 MA's), (191, 18876), (194, 18861), (200, 18819), (206, 18792), (208, 18786), (209, 18783), (212, 18768), (229, 18663), (244, 18576), (249, 18558), (266, 18447), (277, 18378), (283, 18318),

Gene: ATCC29399BT\_26 Start: 19311, Stop: 18265, Start Num: 87

Candidate Starts for ATCC29399BT\_26:

(55, 19422), (Start: 87 @19311 has 45 MA's), (191, 18876), (194, 18861), (200, 18819), (206, 18792), (208, 18786), (209, 18783), (212, 18768), (229, 18663), (244, 18576), (249, 18558), (266, 18447), (277, 18378), (283, 18318),

Gene: Aaronocolus\_43 Start: 29213, Stop: 30403, Start Num: 48

Candidate Starts for Aaronocolus\_43:

(32, 29150), (Start: 48 @29213 has 101 MA's), (64, 29261), (79, 29327), (104, 29414), (114, 29447), (162, 29630), (177, 29720), (207, 29861), (208, 29864), (211, 29876), (219, 29912), (222, 29921), (224, 29945), (228, 29966), (246, 30089), (247, 30092), (262, 30200), (277, 30290), (296, 30392),

Gene: ActinUp\_35 Start: 28362, Stop: 29570, Start Num: 29

Candidate Starts for ActinUp\_35:

(Start: 29 @28362 has 188 MA's), (Start: 57 @28464 has 11 MA's), (93, 28575), (143, 28752), (160, 28794), (169, 28869), (186, 28935), (189, 28947), (194, 28974), (208, 29049), (218, 29088), (222, 29103), (234, 29184), (235, 29196), (236, 29199), (238, 29214), (240, 29232), (242, 29238), (246, 29262), (248, 29268), (250, 29286), (252, 29295), (253, 29298), (259, 29355), (264, 29385), (265, 29388), (271, 29424), (275, 29445), (293, 29547), (297, 29562),

Gene: Adephagia\_35 Start: 28359, Stop: 29567, Start Num: 29

Candidate Starts for Adephagia\_35:

(Start: 29 @28359 has 188 MA's), (Start: 57 @28461 has 11 MA's), (93, 28572), (143, 28749), (160, 28791), (169, 28866), (186, 28932), (189, 28944), (194, 28971), (208, 29046), (218, 29085), (222, 29100), (234, 29181), (235, 29193), (236, 29196), (238, 29211), (240, 29229), (242, 29235), (246, 29259), (248, 29265), (250, 29283), (252, 29292), (253, 29295), (259, 29352), (264, 29382), (265, 29385), (271, 29421), (275, 29442), (293, 29544), (297, 29559),

Gene: Adonis\_35 Start: 28374, Stop: 29582, Start Num: 29

Candidate Starts for Adonis\_35:

(Start: 29 @28374 has 188 MA's), (Start: 57 @28476 has 11 MA's), (72, 28527), (93, 28587), (136, 28743), (160, 28806), (169, 28881), (189, 28959), (208, 29061), (218, 29100), (222, 29115), (234, 29196), (235, 29208), (236, 29211), (238, 29226), (240, 29244), (246, 29274), (248, 29280), (250, 29298), (252, 29307), (253, 29310), (259, 29367), (264, 29397), (271, 29436), (275, 29457), (293, 29559), (297, 29574),

Gene: Agent47\_34 Start: 28998, Stop: 30212, Start Num: 29

Candidate Starts for Agent47\_34:

(Start: 29 @28998 has 188 MA's), (33, 29016), (99, 29229), (111, 29277), (160, 29436), (163, 29460), (171, 29520), (178, 29550), (181, 29559), (186, 29574), (189, 29586), (208, 29691), (209, 29694), (213, 29712), (222, 29745), (226, 29778), (234, 29826), (235, 29838), (240, 29874), (246, 29904), (248, 29910), (251, 29931), (252, 29937), (253, 29940), (259, 29997), (264, 30027), (265, 30030), (283, 30162), (287, 30174), (293, 30189), (295, 30198),

Gene: Ageofdapage\_35 Start: 28320, Stop: 29528, Start Num: 29

Candidate Starts for Ageofdapage\_35:

(Start: 29 @28320 has 188 MA's), (Start: 57 @28422 has 11 MA's), (93, 28533), (99, 28551), (143, 28710), (160, 28752), (169, 28827), (186, 28893), (189, 28905), (194, 28932), (208, 29007), (218, 29046), (221, 29058), (222, 29061), (234, 29142), (235, 29154), (236, 29157), (238, 29172), (240, 29190), (242, 29196), (246, 29220), (248, 29226), (250, 29244), (252, 29253), (253, 29256), (259, 29313), (264, 29343), (271, 29382), (293, 29505), (297, 29520),

Gene: AlishaPH\_35 Start: 28328, Stop: 29560, Start Num: 25

Candidate Starts for AlishaPH\_35:

(Start: 25 @28328 has 1 MA's), (Start: 29 @28352 has 188 MA's), (Start: 57 @28454 has 11 MA's), (93, 28565), (143, 28742), (160, 28784), (169, 28859), (179, 28901), (186, 28925), (189, 28937), (194, 28964), (208, 29039), (218, 29078), (222, 29093), (234, 29174), (235, 29186), (236, 29189), (238, 29204), (240, 29222), (242, 29228), (246, 29252), (248, 29258), (250, 29276), (252, 29285), (253,

29288), (259, 29345), (264, 29375), (271, 29414), (275, 29435), (293, 29537), (297, 29552),

Gene: AlleyCat\_35 Start: 28929, Stop: 30143, Start Num: 29

Candidate Starts for AlleyCat\_35:

(28, 28923), (Start: 29 @28929 has 188 MA's), (33, 28947), (99, 29160), (111, 29208), (131, 29280), (160, 29367), (163, 29391), (171, 29451), (178, 29481), (181, 29490), (186, 29505), (189, 29517), (204, 29607), (205, 29610), (208, 29622), (209, 29625), (213, 29643), (222, 29676), (226, 29709), (234, 29757), (235, 29769), (240, 29805), (246, 29835), (248, 29841), (252, 29868), (253, 29871), (259, 29928), (264, 29958), (283, 30093), (287, 30105), (293, 30120), (295, 30129),

Gene: Alsaber\_44 Start: 30909, Stop: 32096, Start Num: 48

Candidate Starts for Alsaber\_44:

(Start: 48 @30909 has 101 MA's), (73, 31005), (79, 31026), (81, 31032), (89, 31053), (114, 31146), (119, 31167), (149, 31269), (151, 31275), (162, 31323), (198, 31515), (207, 31554), (208, 31557), (215, 31587), (219, 31605), (228, 31659), (234, 31704), (242, 31758), (277, 31983), (296, 32085),

Gene: Alvy\_46 Start: 30775, Stop: 31977, Start Num: 48

Candidate Starts for Alvy\_46:

(Start: 48 @30775 has 101 MA's), (97, 30946), (114, 31015), (119, 31036), (149, 31138), (152, 31147), (162, 31201), (180, 31300), (207, 31432), (208, 31435), (215, 31465), (219, 31483), (242, 31636), (262, 31771), (276, 31852), (277, 31861), (286, 31930), (292, 31948), (294, 31954),

Gene: Amela\_43 Start: 31710, Stop: 32897, Start Num: 48

Candidate Starts for Amela\_43:

(Start: 48 @31710 has 101 MA's), (73, 31806), (79, 31827), (81, 31833), (89, 31854), (114, 31947), (119, 31968), (127, 32004), (149, 32070), (151, 32076), (162, 32124), (166, 32154), (198, 32316), (207, 32355), (208, 32358), (215, 32388), (219, 32406), (228, 32460), (234, 32505), (242, 32559), (247, 32586), (277, 32784), (296, 32886),

Gene: Amelie\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for Amelie\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: Amethyst\_43 Start: 30138, Stop: 31340, Start Num: 48

Candidate Starts for Amethyst\_43:

(Start: 48 @30138 has 101 MA's), (97, 30309), (114, 30378), (119, 30399), (150, 30507), (153, 30513), (162, 30564), (207, 30795), (208, 30798), (215, 30828), (219, 30846), (220, 30849), (222, 30855), (228, 30900), (262, 31134), (277, 31224), (292, 31311), (294, 31317), (297, 31329),

Gene: Amgine\_33 Start: 28327, Stop: 29460, Start Num: 29

Candidate Starts for Amgine\_33:

(Start: 29 @28327 has 188 MA's), (85, 28516), (136, 28621), (143, 28642), (160, 28687), (169, 28762), (189, 28837), (193, 28861), (208, 28939), (218, 28978), (222, 28993), (234, 29074), (242, 29128), (246, 29152), (250, 29176), (253, 29188), (259, 29245), (264, 29275), (271, 29314), (275, 29335), (277, 29350), (298, 29455),

Gene: Aminay\_36 Start: 30032, Stop: 31216, Start Num: 29

Candidate Starts for Aminay\_36:

(Start: 29 @30032 has 188 MA's), (37, 30059), (85, 30218), (137, 30380), (160, 30437), (164, 30470), (169, 30512), (178, 30551), (186, 30575), (189, 30587), (196, 30635), (197, 30644), (200, 30659), (208, 30692), (215, 30722), (242, 30881), (246, 30905), (249, 30917), (252, 30938), (256, 30977), (259, 31001), (284, 31169), (297, 31208),

Gene: Amohnition\_34 Start: 28755, Stop: 29888, Start Num: 29

Candidate Starts for Amohnition\_34:

(Start: 29 @28755 has 188 MA's), (72, 28908), (85, 28944), (143, 29073), (160, 29115), (186, 29253), (189, 29265), (194, 29292), (208, 29367), (222, 29421), (240, 29550), (242, 29556), (246, 29580), (248, 29586), (250, 29604), (253, 29616), (259, 29673), (264, 29703), (271, 29742), (275, 29763), (293, 29865), (295, 29874), (297, 29880),

Gene: Anaya\_36 Start: 28387, Stop: 29595, Start Num: 29

Candidate Starts for Anaya\_36:

(Start: 29 @28387 has 188 MA's), (Start: 57 @28489 has 11 MA's), (72, 28540), (93, 28600), (136, 28756), (160, 28819), (169, 28894), (186, 28960), (189, 28972), (194, 28999), (205, 29062), (208, 29074), (218, 29113), (221, 29125), (222, 29128), (234, 29209), (235, 29221), (236, 29224), (238, 29239), (240, 29257), (242, 29263), (246, 29287), (248, 29293), (250, 29311), (252, 29320), (253, 29323), (259, 29380), (264, 29410), (271, 29449), (275, 29470), (293, 29572), (297, 29587),

Gene: Andris\_44 Start: 30403, Stop: 31602, Start Num: 48

Candidate Starts for Andris\_44:

(Start: 48 @30403 has 101 MA's), (73, 30502), (114, 30643), (119, 30664), (153, 30775), (162, 30826), (207, 31057), (208, 31060), (215, 31090), (222, 31117), (228, 31162), (251, 31312), (262, 31396), (277, 31486), (292, 31573), (294, 31579), (297, 31591),

Gene: Angelica\_35 Start: 28309, Stop: 29517, Start Num: 29

Candidate Starts for Angelica\_35:

(Start: 29 @28309 has 188 MA's), (Start: 57 @28411 has 11 MA's), (72, 28462), (93, 28522), (143, 28699), (160, 28741), (169, 28816), (186, 28882), (189, 28894), (194, 28921), (208, 28996), (218, 29035), (222, 29050), (234, 29131), (235, 29143), (236, 29146), (238, 29161), (240, 29179), (242, 29185), (246, 29209), (248, 29215), (250, 29233), (252, 29242), (253, 29245), (264, 29332), (271, 29371), (275, 29392), (293, 29494), (297, 29509),

Gene: Animus\_43 Start: 30648, Stop: 31847, Start Num: 48

Candidate Starts for Animus\_43:

(Start: 48 @30648 has 101 MA's), (97, 30819), (114, 30888), (153, 31020), (162, 31071), (207, 31302), (208, 31305), (215, 31335), (219, 31353), (222, 31362), (228, 31407), (262, 31641), (276, 31722), (277, 31731), (292, 31818), (294, 31824), (297, 31836),

Gene: Apocalypse\_35 Start: 28330, Stop: 29538, Start Num: 29

Candidate Starts for Apocalypse\_35:

(Start: 29 @28330 has 188 MA's), (Start: 57 @28432 has 11 MA's), (93, 28543), (99, 28561), (136, 28699), (143, 28720), (160, 28762), (169, 28837), (186, 28903), (189, 28915), (194, 28942), (208, 29017), (218, 29056), (222, 29071), (234, 29152), (235, 29164), (236, 29167), (238, 29182), (240, 29200), (242, 29206), (246, 29230), (248, 29236), (250, 29254), (252, 29263), (253, 29266), (259, 29323), (271, 29392), (275, 29413), (293, 29515), (297, 29530),

Gene: Applecrisp\_34 Start: 28749, Stop: 29882, Start Num: 29

Candidate Starts for Applecrisp\_34:

(Start: 29 @28749 has 188 MA's), (85, 28938), (136, 29043), (143, 29064), (160, 29109), (169, 29184), (189, 29259), (193, 29283), (208, 29361), (218, 29400), (222, 29415), (234, 29496), (242, 29550), (246, 29574), (250, 29598), (253, 29610), (264, 29697), (271, 29736), (275, 29757), (277, 29772),

(298, 29877),

Gene: Aquarius\_26 Start: 19072, Stop: 18026, Start Num: 87

Candidate Starts for Aquarius\_26:

(55, 19183), (Start: 87 @19072 has 45 MA's), (191, 18637), (194, 18622), (200, 18580), (206, 18553), (208, 18547), (209, 18544), (218, 18508), (244, 18337), (249, 18319), (266, 18208), (277, 18139), (283, 18079),

Gene: Asayake\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Asayake\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Asten\_43 Start: 29548, Stop: 30738, Start Num: 48

Candidate Starts for Asten\_43:

(Start: 48 @29548 has 101 MA's), (64, 29596), (79, 29662), (81, 29668), (114, 29782), (162, 29965), (177, 30055), (207, 30196), (208, 30199), (211, 30211), (219, 30247), (222, 30256), (228, 30301), (234, 30346), (242, 30400), (246, 30424), (262, 30535), (277, 30625),

Gene: Atiba\_35 Start: 28322, Stop: 29530, Start Num: 29

Candidate Starts for Atiba\_35:

(Start: 29 @28322 has 188 MA's), (Start: 57 @28424 has 11 MA's), (93, 28535), (143, 28712), (160, 28754), (169, 28829), (186, 28895), (189, 28907), (194, 28934), (208, 29009), (218, 29048), (222, 29063), (234, 29144), (235, 29156), (236, 29159), (238, 29174), (240, 29192), (242, 29198), (246, 29222), (248, 29228), (250, 29246), (252, 29255), (253, 29258), (259, 29315), (264, 29345), (265, 29348), (271, 29384), (275, 29405), (293, 29507), (297, 29522),

Gene: Attacne\_26 Start: 19091, Stop: 18045, Start Num: 87

Candidate Starts for Attacne\_26:

(Start: 87 @19091 has 45 MA's), (191, 18656), (194, 18641), (200, 18599), (206, 18572), (208, 18566), (209, 18563), (224, 18488), (244, 18356), (266, 18227), (277, 18158), (283, 18098),

Gene: Atuin\_162 Start: 113430, Stop: 111916, Start Num: 13

Candidate Starts for Atuin\_162:

(12, 113439), (Start: 13 @113430 has 4 MA's), (14, 113394), (18, 113358), (22, 113304), (39, 113199), (43, 113172), (63, 113103), (107, 112944), (112, 112923), (120, 112866), (144, 112767), (169, 112641), (201, 112506), (239, 112290), (255, 112188), (283, 111975), (286, 111966),

Gene: Axiom\_48 Start: 30603, Stop: 31802, Start Num: 48

Candidate Starts for Axiom\_48:

(Start: 48 @30603 has 101 MA's), (97, 30774), (114, 30843), (119, 30864), (153, 30975), (162, 31026), (207, 31257), (208, 31260), (215, 31290), (219, 31308), (222, 31317), (228, 31362), (262, 31596), (270, 31644), (276, 31677), (277, 31686), (292, 31773), (294, 31779), (297, 31791),

Gene: BEEST\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for BEEST\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253,

29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: BGlluviae\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for BGlluviae\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: BaghaKamala\_35 Start: 28322, Stop: 29530, Start Num: 29

Candidate Starts for BaghaKamala\_35:

(Start: 25 @28298 has 1 MA's), (Start: 29 @28322 has 188 MA's), (Start: 57 @28424 has 11 MA's), (93, 28535), (123, 28643), (143, 28712), (160, 28754), (169, 28829), (186, 28895), (189, 28907), (194, 28934), (208, 29009), (218, 29048), (222, 29063), (234, 29144), (235, 29156), (236, 29159), (238, 29174), (240, 29192), (242, 29198), (246, 29222), (248, 29228), (250, 29246), (252, 29255), (253, 29258), (259, 29315), (264, 29345), (271, 29384), (275, 29405), (293, 29507), (297, 29522), (298, 29525),

Gene: Banquo\_65 Start: 39615, Stop: 40727, Start Num: 57

Candidate Starts for Banquo\_65:

(47, 39588), (Start: 57 @39615 has 11 MA's), (61, 39624), (65, 39636), (75, 39672), (100, 39738), (156, 39933), (167, 40011), (182, 40077), (185, 40086), (188, 40098), (196, 40149), (211, 40215), (218, 40245), (219, 40251), (222, 40260), (237, 40359), (246, 40419), (249, 40431), (250, 40443), (256, 40488), (273, 40596), (279, 40647), (286, 40686), (298, 40722),

Gene: BarrelRoll\_35 Start: 28345, Stop: 29553, Start Num: 29

Candidate Starts for BarrelRoll\_35:

(Start: 29 @28345 has 188 MA's), (Start: 57 @28447 has 11 MA's), (93, 28558), (143, 28735), (160, 28777), (169, 28852), (186, 28918), (189, 28930), (194, 28957), (208, 29032), (218, 29071), (222, 29086), (234, 29167), (235, 29179), (236, 29182), (238, 29197), (240, 29215), (242, 29221), (246, 29245), (248, 29251), (250, 29269), (252, 29278), (253, 29281), (259, 29338), (264, 29368), (265, 29371), (271, 29407), (275, 29428), (293, 29530), (297, 29545),

Gene: BarryBee\_46 Start: 29558, Stop: 30748, Start Num: 48

Candidate Starts for BarryBee\_46:

(Start: 48 @29558 has 101 MA's), (64, 29606), (79, 29672), (81, 29678), (114, 29792), (162, 29975), (177, 30065), (207, 30206), (208, 30209), (211, 30221), (219, 30257), (222, 30266), (228, 30311), (234, 30356), (242, 30410), (246, 30434), (247, 30437), (262, 30545), (277, 30635), (286, 30704),

Gene: BartholomewSD\_46 Start: 30774, Stop: 31976, Start Num: 48

Candidate Starts for BartholomewSD\_46:

(Start: 48 @30774 has 101 MA's), (97, 30945), (114, 31014), (119, 31035), (149, 31137), (152, 31146), (162, 31200), (180, 31299), (207, 31431), (208, 31434), (215, 31464), (219, 31482), (242, 31635), (262, 31770), (276, 31851), (277, 31860), (286, 31929), (292, 31947), (294, 31953),

Gene: BeardedLady\_44 Start: 29466, Stop: 30656, Start Num: 48

Candidate Starts for BeardedLady\_44:

(32, 29403), (Start: 48 @29466 has 101 MA's), (64, 29514), (79, 29580), (104, 29667), (114, 29700), (162, 29883), (177, 29973), (207, 30114), (208, 30117), (211, 30129), (219, 30165), (222, 30174), (224, 30198), (228, 30219), (246, 30342), (247, 30345), (251, 30369), (262, 30453), (277, 30543), (296, 30645),

Gene: Beezoo\_35 Start: 28370, Stop: 29578, Start Num: 29

Candidate Starts for Beezoo\_35:

(Start: 29 @28370 has 188 MA's), (Start: 57 @28472 has 11 MA's), (93, 28583), (143, 28760), (160, 28802), (169, 28877), (186, 28943), (189, 28955), (194, 28982), (208, 29057), (218, 29096), (222, 29111), (234, 29192), (235, 29204), (236, 29207), (238, 29222), (240, 29240), (242, 29246), (246, 29270), (248, 29276), (250, 29294), (252, 29303), (253, 29306), (259, 29363), (264, 29393), (265, 29396), (271, 29432), (275, 29453), (293, 29555), (297, 29570),

Gene: Bella96\_35 Start: 28263, Stop: 29471, Start Num: 29

Candidate Starts for Bella96\_35:

(Start: 29 @28263 has 188 MA's), (Start: 57 @28365 has 11 MA's), (93, 28476), (99, 28494), (143, 28653), (160, 28695), (169, 28770), (186, 28836), (189, 28848), (194, 28875), (208, 28950), (218, 28989), (221, 29001), (222, 29004), (234, 29085), (235, 29097), (236, 29100), (238, 29115), (240, 29133), (242, 29139), (246, 29163), (248, 29169), (250, 29187), (252, 29196), (253, 29199), (259, 29256), (264, 29286), (271, 29325), (293, 29448), (297, 29463),

Gene: Belladonna\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Belladonna\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Bern\_37 Start: 28302, Stop: 29510, Start Num: 29

Candidate Starts for Bern\_37:

(Start: 29 @28302 has 188 MA's), (Start: 57 @28404 has 11 MA's), (93, 28515), (99, 28533), (143, 28692), (160, 28734), (169, 28809), (186, 28875), (189, 28887), (194, 28914), (207, 28986), (208, 28989), (218, 29028), (221, 29040), (222, 29043), (234, 29124), (235, 29136), (236, 29139), (240, 29172), (242, 29178), (246, 29202), (248, 29208), (250, 29226), (252, 29235), (253, 29238), (259, 29295), (264, 29325), (271, 29364), (275, 29385), (293, 29487), (297, 29502), (298, 29505),

Gene: Biglebops\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for Biglebops\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: Blizzard\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Blizzard\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Bloom\_174 Start: 113947, Stop: 112619, Start Num: 13

Candidate Starts for Bloom\_174:

(Start: 13 @113947 has 4 MA's), (58, 113722), (193, 113224), (208, 113146), (269, 112774),

Gene: Bobby\_160 Start: 90693, Stop: 91850, Start Num: 45

Candidate Starts for Bobby\_160:

(Start: 45 @90693 has 1 MA's), (52, 90714), (65, 90750), (96, 90846), (101, 90858), (134, 90987), (141, 91011), (158, 91062), (162, 91086), (165, 91101), (186, 91206), (195, 91248), (203, 91302), (204, 91308), (207, 91320), (209, 91326), (222, 91380), (227, 91416), (239, 91506), (242, 91518), (246, 91542), (249, 91554), (295, 91836),

Gene: Bobquesha\_37 Start: 29185, Stop: 30375, Start Num: 29

Candidate Starts for Bobquesha\_37:

(Start: 29 @29185 has 188 MA's), (72, 29341), (83, 29371), (93, 29401), (123, 29488), (160, 29596), (171, 29680), (186, 29734), (196, 29794), (197, 29803), (200, 29818), (208, 29851), (221, 29902), (222, 29905), (234, 29986), (240, 30034), (242, 30040), (246, 30064), (248, 30070), (249, 30076), (251, 30091), (256, 30136), (265, 30193), (284, 30328), (286, 30334), (295, 30361), (297, 30367), (298, 30370),

Gene: Boiiii\_35 Start: 28395, Stop: 29603, Start Num: 29

Candidate Starts for Boiiii\_35:

(Start: 25 @28371 has 1 MA's), (Start: 29 @28395 has 188 MA's), (Start: 57 @28497 has 11 MA's), (93, 28608), (143, 28785), (160, 28827), (169, 28902), (179, 28944), (186, 28968), (189, 28980), (194, 29007), (208, 29082), (218, 29121), (222, 29136), (234, 29217), (235, 29229), (236, 29232), (238, 29247), (240, 29265), (242, 29271), (246, 29295), (248, 29301), (250, 29319), (252, 29328), (253, 29331), (259, 29388), (264, 29418), (271, 29457), (275, 29478), (293, 29580), (297, 29595),

Gene: Boilgate\_32 Start: 30234, Stop: 31436, Start Num: 29

Candidate Starts for Boilgate\_32:

(27, 30225), (Start: 29 @30234 has 188 MA's), (Start: 57 @30339 has 11 MA's), (82, 30429), (93, 30462), (120, 30534), (136, 30597), (160, 30657), (162, 30675), (171, 30741), (189, 30807), (196, 30855), (197, 30864), (200, 30879), (205, 30900), (208, 30912), (215, 30942), (221, 30963), (234, 31047), (242, 31101), (246, 31125), (248, 31131), (251, 31152), (253, 31161), (256, 31197), (259, 31221), (264, 31251), (265, 31254), (268, 31278), (283, 31386), (295, 31422), (297, 31428), (298, 31431),

Gene: BoostSeason\_35 Start: 27717, Stop: 28901, Start Num: 29

Candidate Starts for BoostSeason\_35:

(Start: 29 @27717 has 188 MA's), (39, 27750), (83, 27900), (93, 27930), (160, 28128), (169, 28203), (186, 28266), (193, 28302), (208, 28380), (209, 28383), (240, 28563), (246, 28593), (248, 28599), (251, 28620), (252, 28626), (259, 28686), (264, 28716), (275, 28776), (298, 28896),

Gene: Bovely\_43 Start: 29219, Stop: 30409, Start Num: 48

Candidate Starts for Bovely\_43:

(32, 29156), (Start: 48 @29219 has 101 MA's), (64, 29267), (79, 29333), (104, 29420), (114, 29453), (162, 29636), (177, 29726), (207, 29867), (208, 29870), (211, 29882), (219, 29918), (222, 29927), (224, 29951), (228, 29972), (246, 30095), (247, 30098), (262, 30206), (277, 30296), (296, 30398),

Gene: Bowden\_43 Start: 30689, Stop: 31891, Start Num: 48

Candidate Starts for Bowden\_43:

(Start: 48 @30689 has 101 MA's), (114, 30929), (119, 30950), (138, 31031), (149, 31052), (152, 31061), (162, 31115), (180, 31214), (207, 31346), (208, 31349), (215, 31379), (219, 31397), (251, 31601), (262, 31685), (263, 31694), (277, 31775), (292, 31862), (294, 31868),

Gene: Brataylor\_46 Start: 30531, Stop: 31721, Start Num: 48

Candidate Starts for Brataylor\_46:

(Start: 48 @30531 has 101 MA's), (64, 30579), (79, 30645), (81, 30651), (114, 30765), (162, 30948), (177, 31038), (207, 31179), (208, 31182), (211, 31194), (219, 31230), (222, 31239), (224, 31263),



(228, 31284), (234, 31329), (246, 31407), (247, 31410), (262, 31518), (277, 31608), (286, 31677),

Gene: BroPlease\_44 Start: 29706, Stop: 30899, Start Num: 48

Candidate Starts for BroPlease\_44:

(Start: 48 @29706 has 101 MA's), (52, 29718), (81, 29832), (114, 29946), (119, 29967), (161, 30108), (215, 30387), (219, 30405), (228, 30459), (229, 30486), (234, 30504), (262, 30693), (276, 30774), (286, 30852), (292, 30870), (294, 30876), (297, 30888),

Gene: BruceLethal\_26 Start: 19313, Stop: 18270, Start Num: 87

Candidate Starts for BruceLethal\_26:

