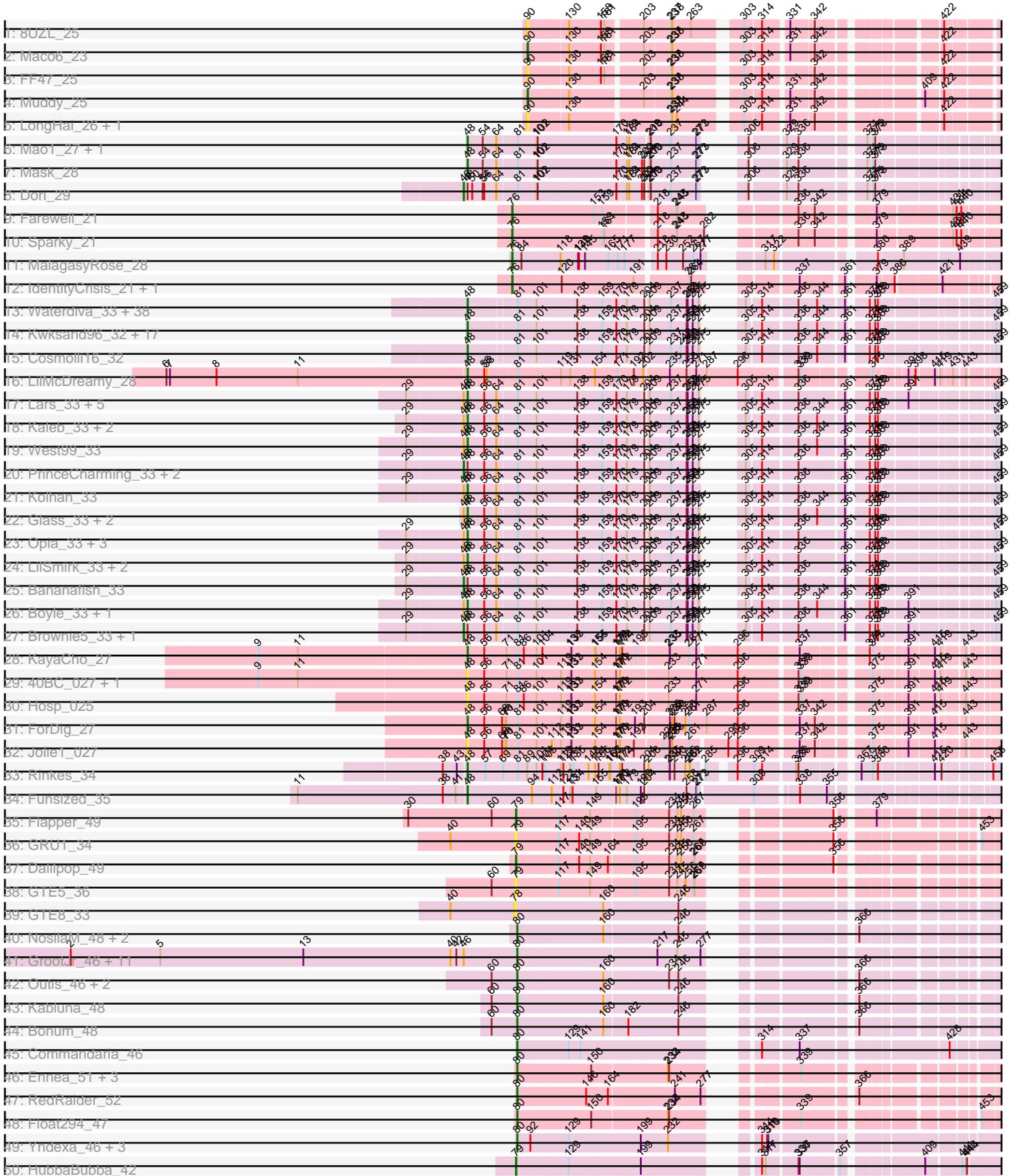
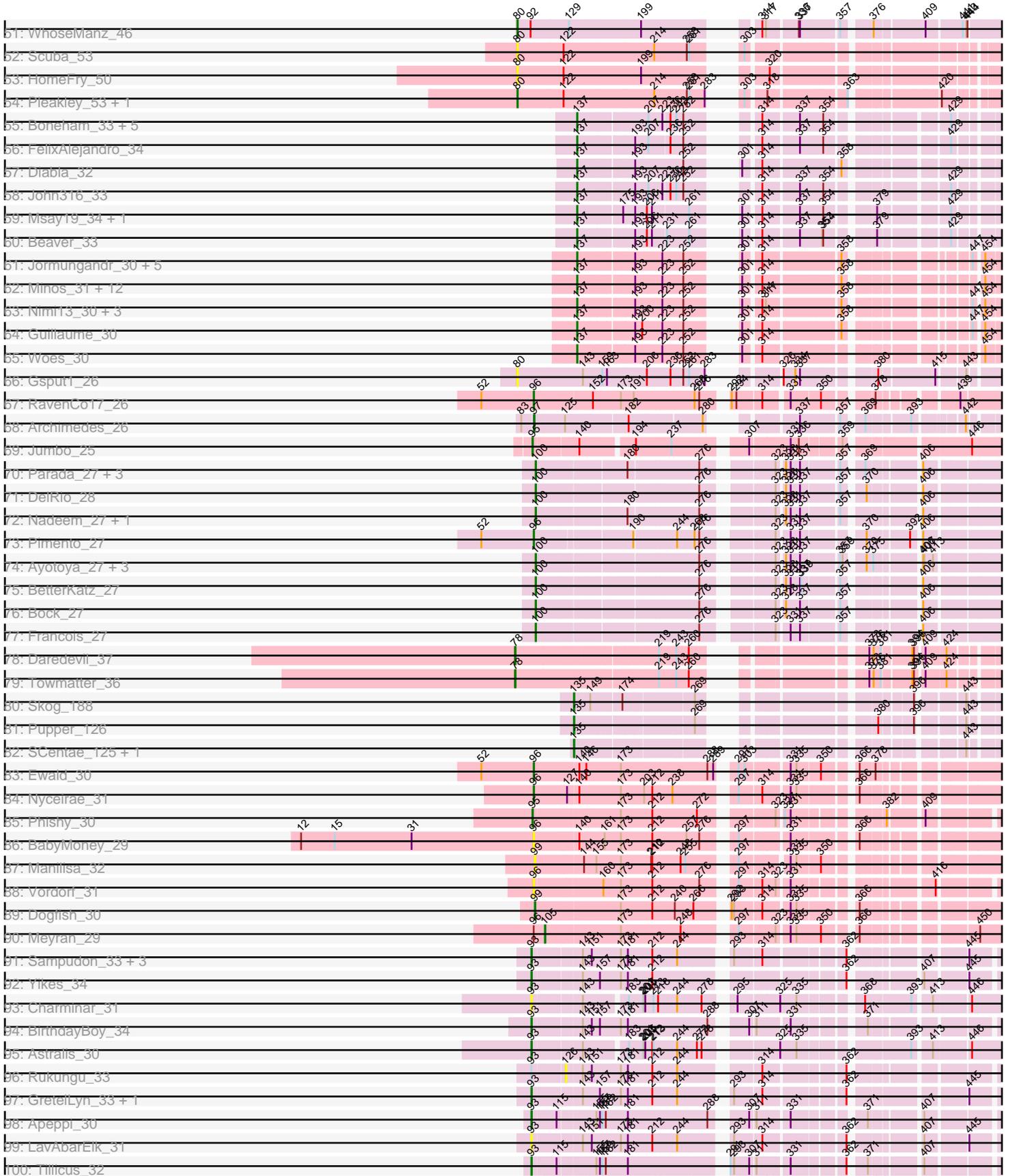


# Zoomed Pham 283353

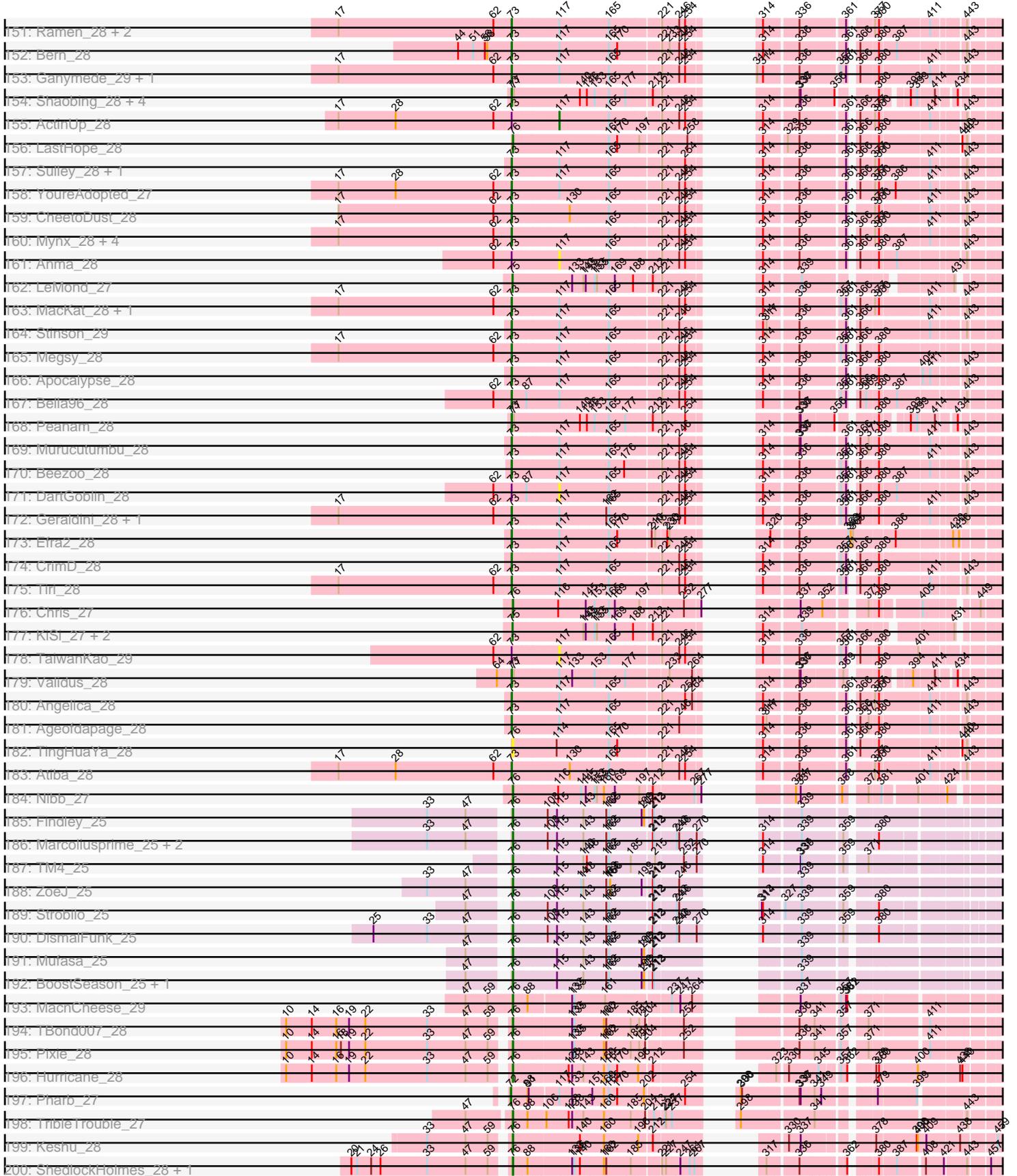


# Zoomed Pham 283353

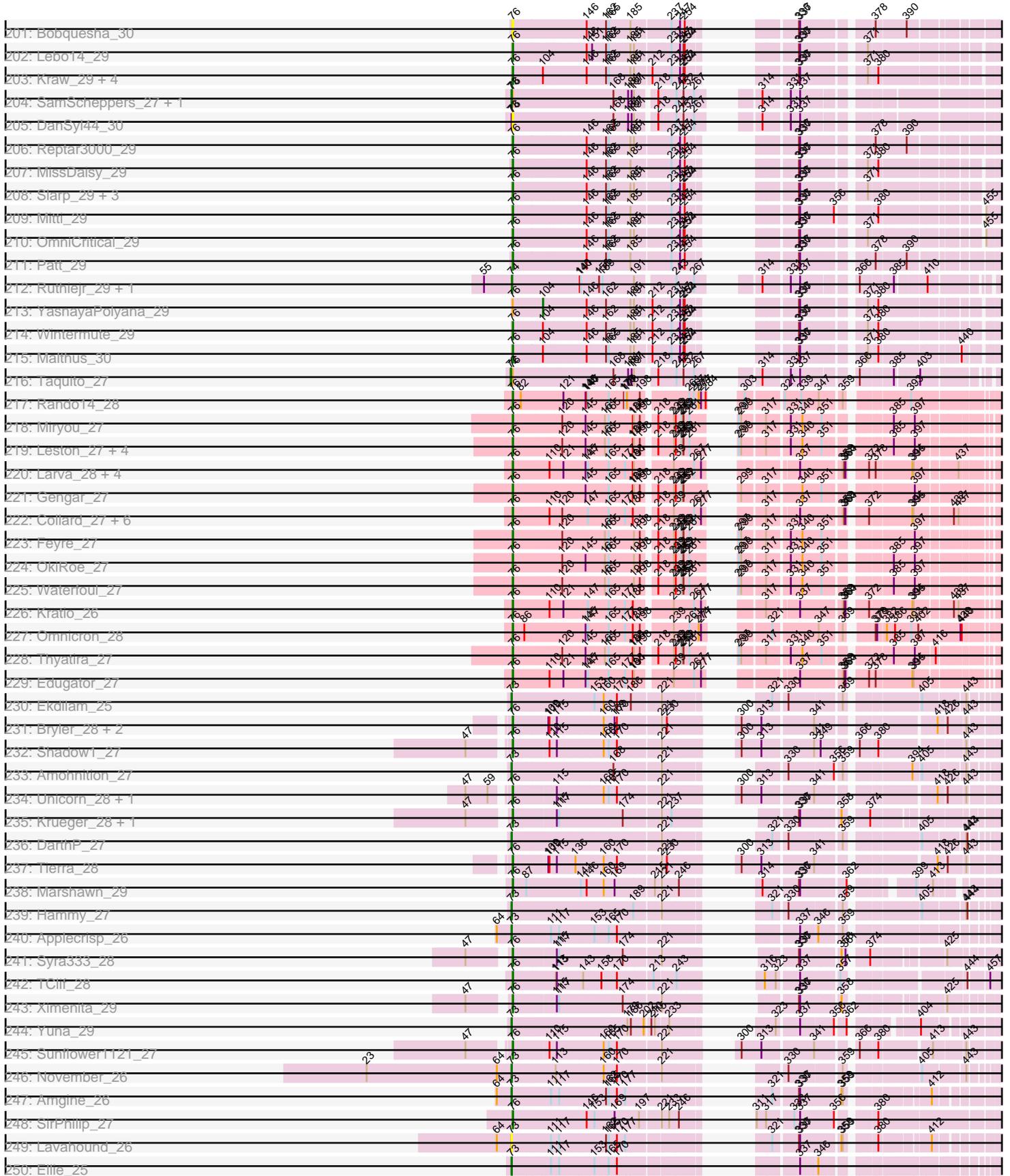




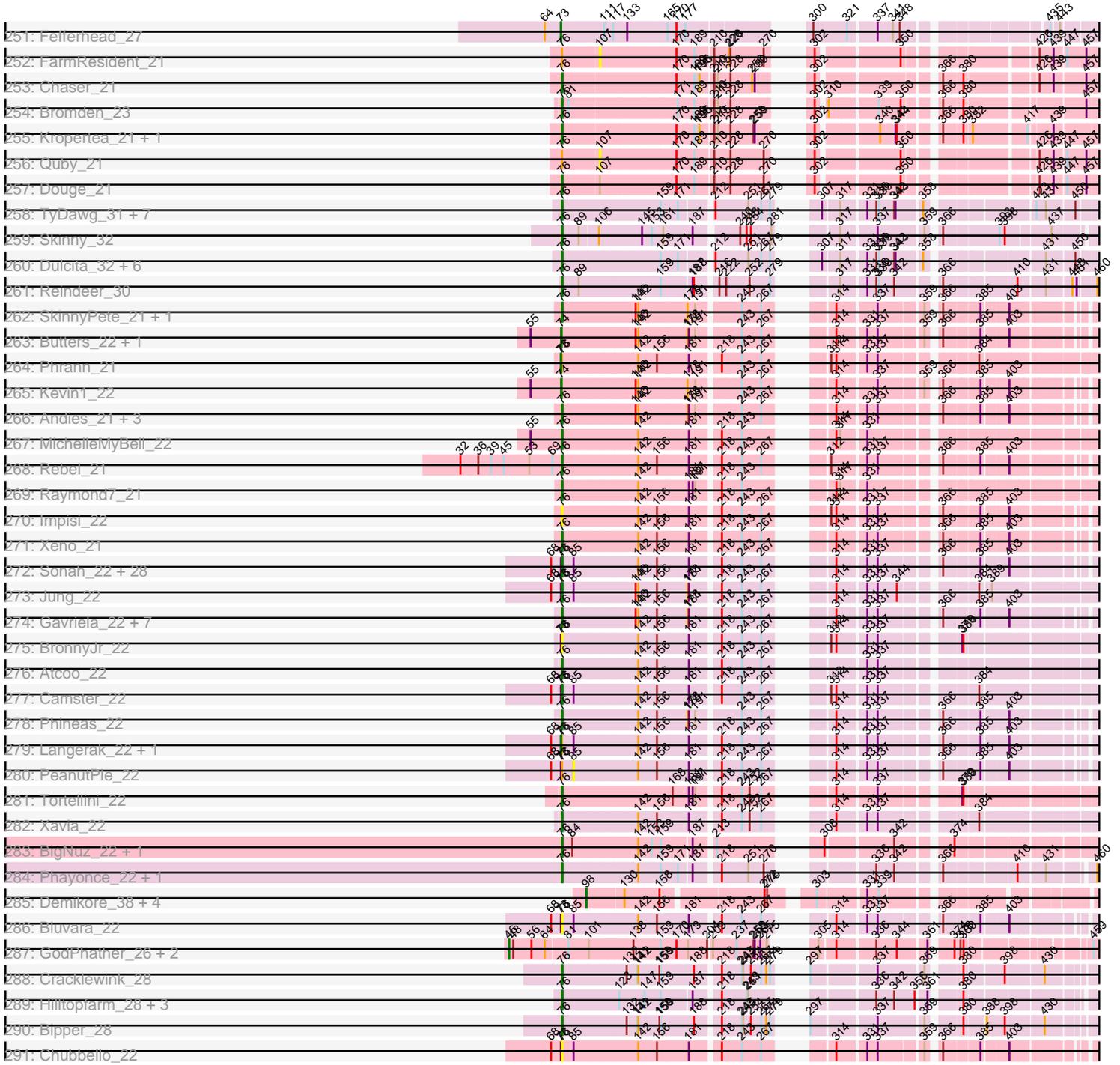
# Zoomed Pham 283353



# Zoomed Pham 283353



# Zoomed Pham 283353



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 283353 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283353 has 599 members, 75 are drafts.