(55, 19421), (Start: 87 @19313 has 45 MA's), (191, 18881), (194, 18866), (200, 18824), (206, 18797), (208, 18791), (209, 18788), (212, 18773), (229, 18668), (244, 18581), (249, 18563), (266, 18452), (277, 18383), (283, 18323),

Gene: BryanRecycles\_44 Start: 29538, Stop: 30725, Start Num: 48

Candidate Starts for BryanRecycles\_44:

(Start: 48 @29538 has 101 MA's), (79, 29655), (81, 29661), (95, 29700), (103, 29736), (114, 29775), (145, 29892), (149, 29898), (162, 29952), (208, 30186), (219, 30234), (234, 30333), (246, 30411), (247, 30414), (251, 30438), (262, 30522), (277, 30612),

Gene: Bryler\_35 Start: 27685, Stop: 28893, Start Num: 29

Candidate Starts for Bryler\_35:

(Start: 29 @27685 has 188 MA's), (33, 27703), (Start: 57 @27787 has 11 MA's), (93, 27898), (99, 27916), (143, 28078), (160, 28120), (186, 28258), (189, 28270), (194, 28297), (208, 28372), (222, 28426), (234, 28507), (240, 28555), (242, 28561), (246, 28585), (250, 28609), (251, 28612), (259, 28678), (264, 28708), (275, 28768), (286, 28852), (293, 28870), (297, 28885),

Gene: CREW\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for CREW\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Caelum\_45 Start: 30379, Stop: 31572, Start Num: 48

Candidate Starts for Caelum\_45:

(24, 30268), (Start: 48 @30379 has 101 MA's), (79, 30499), (97, 30550), (114, 30619), (119, 30640), (128, 30682), (161, 30781), (162, 30796), (196, 30976), (207, 31027), (208, 31030), (219, 31078), (262, 31366), (277, 31456), (292, 31543), (294, 31549),

Gene: Cain\_35 Start: 27673, Stop: 28881, Start Num: 29

Candidate Starts for Cain\_35:

(Start: 29 @27673 has 188 MA's), (33, 27691), (Start: 57 @27775 has 11 MA's), (93, 27886), (99, 27904), (143, 28066), (160, 28108), (186, 28246), (189, 28258), (194, 28285), (208, 28360), (222, 28414), (234, 28495), (240, 28543), (242, 28549), (246, 28573), (250, 28597), (251, 28600), (259, 28666), (264, 28696), (275, 28756), (286, 28840), (293, 28858), (297, 28873),

Gene: Caliburn\_43 Start: 29196, Stop: 30386, Start Num: 48

Candidate Starts for Caliburn\_43:

(32, 29133), (Start: 48 @29196 has 101 MA's), (64, 29244), (79, 29310), (104, 29397), (114, 29430), (153, 29562), (162, 29613), (177, 29703), (207, 29844), (208, 29847), (211, 29859), (219, 29895), (222, 29904), (224, 29928), (228, 29949), (246, 30072), (247, 30075), (262, 30183), (277, 30273),

(296, 30375),

Gene: CallaLilly\_36 Start: 28316, Stop: 29524, Start Num: 29

Candidate Starts for CallaLilly\_36:

(Start: 25 @28292 has 1 MA's), (Start: 29 @28316 has 188 MA's), (Start: 57 @28418 has 11 MA's), (93, 28529), (123, 28637), (143, 28706), (160, 28748), (169, 28823), (186, 28889), (189, 28901), (194, 28928), (208, 29003), (218, 29042), (222, 29057), (234, 29138), (235, 29150), (236, 29153), (238, 29168), (240, 29186), (242, 29192), (246, 29216), (248, 29222), (250, 29240), (252, 29249), (253, 29252), (259, 29309), (264, 29339), (271, 29378), (275, 29399), (293, 29501), (297, 29516),

Gene: Capricorn\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Capricorn\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: CaseJules\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for CaseJules\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Catfish\_66 Start: 41648, Stop: 42793, Start Num: 57

Candidate Starts for Catfish\_66:

(Start: 57 @41648 has 11 MA's), (65, 41669), (76, 41714), (101, 41789), (110, 41831), (140, 41948), (180, 42134), (185, 42152), (186, 42155), (188, 42164), (196, 42215), (200, 42236), (204, 42254), (208, 42269), (218, 42311), (221, 42323), (222, 42326), (246, 42485), (248, 42491), (250, 42509), (256, 42554), (265, 42611), (266, 42614), (273, 42662), (279, 42713), (283, 42743), (284, 42746), (286, 42752), (298, 42788),

Gene: Celery\_46 Start: 30842, Stop: 32029, Start Num: 48

Candidate Starts for Celery\_46:

(Start: 48 @30842 has 101 MA's), (73, 30938), (79, 30959), (81, 30965), (89, 30986), (114, 31079), (119, 31100), (135, 31160), (149, 31202), (151, 31208), (162, 31256), (166, 31286), (198, 31448), (207, 31487), (208, 31490), (215, 31520), (219, 31538), (228, 31592), (234, 31637), (242, 31691), (277, 31916), (296, 32018),

Gene: Celeste\_44 Start: 29997, Stop: 31187, Start Num: 48

Candidate Starts for Celeste\_44:

(Start: 48 @29997 has 101 MA's), (64, 30045), (79, 30111), (81, 30117), (114, 30231), (162, 30414), (177, 30504), (194, 30573), (207, 30645), (208, 30648), (211, 30660), (219, 30696), (222, 30705), (224, 30729), (228, 30750), (242, 30849), (246, 30873), (247, 30876), (262, 30984), (277, 31074), (286, 31143),

Gene: Celia\_45 Start: 30185, Stop: 31378, Start Num: 49

Candidate Starts for Celia\_45:

(Start: 49 @30185 has 11 MA's), (73, 30284), (79, 30305), (81, 30311), (114, 30425), (119, 30446), (127, 30482), (161, 30587), (162, 30602), (186, 30722), (198, 30794), (207, 30833), (208, 30836), (219, 30884), (222, 30893), (224, 30917), (226, 30926), (228, 30938), (262, 31172), (275, 31247),

(277, 31262), (283, 31322), (297, 31367),

Gene: Chancellor\_36 Start: 29445, Stop: 30635, Start Num: 29

Candidate Starts for Chancellor\_36:

(Start: 29 @29445 has 188 MA's), (72, 29601), (83, 29631), (93, 29661), (123, 29748), (160, 29856), (171, 29940), (186, 29994), (196, 30054), (197, 30063), (200, 30078), (208, 30111), (221, 30162), (222, 30165), (234, 30246), (240, 30294), (242, 30300), (246, 30324), (248, 30330), (251, 30351), (256, 30396), (265, 30453), (284, 30588), (286, 30594), (295, 30621), (297, 30627), (298, 30630),

Gene: Chavito\_35 Start: 27992, Stop: 29122, Start Num: 29

Candidate Starts for Chavito\_35:

(Start: 29 @27992 has 188 MA's), (40, 28034), (85, 28181), (143, 28307), (160, 28349), (169, 28424), (186, 28487), (189, 28499), (193, 28523), (194, 28526), (208, 28601), (218, 28640), (221, 28652), (222, 28655), (234, 28736), (235, 28748), (240, 28784), (246, 28814), (248, 28820), (250, 28838), (252, 28847), (253, 28850), (259, 28907), (264, 28937), (271, 28976), (275, 28997), (293, 29099), (297, 29114),

Gene: CheetoDust\_35 Start: 28370, Stop: 29578, Start Num: 29

Candidate Starts for CheetoDust\_35:

(Start: 29 @28370 has 188 MA's), (Start: 57 @28472 has 11 MA's), (93, 28583), (143, 28760), (160, 28802), (169, 28877), (186, 28943), (189, 28955), (194, 28982), (208, 29057), (218, 29096), (222, 29111), (234, 29192), (235, 29204), (236, 29207), (240, 29240), (242, 29246), (246, 29270), (248, 29276), (250, 29294), (252, 29303), (253, 29306), (259, 29363), (264, 29393), (271, 29432), (275, 29453), (293, 29555), (297, 29570),

Gene: Cheetobro\_36 Start: 29442, Stop: 30632, Start Num: 29

Candidate Starts for Cheetobro\_36:

(Start: 29 @29442 has 188 MA's), (72, 29598), (83, 29628), (93, 29658), (123, 29745), (160, 29853), (171, 29937), (186, 29991), (196, 30051), (197, 30060), (200, 30075), (208, 30108), (221, 30159), (222, 30162), (234, 30243), (240, 30291), (242, 30297), (246, 30321), (248, 30327), (251, 30348), (256, 30393), (265, 30450), (284, 30585), (286, 30591), (295, 30618), (297, 30624), (298, 30627),

Gene: Chilliams\_167 Start: 104835, Stop: 103429, Start Num: 13

Candidate Starts for Chilliams\_167:

(2, 104946), (5, 104916), (6, 104913), (7, 104910), (8, 104907), (12, 104844), (Start: 13 @104835 has 4 MA's), (77, 104511), (159, 104232), (191, 104076), (201, 104019), (213, 103968), (239, 103803), (255, 103701), (283, 103488), (299, 103437),

Gene: Chris\_35 Start: 28107, Stop: 29234, Start Num: 29

Candidate Starts for Chris\_35:

(Start: 29 @28107 has 188 MA's), (43, 28167), (85, 28296), (143, 28422), (169, 28536), (186, 28599), (189, 28611), (193, 28635), (194, 28638), (205, 28701), (208, 28713), (222, 28767), (225, 28797), (234, 28848), (235, 28860), (238, 28878), (242, 28902), (246, 28926), (248, 28932), (250, 28950), (253, 28962), (259, 29019), (270, 29082), (275, 29109), (277, 29124), (293, 29211), (297, 29226),

Gene: Chucky\_43 Start: 29562, Stop: 30752, Start Num: 48

Candidate Starts for Chucky\_43:

(Start: 48 @29562 has 101 MA's), (64, 29610), (79, 29676), (81, 29682), (114, 29796), (162, 29979), (207, 30210), (208, 30213), (211, 30225), (219, 30261), (222, 30270), (224, 30294), (228, 30315), (234, 30360), (242, 30414), (246, 30438), (247, 30441), (262, 30549), (277, 30639), (286, 30708),

Gene: Clipper\_37 Start: 28346, Stop: 29578, Start Num: 25

Candidate Starts for Clipper\_37:

(Start: 25 @28346 has 1 MA's), (Start: 29 @28370 has 188 MA's), (Start: 57 @28472 has 11 MA's), (93, 28583), (143, 28760), (160, 28802), (169, 28877), (186, 28943), (189, 28955), (194, 28982), (208, 29057), (218, 29096), (222, 29111), (234, 29192), (235, 29204), (236, 29207), (238, 29222), (240, 29240), (246, 29270), (248, 29276), (250, 29294), (252, 29303), (253, 29306), (259, 29363), (264, 29393), (271, 29432), (275, 29453), (293, 29555), (297, 29570),

Gene: Collard\_34 Start: 28959, Stop: 30173, Start Num: 29

Candidate Starts for Collard\_34:

(Start: 29 @28959 has 188 MA's), (33, 28977), (99, 29190), (111, 29238), (160, 29397), (163, 29421), (171, 29481), (178, 29511), (181, 29520), (186, 29535), (189, 29547), (208, 29652), (209, 29655), (213, 29673), (222, 29706), (226, 29739), (234, 29787), (235, 29799), (240, 29835), (246, 29865), (248, 29871), (251, 29892), (252, 29898), (253, 29901), (259, 29958), (264, 29988), (265, 29991), (283, 30123), (287, 30135), (293, 30150), (295, 30159),

Gene: Conan\_44 Start: 30803, Stop: 31990, Start Num: 48

Candidate Starts for Conan\_44:

(Start: 48 @30803 has 101 MA's), (73, 30899), (79, 30920), (81, 30926), (89, 30947), (114, 31040), (119, 31061), (149, 31163), (151, 31169), (162, 31217), (198, 31409), (207, 31448), (208, 31451), (215, 31481), (219, 31499), (228, 31553), (234, 31598), (242, 31652), (247, 31679), (277, 31877), (296, 31979),

Gene: Cota\_26 Start: 19357, Stop: 18317, Start Num: 87

Candidate Starts for Cota\_26:

(Start: 87 @19357 has 45 MA's), (191, 18928), (194, 18913), (206, 18844), (208, 18838), (209, 18835), (229, 18715), (244, 18628), (249, 18610), (266, 18499), (277, 18430), (283, 18370),

Gene: CrimD\_35 Start: 28327, Stop: 29535, Start Num: 29

Candidate Starts for CrimD\_35:

(Start: 29 @28327 has 188 MA's), (Start: 57 @28429 has 11 MA's), (93, 28540), (99, 28558), (136, 28696), (143, 28717), (146, 28723), (160, 28759), (162, 28777), (169, 28834), (186, 28900), (189, 28912), (194, 28939), (208, 29014), (218, 29053), (221, 29065), (222, 29068), (234, 29149), (235, 29161), (236, 29164), (238, 29179), (240, 29197), (242, 29203), (246, 29227), (248, 29233), (250, 29251), (252, 29260), (253, 29263), (259, 29320), (264, 29350), (271, 29389), (275, 29410), (293, 29512), (297, 29527),

Gene: Curiosium\_36 Start: 28153, Stop: 29373, Start Num: 29

Candidate Starts for Curiosium\_36:

(Start: 29 @28153 has 188 MA's), (Start: 57 @28255 has 11 MA's), (72, 28306), (93, 28366), (99, 28384), (149, 28552), (160, 28594), (169, 28669), (186, 28732), (189, 28744), (194, 28771), (203, 28825), (208, 28846), (221, 28903), (222, 28906), (234, 28987), (235, 28999), (240, 29035), (242, 29041), (246, 29065), (248, 29071), (250, 29089), (252, 29098), (253, 29101), (259, 29158), (271, 29227), (275, 29248), (286, 29332), (293, 29350), (297, 29365),

Gene: DS6A\_36 Start: 30214, Stop: 31425, Start Num: 29

Candidate Starts for DS6A\_36:

(Start: 29 @30214 has 188 MA's), (78, 30388), (83, 30397), (88, 30412), (160, 30646), (161, 30649), (169, 30721), (184, 30778), (186, 30787), (187, 30793), (194, 30826), (196, 30847), (197, 30853), (200, 30868), (209, 30904), (218, 30943), (221, 30955), (222, 30958), (240, 31087), (246, 31117), (248, 31123), (251, 31144), (252, 31150), (265, 31243), (269, 31270), (270, 31273), (274, 31297), (275, 31300), (283, 31375), (295, 31411),

Gene: Dadosky\_35 Start: 28930, Stop: 30144, Start Num: 29

Candidate Starts for Dadosky\_35:

(28, 28924), (Start: 29 @28930 has 188 MA's), (33, 28948), (99, 29161), (111, 29209), (131, 29281), (160, 29368), (163, 29392), (171, 29452), (178, 29482), (181, 29491), (186, 29506), (189, 29518), (204, 29608), (205, 29611), (208, 29623), (209, 29626), (213, 29644), (222, 29677), (226, 29710), (234, 29758), (235, 29770), (240, 29806), (246, 29836), (248, 29842), (252, 29869), (253, 29872), (259, 29929), (264, 29959), (283, 30094), (287, 30106), (293, 30121), (295, 30130),

Gene: Dalmuri\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Dalmuri\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Danzina\_45 Start: 30298, Stop: 31488, Start Num: 48

Candidate Starts for Danzina\_45:

(Start: 48 @30298 has 101 MA's), (64, 30346), (79, 30412), (81, 30418), (114, 30532), (162, 30715), (169, 30769), (177, 30805), (207, 30946), (208, 30949), (211, 30961), (219, 30997), (222, 31006), (224, 31030), (228, 31051), (242, 31150), (246, 31174), (247, 31177), (262, 31285), (277, 31375), (286, 31444),

Gene: Dardanus\_60 Start: 37871, Stop: 38989, Start Num: 57

Candidate Starts for Dardanus\_60:

(Start: 57 @37871 has 11 MA's), (61, 37880), (63, 37889), (68, 37913), (84, 37955), (101, 38006), (115, 38060), (133, 38135), (147, 38171), (173, 38300), (183, 38342), (187, 38357), (188, 38360), (196, 38411), (200, 38432), (204, 38450), (208, 38465), (212, 38483), (218, 38507), (219, 38513), (243, 38666), (246, 38681), (250, 38705), (256, 38750), (264, 38804), (273, 38858), (279, 38909), (280, 38921), (286, 38948),

Gene: DARTH\_P\_34 Start: 28677, Stop: 29810, Start Num: 29

Candidate Starts for DARTH\_P\_34:

(Start: 29 @28677 has 188 MA's), (72, 28830), (85, 28866), (143, 28995), (160, 29037), (186, 29175), (189, 29187), (194, 29214), (208, 29289), (222, 29343), (234, 29424), (242, 29478), (246, 29502), (248, 29508), (253, 29538), (259, 29595), (264, 29625), (271, 29664), (275, 29685), (293, 29787), (295, 29796), (297, 29802),

Gene: Dartin\_35 Start: 27680, Stop: 28810, Start Num: 29

Candidate Starts for Dartin\_35:

(Start: 29 @27680 has 188 MA's), (40, 27722), (50, 27764), (85, 27869), (143, 27995), (160, 28037), (169, 28112), (186, 28175), (189, 28187), (193, 28211), (194, 28214), (208, 28289), (218, 28328), (221, 28340), (222, 28343), (234, 28424), (235, 28436), (240, 28472), (246, 28502), (248, 28508), (250, 28526), (252, 28535), (253, 28538), (264, 28625), (271, 28664), (275, 28685), (293, 28787), (297, 28802),

Gene: Dattran\_45 Start: 30140, Stop: 31330, Start Num: 48

Candidate Starts for Dattran\_45:

(Start: 48 @30140 has 101 MA's), (64, 30188), (79, 30254), (81, 30260), (114, 30374), (162, 30557), (177, 30647), (207, 30788), (208, 30791), (211, 30803), (219, 30839), (222, 30848), (228, 30893), (234, 30938), (242, 30992), (246, 31016), (247, 31019), (262, 31127), (277, 31217), (286, 31286),

Gene: Daudau\_44 Start: 30511, Stop: 31713, Start Num: 48

Candidate Starts for Daudau\_44:

(Start: 48 @30511 has 101 MA's), (114, 30751), (149, 30874), (162, 30937), (180, 31036), (207, 31168), (208, 31171), (215, 31201), (219, 31219), (228, 31273), (262, 31507), (276, 31588), (277, 31597), (292, 31684), (294, 31690),

Gene: Deby\_35 Start: 28327, Stop: 29535, Start Num: 29

Candidate Starts for Deby\_35:

(Start: 29 @28327 has 188 MA's), (Start: 57 @28429 has 11 MA's), (72, 28480), (93, 28540), (143, 28717), (160, 28759), (169, 28834), (186, 28900), (189, 28912), (194, 28939), (208, 29014), (218, 29053), (222, 29068), (234, 29149), (235, 29161), (236, 29164), (238, 29179), (240, 29197), (242, 29203), (246, 29227), (248, 29233), (250, 29251), (252, 29260), (253, 29263), (264, 29350), (271, 29389), (275, 29410), (293, 29512), (297, 29527),

Gene: Devera\_35 Start: 28388, Stop: 29596, Start Num: 29

Candidate Starts for Devera\_35:

(Start: 29 @28388 has 188 MA's), (Start: 57 @28490 has 11 MA's), (93, 28601), (99, 28619), (143, 28778), (160, 28820), (169, 28895), (186, 28961), (189, 28973), (194, 29000), (208, 29075), (218, 29114), (221, 29126), (222, 29129), (234, 29210), (235, 29222), (236, 29225), (238, 29240), (240, 29258), (242, 29264), (246, 29288), (248, 29294), (250, 29312), (252, 29321), (253, 29324), (259, 29381), (264, 29411), (265, 29414), (271, 29450), (293, 29573), (297, 29588),

Gene: Dexers\_42 Start: 30827, Stop: 32014, Start Num: 48

Candidate Starts for Dexers\_42:

(Start: 48 @30827 has 101 MA's), (73, 30923), (79, 30944), (81, 30950), (89, 30971), (114, 31064), (119, 31085), (149, 31187), (151, 31193), (162, 31241), (198, 31433), (207, 31472), (208, 31475), (215, 31505), (219, 31523), (228, 31577), (234, 31622), (242, 31676), (277, 31901), (296, 32003),

Gene: Diane\_43 Start: 30367, Stop: 31569, Start Num: 48

Candidate Starts for Diane\_43:

(Start: 48 @30367 has 101 MA's), (97, 30538), (114, 30607), (119, 30628), (150, 30736), (153, 30742), (162, 30793), (207, 31024), (208, 31027), (215, 31057), (219, 31075), (228, 31129), (251, 31279), (262, 31363), (277, 31453), (292, 31540), (294, 31546), (297, 31558),

Gene: DinoDaryn\_66 Start: 39716, Stop: 40840, Start Num: 57

Candidate Starts for DinoDaryn\_66:

(36, 39641), (Start: 57 @39716 has 11 MA's), (61, 39725), (65, 39737), (102, 39860), (173, 40151), (188, 40211), (196, 40262), (200, 40283), (204, 40301), (211, 40328), (218, 40358), (219, 40364), (237, 40472), (246, 40532), (256, 40601), (273, 40709), (286, 40799), (298, 40835),

Gene: DismalFunk\_34 Start: 27629, Stop: 28813, Start Num: 29

Candidate Starts for DismalFunk\_34:

(Start: 29 @27629 has 188 MA's), (39, 27662), (83, 27812), (93, 27842), (136, 27974), (169, 28115), (186, 28178), (208, 28292), (209, 28295), (240, 28475), (246, 28505), (248, 28511), (251, 28532), (252, 28538), (259, 28598), (264, 28628), (275, 28688), (293, 28790), (298, 28808),

Gene: DismalStressor\_34 Start: 27629, Stop: 28813, Start Num: 29

Candidate Starts for DismalStressor\_34:

(Start: 29 @27629 has 188 MA's), (39, 27662), (83, 27812), (93, 27842), (136, 27974), (169, 28115), (186, 28178), (208, 28292), (209, 28295), (240, 28475), (246, 28505), (248, 28511), (251, 28532), (252, 28538), (259, 28598), (264, 28628), (275, 28688), (293, 28790), (298, 28808),

Gene: Dole\_35 Start: 28390, Stop: 29598, Start Num: 29

Candidate Starts for Dole\_35:

(Start: 29 @28390 has 188 MA's), (Start: 57 @28492 has 11 MA's), (93, 28603), (99, 28621), (143, 28780), (160, 28822), (169, 28897), (186, 28963), (189, 28975), (194, 29002), (208, 29077), (218, 29116), (221, 29128), (222, 29131), (234, 29212), (235, 29224), (236, 29227), (238, 29242), (240, 29260), (242, 29266), (246, 29290), (248, 29296), (250, 29314), (252, 29323), (253, 29326), (259, 29383), (264, 29413), (265, 29416), (271, 29452), (293, 29575), (297, 29590),

Gene: Doughnut\_35 Start: 27710, Stop: 28894, Start Num: 29

Candidate Starts for Doughnut\_35:

(Start: 29 @27710 has 188 MA's), (39, 27743), (83, 27893), (93, 27923), (136, 28055), (160, 28121), (169, 28196), (186, 28259), (192, 28286), (194, 28298), (208, 28373), (209, 28376), (240, 28556), (246, 28586), (248, 28592), (251, 28613), (252, 28619), (259, 28679), (264, 28709), (275, 28769), (298, 28889),

Gene: DrHayes\_35 Start: 28303, Stop: 29511, Start Num: 29

Candidate Starts for DrHayes\_35:

(Start: 29 @28303 has 188 MA's), (Start: 57 @28405 has 11 MA's), (93, 28516), (99, 28534), (143, 28693), (160, 28735), (169, 28810), (186, 28876), (189, 28888), (194, 28915), (208, 28990), (218, 29029), (221, 29041), (222, 29044), (234, 29125), (235, 29137), (236, 29140), (238, 29155), (240, 29173), (246, 29203), (248, 29209), (250, 29227), (252, 29236), (253, 29239), (259, 29296), (271, 29365), (275, 29386), (293, 29488), (297, 29503),

Gene: DrParker\_26 Start: 19410, Stop: 18364, Start Num: 87

Candidate Starts for DrParker\_26:

(Start: 87 @19410 has 45 MA's), (191, 18975), (194, 18960), (204, 18900), (206, 18891), (208, 18885), (209, 18882), (212, 18867), (244, 18675), (266, 18546), (277, 18477), (283, 18417),

Gene: DunneganBoMo\_166 Start: 110252, Stop: 108825, Start Num: 13

Candidate Starts for DunneganBoMo\_166:

(3, 110354), (9, 110318), (12, 110261), (Start: 13 @110252 has 4 MA's), (14, 110216), (20, 110165), (22, 110126), (34, 110048), (35, 110045), (63, 109973), (144, 109676), (160, 109625), (201, 109415), (239, 109199), (248, 109157), (255, 109097), (283, 108884),

Gene: Durfee\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Durfee\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Dwayne\_43 Start: 29549, Stop: 30739, Start Num: 48

Candidate Starts for Dwayne\_43:

(Start: 48 @29549 has 101 MA's), (64, 29597), (79, 29663), (81, 29669), (114, 29783), (162, 29966), (207, 30197), (208, 30200), (211, 30212), (219, 30248), (222, 30257), (224, 30281), (228, 30302), (234, 30347), (242, 30401), (246, 30425), (247, 30428), (262, 30536), (277, 30626), (286, 30695),

Gene: ELB20\_43 Start: 31002, Stop: 32195, Start Num: 48

Candidate Starts for ELB20\_43:

(Start: 48 @31002 has 101 MA's), (73, 31101), (79, 31122), (81, 31128), (105, 31212), (114, 31242), (119, 31263), (161, 31404), (162, 31419), (166, 31449), (207, 31650), (208, 31653), (219, 31701), (225, 31740), (228, 31755), (262, 31989), (276, 32070), (277, 32079), (292, 32166), (294, 32172),

Gene: Eddasa\_44 Start: 29538, Stop: 30725, Start Num: 48

Candidate Starts for Eddasa\_44:

(Start: 48 @29538 has 101 MA's), (79, 29655), (81, 29661), (95, 29700), (103, 29736), (114, 29775), (145, 29892), (149, 29898), (162, 29952), (208, 30186), (219, 30234), (234, 30333), (246, 30411), (247, 30414), (251, 30438), (262, 30522), (277, 30612),

Gene: Edugator\_34 Start: 28929, Stop: 30146, Start Num: 29

Candidate Starts for Edugator\_34:

(Start: 29 @28929 has 188 MA's), (33, 28950), (99, 29163), (111, 29211), (163, 29394), (164, 29403), (171, 29454), (178, 29484), (181, 29493), (186, 29508), (189, 29520), (204, 29610), (205, 29613), (208, 29625), (209, 29628), (213, 29646), (222, 29679), (226, 29712), (234, 29760), (235, 29772), (240, 29808), (246, 29838), (248, 29844), (252, 29871), (253, 29874), (259, 29931), (264, 29961), (265, 29964), (283, 30096), (287, 30108), (293, 30123), (295, 30132), (298, 30141),

Gene: Efra2\_35 Start: 27628, Stop: 28836, Start Num: 29

Candidate Starts for Efra2\_35:

(Start: 29 @27628 has 188 MA's), (Start: 57 @27730 has 11 MA's), (93, 27841), (143, 28018), (160, 28060), (169, 28135), (186, 28201), (189, 28213), (194, 28240), (208, 28315), (218, 28354), (221, 28366), (222, 28369), (234, 28450), (235, 28462), (236, 28465), (238, 28480), (240, 28498), (242, 28504), (246, 28528), (250, 28552), (252, 28561), (253, 28564), (259, 28621), (264, 28651), (271, 28690), (275, 28711), (293, 28813), (297, 28828),

Gene: Ejemplo\_42 Start: 29490, Stop: 30680, Start Num: 48

Candidate Starts for Ejemplo\_42:

(Start: 48 @29490 has 101 MA's), (64, 29538), (79, 29604), (114, 29724), (162, 29907), (177, 29997), (207, 30138), (208, 30141), (211, 30153), (219, 30189), (222, 30198), (224, 30222), (228, 30243), (234, 30288), (242, 30342), (247, 30369), (262, 30477), (277, 30567),

Gene: Ekdilam\_32 Start: 28435, Stop: 29565, Start Num: 29

Candidate Starts for Ekdilam\_32:

(Start: 29 @28435 has 188 MA's), (85, 28624), (143, 28750), (160, 28792), (189, 28942), (192, 28957), (208, 29044), (218, 29083), (222, 29098), (234, 29179), (236, 29194), (240, 29227), (242, 29233), (246, 29257), (248, 29263), (250, 29281), (253, 29293), (259, 29350), (264, 29380), (271, 29419), (275, 29440), (297, 29557),

Gene: ElGato\_44 Start: 30467, Stop: 31654, Start Num: 48

Candidate Starts for ElGato\_44:

(Start: 48 @30467 has 101 MA's), (73, 30563), (79, 30584), (81, 30590), (89, 30611), (114, 30704), (119, 30725), (149, 30827), (151, 30833), (162, 30881), (198, 31073), (207, 31112), (208, 31115), (215, 31145), (219, 31163), (228, 31217), (234, 31262), (242, 31316), (247, 31343), (277, 31541), (296, 31643),

Gene: Ellewin\_165 Start: 110359, Stop: 108929, Start Num: 13

Candidate Starts for Ellewin\_165:

(3, 110461), (9, 110425), (12, 110368), (Start: 13 @110359 has 4 MA's), (14, 110323), (20, 110272), (34, 110155), (35, 110152), (63, 110077), (144, 109780), (160, 109729), (201, 109519), (203, 109510), (248, 109261), (255, 109201), (283, 108988),

Gene: Ellie\_32 Start: 28440, Stop: 29573, Start Num: 29

Candidate Starts for Ellie\_32:

(Start: 29 @28440 has 188 MA's), (85, 28629), (136, 28734), (143, 28755), (160, 28800), (169, 28875), (189, 28950), (193, 28974), (208, 29052), (218, 29091), (222, 29106), (234, 29187), (242, 29241), (246, 29265), (250, 29289), (253, 29301), (264, 29388), (271, 29427), (275, 29448), (277, 29463), (298, 29568),



Gene: Emaanora\_46 Start: 29507, Stop: 30697, Start Num: 48

Candidate Starts for Emaanora\_46:

(Start: 48 @29507 has 101 MA's), (64, 29555), (79, 29621), (81, 29627), (114, 29741), (162, 29924), (207, 30155), (208, 30158), (211, 30170), (219, 30206), (222, 30215), (224, 30239), (228, 30260), (234, 30305), (242, 30359), (246, 30383), (247, 30386), (262, 30494), (277, 30584), (286, 30653),

Gene: Emerson\_35 Start: 28353, Stop: 29561, Start Num: 29

Candidate Starts for Emerson\_35:

(Start: 29 @28353 has 188 MA's), (Start: 57 @28455 has 11 MA's), (93, 28566), (143, 28743), (160, 28785), (169, 28860), (186, 28926), (189, 28938), (194, 28965), (208, 29040), (218, 29079), (222, 29094), (234, 29175), (235, 29187), (236, 29190), (238, 29205), (240, 29223), (242, 29229), (246, 29253), (248, 29259), (250, 29277), (252, 29286), (253, 29289), (259, 29346), (264, 29376), (265, 29379), (271, 29415), (275, 29436), (293, 29538), (297, 29553),

Gene: Enkosi\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for Enkosi\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: EnochSoames\_46 Start: 29533, Stop: 30720, Start Num: 48

Candidate Starts for EnochSoames\_46:

(Start: 48 @29533 has 101 MA's), (79, 29650), (81, 29656), (95, 29695), (114, 29770), (145, 29887), (149, 29893), (162, 29947), (208, 30181), (219, 30229), (234, 30328), (246, 30406), (247, 30409), (251, 30433), (262, 30517), (277, 30607),

Gene: Enochoraptor\_26 Start: 19336, Stop: 18290, Start Num: 87

Candidate Starts for Enochoraptor\_26:

(Start: 87 @19336 has 45 MA's), (135, 19144), (160, 19057), (191, 18901), (194, 18886), (204, 18826), (206, 18817), (208, 18811), (209, 18808), (212, 18793), (224, 18733), (229, 18688), (244, 18601), (249, 18583), (266, 18472), (277, 18403), (283, 18343),

Gene: Enoki\_26 Start: 19347, Stop: 18301, Start Num: 87

Candidate Starts for Enoki\_26:

(Start: 87 @19347 has 45 MA's), (191, 18912), (194, 18897), (200, 18855), (206, 18828), (208, 18822), (209, 18819), (212, 18804), (218, 18783), (224, 18744), (229, 18699), (244, 18612), (249, 18594), (266, 18483), (277, 18414), (283, 18354),

Gene: Eponine\_38 Start: 30198, Stop: 31388, Start Num: 29

Candidate Starts for Eponine\_38:

(Start: 29 @30198 has 188 MA's), (72, 30354), (83, 30384), (93, 30414), (123, 30501), (160, 30609), (171, 30693), (186, 30747), (196, 30807), (197, 30816), (200, 30831), (208, 30864), (221, 30915), (222, 30918), (234, 30999), (240, 31047), (242, 31053), (246, 31077), (248, 31083), (251, 31104), (256, 31149), (265, 31206), (284, 31341), (286, 31347), (295, 31374), (297, 31380), (298, 31383),

Gene: Esperer\_43 Start: 29032, Stop: 30222, Start Num: 48

Candidate Starts for Esperer\_43:

(32, 28969), (Start: 48 @29032 has 101 MA's), (64, 29080), (79, 29146), (104, 29233), (114, 29266), (162, 29449), (177, 29539), (207, 29680), (208, 29683), (211, 29695), (219, 29731), (222, 29740), (224, 29764), (228, 29785), (246, 29908), (247, 29911), (262, 30019), (277, 30109), (296, 30211),

Gene: Fefferhead\_34 Start: 28640, Stop: 29773, Start Num: 29

Candidate Starts for Fefferhead\_34:

(Start: 29 @28640 has 188 MA's), (85, 28829), (136, 28934), (143, 28955), (160, 29000), (169, 29075), (189, 29150), (193, 29174), (208, 29252), (218, 29291), (222, 29306), (234, 29387), (242, 29441), (246, 29465), (250, 29489), (253, 29501), (259, 29558), (264, 29588), (265, 29591), (271, 29627), (275, 29648), (277, 29663), (298, 29768),

Gene: Feyre\_34 Start: 28843, Stop: 30060, Start Num: 29

Candidate Starts for Feyre\_34:

(Start: 29 @28843 has 188 MA's), (33, 28864), (99, 29077), (111, 29125), (160, 29284), (164, 29317), (171, 29368), (178, 29398), (181, 29407), (186, 29422), (189, 29434), (204, 29524), (208, 29539), (209, 29542), (213, 29560), (222, 29593), (226, 29626), (234, 29674), (235, 29686), (240, 29722), (246, 29752), (248, 29758), (251, 29779), (252, 29785), (253, 29788), (256, 29821), (257, 29830), (259, 29845), (264, 29875), (265, 29878), (270, 29908), (283, 30010), (293, 30037), (295, 30046),

Gene: Findley\_34 Start: 27622, Stop: 28806, Start Num: 29

Candidate Starts for Findley\_34:

(23, 27589), (Start: 29 @27622 has 188 MA's), (39, 27655), (83, 27805), (93, 27835), (146, 27994), (160, 28033), (169, 28108), (186, 28171), (192, 28198), (194, 28210), (208, 28285), (209, 28288), (240, 28468), (246, 28498), (248, 28504), (251, 28525), (252, 28531), (259, 28591), (264, 28621), (275, 28681), (293, 28783), (298, 28801),

Gene: Fionnbharth\_36 Start: 29433, Stop: 30623, Start Num: 29

Candidate Starts for Fionnbharth\_36:

(Start: 29 @29433 has 188 MA's), (72, 29589), (83, 29619), (93, 29649), (123, 29736), (126, 29748), (160, 29844), (162, 29862), (171, 29928), (186, 29982), (196, 30042), (197, 30051), (200, 30066), (207, 30096), (208, 30099), (221, 30150), (222, 30153), (234, 30234), (240, 30282), (242, 30288), (246, 30312), (248, 30318), (251, 30339), (256, 30384), (265, 30441), (284, 30576), (295, 30609), (297, 30615), (298, 30618),

Gene: Fryberger\_119 Start: 56561, Stop: 57652, Start Num: 49

Candidate Starts for Fryberger\_119:

(Start: 49 @56561 has 11 MA's), (56, 56582), (109, 56717), (121, 56753), (124, 56765), (132, 56798), (192, 57041), (211, 57140), (221, 57182), (235, 57278), (239, 57302), (240, 57308), (246, 57338), (249, 57350), (254, 57395), (256, 57407), (265, 57464), (291, 57626),

Gene: Ganymede\_36 Start: 28382, Stop: 29590, Start Num: 29

Candidate Starts for Ganymede\_36:

(Start: 29 @28382 has 188 MA's), (Start: 57 @28484 has 11 MA's), (72, 28535), (93, 28595), (136, 28751), (160, 28814), (169, 28889), (186, 28955), (189, 28967), (194, 28994), (208, 29069), (218, 29108), (222, 29123), (234, 29204), (235, 29216), (236, 29219), (238, 29234), (240, 29252), (242, 29258), (246, 29282), (248, 29288), (250, 29306), (252, 29315), (253, 29318), (259, 29375), (264, 29405), (271, 29444), (275, 29465), (293, 29567), (297, 29582),

Gene: Gengar\_34 Start: 28953, Stop: 30170, Start Num: 29

Candidate Starts for Gengar\_34:

(Start: 29 @28953 has 188 MA's), (33, 28974), (99, 29187), (111, 29235), (160, 29394), (162, 29412), (164, 29427), (171, 29478), (178, 29508), (181, 29517), (186, 29532), (189, 29544), (204, 29634), (208, 29649), (209, 29652), (213, 29670), (222, 29703), (226, 29736), (234, 29784), (235, 29796), (240, 29832), (246, 29862), (248, 29868), (251, 29889), (252, 29895), (253, 29898), (256, 29931), (257, 29940), (259, 29955), (264, 29985), (265, 29988), (270, 30018), (283, 30120), (293, 30147), (295, 30156),

Gene: Geraldini\_35 Start: 28370, Stop: 29578, Start Num: 29

Candidate Starts for Geraldini\_35:

(Start: 29 @28370 has 188 MA's), (Start: 57 @28472 has 11 MA's), (93, 28583), (143, 28760), (160, 28802), (169, 28877), (186, 28943), (189, 28955), (194, 28982), (208, 29057), (218, 29096), (222, 29111), (234, 29192), (235, 29204), (236, 29207), (238, 29222), (240, 29240), (246, 29270), (248, 29276), (250, 29294), (252, 29303), (253, 29306), (259, 29363), (264, 29393), (271, 29432), (275, 29453), (293, 29555), (297, 29570),

Gene: Gilgamesh\_55 Start: 50958, Stop: 52205, Start Num: 38

Candidate Starts for Gilgamesh\_55:

(1, 50523), (4, 50637), (15, 50766), (33, 50943), (35, 50949), (Start: 38 @50958 has 1 MA's), (66, 51072), (71, 51096), (91, 51159), (94, 51168), (103, 51207), (118, 51264), (122, 51276), (127, 51309), (137, 51348), (139, 51360), (164, 51447), (202, 51645), (231, 51804), (241, 51864), (242, 51867), (246, 51891), (251, 51918), (271, 52059), (285, 52158),

Gene: GirlDinner\_43 Start: 30149, Stop: 31348, Start Num: 48

Candidate Starts for GirlDinner\_43:

(Start: 48 @30149 has 101 MA's), (97, 30320), (114, 30389), (153, 30521), (162, 30572), (207, 30803), (208, 30806), (215, 30836), (219, 30854), (222, 30863), (228, 30908), (262, 31142), (276, 31223), (277, 31232), (292, 31319), (294, 31325), (297, 31337),

Gene: Goby\_43 Start: 30039, Stop: 31229, Start Num: 48

Candidate Starts for Goby\_43:

(Start: 48 @30039 has 101 MA's), (64, 30087), (79, 30153), (81, 30159), (114, 30273), (162, 30456), (177, 30546), (207, 30687), (208, 30690), (211, 30702), (219, 30738), (222, 30747), (228, 30792), (234, 30837), (242, 30891), (246, 30915), (247, 30918), (262, 31026), (277, 31116), (286, 31185),

Gene: Godpower\_44 Start: 30022, Stop: 31212, Start Num: 48

Candidate Starts for Godpower\_44:

(Start: 48 @30022 has 101 MA's), (64, 30070), (79, 30136), (81, 30142), (114, 30256), (152, 30385), (162, 30439), (177, 30529), (207, 30670), (208, 30673), (211, 30685), (219, 30721), (222, 30730), (224, 30754), (228, 30775), (234, 30820), (242, 30874), (247, 30901), (262, 31009), (277, 31099), (294, 31192),

Gene: Goib\_66 Start: 40832, Stop: 41953, Start Num: 57

Candidate Starts for Goib\_66:

(Start: 57 @40832 has 11 MA's), (61, 40841), (65, 40853), (101, 40970), (102, 40976), (171, 41258), (185, 41312), (186, 41315), (188, 41324), (196, 41375), (200, 41396), (204, 41414), (211, 41441), (218, 41471), (219, 41477), (235, 41579), (237, 41585), (246, 41645), (248, 41651), (250, 41669), (256, 41714), (273, 41822), (286, 41912), (298, 41948),

Gene: GoldenEssence\_158 Start: 107508, Stop: 106180, Start Num: 13

Candidate Starts for GoldenEssence\_158:

(Start: 13 @107508 has 4 MA's), (58, 107283), (193, 106785), (208, 106707), (269, 106335),

Gene: GreenWeasel\_45 Start: 29713, Stop: 30906, Start Num: 48

Candidate Starts for GreenWeasel\_45:

(Start: 48 @29713 has 101 MA's), (52, 29725), (81, 29839), (98, 29887), (105, 29923), (114, 29953), (119, 29974), (161, 30115), (207, 30361), (219, 30412), (222, 30421), (228, 30466), (229, 30493), (234, 30511), (245, 30586), (262, 30700), (276, 30781), (286, 30859), (294, 30883), (297, 30895),

Gene: Gspu1\_57 Start: 38283, Stop: 39401, Start Num: 57

Candidate Starts for Gspu1\_57:

(Start: 57 @38283 has 11 MA's), (61, 38292), (63, 38301), (86, 38367), (115, 38466), (125, 38499), (129, 38526), (130, 38532), (171, 38706), (183, 38754), (187, 38769), (196, 38823), (199, 38838), (208, 38877), (210, 38883), (215, 38907), (218, 38919), (222, 38934), (223, 38955), (240, 39063), (242, 39069), (246, 39093), (248, 39099), (250, 39117), (256, 39162), (265, 39219), (275, 39276), (279, 39321), (293, 39378),

Gene: Guanica15\_35 Start: 27645, Stop: 28853, Start Num: 29

Candidate Starts for Guanica15\_35:

(Start: 29 @27645 has 188 MA's), (Start: 57 @27747 has 11 MA's), (93, 27858), (143, 28035), (146, 28041), (160, 28077), (169, 28152), (186, 28218), (189, 28230), (194, 28257), (208, 28332), (218, 28371), (221, 28383), (222, 28386), (234, 28467), (235, 28479), (236, 28482), (238, 28497), (240, 28515), (242, 28521), (246, 28545), (250, 28569), (252, 28578), (253, 28581), (259, 28638), (264, 28668), (271, 28707), (275, 28728), (286, 28812), (293, 28830), (297, 28845),

Gene: Guey18\_123 Start: 57884, Stop: 58975, Start Num: 49

Candidate Starts for Guey18\_123:

(Start: 49 @57884 has 11 MA's), (56, 57905), (109, 58040), (121, 58076), (124, 58088), (136, 58136), (162, 58211), (171, 58277), (173, 58283), (192, 58364), (211, 58463), (221, 58505), (235, 58601), (239, 58625), (240, 58631), (246, 58661), (249, 58673), (256, 58730), (265, 58787), (291, 58949),

Gene: Guillsminger\_34 Start: 28924, Stop: 30141, Start Num: 29

Candidate Starts for Guillsminger\_34:

(Start: 29 @28924 has 188 MA's), (33, 28945), (99, 29158), (111, 29206), (160, 29365), (162, 29383), (164, 29398), (171, 29449), (178, 29479), (181, 29488), (186, 29503), (189, 29515), (204, 29605), (208, 29620), (209, 29623), (213, 29641), (218, 29659), (222, 29674), (226, 29707), (234, 29755), (235, 29767), (240, 29803), (246, 29833), (248, 29839), (251, 29860), (252, 29866), (253, 29869), (259, 29926), (264, 29956), (265, 29959), (270, 29989), (283, 30091), (293, 30118), (295, 30127),

Gene: Haizum\_45 Start: 30482, Stop: 31684, Start Num: 48

Candidate Starts for Haizum\_45:

(Start: 48 @30482 has 101 MA's), (97, 30653), (114, 30722), (119, 30743), (150, 30851), (153, 30857), (162, 30908), (207, 31139), (208, 31142), (215, 31172), (219, 31190), (222, 31199), (228, 31244), (262, 31478), (277, 31568), (292, 31655), (294, 31661), (297, 31673),

Gene: Hammy\_34 Start: 28668, Stop: 29801, Start Num: 29

Candidate Starts for Hammy\_34:

(Start: 29 @28668 has 188 MA's), (72, 28821), (85, 28857), (143, 28986), (160, 29028), (186, 29166), (189, 29178), (194, 29205), (208, 29280), (222, 29334), (242, 29469), (246, 29493), (248, 29499), (250, 29517), (253, 29529), (259, 29586), (264, 29616), (271, 29655), (275, 29676), (293, 29778), (295, 29787), (297, 29793),

Gene: Hank144\_46 Start: 30698, Stop: 31897, Start Num: 48

Candidate Starts for Hank144\_46:

(Start: 48 @30698 has 101 MA's), (81, 30824), (105, 30908), (114, 30938), (128, 30998), (153, 31070), (162, 31121), (207, 31352), (208, 31355), (215, 31385), (219, 31403), (222, 31412), (228, 31457), (262, 31691), (276, 31772), (277, 31781), (292, 31868), (294, 31874), (297, 31886),

Gene: HedwigODU\_35 Start: 28362, Stop: 29570, Start Num: 29

Candidate Starts for HedwigODU\_35:

(Start: 29 @28362 has 188 MA's), (Start: 57 @28464 has 11 MA's), (93, 28575), (143, 28752), (160, 28794), (169, 28869), (186, 28935), (189, 28947), (194, 28974), (208, 29049), (218, 29088), (222, 29103), (234, 29184), (235, 29196), (236, 29199), (238, 29214), (240, 29232), (242, 29238), (246,

29262), (248, 29268), (250, 29286), (252, 29295), (253, 29298), (259, 29355), (264, 29385), (265, 29388), (271, 29424), (275, 29445), (293, 29547), (297, 29562),

Gene: Heftyboy\_34 Start: 29070, Stop: 30287, Start Num: 29

Candidate Starts for Heftyboy\_34:

(Start: 29 @29070 has 188 MA's), (33, 29091), (99, 29304), (111, 29352), (160, 29511), (162, 29529), (164, 29544), (171, 29595), (178, 29625), (181, 29634), (186, 29649), (189, 29661), (204, 29751), (208, 29766), (209, 29769), (213, 29787), (218, 29805), (226, 29853), (234, 29901), (235, 29913), (240, 29949), (246, 29979), (248, 29985), (251, 30006), (252, 30012), (253, 30015), (256, 30048), (257, 30057), (259, 30072), (264, 30102), (265, 30105), (270, 30135), (293, 30264), (295, 30273),

Gene: Hippo\_43 Start: 29561, Stop: 30751, Start Num: 48

Candidate Starts for Hippo\_43:

(Start: 48 @29561 has 101 MA's), (64, 29609), (79, 29675), (81, 29681), (114, 29795), (162, 29978), (207, 30209), (208, 30212), (211, 30224), (219, 30260), (222, 30269), (224, 30293), (228, 30314), (234, 30359), (242, 30413), (246, 30437), (247, 30440), (262, 30548), (277, 30638), (286, 30707),

Gene: Homura\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Homura\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Huffy\_66 Start: 39716, Stop: 40840, Start Num: 57

Candidate Starts for Huffy\_66:

(36, 39641), (Start: 57 @39716 has 11 MA's), (61, 39725), (65, 39737), (102, 39860), (173, 40151), (188, 40211), (196, 40262), (200, 40283), (204, 40301), (211, 40328), (218, 40358), (219, 40364), (237, 40472), (246, 40532), (256, 40601), (273, 40709), (286, 40799), (298, 40835),

Gene: Hurricane\_36 Start: 29220, Stop: 30350, Start Num: 29

Candidate Starts for Hurricane\_36:

(Start: 29 @29220 has 188 MA's), (33, 29238), (40, 29262), (85, 29409), (143, 29535), (160, 29577), (169, 29652), (186, 29715), (189, 29727), (204, 29814), (234, 29964), (240, 30012), (242, 30018), (246, 30042), (251, 30069), (253, 30078), (259, 30135), (264, 30165), (265, 30168), (271, 30204), (275, 30225), (277, 30240), (293, 30327), (295, 30336), (297, 30342),

Gene: Hydra\_45 Start: 29744, Stop: 30934, Start Num: 48

Candidate Starts for Hydra\_45:

(32, 29681), (Start: 48 @29744 has 101 MA's), (64, 29792), (79, 29858), (114, 29978), (162, 30161), (177, 30251), (207, 30392), (208, 30395), (211, 30407), (219, 30443), (222, 30452), (224, 30476), (228, 30497), (246, 30620), (247, 30623), (262, 30731), (277, 30821), (296, 30923),

Gene: Hyperbowlee\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Hyperbowlee\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Illumine\_35 Start: 28390, Stop: 29598, Start Num: 29

Candidate Starts for Illumine\_35:

(Start: 29 @28390 has 188 MA's), (Start: 57 @28492 has 11 MA's), (93, 28603), (99, 28621), (143, 28780), (160, 28822), (169, 28897), (186, 28963), (189, 28975), (194, 29002), (208, 29077), (218, 29116), (221, 29128), (222, 29131), (234, 29212), (235, 29224), (236, 29227), (238, 29242), (240, 29260), (242, 29266), (246, 29290), (248, 29296), (250, 29314), (252, 29323), (253, 29326), (259, 29383), (264, 29413), (265, 29416), (271, 29452), (293, 29575), (297, 29590),

Gene: Indigo\_42 Start: 29212, Stop: 30402, Start Num: 48

Candidate Starts for Indigo\_42:

(32, 29149), (Start: 48 @29212 has 101 MA's), (64, 29260), (79, 29326), (104, 29413), (114, 29446), (162, 29629), (177, 29719), (207, 29860), (208, 29863), (211, 29875), (219, 29911), (222, 29920), (224, 29944), (228, 29965), (246, 30088), (247, 30091), (262, 30199), (277, 30289), (296, 30391),

Gene: Inky\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Inky\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: InvictusManeo\_34 Start: 29002, Stop: 30216, Start Num: 29

Candidate Starts for InvictusManeo\_34:

(Start: 29 @29002 has 188 MA's), (33, 29020), (99, 29233), (111, 29281), (160, 29440), (163, 29464), (171, 29524), (178, 29554), (181, 29563), (186, 29578), (189, 29590), (208, 29695), (209, 29698), (213, 29716), (222, 29749), (226, 29782), (234, 29830), (235, 29842), (240, 29878), (246, 29908), (248, 29914), (251, 29935), (252, 29941), (253, 29944), (259, 30001), (264, 30031), (265, 30034), (283, 30166), (287, 30178), (293, 30193), (295, 30202),

Gene: Issmi\_45 Start: 31069, Stop: 32271, Start Num: 48

Candidate Starts for Issmi\_45:

(Start: 48 @31069 has 101 MA's), (97, 31240), (114, 31309), (119, 31330), (128, 31366), (150, 31435), (152, 31441), (162, 31495), (180, 31594), (207, 31726), (208, 31729), (219, 31777), (222, 31786), (224, 31810), (228, 31831), (262, 32065), (277, 32155), (292, 32242), (294, 32248), (297, 32260),

Gene: Itza\_45 Start: 30099, Stop: 31292, Start Num: 49

Candidate Starts for Itza\_45:

(Start: 49 @30099 has 11 MA's), (73, 30198), (79, 30219), (81, 30225), (114, 30339), (119, 30360), (127, 30396), (161, 30501), (162, 30516), (186, 30636), (198, 30708), (207, 30747), (208, 30750), (219, 30798), (222, 30807), (224, 30831), (226, 30840), (228, 30852), (262, 31086), (275, 31161), (277, 31176), (283, 31236), (297, 31281),

Gene: Izzy\_44 Start: 29585, Stop: 30772, Start Num: 48

Candidate Starts for Izzy\_44:

(Start: 48 @29585 has 101 MA's), (79, 29702), (81, 29708), (95, 29747), (103, 29783), (114, 29822), (145, 29939), (149, 29945), (162, 29999), (208, 30233), (219, 30281), (234, 30380), (246, 30458), (247, 30461), (251, 30485), (262, 30569), (277, 30659),

Gene: JAWS\_35 Start: 28347, Stop: 29555, Start Num: 29

Candidate Starts for JAWS\_35:

(Start: 29 @28347 has 188 MA's), (Start: 57 @28449 has 11 MA's), (93, 28560), (143, 28737), (160, 28779), (169, 28854), (186, 28920), (189, 28932), (194, 28959), (208, 29034), (218, 29073), (222, 29088), (234, 29169), (235, 29181), (236, 29184), (238, 29199), (240, 29217), (246, 29247), (248,

29253), (250, 29271), (252, 29280), (253, 29283), (259, 29340), (264, 29370), (271, 29409), (275, 29430), (293, 29532), (297, 29547),

Gene: JF1\_36 Start: 29432, Stop: 30622, Start Num: 29

Candidate Starts for JF1\_36:

(Start: 29 @29432 has 188 MA's), (72, 29588), (83, 29618), (93, 29648), (123, 29735), (126, 29747), (160, 29843), (162, 29861), (171, 29927), (186, 29981), (196, 30041), (197, 30050), (200, 30065), (207, 30095), (208, 30098), (221, 30149), (222, 30152), (234, 30233), (240, 30281), (242, 30287), (246, 30311), (248, 30317), (251, 30338), (256, 30383), (265, 30440), (284, 30575), (295, 30608), (297, 30614), (298, 30617),

Gene: Jace\_84 Start: 45853, Stop: 47001, Start Num: 54

Candidate Starts for Jace\_84:

(32, 45766), (46, 45826), (Start: 48 @45832 has 101 MA's), (Start: 54 @45853 has 1 MA's), (63, 45880), (78, 45940), (108, 46036), (143, 46171), (158, 46219), (160, 46225), (165, 46258), (169, 46297), (174, 46318), (186, 46363), (188, 46372), (196, 46423), (204, 46462), (209, 46480), (230, 46603), (233, 46609), (242, 46669), (250, 46717), (255, 46759), (256, 46762), (258, 46780), (261, 46795), (265, 46819), (272, 46864),

Gene: Janus\_44 Start: 30489, Stop: 31688, Start Num: 48

Candidate Starts for Janus\_44:

(Start: 48 @30489 has 101 MA's), (97, 30660), (114, 30729), (153, 30861), (162, 30912), (207, 31143), (208, 31146), (215, 31176), (219, 31194), (222, 31203), (228, 31248), (262, 31482), (276, 31563), (277, 31572), (292, 31659), (294, 31665), (297, 31677),

Gene: Jarvi\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Jarvi\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Jash\_44 Start: 29538, Stop: 30725, Start Num: 48

Candidate Starts for Jash\_44:

(Start: 48 @29538 has 101 MA's), (79, 29655), (81, 29661), (95, 29700), (103, 29736), (114, 29775), (145, 29892), (149, 29898), (162, 29952), (208, 30186), (219, 30234), (234, 30333), (246, 30411), (247, 30414), (251, 30438), (262, 30522), (277, 30612),

Gene: Jayhawk\_35 Start: 28360, Stop: 29568, Start Num: 29

Candidate Starts for Jayhawk\_35:

(Start: 29 @28360 has 188 MA's), (Start: 57 @28462 has 11 MA's), (93, 28573), (143, 28750), (160, 28792), (169, 28867), (186, 28933), (189, 28945), (194, 28972), (208, 29047), (218, 29086), (222, 29101), (234, 29182), (235, 29194), (236, 29197), (238, 29212), (240, 29230), (242, 29236), (246, 29260), (248, 29266), (250, 29284), (252, 29293), (253, 29296), (259, 29353), (264, 29383), (265, 29386), (271, 29422), (275, 29443), (293, 29545), (297, 29560),

Gene: Jeckyll\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Jeckyll\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253,

29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Jevington\_46 Start: 30880, Stop: 32070, Start Num: 48

Candidate Starts for Jevington\_46:

(Start: 48 @30880 has 101 MA's), (73, 30979), (79, 31000), (81, 31006), (97, 31051), (105, 31090), (114, 31120), (119, 31141), (136, 31210), (149, 31237), (161, 31279), (162, 31294), (207, 31525), (208, 31528), (215, 31558), (219, 31576), (251, 31780), (262, 31864), (264, 31879), (276, 31945), (277, 31954), (286, 32023), (292, 32041), (294, 32047),

Gene: Joy99\_35 Start: 28322, Stop: 29530, Start Num: 29

Candidate Starts for Joy99\_35:

(Start: 25 @28298 has 1 MA's), (Start: 29 @28322 has 188 MA's), (Start: 57 @28424 has 11 MA's), (93, 28535), (123, 28643), (143, 28712), (160, 28754), (169, 28829), (186, 28895), (189, 28907), (194, 28934), (208, 29009), (218, 29048), (222, 29063), (234, 29144), (235, 29156), (236, 29159), (238, 29174), (240, 29192), (242, 29198), (246, 29222), (248, 29228), (250, 29246), (252, 29255), (253, 29258), (259, 29315), (264, 29345), (271, 29384), (275, 29405), (293, 29507), (297, 29522),

Gene: Juliette\_38 Start: 29591, Stop: 30781, Start Num: 29

Candidate Starts for Juliette\_38:

(Start: 29 @29591 has 188 MA's), (72, 29747), (83, 29777), (93, 29807), (123, 29894), (126, 29906), (160, 30002), (162, 30020), (171, 30086), (186, 30140), (196, 30200), (197, 30209), (200, 30224), (207, 30254), (208, 30257), (221, 30308), (222, 30311), (234, 30392), (240, 30440), (242, 30446), (246, 30470), (248, 30476), (251, 30497), (256, 30542), (265, 30599), (284, 30734), (295, 30767), (297, 30773), (298, 30776),

Gene: KSunshine22\_164 Start: 111315, Stop: 109888, Start Num: 13

Candidate Starts for KSunshine22\_164:

(3, 111417), (9, 111381), (12, 111324), (Start: 13 @111315 has 4 MA's), (14, 111279), (34, 111111), (35, 111108), (63, 111036), (144, 110739), (160, 110688), (201, 110478), (203, 110469), (248, 110220), (255, 110160), (283, 109947),

Gene: Kaine\_43 Start: 30618, Stop: 31805, Start Num: 48

Candidate Starts for Kaine\_43:

(Start: 48 @30618 has 101 MA's), (73, 30714), (79, 30735), (81, 30741), (89, 30762), (114, 30855), (119, 30876), (149, 30978), (151, 30984), (162, 31032), (198, 31224), (207, 31263), (208, 31266), (215, 31296), (219, 31314), (228, 31368), (234, 31413), (242, 31467), (277, 31692), (296, 31794),

Gene: Katalie\_43 Start: 29753, Stop: 30946, Start Num: 48

Candidate Starts for Katalie\_43:

(Start: 48 @29753 has 101 MA's), (64, 29801), (79, 29867), (81, 29873), (114, 29987), (128, 30047), (154, 30128), (162, 30173), (177, 30263), (207, 30404), (208, 30407), (211, 30419), (219, 30455), (222, 30464), (228, 30509), (234, 30554), (242, 30608), (246, 30632), (247, 30635), (262, 30743), (277, 30833), (294, 30926), (296, 30935),

Gene: Keelan\_120 Start: 57423, Stop: 58517, Start Num: 49

Candidate Starts for Keelan\_120:

(Start: 49 @57423 has 11 MA's), (56, 57444), (109, 57579), (124, 57627), (171, 57819), (179, 57852), (181, 57858), (211, 58005), (221, 58047), (235, 58143), (239, 58167), (240, 58173), (246, 58203), (249, 58215), (251, 58230), (256, 58272), (265, 58329), (291, 58491),

Gene: Keiki\_26 Start: 19265, Stop: 18219, Start Num: 87

Candidate Starts for Keiki\_26:



(Start: 87 @19265 has 45 MA's), (135, 19073), (160, 18986), (191, 18830), (194, 18815), (206, 18746), (208, 18740), (209, 18737), (212, 18722), (224, 18662), (229, 18617), (244, 18530), (249, 18512), (266, 18401), (277, 18332), (283, 18272),

Gene: Keshu\_36 Start: 29208, Stop: 30341, Start Num: 29

Candidate Starts for Keshu\_36:

(Start: 29 @29208 has 188 MA's), (186, 29706), (189, 29718), (194, 29745), (208, 29820), (234, 29955), (236, 29970), (240, 30003), (242, 30009), (246, 30033), (251, 30060), (253, 30069), (259, 30126), (260, 30132), (293, 30318), (295, 30327), (297, 30333),

Gene: KiSi\_35 Start: 27982, Stop: 29109, Start Num: 29

Candidate Starts for KiSi\_35:

(Start: 29 @27982 has 188 MA's), (40, 28024), (85, 28171), (143, 28297), (160, 28336), (169, 28411), (186, 28474), (189, 28486), (194, 28513), (205, 28576), (208, 28588), (212, 28606), (222, 28642), (225, 28672), (234, 28723), (235, 28735), (238, 28753), (240, 28771), (242, 28777), (246, 28801), (248, 28807), (253, 28837), (259, 28894), (270, 28957), (275, 28984), (277, 28999), (286, 29068), (293, 29086), (297, 29101),

Gene: Kratio\_33 Start: 28633, Stop: 29847, Start Num: 29

Candidate Starts for Kratio\_33:

(28, 28627), (Start: 29 @28633 has 188 MA's), (33, 28651), (99, 28864), (111, 28912), (160, 29071), (163, 29095), (171, 29155), (178, 29185), (181, 29194), (186, 29209), (189, 29221), (208, 29326), (209, 29329), (213, 29347), (222, 29380), (226, 29413), (234, 29461), (235, 29473), (240, 29509), (246, 29539), (248, 29545), (251, 29566), (252, 29572), (253, 29575), (259, 29632), (264, 29662), (265, 29665), (283, 29797), (287, 29809), (293, 29824), (295, 29833),

Gene: Kraw\_37 Start: 29357, Stop: 30547, Start Num: 29

Candidate Starts for Kraw\_37:

(Start: 29 @29357 has 188 MA's), (72, 29513), (83, 29543), (93, 29573), (123, 29660), (126, 29672), (160, 29768), (162, 29786), (171, 29852), (186, 29906), (196, 29966), (197, 29975), (200, 29990), (207, 30020), (208, 30023), (221, 30074), (222, 30077), (234, 30158), (240, 30206), (242, 30212), (246, 30236), (248, 30242), (251, 30263), (256, 30308), (265, 30365), (284, 30500), (295, 30533), (297, 30539), (298, 30542),

Gene: Krueger\_35 Start: 27546, Stop: 28754, Start Num: 29

Candidate Starts for Krueger\_35:

(Start: 29 @27546 has 188 MA's), (33, 27564), (Start: 57 @27648 has 11 MA's), (93, 27759), (99, 27777), (116, 27840), (143, 27939), (160, 27981), (186, 28119), (189, 28131), (194, 28158), (208, 28233), (222, 28287), (234, 28368), (240, 28416), (242, 28422), (246, 28446), (250, 28470), (251, 28473), (259, 28539), (275, 28629), (297, 28746),

Gene: Kubed\_26 Start: 19311, Stop: 18268, Start Num: 87

Candidate Starts for Kubed\_26:

(Start: 87 @19311 has 45 MA's), (113, 19221), (160, 19035), (191, 18879), (194, 18864), (206, 18795), (208, 18789), (209, 18786), (212, 18771), (244, 18579), (249, 18561), (266, 18450), (277, 18381), (283, 18321),

Gene: Kudfre\_116 Start: 63427, Stop: 64569, Start Num: 42

Candidate Starts for Kudfre\_116:

(Start: 42 @63427 has 7 MA's), (44, 63436), (82, 63559), (162, 63808), (167, 63853), (169, 63865), (174, 63886), (187, 63937), (192, 63958), (193, 63967), (194, 63970), (218, 64087), (221, 64099), (226, 64135), (234, 64183), (235, 64195), (242, 64237), (246, 64261), (248, 64267), (252, 64294), (256, 64330), (260, 64360), (265, 64387), (283, 64519), (284, 64522), (287, 64531), (295, 64555),

(297, 64561),

Gene: Lannister\_45 Start: 30215, Stop: 31405, Start Num: 48

Candidate Starts for Lannister\_45:

(Start: 48 @30215 has 101 MA's), (64, 30263), (79, 30329), (114, 30449), (162, 30632), (177, 30722), (207, 30863), (208, 30866), (211, 30878), (216, 30899), (219, 30914), (222, 30923), (224, 30947), (228, 30968), (234, 31013), (242, 31067), (246, 31091), (247, 31094), (262, 31202), (277, 31292), (286, 31361), (290, 31376),

Gene: Larva\_35 Start: 28797, Stop: 30011, Start Num: 29

Candidate Starts for Larva\_35:

(28, 28791), (Start: 29 @28797 has 188 MA's), (33, 28815), (99, 29028), (111, 29076), (131, 29148), (160, 29235), (163, 29259), (171, 29319), (178, 29349), (181, 29358), (186, 29373), (189, 29385), (204, 29475), (205, 29478), (208, 29490), (209, 29493), (213, 29511), (222, 29544), (226, 29577), (234, 29625), (235, 29637), (240, 29673), (246, 29703), (248, 29709), (252, 29736), (253, 29739), (259, 29796), (264, 29826), (283, 29961), (287, 29973), (293, 29988), (295, 29997),

Gene: LastHope\_35 Start: 27530, Stop: 28738, Start Num: 29

Candidate Starts for LastHope\_35:

(Start: 29 @27530 has 188 MA's), (Start: 57 @27632 has 11 MA's), (72, 27683), (93, 27743), (99, 27761), (123, 27851), (143, 27920), (160, 27962), (169, 28037), (186, 28103), (189, 28115), (194, 28142), (208, 28217), (218, 28256), (221, 28268), (222, 28271), (234, 28352), (235, 28364), (236, 28367), (238, 28382), (240, 28400), (242, 28406), (246, 28430), (248, 28436), (250, 28454), (252, 28463), (253, 28466), (259, 28523), (271, 28592), (275, 28613), (293, 28715), (297, 28730),

Gene: LaterM\_35 Start: 28307, Stop: 29515, Start Num: 29

Candidate Starts for LaterM\_35:

(Start: 29 @28307 has 188 MA's), (Start: 57 @28409 has 11 MA's), (93, 28520), (99, 28538), (143, 28697), (160, 28739), (169, 28814), (186, 28880), (189, 28892), (194, 28919), (208, 28994), (218, 29033), (221, 29045), (222, 29048), (234, 29129), (235, 29141), (236, 29144), (238, 29159), (240, 29177), (242, 29183), (246, 29207), (248, 29213), (250, 29231), (252, 29240), (253, 29243), (259, 29300), (264, 29330), (265, 29333), (271, 29369), (293, 29492), (297, 29507),

Gene: Lauchelly\_26 Start: 19372, Stop: 18326, Start Num: 87

Candidate Starts for Lauchelly\_26:

(Start: 87 @19372 has 45 MA's), (169, 19018), (191, 18937), (194, 18922), (200, 18880), (206, 18853), (208, 18847), (209, 18844), (212, 18829), (224, 18769), (244, 18637), (249, 18619), (266, 18508), (277, 18439), (283, 18379),

Gene: LeMond\_35 Start: 28053, Stop: 29180, Start Num: 29

Candidate Starts for LeMond\_35:

(Start: 29 @28053 has 188 MA's), (40, 28095), (85, 28242), (143, 28368), (160, 28407), (169, 28482), (186, 28545), (189, 28557), (194, 28584), (205, 28647), (208, 28659), (212, 28677), (222, 28713), (225, 28743), (234, 28794), (235, 28806), (238, 28824), (240, 28842), (242, 28848), (246, 28872), (248, 28878), (253, 28908), (259, 28965), (270, 29028), (275, 29055), (277, 29070), (286, 29139), (293, 29157), (297, 29172),

Gene: Lea83\_37 Start: 29278, Stop: 30408, Start Num: 29

Candidate Starts for Lea83\_37:

(Start: 29 @29278 has 188 MA's), (33, 29296), (40, 29320), (85, 29467), (143, 29593), (160, 29635), (169, 29710), (186, 29773), (189, 29785), (204, 29872), (234, 30022), (240, 30070), (242, 30076), (246, 30100), (251, 30127), (253, 30136), (259, 30193), (264, 30223), (271, 30262), (275, 30283), (277, 30298), (293, 30385), (295, 30394), (297, 30400),

Gene: Lebo14\_37 Start: 29446, Stop: 30636, Start Num: 29

Candidate Starts for Lebo14\_37:

(Start: 29 @29446 has 188 MA's), (72, 29602), (83, 29632), (93, 29662), (123, 29749), (160, 29857), (171, 29941), (186, 29995), (196, 30055), (197, 30064), (200, 30079), (208, 30112), (221, 30163), (222, 30166), (234, 30247), (240, 30295), (242, 30301), (246, 30325), (248, 30331), (251, 30352), (256, 30397), (265, 30454), (284, 30589), (286, 30595), (295, 30622), (297, 30628), (298, 30631),

Gene: Legacy\_43 Start: 29187, Stop: 30377, Start Num: 48

Candidate Starts for Legacy\_43:

(32, 29124), (Start: 48 @29187 has 101 MA's), (64, 29235), (79, 29301), (114, 29421), (162, 29604), (177, 29694), (207, 29835), (208, 29838), (211, 29850), (219, 29886), (222, 29895), (224, 29919), (228, 29940), (246, 30063), (247, 30066), (262, 30174), (277, 30264), (296, 30366),

Gene: LeoJr\_171 Start: 114050, Stop: 112527, Start Num: 13

Candidate Starts for LeoJr\_171:

(12, 114059), (Start: 13 @114050 has 4 MA's), (14, 114014), (18, 113978), (22, 113924), (39, 113819), (43, 113795), (61, 113723), (63, 113714), (107, 113555), (112, 113534), (120, 113477), (144, 113378), (169, 113252), (201, 113117), (239, 112901), (255, 112799), (283, 112586), (286, 112577),

Gene: Leston\_34 Start: 29054, Stop: 30271, Start Num: 29

Candidate Starts for Leston\_34:

(Start: 29 @29054 has 188 MA's), (33, 29075), (99, 29288), (111, 29336), (160, 29495), (162, 29513), (164, 29528), (171, 29579), (178, 29609), (181, 29618), (186, 29633), (189, 29645), (204, 29735), (208, 29750), (209, 29753), (213, 29771), (218, 29789), (222, 29804), (226, 29837), (234, 29885), (235, 29897), (240, 29933), (246, 29963), (248, 29969), (251, 29990), (252, 29996), (253, 29999), (259, 30056), (264, 30086), (265, 30089), (270, 30119), (283, 30221), (293, 30248), (295, 30257),

Gene: Leviosa\_26 Start: 19363, Stop: 18320, Start Num: 87

Candidate Starts for Leviosa\_26:

(Start: 87 @19363 has 45 MA's), (191, 18931), (194, 18916), (200, 18874), (206, 18847), (208, 18841), (209, 18838), (212, 18823), (218, 18802), (229, 18718), (244, 18631), (249, 18613), (266, 18502), (277, 18433), (283, 18373),

Gene: Leviticus\_43 Start: 29216, Stop: 30406, Start Num: 48

Candidate Starts for Leviticus\_43:

(32, 29153), (Start: 48 @29216 has 101 MA's), (64, 29264), (79, 29330), (104, 29417), (114, 29450), (162, 29633), (177, 29723), (207, 29864), (208, 29867), (211, 29879), (219, 29915), (222, 29924), (224, 29948), (228, 29969), (246, 30092), (247, 30095), (262, 30203), (277, 30293), (296, 30395),

Gene: Lika\_43 Start: 30025, Stop: 31215, Start Num: 48

Candidate Starts for Lika\_43:

(Start: 48 @30025 has 101 MA's), (64, 30073), (79, 30139), (81, 30145), (114, 30259), (152, 30388), (162, 30442), (177, 30532), (207, 30673), (208, 30676), (211, 30688), (219, 30724), (222, 30733), (224, 30757), (228, 30778), (234, 30823), (242, 30877), (247, 30904), (262, 31012), (277, 31102), (294, 31195),

Gene: LilBandit\_26 Start: 19151, Stop: 18105, Start Num: 87

Candidate Starts for LilBandit\_26:

(Start: 87 @19151 has 45 MA's), (113, 19061), (160, 18872), (191, 18716), (194, 18701), (206, 18632), (208, 18626), (209, 18623), (212, 18608), (224, 18548), (229, 18503), (244, 18416), (266, 18287), (277, 18218), (283, 18158),

Gene: LilPharaoh\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for LilPharaoh\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: LindNT\_35 Start: 28323, Stop: 29531, Start Num: 29

Candidate Starts for LindNT\_35:

(Start: 29 @28323 has 188 MA's), (Start: 57 @28425 has 11 MA's), (93, 28536), (99, 28554), (143, 28713), (160, 28755), (169, 28830), (186, 28896), (189, 28908), (194, 28935), (208, 29010), (218, 29049), (221, 29061), (222, 29064), (234, 29145), (235, 29157), (238, 29175), (240, 29193), (242, 29199), (246, 29223), (248, 29229), (252, 29256), (253, 29259), (259, 29316), (264, 29346), (271, 29385), (275, 29406), (293, 29508), (297, 29523),

Gene: Llorens\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Llorens\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Loofah\_45 Start: 30872, Stop: 32077, Start Num: 48

Candidate Starts for Loofah\_45:

(Start: 48 @30872 has 101 MA's), (73, 30971), (81, 30998), (105, 31082), (114, 31112), (119, 31133), (150, 31241), (162, 31301), (166, 31331), (168, 31352), (177, 31391), (186, 31421), (207, 31532), (208, 31535), (215, 31565), (219, 31583), (224, 31616), (228, 31637), (251, 31787), (262, 31871), (263, 31880), (277, 31961), (294, 32054),

Gene: Lorelei\_44 Start: 30076, Stop: 31266, Start Num: 48

Candidate Starts for Lorelei\_44:

(Start: 48 @30076 has 101 MA's), (64, 30124), (79, 30190), (81, 30196), (114, 30310), (162, 30493), (177, 30583), (207, 30724), (208, 30727), (211, 30739), (219, 30775), (222, 30784), (224, 30808), (228, 30829), (234, 30874), (242, 30928), (246, 30952), (247, 30955), (251, 30979), (262, 31063), (265, 31081), (277, 31153), (286, 31222),

Gene: Lunahalos\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Lunahalos\_35:

(Start: 25 @28369 has 1 MA's), (28, 28387), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: MEAK\_26 Start: 19317, Stop: 18271, Start Num: 87

Candidate Starts for MEAK\_26:

(Start: 87 @19317 has 45 MA's), (135, 19125), (160, 19038), (169, 18963), (191, 18882), (194, 18867), (200, 18825), (206, 18798), (208, 18792), (209, 18789), (212, 18774), (224, 18714), (244, 18582), (249, 18564), (266, 18453), (277, 18384), (283, 18324),

Gene: MacKat\_36 Start: 28370, Stop: 29578, Start Num: 29

Candidate Starts for MacKat\_36:

(Start: 25 @28346 has 1 MA's), (Start: 29 @28370 has 188 MA's), (Start: 57 @28472 has 11 MA's), (93, 28583), (143, 28760), (160, 28802), (169, 28877), (186, 28943), (189, 28955), (194, 28982), (208, 29057), (218, 29096), (222, 29111), (234, 29192), (235, 29204), (236, 29207), (238, 29222), (240, 29240), (246, 29270), (248, 29276), (250, 29294), (252, 29303), (253, 29306), (259, 29363), (264, 29393), (271, 29432), (275, 29453), (293, 29555), (297, 29570),

Gene: MacnCheese\_36 Start: 29261, Stop: 30394, Start Num: 29

Candidate Starts for MacnCheese\_36:

(Start: 29 @29261 has 188 MA's), (Start: 57 @29363 has 11 MA's), (85, 29450), (143, 29579), (160, 29621), (186, 29759), (189, 29771), (193, 29795), (194, 29798), (208, 29873), (218, 29912), (234, 30008), (240, 30056), (242, 30062), (246, 30086), (251, 30113), (253, 30122), (259, 30179), (260, 30185), (281, 30332), (293, 30371), (295, 30380), (297, 30386),

Gene: MalagasyRose\_35 Start: 27663, Stop: 28874, Start Num: 29

Candidate Starts for MalagasyRose\_35:

(26, 27651), (28, 27657), (Start: 29 @27663 has 188 MA's), (Start: 57 @27765 has 11 MA's), (93, 27876), (99, 27894), (136, 28032), (148, 28062), (154, 28080), (164, 28131), (171, 28182), (186, 28236), (189, 28248), (204, 28338), (205, 28341), (208, 28353), (209, 28356), (211, 28365), (218, 28392), (221, 28404), (222, 28407), (234, 28488), (237, 28506), (246, 28566), (248, 28572), (250, 28590), (251, 28593), (252, 28599), (253, 28602), (259, 28659), (265, 28692), (269, 28719), (286, 28833), (287, 28836), (295, 28860), (298, 28869),

Gene: Malthus\_37 Start: 29357, Stop: 30547, Start Num: 29

Candidate Starts for Malthus\_37:

(Start: 29 @29357 has 188 MA's), (72, 29513), (83, 29543), (93, 29573), (123, 29660), (126, 29672), (160, 29768), (162, 29786), (171, 29852), (186, 29906), (196, 29966), (197, 29975), (200, 29990), (207, 30020), (208, 30023), (221, 30074), (222, 30077), (234, 30158), (240, 30206), (242, 30212), (246, 30236), (248, 30242), (251, 30263), (256, 30308), (265, 30365), (284, 30500), (295, 30533), (297, 30539), (298, 30542),

Gene: Maneekul\_43 Start: 29580, Stop: 30770, Start Num: 48

Candidate Starts for Maneekul\_43:

(Start: 48 @29580 has 101 MA's), (64, 29628), (79, 29694), (114, 29814), (162, 29997), (177, 30087), (207, 30228), (208, 30231), (211, 30243), (219, 30279), (222, 30288), (224, 30312), (228, 30333), (234, 30378), (242, 30432), (247, 30459), (262, 30567), (277, 30657),

Gene: Marav\_47 Start: 31202, Stop: 32392, Start Num: 48

Candidate Starts for Marav\_47:

(Start: 48 @31202 has 101 MA's), (73, 31301), (79, 31322), (81, 31328), (97, 31373), (105, 31412), (114, 31442), (119, 31463), (161, 31601), (162, 31616), (207, 31847), (208, 31850), (215, 31880), (219, 31898), (251, 32102), (262, 32186), (276, 32267), (277, 32276), (286, 32345), (292, 32363), (294, 32369),

Gene: Marcoliusprime\_34 Start: 27629, Stop: 28813, Start Num: 29

Candidate Starts for Marcoliusprime\_34:

(Start: 29 @27629 has 188 MA's), (39, 27662), (83, 27812), (93, 27842), (136, 27974), (169, 28115), (186, 28178), (208, 28292), (209, 28295), (240, 28475), (246, 28505), (248, 28511), (251, 28532), (252, 28538), (259, 28598), (264, 28628), (275, 28688), (293, 28790), (298, 28808),

Gene: MarkPhew\_36 Start: 27954, Stop: 29081, Start Num: 29

Candidate Starts for MarkPhew\_36:

(Start: 29 @27954 has 188 MA's), (43, 28014), (143, 28269), (169, 28383), (186, 28446), (189, 28458), (193, 28482), (194, 28485), (205, 28548), (208, 28560), (212, 28578), (222, 28614), (225, 28644), (234, 28695), (235, 28707), (242, 28749), (246, 28773), (248, 28779), (250, 28797), (252, 28806), (259, 28866), (270, 28929), (275, 28956), (277, 28971), (293, 29058), (297, 29073),

Gene: Marshawn\_37 Start: 28595, Stop: 29722, Start Num: 29

Candidate Starts for Marshawn\_37:

(Start: 25 @28571 has 1 MA's), (Start: 29 @28595 has 188 MA's), (40, 28637), (85, 28784), (143, 28910), (160, 28949), (162, 28967), (186, 29087), (189, 29099), (193, 29123), (194, 29126), (205, 29189), (208, 29201), (212, 29219), (218, 29240), (222, 29255), (225, 29285), (234, 29336), (235, 29348), (238, 29366), (242, 29390), (246, 29414), (248, 29420), (251, 29441), (253, 29450), (259, 29507), (275, 29597), (277, 29612), (293, 29699), (297, 29714),

Gene: McMater\_35 Start: 27680, Stop: 28810, Start Num: 29

Candidate Starts for McMater\_35:

(Start: 29 @27680 has 188 MA's), (40, 27722), (50, 27764), (85, 27869), (143, 27995), (160, 28037), (169, 28112), (186, 28175), (189, 28187), (193, 28211), (194, 28214), (208, 28289), (218, 28328), (221, 28340), (222, 28343), (234, 28424), (235, 28436), (240, 28472), (246, 28502), (248, 28508), (250, 28526), (252, 28535), (253, 28538), (264, 28625), (271, 28664), (275, 28685), (293, 28787), (297, 28802),

Gene: Mdavu\_31 Start: 27772, Stop: 28908, Start Num: 29

Candidate Starts for Mdavu\_31:

(Start: 29 @27772 has 188 MA's), (40, 27814), (52, 27859), (69, 27916), (85, 27961), (131, 28048), (152, 28105), (169, 28207), (186, 28273), (189, 28285), (193, 28309), (194, 28312), (208, 28387), (214, 28414), (218, 28426), (222, 28441), (234, 28522), (235, 28534), (240, 28570), (246, 28600), (248, 28606), (250, 28624), (252, 28633), (253, 28636), (264, 28723), (270, 28756), (271, 28762), (275, 28783), (293, 28885), (298, 28903),

Gene: MeaningOfLife\_35 Start: 28338, Stop: 29546, Start Num: 29

Candidate Starts for MeaningOfLife\_35:

(Start: 29 @28338 has 188 MA's), (Start: 57 @28440 has 11 MA's), (72, 28491), (93, 28551), (136, 28707), (160, 28770), (169, 28845), (186, 28911), (189, 28923), (194, 28950), (208, 29025), (218, 29064), (222, 29079), (234, 29160), (235, 29172), (236, 29175), (238, 29190), (240, 29208), (242, 29214), (246, 29238), (248, 29244), (250, 29262), (252, 29271), (253, 29274), (259, 29331), (264, 29361), (271, 29400), (275, 29421), (293, 29523), (297, 29538),

Gene: Megsy\_35 Start: 28326, Stop: 29534, Start Num: 29

Candidate Starts for Megsy\_35:

(Start: 29 @28326 has 188 MA's), (Start: 57 @28428 has 11 MA's), (93, 28539), (99, 28557), (143, 28716), (160, 28758), (169, 28833), (186, 28899), (189, 28911), (194, 28938), (208, 29013), (218, 29052), (221, 29064), (222, 29067), (234, 29148), (235, 29160), (236, 29163), (238, 29178), (240, 29196), (242, 29202), (246, 29226), (248, 29232), (250, 29250), (252, 29259), (253, 29262), (259, 29319), (264, 29349), (271, 29388), (275, 29409), (293, 29511), (297, 29526),

Gene: Milly\_34 Start: 27602, Stop: 28786, Start Num: 29

Candidate Starts for Milly\_34:

(Start: 29 @27602 has 188 MA's), (39, 27635), (83, 27785), (93, 27815), (136, 27947), (169, 28088), (186, 28151), (192, 28178), (194, 28190), (208, 28265), (209, 28268), (240, 28448), (246, 28478), (248, 28484), (251, 28505), (252, 28511), (259, 28571), (264, 28601), (275, 28661), (293, 28763), (298, 28781),

Gene: Mimi\_170 Start: 113574, Stop: 112246, Start Num: 13

Candidate Starts for Mimi\_170:

(Start: 13 @113574 has 4 MA's), (58, 113349), (193, 112851), (208, 112773), (269, 112401),

Gene: Miryou\_34 Start: 28909, Stop: 30126, Start Num: 29

Candidate Starts for Miryou\_34:

(Start: 29 @28909 has 188 MA's), (33, 28930), (99, 29143), (111, 29191), (160, 29350), (162, 29368), (164, 29383), (171, 29434), (177, 29461), (178, 29464), (181, 29473), (186, 29488), (189, 29500), (204, 29590), (208, 29605), (209, 29608), (213, 29626), (218, 29644), (226, 29692), (234, 29740), (235, 29752), (240, 29788), (246, 29818), (248, 29824), (251, 29845), (252, 29851), (253, 29854), (259, 29911), (264, 29941), (265, 29944), (283, 30076), (293, 30103), (295, 30112),

Gene: MissDaisy\_36 Start: 29200, Stop: 30390, Start Num: 29

Candidate Starts for MissDaisy\_36:

(Start: 29 @29200 has 188 MA's), (72, 29356), (83, 29386), (93, 29416), (123, 29503), (160, 29611), (171, 29695), (186, 29749), (196, 29809), (197, 29818), (200, 29833), (208, 29866), (221, 29917), (222, 29920), (234, 30001), (240, 30049), (242, 30055), (246, 30079), (248, 30085), (249, 30091), (251, 30106), (256, 30151), (265, 30208), (284, 30343), (286, 30349), (295, 30376), (297, 30382), (298, 30385),

Gene: Mitti\_36 Start: 29358, Stop: 30548, Start Num: 29

Candidate Starts for Mitti\_36:

(Start: 29 @29358 has 188 MA's), (72, 29514), (83, 29544), (93, 29574), (123, 29661), (160, 29769), (171, 29853), (186, 29907), (196, 29967), (197, 29976), (200, 29991), (208, 30024), (221, 30075), (222, 30078), (234, 30159), (240, 30207), (242, 30213), (246, 30237), (248, 30243), (251, 30264), (256, 30309), (265, 30366), (284, 30501), (286, 30507), (295, 30534), (297, 30540), (298, 30543),

Gene: Moyashi\_26 Start: 19421, Stop: 18375, Start Num: 87

Candidate Starts for Moyashi\_26:

(Start: 87 @19421 has 45 MA's), (113, 19331), (169, 19067), (191, 18986), (194, 18971), (206, 18902), (208, 18896), (209, 18893), (229, 18773), (244, 18686), (249, 18668), (266, 18557), (277, 18488), (283, 18428),

Gene: MrAK\_26 Start: 19430, Stop: 18384, Start Num: 87

Candidate Starts for MrAK\_26:

(Start: 87 @19430 has 45 MA's), (113, 19340), (191, 18995), (194, 18980), (206, 18911), (208, 18905), (209, 18902), (212, 18887), (229, 18782), (244, 18695), (249, 18677), (266, 18566), (277, 18497), (283, 18437),

Gene: Mufasa\_35 Start: 27710, Stop: 28894, Start Num: 29

Candidate Starts for Mufasa\_35:

(Start: 29 @27710 has 188 MA's), (39, 27743), (83, 27893), (93, 27923), (136, 28055), (160, 28121), (169, 28196), (186, 28259), (192, 28286), (194, 28298), (208, 28373), (209, 28376), (240, 28556), (246, 28586), (248, 28592), (251, 28613), (252, 28619), (259, 28679), (264, 28709), (275, 28769), (298, 28889),

Gene: Murucutumbu\_35 Start: 28326, Stop: 29534, Start Num: 29

Candidate Starts for Murucutumbu\_35:

(Start: 29 @28326 has 188 MA's), (Start: 57 @28428 has 11 MA's), (93, 28539), (99, 28557), (143, 28716), (160, 28758), (169, 28833), (186, 28899), (189, 28911), (194, 28938), (208, 29013), (218, 29052), (221, 29064), (222, 29067), (234, 29148), (235, 29160), (236, 29163), (238, 29178), (240, 29196), (242, 29202), (246, 29226), (248, 29232), (250, 29250), (252, 29259), (253, 29262), (259, 29319), (264, 29349), (271, 29388), (293, 29511), (297, 29526),

Gene: Mynx\_35 Start: 28376, Stop: 29584, Start Num: 29

Candidate Starts for Mynx\_35:

(Start: 29 @28376 has 188 MA's), (Start: 57 @28478 has 11 MA's), (93, 28589), (143, 28766), (160, 28808), (169, 28883), (186, 28949), (189, 28961), (194, 28988), (208, 29063), (218, 29102), (222, 29117), (234, 29198), (235, 29210), (236, 29213), (238, 29228), (240, 29246), (246, 29276), (248, 29282), (250, 29300), (252, 29309), (253, 29312), (259, 29369), (264, 29399), (271, 29438), (275, 29459), (293, 29561), (297, 29576),

Gene: Nabi\_44 Start: 30076, Stop: 31266, Start Num: 48

Candidate Starts for Nabi\_44:

(Start: 48 @30076 has 101 MA's), (64, 30124), (79, 30190), (81, 30196), (114, 30310), (162, 30493), (177, 30583), (207, 30724), (208, 30727), (211, 30739), (219, 30775), (222, 30784), (224, 30808), (228, 30829), (234, 30874), (242, 30928), (246, 30952), (247, 30955), (251, 30979), (262, 31063), (265, 31081), (277, 31153), (286, 31222),

Gene: Nanodon\_45 Start: 29859, Stop: 31049, Start Num: 48

Candidate Starts for Nanodon\_45:

(31, 29790), (Start: 48 @29859 has 101 MA's), (64, 29907), (67, 29919), (79, 29973), (114, 30093), (135, 30171), (153, 30225), (154, 30231), (162, 30276), (177, 30366), (207, 30507), (208, 30510), (211, 30522), (219, 30558), (222, 30567), (228, 30612), (234, 30657), (262, 30846), (277, 30936), (296, 31038),

Gene: Neighly\_35 Start: 28796, Stop: 30010, Start Num: 29

Candidate Starts for Neighly\_35:

(28, 28790), (Start: 29 @28796 has 188 MA's), (33, 28814), (99, 29027), (111, 29075), (131, 29147), (160, 29234), (163, 29258), (171, 29318), (178, 29348), (181, 29357), (186, 29372), (189, 29384), (204, 29474), (205, 29477), (208, 29489), (209, 29492), (213, 29510), (222, 29543), (226, 29576), (234, 29624), (235, 29636), (240, 29672), (246, 29702), (248, 29708), (252, 29735), (253, 29738), (259, 29795), (264, 29825), (283, 29960), (287, 29972), (293, 29987), (295, 29996),

Gene: Nerdos\_42 Start: 29211, Stop: 30401, Start Num: 48

Candidate Starts for Nerdos\_42:

(32, 29148), (Start: 48 @29211 has 101 MA's), (64, 29259), (79, 29325), (104, 29412), (114, 29445), (162, 29628), (177, 29718), (207, 29859), (208, 29862), (211, 29874), (219, 29910), (222, 29919), (224, 29943), (228, 29964), (246, 30087), (247, 30090), (262, 30198), (277, 30288), (296, 30390),

Gene: Nergal\_31 Start: 26074, Stop: 27270, Start Num: 29

Candidate Starts for Nergal\_31:

(28, 26068), (Start: 29 @26074 has 188 MA's), (83, 26263), (93, 26293), (123, 26380), (160, 26494), (162, 26512), (164, 26527), (186, 26632), (189, 26644), (208, 26749), (242, 26938), (250, 26986), (253, 26998), (254, 27019), (259, 27055), (264, 27085), (268, 27112), (295, 27256), (297, 27262), (298, 27265),

Gene: Neville\_113 Start: 64325, Stop: 65452, Start Num: 42

Candidate Starts for Neville\_113:

(Start: 42 @64325 has 7 MA's), (75, 64427), (90, 64460), (160, 64673), (186, 64814), (190, 64829), (192, 64841), (194, 64853), (209, 64931), (218, 64970), (222, 64985), (225, 65015), (226, 65018), (235, 65078), (237, 65084), (239, 65108), (242, 65120), (246, 65144), (251, 65171), (252, 65177), (256, 65213), (259, 65237), (267, 65285), (287, 65414), (288, 65417), (295, 65438), (297, 65444), (298, 65447),

Gene: Nibb\_34 Start: 27521, Stop: 28648, Start Num: 29

Candidate Starts for Nibb\_34:



(Start: 29 @27521 has 188 MA's), (85, 27710), (143, 27836), (169, 27950), (186, 28013), (189, 28025), (194, 28052), (205, 28115), (208, 28127), (212, 28145), (222, 28181), (225, 28211), (234, 28262), (235, 28274), (237, 28280), (238, 28292), (242, 28316), (246, 28340), (248, 28346), (250, 28364), (252, 28373), (253, 28376), (259, 28433), (270, 28496), (275, 28523), (277, 28538), (287, 28610), (293, 28625),

Gene: Nikao\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for Nikao\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: Niklas\_35 Start: 27683, Stop: 28813, Start Num: 29

Candidate Starts for Niklas\_35:

(Start: 29 @27683 has 188 MA's), (40, 27725), (50, 27767), (85, 27872), (143, 27998), (160, 28040), (186, 28178), (189, 28190), (193, 28214), (194, 28217), (208, 28292), (218, 28331), (221, 28343), (222, 28346), (234, 28427), (235, 28439), (240, 28475), (246, 28505), (248, 28511), (250, 28529), (252, 28538), (253, 28541), (264, 28628), (271, 28667), (275, 28688), (293, 28790), (297, 28805),

Gene: Nishikigoi\_45 Start: 30482, Stop: 31684, Start Num: 48

Candidate Starts for Nishikigoi\_45:

(Start: 48 @30482 has 101 MA's), (97, 30653), (114, 30722), (119, 30743), (150, 30851), (153, 30857), (162, 30908), (207, 31139), (208, 31142), (215, 31172), (219, 31190), (222, 31199), (228, 31244), (262, 31478), (277, 31568), (292, 31655), (294, 31661), (297, 31673),

Gene: November\_34 Start: 28596, Stop: 29729, Start Num: 29

Candidate Starts for November\_34:

(Start: 29 @28596 has 188 MA's), (72, 28749), (85, 28785), (143, 28914), (186, 29094), (189, 29106), (194, 29133), (208, 29208), (222, 29262), (238, 29373), (240, 29391), (242, 29397), (246, 29421), (248, 29427), (250, 29445), (253, 29457), (259, 29514), (271, 29583), (275, 29604), (293, 29706), (295, 29715), (297, 29721),

Gene: Nutello\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for Nutello\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: Octobien14\_112 Start: 62219, Stop: 63349, Start Num: 42

Candidate Starts for Octobien14\_112:

(Start: 42 @62219 has 7 MA's), (44, 62228), (60, 62273), (92, 62369), (93, 62372), (107, 62399), (162, 62588), (167, 62633), (169, 62645), (174, 62666), (178, 62684), (187, 62717), (192, 62738), (193, 62747), (194, 62750), (218, 62867), (221, 62879), (226, 62915), (234, 62963), (235, 62975), (242, 63017), (246, 63041), (248, 63047), (252, 63074), (256, 63110), (260, 63140), (265, 63167), (282, 63290), (283, 63299), (284, 63302), (287, 63311), (295, 63335), (297, 63341),

Gene: OkiRoe\_34 Start: 28926, Stop: 30143, Start Num: 29

Candidate Starts for OkiRoe\_34:

(Start: 29 @28926 has 188 MA's), (33, 28947), (99, 29160), (111, 29208), (160, 29367), (164, 29400), (171, 29451), (178, 29481), (181, 29490), (186, 29505), (189, 29517), (204, 29607), (208, 29622), (209, 29625), (213, 29643), (222, 29676), (226, 29709), (234, 29757), (235, 29769), (240, 29805), (246, 29835), (248, 29841), (251, 29862), (252, 29868), (253, 29871), (256, 29904), (257, 29913), (259, 29928), (264, 29958), (265, 29961), (270, 29991), (283, 30093), (293, 30120), (295, 30129),

Gene: Oliynyk\_44 Start: 29538, Stop: 30725, Start Num: 48

Candidate Starts for Oliynyk\_44:

(Start: 48 @29538 has 101 MA's), (79, 29655), (81, 29661), (95, 29700), (103, 29736), (114, 29775), (145, 29892), (149, 29898), (162, 29952), (208, 30186), (219, 30234), (234, 30333), (246, 30411), (247, 30414), (251, 30438), (262, 30522), (277, 30612),

Gene: Omar\_46 Start: 30682, Stop: 31869, Start Num: 48

Candidate Starts for Omar\_46:

(Start: 48 @30682 has 101 MA's), (73, 30781), (79, 30802), (81, 30808), (105, 30892), (114, 30922), (119, 30943), (149, 31039), (161, 31081), (162, 31096), (207, 31327), (208, 31330), (215, 31360), (219, 31378), (242, 31531), (262, 31666), (276, 31747), (277, 31756), (286, 31825), (292, 31843), (294, 31849), (297, 31861),

Gene: OmniCritical\_36 Start: 29342, Stop: 30532, Start Num: 29

Candidate Starts for OmniCritical\_36:

(Start: 29 @29342 has 188 MA's), (72, 29498), (83, 29528), (93, 29558), (123, 29645), (160, 29753), (171, 29837), (186, 29891), (196, 29951), (197, 29960), (200, 29975), (208, 30008), (221, 30059), (222, 30062), (234, 30143), (240, 30191), (242, 30197), (246, 30221), (248, 30227), (251, 30248), (256, 30293), (265, 30350), (284, 30485), (286, 30491), (295, 30518), (297, 30524), (298, 30527),

Gene: Omnicron\_35 Start: 27834, Stop: 29048, Start Num: 29

Candidate Starts for Omnicron\_35:

(28, 27828), (Start: 29 @27834 has 188 MA's), (82, 28014), (111, 28113), (160, 28272), (163, 28296), (164, 28305), (171, 28356), (175, 28377), (178, 28386), (186, 28410), (189, 28422), (204, 28512), (207, 28524), (208, 28527), (209, 28530), (218, 28566), (226, 28614), (234, 28662), (235, 28674), (240, 28710), (246, 28740), (248, 28746), (250, 28764), (252, 28773), (253, 28776), (259, 28833), (265, 28866), (270, 28896), (283, 28998), (287, 29010), (293, 29025), (295, 29034), (298, 29043),

Gene: Oscar\_35 Start: 28055, Stop: 29182, Start Num: 29

Candidate Starts for Oscar\_35:

(Start: 29 @28055 has 188 MA's), (40, 28097), (85, 28244), (143, 28370), (160, 28409), (169, 28484), (186, 28547), (189, 28559), (194, 28586), (205, 28649), (208, 28661), (212, 28679), (222, 28715), (225, 28745), (234, 28796), (235, 28808), (238, 28826), (240, 28844), (242, 28850), (246, 28874), (248, 28880), (253, 28910), (259, 28967), (270, 29030), (275, 29057), (277, 29072), (286, 29141), (293, 29159), (297, 29174),

Gene: Ouroboros\_26 Start: 19334, Stop: 18291, Start Num: 87

Candidate Starts for Ouroboros\_26:

(Start: 87 @19334 has 45 MA's), (135, 19142), (169, 18983), (191, 18902), (194, 18887), (200, 18845), (206, 18818), (208, 18812), (209, 18809), (212, 18794), (224, 18734), (229, 18689), (244, 18602), (249, 18584), (266, 18473), (277, 18404), (283, 18344),

Gene: Ozzie\_43 Start: 29196, Stop: 30386, Start Num: 48

Candidate Starts for Ozzie\_43:

(32, 29133), (Start: 48 @29196 has 101 MA's), (64, 29244), (79, 29310), (114, 29430), (162, 29613), (177, 29703), (207, 29844), (208, 29847), (211, 29859), (219, 29895), (222, 29904), (224, 29928), (228, 29949), (246, 30072), (247, 30075), (262, 30183), (277, 30273), (296, 30375),

Gene: OzzyJ\_44 Start: 29549, Stop: 30739, Start Num: 48

Candidate Starts for OzzyJ\_44:

(Start: 48 @29549 has 101 MA's), (64, 29597), (79, 29663), (81, 29669), (114, 29783), (162, 29966), (207, 30197), (208, 30200), (211, 30212), (219, 30248), (222, 30257), (224, 30281), (228, 30302), (234, 30347), (242, 30401), (246, 30425), (247, 30428), (262, 30536), (277, 30626), (286, 30695),

Gene: P1.1\_26 Start: 19354, Stop: 18308, Start Num: 87

Candidate Starts for P1.1\_26:

(Start: 87 @19354 has 45 MA's), (135, 19162), (191, 18919), (194, 18904), (206, 18835), (208, 18829), (209, 18826), (212, 18811), (224, 18751), (229, 18706), (244, 18619), (249, 18601), (266, 18490), (277, 18421), (283, 18361),

Gene: P100.1\_26 Start: 19395, Stop: 18349, Start Num: 87

Candidate Starts for P100.1\_26:

(55, 19506), (Start: 87 @19395 has 45 MA's), (191, 18960), (194, 18945), (206, 18876), (208, 18870), (209, 18867), (218, 18831), (244, 18660), (266, 18531), (277, 18462), (283, 18402),

Gene: P100A\_26 Start: 19358, Stop: 18315, Start Num: 87

Candidate Starts for P100A\_26:

(Start: 87 @19358 has 45 MA's), (160, 19082), (191, 18926), (194, 18911), (200, 18869), (206, 18842), (208, 18836), (209, 18833), (212, 18818), (239, 18656), (244, 18626), (249, 18608), (266, 18497), (277, 18428), (283, 18368),

Gene: P100D\_26 Start: 19327, Stop: 18281, Start Num: 87

Candidate Starts for P100D\_26:

(55, 19438), (Start: 87 @19327 has 45 MA's), (191, 18892), (194, 18877), (200, 18835), (206, 18808), (208, 18802), (209, 18799), (212, 18784), (229, 18679), (244, 18592), (249, 18574), (266, 18463), (277, 18394), (283, 18334),

Gene: P101A\_26 Start: 19371, Stop: 18325, Start Num: 87

Candidate Starts for P101A\_26:

(55, 19479), (Start: 87 @19371 has 45 MA's), (169, 19017), (191, 18936), (194, 18921), (206, 18852), (208, 18846), (209, 18843), (224, 18768), (229, 18723), (244, 18636), (249, 18618), (266, 18507), (277, 18438), (283, 18378),

Gene: P104A\_26 Start: 19128, Stop: 18088, Start Num: 87

Candidate Starts for P104A\_26:

(Start: 87 @19128 has 45 MA's), (113, 19038), (169, 18780), (191, 18699), (194, 18684), (200, 18642), (206, 18615), (208, 18609), (209, 18606), (229, 18486), (244, 18399), (249, 18381), (266, 18270), (277, 18201), (283, 18141),

Gene: P104B\_26 Start: 19324, Stop: 18278, Start Num: 87

Candidate Starts for P104B\_26:

(55, 19435), (Start: 87 @19324 has 45 MA's), (191, 18889), (194, 18874), (206, 18805), (208, 18799), (209, 18796), (212, 18781), (218, 18760), (229, 18676), (244, 18589), (249, 18571), (266, 18460), (277, 18391), (283, 18331),

Gene: P105\_26 Start: 19290, Stop: 18244, Start Num: 87

Candidate Starts for P105\_26:

(Start: 87 @19290 has 45 MA's), (113, 19200), (191, 18855), (194, 18840), (200, 18798), (206, 18771), (208, 18765), (209, 18762), (244, 18555), (249, 18537), (266, 18426), (277, 18357), (283, 18297),

Gene: P106A\_26 Start: 19420, Stop: 18374, Start Num: 87

Candidate Starts for P106A\_26:

(55, 19528), (Start: 87 @19420 has 45 MA's), (169, 19066), (191, 18985), (194, 18970), (206, 18901), (208, 18895), (209, 18892), (218, 18856), (244, 18685), (266, 18556), (277, 18487), (283, 18427),

Gene: P106C\_27 Start: 19358, Stop: 18312, Start Num: 87

Candidate Starts for P106C\_27:

(55, 19466), (Start: 87 @19358 has 45 MA's), (169, 19004), (191, 18923), (194, 18908), (206, 18839), (208, 18833), (209, 18830), (218, 18794), (244, 18623), (266, 18494), (277, 18425), (283, 18365),

Gene: P106I\_26 Start: 19187, Stop: 18141, Start Num: 87

Candidate Starts for P106I\_26:

(55, 19295), (Start: 87 @19187 has 45 MA's), (169, 18833), (191, 18752), (194, 18737), (206, 18668), (208, 18662), (209, 18659), (218, 18623), (244, 18452), (266, 18323), (277, 18254), (283, 18194),

Gene: P106L\_26 Start: 19358, Stop: 18312, Start Num: 87

Candidate Starts for P106L\_26:

(55, 19466), (Start: 87 @19358 has 45 MA's), (169, 19004), (191, 18923), (194, 18908), (206, 18839), (208, 18833), (209, 18830), (218, 18794), (244, 18623), (266, 18494), (277, 18425), (283, 18365),

Gene: P106M\_26 Start: 19358, Stop: 18312, Start Num: 87

Candidate Starts for P106M\_26:

(55, 19466), (Start: 87 @19358 has 45 MA's), (169, 19004), (191, 18923), (194, 18908), (206, 18839), (208, 18833), (209, 18830), (218, 18794), (244, 18623), (266, 18494), (277, 18425), (283, 18365),

Gene: P107A\_26 Start: 19377, Stop: 18331, Start Num: 87

Candidate Starts for P107A\_26:

(Start: 87 @19377 has 45 MA's), (135, 19185), (160, 19098), (191, 18942), (194, 18927), (206, 18858), (208, 18852), (209, 18849), (224, 18774), (229, 18729), (244, 18642), (249, 18624), (266, 18513), (277, 18444), (283, 18384),

Gene: P107C\_26 Start: 19311, Stop: 18265, Start Num: 87

Candidate Starts for P107C\_26:

(55, 19422), (Start: 87 @19311 has 45 MA's), (191, 18876), (194, 18861), (200, 18819), (206, 18792), (208, 18786), (209, 18783), (212, 18768), (229, 18663), (244, 18576), (249, 18558), (266, 18447), (277, 18378), (283, 18318),

Gene: P108C\_26 Start: 19331, Stop: 18291, Start Num: 87

Candidate Starts for P108C\_26:

(Start: 87 @19331 has 45 MA's), (135, 19139), (160, 19058), (191, 18902), (194, 18887), (206, 18818), (208, 18812), (209, 18809), (212, 18794), (224, 18734), (229, 18689), (244, 18602), (249, 18584), (266, 18473), (277, 18404), (283, 18344),

Gene: P14.4\_26 Start: 19327, Stop: 18284, Start Num: 87

Candidate Starts for P14.4\_26:

(Start: 87 @19327 has 45 MA's), (191, 18895), (194, 18880), (206, 18811), (208, 18805), (209, 18802), (229, 18682), (244, 18595), (249, 18577), (266, 18466), (277, 18397), (283, 18337),

Gene: P9.1\_26 Start: 19360, Stop: 18314, Start Num: 87

Candidate Starts for P9.1\_26:

(Start: 87 @19360 has 45 MA's), (191, 18925), (194, 18910), (206, 18841), (208, 18835), (209, 18832), (218, 18796), (229, 18712), (244, 18625), (249, 18607), (266, 18496), (277, 18427), (283, 18367),

Gene: PA6\_27 Start: 19315, Stop: 18269, Start Num: 87

Candidate Starts for PA6\_27:

(55, 19423), (Start: 87 @19315 has 45 MA's), (191, 18880), (194, 18865), (200, 18823), (206, 18796), (208, 18790), (209, 18787), (212, 18772), (218, 18751), (244, 18580), (266, 18451), (277, 18382), (283, 18322),

Gene: PAD20\_27 Start: 19098, Stop: 18052, Start Num: 87

Candidate Starts for PAD20\_27:

(Start: 87 @19098 has 45 MA's), (191, 18663), (194, 18648), (206, 18579), (208, 18573), (209, 18570), (212, 18555), (229, 18450), (244, 18363), (249, 18345), (266, 18234), (277, 18165), (283, 18105),

Gene: PAS50\_27 Start: 19266, Stop: 18220, Start Num: 87

Candidate Starts for PAS50\_27:

(Start: 87 @19266 has 45 MA's), (191, 18831), (194, 18816), (200, 18774), (206, 18747), (208, 18741), (209, 18738), (212, 18723), (244, 18531), (249, 18513), (266, 18402), (277, 18333), (283, 18273),

Gene: PHL010M04\_26 Start: 19341, Stop: 18298, Start Num: 87

Candidate Starts for PHL010M04\_26:

(55, 19446), (Start: 87 @19341 has 45 MA's), (135, 19149), (160, 19065), (191, 18909), (194, 18894), (200, 18852), (206, 18825), (208, 18819), (209, 18816), (212, 18801), (229, 18696), (244, 18609), (249, 18591), (266, 18480), (277, 18411), (283, 18351),