Phages represented in each track:

- Track 1 : 8UZL\_25
- Track 2 : Maco6\_23
- Track 3 : FF47\_25
- Track 4 : Muddy\_25
- Track 5 : LongHai\_26, Salvus\_26
- Track 6 : Mao1\_27, Sejanus\_28
- Track 7 : Mask\_28
- Track 8 : Dori\_29
- Track 9 : Farewell\_21
- Track 10 : Sparky\_21
- Track 11 : MalagasyRose\_28
- Track 12 : IdentityCrisis\_21, WST1\_22
- Track 13 : Waterdiva\_33, Freya\_32, Childish\_32, Scoot17C\_33, Mesh1\_33, AltPhacts\_33, Craff\_33, HogWash\_32, GeneCoco\_33, Badfish\_33, Longacauda\_32, Phareon\_33, Kahve\_32, Adriana\_33, Eugenia\_33, Nathan\_33, HighStump\_32, Boehler\_33, Katniss\_33, PhatCats2014\_33, PG1\_33, Piglet\_0032, HenryJackson\_32, Pinkman\_32, ThreeOh3D2\_33, Vista\_33, Serendipity\_33, Orion\_33, Jillium\_32, Solosis\_32, Kikipoo\_33, Derpp\_32, TyrionL\_32, Zonia\_33, Pipsqueak\_33, Fang\_33, Labeouficaum\_32, Wallhey\_32, Chipette\_34
- Track 14 : Kwksand96\_32, Durga\_33, ElvisPhasley\_33, MelsMeow\_32, Ashraf\_32, Emiris\_33, Cobra\_33, JDog\_32, Pops\_33, Cornbread\_32, Trypo\_33, ImtiyazSitla\_32, Khan1\_33, CharlieGBrown\_32, Chuni\_32, Rimu\_33, MrPhizzler\_33, Maskar\_32
- Track 15 : Cosmolli16\_32
- Track 16 : LilMcDreamy\_28
- Track 17 : Lars\_33, Rosebush\_33, Arbiter\_33, Hedgerow\_33, Allegro\_33, FrenchFry\_33
- Track 18 : Kaleb\_33, Eaglehorse\_33, LizLemon\_33
- Track 19 : West99\_33
- Track 20 : PrinceCharming\_33, Blocker23\_33, Lephleur\_33
- Track 21 : Kolhan\_33
- Track 22 : Glass\_33, Phantasmagoria\_33, Faze9\_33
- Track 23 : Opia\_33, Coffee\_33, Holeinone\_33, Tres\_33
- Track 24 : LilSmirk\_33, ItsyBitsy1\_33, Calamitous\_33
- Track 25 : Bananafish\_33
- Track 26 : Boyle\_33, Rhinoforte\_33
- Track 27 : Brownie5\_33, Tinciduntolum\_34
- Track 28 : KayaCho\_27

- Track 29 : 40BC\_027, 39HC\_027
- Track 30 : Hosp\_025
- Track 31 : ForDig\_27
- Track 32 : Jolie1\_027
- Track 33 : Rinkes\_34
- Track 34 : Funsized\_35
- Track 35 : Flapper\_49
- Track 36 : GRU1\_34
- Track 37 : Dalilpop\_49
- Track 38 : GTE5\_36
- Track 39 : GTE8\_33
- Track 40 : NosilaM\_48, Buggaboo\_46, SuperSulley\_46
- Track 41 : GrootJr\_46, Emianna\_44, Kurt\_44, NovumRegina\_44, Tracker\_44, Arti\_44, NatB6\_44, KidneyBean\_44, Phomeo\_43, Foxboro\_45, Wheezy\_44, Jifall16\_43
- Track 42 : Outis\_46, StarStruck\_46, MerCougar\_46
- Track 43 : Kabluna\_48
- Track 44 : Bonum\_48
- Track 45 : Commandaria\_46
- Track 46 : Ennea\_51, Patio\_48, Skysand\_47, Lollipop1437\_50
- Track 47 : RedRaider\_52
- Track 48 : Float294\_47
- Track 49 : Yndexa\_46, BiPauneto\_47, Sukkupi\_46, Pemberton\_48
- Track 50 : HubbaBubba\_42
- Track 51 : WhoseManz\_46
- Track 52 : Scuba\_53
- Track 53 : HomeFry\_50
- Track 54 : Pleakley\_53, Fury\_53
- Track 55 : Boneham\_33, CinnamonToast\_34, Butterball\_33, BirksAndSocks\_33, Jellybones\_33, BillyBobJr\_34
- Track 56 : FelixAlejandro\_34
- Track 57 : Diabla\_32
- Track 58 : John316\_33
- Track 59 : Msay19\_34, Poland\_34
- Track 60 : Beaver\_33
- Track 61 : Jormungandr\_30, Damp\_30, Luker\_31, Harambe\_30, Lahirium\_30, Sticker17\_30
- Track 62 : Minos\_31, Hello\_30, Bianmat\_30, GalacticEye\_30, Lidong\_30, Kaseim\_30, Newt\_31, Charianelly\_30, Teal\_30, Shelley\_30, Jams\_30, Berries\_30, MrWormie\_30
- Track 63 : Nimi13\_30, Neoevie\_30, Hail2Pitt\_30, Anamika\_30
- Track 64 : Guillaume\_30
- Track 65 : Woes\_30
- Track 66 : Gspu1\_26
- Track 67 : RavenCo17\_26
- Track 68 : Archimedes\_26
- Track 69 : Jumbo\_25
- Track 70 : Parada\_27, Mulch\_27, Brylie\_27, NancyRae\_27
- Track 71 : DelRio\_28
- Track 72 : Nadeem\_27, WheatThin\_27
- Track 73 : Pimento\_27
- Track 74 : Ayotoya\_27, Hamood\_27, Chop\_27, GrandSlam\_27
- Track 75 : BetterKatz\_27

- Track 76 : Bock\_27
- Track 77 : Francois\_27
- Track 78 : Daredevil\_37
- Track 79 : Towmatter\_36
- Track 80 : Skog\_188
- Track 81 : Pupper\_126
- Track 82 : SCentae\_125, CherryTomatoes\_125
- Track 83 : Ewald\_30
- Track 84 : Nyceirae\_31
- Track 85 : Phishy\_30
- Track 86 : BabyMoney\_29
- Track 87 : Manilisa\_32
- Track 88 : Vordorf\_31
- Track 89 : Dogfish\_30
- Track 90 : Meyran\_29
- Track 91 : Sampudon\_33, Jalebi\_32, GOATification\_34, Fulcrum\_34
- Track 92 : Yikes\_34
- Track 93 : Charminar\_31
- Track 94 : BirthdayBoy\_34
- Track 95 : Astralis\_30
- Track 96 : Rukungu\_33
- Track 97 : GretelLyn\_33, OtterstedtS21\_33
- Track 98 : Apeppi\_30
- Track 99 : LavAbarElk\_31
- Track 100 : Tillicus\_32
- Track 101 : Mima20\_31
- Track 102 : ParvusTarda\_33
- Track 103 : MoiGyank\_35
- Track 104 : Rumi\_32
- Track 105 : Gibbin\_34
- Track 106 : Jamemuya19\_30, Alyssamiracle\_33, RazorC\_31, NovaSharks\_32
- Track 107 : Patos\_34, NorManre\_34
- Track 108 : Erutan\_33
- Track 109 : LuckyLeo\_32
- Track 110 : DoobyDoo\_32
- Track 111 : Rota\_32
- Track 112 : DaviePasture\_33
- Track 113 : Ranch\_33
- Track 114 : Zany\_32
- Track 115 : Wojtek\_32
- Track 116 : Lambo\_33
- Track 117 : Avian\_30, Stormer\_32
- Track 118 : Alephilan\_30
- Track 119 : Lila22\_32
- Track 120 : Genamy16\_33
- Track 121 : Zodiariah\_22
- Track 122 : DumpsterDude\_23
- Track 123 : Sprinklemunch\_22
- Track 124 : MakCheese\_24
- Track 125 : LordVader\_21
- Track 126 : Jolie2\_23
- Track 127 : Stargaze\_23
- Track 128 : YangYin\_23

- Track 129 : DrLupo\_39
- Track 130 : Barnyard\_37
- Track 131 : Che9c\_21, Purky\_22
- Track 132 : Sbash\_21
- Track 133 : Mdavu\_24, Enkosi\_24, Amelie\_24, Nikao\_24, LilPharaoh\_24, Biglebops\_24, Torres\_24, SgtBeansprout\_24, Nutello\_24
- Track 134 : Durfee\_28, Pokerus\_27, Boiiii\_28, Hyperbowlee\_28, Padfoot\_28, Asayake\_28, AlishaPH\_28, CaseJules\_28, BaghaKamala\_28, Piatt\_28, BEEEST\_28, Blizzard\_28, Homura\_28, ShiaSurprise\_28
- Track 135 : Teejan\_24, Trice\_24
- Track 136 : Chavito\_28
- Track 137 : Joy99\_28, Dalmuri\_28, Inky\_28, Jeckyll\_28, BGlluviae\_28, CallaLilly\_28, Belladonna\_28, Jarvi\_28, Peel\_28, Llorens\_28, Capricorn\_28, Rosmarinus\_28, Spock\_28, Twitch\_28, Topper\_28, CREW\_28, Lunahalos\_28
- Track 138 : DrHayes\_28, Urkel\_28, SamuelLPlaqson\_28
- Track 139 : MarkPheW\_28
- Track 140 : Adonis\_28
- Track 141 : TiniBug\_28
- Track 142 : HedwigODU\_28, Veliki\_28, Zabiza\_28, Rapunzel97\_28, Jayhawk\_28, Slimphazie\_28, AdepHagia\_28
- Track 143 : TreyKay\_28, Prithvi\_28, LindNT\_28
- Track 144 : Anaya\_29
- Track 145 : Illumine\_28, Devera\_28, Dole\_28
- Track 146 : Pisa4\_27, Pisa1\_27
- Track 147 : Guanica15\_28, Yunkel11\_28
- Track 148 : Curiosium\_29
- Track 149 : Tachez\_28
- Track 150 : LaterM\_28
- Track 151 : Ramen\_28, BarrelRoll\_28, JAWS\_28
- Track 152 : Bern\_28
- Track 153 : Ganymede\_29, QuincyRose\_27
- Track 154 : Shaobing\_28, Dartin\_28, McMater\_28, Richo\_28, Niklas\_28
- Track 155 : ActinUp\_28
- Track 156 : LastHope\_28
- Track 157 : Sulley\_28, Deby\_28
- Track 158 : YoureAdopted\_27
- Track 159 : CheetoDust\_28
- Track 160 : Mynx\_28, Zavala\_28, Emerson\_28, TruffulaTree\_28, Padpat\_28
- Track 161 : Anma\_28
- Track 162 : LeMond\_27
- Track 163 : MacKat\_28, Clipper\_28
- Track 164 : Stinson\_29
- Track 165 : Megsy\_28
- Track 166 : Apocalypse\_28
- Track 167 : Bella96\_28
- Track 168 : Peanam\_28
- Track 169 : Murucutumbu\_28
- Track 170 : Beezoo\_28
- Track 171 : DartGoblin\_28
- Track 172 : Geraldini\_28, MeaningOfLife\_28
- Track 173 : Efra2\_28
- Track 174 : CrimD\_28
- Track 175 : Tiri\_28

- Track 176 : Chris\_27
- Track 177 : KiSi\_27, Oscar\_27, Scarlett\_27
- Track 178 : TaiwanKao\_29
- Track 179 : Validus\_28
- Track 180 : Angelica\_28
- Track 181 : Ageofdapage\_28
- Track 182 : TingHuaYa\_28
- Track 183 : Atiba\_28
- Track 184 : Nibb\_27
- Track 185 : Findley\_25
- Track 186 : Marcoliusprime\_25, Milly\_25, DismalStressor\_25
- Track 187 : TM4\_25
- Track 188 : ZoeJ\_25
- Track 189 : Strobilo\_25
- Track 190 : DismalFunk\_25
- Track 191 : Mufasa\_25
- Track 192 : BoostSeason\_25, Doughnut\_25
- Track 193 : MacnCheese\_29
- Track 194 : TBond007\_28
- Track 195 : Pixie\_28
- Track 196 : Hurricane\_28
- Track 197 : Pharb\_27
- Track 198 : TribbleTrouble\_27
- Track 199 : Keshu\_28
- Track 200 : ShedlockHolmes\_28, Lea83\_28
- Track 201 : Bobquesha\_30
- Track 202 : Lebo14\_29
- Track 203 : Kraw\_29, Fionnbharth\_29, Y10\_29, JF1\_29, Y2\_29
- Track 204 : SamScheppers\_27, Eponine\_29
- Track 205 : DanSyl44\_30
- Track 206 : Reptar3000\_29
- Track 207 : MissDaisy\_29
- Track 208 : Slarp\_29, Cheetobro\_29, Chancellor\_29, Qhanda\_30
- Track 209 : Mitti\_29
- Track 210 : OmniCritical\_29
- Track 211 : Patt\_29
- Track 212 : Ruthiejr\_29, Juliette\_30
- Track 213 : YasnayaPolyana\_29
- Track 214 : Wintermute\_29
- Track 215 : Malthus\_30
- Track 216 : Taquito\_27
- Track 217 : Rando14\_28
- Track 218 : Miryou\_27
- Track 219 : Leston\_27, Heftyboy\_27, Paola\_27, Guillsminger\_27, SoSeph\_27
- Track 220 : Larva\_28, Dadosky\_28, Neighly\_28, Psycho\_28, AlleyCat\_28
- Track 221 : Gengar\_27
- Track 222 : Collard\_27, BananenDer11\_27, ViviJ\_26, Agent47\_27, LilDirt\_26, DoubleChamp\_27, InvictusManeo\_27
- Track 223 : Feyre\_27
- Track 224 : OkiRoe\_27
- Track 225 : Waterfoul\_27
- Track 226 : Kratio\_26
- Track 227 : Omnicron\_28

- Track 228 : Thyatira\_27
- Track 229 : Edugator\_27
- Track 230 : Ekdilam\_25
- Track 231 : Bryler\_28, Phrank\_28, Cain\_28
- Track 232 : Shadow1\_27
- Track 233 : Amohnition\_27
- Track 234 : Unicorn\_28, PhelpsODU\_28
- Track 235 : Krueger\_28, Tigress9\_29
- Track 236 : DarthP\_27
- Track 237 : Tierra\_28
- Track 238 : Marshawn\_29
- Track 239 : Hammy\_27
- Track 240 : Applecrisp\_26
- Track 241 : Syra333\_28
- Track 242 : TClif\_28
- Track 243 : Ximenita\_29
- Track 244 : Yuna\_29
- Track 245 : Sunflower1121\_27
- Track 246 : November\_26
- Track 247 : Amgine\_26
- Track 248 : SirPhilip\_27
- Track 249 : Lavahound\_26
- Track 250 : Ellie\_25
- Track 251 : Fefferhead\_27
- Track 252 : FarmResident\_21
- Track 253 : Chaser\_21
- Track 254 : Bromden\_23
- Track 255 : Kropertea\_21, DyoEdafos\_22
- Track 256 : Quby\_21
- Track 257 : Douge\_21
- Track 258 : TyDawg\_31, FreakyGoo\_32, Bongo\_31, LilhomieP\_30, TpudiCK\_32, Bricole\_31, IPhane7\_31, PegLeg\_31
- Track 259 : Skinny\_32
- Track 260 : Dulcita\_32, Izel\_32, Auspice\_31, SlimJimmy\_30, Diminimus\_32, Glaske16\_32, KleverKiS\_31
- Track 261 : Reindeer\_30
- Track 262 : SkinnyPete\_21, Panchino\_21
- Track 263 : Butters\_22, Rubeelu\_22
- Track 264 : Phrann\_21
- Track 265 : Kevin1\_22
- Track 266 : Andies\_21, Willsammy\_22, Dynamo\_22, Scitech\_21
- Track 267 : MichelleMyBell\_22
- Track 268 : Rebel\_21
- Track 269 : Raymond7\_21
- Track 270 : Impisi\_22
- Track 271 : Xeno\_21
- Track 272 : Sonah\_22, Bartholomew\_22, Ksquared\_22, Phegasus\_22, Fishburne\_22, Techage\_22, Bhagsy\_22, Brusacoram\_22, Jebeks\_22, Zilizebeth\_22, Kari\_22, Juniormint\_22, Venti\_22, Polkaroo\_22, Donovan\_22, Mangethe\_22, Necropolis\_22, Majeke\_22, HUHilltop\_22, Vidya\_22, FirstPlacePfu\_22, Etoile\_22, HC\_22, Babsiella\_22, StevieRay\_22, Bunnies\_22, Thespis\_22, Arib1\_22, GaloreK\_22
- Track 273 : Jung\_22

- Track 274 : Gavriela\_22, CactusJack\_22, StressBall\_22, Glaske\_22, Shweta\_21, Megiddo\_22, KilKor\_22, Phalm\_22
- Track 275 : BronnyJr\_22
- Track 276 : Atcoo\_22
- Track 277 : Camster\_22
- Track 278 : Phineas\_22
- Track 279 : Langerak\_22, Malithi\_22
- Track 280 : PeanutPie\_22
- Track 281 : Tortellini\_22
- Track 282 : Xavia\_22
- Track 283 : BigNuz\_22, Nazo\_22
- Track 284 : Phayonce\_22, ThulaThula\_22
- Track 285 : Demikore\_38, Patience\_38, Madruga\_36, SuperSonics\_37, Labelle\_37
- Track 286 : Bluvara\_22
- Track 287 : GodPhather\_26, MasterPo\_33, Jeon\_25
- Track 288 : Cracklewink\_28
- Track 289 : Hilltopfarm\_28, Faiyaz\_28, AuntGwenStacy\_28, Typha\_28
- Track 290 : Bipper\_28
- Track 291 : Chubbello\_22

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

The start number called the most often in the published annotations is 76, it was called in 170 of the 524 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agent47\_27, AlleyCat\_28, Amelie\_24, Andies\_21, Arib1\_22, Atcoo\_22, AuntGwenStacy\_28, Auspice\_31, Babsiella\_22, BananenDer11\_27, Bartholomew\_22, Bhagsy\_22, BigNuz\_22, Biglebops\_24, Bipper\_28, Bluvara\_22, Bobquesha\_30, Bongo\_31, BoostSeason\_25, Bricole\_31, Bromden\_23, BronnyJr\_22, Brusacoram\_22, Bryler\_28, Bunnies\_22, CactusJack\_22, Cain\_28, Camster\_22, Chancellor\_29, Chaser\_21, Che9c\_21, Cheetobro\_29, Chris\_27, Chubbello\_22, Collard\_27, Cracklewink\_28, Curiosium\_29, Dadosky\_28, DanSyl44\_30, Diminimus\_32, DismalFunk\_25, DismalStressor\_25, Donovan\_22, DoubleChamp\_27, Douge\_21, Doughnut\_25, Dulcita\_32, Dynamo\_22, DyoEdafos\_22, Edugator\_27, Enkosi\_24, Etoile\_22, Faiyaz\_28, Farewell\_21, Feyre\_27, Findley\_25, Fionnbharth\_29, FirstPlacePfu\_22, Fishburne\_22, FreakyGoo\_32, GaloreK\_22, Gavriela\_22, Gengar\_27, Glaske16\_32, Glaske\_22, Guillsminger\_27, HC\_22, HUHilltop\_22, Heftyboy\_27, Hilltopfarm\_28, Hurricane\_28, IPhane7\_31, IdentityCrisis\_21, Impisi\_22, InvictusManeo\_27, Izel\_32, JF1\_29, Jebeks\_22, Jung\_22, Juniormint\_22, Kari\_22, Keshu\_28, KilKor\_22, KleverKiS\_31, Kratio\_26, Kraw\_29, Kropertea\_21, Krueger\_28, Ksquared\_22, Larva\_28, LastHope\_28, Lea83\_28, Lebo14\_29, Leston\_27, LilDirt\_26, LilPharaoh\_24, LilhomieP\_30, LordVader\_21, MacnCheese\_29, Majeke\_22, MalagasyRose\_28, Malthus\_30, Mangethe\_22, Marcoliusprime\_25, MarkPhew\_28, Marshawn\_29, Mdavu\_24, Megiddo\_22, MichelleMyBell\_22, Milly\_25, Miryou\_27, MissDaisy\_29, Mitti\_29, Mufasa\_25, Nazo\_22, Necropolis\_22, Neighly\_28, Nibb\_27, Nikao\_24, Nutello\_24, OkiRoe\_27, OmniCritical\_29, Omnicron\_28, Panchino\_21, Paola\_27, Patt\_29, PegLeg\_31, Phalm\_22, Phayonce\_22, Phegasus\_22, PhelpsODU\_28, Phineas\_22, Phrank\_28, Pixie\_28, Polkaroo\_22, Psycho\_28, Purky\_22, Qhanda\_30,

Rando14\_28, Raymond7\_21, Rebel\_21, Reindeer\_30, Reptar3000\_29, Sbash\_21, Scitech\_21, SgtBeansprout\_24, Shadow1\_27, ShedlockHolmes\_28, Shweta\_21, SirPhilip\_27, SkinnyPete\_21, Skinny\_32, Slarp\_29, SlimJimmy\_30, SoSeph\_27, Sonah\_22, Sparky\_21, StevieRay\_22, StressBall\_22, Strobilo\_25, Sunflower1121\_27, Syra333\_28, TBond007\_28, TClif\_28, TM4\_25, Techage\_22, Thespis\_22, ThulaThula\_22, Thyatira\_27, Tierra\_28, Tigress9\_29, TingHuaYa\_28, Torres\_24, Tortellini\_22, TpudiCK\_32, TribbleTrouble\_27, TyDawg\_31, Typha\_28, Unicorn\_28, Venti\_22, Vidya\_22, ViviJ\_26, WST1\_22, Waterfoul\_27, Willsammy\_22, Wintermute\_29, Xavia\_22, Xeno\_21, Ximenita\_29, Y10\_29, Y2\_29, Zilizebeth\_22, ZoeJ\_25,

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

- Eponine\_29, FarmResident\_21, Langerak\_22, Malithi\_22, PeanutPie\_22, Phrann\_21, Quby\_21, SamScheppers\_27, Taquito\_27, Teejan\_24, Trice\_24, YasnayaPolyana\_29,

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

- 39HC\_027, 40BC\_027, 8UZL\_25, ActinUp\_28, Adephagia\_28, Adonis\_28, Adriana\_33, Ageofdapage\_28, Alephilan\_30, AlishaPH\_28, Allegro\_33, AltPhacts\_33, Alyssamiracle\_33, Amgine\_26, Amohntion\_27, Anamika\_30, Anaya\_29, Angelica\_28, Anma\_28, Apeppi\_30, Apocalypse\_28, Applecrisp\_26, Arbiter\_33, Archimedes\_26, Arti\_44, Asayake\_28, Ashraf\_32, Astralis\_30, Atiba\_28, Avian\_30, Ayotoya\_27, BEEST\_28, BGlluviae\_28, BabyMoney\_29, Badfish\_33, BaghaKamala\_28, Bananafish\_33, Barnyard\_37, BarrelRoll\_28, Beaver\_33, Beezoo\_28, Bella96\_28, Belladonna\_28, Bern\_28, Berries\_30, BetterKatz\_27, BiPauneto\_47, Bianmat\_30, BillyBobJr\_34, BirksAndSocks\_33, BirthdayBoy\_34, Blizzard\_28, Blocker23\_33, Bock\_27, Boehler\_33, Boiiii\_28, Boneham\_33, Bonum\_48, Boyle\_33, Brownie5\_33, Brylie\_27, Buggaboo\_46, Butterball\_33, Butters\_22, CREW\_28, Calamitous\_33, CallaLilly\_28, Capricorn\_28, CaseJules\_28, Charianelly\_30, CharlieGBrown\_32, Charminar\_31, Chavito\_28, CheetoDust\_28, CherryTomatoes\_125, Childish\_32, Chipette\_34, Chop\_27, Chuni\_32, CinnamonToast\_34, Clipper\_28, Cobra\_33, Coffee\_33, Commandaria\_46, Cornbread\_32, Cosmolli16\_32, Craff\_33, CrimD\_28, Dalilpop\_49, Dalmuri\_28, Damp\_30, Daredevil\_37, DartGoblin\_28, DarthP\_27, Dartin\_28, DaviePasture\_33, Deby\_28, DelRio\_28, Demikore\_38, Derpp\_32, Devera\_28, Diabla\_32, Dogfish\_30, Dole\_28, DoobyDoo\_32, Dori\_29, DrHayes\_28, DrLupo\_39, DumpsterDude\_23, Durfee\_28, Durga\_33, Eaglehorse\_33, Efra2\_28, Ekdilam\_25, Ellie\_25, ElvisPhasley\_33, Emerson\_28, Emianna\_44, Emiris\_33, Ennea\_51, Erutan\_33, Eugenia\_33, Ewald\_30, FF47\_25, Fang\_33, Faze9\_33, Fefferhead\_27, FelixAlejandro\_34, Flapper\_49, Float294\_47, ForDig\_27, Foxboro\_45, Francois\_27, FrenchFry\_33, Freya\_32, Fulcrum\_34, Funsized\_35, Fury\_53, GOATification\_34, GRU1\_34, GTE5\_36, GTE8\_33, GalacticEye\_30, Ganymede\_29, Genamy16\_33, GeneCoco\_33, Geraldini\_28, Gibbin\_34, Glass\_33, GodPhather\_26, GrandSlam\_27, GretellLyn\_33, GrootJr\_46, Gsput1\_26, Guanica15\_28, Guillaume\_30, Hail2Pitt\_30, Hammy\_27, Hamood\_27, Harambe\_30, Hedgerow\_33, HedwigODU\_28, Hello\_30, HenryJackson\_32, HighStump\_32, HogWash\_32, Holeinone\_33, HomeFry\_50, Homura\_28, Hosp\_025, HubbaBubba\_42, Hyperbowlee\_28, Illumine\_28, ImtiyazSitla\_32, Inky\_28, ItsyBitsy1\_33, JAWS\_28, JDog\_32, Jalebi\_32, Jamemuya19\_30, Jams\_30, Jarvi\_28, Jayhawk\_28, Jeckyll\_28, Jellybones\_33, Jeon\_25, Jifall16\_43, Jillium\_32, John316\_33, Jolie1\_027, Jolie2\_23, Jormungandr\_30, Joy99\_28, Juliette\_30, Jumbo\_25, Kabluna\_48, Kahve\_32, Kaleb\_33, Kaseim\_30, Katniss\_33, KayaCho\_27, Kevin1\_22, Khan1\_33, KiSi\_27, KidneyBean\_44, Kikipoo\_33, Kolhan\_33, Kurt\_44, Kwksand96\_32, Labelle\_37,

Labeouficaum\_32, Lahirium\_30, Lambo\_33, Lars\_33, LaterM\_28, LavAbarElk\_31, Lavahound\_26, LeMond\_27, Lephleur\_33, Lidong\_30, LilMcDreamy\_28, LilSmirk\_33, Lila22\_32, LindNT\_28, LizLemon\_33, Llorens\_28, Lollipop1437\_50, LongHai\_26, Longacauda\_32, LuckyLeo\_32, Luker\_31, Lunahalos\_28, MacKat\_28, Maco6\_23, Madruga\_36, MakCheese\_24, Manilisa\_32, Mao1\_27, Mask\_28, Maskar\_32, MasterPo\_33, McMater\_28, MeaningOfLife\_28, Megsy\_28, MelsMeow\_32, MerCougar\_46, Mesh1\_33, Meyran\_29, Mima20\_31, Minos\_31, MoiGyank\_35, MrPhizzler\_33, MrWormie\_30, Msay19\_34, Muddy\_25, Mulch\_27, Murucutumbu\_28, Mynx\_28, Nadeem\_27, NancyRae\_27, NatB6\_44, Nathan\_33, Neoevie\_30, Newt\_31, Niklas\_28, Nimi13\_30, NorManre\_34, NosilaM\_48, NovaSharks\_32, November\_26, NovumRegina\_44, Nyceirae\_31, Opia\_33, Orion\_33, Oscar\_27, OtterstedtS21\_33, Outis\_46, PG1\_33, Padfoot\_28, Padpat\_28, Parada\_27, ParvusTarda\_33, Patience\_38, Patio\_48, Patos\_34, Peanam\_28, Peel\_28, Pemberton\_48, Phantasmagoria\_33, Pharb\_27, Phareon\_33, PhatCats2014\_33, Phishy\_30, Phomeo\_43, Piatt\_28, Piglet\_0032, Pimento\_27, Pinkman\_32, Pipsqueak\_33, Pisa1\_27, Pisa4\_27, Pleakley\_53, Pokerus\_27, Poland\_34, Pops\_33, PrinceCharming\_33, Prithvi\_28, Pupper\_126, QuincyRose\_27, Ramen\_28, Ranch\_33, Rapunzel97\_28, RavenCo17\_26, RazorC\_31, RedRaider\_52, Rhinoforte\_33, Richo\_28, Rimu\_33, Rinke\_34, Rosebush\_33, Rosmarinus\_28, Rota\_32, Rubeelu\_22, Rukungu\_33, Rumi\_32, Ruthiejr\_29, SCentae\_125, Salvus\_26, Sampudon\_33, SamuelLPlaqson\_28, Scarlett\_27, Scoot17C\_33, Scuba\_53, Sejanus\_28, Serendipity\_33, Shaobing\_28, Shelley\_30, ShiaSurprise\_28, Skog\_188, Skysand\_47, Slimphazie\_28, Solosis\_32, Spock\_28, Sprinklemunch\_22, StarStruck\_46, Stargaze\_23, Sticker17\_30, Stinson\_29, Stormer\_32, Sukkupi\_46, Sulley\_28, SuperSonics\_37, SuperSulley\_46, Tachez\_28, TaiwanKao\_29, Teal\_30, ThreeOh3D2\_33, Tillicus\_32, Tinciduntolum\_34, TiniBug\_28, Tiri\_28, Topper\_28, Towmatter\_36, Tracker\_44, Tres\_33, TreyKay\_28, TruffulaTree\_28, Trypo\_33, Twitch\_28, TyrionL\_32, Urkel\_28, Validus\_28, Veliki\_28, Vista\_33, Vordorf\_31, Wallhey\_32, Waterdiva\_33, West99\_33, WheatThin\_27, Wheezy\_44, WhoseManz\_46, Woes\_30, Wojtek\_32, YangYin\_23, Yikes\_34, Yndexa\_46, YoureAdopted\_27, Yuna\_29, Yunkel11\_28, Zabiza\_28, Zany\_32, Zavala\_28, Zodiariah\_22, Zonia\_33,

### Summary by start number:

#### Start 34:

- Found in 1 of 599 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chavito\_28 (K1),

#### Start 46:

- Found in 45 of 599 ( 7.5% ) of genes in pham
- Manual Annotations of this start: 10 of 524
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Bananafish\_33 (B2), Blocker23\_33 (B2), Brownie5\_33 (B2), Dori\_29 (AD), GodPhather\_26 (W), Jeon\_25 (W), Lephleur\_33 (B2), MasterPo\_33 (B2), PrinceCharming\_33 (B2), Tinciduntolum\_34 (B2),

#### Start 48:

- Found in 106 of 599 ( 17.7% ) of genes in pham
- Manual Annotations of this start: 84 of 524
- Called 90.6% of time when present

- Phage (with cluster) where this start called: 39HC\_027 (B6), 40BC\_027 (B6), Adriana\_33 (B1), Allegro\_33 (B2), AltPhacts\_33 (B1), Arbiter\_33 (B2), Ashraf\_32 (B1), Badfish\_33 (B1), Boehler\_33 (B1), Boyle\_33 (B2), Calamitous\_33 (B2), CharlieGBrown\_32 (B1), Childish\_32 (B1), Chipette\_34 (B1), Chuni\_32 (B1), Cobra\_33 (B1), Coffee\_33 (B2), Cornbread\_32 (B1), Cosmolli16\_32 (B1), Craff\_33 (B1), Derpp\_32 (B1), Durga\_33 (B1), Eaglehorse\_33 (B2), ElvisPhasley\_33 (B1), Emiris\_33 (B1), Eugenia\_33 (B1), Fang\_33 (B1), Faze9\_33 (B2), ForDig\_27 (B6), FrenchFry\_33 (B2), Freya\_32 (B1), Funsized\_35 (B9), GeneCoco\_33 (B1), Glass\_33 (B2), Hedgerow\_33 (B2), HenryJackson\_32 (B1), HighStump\_32 (B1), HogWash\_32 (B1), Holeinone\_33 (B2), Hosp\_025 (B6), ImtiyazSitla\_32 (B1), ItsyBitsy1\_33 (B2), JDog\_32 (B1), Jillium\_32 (B1), Jolie1\_027 (B6), Jolie2\_23 (G4), Kahve\_32 (B1), Kaleb\_33 (B2), Katniss\_33 (B1), KayaCho\_27 (B6), Khan1\_33 (B1), Kikipoo\_33 (B1), Kolhan\_33 (B2), Kwksand96\_32 (B1), Labeouficaum\_32 (B1), Lars\_33 (B2), LilMcDreamy\_28 (B12), LilSmirk\_33 (B2), LizLemon\_33 (B2), Longacauda\_32 (B1), Mao1\_27 (AD), Mask\_28 (AD), Maskar\_32 (B1), MelsMeow\_32 (B1), Mesh1\_33 (B1), MrPhizzler\_33 (B1), Nathan\_33 (B1), Opia\_33 (B2), Orion\_33 (B1), PG1\_33 (B1), Phantasmagoria\_33 (B2), Phareon\_33 (B1), PhatCats2014\_33 (B1), Piglet\_0032 (B1), Pinkman\_32 (B1), Pipsqueak\_33 (B1), Pops\_33 (B1), Rhinoforte\_33 (B2), Rimu\_33 (B1), Rinkes\_34 (B9), Rosebush\_33 (B2), Scoot17C\_33 (B1), Sejanus\_28 (AD), Serendipity\_33 (B1), Solosis\_32 (B1), Stargaze\_23 (G5), ThreeOh3D2\_33 (B1), Tres\_33 (B2), Trypo\_33 (B1), TyrionL\_32 (B1), Vista\_33 (B1), Wallhey\_32 (B1), Waterdiva\_33 (B1), West99\_33 (B2), YangYin\_23 (G5), Zonia\_33 (B1),

#### Start 65:

- Found in 11 of 599 ( 1.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 18.2% of time when present
- Phage (with cluster) where this start called: Teejan\_24 (K1), Trice\_24 (K1),

#### Start 72:

- Found in 4 of 599 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 4 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnyard\_37 (H2), DrLupo\_39 (H2), Pharb\_27 (K3), Taquito\_27 (K4),

#### Start 73:

- Found in 150 of 599 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 102 of 524
- Called 72.0% of time when present
- Phage (with cluster) where this start called: Adephagia\_28 (K1), Ageofdapage\_28 (K1), AlishaPH\_28 (K1), Amgine\_26 (K6), Amohntion\_27 (K6), Angelica\_28 (K1), Apocalypse\_28 (K1), Applecrisp\_26 (K6), Asayake\_28 (K1), Atiba\_28 (K1), BEEST\_28 (K1), BGlluviae\_28 (K1), BaghaKamala\_28 (K1), BarrelRoll\_28 (K1), Beezoo\_28 (K1), Bella96\_28 (K1), Belladonna\_28 (K1), Bern\_28 (K1), Blizzard\_28 (K1), Boiiii\_28 (K1), CREW\_28 (K1), CallaLilly\_28 (K1), Capricorn\_28 (K1), CaseJules\_28 (K1), CheetoDust\_28 (K1), Clipper\_28 (K1), CrimD\_28 (K1), Dalmuri\_28 (K1), DarthP\_27 (K6), Dartin\_28 (K1), Deby\_28 (K1), Devera\_28 (K1), Dole\_28 (K1), DrHayes\_28 (K1), Durfee\_28 (K1), Efra2\_28 (K1), Ekdilam\_25 (K6), Ellie\_25 (K6), Emerson\_28 (K1), Eponine\_29 (K4), Fefferhead\_27 (K6), Ganymede\_29 (K1), Geraldini\_28 (K1), Guanica15\_28 (K1), Hammy\_27 (K6), HedwigODU\_28 (K1), Homura\_28 (K1), Hyperbowlee\_28 (K1), Illumine\_28 (K1), Inky\_28 (K1), JAWS\_28 (K1), Jarvi\_28 (K1), Jayhawk\_28 (K1), Jeckyll\_28 (K1),

Joy99\_28 (K1), Langerak\_22 (P1), LaterM\_28 (K1), Lavahound\_26 (K6), LindNT\_28 (K1), Llorens\_28 (K1), Lunahalos\_28 (K1), MacKat\_28 (K1), Malithi\_22 (P1), McMater\_28 (K1), MeaningOfLife\_28 (K1), Megsy\_28 (K1), Murucutumbu\_28 (K1), Mynx\_28 (K1), Niklas\_28 (K1), November\_26 (K6), Padfoot\_28 (K1), Padpat\_28 (K1), Peanam\_28 (K1), Peel\_28 (K1), Phrann\_21 (N), Piatt\_28 (K1), Pisa1\_27 (K1), Pisa4\_27 (K1), Pokerus\_27 (K1), Prithvi\_28 (K1), QuincyRose\_27 (K1), Ramen\_28 (K1), Rapunzel97\_28 (K1), Richo\_28 (K1), Rosmarinus\_28 (K1), SamScheppers\_27 (K4), SamuelLPlaqson\_28 (K1), Shaobing\_28 (K1), ShiaSurprise\_28 (K1), Slimphazie\_28 (K1), Spock\_28 (K1), Stinson\_29 (K1), Sulley\_28 (K1), Tachez\_28 (K1), TiniBug\_28 (K1), Tiri\_28 (K1), Topper\_28 (K1), TreyKay\_28 (K1), TruffulaTree\_28 (K1), Twitch\_28 (K1), Urkel\_28 (K1), Validus\_28 (K1), Veliki\_28 (K1), YoureAdopted\_27 (K1), Yuna\_29 (K6), Yunkel11\_28 (K1), Zabiza\_28 (K1), Zavala\_28 (K1),

#### Start 74:

- Found in 5 of 599 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 5 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Butters\_22 (N), Juliette\_30 (K4), Kevin1\_22 (N), Rubeelu\_22 (N), Ruthiejr\_29 (K4),

#### Start 75:

- Found in 4 of 599 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 4 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KiSi\_27 (K1), LeMond\_27 (K1), Oscar\_27 (K1), Scarlett\_27 (K1),