Gene: PHL037M02\_26 Start: 19316, Stop: 18270, Start Num: 87

Candidate Starts for PHL037M02\_26:

(Start: 87 @19316 has 45 MA's), (169, 18962), (191, 18881), (194, 18866), (206, 18797), (208, 18791), (209, 18788), (224, 18713), (229, 18668), (244, 18581), (249, 18563), (266, 18452), (277, 18383), (283, 18323),

Gene: PHL060L00\_26 Start: 19165, Stop: 18119, Start Num: 87

Candidate Starts for PHL060L00\_26:

(55, 19276), (Start: 87 @19165 has 45 MA's), (191, 18730), (194, 18715), (206, 18646), (208, 18640), (209, 18637), (212, 18622), (244, 18430), (249, 18412), (266, 18301), (277, 18232), (283, 18172),

Gene: PHL067M10\_26 Start: 19289, Stop: 18243, Start Num: 87

Candidate Starts for PHL067M10\_26:

(Start: 87 @19289 has 45 MA's), (191, 18854), (194, 18839), (200, 18797), (206, 18770), (208, 18764), (209, 18761), (212, 18746), (224, 18686), (229, 18641), (244, 18554), (266, 18425), (277, 18356), (283, 18296),

Gene: PHL071N05\_26 Start: 19351, Stop: 18305, Start Num: 87

Candidate Starts for PHL071N05\_26:

(Start: 87 @19351 has 45 MA's), (135, 19159), (191, 18916), (194, 18901), (206, 18832), (208, 18826), (209, 18823), (212, 18808), (224, 18748), (229, 18703), (244, 18616), (249, 18598), (266, 18487), (277, 18418), (283, 18358),

Gene: PHL111M01\_26 Start: 19339, Stop: 18293, Start Num: 87

Candidate Starts for PHL111M01\_26:

(Start: 87 @19339 has 45 MA's), (169, 18985), (191, 18904), (194, 18889), (200, 18847), (206, 18820), (208, 18814), (209, 18811), (229, 18691), (244, 18604), (249, 18586), (266, 18475), (277, 18406), (283, 18346),

Gene: PHL112N00\_26 Start: 19367, Stop: 18324, Start Num: 87

Candidate Starts for PHL112N00\_26:

(Start: 87 @19367 has 45 MA's), (113, 19277), (191, 18935), (194, 18920), (200, 18878), (206, 18851), (208, 18845), (209, 18842), (229, 18722), (244, 18635), (266, 18506), (277, 18437), (283, 18377),

Gene: PHL113M01\_26 Start: 19385, Stop: 18339, Start Num: 87

Candidate Starts for PHL113M01\_26:

(Start: 87 @19385 has 45 MA's), (169, 19031), (191, 18950), (194, 18935), (206, 18866), (208, 18860), (209, 18857), (212, 18842), (229, 18737), (244, 18650), (249, 18632), (266, 18521), (277, 18452), (283, 18392),

Gene: PHL114L00\_26 Start: 19308, Stop: 18265, Start Num: 87

Candidate Starts for PHL114L00\_26:

(Start: 87 @19308 has 45 MA's), (135, 19116), (160, 19032), (191, 18876), (194, 18861), (200, 18819), (206, 18792), (208, 18786), (209, 18783), (212, 18768), (229, 18663), (244, 18576), (249, 18558), (266, 18447), (277, 18378), (283, 18318),

Gene: Pablito\_44 Start: 30267, Stop: 31469, Start Num: 48

Candidate Starts for Pablito\_44:

(Start: 48 @30267 has 101 MA's), (97, 30438), (114, 30507), (162, 30693), (166, 30723), (207, 30924), (208, 30927), (215, 30957), (219, 30975), (222, 30984), (226, 31017), (228, 31029), (234, 31074), (262, 31263), (276, 31344), (277, 31353), (286, 31422), (292, 31440), (294, 31446), (297, 31458),

Gene: Padfoot\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Padfoot\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Padpat\_35 Start: 28353, Stop: 29561, Start Num: 29

Candidate Starts for Padpat\_35:

(Start: 29 @28353 has 188 MA's), (Start: 57 @28455 has 11 MA's), (93, 28566), (143, 28743), (160, 28785), (169, 28860), (186, 28926), (189, 28938), (194, 28965), (208, 29040), (218, 29079), (222, 29094), (234, 29175), (235, 29187), (236, 29190), (238, 29205), (240, 29223), (242, 29229), (246, 29253), (248, 29259), (250, 29277), (252, 29286), (253, 29289), (259, 29346), (264, 29376), (265, 29379), (271, 29415), (275, 29436), (293, 29538), (297, 29553),

Gene: Paedore\_44 Start: 30857, Stop: 32062, Start Num: 48

Candidate Starts for Paedore\_44:

(Start: 48 @30857 has 101 MA's), (73, 30956), (81, 30983), (105, 31067), (114, 31097), (119, 31118), (150, 31226), (162, 31286), (166, 31316), (168, 31337), (177, 31376), (186, 31406), (207, 31517), (208, 31520), (215, 31550), (219, 31568), (224, 31601), (228, 31622), (251, 31772), (262, 31856), (263, 31865), (277, 31946), (294, 32039),

Gene: Panchaali\_171 Start: 111167, Stop: 109740, Start Num: 13

Candidate Starts for Panchaali\_171:

(9, 111233), (12, 111176), (Start: 13 @111167 has 4 MA's), (14, 111131), (34, 110963), (35, 110960), (63, 110888), (136, 110618), (159, 110543), (160, 110540), (201, 110330), (228, 110201), (241, 110105), (253, 110042), (255, 110012), (283, 109799), (286, 109790),

Gene: Paola\_34 Start: 28924, Stop: 30141, Start Num: 29

Candidate Starts for Paola\_34:

(Start: 29 @28924 has 188 MA's), (33, 28945), (99, 29158), (111, 29206), (160, 29365), (162, 29383), (164, 29398), (171, 29449), (178, 29479), (181, 29488), (186, 29503), (189, 29515), (204, 29605), (208, 29620), (209, 29623), (213, 29641), (218, 29659), (222, 29674), (226, 29707), (234, 29755), (235, 29767), (240, 29803), (246, 29833), (248, 29839), (251, 29860), (252, 29866), (253, 29869), (259, 29926), (264, 29956), (265, 29959), (270, 29989), (283, 30091), (293, 30118), (295, 30127),

Gene: Paolo\_46 Start: 31065, Stop: 32255, Start Num: 48

Candidate Starts for Paolo\_46:

(Start: 48 @31065 has 101 MA's), (73, 31164), (79, 31185), (81, 31191), (105, 31275), (114, 31305), (119, 31326), (149, 31422), (161, 31464), (162, 31479), (207, 31710), (208, 31713), (215, 31743), (219, 31761), (224, 31794), (228, 31815), (242, 31914), (248, 31944), (251, 31965), (262, 32049), (264, 32064), (276, 32130), (277, 32139), (286, 32208), (292, 32226), (294, 32232),

Gene: Patbob\_169 Start: 114130, Stop: 112802, Start Num: 13

Candidate Starts for Patbob\_169:

(Start: 13 @114130 has 4 MA's), (58, 113905), (193, 113407), (208, 113329), (269, 112957),

Gene: Patt\_36 Start: 29176, Stop: 30366, Start Num: 29

Candidate Starts for Patt\_36:

(Start: 29 @29176 has 188 MA's), (72, 29332), (83, 29362), (93, 29392), (123, 29479), (160, 29587), (171, 29671), (186, 29725), (196, 29785), (197, 29794), (200, 29809), (208, 29842), (221, 29893), (222, 29896), (234, 29977), (240, 30025), (242, 30031), (246, 30055), (248, 30061), (249, 30067), (251, 30082), (256, 30127), (265, 30184), (284, 30319), (286, 30325), (295, 30352), (297, 30358), (298, 30361),

Gene: Pavo\_44 Start: 31067, Stop: 32254, Start Num: 48

Candidate Starts for Pavo\_44:

(Start: 48 @31067 has 101 MA's), (73, 31163), (79, 31184), (81, 31190), (89, 31211), (114, 31304), (119, 31325), (149, 31427), (151, 31433), (162, 31481), (198, 31673), (207, 31712), (208, 31715), (215, 31745), (219, 31763), (228, 31817), (234, 31862), (242, 31916), (247, 31943), (277, 32141), (296, 32243),

Gene: Peanam\_35 Start: 27680, Stop: 28810, Start Num: 29

Candidate Starts for Peanam\_35:

(Start: 29 @27680 has 188 MA's), (40, 27722), (50, 27764), (85, 27869), (143, 27995), (160, 28037), (169, 28112), (186, 28175), (189, 28187), (193, 28211), (194, 28214), (208, 28289), (218, 28328), (221, 28340), (222, 28343), (234, 28424), (235, 28436), (240, 28472), (246, 28502), (248, 28508), (250, 28526), (252, 28535), (253, 28538), (264, 28625), (271, 28664), (275, 28685), (293, 28787), (297, 28802),

Gene: Peel\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Peel\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Pharb\_34 Start: 28523, Stop: 29653, Start Num: 29

Candidate Starts for Pharb\_34:

(Start: 29 @28523 has 188 MA's), (69, 28667), (85, 28712), (143, 28838), (160, 28880), (169, 28955), (181, 29003), (186, 29018), (189, 29030), (193, 29054), (204, 29117), (234, 29267), (240, 29315), (242, 29321), (246, 29345), (248, 29351), (251, 29372), (253, 29381), (259, 29438), (271, 29507),

(275, 29528), (277, 29543), (293, 29630), (295, 29639), (297, 29645),

Gene: PhelpsODU\_35 Start: 27711, Stop: 28919, Start Num: 29

Candidate Starts for PhelpsODU\_35:

(Start: 29 @27711 has 188 MA's), (33, 27729), (Start: 57 @27813 has 11 MA's), (93, 27924), (99, 27942), (143, 28104), (160, 28146), (186, 28284), (189, 28296), (194, 28323), (208, 28398), (222, 28452), (234, 28533), (240, 28581), (242, 28587), (246, 28611), (250, 28635), (251, 28638), (264, 28734), (275, 28794), (286, 28878), (293, 28896), (297, 28911),

Gene: Phettuccine\_43 Start: 29212, Stop: 30402, Start Num: 48

Candidate Starts for Phettuccine\_43:

(32, 29149), (Start: 48 @29212 has 101 MA's), (64, 29260), (79, 29326), (104, 29413), (114, 29446), (162, 29629), (177, 29719), (207, 29860), (208, 29863), (211, 29875), (219, 29911), (222, 29920), (224, 29944), (228, 29965), (246, 30088), (247, 30091), (262, 30199), (277, 30289), (296, 30391),

Gene: Phrampa\_163 Start: 115709, Stop: 114375, Start Num: 13

Candidate Starts for Phrampa\_163:

(Start: 13 @115709 has 4 MA's), (19, 115628), (30, 115520), (77, 115406), (193, 114980), (208, 114902), (269, 114530),

Gene: Phrank\_35 Start: 27661, Stop: 28869, Start Num: 29

Candidate Starts for Phrank\_35:

(Start: 29 @27661 has 188 MA's), (33, 27679), (Start: 57 @27763 has 11 MA's), (93, 27874), (99, 27892), (143, 28054), (160, 28096), (186, 28234), (189, 28246), (194, 28273), (208, 28348), (222, 28402), (234, 28483), (240, 28531), (242, 28537), (246, 28561), (250, 28585), (251, 28588), (259, 28654), (264, 28684), (275, 28744), (286, 28828), (293, 28846), (297, 28861),

Gene: Piatt\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Piatt\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Pirate\_26 Start: 19250, Stop: 18204, Start Num: 87

Candidate Starts for Pirate\_26:

(Start: 87 @19250 has 45 MA's), (135, 19058), (160, 18971), (191, 18815), (194, 18800), (206, 18731), (208, 18725), (209, 18722), (212, 18707), (224, 18647), (229, 18602), (244, 18515), (249, 18497), (266, 18386), (277, 18317), (283, 18257),

Gene: Pixie\_35 Start: 28762, Stop: 29892, Start Num: 29

Candidate Starts for Pixie\_35:

(17, 28627), (Start: 29 @28762 has 188 MA's), (33, 28780), (40, 28804), (85, 28951), (143, 29077), (160, 29119), (169, 29194), (186, 29257), (189, 29269), (193, 29293), (204, 29356), (234, 29506), (240, 29554), (242, 29560), (246, 29584), (251, 29611), (253, 29620), (259, 29677), (264, 29707), (271, 29746), (275, 29767), (277, 29782), (293, 29869), (295, 29878), (297, 29884),

Gene: Pokerus\_34 Start: 28310, Stop: 29518, Start Num: 29

Candidate Starts for Pokerus\_34:

(Start: 29 @28310 has 188 MA's), (Start: 57 @28412 has 11 MA's), (93, 28523), (143, 28700), (160, 28742), (169, 28817), (186, 28883), (189, 28895), (194, 28922), (208, 28997), (218, 29036), (222, 29051), (234, 29132), (235, 29144), (236, 29147), (238, 29162), (240, 29180), (246, 29210), (248,



29216), (250, 29234), (252, 29243), (253, 29246), (259, 29303), (264, 29333), (271, 29372), (275, 29393), (293, 29495), (297, 29510),

Gene: Prithvi\_35 Start: 28323, Stop: 29531, Start Num: 29

Candidate Starts for Prithvi\_35:

(Start: 29 @28323 has 188 MA's), (Start: 57 @28425 has 11 MA's), (93, 28536), (99, 28554), (143, 28713), (160, 28755), (169, 28830), (186, 28896), (189, 28908), (194, 28935), (208, 29010), (218, 29049), (221, 29061), (222, 29064), (234, 29145), (235, 29157), (238, 29175), (240, 29193), (242, 29199), (246, 29223), (248, 29229), (252, 29256), (253, 29259), (259, 29316), (264, 29346), (271, 29385), (275, 29406), (293, 29508), (297, 29523),

Gene: Procrass1\_26 Start: 19317, Stop: 18271, Start Num: 87

Candidate Starts for Procrass1\_26:

(55, 19425), (Start: 87 @19317 has 45 MA's), (135, 19125), (160, 19038), (169, 18963), (191, 18882), (194, 18867), (206, 18798), (208, 18792), (209, 18789), (212, 18774), (229, 18669), (244, 18582), (249, 18564), (266, 18453), (277, 18384), (283, 18324),

Gene: Provolone\_44 Start: 30449, Stop: 31636, Start Num: 48

Candidate Starts for Provolone\_44:

(Start: 48 @30449 has 101 MA's), (73, 30545), (79, 30566), (81, 30572), (89, 30593), (114, 30686), (119, 30707), (149, 30809), (151, 30815), (162, 30863), (207, 31094), (208, 31097), (215, 31127), (219, 31145), (228, 31199), (234, 31244), (242, 31298), (277, 31523), (296, 31625),

Gene: Psycho\_35 Start: 28927, Stop: 30141, Start Num: 29

Candidate Starts for Psycho\_35:

(28, 28921), (Start: 29 @28927 has 188 MA's), (33, 28945), (99, 29158), (111, 29206), (131, 29278), (160, 29365), (163, 29389), (171, 29449), (178, 29479), (181, 29488), (186, 29503), (189, 29515), (204, 29605), (205, 29608), (208, 29620), (209, 29623), (213, 29641), (222, 29674), (226, 29707), (234, 29755), (235, 29767), (240, 29803), (246, 29833), (248, 29839), (252, 29866), (253, 29869), (259, 29926), (264, 29956), (283, 30091), (287, 30103), (293, 30118), (295, 30127),

Gene: Puginator\_46 Start: 31083, Stop: 32285, Start Num: 48

Candidate Starts for Puginator\_46:

(Start: 48 @31083 has 101 MA's), (73, 31182), (81, 31209), (97, 31254), (105, 31293), (114, 31323), (119, 31344), (149, 31446), (152, 31455), (162, 31509), (180, 31608), (207, 31740), (208, 31743), (215, 31773), (219, 31791), (228, 31845), (242, 31944), (251, 31995), (262, 32079), (264, 32094), (276, 32160), (277, 32169), (292, 32256), (294, 32262),

Gene: QueenBey\_26 Start: 19307, Stop: 18264, Start Num: 87

Candidate Starts for QueenBey\_26:

(Start: 87 @19307 has 45 MA's), (160, 19031), (169, 18956), (191, 18875), (194, 18860), (200, 18818), (204, 18800), (206, 18791), (208, 18785), (209, 18782), (212, 18767), (229, 18662), (244, 18575), (249, 18557), (266, 18446), (277, 18377), (283, 18317),

Gene: QuincyRose\_34 Start: 28382, Stop: 29590, Start Num: 29

Candidate Starts for QuincyRose\_34:

(Start: 29 @28382 has 188 MA's), (Start: 57 @28484 has 11 MA's), (72, 28535), (93, 28595), (136, 28751), (160, 28814), (169, 28889), (186, 28955), (189, 28967), (194, 28994), (208, 29069), (218, 29108), (222, 29123), (234, 29204), (235, 29216), (236, 29219), (238, 29234), (240, 29252), (242, 29258), (246, 29282), (248, 29288), (250, 29306), (252, 29315), (253, 29318), (259, 29375), (264, 29405), (271, 29444), (275, 29465), (293, 29567), (297, 29582),

Gene: R4\_45 Start: 31018, Stop: 32223, Start Num: 48

Candidate Starts for R4\_45:

(Start: 48 @31018 has 101 MA's), (73, 31117), (79, 31138), (81, 31144), (105, 31228), (114, 31258), (150, 31387), (155, 31405), (162, 31447), (166, 31477), (177, 31537), (186, 31567), (207, 31678), (208, 31681), (215, 31711), (219, 31729), (222, 31738), (226, 31771), (228, 31783), (262, 32017), (276, 32098), (277, 32107), (292, 32194), (294, 32200),

Gene: Rabbitrun\_115 Start: 65402, Stop: 66529, Start Num: 42

Candidate Starts for Rabbitrun\_115:

(Start: 42 @65402 has 7 MA's), (75, 65504), (90, 65537), (160, 65750), (170, 65828), (171, 65834), (186, 65891), (190, 65906), (192, 65918), (194, 65930), (209, 66008), (218, 66047), (222, 66062), (225, 66092), (226, 66095), (235, 66155), (237, 66161), (239, 66185), (242, 66197), (246, 66221), (249, 66233), (256, 66290), (259, 66314), (267, 66362), (287, 66491), (288, 66494), (295, 66515), (297, 66521), (298, 66524),

Gene: Racecar\_171 Start: 114540, Stop: 113212, Start Num: 13

Candidate Starts for Racecar\_171:

(Start: 13 @114540 has 4 MA's), (58, 114315), (193, 113817), (208, 113739), (269, 113367),

Gene: Ramen\_35 Start: 28359, Stop: 29567, Start Num: 29

Candidate Starts for Ramen\_35:

(Start: 29 @28359 has 188 MA's), (Start: 57 @28461 has 11 MA's), (93, 28572), (143, 28749), (160, 28791), (169, 28866), (186, 28932), (189, 28944), (194, 28971), (208, 29046), (218, 29085), (222, 29100), (234, 29181), (235, 29193), (236, 29196), (238, 29211), (240, 29229), (246, 29259), (248, 29265), (250, 29283), (252, 29292), (253, 29295), (259, 29352), (264, 29382), (271, 29421), (275, 29442), (293, 29544), (297, 29559),

Gene: Rana\_44 Start: 30076, Stop: 31266, Start Num: 48

Candidate Starts for Rana\_44:

(Start: 48 @30076 has 101 MA's), (64, 30124), (79, 30190), (81, 30196), (114, 30310), (162, 30493), (177, 30583), (207, 30724), (208, 30727), (211, 30739), (219, 30775), (222, 30784), (224, 30808), (228, 30829), (234, 30874), (242, 30928), (246, 30952), (247, 30955), (251, 30979), (262, 31063), (265, 31081), (277, 31153), (286, 31222),

Gene: Rando14\_35 Start: 27788, Stop: 29002, Start Num: 29

Candidate Starts for Rando14\_35:

(28, 27782), (Start: 29 @27788 has 188 MA's), (111, 28067), (160, 28226), (163, 28250), (164, 28259), (171, 28310), (178, 28340), (186, 28364), (189, 28376), (197, 28433), (204, 28466), (207, 28478), (208, 28481), (209, 28484), (218, 28520), (221, 28532), (222, 28535), (226, 28568), (234, 28616), (235, 28628), (240, 28664), (246, 28694), (248, 28700), (250, 28718), (252, 28727), (253, 28730), (259, 28787), (264, 28817), (265, 28820), (270, 28850), (283, 28952), (287, 28964), (293, 28979), (295, 28988), (298, 28997),

Gene: Rapunzel97\_35 Start: 28360, Stop: 29568, Start Num: 29

Candidate Starts for Rapunzel97\_35:

(Start: 29 @28360 has 188 MA's), (Start: 57 @28462 has 11 MA's), (93, 28573), (143, 28750), (160, 28792), (169, 28867), (186, 28933), (189, 28945), (194, 28972), (208, 29047), (218, 29086), (222, 29101), (234, 29182), (235, 29194), (236, 29197), (238, 29212), (240, 29230), (242, 29236), (246, 29260), (248, 29266), (250, 29284), (252, 29293), (253, 29296), (259, 29353), (264, 29383), (265, 29386), (271, 29422), (275, 29443), (293, 29545), (297, 29560),

Gene: RedBear\_44 Start: 29753, Stop: 30946, Start Num: 48

Candidate Starts for RedBear\_44:

(Start: 48 @29753 has 101 MA's), (64, 29801), (79, 29867), (81, 29873), (114, 29987), (128, 30047), (154, 30128), (162, 30173), (177, 30263), (207, 30404), (208, 30407), (211, 30419), (219, 30455), (222, 30464), (228, 30509), (234, 30554), (242, 30608), (246, 30632), (247, 30635), (262, 30743), (277, 30833), (294, 30926), (296, 30935),

Gene: ReginaGlobina\_175 Start: 115323, Stop: 113800, Start Num: 13

Candidate Starts for ReginaGlobina\_175:

(12, 115332), (Start: 13 @115323 has 4 MA's), (14, 115287), (18, 115251), (22, 115197), (39, 115092), (43, 115068), (61, 114996), (63, 114987), (107, 114828), (112, 114807), (120, 114750), (144, 114651), (169, 114525), (201, 114390), (239, 114174), (255, 114072), (283, 113859), (286, 113850),

Gene: Reptar3000\_36 Start: 29167, Stop: 30357, Start Num: 29

Candidate Starts for Reptar3000\_36:

(Start: 29 @29167 has 188 MA's), (72, 29323), (83, 29353), (93, 29383), (123, 29470), (160, 29578), (171, 29662), (186, 29716), (196, 29776), (197, 29785), (200, 29800), (208, 29833), (221, 29884), (222, 29887), (234, 29968), (240, 30016), (242, 30022), (246, 30046), (248, 30052), (249, 30058), (251, 30073), (256, 30118), (265, 30175), (284, 30310), (286, 30316), (295, 30343), (297, 30349), (298, 30352),

Gene: Richo\_35 Start: 27680, Stop: 28810, Start Num: 29

Candidate Starts for Richo\_35:

(Start: 29 @27680 has 188 MA's), (40, 27722), (50, 27764), (85, 27869), (143, 27995), (160, 28037), (169, 28112), (186, 28175), (189, 28187), (193, 28211), (194, 28214), (208, 28289), (218, 28328), (221, 28340), (222, 28343), (234, 28424), (235, 28436), (240, 28472), (246, 28502), (248, 28508), (250, 28526), (252, 28535), (253, 28538), (264, 28625), (271, 28664), (275, 28685), (293, 28787), (297, 28802),

Gene: Rileysaurus\_26 Start: 19348, Stop: 18305, Start Num: 87

Candidate Starts for Rileysaurus\_26:

(Start: 87 @19348 has 45 MA's), (135, 19156), (157, 19081), (191, 18916), (194, 18901), (200, 18859), (204, 18841), (206, 18832), (208, 18826), (209, 18823), (212, 18808), (224, 18748), (229, 18703), (244, 18616), (249, 18598), (266, 18487), (277, 18418), (283, 18358),

Gene: Rockabye\_174 Start: 106748, Stop: 105342, Start Num: 13

Candidate Starts for Rockabye\_174:

(2, 106859), (5, 106829), (6, 106826), (7, 106823), (8, 106820), (10, 106796), (12, 106757), (Start: 13 @106748 has 4 MA's), (21, 106628), (77, 106424), (160, 106142), (168, 106070), (201, 105932), (232, 105767), (239, 105716), (255, 105614), (283, 105401),

Gene: Ronaldo\_120 Start: 57466, Stop: 58557, Start Num: 49

Candidate Starts for Ronaldo\_120:

(Start: 49 @57466 has 11 MA's), (56, 57487), (109, 57622), (121, 57658), (124, 57670), (136, 57718), (162, 57793), (171, 57859), (173, 57865), (192, 57946), (211, 58045), (221, 58087), (235, 58183), (239, 58207), (240, 58213), (246, 58243), (249, 58255), (256, 58312), (265, 58369), (291, 58531),

Gene: Rosmarinus\_35 Start: 28381, Stop: 29589, Start Num: 29

Candidate Starts for Rosmarinus\_35:

(Start: 25 @28357 has 1 MA's), (Start: 29 @28381 has 188 MA's), (Start: 57 @28483 has 11 MA's), (93, 28594), (123, 28702), (143, 28771), (160, 28813), (169, 28888), (186, 28954), (189, 28966), (194, 28993), (208, 29068), (218, 29107), (222, 29122), (234, 29203), (235, 29215), (236, 29218), (238, 29233), (240, 29251), (242, 29257), (246, 29281), (248, 29287), (250, 29305), (252, 29314), (253, 29317), (259, 29374), (264, 29404), (271, 29443), (275, 29464), (293, 29566), (297, 29581),

Gene: Rusticus\_44 Start: 29538, Stop: 30725, Start Num: 48

Candidate Starts for Rusticus\_44:

(Start: 48 @29538 has 101 MA's), (79, 29655), (81, 29661), (95, 29700), (103, 29736), (114, 29775), (145, 29892), (149, 29898), (162, 29952), (208, 30186), (219, 30234), (234, 30333), (246, 30411), (247, 30414), (251, 30438), (262, 30522), (277, 30612),

Gene: Ruthiejr\_37 Start: 29323, Stop: 30513, Start Num: 29

Candidate Starts for Ruthiejr\_37:

(Start: 29 @29323 has 188 MA's), (72, 29479), (83, 29509), (93, 29539), (123, 29626), (126, 29638), (160, 29734), (162, 29752), (171, 29818), (186, 29872), (196, 29932), (197, 29941), (200, 29956), (207, 29986), (208, 29989), (221, 30040), (222, 30043), (234, 30124), (240, 30172), (242, 30178), (246, 30202), (248, 30208), (251, 30229), (256, 30274), (265, 30331), (284, 30466), (295, 30499), (297, 30505), (298, 30508),

Gene: SJReid\_175 Start: 104973, Stop: 103564, Start Num: 13

Candidate Starts for SJReid\_175:

(2, 105084), (6, 105051), (7, 105048), (8, 105045), (11, 105000), (12, 104982), (Start: 13 @104973 has 4 MA's), (16, 104928), (59, 104721), (142, 104412), (201, 104154), (219, 104076), (239, 103938), (255, 103836), (283, 103623), (286, 103614),

Gene: SKKY\_26 Start: 19396, Stop: 18353, Start Num: 87

Candidate Starts for SKKY\_26:

(Start: 87 @19396 has 45 MA's), (169, 19045), (191, 18964), (194, 18949), (200, 18907), (206, 18880), (208, 18874), (209, 18871), (212, 18856), (229, 18751), (239, 18694), (244, 18664), (249, 18646), (266, 18535), (277, 18466), (283, 18406),

Gene: Saftant\_43 Start: 31027, Stop: 32214, Start Num: 48

Candidate Starts for Saftant\_43:

(Start: 48 @31027 has 101 MA's), (73, 31123), (79, 31144), (81, 31150), (89, 31171), (114, 31264), (119, 31285), (127, 31321), (149, 31387), (151, 31393), (162, 31441), (198, 31633), (207, 31672), (208, 31675), (215, 31705), (219, 31723), (228, 31777), (234, 31822), (242, 31876), (246, 31900), (247, 31903), (277, 32101), (296, 32203),

Gene: SamScheppers\_36 Start: 29836, Stop: 31026, Start Num: 29

Candidate Starts for SamScheppers\_36:

(Start: 29 @29836 has 188 MA's), (72, 29992), (83, 30022), (93, 30052), (123, 30139), (160, 30247), (171, 30331), (186, 30385), (196, 30445), (197, 30454), (200, 30469), (208, 30502), (221, 30553), (222, 30556), (234, 30637), (240, 30685), (242, 30691), (246, 30715), (248, 30721), (251, 30742), (256, 30787), (265, 30844), (284, 30979), (286, 30985), (295, 31012), (297, 31018), (298, 31021),

Gene: SamuelLPlaqson\_35 Start: 28303, Stop: 29511, Start Num: 29

Candidate Starts for SamuelLPlaqson\_35:

(Start: 29 @28303 has 188 MA's), (Start: 57 @28405 has 11 MA's), (93, 28516), (99, 28534), (143, 28693), (160, 28735), (169, 28810), (186, 28876), (189, 28888), (194, 28915), (208, 28990), (218, 29029), (221, 29041), (222, 29044), (234, 29125), (235, 29137), (236, 29140), (238, 29155), (240, 29173), (246, 29203), (248, 29209), (250, 29227), (252, 29236), (253, 29239), (259, 29296), (271, 29365), (275, 29386), (293, 29488), (297, 29503),

Gene: SarahRose\_43 Start: 29557, Stop: 30747, Start Num: 48

Candidate Starts for SarahRose\_43:

(Start: 48 @29557 has 101 MA's), (64, 29605), (79, 29671), (81, 29677), (114, 29791), (162, 29974), (207, 30205), (208, 30208), (211, 30220), (219, 30256), (222, 30265), (224, 30289), (228, 30310), (234, 30355), (242, 30409), (246, 30433), (247, 30436), (262, 30544), (277, 30634), (286, 30703),

Gene: Scarlett\_35 Start: 28055, Stop: 29182, Start Num: 29

Candidate Starts for Scarlett\_35:

(Start: 29 @28055 has 188 MA's), (85, 28244), (143, 28370), (160, 28409), (169, 28484), (186, 28547), (189, 28559), (194, 28586), (205, 28649), (208, 28661), (212, 28679), (222, 28715), (225, 28745), (234, 28796), (235, 28808), (238, 28826), (240, 28844), (242, 28850), (246, 28874), (248, 28880), (253, 28910), (259, 28967), (270, 29030), (275, 29057), (277, 29072), (278, 29078), (286, 29141), (293, 29159), (297, 29174),

Gene: Schmidt\_60 Start: 37326, Stop: 38462, Start Num: 57

Candidate Starts for Schmidt\_60:

(Start: 57 @37326 has 11 MA's), (68, 37371), (80, 37416), (106, 37497), (115, 37527), (125, 37560), (165, 37719), (171, 37767), (187, 37830), (196, 37884), (200, 37905), (208, 37938), (218, 37980), (221, 37992), (222, 37995), (223, 38016), (237, 38094), (239, 38118), (240, 38124), (242, 38130), (246, 38154), (248, 38160), (250, 38178), (256, 38223), (265, 38280), (270, 38310), (279, 38382), (286, 38421), (298, 38457),

Gene: Sephiroth\_112 Start: 63182, Stop: 64324, Start Num: 42

Candidate Starts for Sephiroth\_112:

(Start: 42 @63182 has 7 MA's), (44, 63191), (82, 63314), (162, 63563), (167, 63608), (169, 63620), (174, 63641), (187, 63692), (192, 63713), (193, 63722), (194, 63725), (218, 63842), (221, 63854), (226, 63890), (234, 63938), (235, 63950), (242, 63992), (246, 64016), (248, 64022), (252, 64049), (256, 64085), (260, 64115), (265, 64142), (282, 64265), (283, 64274), (284, 64277), (287, 64286), (295, 64310), (297, 64316),

Gene: SgtBeansprout\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for SgtBeansprout\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: Shadow1\_34 Start: 27528, Stop: 28661, Start Num: 29

Candidate Starts for Shadow1\_34:

(Start: 29 @27528 has 188 MA's), (43, 27588), (143, 27846), (160, 27888), (176, 27996), (181, 28011), (189, 28038), (194, 28065), (208, 28140), (222, 28194), (234, 28275), (240, 28323), (246, 28353), (248, 28359), (250, 28377), (251, 28380), (259, 28446), (264, 28476), (275, 28536), (297, 28653),

Gene: Shaobing\_35 Start: 27680, Stop: 28810, Start Num: 29

Candidate Starts for Shaobing\_35:

(Start: 29 @27680 has 188 MA's), (40, 27722), (50, 27764), (85, 27869), (143, 27995), (160, 28037), (186, 28175), (189, 28187), (193, 28211), (194, 28214), (208, 28289), (218, 28328), (221, 28340), (222, 28343), (234, 28424), (235, 28436), (240, 28472), (246, 28502), (248, 28508), (250, 28526), (252, 28535), (253, 28538), (264, 28625), (271, 28664), (275, 28685), (293, 28787), (297, 28802),

Gene: ShedlockHolmes\_36 Start: 29284, Stop: 30414, Start Num: 29

Candidate Starts for ShedlockHolmes\_36:

(17, 29149), (Start: 29 @29284 has 188 MA's), (33, 29302), (40, 29326), (85, 29473), (143, 29599), (160, 29641), (169, 29716), (186, 29779), (189, 29791), (204, 29878), (234, 30028), (240, 30076), (242, 30082), (246, 30106), (251, 30133), (253, 30142), (259, 30199), (264, 30229), (271, 30268), (275, 30289), (277, 30304), (293, 30391), (295, 30400), (297, 30406),

Gene: ShiaSurprise\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for ShiaSurprise\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (143, 28783), (160, 28825), (169, 28900), (179, 28942), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: SirPhilip\_34 Start: 27159, Stop: 28289, Start Num: 29

Candidate Starts for SirPhilip\_34:

(Start: 29 @27159 has 188 MA's), (Start: 57 @27261 has 11 MA's), (126, 27417), (143, 27474), (160, 27516), (169, 27591), (186, 27654), (189, 27666), (194, 27693), (204, 27753), (205, 27756), (208, 27768), (222, 27822), (234, 27903), (235, 27915), (240, 27951), (242, 27957), (246, 27981), (248, 27987), (250, 28005), (253, 28017), (259, 28074), (264, 28104), (270, 28137), (271, 28143), (275, 28164), (277, 28179), (287, 28251), (293, 28266), (297, 28281),

Gene: Slarp\_36 Start: 29445, Stop: 30635, Start Num: 29

Candidate Starts for Slarp\_36:

(Start: 29 @29445 has 188 MA's), (72, 29601), (83, 29631), (93, 29661), (123, 29748), (160, 29856), (171, 29940), (186, 29994), (196, 30054), (197, 30063), (200, 30078), (208, 30111), (221, 30162), (222, 30165), (234, 30246), (240, 30294), (242, 30300), (246, 30324), (248, 30330), (251, 30351), (256, 30396), (265, 30453), (284, 30588), (286, 30594), (295, 30621), (297, 30627), (298, 30630),

Gene: Slimphazie\_35 Start: 28360, Stop: 29568, Start Num: 29

Candidate Starts for Slimphazie\_35:

(Start: 29 @28360 has 188 MA's), (Start: 57 @28462 has 11 MA's), (93, 28573), (143, 28750), (160, 28792), (169, 28867), (186, 28933), (189, 28945), (194, 28972), (208, 29047), (218, 29086), (222, 29101), (234, 29182), (235, 29194), (236, 29197), (238, 29212), (240, 29230), (242, 29236), (246, 29260), (248, 29266), (250, 29284), (252, 29293), (253, 29296), (259, 29353), (264, 29383), (265, 29386), (271, 29422), (275, 29443), (293, 29545), (297, 29560),

Gene: Snorlax\_43 Start: 29561, Stop: 30751, Start Num: 48

Candidate Starts for Snorlax\_43:

(Start: 48 @29561 has 101 MA's), (64, 29609), (79, 29675), (81, 29681), (114, 29795), (162, 29978), (177, 30068), (207, 30209), (208, 30212), (211, 30224), (219, 30260), (222, 30269), (224, 30293), (228, 30314), (234, 30359), (242, 30413), (246, 30437), (247, 30440), (262, 30548), (277, 30638), (286, 30707),

Gene: SoSeph\_34 Start: 29070, Stop: 30287, Start Num: 29

Candidate Starts for SoSeph\_34:

(Start: 29 @29070 has 188 MA's), (33, 29091), (99, 29304), (111, 29352), (160, 29511), (162, 29529), (164, 29544), (171, 29595), (178, 29625), (181, 29634), (186, 29649), (189, 29661), (204, 29751), (208, 29766), (209, 29769), (213, 29787), (218, 29805), (226, 29853), (234, 29901), (235, 29913), (240, 29949), (246, 29979), (248, 29985), (251, 30006), (252, 30012), (253, 30015), (256, 30048), (257, 30057), (259, 30072), (264, 30102), (265, 30105), (270, 30135), (293, 30264), (295, 30273),

Gene: Solid\_26 Start: 19327, Stop: 18281, Start Num: 87

Candidate Starts for Solid\_26:

(Start: 87 @19327 has 45 MA's), (135, 19135), (160, 19048), (169, 18973), (191, 18892), (194, 18877), (206, 18808), (208, 18802), (209, 18799), (212, 18784), (244, 18592), (249, 18574), (266, 18463), (277, 18394), (283, 18334),

Gene: South40\_43 Start: 29753, Stop: 30946, Start Num: 48

Candidate Starts for South40\_43:

(Start: 48 @29753 has 101 MA's), (64, 29801), (79, 29867), (81, 29873), (114, 29987), (128, 30047), (154, 30128), (162, 30173), (177, 30263), (207, 30404), (208, 30407), (211, 30419), (219, 30455), (222, 30464), (228, 30509), (234, 30554), (242, 30608), (246, 30632), (247, 30635), (262, 30743), (277, 30833), (294, 30926), (296, 30935),

Gene: Speedwell\_48 Start: 32317, Stop: 33504, Start Num: 48

Candidate Starts for Speedwell\_48:

(Start: 48 @32317 has 101 MA's), (73, 32413), (79, 32434), (81, 32440), (89, 32461), (104, 32521), (114, 32554), (119, 32575), (127, 32611), (149, 32677), (151, 32683), (162, 32731), (198, 32923), (207, 32962), (208, 32965), (215, 32995), (219, 33013), (228, 33067), (234, 33112), (242, 33166), (247, 33193), (277, 33391), (296, 33493),

Gene: Splinter\_66 Start: 40804, Stop: 41925, Start Num: 57

Candidate Starts for Splinter\_66:

(Start: 57 @40804 has 11 MA's), (61, 40813), (65, 40825), (171, 41230), (188, 41296), (196, 41347), (200, 41368), (204, 41386), (211, 41413), (218, 41443), (219, 41449), (237, 41557), (246, 41617), (248, 41623), (250, 41641), (256, 41686), (273, 41794), (286, 41884), (298, 41920),

Gene: Spock\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Spock\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: SqueakyClean\_43 Start: 30580, Stop: 31779, Start Num: 48

Candidate Starts for SqueakyClean\_43:

(Start: 48 @30580 has 101 MA's), (97, 30751), (114, 30820), (153, 30952), (162, 31003), (207, 31234), (208, 31237), (215, 31267), (219, 31285), (222, 31294), (228, 31339), (262, 31573), (276, 31654), (277, 31663), (292, 31750), (294, 31756), (297, 31768),

Gene: Stinson\_36 Start: 28595, Stop: 29803, Start Num: 29

Candidate Starts for Stinson\_36:

(Start: 29 @28595 has 188 MA's), (Start: 57 @28697 has 11 MA's), (93, 28808), (99, 28826), (143, 28985), (160, 29027), (169, 29102), (186, 29168), (189, 29180), (194, 29207), (208, 29282), (218, 29321), (221, 29333), (222, 29336), (234, 29417), (235, 29429), (238, 29447), (240, 29465), (242, 29471), (246, 29495), (248, 29501), (250, 29519), (252, 29528), (253, 29531), (259, 29588), (264, 29618), (265, 29621), (271, 29657), (293, 29780), (297, 29795),

Gene: Stormborn\_26 Start: 19231, Stop: 18185, Start Num: 87

Candidate Starts for Stormborn\_26:

(Start: 87 @19231 has 45 MA's), (169, 18877), (191, 18796), (194, 18781), (206, 18712), (208, 18706), (209, 18703), (229, 18583), (244, 18496), (249, 18478), (266, 18367), (277, 18298), (283, 18238),

Gene: Strobilo\_34 Start: 27603, Stop: 28787, Start Num: 29

Candidate Starts for Strobilo\_34:

(23, 27570), (Start: 29 @27603 has 188 MA's), (39, 27636), (83, 27786), (93, 27816), (146, 27975), (160, 28014), (169, 28089), (186, 28152), (192, 28179), (194, 28191), (208, 28266), (209, 28269), (240, 28449), (246, 28479), (248, 28485), (251, 28506), (252, 28512), (259, 28572), (264, 28602), (275, 28662), (293, 28764), (298, 28782),

Gene: Sujidade\_44 Start: 30307, Stop: 31497, Start Num: 48

Candidate Starts for Sujidade\_44:

(Start: 48 @30307 has 101 MA's), (64, 30355), (79, 30421), (81, 30427), (114, 30541), (152, 30670), (162, 30724), (177, 30814), (207, 30955), (208, 30958), (211, 30970), (219, 31006), (222, 31015), (224, 31039), (228, 31060), (234, 31105), (242, 31159), (247, 31186), (262, 31294), (277, 31384), (294, 31477),

Gene: Sulley\_35 Start: 28326, Stop: 29534, Start Num: 29

Candidate Starts for Sulley\_35:

(Start: 29 @28326 has 188 MA's), (Start: 57 @28428 has 11 MA's), (72, 28479), (93, 28539), (143, 28716), (160, 28758), (169, 28833), (186, 28899), (189, 28911), (194, 28938), (208, 29013), (218, 29052), (222, 29067), (234, 29148), (235, 29160), (236, 29163), (238, 29178), (240, 29196), (242, 29202), (246, 29226), (248, 29232), (250, 29250), (252, 29259), (253, 29262), (264, 29349), (271, 29388), (275, 29409), (293, 29511), (297, 29526),

Gene: Sunflower1121\_34 Start: 27546, Stop: 28754, Start Num: 29

Candidate Starts for Sunflower1121\_34:

(Start: 29 @27546 has 188 MA's), (33, 27564), (41, 27591), (Start: 57 @27648 has 11 MA's), (99, 27777), (143, 27939), (160, 27981), (181, 28104), (189, 28131), (194, 28158), (208, 28233), (222, 28287), (234, 28368), (240, 28416), (246, 28446), (248, 28452), (250, 28470), (251, 28473), (259, 28539), (264, 28569), (275, 28629), (297, 28746),

Gene: SunsetPointe\_43 Start: 29203, Stop: 30393, Start Num: 48

Candidate Starts for SunsetPointe\_43:

(32, 29140), (Start: 48 @29203 has 101 MA's), (64, 29251), (79, 29317), (114, 29437), (162, 29620), (177, 29710), (207, 29851), (208, 29854), (211, 29866), (219, 29902), (222, 29911), (224, 29935), (228, 29956), (246, 30079), (247, 30082), (262, 30190), (277, 30280), (296, 30382),

Gene: Supernova\_26 Start: 19397, Stop: 18351, Start Num: 87

Candidate Starts for Supernova\_26:

(Start: 87 @19397 has 45 MA's), (160, 19118), (191, 18962), (194, 18947), (206, 18878), (208, 18872), (209, 18869), (212, 18854), (244, 18662), (249, 18644), (266, 18533), (277, 18464), (283, 18404),

Gene: Superstar\_48 Start: 31768, Stop: 32967, Start Num: 48

Candidate Starts for Superstar\_48:

(Start: 48 @31768 has 101 MA's), (51, 31777), (73, 31867), (81, 31894), (97, 31939), (105, 31978), (114, 32008), (119, 32029), (162, 32191), (166, 32221), (186, 32311), (207, 32422), (208, 32425), (215, 32455), (219, 32473), (220, 32476), (222, 32482), (226, 32515), (228, 32527), (242, 32626), (250, 32674), (262, 32761), (264, 32776), (276, 32842), (277, 32851), (292, 32938), (294, 32944),

Gene: Syleon\_117 Start: 63964, Stop: 65106, Start Num: 42

Candidate Starts for Syleon\_117:

(Start: 42 @63964 has 7 MA's), (44, 63973), (74, 64069), (82, 64096), (162, 64345), (167, 64390), (169, 64402), (174, 64423), (187, 64474), (192, 64495), (193, 64504), (194, 64507), (218, 64624), (221, 64636), (226, 64672), (234, 64720), (235, 64732), (242, 64774), (246, 64798), (248, 64804), (252, 64831), (256, 64867), (260, 64897), (265, 64924), (282, 65047), (283, 65056), (284, 65059), (287, 65068), (295, 65092), (297, 65098),

Gene: Syra333\_35 Start: 27547, Stop: 28680, Start Num: 29

Candidate Starts for Syra333\_35:

(Start: 29 @27547 has 188 MA's), (43, 27607), (143, 27865), (160, 27907), (181, 28030), (189, 28057), (194, 28084), (208, 28159), (222, 28213), (234, 28294), (240, 28342), (242, 28348), (246, 28372), (248, 28378), (250, 28396), (251, 28399), (259, 28465), (264, 28495), (275, 28555), (297, 28672),



Gene: TBond007\_35 Start: 28761, Stop: 29891, Start Num: 29

Candidate Starts for TBond007\_35:

(17, 28626), (Start: 29 @28761 has 188 MA's), (33, 28779), (40, 28803), (85, 28950), (143, 29076), (160, 29118), (169, 29193), (186, 29256), (189, 29268), (193, 29292), (204, 29355), (234, 29505), (240, 29553), (242, 29559), (246, 29583), (251, 29610), (253, 29619), (259, 29676), (264, 29706), (271, 29745), (275, 29766), (277, 29781), (293, 29868), (295, 29877), (297, 29883),

Gene: TClif\_36 Start: 28125, Stop: 29261, Start Num: 29

Candidate Starts for TClif\_36:

(Start: 29 @28125 has 188 MA's), (40, 28167), (85, 28314), (136, 28422), (143, 28443), (160, 28488), (169, 28563), (186, 28626), (189, 28638), (192, 28653), (208, 28740), (222, 28794), (234, 28875), (240, 28923), (242, 28929), (246, 28953), (248, 28959), (253, 28989), (259, 29046), (264, 29076), (271, 29115), (286, 29220), (293, 29238), (297, 29253),

Gene: TM4\_36 Start: 27808, Stop: 28992, Start Num: 29

Candidate Starts for TM4\_36:

(Start: 29 @27808 has 188 MA's), (39, 27841), (83, 27991), (93, 28021), (186, 28357), (192, 28384), (194, 28396), (208, 28471), (209, 28474), (240, 28654), (246, 28684), (248, 28690), (251, 28711), (252, 28717), (259, 28777), (264, 28807), (275, 28867), (298, 28987),

Gene: TZGordon\_67 Start: 39692, Stop: 40816, Start Num: 57

Candidate Starts for TZGordon\_67:

(36, 39617), (Start: 57 @39692 has 11 MA's), (61, 39701), (65, 39713), (102, 39836), (173, 40127), (185, 40175), (188, 40187), (196, 40238), (200, 40259), (204, 40277), (211, 40304), (218, 40334), (219, 40340), (237, 40448), (246, 40508), (248, 40514), (250, 40532), (256, 40577), (273, 40685), (286, 40775), (298, 40811),

Gene: Tachez\_35 Start: 28322, Stop: 29530, Start Num: 29

Candidate Starts for Tachez\_35:

(Start: 29 @28322 has 188 MA's), (Start: 57 @28424 has 11 MA's), (93, 28535), (143, 28712), (160, 28754), (169, 28829), (186, 28895), (189, 28907), (194, 28934), (208, 29009), (218, 29048), (222, 29063), (234, 29144), (235, 29156), (236, 29159), (238, 29174), (240, 29192), (242, 29198), (246, 29222), (248, 29228), (250, 29246), (252, 29255), (253, 29258), (259, 29315), (264, 29345), (265, 29348), (271, 29384), (275, 29405), (293, 29507), (297, 29522),

Gene: TagePhighter\_45 Start: 29561, Stop: 30751, Start Num: 48

Candidate Starts for TagePhighter\_45:

(Start: 48 @29561 has 101 MA's), (64, 29609), (79, 29675), (81, 29681), (114, 29795), (162, 29978), (207, 30209), (208, 30212), (211, 30224), (219, 30260), (222, 30269), (224, 30293), (228, 30314), (234, 30359), (242, 30413), (246, 30437), (247, 30440), (262, 30548), (277, 30638), (286, 30707),

Gene: TaiwanKao\_36 Start: 28323, Stop: 29531, Start Num: 29

Candidate Starts for TaiwanKao\_36:

(Start: 29 @28323 has 188 MA's), (Start: 57 @28425 has 11 MA's), (93, 28536), (99, 28554), (143, 28713), (160, 28755), (169, 28830), (186, 28896), (189, 28908), (194, 28935), (208, 29010), (218, 29049), (221, 29061), (222, 29064), (234, 29145), (235, 29157), (236, 29160), (238, 29175), (240, 29193), (242, 29199), (246, 29223), (248, 29229), (250, 29247), (252, 29256), (253, 29259), (259, 29316), (264, 29346), (271, 29385), (275, 29406), (293, 29508), (297, 29523),

Gene: Talia1610\_171 Start: 113951, Stop: 112623, Start Num: 13

Candidate Starts for Talia1610\_171:

(Start: 13 @113951 has 4 MA's), (58, 113726), (172, 113303), (193, 113228), (208, 113150), (269, 112778),

Gene: Taquito\_36 Start: 29883, Stop: 31079, Start Num: 29

Candidate Starts for Taquito\_36:

(Start: 29 @29883 has 188 MA's), (72, 30039), (83, 30069), (93, 30099), (123, 30186), (160, 30294), (171, 30378), (186, 30432), (196, 30492), (197, 30501), (200, 30516), (208, 30549), (221, 30600), (222, 30603), (234, 30684), (240, 30732), (242, 30738), (246, 30762), (248, 30768), (251, 30789), (256, 30834), (265, 30891), (284, 31026), (286, 31032), (289, 31044),

Gene: Teejan\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for Teejan\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: Tefunt\_45 Start: 30484, Stop: 31686, Start Num: 48

Candidate Starts for Tefunt\_45:

(Start: 48 @30484 has 101 MA's), (81, 30610), (97, 30655), (114, 30724), (119, 30745), (150, 30853), (153, 30859), (162, 30910), (207, 31141), (208, 31144), (215, 31174), (219, 31192), (222, 31201), (228, 31246), (262, 31480), (277, 31570), (292, 31657), (294, 31663), (297, 31675),

Gene: Thestral\_45 Start: 30681, Stop: 31883, Start Num: 48

Candidate Starts for Thestral\_45:

(Start: 48 @30681 has 101 MA's), (114, 30921), (119, 30942), (149, 31044), (152, 31053), (162, 31107), (180, 31206), (207, 31338), (208, 31341), (215, 31371), (219, 31389), (251, 31593), (262, 31677), (263, 31686), (277, 31767), (292, 31854), (294, 31860),

Gene: Thyatira\_34 Start: 28924, Stop: 30141, Start Num: 29

Candidate Starts for Thyatira\_34:

(Start: 29 @28924 has 188 MA's), (33, 28945), (99, 29158), (111, 29206), (160, 29365), (162, 29383), (164, 29398), (171, 29449), (177, 29476), (178, 29479), (181, 29488), (186, 29503), (189, 29515), (204, 29605), (208, 29620), (209, 29623), (213, 29641), (218, 29659), (222, 29674), (226, 29707), (234, 29755), (235, 29767), (240, 29803), (246, 29833), (248, 29839), (251, 29860), (252, 29866), (253, 29869), (264, 29956), (265, 29959), (270, 29989), (283, 30091), (293, 30118), (295, 30127),

Gene: Tierra\_35 Start: 28382, Stop: 29590, Start Num: 29

Candidate Starts for Tierra\_35:

(Start: 29 @28382 has 188 MA's), (33, 28400), (Start: 57 @28484 has 11 MA's), (93, 28595), (99, 28613), (143, 28775), (160, 28817), (186, 28955), (189, 28967), (194, 28994), (208, 29069), (222, 29123), (234, 29204), (240, 29252), (242, 29258), (246, 29282), (250, 29306), (251, 29309), (259, 29375), (264, 29405), (275, 29465), (286, 29549), (293, 29567), (297, 29582),

Gene: TinaBelcher\_43 Start: 30628, Stop: 31830, Start Num: 48

Candidate Starts for TinaBelcher\_43:

(Start: 48 @30628 has 101 MA's), (114, 30868), (119, 30889), (149, 30991), (152, 31000), (162, 31054), (180, 31153), (207, 31285), (208, 31288), (215, 31318), (219, 31336), (251, 31540), (262, 31624), (263, 31633), (277, 31714), (292, 31801), (294, 31807),

Gene: TinaLin\_65 Start: 39535, Stop: 40647, Start Num: 57

Candidate Starts for TinaLin\_65:

(47, 39508), (Start: 57 @39535 has 11 MA's), (61, 39544), (65, 39556), (75, 39592), (100, 39658), (156, 39853), (167, 39931), (182, 39997), (185, 40006), (188, 40018), (196, 40069), (211, 40135), (218, 40165), (219, 40171), (222, 40180), (237, 40279), (246, 40339), (249, 40351), (250, 40363), (256, 40408), (273, 40516), (279, 40567), (286, 40606), (298, 40642),

Gene: TingHuaYa\_35 Start: 27515, Stop: 28723, Start Num: 29

Candidate Starts for TingHuaYa\_35:

(Start: 29 @27515 has 188 MA's), (Start: 57 @27617 has 11 MA's), (93, 27728), (99, 27746), (123, 27836), (143, 27905), (160, 27947), (169, 28022), (186, 28088), (189, 28100), (194, 28127), (208, 28202), (218, 28241), (221, 28253), (222, 28256), (234, 28337), (235, 28349), (236, 28352), (238, 28367), (240, 28385), (242, 28391), (246, 28415), (248, 28421), (250, 28439), (252, 28448), (253, 28451), (259, 28508), (271, 28577), (275, 28598), (293, 28700), (297, 28715),

Gene: TiniBug\_35 Start: 28299, Stop: 29507, Start Num: 29

Candidate Starts for TiniBug\_35:

(Start: 29 @28299 has 188 MA's), (Start: 57 @28401 has 11 MA's), (93, 28512), (99, 28530), (143, 28689), (160, 28731), (169, 28806), (186, 28872), (189, 28884), (194, 28911), (208, 28986), (218, 29025), (221, 29037), (222, 29040), (234, 29121), (235, 29133), (236, 29136), (238, 29151), (240, 29169), (246, 29199), (248, 29205), (250, 29223), (252, 29232), (253, 29235), (259, 29292), (271, 29361), (275, 29382), (293, 29484), (297, 29499),

Gene: Tiri\_35 Start: 28374, Stop: 29582, Start Num: 29

Candidate Starts for Tiri\_35:

(Start: 29 @28374 has 188 MA's), (Start: 57 @28476 has 11 MA's), (72, 28527), (93, 28587), (99, 28605), (143, 28764), (160, 28806), (169, 28881), (186, 28947), (189, 28959), (194, 28986), (208, 29061), (218, 29100), (234, 29196), (235, 29208), (236, 29211), (238, 29226), (240, 29244), (246, 29274), (248, 29280), (250, 29298), (252, 29307), (253, 29310), (259, 29367), (271, 29436), (275, 29457), (293, 29559), (297, 29574),

Gene: Toma\_43 Start: 30039, Stop: 31229, Start Num: 48

Candidate Starts for Toma\_43:

(Start: 48 @30039 has 101 MA's), (64, 30087), (79, 30153), (81, 30159), (114, 30273), (162, 30456), (177, 30546), (207, 30687), (208, 30690), (211, 30702), (219, 30738), (222, 30747), (228, 30792), (234, 30837), (242, 30891), (246, 30915), (247, 30918), (262, 31026), (277, 31116), (286, 31185),

Gene: Topper\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Topper\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Torres\_31 Start: 27784, Stop: 28920, Start Num: 29

Candidate Starts for Torres\_31:

(Start: 29 @27784 has 188 MA's), (40, 27826), (52, 27871), (69, 27928), (85, 27973), (131, 28060), (152, 28117), (169, 28219), (186, 28285), (189, 28297), (193, 28321), (194, 28324), (208, 28399), (214, 28426), (218, 28438), (222, 28453), (234, 28534), (235, 28546), (240, 28582), (246, 28612), (248, 28618), (250, 28636), (252, 28645), (253, 28648), (264, 28735), (270, 28768), (271, 28774), (275, 28795), (293, 28897), (298, 28915),

Gene: Trax\_115 Start: 65319, Stop: 66446, Start Num: 42

Candidate Starts for Trax\_115:

(Start: 42 @65319 has 7 MA's), (75, 65421), (90, 65454), (160, 65667), (186, 65808), (190, 65823), (192, 65835), (194, 65847), (209, 65925), (218, 65964), (222, 65979), (225, 66009), (226, 66012), (235, 66072), (237, 66078), (239, 66102), (242, 66114), (246, 66138), (252, 66171), (256, 66207), (259, 66231), (267, 66279), (287, 66408), (288, 66411), (295, 66432), (297, 66438), (298, 66441),

Gene: TreyKay\_35 Start: 28323, Stop: 29531, Start Num: 29

Candidate Starts for TreyKay\_35:

(Start: 29 @28323 has 188 MA's), (Start: 57 @28425 has 11 MA's), (93, 28536), (99, 28554), (143, 28713), (160, 28755), (169, 28830), (186, 28896), (189, 28908), (194, 28935), (208, 29010), (218, 29049), (221, 29061), (222, 29064), (234, 29145), (235, 29157), (238, 29175), (240, 29193), (242, 29199), (246, 29223), (248, 29229), (252, 29256), (253, 29259), (259, 29316), (264, 29346), (271, 29385), (275, 29406), (293, 29508), (297, 29523),

Gene: TribelTrouble\_34 Start: 28818, Stop: 30026, Start Num: 29

Candidate Starts for TribelTrouble\_34:

(Start: 29 @28818 has 188 MA's), (33, 28836), (Start: 57 @28920 has 11 MA's), (93, 29031), (99, 29049), (116, 29112), (143, 29211), (160, 29253), (169, 29328), (186, 29391), (189, 29403), (192, 29418), (208, 29505), (234, 29640), (240, 29688), (246, 29718), (251, 29745), (259, 29811), (264, 29841), (275, 29901), (293, 30003), (295, 30012), (297, 30018),

Gene: Triste\_43 Start: 29549, Stop: 30739, Start Num: 48

Candidate Starts for Triste\_43:

(Start: 48 @29549 has 101 MA's), (64, 29597), (79, 29663), (81, 29669), (114, 29783), (162, 29966), (177, 30056), (207, 30197), (208, 30200), (211, 30212), (219, 30248), (222, 30257), (228, 30302), (234, 30347), (242, 30401), (246, 30425), (247, 30428), (262, 30536), (277, 30626), (286, 30695),

Gene: Triumph\_46 Start: 30620, Stop: 31819, Start Num: 48

Candidate Starts for Triumph\_46:

(Start: 48 @30620 has 101 MA's), (62, 30668), (97, 30791), (114, 30860), (119, 30881), (153, 30992), (162, 31043), (207, 31274), (208, 31277), (215, 31307), (219, 31325), (222, 31334), (228, 31379), (262, 31613), (270, 31661), (276, 31694), (277, 31703), (292, 31790), (294, 31796), (297, 31808),

Gene: TruffulaTree\_35 Start: 28356, Stop: 29564, Start Num: 29

Candidate Starts for TruffulaTree\_35:

(Start: 29 @28356 has 188 MA's), (Start: 57 @28458 has 11 MA's), (93, 28569), (143, 28746), (160, 28788), (169, 28863), (186, 28929), (189, 28941), (194, 28968), (208, 29043), (218, 29082), (222, 29097), (234, 29178), (235, 29190), (236, 29193), (238, 29208), (240, 29226), (246, 29256), (248, 29262), (250, 29280), (252, 29289), (253, 29292), (259, 29349), (264, 29379), (265, 29382), (271, 29418), (275, 29439), (293, 29541), (297, 29556),

Gene: TrvxScott\_42 Start: 30674, Stop: 31876, Start Num: 48

Candidate Starts for TrvxScott\_42:

(Start: 48 @30674 has 101 MA's), (114, 30914), (119, 30935), (138, 31016), (149, 31037), (152, 31046), (162, 31100), (180, 31199), (200, 31301), (207, 31331), (208, 31334), (215, 31364), (219, 31382), (251, 31586), (262, 31670), (263, 31679), (277, 31760), (292, 31847), (294, 31853),

Gene: TuanPN\_42 Start: 29490, Stop: 30680, Start Num: 48

Candidate Starts for TuanPN\_42:

(Start: 48 @29490 has 101 MA's), (64, 29538), (79, 29604), (114, 29724), (162, 29907), (177, 29997), (207, 30138), (208, 30141), (211, 30153), (219, 30189), (222, 30198), (224, 30222), (228, 30243), (234, 30288), (242, 30342), (247, 30369), (262, 30477), (277, 30567),

Gene: Twitch\_35 Start: 28393, Stop: 29601, Start Num: 29

Candidate Starts for Twitch\_35:

(Start: 25 @28369 has 1 MA's), (Start: 29 @28393 has 188 MA's), (Start: 57 @28495 has 11 MA's), (93, 28606), (123, 28714), (143, 28783), (160, 28825), (169, 28900), (186, 28966), (189, 28978), (194, 29005), (208, 29080), (218, 29119), (222, 29134), (234, 29215), (235, 29227), (236, 29230), (238, 29245), (240, 29263), (242, 29269), (246, 29293), (248, 29299), (250, 29317), (252, 29326), (253, 29329), (259, 29386), (264, 29416), (271, 29455), (275, 29476), (293, 29578), (297, 29593),

Gene: Unicorn\_35 Start: 27711, Stop: 28919, Start Num: 29

Candidate Starts for Unicorn\_35:

(Start: 29 @27711 has 188 MA's), (33, 27729), (Start: 57 @27813 has 11 MA's), (93, 27924), (99, 27942), (143, 28104), (160, 28146), (186, 28284), (189, 28296), (194, 28323), (208, 28398), (222, 28452), (234, 28533), (240, 28581), (242, 28587), (246, 28611), (250, 28635), (251, 28638), (264, 28734), (275, 28794), (286, 28878), (293, 28896), (297, 28911),

Gene: Unstoppable\_43 Start: 29207, Stop: 30397, Start Num: 48

Candidate Starts for Unstoppable\_43:

(32, 29144), (Start: 48 @29207 has 101 MA's), (64, 29255), (79, 29321), (104, 29408), (114, 29441), (153, 29573), (162, 29624), (177, 29714), (207, 29855), (208, 29858), (211, 29870), (219, 29906), (222, 29915), (224, 29939), (228, 29960), (246, 30083), (247, 30086), (262, 30194), (277, 30284), (296, 30386),

Gene: Urkel\_35 Start: 28303, Stop: 29511, Start Num: 29

Candidate Starts for Urkel\_35:

(Start: 29 @28303 has 188 MA's), (Start: 57 @28405 has 11 MA's), (93, 28516), (99, 28534), (143, 28693), (160, 28735), (169, 28810), (186, 28876), (189, 28888), (194, 28915), (208, 28990), (218, 29029), (221, 29041), (222, 29044), (234, 29125), (235, 29137), (236, 29140), (238, 29155), (240, 29173), (246, 29203), (248, 29209), (250, 29227), (252, 29236), (253, 29239), (259, 29296), (271, 29365), (275, 29386), (293, 29488), (297, 29503),

Gene: Urza\_45 Start: 30120, Stop: 31313, Start Num: 49

Candidate Starts for Urza\_45:

(Start: 49 @30120 has 11 MA's), (73, 30219), (79, 30240), (81, 30246), (114, 30360), (119, 30381), (127, 30417), (161, 30522), (162, 30537), (186, 30657), (198, 30729), (207, 30768), (208, 30771), (219, 30819), (222, 30828), (224, 30852), (226, 30861), (228, 30873), (262, 31107), (275, 31182), (277, 31197), (283, 31257), (297, 31302),

Gene: Validus\_35 Start: 27612, Stop: 28742, Start Num: 29

Candidate Starts for Validus\_35:

(Start: 29 @27612 has 188 MA's), (40, 27654), (85, 27801), (143, 27927), (160, 27969), (169, 28044), (189, 28119), (193, 28143), (194, 28146), (208, 28221), (218, 28260), (221, 28272), (222, 28275), (234, 28356), (235, 28368), (240, 28404), (246, 28434), (248, 28440), (250, 28458), (252, 28467), (253, 28470), (259, 28527), (264, 28557), (271, 28596), (275, 28617), (293, 28719), (297, 28734),

Gene: Vanseggelen\_48 Start: 30550, Stop: 31737, Start Num: 48

Candidate Starts for Vanseggelen\_48:

(Start: 48 @30550 has 101 MA's), (62, 30595), (73, 30646), (79, 30667), (81, 30673), (89, 30694), (114, 30787), (119, 30808), (127, 30844), (132, 30862), (149, 30910), (151, 30916), (162, 30964), (166, 30994), (198, 31156), (207, 31195), (208, 31198), (215, 31228), (219, 31246), (228, 31300), (242, 31399), (248, 31429), (251, 31450), (277, 31624), (296, 31726),

Gene: Veliki\_35 Start: 28396, Stop: 29604, Start Num: 29

Candidate Starts for Veliki\_35:

(Start: 29 @28396 has 188 MA's), (Start: 57 @28498 has 11 MA's), (93, 28609), (143, 28786), (160, 28828), (169, 28903), (186, 28969), (189, 28981), (194, 29008), (208, 29083), (218, 29122), (222, 29137), (234, 29218), (235, 29230), (236, 29233), (238, 29248), (240, 29266), (242, 29272), (246, 29296), (248, 29302), (250, 29320), (252, 29329), (253, 29332), (259, 29389), (264, 29419), (265, 29422), (271, 29458), (275, 29479), (286, 29563), (293, 29581), (297, 29596),

Gene: Vendetta\_66 Start: 40804, Stop: 41925, Start Num: 57

Candidate Starts for Vendetta\_66:

(Start: 57 @40804 has 11 MA's), (61, 40813), (65, 40825), (171, 41230), (188, 41296), (196, 41347), (200, 41368), (204, 41386), (211, 41413), (218, 41443), (219, 41449), (237, 41557), (246, 41617), (248, 41623), (250, 41641), (256, 41686), (273, 41794), (286, 41884), (298, 41920),

Gene: Verabelle\_47 Start: 31111, Stop: 32298, Start Num: 48

Candidate Starts for Verabelle\_47:

(Start: 48 @31111 has 101 MA's), (73, 31207), (79, 31228), (81, 31234), (89, 31255), (114, 31348), (119, 31369), (149, 31471), (151, 31477), (162, 31525), (166, 31555), (198, 31717), (207, 31756), (208, 31759), (215, 31789), (219, 31807), (228, 31861), (234, 31906), (242, 31960), (277, 32185), (296, 32287),

Gene: Verse\_43 Start: 31704, Stop: 32891, Start Num: 48

Candidate Starts for Verse\_43:

(Start: 48 @31704 has 101 MA's), (73, 31800), (79, 31821), (81, 31827), (89, 31848), (114, 31941), (119, 31962), (127, 31998), (149, 32064), (151, 32070), (162, 32118), (166, 32148), (198, 32310), (207, 32349), (208, 32352), (215, 32382), (219, 32400), (228, 32454), (234, 32499), (242, 32553), (247, 32580), (277, 32778), (296, 32880),

Gene: VieEnRose\_45 Start: 30190, Stop: 31383, Start Num: 49

Candidate Starts for VieEnRose\_45:

(Start: 49 @30190 has 11 MA's), (73, 30289), (79, 30310), (81, 30316), (114, 30430), (119, 30451), (127, 30487), (161, 30592), (162, 30607), (186, 30727), (198, 30799), (207, 30838), (208, 30841), (219, 30889), (222, 30898), (226, 30931), (228, 30943), (262, 31177), (275, 31252), (277, 31267), (283, 31327), (297, 31372),

Gene: ViviJ\_33 Start: 28759, Stop: 29973, Start Num: 29

Candidate Starts for ViviJ\_33:

(Start: 29 @28759 has 188 MA's), (33, 28777), (99, 28990), (111, 29038), (160, 29197), (163, 29221), (171, 29281), (178, 29311), (181, 29320), (186, 29335), (189, 29347), (208, 29452), (209, 29455), (213, 29473), (222, 29506), (226, 29539), (234, 29587), (235, 29599), (240, 29635), (246, 29665), (248, 29671), (251, 29692), (252, 29698), (253, 29701), (259, 29758), (264, 29788), (265, 29791), (283, 29923), (287, 29935), (293, 29950), (295, 29959),

Gene: Volt\_123 Start: 57630, Stop: 58721, Start Num: 49

Candidate Starts for Volt\_123:

(Start: 49 @57630 has 11 MA's), (56, 57651), (109, 57786), (121, 57822), (124, 57834), (136, 57882), (162, 57957), (171, 58023), (173, 58029), (192, 58110), (211, 58209), (221, 58251), (235, 58347), (239, 58371), (240, 58377), (246, 58407), (249, 58419), (256, 58476), (265, 58533), (291, 58695),

Gene: WaddleDee\_165 Start: 109525, Stop: 108011, Start Num: 13

Candidate Starts for WaddleDee\_165:

(3, 109627), (9, 109591), (12, 109534), (Start: 13 @109525 has 4 MA's), (14, 109489), (34, 109321), (35, 109318), (53, 109240), (61, 109207), (63, 109198), (70, 109165), (112, 109018), (117, 108970), (136, 108889), (168, 108739), (201, 108601), (239, 108385), (248, 108343), (255, 108283), (283, 108070),

Gene: Waterfoul\_34 Start: 28948, Stop: 30165, Start Num: 29

Candidate Starts for Waterfoul\_34:

(Start: 29 @28948 has 188 MA's), (33, 28969), (99, 29182), (111, 29230), (160, 29389), (162, 29407), (164, 29422), (171, 29473), (178, 29503), (181, 29512), (186, 29527), (189, 29539), (204, 29629), (208, 29644), (209, 29647), (213, 29665), (218, 29683), (222, 29698), (226, 29731), (234, 29779), (235, 29791), (240, 29827), (246, 29857), (248, 29863), (251, 29884), (252, 29890), (253, 29893), (259, 29950), (264, 29980), (265, 29983), (270, 30013), (283, 30115), (293, 30142), (295, 30151), (298, 30160),

Gene: Werner\_43 Start: 29559, Stop: 30749, Start Num: 48

Candidate Starts for Werner\_43:

(Start: 48 @29559 has 101 MA's), (64, 29607), (79, 29673), (81, 29679), (114, 29793), (162, 29976), (177, 30066), (207, 30207), (208, 30210), (211, 30222), (219, 30258), (222, 30267), (228, 30312), (234, 30357), (242, 30411), (246, 30435), (247, 30438), (262, 30546), (277, 30636), (286, 30705),

Gene: Whatever\_43 Start: 29559, Stop: 30749, Start Num: 48

Candidate Starts for Whatever\_43:

(Start: 48 @29559 has 101 MA's), (64, 29607), (79, 29673), (81, 29679), (114, 29793), (162, 29976), (207, 30207), (208, 30210), (211, 30222), (219, 30258), (222, 30267), (228, 30312), (234, 30357), (242, 30411), (246, 30435), (247, 30438), (262, 30546), (277, 30636), (286, 30705),

Gene: Wintermute\_36 Start: 29432, Stop: 30622, Start Num: 29

Candidate Starts for Wintermute\_36:

(Start: 29 @29432 has 188 MA's), (72, 29588), (83, 29618), (93, 29648), (123, 29735), (160, 29843), (171, 29927), (186, 29981), (196, 30041), (197, 30050), (200, 30065), (208, 30098), (221, 30149), (222, 30152), (234, 30233), (240, 30281), (242, 30287), (246, 30311), (248, 30317), (251, 30338), (256, 30383), (265, 30440), (284, 30575), (286, 30581), (295, 30608), (297, 30614), (298, 30617),

Gene: Wizzo\_26 Start: 19120, Stop: 18074, Start Num: 87

Candidate Starts for Wizzo\_26:

(Start: 87 @19120 has 45 MA's), (160, 18841), (191, 18685), (194, 18670), (200, 18628), (206, 18601), (208, 18595), (209, 18592), (212, 18577), (218, 18556), (244, 18385), (249, 18367), (266, 18256), (277, 18187), (283, 18127),

Gene: Ximenita\_36 Start: 27732, Stop: 28865, Start Num: 29

Candidate Starts for Ximenita\_36:

(Start: 29 @27732 has 188 MA's), (143, 28050), (160, 28092), (189, 28242), (194, 28269), (208, 28344), (222, 28398), (234, 28479), (240, 28527), (246, 28557), (248, 28563), (250, 28581), (251, 28584), (259, 28650), (264, 28680), (275, 28740), (297, 28857),

Gene: Y10\_36 Start: 29432, Stop: 30622, Start Num: 29

Candidate Starts for Y10\_36:

(Start: 29 @29432 has 188 MA's), (72, 29588), (83, 29618), (93, 29648), (123, 29735), (126, 29747), (160, 29843), (162, 29861), (171, 29927), (186, 29981), (196, 30041), (197, 30050), (200, 30065), (207, 30095), (208, 30098), (221, 30149), (222, 30152), (234, 30233), (240, 30281), (242, 30287), (246, 30311), (248, 30317), (251, 30338), (256, 30383), (265, 30440), (284, 30575), (295, 30608), (297, 30614), (298, 30617),

Gene: Y2\_36 Start: 29432, Stop: 30622, Start Num: 29

Candidate Starts for Y2\_36:

(Start: 29 @29432 has 188 MA's), (72, 29588), (83, 29618), (93, 29648), (123, 29735), (126, 29747), (160, 29843), (162, 29861), (171, 29927), (186, 29981), (196, 30041), (197, 30050), (200, 30065),

(207, 30095), (208, 30098), (221, 30149), (222, 30152), (234, 30233), (240, 30281), (242, 30287), (246, 30311), (248, 30317), (251, 30338), (256, 30383), (265, 30440), (284, 30575), (295, 30608), (297, 30614), (298, 30617),

Gene: Yasdni\_43 Start: 29608, Stop: 30798, Start Num: 48

Candidate Starts for Yasdni\_43:

(Start: 48 @29608 has 101 MA's), (64, 29656), (79, 29722), (114, 29842), (162, 30025), (177, 30115), (207, 30256), (208, 30259), (211, 30271), (219, 30307), (222, 30316), (224, 30340), (228, 30361), (234, 30406), (242, 30460), (247, 30487), (262, 30595), (277, 30685),

Gene: Yosif\_46 Start: 31673, Stop: 32860, Start Num: 49

Candidate Starts for Yosif\_46:

(32, 31607), (Start: 49 @31673 has 11 MA's), (73, 31772), (81, 31799), (97, 31844), (104, 31880), (114, 31913), (150, 32039), (162, 32087), (166, 32117), (177, 32177), (207, 32318), (208, 32321), (215, 32351), (217, 32357), (218, 32363), (219, 32369), (228, 32423), (242, 32522), (246, 32546), (247, 32549), (262, 32657), (277, 32747), (296, 32849),

Gene: YoureAdopted\_34 Start: 28329, Stop: 29537, Start Num: 29

Candidate Starts for YoureAdopted\_34:

(Start: 25 @28305 has 1 MA's), (Start: 29 @28329 has 188 MA's), (Start: 57 @28431 has 11 MA's), (93, 28542), (123, 28650), (143, 28719), (160, 28761), (169, 28836), (186, 28902), (189, 28914), (194, 28941), (208, 29016), (218, 29055), (222, 29070), (234, 29151), (235, 29163), (236, 29166), (238, 29181), (240, 29199), (246, 29229), (248, 29235), (250, 29253), (252, 29262), (253, 29265), (259, 29322), (264, 29352), (271, 29391), (275, 29412), (293, 29514), (297, 29529),

Gene: Yuna\_36 Start: 28128, Stop: 29333, Start Num: 29

Candidate Starts for Yuna\_36:

(Start: 29 @28128 has 188 MA's), (Start: 57 @28230 has 11 MA's), (93, 28341), (143, 28518), (160, 28560), (186, 28698), (207, 28809), (222, 28866), (234, 28947), (235, 28959), (240, 28995), (242, 29001), (246, 29025), (250, 29049), (253, 29061), (259, 29118), (264, 29148), (271, 29187), (275, 29208), (277, 29223), (287, 29295), (295, 29319), (297, 29325),

Gene: Yunkel11\_35 Start: 27644, Stop: 28852, Start Num: 29

Candidate Starts for Yunkel11\_35:

(Start: 29 @27644 has 188 MA's), (Start: 57 @27746 has 11 MA's), (93, 27857), (143, 28034), (160, 28076), (169, 28151), (186, 28217), (189, 28229), (194, 28256), (208, 28331), (218, 28370), (221, 28382), (222, 28385), (234, 28466), (235, 28478), (236, 28481), (238, 28496), (240, 28514), (242, 28520), (246, 28544), (250, 28568), (252, 28577), (253, 28580), (259, 28637), (264, 28667), (271, 28706), (275, 28727), (293, 28829), (297, 28844),

Gene: Zabiza\_35 Start: 28360, Stop: 29568, Start Num: 29

Candidate Starts for Zabiza\_35:

(Start: 29 @28360 has 188 MA's), (Start: 57 @28462 has 11 MA's), (93, 28573), (143, 28750), (160, 28792), (169, 28867), (186, 28933), (189, 28945), (194, 28972), (208, 29047), (218, 29086), (222, 29101), (234, 29182), (235, 29194), (236, 29197), (238, 29212), (240, 29230), (242, 29236), (246, 29260), (248, 29266), (250, 29284), (252, 29293), (253, 29296), (259, 29353), (264, 29383), (265, 29386), (271, 29422), (275, 29443), (293, 29545), (297, 29560),

Gene: Zainub\_46 Start: 31029, Stop: 32231, Start Num: 48

Candidate Starts for Zainub\_46:

(Start: 48 @31029 has 101 MA's), (73, 31128), (79, 31149), (81, 31155), (105, 31239), (114, 31269), (119, 31290), (162, 31455), (208, 31689), (219, 31737), (228, 31791), (242, 31890), (251, 31941), (262, 32025), (264, 32040), (276, 32106), (277, 32115), (286, 32184), (292, 32202), (294, 32208),



Gene: Zavala\_35 Start: 28335, Stop: 29543, Start Num: 29

Candidate Starts for Zavala\_35:

(Start: 29 @28335 has 188 MA's), (Start: 57 @28437 has 11 MA's), (93, 28548), (143, 28725), (160, 28767), (169, 28842), (186, 28908), (189, 28920), (194, 28947), (208, 29022), (218, 29061), (222, 29076), (234, 29157), (235, 29169), (236, 29172), (238, 29187), (240, 29205), (246, 29235), (248, 29241), (250, 29259), (252, 29268), (253, 29271), (259, 29328), (264, 29358), (271, 29397), (275, 29418), (293, 29520), (297, 29535),

Gene: Zemlya\_45 Start: 30098, Stop: 31288, Start Num: 48

Candidate Starts for Zemlya\_45:

(Start: 48 @30098 has 101 MA's), (64, 30146), (79, 30212), (81, 30218), (114, 30332), (162, 30515), (177, 30605), (207, 30746), (208, 30749), (211, 30761), (219, 30797), (222, 30806), (224, 30830), (228, 30851), (242, 30950), (246, 30974), (247, 30977), (262, 31085), (277, 31175), (286, 31244),

Gene: Ziko\_121 Start: 57472, Stop: 58563, Start Num: 49

Candidate Starts for Ziko\_121:

(Start: 49 @57472 has 11 MA's), (56, 57493), (109, 57628), (121, 57664), (124, 57676), (132, 57709), (192, 57952), (211, 58051), (221, 58093), (235, 58189), (239, 58213), (240, 58219), (246, 58249), (249, 58261), (256, 58318), (265, 58375), (291, 58537),

Gene: ZoeJ\_34 Start: 27607, Stop: 28791, Start Num: 29

Candidate Starts for ZoeJ\_34:

(Start: 29 @27607 has 188 MA's), (39, 27640), (83, 27790), (93, 27820), (136, 27952), (160, 28018), (169, 28093), (175, 28123), (186, 28156), (192, 28183), (194, 28195), (208, 28270), (209, 28273), (240, 28453), (242, 28459), (246, 28483), (248, 28489), (249, 28495), (251, 28510), (252, 28516), (259, 28576), (264, 28606), (275, 28666), (293, 28768), (297, 28783), (298, 28786),

Gene: phiCAM\_41 Start: 33092, Stop: 34042, Start Num: 114

Candidate Starts for phiCAM\_41:

(Start: 48 @32855 has 101 MA's), (72, 32945), (79, 32972), (81, 32978), (104, 33059), (114, 33092), (119, 33113), (149, 33215), (151, 33221), (162, 33269), (166, 33299), (198, 33461), (207, 33500), (208, 33503), (215, 33533), (219, 33551), (228, 33605), (234, 33650), (242, 33704), (247, 33731), (277, 33929), (296, 34031),

Gene: phiHau3\_45 Start: 29681, Stop: 30874, Start Num: 48

Candidate Starts for phiHau3\_45:

(Start: 48 @29681 has 101 MA's), (52, 29693), (81, 29807), (105, 29891), (114, 29921), (119, 29942), (161, 30083), (215, 30362), (219, 30380), (228, 30434), (229, 30461), (234, 30479), (262, 30668), (276, 30749), (286, 30827), (292, 30845), (294, 30851), (297, 30863),