#### Start 76:

- Found in 205 of 599 ( 34.2% ) of genes in pham
- Manual Annotations of this start: 170 of 524
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Agent47\_27 (K5), AlleyCat\_28 (K5), Amelie\_24 (K1), Andies\_21 (N), Arib1\_22 (P1), Atcoo\_22 (P1), AuntGwenStacy\_28 (Y), Auspice\_31 (M1), Babsiella\_22 (I1), BananenDer11\_27 (K5), Bartholomew\_22 (P1), Bhagsy\_22 (P1), BigNuz\_22 (P4), Binglebops\_24 (K1), Bipper\_28 (Y), Bluvara\_22 (UNK), Bobquesha\_30 (K4), Bongo\_31 (M1), BoostSeason\_25 (K2), Bricole\_31 (M1), Bromden\_23 (L4), BronnyJr\_22 (P1), Brusacoram\_22 (P1), Bryler\_28 (K6), Bunnies\_22 (P1), CactusJack\_22 (P1), Cain\_28 (K6), Camster\_22 (P1), Chancellor\_29 (K4), Chaser\_21 (L4), Che9c\_21 (I2), Cheetobro\_29 (K4), Chris\_27 (K1), Chubbello\_22 (none), Collard\_27 (K5), Cracklewink\_28 (Y), Curiosium\_29 (K1), Dadosky\_28 (K5), DanSyl44\_30 (K4), Diminimus\_32 (M1), DismalFunk\_25 (K2), DismalStressor\_25 (K2), Donovan\_22 (P1), DoubleChamp\_27 (K5), Douge\_21 (L4), Doughnut\_25 (K2), Dulcita\_32 (M1), Dynamo\_22 (P1), DyoEdafos\_22 (L4), Edugator\_27 (K5), Enkosi\_24 (K1), Etoile\_22 (P1), Faiyaz\_28 (Y), Farewell\_21 (AF), Feyre\_27 (K5), Findley\_25 (K2), Fionnbharth\_29 (K4), FirstPlacePfu\_22 (P1), Fishburne\_22 (P1), FreakyGoo\_32 (M1), GaloreK\_22 (P1), Gavriela\_22 (P1), Gengar\_27 (K5), Glaske16\_32 (M1), Glaske\_22 (P1), Guillsminger\_27 (K5), HC\_22 (I1), HUHilltop\_22 (P1), Heftyboy\_27 (K5), Hilltopfarm\_28 (Y), Hurricane\_28 (K3), IPhone7\_31 (M1), IdentityCrisis\_21 (AJ), Impisi\_22 (N), InvictusManeo\_27 (K5), Izel\_32 (M1), JF1\_29 (K4), Jebeks\_22 (P1), Jung\_22 (P1), Juniormint\_22 (P1), Kari\_22 (P1), Keshu\_28 (K3), KilKor\_22 (P1), KleverKiS\_31 (M1), Kratio\_26 (K5), Kraw\_29 (K4), Kropertea\_21 (L4), Krueger\_28

(K6), Ksquared\_22 (P1), Larva\_28 (K5), LastHope\_28 (K1), Lea83\_28 (K3), Lebo14\_29 (K4), Leston\_27 (K5), LilDirt\_26 (K5), LilPharaoh\_24 (K1), LilhomieP\_30 (M1), LordVader\_21 (F), MacnCheese\_29 (K3), Majeke\_22 (P1), MalagasyRose\_28 (AG), Malthus\_30 (K4), Mangethe\_22 (P1), Marcoliusprime\_25 (K2), MarkPheW\_28 (K1), Marshawn\_29 (K6), Mdavu\_24 (K1), Megiddo\_22 (P1), MichelleMyBell\_22 (N), Milly\_25 (K2), Miryou\_27 (K5), MissDaisy\_29 (K4), Mitti\_29 (K4), Mufasa\_25 (K2), Nazo\_22 (P4), Necropolis\_22 (P1), Neighly\_28 (K3), Nibb\_27 (K1), Nikao\_24 (K1), Nutello\_24 (K1), OkiRoe\_27 (K5), OmniCritical\_29 (K4), Omnicron\_28 (K5), Panchino\_21 (N), Paola\_27 (K5), Patt\_29 (K4), PegLeg\_31 (M1), Phalm\_22 (P1), Phayonce\_22 (P5), Phegasus\_22 (P1), PhelpsODU\_28 (K6), Phineas\_22 (P1), Phrank\_28 (K6), Pixie\_28 (K3), Polkaroo\_22 (P1), Psycho\_28 (K5), Purky\_22 (P6), Qhanda\_30 (K4), Rando14\_28 (K5), Raymond7\_21 (N), Rebel\_21 (N), Reindeer\_30 (M1), Reptar3000\_29 (K4), Sbash\_21 (I2), Scitech\_21 (N), SgtBeansprout\_24 (K1), Shadow1\_27 (K6), ShedlockHolmes\_28 (K3), Shweta\_21 (N), SirPhilip\_27 (K6), SkinnyPete\_21 (N), Skinny\_32 (M1), Slarp\_29 (K4), SlimJimmy\_30 (M1), SoSeph\_27 (K5), Sonah\_22 (P1), Sparky\_21 (AF), StevieRay\_22 (P1), StressBall\_22 (P1), Strobilo\_25 (K2), Sunflower1121\_27 (K6), Syra333\_28 (K6), TBond007\_28 (K3), TClif\_28 (K6), TM4\_25 (K2), Techage\_22 (P1), Thespis\_22 (P1), ThulaThula\_22 (P5), Thyatira\_27 (K5), Tierra\_28 (K6), Tigress9\_29 (K6), TingHuaYa\_28 (K1), Torres\_24 (K1), Tortellini\_22 (P2), TpudiCK\_32 (M1), TribbleTrouble\_27 (K3), TyDawg\_31 (M1), Typha\_28 (Y), Unicorn\_28 (K6), Venti\_22 (P1), Vidya\_22 (P1), ViviJ\_26 (K5), WST1\_22 (AJ), Waterfoul\_27 (K5), Willsammy\_22 (P1), Wintermute\_29 (K4), Xavia\_22 (P3), Xen0\_21 (N), Ximenita\_29 (K6), Y10\_29 (K4), Y2\_29 (K4), Zilizebeth\_22 (P1), ZoeJ\_25 (K2),

#### Start 78:

- Found in 3 of 599 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Daredevil\_37 (DL), GTE8\_33 (CR2), Towmatter\_36 (DL),

#### Start 79:

- Found in 5 of 599 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dalilpop\_49 (CR1), Flapper\_49 (CR1), GRU1\_34 (CR1), GTE5\_36 (CR1), HubbaBubba\_42 (CR4),

#### Start 80:

- Found in 37 of 599 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 33 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arti\_44 (CR2), BiPauneto\_47 (CR4), Bonum\_48 (CR2), Buggaboo\_46 (CR2), Commandaria\_46 (CR2), Emianna\_44 (CR2), Ennea\_51 (CR3), Float294\_47 (CR3), Foxboro\_45 (CR2), Fury\_53 (CR5), GrootJr\_46 (CR2), Gsput1\_26 (CU2), HomeFry\_50 (CR5), Jifall16\_43 (CR2), Kabluna\_48 (CR2), KidneyBean\_44 (CR2), Kurt\_44 (CR2), Lollipop1437\_50 (CR3), MerCougar\_46 (CR2), NatB6\_44 (CR2), NosilaM\_48 (CR2), NovumRegina\_44 (CR2), Outis\_46 (CR2), Patio\_48 (CR3), Pemberton\_48 (CR4), Phomeo\_43 (CR2), Pleakley\_53 (CR5), RedRaider\_52 (CR3), Scuba\_53 (CR5), Skysand\_47 (CR3), StarStruck\_46 (CR2), Sukkupi\_46 (CR4), SuperSulley\_46 (CR2), Tracker\_44 (CR2), Wheezy\_44 (CR2), WhoseManz\_46 (CR4), Yndexa\_46 (CR4),

Start 85:

- Found in 37 of 599 ( 6.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.7% of time when present
- Phage (with cluster) where this start called: PeanutPie\_22 (P1),

Start 90:

- Found in 6 of 599 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 8UZL\_25 (AB), FF47\_25 (AB), LongHai\_26 (AB), Maco6\_23 (AB), Muddy\_25 (AB), Salvus\_26 (AB),

Start 93:

- Found in 39 of 599 ( 6.5% ) of genes in pham
- Manual Annotations of this start: 33 of 524
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Alephilan\_30 (DV), Alyssamiracle\_33 (DV), Apeppi\_30 (DV), Astralis\_30 (DV), Avian\_30 (DV), BirthdayBoy\_34 (DV), Charminar\_31 (DV), DaviePasture\_33 (DV), DoobyDoo\_32 (DV), Erutan\_33 (DV), Fulcrum\_34 (DV), GOATification\_34 (DV), Genamy16\_33 (DV), Gibbin\_34 (DV), GretelLyn\_33 (DV), Jalebi\_32 (DV), Jamemuya19\_30 (DV), Lambo\_33 (DV), LavAbarElk\_31 (DV), Lila22\_32 (DV), Mima20\_31 (DV), MoiGyank\_35 (DV), NorManre\_34 (DV), NovaSharks\_32 (DV), OtterstedtS21\_33 (DV), ParvusTarda\_33 (DV), Patos\_34 (DV), Ranch\_33 (DV), RazorC\_31 (DV), Rumi\_32 (DV), Sampudon\_33 (DV), Stormer\_32 (DV), Tillicus\_32 (DV), Wojtek\_32 (DV), Yikes\_34 (DV), Zany\_32 (DV),

Start 95:

- Found in 5 of 599 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 524
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Jumbo\_25 (DF3), Phishy\_30 (DT), Sprinklemunch\_22 (DW), Zodiariah\_22 (DW),

Start 96:

- Found in 8 of 599 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 5 of 524
- Called 87.5% of time when present
- Phage (with cluster) where this start called: BabyMoney\_29 (DT), DumpsterDude\_23 (DW), Ewald\_30 (DT), Nyceirae\_31 (DT), Pimento\_27 (DI), RavenCo17\_26 (CZ8), Vordorf\_31 (DT),

Start 97:

- Found in 1 of 599 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archimedes\_26 (DA),

Start 98:

- Found in 5 of 599 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 524

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Demikore\_38 (U), Labelle\_37 (U), Madrugua\_36 (U), Patience\_38 (U), SuperSonics\_37 (U),

#### Start 99:

- Found in 2 of 599 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dogfish\_30 (DT), Manilisa\_32 (DT),

#### Start 100:

- Found in 14 of 599 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 14 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ayotoya\_27 (DI), BetterKatz\_27 (DI), Bock\_27 (DI), Brylie\_27 (DI), Chop\_27 (DI), DelRio\_28 (DI), Francois\_27 (DI), GrandSlam\_27 (DI), Hamood\_27 (DI), Mulch\_27 (DI), Nadeem\_27 (DI), NancyRae\_27 (DI), Parada\_27 (DI), WheatThin\_27 (DI),

#### Start 104:

- Found in 10 of 599 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 524
- Called 10.0% of time when present
- Phage (with cluster) where this start called: YasnayaPolyana\_29 (K4),

#### Start 105:

- Found in 2 of 599 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 524
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Meyran\_29 (DT),

#### Start 107:

- Found in 3 of 599 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: FarmResident\_21 (L4), Quby\_21 (L4),

#### Start 115:

- Found in 27 of 599 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 524
- Called 3.7% of time when present
- Phage (with cluster) where this start called: LuckyLeo\_32 (DV),

#### Start 117:

- Found in 83 of 599 ( 13.9% ) of genes in pham
- Manual Annotations of this start: 3 of 524
- Called 7.2% of time when present
- Phage (with cluster) where this start called: ActinUp\_28 (K1), Adonis\_28 (K1), Anaya\_29 (K1), Anma\_28 (K1), DartGoblin\_28 (K1), TaiwanKao\_29 (K1),

#### Start 126:

- Found in 7 of 599 ( 1.2% ) of genes in pham
- No Manual Annotations of this start.

- Called 28.6% of time when present
- Phage (with cluster) where this start called: Rota\_32 (DV), Rukungu\_33 (DV),

#### Start 135:

- Found in 10 of 599 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 4 of 524
- Called 40.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes\_125 (DO), Pupper\_126 (DO), SCentae\_125 (DO), Skog\_188 (DO),

#### Start 137:

- Found in 37 of 599 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 35 of 524
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anamika\_30 (CS3), Beaver\_33 (CS2), Berries\_30 (CS3), Bianmat\_30 (CS3), BillyBobJr\_34 (CS2), BirksAndSocks\_33 (CS2), Boneham\_33 (CS2), Butterball\_33 (CS2), Charianelly\_30 (CS3), CinnamonToast\_34 (CS2), Damp\_30 (CS3), Diabla\_32 (CS2), FelixAlejandro\_34 (CS2), GalacticEye\_30 (CS3), Guillaume\_30 (CS3), Hail2Pitt\_30 (CS3), Harambe\_30 (CS3), Hello\_30 (CS3), Jams\_30 (CS3), Jellybones\_33 (CS2), John316\_33 (CS2), Jormungandr\_30 (CS3), Kaseim\_30 (CS3), Lahirium\_30 (CS3), Lidong\_30 (CS3), Luker\_31 (CS3), Minos\_31 (CS3), MrWormie\_30 (CS3), Msay19\_34 (CS2), Neevie\_30 (CS3), Newt\_31 (CS3), Nimi13\_30 (CS3), Poland\_34 (CS2), Shelley\_30 (CS3), Sticker17\_30 (CS3), Teal\_30 (CS3), Woes\_30 (CS3),

#### Start 140:

- Found in 41 of 599 ( 6.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.4% of time when present
- Phage (with cluster) where this start called: MakCheese\_24 (DW),

### Summary by clusters:

There are 53 clusters represented in this pham: DO, CZ8, DI, DL, DA, K3, K2, K1, AB, M1, K6, K5, K4, DV, DW, DT, F, G4, AG, I1, I2, DF3, CS3, CS2, P2, P3, P1, P6, AD, P4, P5, AJ, G5, N, L4, U, W, Y, UNK, AF, CU2, CR2, CR3, none, CR1, CR4, CR5, H2, B6, B1, B2, B12, B9,

#### Info for manual annotations of cluster AB:

- Start number 90 was manually annotated 2 times for cluster AB.

#### Info for manual annotations of cluster AD:

- Start number 46 was manually annotated 1 time for cluster AD.
- Start number 48 was manually annotated 3 times for cluster AD.

#### Info for manual annotations of cluster AF:

- Start number 76 was manually annotated 2 times for cluster AF.

#### Info for manual annotations of cluster AG:

- Start number 76 was manually annotated 1 time for cluster AG.

#### Info for manual annotations of cluster AJ:

- Start number 76 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster B1:

- Start number 48 was manually annotated 54 times for cluster B1.

Info for manual annotations of cluster B12:

- Start number 48 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B2:

- Start number 46 was manually annotated 7 times for cluster B2.
- Start number 48 was manually annotated 21 times for cluster B2.

Info for manual annotations of cluster B6:

- Start number 48 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster B9:

- Start number 48 was manually annotated 2 times for cluster B9.

Info for manual annotations of cluster CR1:

- Start number 79 was manually annotated 2 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 80 was manually annotated 21 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 80 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 79 was manually annotated 1 time for cluster CR4.
- Start number 80 was manually annotated 4 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 80 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CS2:

- Start number 137 was manually annotated 10 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 137 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CZ8:

- Start number 96 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DA:

- Start number 97 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster DF3:

- Start number 95 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DI:

- Start number 96 was manually annotated 1 time for cluster DI.
- Start number 100 was manually annotated 14 times for cluster DI.

Info for manual annotations of cluster DL:

- Start number 78 was manually annotated 2 times for cluster DL.

Info for manual annotations of cluster DO:

- Start number 135 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DT:

- Start number 95 was manually annotated 1 time for cluster DT.
- Start number 96 was manually annotated 2 times for cluster DT.
- Start number 99 was manually annotated 1 time for cluster DT.
- Start number 105 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster DV:

- Start number 93 was manually annotated 33 times for cluster DV.
- Start number 115 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster DW:

- Start number 95 was manually annotated 1 time for cluster DW.
- Start number 96 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster G5:

- Start number 48 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster H2:

- Start number 72 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster I1:

- Start number 76 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 76 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster K1:

- Start number 73 was manually annotated 87 times for cluster K1.
- Start number 75 was manually annotated 4 times for cluster K1.
- Start number 76 was manually annotated 14 times for cluster K1.
- Start number 117 was manually annotated 3 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 76 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 72 was manually annotated 1 time for cluster K3.
- Start number 76 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 72 was manually annotated 1 time for cluster K4.
- Start number 73 was manually annotated 2 times for cluster K4.
- Start number 74 was manually annotated 2 times for cluster K4.
- Start number 76 was manually annotated 16 times for cluster K4.
- Start number 104 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K5:

- Start number 76 was manually annotated 23 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 73 was manually annotated 10 times for cluster K6.
- Start number 76 was manually annotated 14 times for cluster K6.

Info for manual annotations of cluster L4:

- Start number 76 was manually annotated 4 times for cluster L4.

Info for manual annotations of cluster M1:

- Start number 76 was manually annotated 15 times for cluster M1.

Info for manual annotations of cluster N:

- Start number 73 was manually annotated 1 time for cluster N.
- Start number 74 was manually annotated 3 times for cluster N.
- Start number 76 was manually annotated 8 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 73 was manually annotated 2 times for cluster P1.
- Start number 76 was manually annotated 37 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 76 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 76 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 76 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 76 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 76 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster U:

- Start number 98 was manually annotated 3 times for cluster U.

Info for manual annotations of cluster W:

- Start number 46 was manually annotated 2 times for cluster W.

Info for manual annotations of cluster Y:

- Start number 76 was manually annotated 5 times for cluster Y.

***Gene Information:***

Gene: 39HC\_027 Start: 30067, Stop: 31293, Start Num: 48

Candidate Starts for 39HC\_027:

(9, 29542), (11, 29644), (Start: 48 @30067 has 84 MA's), (56, 30106), (71, 30157), (81, 30178), (101, 30223), (119, 30283), (131, 30304), (133, 30307), (154, 30364), (170, 30418), (171, 30421), (172, 30427), (233, 30544), (271, 30613), (296, 30718), (336, 30850), (339, 30856), (375, 30979), (391, 31039), (415, 31093), (419, 31099), (443, 31147),

Gene: 40BC\_027 Start: 30067, Stop: 31293, Start Num: 48

Candidate Starts for 40BC\_027:

(9, 29542), (11, 29644), (Start: 48 @30067 has 84 MA's), (56, 30106), (71, 30157), (81, 30178), (101, 30223), (119, 30283), (131, 30304), (133, 30307), (154, 30364), (170, 30418), (171, 30421), (172, 30427), (233, 30544), (271, 30613), (296, 30718), (336, 30850), (339, 30856), (375, 30979), (391, 31039), (415, 31093), (419, 31099), (443, 31147),

Gene: 8UZL\_25 Start: 21727, Stop: 22752, Start Num: 90

Candidate Starts for 8UZL\_25:

(Start: 90 @21727 has 2 MA's), (130, 21817), (158, 21886), (161, 21895), (203, 21973), (237, 22036), (238, 22039), (263, 22087), (303, 22183), (314, 22219), (331, 22270), (342, 22327), (422, 22564), (463, 22690),

Gene: ActinUp\_28 Start: 23436, Stop: 24338, Start Num: 117

Candidate Starts for ActinUp\_28:

(17, 22881), (28, 23028), (62, 23280), (Start: 73 @23325 has 102 MA's), (Start: 117 @23436 has 3 MA's), (165, 23550), (221, 23667), (246, 23709), (254, 23721), (314, 23775), (336, 23853), (361, 23949), (366, 23961), (377, 23991), (380, 24000), (411, 24114), (443, 24183),

Gene: Adephagia\_28 Start: 23322, Stop: 24335, Start Num: 73

Candidate Starts for Adephagia\_28:

(17, 22878), (28, 23025), (62, 23277), (Start: 73 @23322 has 102 MA's), (Start: 117 @23433 has 3 MA's), (165, 23547), (221, 23664), (246, 23706), (254, 23718), (314, 23772), (336, 23850), (361, 23946), (366, 23958), (377, 23988), (380, 23997), (411, 24111), (443, 24180),

Gene: Adonis\_28 Start: 23439, Stop: 24341, Start Num: 117

Candidate Starts for Adonis\_28:

(17, 22884), (62, 23283), (Start: 73 @23328 has 102 MA's), (Start: 117 @23439 has 3 MA's), (165, 23553), (221, 23670), (246, 23712), (254, 23724), (314, 23778), (336, 23856), (357, 23940), (361, 23952), (366, 23964), (380, 24003), (411, 24117), (443, 24186),

Gene: Adriana\_33 Start: 32362, Stop: 33522, Start Num: 48

Candidate Starts for Adriana\_33:

(Start: 48 @32362 has 84 MA's), (81, 32473), (101, 32518), (138, 32617), (159, 32677), (170, 32713), (179, 32737), (204, 32782), (209, 32788), (237, 32839), (258, 32878), (259, 32881), (265, 32893), (275, 32908), (305, 32932), (314, 32965), (336, 33046), (344, 33091), (361, 33139), (374, 33175), (378, 33184), (380, 33190), (459, 33415),

Gene: Agent47\_27 Start: 24079, Stop: 25143, Start Num: 76

Candidate Starts for Agent47\_27:

(Start: 76 @24079 has 170 MA's), (110, 24169), (120, 24196), (147, 24259), (165, 24307), (177, 24346), (188, 24364), (218, 24409), (239, 24448), (267, 24496), (277, 24514), (317, 24589), (337, 24655), (359, 24745), (360, 24748), (361, 24751), (372, 24784), (394, 24883), (395, 24886), (432, 24970), (437, 24982), (470, 25099),

Gene: Ageofdapage\_28 Start: 23272, Stop: 24285, Start Num: 73

Candidate Starts for Ageofdapage\_28:

(Start: 73 @23272 has 102 MA's), (Start: 117 @23383 has 3 MA's), (165, 23497), (221, 23614), (246, 23656), (314, 23722), (317, 23731), (336, 23800), (361, 23896), (366, 23908), (371, 23926), (380, 23947), (411, 24061), (443, 24130), (468, 24226),

Gene: Alephilan\_30 Start: 28717, Stop: 29766, Start Num: 93

Candidate Starts for Alephilan\_30:

(Start: 93 @28717 has 33 MA's), (143, 28831), (157, 28873), (164, 28894), (173, 28927), (181, 28942), (212, 29005), (220, 29023), (295, 29176), (307, 29206), (315, 29233), (367, 29416), (379, 29446), (441, 29620), (456, 29674),

Gene: AlishaPH\_28 Start: 23315, Stop: 24328, Start Num: 73

Candidate Starts for AlishaPH\_28:

(17, 22871), (62, 23270), (Start: 73 @23315 has 102 MA's), (Start: 117 @23426 has 3 MA's), (165, 23540), (221, 23657), (246, 23699), (254, 23711), (314, 23765), (336, 23843), (361, 23939), (366, 23951), (377, 23981), (380, 23990), (411, 24104), (443, 24173),

Gene: Allegro\_33 Start: 32683, Stop: 33846, Start Num: 48

Candidate Starts for Allegro\_33:

(29, 32536), (Start: 46 @32677 has 10 MA's), (Start: 48 @32683 has 84 MA's), (56, 32722), (64, 32752), (81, 32797), (101, 32842), (138, 32941), (159, 33001), (170, 33037), (179, 33061), (204, 33106), (209, 33112), (237, 33163), (258, 33202), (259, 33205), (265, 33217), (275, 33232), (305, 33256), (314, 33289), (336, 33370), (361, 33463), (374, 33499), (378, 33508), (380, 33514), (391, 33574), (459, 33739),

Gene: AlleyCat\_28 Start: 24010, Stop: 25074, Start Num: 76

Candidate Starts for AlleyCat\_28:

(Start: 76 @24010 has 170 MA's), (110, 24100), (121, 24130), (145, 24184), (147, 24190), (165, 24238), (177, 24277), (188, 24295), (191, 24298), (239, 24379), (267, 24427), (277, 24445), (337, 24586), (359, 24676), (360, 24679), (361, 24682), (372, 24715), (378, 24727), (394, 24814), (395, 24817), (437, 24913), (470, 25030),

Gene: AltPhacts\_33 Start: 32351, Stop: 33511, Start Num: 48

Candidate Starts for AltPhacts\_33:

(Start: 48 @32351 has 84 MA's), (81, 32462), (101, 32507), (138, 32606), (159, 32666), (170, 32702), (179, 32726), (204, 32771), (209, 32777), (237, 32828), (258, 32867), (259, 32870), (265, 32882), (275, 32897), (305, 32921), (314, 32954), (336, 33035), (344, 33080), (361, 33128), (374, 33164), (378, 33173), (380, 33179), (459, 33404),

Gene: Alyssamiracle\_33 Start: 27521, Stop: 28618, Start Num: 93

Candidate Starts for Alyssamiracle\_33:

(Start: 93 @27521 has 33 MA's), (143, 27635), (183, 27728), (201, 27761), (203, 27764), (205, 27767), (213, 27788), (218, 27800), (244, 27848), (278, 27911), (295, 27965), (325, 28061), (335, 28103), (393, 28337), (413, 28376), (446, 28463), (478, 28610),

Gene: Amelie\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for Amelie\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: Amgine\_26 Start: 23356, Stop: 24351, Start Num: 73

Candidate Starts for Amgine\_26:

(64, 23320), (Start: 73 @23356 has 102 MA's), (111, 23446), (Start: 117 @23467 has 3 MA's), (162, 23575), (165, 23581), (170, 23602), (177, 23623), (321, 23830), (336, 23884), (337, 23887), (358, 23971), (359, 23974), (412, 24139),

Gene: Amohnition\_27 Start: 23778, Stop: 24782, Start Num: 73

Candidate Starts for Amohnition\_27:

(Start: 73 @23778 has 102 MA's), (168, 24015), (221, 24120), (330, 24279), (356, 24381), (359, 24393), (394, 24528), (405, 24546), (443, 24639), (461, 24705), (465, 24717),

Gene: Anamika\_30 Start: 38386, Stop: 39288, Start Num: 137

Candidate Starts for Anamika\_30:

(Start: 137 @38386 has 35 MA's), (193, 38524), (223, 38593), (252, 38641), (301, 38704), (314, 38740), (317, 38749), (358, 38908), (447, 39142), (454, 39160), (473, 39265),

Gene: Anaya\_29 Start: 23452, Stop: 24354, Start Num: 117

Candidate Starts for Anaya\_29:

(17, 22897), (62, 23296), (Start: 73 @23341 has 102 MA's), (Start: 117 @23452 has 3 MA's), (165, 23566), (221, 23683), (246, 23725), (254, 23737), (314, 23791), (336, 23869), (361, 23965), (366, 23977), (377, 24007), (380, 24016), (411, 24130), (443, 24199),

Gene: Andies\_21 Start: 20194, Stop: 21228, Start Num: 76

Candidate Starts for Andies\_21:

(Start: 76 @20194 has 170 MA's), (140, 20350), (142, 20356), (178, 20464), (181, 20467), (191, 20482), (243, 20569), (267, 20614), (314, 20695), (331, 20752), (337, 20776), (366, 20881), (385, 20953), (403, 20998),

Gene: Angelica\_28 Start: 23290, Stop: 24303, Start Num: 73

Candidate Starts for Angelica\_28:

(Start: 73 @23290 has 102 MA's), (Start: 117 @23401 has 3 MA's), (165, 23515), (221, 23632), (254, 23686), (264, 23704), (314, 23740), (336, 23818), (361, 23914), (366, 23926), (377, 23956), (380, 23965), (411, 24079), (443, 24148),

Gene: Anma\_28 Start: 23395, Stop: 24297, Start Num: 117

Candidate Starts for Anma\_28:

(62, 23239), (Start: 73 @23284 has 102 MA's), (Start: 117 @23395 has 3 MA's), (165, 23509), (221, 23626), (246, 23668), (254, 23680), (314, 23734), (336, 23812), (361, 23908), (366, 23920), (380, 23959), (387, 23995), (443, 24142), (468, 24238),

Gene: Apeppi\_30 Start: 28862, Stop: 29908, Start Num: 93

Candidate Starts for Apeppi\_30:

(Start: 93 @28862 has 33 MA's), (Start: 115 @28919 has 1 MA's), (155, 29009), (157, 29018), (159, 29024), (162, 29033), (181, 29087), (288, 29285), (307, 29351), (311, 29363), (331, 29432), (371, 29573), (407, 29681),

Gene: Apocalypse\_28 Start: 23293, Stop: 24306, Start Num: 73

Candidate Starts for Apocalypse\_28:

(Start: 73 @23293 has 102 MA's), (Start: 117 @23404 has 3 MA's), (165, 23518), (221, 23635), (246, 23677), (254, 23689), (314, 23743), (336, 23821), (361, 23917), (366, 23929), (380, 23968), (405, 24064), (411, 24082), (443, 24151),

Gene: Applecrisp\_26 Start: 23767, Stop: 24774, Start Num: 73

Candidate Starts for Applecrisp\_26:

(64, 23731), (Start: 73 @23767 has 102 MA's), (111, 23857), (Start: 117 @23878 has 3 MA's), (153, 23959), (165, 23992), (170, 24013), (337, 24298), (346, 24337), (359, 24382), (461, 24697), (475, 24757),

Gene: Arbirer\_33 Start: 32772, Stop: 33935, Start Num: 48

Candidate Starts for Arbirer\_33:

(29, 32625), (Start: 46 @32766 has 10 MA's), (Start: 48 @32772 has 84 MA's), (56, 32811), (64, 32841), (81, 32886), (101, 32931), (138, 33030), (159, 33090), (170, 33126), (179, 33150), (204, 33195), (209, 33201), (237, 33252), (258, 33291), (259, 33294), (265, 33306), (275, 33321), (305, 33345), (314, 33378), (336, 33459), (361, 33552), (374, 33588), (378, 33597), (380, 33603), (391, 33663), (459, 33828),

Gene: Archimedes\_26 Start: 23367, Stop: 24368, Start Num: 97

Candidate Starts for Archimedes\_26:

(83, 23343), (Start: 97 @23367 has 1 MA's), (125, 23445), (182, 23595), (280, 23766), (337, 23898), (357, 23982), (369, 24018), (393, 24114), (442, 24213), (474, 24348),

Gene: Arib1\_22 Start: 21305, Stop: 22342, Start Num: 76

Candidate Starts for Arib1\_22:

(68, 21281), (Start: 73 @21302 has 102 MA's), (Start: 76 @21305 has 170 MA's), (85, 21329), (142, 21467), (156, 21509), (181, 21578), (218, 21638), (243, 21683), (267, 21728), (314, 21809), (331, 21866), (337, 21890), (366, 21995), (385, 22067), (403, 22112), (465, 22277),

Gene: Arti\_44 Start: 34961, Stop: 36019, Start Num: 80

Candidate Starts for Arti\_44:

(1, 33521), (2, 33818), (5, 34049), (13, 34418), (40, 34796), (42, 34811), (Start: 46 @34829 has 10 MA's), (Start: 80 @34961 has 33 MA's), (217, 35306), (245, 35357), (277, 35405),

Gene: Asayake\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Asayake\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Ashraf\_32 Start: 31924, Stop: 33084, Start Num: 48

Candidate Starts for Ashraf\_32:

(Start: 48 @31924 has 84 MA's), (81, 32035), (101, 32080), (138, 32179), (159, 32239), (170, 32275), (179, 32299), (204, 32344), (209, 32350), (237, 32401), (258, 32440), (259, 32443), (265, 32455), (275, 32470), (305, 32494), (314, 32527), (336, 32608), (344, 32653), (361, 32701), (374, 32737), (378, 32746), (380, 32752), (459, 32977),

Gene: Astralis\_30 Start: 27111, Stop: 28208, Start Num: 93

Candidate Starts for Astralis\_30:

(Start: 93 @27111 has 33 MA's), (143, 27225), (183, 27318), (201, 27351), (203, 27354), (205, 27357), (212, 27375), (213, 27378), (244, 27438), (272, 27489), (278, 27501), (325, 27651), (335, 27693), (393, 27927), (413, 27966), (446, 28053), (478, 28200),

Gene: Atcoo\_22 Start: 21759, Stop: 22826, Start Num: 76

Candidate Starts for Atcoo\_22:

(Start: 76 @21759 has 170 MA's), (142, 21921), (156, 21963), (181, 22032), (218, 22092), (243, 22137), (267, 22182), (331, 22320), (337, 22344),

Gene: Atiba\_28 Start: 23285, Stop: 24298, Start Num: 73

Candidate Starts for Atiba\_28:

(17, 22841), (28, 22988), (62, 23240), (Start: 73 @23285 has 102 MA's), (130, 23417), (165, 23510), (221, 23627), (246, 23669), (254, 23681), (314, 23735), (336, 23813), (361, 23909), (377, 23951), (380, 23960), (411, 24074), (443, 24143),

Gene: AuntGwenStacy\_28 Start: 26025, Stop: 27062, Start Num: 76

Candidate Starts for AuntGwenStacy\_28:

(Start: 76 @26025 has 170 MA's), (123, 26148), (147, 26202), (159, 26238), (187, 26301), (218, 26349), (249, 26403), (251, 26406), (336, 26592), (342, 26628), (356, 26670), (361, 26688), (380, 26739),

Gene: Auspice\_31 Start: 26992, Stop: 28047, Start Num: 76

Candidate Starts for Auspice\_31:

(Start: 76 @26992 has 170 MA's), (159, 27205), (171, 27241), (212, 27304), (251, 27376), (267, 27406), (279, 27427), (307, 27463), (317, 27499), (331, 27547), (336, 27568), (339, 27574), (342, 27604), (343, 27607), (358, 27655), (431, 27865), (450, 27919),

Gene: Avian\_30 Start: 27503, Stop: 28600, Start Num: 93

Candidate Starts for Avian\_30:

(Start: 93 @27503 has 33 MA's), (143, 27617), (183, 27710), (201, 27743), (203, 27746), (205, 27749), (212, 27767), (213, 27770), (244, 27830), (272, 27881), (278, 27893), (286, 27905), (295, 27947), (325, 28043), (335, 28085), (393, 28319), (413, 28358), (446, 28445), (478, 28592),

Gene: Ayotoya\_27 Start: 24101, Stop: 25168, Start Num: 100

Candidate Starts for Ayotoya\_27:

(Start: 100 @24101 has 14 MA's), (276, 24479), (323, 24620), (328, 24635), (331, 24647), (337, 24671), (357, 24755), (359, 24761), (370, 24794), (375, 24806), (406, 24902), (407, 24905), (413, 24926),

Gene: BEEST\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for BEEST\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: BGlluviae\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for BGlluviae\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Babsiella\_22 Start: 21313, Stop: 22350, Start Num: 76

Candidate Starts for Babsiella\_22:

(68, 21289), (Start: 73 @21310 has 102 MA's), (Start: 76 @21313 has 170 MA's), (85, 21337), (142, 21475), (156, 21517), (181, 21586), (218, 21646), (243, 21691), (267, 21736), (314, 21817), (331, 21874), (337, 21898), (366, 22003), (385, 22075), (403, 22120), (465, 22285),

Gene: BabyMoney\_29 Start: 25948, Stop: 27033, Start Num: 96

Candidate Starts for BabyMoney\_29:

(12, 25351), (15, 25438), (31, 25636), (Start: 96 @25948 has 5 MA's), (140, 26053), (161, 26116), (173, 26158), (212, 26236), (257, 26320), (276, 26350), (297, 26413), (331, 26521), (366, 26653),

Gene: Badfish\_33 Start: 32386, Stop: 33546, Start Num: 48

Candidate Starts for Badfish\_33:

(Start: 48 @32386 has 84 MA's), (81, 32497), (101, 32542), (138, 32641), (159, 32701), (170, 32737), (179, 32761), (204, 32806), (209, 32812), (237, 32863), (258, 32902), (259, 32905), (265, 32917), (275, 32932), (305, 32956), (314, 32989), (336, 33070), (344, 33115), (361, 33163), (374, 33199), (378, 33208), (380, 33214), (459, 33439),

Gene: BaghaKamala\_28 Start: 23285, Stop: 24298, Start Num: 73

Candidate Starts for BaghaKamala\_28:

(17, 22841), (62, 23240), (Start: 73 @23285 has 102 MA's), (Start: 117 @23396 has 3 MA's), (165, 23510), (221, 23627), (246, 23669), (254, 23681), (314, 23735), (336, 23813), (361, 23909), (366, 23921), (377, 23951), (380, 23960), (411, 24074), (443, 24143),

Gene: Bananafish\_33 Start: 32686, Stop: 33855, Start Num: 46

Candidate Starts for Bananafish\_33:

(29, 32545), (Start: 46 @32686 has 10 MA's), (Start: 48 @32692 has 84 MA's), (56, 32731), (64, 32761), (81, 32806), (101, 32851), (138, 32950), (159, 33010), (170, 33046), (179, 33070), (204, 33115), (209, 33121), (237, 33172), (258, 33211), (259, 33214), (265, 33226), (275, 33241), (305, 33265), (314, 33298), (336, 33379), (361, 33472), (374, 33508), (378, 33517), (380, 33523), (459, 33748),

Gene: BananenDer11\_27 Start: 24040, Stop: 25104, Start Num: 76

Candidate Starts for BananenDer11\_27:

(Start: 76 @24040 has 170 MA's), (110, 24130), (120, 24157), (147, 24220), (165, 24268), (177, 24307), (188, 24325), (218, 24370), (239, 24409), (267, 24457), (277, 24475), (317, 24550), (337, 24616), (359, 24706), (360, 24709), (361, 24712), (372, 24745), (394, 24844), (395, 24847), (432, 24931), (437, 24943), (470, 25060),

Gene: Barnyard\_37 Start: 29858, Stop: 30898, Start Num: 72

Candidate Starts for Barnyard\_37:

(37, 29684), (66, 29834), (Start: 72 @29858 has 4 MA's), (145, 30035), (163, 30089), (212, 30188), (249, 30254), (251, 30257), (256, 30266), (300, 30308), (330, 30389), (332, 30401), (361, 30506), (375, 30545), (395, 30635), (407, 30656), (434, 30725), (443, 30740), (475, 30878), (476, 30881), (477, 30884),

Gene: BarrelRoll\_28 Start: 23308, Stop: 24321, Start Num: 73

Candidate Starts for BarrelRoll\_28:

(17, 22864), (62, 23263), (Start: 73 @23308 has 102 MA's), (Start: 117 @23419 has 3 MA's), (165, 23533), (221, 23650), (246, 23692), (254, 23704), (314, 23758), (336, 23836), (361, 23932), (377, 23974), (380, 23983), (411, 24097), (443, 24166),

Gene: Bartholomew\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Bartholomew\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Beaver\_33 Start: 37866, Stop: 38768, Start Num: 137

Candidate Starts for Beaver\_33:

(Start: 137 @37866 has 35 MA's), (193, 38001), (206, 38031), (211, 38043), (231, 38076), (261, 38127), (301, 38175), (314, 38211), (337, 38292), (353, 38343), (354, 38346), (379, 38436), (429, 38583), (475, 38751),

Gene: Beezoo\_28 Start: 23333, Stop: 24346, Start Num: 73

Candidate Starts for Beezoo\_28:

(Start: 73 @23333 has 102 MA's), (Start: 117 @23444 has 3 MA's), (165, 23558), (176, 23597), (221, 23675), (246, 23717), (254, 23729), (314, 23783), (336, 23861), (357, 23945), (361, 23957), (366, 23969), (380, 24008), (411, 24122), (443, 24191),

Gene: Bella96\_28 Start: 23266, Stop: 24279, Start Num: 73

Candidate Starts for Bella96\_28:

(62, 23221), (Start: 73 @23266 has 102 MA's), (87, 23299), (Start: 117 @23377 has 3 MA's), (165, 23491), (221, 23608), (246, 23650), (254, 23662), (314, 23716), (336, 23794), (357, 23878), (361, 23890), (366, 23902), (369, 23914), (380, 23941), (387, 23977), (443, 24124), (468, 24220),

Gene: Belladonna\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Belladonna\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Bern\_28 Start: 23278, Stop: 24291, Start Num: 73

Candidate Starts for Bern\_28:

(44, 23140), (51, 23179), (56, 23209), (58, 23215), (Start: 73 @23278 has 102 MA's), (Start: 117 @23389 has 3 MA's), (165, 23503), (170, 23524), (221, 23620), (233, 23638), (246, 23662), (254, 23674), (314, 23728), (336, 23806), (361, 23902), (366, 23914), (380, 23953), (387, 23989), (443, 24136),

Gene: Berries\_30 Start: 38356, Stop: 39258, Start Num: 137

Candidate Starts for Berries\_30:

(Start: 137 @38356 has 35 MA's), (193, 38494), (223, 38563), (252, 38611), (301, 38674), (314, 38710), (358, 38878), (454, 39130), (473, 39235),

Gene: BetterKatz\_27 Start: 23574, Stop: 24641, Start Num: 100

Candidate Starts for BetterKatz\_27:

(Start: 100 @23574 has 14 MA's), (276, 23952), (323, 24093), (328, 24108), (331, 24120), (337, 24144), (339, 24147), (357, 24228), (406, 24375),

Gene: Bhagsy\_22 Start: 21306, Stop: 22343, Start Num: 76

Candidate Starts for Bhagsy\_22:

(68, 21282), (Start: 73 @21303 has 102 MA's), (Start: 76 @21306 has 170 MA's), (85, 21330), (142, 21468), (156, 21510), (181, 21579), (218, 21639), (243, 21684), (267, 21729), (314, 21810), (331, 21867), (337, 21891), (366, 21996), (385, 22068), (403, 22113), (465, 22278),

Gene: BiPauneto\_47 Start: 34721, Stop: 35812, Start Num: 80

Candidate Starts for BiPauneto\_47:

(Start: 80 @34721 has 33 MA's), (92, 34754), (129, 34850), (199, 35033), (232, 35102), (314, 35240), (318, 35252), (319, 35255),

Gene: Bianmat\_30 Start: 38396, Stop: 39298, Start Num: 137

Candidate Starts for Bianmat\_30:

(Start: 137 @38396 has 35 MA's), (193, 38534), (223, 38603), (252, 38651), (301, 38714), (314, 38750), (358, 38918), (454, 39170), (473, 39275),

Gene: BigNuz\_22 Start: 21497, Stop: 22546, Start Num: 76

Candidate Starts for BigNuz\_22:

(Start: 76 @21497 has 170 MA's), (84, 21518), (142, 21659), (153, 21689), (159, 21710), (187, 21773), (213, 21812), (308, 21971), (342, 22103), (374, 22199), (466, 22484),

Gene: Biglebops\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for Biglebops\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: BillyBobJr\_34 Start: 37893, Stop: 38795, Start Num: 137

Candidate Starts for BillyBobJr\_34:

(Start: 137 @37893 has 35 MA's), (207, 38061), (223, 38097), (236, 38112), (243, 38127), (252, 38139), (314, 38238), (337, 38319), (354, 38373), (429, 38610), (469, 38736), (475, 38778),

Gene: Bipper\_28 Start: 26155, Stop: 27216, Start Num: 76

Candidate Starts for Bipper\_28:

(Start: 76 @26155 has 170 MA's), (132, 26293), (141, 26314), (142, 26317), (158, 26365), (159, 26368), (188, 26443), (218, 26488), (243, 26530), (245, 26533), (254, 26551), (267, 26575), (274, 26587), (279, 26596), (297, 26602), (337, 26734), (359, 26824), (380, 26881), (388, 26917), (398, 26956), (430, 27037), (475, 27199),

Gene: BirksAndSocks\_33 Start: 37840, Stop: 38742, Start Num: 137

Candidate Starts for BirksAndSocks\_33:

(Start: 137 @37840 has 35 MA's), (207, 38008), (223, 38044), (236, 38059), (243, 38074), (252, 38086), (314, 38185), (337, 38266), (354, 38320), (429, 38557), (469, 38683), (475, 38725),

Gene: BirthdayBoy\_34 Start: 29543, Stop: 30589, Start Num: 93

Candidate Starts for BirthdayBoy\_34:

(Start: 93 @29543 has 33 MA's), (143, 29657), (151, 29678), (157, 29699), (173, 29753), (181, 29768), (288, 29966), (307, 30032), (311, 30044), (331, 30113), (371, 30254),

Gene: Blizzard\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Blizzard\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Blocker23\_33 Start: 32804, Stop: 33973, Start Num: 46

Candidate Starts for Blocker23\_33:

(29, 32663), (Start: 46 @32804 has 10 MA's), (Start: 48 @32810 has 84 MA's), (56, 32849), (64, 32879), (81, 32924), (101, 32969), (138, 33068), (159, 33128), (170, 33164), (179, 33188), (204, 33233), (209, 33239), (237, 33290), (258, 33329), (259, 33332), (265, 33344), (275, 33359), (305, 33383), (314, 33416), (336, 33497), (361, 33590), (374, 33626), (378, 33635), (380, 33641), (459, 33866),

Gene: Bluvara\_22 Start: 21380, Stop: 22417, Start Num: 76

Candidate Starts for Bluvara\_22:

(68, 21356), (Start: 73 @21377 has 102 MA's), (Start: 76 @21380 has 170 MA's), (85, 21404), (142, 21542), (156, 21584), (181, 21653), (218, 21713), (243, 21758), (267, 21803), (314, 21884), (331, 21941), (337, 21965), (366, 22070), (385, 22142), (403, 22187),

Gene: Bobquesha\_30 Start: 24333, Stop: 25337, Start Num: 76

Candidate Starts for Bobquesha\_30:

(Start: 76 @24333 has 170 MA's), (146, 24501), (162, 24546), (165, 24552), (185, 24606), (237, 24696), (247, 24717), (254, 24726), (336, 24858), (337, 24861), (378, 24999), (390, 25068), (465, 25272),

Gene: Bock\_27 Start: 23324, Stop: 24391, Start Num: 100

Candidate Starts for Bock\_27:

(Start: 100 @23324 has 14 MA's), (276, 23702), (323, 23843), (328, 23858), (337, 23894), (357, 23978), (406, 24125),

Gene: Boehler\_33 Start: 32374, Stop: 33534, Start Num: 48

Candidate Starts for Boehler\_33:

(Start: 48 @32374 has 84 MA's), (81, 32485), (101, 32530), (138, 32629), (159, 32689), (170, 32725), (179, 32749), (204, 32794), (209, 32800), (237, 32851), (258, 32890), (259, 32893), (265, 32905), (275, 32920), (305, 32944), (314, 32977), (336, 33058), (344, 33103), (361, 33151), (374, 33187), (378, 33196), (380, 33202), (459, 33427),

Gene: Boiiii\_28 Start: 23358, Stop: 24371, Start Num: 73

Candidate Starts for Boiiii\_28:

(17, 22914), (62, 23313), (Start: 73 @23358 has 102 MA's), (Start: 117 @23469 has 3 MA's), (165, 23583), (221, 23700), (246, 23742), (254, 23754), (314, 23808), (336, 23886), (361, 23982), (366, 23994), (377, 24024), (380, 24033), (411, 24147), (443, 24216),

Gene: Boneham\_33 Start: 37839, Stop: 38741, Start Num: 137

Candidate Starts for Boneham\_33:

(Start: 137 @37839 has 35 MA's), (207, 38007), (223, 38043), (236, 38058), (243, 38073), (252, 38085), (314, 38184), (337, 38265), (354, 38319), (429, 38556), (469, 38682), (475, 38724),

Gene: Bongo\_31 Start: 26992, Stop: 28047, Start Num: 76

Candidate Starts for Bongo\_31:

(Start: 76 @26992 has 170 MA's), (159, 27205), (171, 27241), (212, 27304), (251, 27376), (267, 27406), (279, 27427), (307, 27463), (317, 27499), (331, 27547), (336, 27568), (339, 27574), (342, 27604), (343, 27607), (358, 27655), (423, 27844), (431, 27865), (450, 27919),

Gene: Bonum\_48 Start: 35639, Stop: 36694, Start Num: 80

Candidate Starts for Bonum\_48:

(60, 35576), (Start: 80 @35639 has 33 MA's), (160, 35852), (182, 35909), (246, 36035), (366, 36323), (473, 36668),

Gene: BoostSeason\_25 Start: 21308, Stop: 22333, Start Num: 76

Candidate Starts for BoostSeason\_25:

(47, 21224), (Start: 76 @21308 has 170 MA's), (Start: 115 @21413 has 1 MA's), (143, 21473), (162, 21527), (165, 21533), (199, 21614), (202, 21620), (212, 21635), (213, 21638), (339, 21842), (472, 22301), (473, 22310),

Gene: Boyle\_33 Start: 32811, Stop: 33974, Start Num: 48

Candidate Starts for Boyle\_33:

(29, 32664), (Start: 46 @32805 has 10 MA's), (Start: 48 @32811 has 84 MA's), (56, 32850), (64, 32880), (81, 32925), (101, 32970), (138, 33069), (159, 33129), (170, 33165), (179, 33189), (204, 33234), (209, 33240), (237, 33291), (258, 33330), (259, 33333), (265, 33345), (275, 33360), (305, 33384), (314, 33417), (336, 33498), (344, 33543), (361, 33591), (374, 33627), (378, 33636), (380, 33642), (391, 33702), (459, 33867),

Gene: Bricole\_31 Start: 26978, Stop: 28033, Start Num: 76

Candidate Starts for Bricole\_31:

(Start: 76 @26978 has 170 MA's), (159, 27191), (171, 27227), (212, 27290), (251, 27362), (267, 27392), (279, 27413), (307, 27449), (317, 27485), (331, 27533), (336, 27554), (339, 27560), (342, 27590), (343, 27593), (358, 27641), (423, 27830), (431, 27851), (450, 27905),

Gene: Bromden\_23 Start: 22120, Stop: 23205, Start Num: 76

Candidate Starts for Bromden\_23:

(Start: 76 @22120 has 170 MA's), (81, 22132), (171, 22375), (189, 22411), (210, 22450), (215, 22459), (228, 22483), (302, 22594), (310, 22609), (339, 22711), (350, 22756), (366, 22810), (380, 22849), (457, 23092),

Gene: BronnyJr\_22 Start: 21730, Stop: 22797, Start Num: 76

Candidate Starts for BronnyJr\_22:

(Start: 73 @21727 has 102 MA's), (Start: 76 @21730 has 170 MA's), (142, 21892), (156, 21934), (181, 22003), (218, 22063), (243, 22108), (267, 22153), (312, 22222), (314, 22234), (331, 22291), (337, 22315), (379, 22453), (380, 22456),

Gene: Brownie5\_33 Start: 32811, Stop: 33980, Start Num: 46

Candidate Starts for Brownie5\_33:

(29, 32670), (Start: 46 @32811 has 10 MA's), (Start: 48 @32817 has 84 MA's), (56, 32856), (64, 32886), (81, 32931), (101, 32976), (138, 33075), (159, 33135), (170, 33171), (179, 33195), (204, 33240), (209, 33246), (237, 33297), (258, 33336), (259, 33339), (265, 33351), (275, 33366), (305, 33390), (314, 33423), (336, 33504), (361, 33597), (374, 33633), (378, 33642), (380, 33648), (391, 33708), (459, 33873),

Gene: Brusacoram\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Brusacoram\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Bryler\_28 Start: 22694, Stop: 23755, Start Num: 76

Candidate Starts for Bryler\_28:

(Start: 76 @22694 has 170 MA's), (109, 22772), (110, 22775), (Start: 115 @22793 has 1 MA's), (160, 22901), (169, 22928), (170, 22934), (221, 23030), (230, 23042), (300, 23144), (313, 23195), (341, 23312), (418, 23555), (426, 23573), (443, 23612),

Gene: Brylie\_27 Start: 23315, Stop: 24382, Start Num: 100

Candidate Starts for Brylie\_27:

(Start: 100 @23315 has 14 MA's), (180, 23525), (276, 23693), (323, 23834), (328, 23849), (331, 23861), (337, 23885), (357, 23969), (369, 24005), (406, 24116),

Gene: Buggaboo\_46 Start: 36118, Stop: 37173, Start Num: 80

Candidate Starts for Buggaboo\_46:

(Start: 80 @36118 has 33 MA's), (160, 36331), (246, 36514), (366, 36802), (473, 37147),

Gene: Bunnies\_22 Start: 21321, Stop: 22358, Start Num: 76

Candidate Starts for Bunnies\_22:

(68, 21297), (Start: 73 @21318 has 102 MA's), (Start: 76 @21321 has 170 MA's), (85, 21345), (142, 21483), (156, 21525), (181, 21594), (218, 21654), (243, 21699), (267, 21744), (314, 21825), (331, 21882), (337, 21906), (366, 22011), (385, 22083), (403, 22128), (465, 22293),

Gene: Butterball\_33 Start: 37839, Stop: 38741, Start Num: 137

Candidate Starts for Butterball\_33:

(Start: 137 @37839 has 35 MA's), (207, 38007), (223, 38043), (236, 38058), (243, 38073), (252, 38085), (314, 38184), (337, 38265), (354, 38319), (429, 38556), (469, 38682), (475, 38724),

Gene: Butters\_22 Start: 19998, Stop: 21038, Start Num: 74

Candidate Starts for Butters\_22:

(55, 19932), (Start: 74 @19998 has 5 MA's), (140, 20157), (142, 20163), (178, 20271), (181, 20274), (191, 20289), (243, 20379), (267, 20424), (314, 20505), (331, 20562), (337, 20586), (359, 20673), (366, 20691), (385, 20763), (403, 20808), (465, 20973),

Gene: CREW\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for CREW\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: CactusJack\_22 Start: 21561, Stop: 22601, Start Num: 76

Candidate Starts for CactusJack\_22:

(Start: 76 @21561 has 170 MA's), (140, 21720), (142, 21726), (156, 21768), (178, 21834), (181, 21837), (218, 21897), (243, 21942), (267, 21987), (314, 22068), (331, 22125), (337, 22149), (366, 22254), (385, 22326), (403, 22371),

Gene: Cain\_28 Start: 22682, Stop: 23743, Start Num: 76

Candidate Starts for Cain\_28:

(Start: 76 @22682 has 170 MA's), (109, 22760), (110, 22763), (Start: 115 @22781 has 1 MA's), (160, 22889), (169, 22916), (170, 22922), (221, 23018), (230, 23030), (300, 23132), (313, 23183), (341, 23300), (418, 23543), (426, 23561), (443, 23600),

Gene: Calamitous\_33 Start: 32697, Stop: 33860, Start Num: 48

Candidate Starts for Calamitous\_33:

(29, 32550), (Start: 46 @32691 has 10 MA's), (Start: 48 @32697 has 84 MA's), (56, 32736), (64, 32766), (81, 32811), (101, 32856), (138, 32955), (159, 33015), (170, 33051), (179, 33075), (204, 33120), (209, 33126), (237, 33177), (258, 33216), (259, 33219), (265, 33231), (275, 33246), (305, 33270), (314, 33303), (336, 33384), (361, 33477), (374, 33513), (378, 33522), (380, 33528), (459, 33753),

Gene: CallaLilly\_28 Start: 23279, Stop: 24292, Start Num: 73

Candidate Starts for CallaLilly\_28:

(17, 22835), (62, 23234), (Start: 73 @23279 has 102 MA's), (165, 23504), (221, 23621), (246, 23663), (254, 23675), (314, 23729), (336, 23807), (361, 23903), (377, 23945), (380, 23954), (411, 24068), (443, 24137),

Gene: Camster\_22 Start: 21300, Stop: 22367, Start Num: 76

Candidate Starts for Camster\_22:

(68, 21276), (Start: 73 @21297 has 102 MA's), (Start: 76 @21300 has 170 MA's), (85, 21324), (142, 21462), (156, 21504), (181, 21573), (218, 21633), (243, 21678), (267, 21723), (312, 21792), (314, 21804), (331, 21861), (337, 21885), (384, 22056),

Gene: Capricorn\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Capricorn\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: CaseJules\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for CaseJules\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Chancellor\_29 Start: 24596, Stop: 25600, Start Num: 76

Candidate Starts for Chancellor\_29:

(Start: 76 @24596 has 170 MA's), (146, 24764), (162, 24809), (165, 24815), (185, 24869), (191, 24878), (237, 24959), (247, 24980), (252, 24986), (254, 24989), (336, 25121), (337, 25124), (371, 25247),

Gene: Charianelly\_30 Start: 38106, Stop: 39008, Start Num: 137

Candidate Starts for Charianelly\_30:

(Start: 137 @38106 has 35 MA's), (193, 38244), (223, 38313), (252, 38361), (301, 38424), (314, 38460), (358, 38628), (454, 38880), (473, 38985),

Gene: CharlieGBrown\_32 Start: 31944, Stop: 33104, Start Num: 48

Candidate Starts for CharlieGBrown\_32:

(Start: 48 @31944 has 84 MA's), (81, 32055), (101, 32100), (138, 32199), (159, 32259), (170, 32295), (179, 32319), (204, 32364), (209, 32370), (237, 32421), (258, 32460), (259, 32463), (265, 32475), (275, 32490), (305, 32514), (314, 32547), (336, 32628), (344, 32673), (361, 32721), (374, 32757), (378, 32766), (380, 32772), (459, 32997),

Gene: Charminar\_31 Start: 27114, Stop: 28211, Start Num: 93

Candidate Starts for Charminar\_31:

(Start: 93 @27114 has 33 MA's), (143, 27228), (183, 27321), (201, 27354), (203, 27357), (205, 27360), (213, 27381), (218, 27393), (244, 27441), (278, 27504), (295, 27558), (325, 27654), (335, 27696), (368, 27822), (393, 27930), (413, 27969), (446, 28056), (478, 28203),

Gene: Chaser\_21 Start: 21531, Stop: 22616, Start Num: 76

Candidate Starts for Chaser\_21:

(Start: 76 @21531 has 170 MA's), (170, 21783), (189, 21822), (195, 21831), (196, 21834), (210, 21861), (215, 21870), (228, 21894), (256, 21945), (259, 21951), (302, 22005), (366, 22221), (380, 22260), (426, 22401), (439, 22434), (457, 22503),

Gene: Chavito\_28 Start: 22750, Stop: 24003, Start Num: 34

Candidate Starts for Chavito\_28:

(34, 22750), (35, 22756), (49, 22858), (63, 22921), (67, 22939), (Start: 117 @23074 has 3 MA's), (124, 23089), (140, 23125), (160, 23182), (162, 23188), (230, 23323), (239, 23341), (267, 23389), (312, 23407), (339, 23503), (359, 23584), (362, 23593), (377, 23632), (378, 23635), (439, 23833), (472, 23968),

Gene: Che9c\_21 Start: 21007, Stop: 22053, Start Num: 76

Candidate Starts for Che9c\_21:

(Start: 76 @21007 has 170 MA's), (159, 21220), (218, 21331), (243, 21373), (245, 21376), (282, 21445), (336, 21577), (342, 21613), (379, 21721), (431, 21874), (434, 21883), (440, 21895),

Gene: CheetoDust\_28 Start: 23333, Stop: 24346, Start Num: 73

Candidate Starts for CheetoDust\_28:

(17, 22889), (62, 23288), (Start: 73 @23333 has 102 MA's), (130, 23465), (165, 23558), (221, 23675), (246, 23717), (254, 23729), (314, 23783), (336, 23861), (361, 23957), (377, 23999), (380, 24008),

(411, 24122), (443, 24191),

Gene: Cheetobro\_29 Start: 24593, Stop: 25597, Start Num: 76

Candidate Starts for Cheetobro\_29:

(Start: 76 @24593 has 170 MA's), (146, 24761), (162, 24806), (165, 24812), (185, 24866), (191, 24875), (237, 24956), (247, 24977), (252, 24983), (254, 24986), (336, 25118), (337, 25121), (371, 25244),

Gene: CherryTomatoes\_125 Start: 82351, Stop: 83241, Start Num: 135

Candidate Starts for CherryTomatoes\_125:

(Start: 135 @82351 has 4 MA's), (443, 83086),

Gene: Childish\_32 Start: 32094, Stop: 33254, Start Num: 48

Candidate Starts for Childish\_32:

(Start: 48 @32094 has 84 MA's), (81, 32205), (101, 32250), (138, 32349), (159, 32409), (170, 32445), (179, 32469), (204, 32514), (209, 32520), (237, 32571), (258, 32610), (259, 32613), (265, 32625), (275, 32640), (305, 32664), (314, 32697), (336, 32778), (344, 32823), (361, 32871), (374, 32907), (378, 32916), (380, 32922), (459, 33147),

Gene: Chipette\_34 Start: 32584, Stop: 33744, Start Num: 48

Candidate Starts for Chipette\_34:

(Start: 48 @32584 has 84 MA's), (81, 32695), (101, 32740), (138, 32839), (159, 32899), (170, 32935), (179, 32959), (204, 33004), (209, 33010), (237, 33061), (258, 33100), (259, 33103), (265, 33115), (275, 33130), (305, 33154), (314, 33187), (336, 33268), (344, 33313), (361, 33361), (374, 33397), (378, 33406), (380, 33412), (459, 33637),

Gene: Chop\_27 Start: 23849, Stop: 24916, Start Num: 100

Candidate Starts for Chop\_27:

(Start: 100 @23849 has 14 MA's), (276, 24227), (323, 24368), (328, 24383), (331, 24395), (337, 24419), (357, 24503), (359, 24509), (370, 24542), (375, 24554), (406, 24650), (407, 24653), (413, 24674),

Gene: Chris\_27 Start: 22610, Stop: 23596, Start Num: 76

Candidate Starts for Chris\_27:

(Start: 76 @22610 has 170 MA's), (116, 22715), (145, 22778), (153, 22799), (165, 22832), (169, 22847), (197, 22907), (252, 23000), (277, 23039), (337, 23138), (352, 23189), (371, 23261), (380, 23282), (405, 23363), (449, 23465),

Gene: Chubbello\_22 Start: 21298, Stop: 22335, Start Num: 76

Candidate Starts for Chubbello\_22:

(68, 21274), (Start: 73 @21295 has 102 MA's), (Start: 76 @21298 has 170 MA's), (85, 21322), (142, 21460), (156, 21502), (181, 21571), (218, 21631), (243, 21676), (267, 21721), (314, 21802), (331, 21859), (337, 21883), (359, 21970), (366, 21988), (385, 22060), (403, 22105), (465, 22270),

Gene: Chuni\_32 Start: 32385, Stop: 33545, Start Num: 48

Candidate Starts for Chuni\_32:

(Start: 48 @32385 has 84 MA's), (81, 32496), (101, 32541), (138, 32640), (159, 32700), (170, 32736), (179, 32760), (204, 32805), (209, 32811), (237, 32862), (258, 32901), (259, 32904), (265, 32916), (275, 32931), (305, 32955), (314, 32988), (336, 33069), (344, 33114), (361, 33162), (374, 33198), (378, 33207), (380, 33213), (459, 33438),

Gene: CinnamonToast\_34 Start: 37893, Stop: 38795, Start Num: 137

Candidate Starts for CinnamonToast\_34:

(Start: 137 @37893 has 35 MA's), (207, 38061), (223, 38097), (236, 38112), (243, 38127), (252, 38139), (314, 38238), (337, 38319), (354, 38373), (429, 38610), (469, 38736), (475, 38778),

Gene: Clipper\_28 Start: 23333, Stop: 24346, Start Num: 73

Candidate Starts for Clipper\_28:

(17, 22889), (62, 23288), (Start: 73 @23333 has 102 MA's), (Start: 117 @23444 has 3 MA's), (165, 23558), (221, 23675), (246, 23717), (254, 23729), (314, 23783), (336, 23861), (357, 23945), (361, 23957), (366, 23969), (377, 23999), (380, 24008), (411, 24122), (443, 24191),

Gene: Cobra\_33 Start: 32375, Stop: 33535, Start Num: 48

Candidate Starts for Cobra\_33:

(Start: 48 @32375 has 84 MA's), (81, 32486), (101, 32531), (138, 32630), (159, 32690), (170, 32726), (179, 32750), (204, 32795), (209, 32801), (237, 32852), (258, 32891), (259, 32894), (265, 32906), (275, 32921), (305, 32945), (314, 32978), (336, 33059), (344, 33104), (361, 33152), (374, 33188), (378, 33197), (380, 33203), (459, 33428),

Gene: Coffee\_33 Start: 32800, Stop: 33963, Start Num: 48

Candidate Starts for Coffee\_33:

(29, 32653), (Start: 46 @32794 has 10 MA's), (Start: 48 @32800 has 84 MA's), (56, 32839), (64, 32869), (81, 32914), (101, 32959), (138, 33058), (159, 33118), (170, 33154), (179, 33178), (204, 33223), (209, 33229), (237, 33280), (258, 33319), (259, 33322), (265, 33334), (275, 33349), (305, 33373), (314, 33406), (336, 33487), (361, 33580), (374, 33616), (378, 33625), (380, 33631), (459, 33856),

Gene: Collard\_27 Start: 24040, Stop: 25104, Start Num: 76

Candidate Starts for Collard\_27:

(Start: 76 @24040 has 170 MA's), (110, 24130), (120, 24157), (147, 24220), (165, 24268), (177, 24307), (188, 24325), (218, 24370), (239, 24409), (267, 24457), (277, 24475), (317, 24550), (337, 24616), (359, 24706), (360, 24709), (361, 24712), (372, 24745), (394, 24844), (395, 24847), (432, 24931), (437, 24943), (470, 25060),

Gene: Commandaria\_46 Start: 36317, Stop: 37420, Start Num: 80

Candidate Starts for Commandaria\_46:

(Start: 80 @36317 has 33 MA's), (129, 36446), (141, 36476), (314, 36836), (337, 36917), (428, 37220),

Gene: Cornbread\_32 Start: 32091, Stop: 33251, Start Num: 48

Candidate Starts for Cornbread\_32:

(Start: 48 @32091 has 84 MA's), (81, 32202), (101, 32247), (138, 32346), (159, 32406), (170, 32442), (179, 32466), (204, 32511), (209, 32517), (237, 32568), (258, 32607), (259, 32610), (265, 32622), (275, 32637), (305, 32661), (314, 32694), (336, 32775), (344, 32820), (361, 32868), (374, 32904), (378, 32913), (380, 32919), (459, 33144),

Gene: Cosmolli16\_32 Start: 32088, Stop: 33239, Start Num: 48

Candidate Starts for Cosmolli16\_32:

(Start: 48 @32088 has 84 MA's), (81, 32199), (101, 32244), (138, 32343), (159, 32403), (170, 32439), (179, 32463), (204, 32508), (209, 32514), (237, 32565), (249, 32589), (258, 32604), (259, 32607), (265, 32619), (275, 32634), (305, 32658), (314, 32691), (336, 32772), (344, 32817), (361, 32865), (374, 32901), (378, 32910), (380, 32916), (459, 33141),

Gene: Cracklewink\_28 Start: 26155, Stop: 27216, Start Num: 76

Candidate Starts for Cracklewink\_28:

(Start: 76 @26155 has 170 MA's), (132, 26293), (141, 26314), (142, 26317), (158, 26365), (159, 26368), (188, 26443), (218, 26488), (243, 26530), (245, 26533), (254, 26551), (267, 26575), (274,

26587), (279, 26596), (297, 26602), (337, 26734), (359, 26824), (380, 26881), (398, 26956), (430, 27037), (475, 27199),

Gene: Craff\_33 Start: 32372, Stop: 33532, Start Num: 48

Candidate Starts for Craff\_33:

(Start: 48 @32372 has 84 MA's), (81, 32483), (101, 32528), (138, 32627), (159, 32687), (170, 32723), (179, 32747), (204, 32792), (209, 32798), (237, 32849), (258, 32888), (259, 32891), (265, 32903), (275, 32918), (305, 32942), (314, 32975), (336, 33056), (344, 33101), (361, 33149), (374, 33185), (378, 33194), (380, 33200), (459, 33425),

Gene: CrimD\_28 Start: 23294, Stop: 24307, Start Num: 73

Candidate Starts for CrimD\_28:

(Start: 73 @23294 has 102 MA's), (Start: 117 @23405 has 3 MA's), (165, 23519), (221, 23636), (246, 23678), (254, 23690), (314, 23744), (336, 23822), (357, 23906), (361, 23918), (366, 23930), (380, 23969), (468, 24248),

Gene: Curiosium\_29 Start: 23069, Stop: 24148, Start Num: 76

Candidate Starts for Curiosium\_29:

(Start: 76 @23069 has 170 MA's), (86, 23096), (118, 23183), (140, 23228), (145, 23243), (147, 23249), (156, 23276), (161, 23291), (177, 23336), (178, 23339), (187, 23351), (198, 23372), (218, 23399), (230, 23420), (267, 23486), (331, 23630), (336, 23651), (339, 23657), (389, 23855), (402, 23888), (405, 23897),

Gene: Dadosky\_28 Start: 24011, Stop: 25075, Start Num: 76

Candidate Starts for Dadosky\_28:

(Start: 76 @24011 has 170 MA's), (110, 24101), (121, 24131), (145, 24185), (147, 24191), (165, 24239), (177, 24278), (188, 24296), (191, 24299), (239, 24380), (267, 24428), (277, 24446), (337, 24587), (359, 24677), (360, 24680), (361, 24683), (372, 24716), (378, 24728), (394, 24815), (395, 24818), (437, 24914), (470, 25031),

Gene: Dalilpop\_49 Start: 37250, Stop: 38311, Start Num: 79

Candidate Starts for Dalilpop\_49:

(Start: 79 @37250 has 3 MA's), (Start: 117 @37358 has 3 MA's), (140, 37409), (149, 37436), (164, 37481), (195, 37544), (234, 37628), (245, 37649), (250, 37655), (267, 37682), (269, 37685), (356, 37910), (473, 38285),

Gene: Dalmuri\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Dalmuri\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Damp\_30 Start: 37270, Stop: 38172, Start Num: 137

Candidate Starts for Damp\_30:

(Start: 137 @37270 has 35 MA's), (193, 37408), (223, 37477), (252, 37525), (301, 37588), (314, 37624), (358, 37792), (447, 38026), (454, 38044), (473, 38149),

Gene: DanSyl44\_30 Start: 25030, Stop: 26100, Start Num: 76

Candidate Starts for DanSyl44\_30:

(Start: 73 @25027 has 102 MA's), (Start: 76 @25030 has 170 MA's), (168, 25270), (181, 25306), (187, 25315), (191, 25321), (218, 25366), (243, 25411), (252, 25429), (267, 25456), (314, 25537), (331, 25594), (337, 25618),

Gene: Daredevil\_37 Start: 34603, Stop: 35670, Start Num: 78

Candidate Starts for Daredevil\_37:

(Start: 78 @34603 has 2 MA's), (219, 34948), (243, 34993), (260, 35023), (373, 35314), (376, 35320), (381, 35338), (394, 35404), (396, 35407), (409, 35425), (424, 35473), (477, 35659),

Gene: DartGoblin\_28 Start: 23374, Stop: 24276, Start Num: 117

Candidate Starts for DartGoblin\_28:

(62, 23218), (Start: 73 @23263 has 102 MA's), (87, 23296), (Start: 117 @23374 has 3 MA's), (165, 23488), (221, 23605), (246, 23647), (254, 23659), (314, 23713), (336, 23791), (357, 23875), (361, 23887), (366, 23899), (380, 23938), (387, 23974), (443, 24121), (468, 24217),

Gene: DarthP\_27 Start: 23700, Stop: 24704, Start Num: 73

Candidate Starts for DarthP\_27:

(Start: 73 @23700 has 102 MA's), (221, 24042), (321, 24174), (330, 24201), (359, 24315), (405, 24468), (443, 24561), (444, 24564), (461, 24627), (465, 24639),

Gene: Dartin\_28 Start: 22728, Stop: 23693, Start Num: 73

Candidate Starts for Dartin\_28:

(Start: 73 @22728 has 102 MA's), (77, 22734), (140, 22887), (146, 22905), (153, 22923), (165, 22956), (177, 22998), (212, 23058), (221, 23073), (336, 23259), (337, 23262), (356, 23334), (380, 23403), (392, 23451), (399, 23466), (414, 23499), (434, 23538), (467, 23637),

Gene: DaviePasture\_33 Start: 29342, Stop: 30391, Start Num: 93

Candidate Starts for DaviePasture\_33:

(Start: 93 @29342 has 33 MA's), (143, 29456), (151, 29477), (173, 29552), (181, 29567), (212, 29630), (307, 29831), (314, 29855), (362, 30026), (439, 30239), (445, 30254), (456, 30299),

Gene: Deby\_28 Start: 23290, Stop: 24303, Start Num: 73

Candidate Starts for Deby\_28:

(Start: 73 @23290 has 102 MA's), (Start: 117 @23401 has 3 MA's), (165, 23515), (221, 23632), (254, 23686), (314, 23740), (336, 23818), (361, 23914), (366, 23926), (377, 23956), (380, 23965), (411, 24079), (443, 24148),

Gene: DelRio\_28 Start: 24323, Stop: 25387, Start Num: 100

Candidate Starts for DelRio\_28:

(Start: 100 @24323 has 14 MA's), (276, 24701), (323, 24842), (328, 24854), (331, 24866), (337, 24890), (357, 24974), (370, 25013), (406, 25121),

Gene: Demikore\_38 Start: 32041, Stop: 33081, Start Num: 98

Candidate Starts for Demikore\_38:

(Start: 98 @32041 has 3 MA's), (130, 32119), (158, 32197), (272, 32410), (276, 32416), (303, 32494), (331, 32587), (339, 32614),

Gene: Derpp\_32 Start: 31933, Stop: 33093, Start Num: 48

Candidate Starts for Derpp\_32:

(Start: 48 @31933 has 84 MA's), (81, 32044), (101, 32089), (138, 32188), (159, 32248), (170, 32284), (179, 32308), (204, 32353), (209, 32359), (237, 32410), (258, 32449), (259, 32452), (265, 32464), (275, 32479), (305, 32503), (314, 32536), (336, 32617), (344, 32662), (361, 32710), (374, 32746), (378, 32755), (380, 32761), (459, 32986),

Gene: Devera\_28 Start: 23337, Stop: 24350, Start Num: 73

Candidate Starts for Devera\_28:

(Start: 73 @23337 has 102 MA's), (Start: 117 @23448 has 3 MA's), (122, 23457), (165, 23562), (209, 23658), (221, 23679), (246, 23721), (254, 23733), (314, 23787), (336, 23865), (361, 23961), (366, 23973), (380, 24012), (411, 24126), (443, 24195), (468, 24291),

Gene: Diabla\_32 Start: 37690, Stop: 38598, Start Num: 137

Candidate Starts for Diabla\_32:

(Start: 137 @37690 has 35 MA's), (193, 37825), (252, 37942), (301, 38005), (314, 38041), (358, 38209), (473, 38575), (475, 38581),

Gene: Diminimus\_32 Start: 26991, Stop: 28046, Start Num: 76

Candidate Starts for Diminimus\_32:

(Start: 76 @26991 has 170 MA's), (159, 27204), (171, 27240), (212, 27303), (251, 27375), (267, 27405), (279, 27426), (307, 27462), (317, 27498), (331, 27546), (336, 27567), (339, 27573), (342, 27603), (343, 27606), (358, 27654), (431, 27864), (450, 27918),

Gene: DismalFunk\_25 Start: 21282, Stop: 22277, Start Num: 76

Candidate Starts for DismalFunk\_25:

(25, 20961), (33, 21099), (47, 21198), (Start: 76 @21282 has 170 MA's), (108, 21363), (Start: 115 @21387 has 1 MA's), (143, 21447), (162, 21501), (165, 21507), (212, 21609), (213, 21612), (243, 21660), (246, 21666), (270, 21708), (314, 21732), (339, 21816), (359, 21900), (380, 21957), (473, 22254),

Gene: DismalStressor\_25 Start: 21282, Stop: 22277, Start Num: 76

Candidate Starts for DismalStressor\_25:

(33, 21099), (47, 21198), (Start: 76 @21282 has 170 MA's), (108, 21363), (Start: 115 @21387 has 1 MA's), (143, 21447), (162, 21501), (165, 21507), (212, 21609), (213, 21612), (243, 21660), (246, 21666), (270, 21708), (314, 21732), (339, 21816), (359, 21900), (380, 21957), (473, 22254),

Gene: Dogfish\_30 Start: 26617, Stop: 27699, Start Num: 99

Candidate Starts for Dogfish\_30:

(Start: 99 @26617 has 1 MA's), (173, 26827), (212, 26905), (240, 26959), (266, 27004), (292, 27061), (293, 27067), (314, 27130), (331, 27187), (335, 27202), (366, 27319),

Gene: Dole\_28 Start: 23339, Stop: 24352, Start Num: 73

Candidate Starts for Dole\_28:

(Start: 73 @23339 has 102 MA's), (Start: 117 @23450 has 3 MA's), (122, 23459), (165, 23564), (209, 23660), (221, 23681), (246, 23723), (254, 23735), (314, 23789), (336, 23867), (361, 23963), (366, 23975), (380, 24014), (411, 24128), (443, 24197), (468, 24293),

Gene: Donovan\_22 Start: 21288, Stop: 22325, Start Num: 76

Candidate Starts for Donovan\_22:

(68, 21264), (Start: 73 @21285 has 102 MA's), (Start: 76 @21288 has 170 MA's), (85, 21312), (142, 21450), (156, 21492), (181, 21561), (218, 21621), (243, 21666), (267, 21711), (314, 21792), (331, 21849), (337, 21873), (366, 21978), (385, 22050), (403, 22095), (465, 22260),

Gene: DoobyDoo\_32 Start: 28492, Stop: 29541, Start Num: 93

Candidate Starts for DoobyDoo\_32:

(Start: 93 @28492 has 33 MA's), (126, 28567), (143, 28606), (151, 28627), (173, 28702), (181, 28717), (212, 28780), (244, 28840), (293, 28942), (362, 29176), (445, 29404),

Gene: Dori\_29 Start: 28828, Stop: 29994, Start Num: 46

Candidate Starts for Dori\_29:

(Start: 46 @28828 has 10 MA's), (Start: 48 @28834 has 84 MA's), (50, 28846), (54, 28870), (56, 28873), (64, 28903), (81, 28948), (101, 28993), (102, 28996), (170, 29188), (179, 29212), (184, 29218), (200, 29251), (204, 29257), (209, 29263), (210, 29266), (237, 29314), (271, 29377), (273, 29380), (306, 29413), (329, 29488), (336, 29518), (371, 29641), (375, 29650), (378, 29656),

Gene: DoubleChamp\_27 Start: 24040, Stop: 25104, Start Num: 76

Candidate Starts for DoubleChamp\_27:

(Start: 76 @24040 has 170 MA's), (110, 24130), (120, 24157), (147, 24220), (165, 24268), (177, 24307), (188, 24325), (218, 24370), (239, 24409), (267, 24457), (277, 24475), (317, 24550), (337, 24616), (359, 24706), (360, 24709), (361, 24712), (372, 24745), (394, 24844), (395, 24847), (432, 24931), (437, 24943), (470, 25060),

Gene: Douge\_21 Start: 21469, Stop: 22554, Start Num: 76

Candidate Starts for Douge\_21:

(Start: 76 @21469 has 170 MA's), (107, 21547), (170, 21721), (189, 21760), (210, 21799), (228, 21832), (270, 21910), (302, 21943), (350, 22105), (426, 22339), (439, 22372), (447, 22396), (457, 22441),

Gene: Doughnut\_25 Start: 21302, Stop: 22327, Start Num: 76

Candidate Starts for Doughnut\_25:

(47, 21218), (Start: 76 @21302 has 170 MA's), (Start: 115 @21407 has 1 MA's), (143, 21467), (162, 21521), (165, 21527), (199, 21608), (202, 21614), (212, 21629), (213, 21632), (339, 21836), (472, 22295), (473, 22304),

Gene: DrHayes\_28 Start: 23284, Stop: 24297, Start Num: 73

Candidate Starts for DrHayes\_28:

(62, 23239), (Start: 73 @23284 has 102 MA's), (Start: 117 @23395 has 3 MA's), (165, 23509), (221, 23626), (246, 23668), (254, 23680), (314, 23734), (336, 23812), (361, 23908), (366, 23920), (380, 23959), (387, 23995), (443, 24142), (468, 24238),

Gene: DrLupo\_39 Start: 30258, Stop: 31286, Start Num: 72

Candidate Starts for DrLupo\_39:

(Start: 72 @30258 has 4 MA's), (129, 30393), (163, 30486), (221, 30609), (324, 30771), (330, 30786), (332, 30798), (361, 30900), (375, 30939), (398, 31032), (434, 31113), (443, 31128), (475, 31266),

Gene: Dulcita\_32 Start: 26991, Stop: 28046, Start Num: 76

Candidate Starts for Dulcita\_32:

(Start: 76 @26991 has 170 MA's), (159, 27204), (171, 27240), (212, 27303), (251, 27375), (267, 27405), (279, 27426), (307, 27462), (317, 27498), (331, 27546), (336, 27567), (339, 27573), (342, 27603), (343, 27606), (358, 27654), (431, 27864), (450, 27918),

Gene: DumpsterDude\_23 Start: 21990, Stop: 23072, Start Num: 96

Candidate Starts for DumpsterDude\_23:

(52, 21855), (Start: 96 @21990 has 5 MA's), (121, 22062), (173, 22200), (191, 22230), (244, 22338), (268, 22380), (292, 22434), (331, 22560),

Gene: Durfee\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Durfee\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Durga\_33 Start: 32387, Stop: 33547, Start Num: 48

Candidate Starts for Durga\_33:

(Start: 48 @32387 has 84 MA's), (81, 32498), (101, 32543), (138, 32642), (159, 32702), (170, 32738), (179, 32762), (204, 32807), (209, 32813), (237, 32864), (258, 32903), (259, 32906), (265, 32918), (275, 32933), (305, 32957), (314, 32990), (336, 33071), (344, 33116), (361, 33164), (374, 33200), (378, 33209), (380, 33215), (459, 33440),

Gene: Dynamo\_22 Start: 21688, Stop: 22722, Start Num: 76

Candidate Starts for Dynamo\_22:

(Start: 76 @21688 has 170 MA's), (140, 21844), (142, 21850), (178, 21958), (181, 21961), (191, 21976), (243, 22063), (267, 22108), (314, 22189), (331, 22246), (337, 22270), (366, 22375), (385, 22447), (403, 22492),

Gene: DyoEdafos\_22 Start: 21679, Stop: 22761, Start Num: 76

Candidate Starts for DyoEdafos\_22:

(Start: 76 @21679 has 170 MA's), (170, 21931), (189, 21970), (195, 21979), (196, 21982), (210, 22009), (215, 22018), (228, 22042), (258, 22096), (259, 22099), (302, 22153), (340, 22273), (343, 22306), (344, 22309), (366, 22369), (380, 22408), (382, 22423), (417, 22534), (439, 22582),

Gene: Eaglehorse\_33 Start: 32724, Stop: 33887, Start Num: 48

Candidate Starts for Eaglehorse\_33:

(29, 32577), (Start: 46 @32718 has 10 MA's), (Start: 48 @32724 has 84 MA's), (56, 32763), (64, 32793), (81, 32838), (101, 32883), (138, 32982), (159, 33042), (170, 33078), (179, 33102), (204, 33147), (209, 33153), (237, 33204), (258, 33243), (259, 33246), (265, 33258), (275, 33273), (305, 33297), (314, 33330), (336, 33411), (344, 33456), (361, 33504), (374, 33540), (378, 33549), (380, 33555), (459, 33780),

Gene: Edugator\_27 Start: 24010, Stop: 25074, Start Num: 76

Candidate Starts for Edugator\_27:

(Start: 76 @24010 has 170 MA's), (110, 24100), (121, 24130), (145, 24184), (147, 24190), (165, 24238), (177, 24277), (188, 24295), (191, 24298), (239, 24379), (267, 24427), (277, 24445), (337, 24586), (359, 24676), (360, 24679), (361, 24682), (372, 24715), (378, 24727), (394, 24814), (395, 24817), (470, 25030),

Gene: Efra2\_28 Start: 22526, Stop: 23587, Start Num: 73

Candidate Starts for Efra2\_28:

(Start: 73 @22526 has 102 MA's), (Start: 117 @22640 has 3 MA's), (165, 22754), (170, 22775), (210, 22853), (215, 22862), (230, 22883), (233, 22889), (320, 22997), (336, 23057), (363, 23177), (364, 23183), (365, 23189), (386, 23279), (430, 23405), (436, 23420),

Gene: Ekdilam\_25 Start: 23459, Stop: 24463, Start Num: 73

Candidate Starts for Ekdilam\_25:

(Start: 73 @23459 has 102 MA's), (153, 23651), (160, 23672), (170, 23705), (186, 23738), (221, 23801), (321, 23933), (330, 23960), (359, 24074), (405, 24227), (443, 24320), (461, 24386),

Gene: Ellie\_25 Start: 23458, Stop: 24465, Start Num: 73

Candidate Starts for Ellie\_25:

(Start: 73 @23458 has 102 MA's), (111, 23548), (Start: 117 @23569 has 3 MA's), (153, 23650), (165, 23683), (170, 23704), (337, 23989), (346, 24028), (461, 24388), (475, 24448),

Gene: ElvisPhasley\_33 Start: 32409, Stop: 33569, Start Num: 48

Candidate Starts for ElvisPhasley\_33:

(Start: 48 @32409 has 84 MA's), (81, 32520), (101, 32565), (138, 32664), (159, 32724), (170, 32760), (179, 32784), (204, 32829), (209, 32835), (237, 32886), (258, 32925), (259, 32928), (265, 32940),

(275, 32955), (305, 32979), (314, 33012), (336, 33093), (344, 33138), (361, 33186), (374, 33222), (378, 33231), (380, 33237), (459, 33462),

Gene: Emerson\_28 Start: 23316, Stop: 24329, Start Num: 73

Candidate Starts for Emerson\_28:

(17, 22872), (62, 23271), (Start: 73 @23316 has 102 MA's), (165, 23541), (221, 23658), (246, 23700), (254, 23712), (314, 23766), (336, 23844), (361, 23940), (366, 23952), (377, 23982), (380, 23991), (411, 24105), (443, 24174),

Gene: Emianna\_44 Start: 35974, Stop: 37032, Start Num: 80

Candidate Starts for Emianna\_44:

(1, 34534), (2, 34831), (5, 35062), (13, 35431), (40, 35809), (42, 35824), (Start: 46 @35842 has 10 MA's), (Start: 80 @35974 has 33 MA's), (217, 36319), (245, 36370), (277, 36418),

Gene: Emiris\_33 Start: 32358, Stop: 33518, Start Num: 48

Candidate Starts for Emiris\_33:

(Start: 48 @32358 has 84 MA's), (81, 32469), (101, 32514), (138, 32613), (159, 32673), (170, 32709), (179, 32733), (204, 32778), (209, 32784), (237, 32835), (258, 32874), (259, 32877), (265, 32889), (275, 32904), (305, 32928), (314, 32961), (336, 33042), (344, 33087), (361, 33135), (374, 33171), (378, 33180), (380, 33186), (459, 33411),

Gene: Enkosi\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for Enkosi\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: Ennea\_51 Start: 36974, Stop: 38035, Start Num: 80

Candidate Starts for Ennea\_51:

(Start: 80 @36974 has 33 MA's), (150, 37160), (232, 37346), (234, 37349), (339, 37559),

Gene: Eponine\_29 Start: 24914, Stop: 25987, Start Num: 73

Candidate Starts for Eponine\_29:

(Start: 73 @24914 has 102 MA's), (Start: 76 @24917 has 170 MA's), (168, 25157), (181, 25193), (187, 25202), (191, 25208), (218, 25253), (243, 25298), (252, 25316), (267, 25343), (314, 25424), (331, 25481), (337, 25505),

Gene: Erutan\_33 Start: 29002, Stop: 30048, Start Num: 93

Candidate Starts for Erutan\_33:

(Start: 93 @29002 has 33 MA's), (143, 29116), (151, 29137), (173, 29212), (181, 29227), (212, 29290), (314, 29515), (362, 29686), (379, 29731), (445, 29914),

Gene: Etoile\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Etoile\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Eugenia\_33 Start: 32376, Stop: 33536, Start Num: 48

Candidate Starts for Eugenia\_33:

(Start: 48 @32376 has 84 MA's), (81, 32487), (101, 32532), (138, 32631), (159, 32691), (170, 32727), (179, 32751), (204, 32796), (209, 32802), (237, 32853), (258, 32892), (259, 32895), (265, 32907), (275, 32922), (305, 32946), (314, 32979), (336, 33060), (344, 33105), (361, 33153), (374, 33189),

(378, 33198), (380, 33204), (459, 33429),

Gene: Ewald\_30 Start: 26639, Stop: 27724, Start Num: 96

Candidate Starts for Ewald\_30:

(52, 26504), (Start: 96 @26639 has 5 MA's), (140, 26744), (146, 26762), (173, 26849), (288, 27062), (289, 27077), (297, 27104), (303, 27119), (331, 27212), (335, 27227), (350, 27284), (366, 27344), (378, 27377),

Gene: FF47\_25 Start: 21654, Stop: 22679, Start Num: 90

Candidate Starts for FF47\_25:

(Start: 90 @21654 has 2 MA's), (130, 21744), (158, 21813), (161, 21822), (203, 21900), (237, 21963), (238, 21966), (303, 22110), (314, 22146), (342, 22254), (422, 22491), (463, 22617),

Gene: Faiyaz\_28 Start: 26025, Stop: 27062, Start Num: 76

Candidate Starts for Faiyaz\_28:

(Start: 76 @26025 has 170 MA's), (123, 26148), (147, 26202), (159, 26238), (187, 26301), (218, 26349), (249, 26403), (251, 26406), (336, 26592), (342, 26628), (356, 26670), (361, 26688), (380, 26739),

Gene: Fang\_33 Start: 32380, Stop: 33540, Start Num: 48

Candidate Starts for Fang\_33:

(Start: 48 @32380 has 84 MA's), (81, 32491), (101, 32536), (138, 32635), (159, 32695), (170, 32731), (179, 32755), (204, 32800), (209, 32806), (237, 32857), (258, 32896), (259, 32899), (265, 32911), (275, 32926), (305, 32950), (314, 32983), (336, 33064), (344, 33109), (361, 33157), (374, 33193), (378, 33202), (380, 33208), (459, 33433),

Gene: Farewell\_21 Start: 21884, Stop: 22930, Start Num: 76

Candidate Starts for Farewell\_21:

(Start: 76 @21884 has 170 MA's), (153, 22076), (159, 22097), (218, 22208), (243, 22250), (245, 22253), (336, 22454), (342, 22490), (379, 22598), (431, 22751), (434, 22760), (440, 22772),

Gene: FarmResident\_21 Start: 21591, Stop: 22598, Start Num: 107

Candidate Starts for FarmResident\_21:

(Start: 76 @21513 has 170 MA's), (107, 21591), (170, 21765), (189, 21804), (210, 21843), (226, 21873), (228, 21876), (270, 21954), (302, 21987), (350, 22149), (426, 22383), (439, 22416), (447, 22440), (457, 22485),

Gene: Faze9\_33 Start: 32820, Stop: 33983, Start Num: 48

Candidate Starts for Faze9\_33:

(Start: 46 @32814 has 10 MA's), (Start: 48 @32820 has 84 MA's), (56, 32859), (64, 32889), (81, 32934), (101, 32979), (138, 33078), (159, 33138), (170, 33174), (179, 33198), (204, 33243), (209, 33249), (237, 33300), (258, 33339), (259, 33342), (265, 33354), (275, 33369), (305, 33393), (314, 33426), (336, 33507), (344, 33552), (361, 33600), (374, 33636), (378, 33645), (380, 33651), (459, 33876),

Gene: Fefferhead\_27 Start: 23613, Stop: 24665, Start Num: 73

Candidate Starts for Fefferhead\_27:

(64, 23577), (Start: 73 @23613 has 102 MA's), (111, 23703), (Start: 117 @23724 has 3 MA's), (133, 23751), (165, 23838), (170, 23859), (177, 23880), (300, 24069), (321, 24147), (337, 24204), (341, 24237), (348, 24252), (435, 24507), (443, 24522), (462, 24603), (473, 24642),

Gene: FelixAlejandro\_34 Start: 38037, Stop: 38939, Start Num: 137

Candidate Starts for FelixAlejandro\_34:

(Start: 137 @38037 has 35 MA's), (193, 38172), (207, 38205), (236, 38256), (252, 38283), (314, 38382), (337, 38463), (354, 38517), (429, 38754), (469, 38880), (475, 38922),

Gene: Feyre\_27 Start: 23851, Stop: 24918, Start Num: 76

Candidate Starts for Feyre\_27:

(Start: 76 @23851 has 170 MA's), (120, 23968), (161, 24073), (165, 24079), (191, 24139), (198, 24154), (218, 24181), (239, 24220), (242, 24223), (249, 24235), (251, 24238), (252, 24241), (261, 24256), (297, 24301), (299, 24307), (317, 24361), (331, 24409), (340, 24439), (351, 24484), (397, 24667),

Gene: Findley\_25 Start: 21282, Stop: 22307, Start Num: 76

Candidate Starts for Findley\_25:

(33, 21099), (47, 21198), (Start: 76 @21282 has 170 MA's), (108, 21363), (Start: 115 @21387 has 1 MA's), (143, 21447), (162, 21501), (165, 21507), (199, 21588), (202, 21594), (212, 21609), (213, 21612), (339, 21816), (472, 22275), (473, 22284),

Gene: Fionnbharth\_29 Start: 24586, Stop: 25590, Start Num: 76

Candidate Starts for Fionnbharth\_29:

(Start: 76 @24586 has 170 MA's), (Start: 104 @24655 has 1 MA's), (146, 24754), (162, 24799), (165, 24805), (185, 24859), (191, 24868), (212, 24904), (237, 24949), (247, 24970), (252, 24976), (254, 24979), (336, 25111), (337, 25114), (371, 25237), (380, 25258), (465, 25525),

Gene: FirstPlacePfu\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for FirstPlacePfu\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Fishburne\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Fishburne\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Flapper\_49 Start: 36682, Stop: 37743, Start Num: 79

Candidate Starts for Flapper\_49:

(30, 36406), (60, 36619), (Start: 79 @36682 has 3 MA's), (Start: 117 @36790 has 3 MA's), (149, 36868), (195, 36976), (234, 37060), (245, 37081), (250, 37087), (267, 37114), (356, 37342), (379, 37408), (465, 37672), (473, 37717),

Gene: Float294\_47 Start: 36416, Stop: 37477, Start Num: 80

Candidate Starts for Float294\_47:

(Start: 80 @36416 has 33 MA's), (150, 36602), (232, 36788), (234, 36791), (339, 37001), (453, 37340), (465, 37406),

Gene: ForDig\_27 Start: 30056, Stop: 31282, Start Num: 48

Candidate Starts for ForDig\_27:

(Start: 48 @30056 has 84 MA's), (56, 30095), (68, 30137), (70, 30146), (71, 30149), (81, 30170), (101, 30215), (119, 30275), (131, 30296), (133, 30299), (154, 30356), (170, 30410), (171, 30413), (172, 30419), (193, 30458), (204, 30482), (235, 30536), (238, 30542), (240, 30548), (256, 30575), (261, 30584), (287, 30629), (296, 30707), (337, 30842), (342, 30878), (375, 30968), (391, 31028), (415, 31082), (443, 31136),

Gene: Foxboro\_45 Start: 36480, Stop: 37538, Start Num: 80

Candidate Starts for Foxboro\_45:

(1, 35040), (2, 35337), (5, 35568), (13, 35937), (40, 36315), (42, 36330), (Start: 46 @36348 has 10 MA's), (Start: 80 @36480 has 33 MA's), (217, 36825), (245, 36876), (277, 36924),

Gene: Francois\_27 Start: 23338, Stop: 24405, Start Num: 100

Candidate Starts for Francois\_27:

(Start: 100 @23338 has 14 MA's), (276, 23716), (323, 23857), (331, 23884), (337, 23908), (357, 23992), (406, 24139),

Gene: FreakyGoo\_32 Start: 26992, Stop: 28047, Start Num: 76

Candidate Starts for FreakyGoo\_32:

(Start: 76 @26992 has 170 MA's), (159, 27205), (171, 27241), (212, 27304), (251, 27376), (267, 27406), (279, 27427), (307, 27463), (317, 27499), (331, 27547), (336, 27568), (339, 27574), (342, 27604), (343, 27607), (358, 27655), (423, 27844), (431, 27865), (450, 27919),

Gene: FrenchFry\_33 Start: 32814, Stop: 33977, Start Num: 48

Candidate Starts for FrenchFry\_33:

(29, 32667), (Start: 46 @32808 has 10 MA's), (Start: 48 @32814 has 84 MA's), (56, 32853), (64, 32883), (81, 32928), (101, 32973), (138, 33072), (159, 33132), (170, 33168), (179, 33192), (204, 33237), (209, 33243), (237, 33294), (258, 33333), (259, 33336), (265, 33348), (275, 33363), (305, 33387), (314, 33420), (336, 33501), (361, 33594), (374, 33630), (378, 33639), (380, 33645), (391, 33705), (459, 33870),

Gene: Freya\_32 Start: 32064, Stop: 33224, Start Num: 48

Candidate Starts for Freya\_32:

(Start: 48 @32064 has 84 MA's), (81, 32175), (101, 32220), (138, 32319), (159, 32379), (170, 32415), (179, 32439), (204, 32484), (209, 32490), (237, 32541), (258, 32580), (259, 32583), (265, 32595), (275, 32610), (305, 32634), (314, 32667), (336, 32748), (344, 32793), (361, 32841), (374, 32877), (378, 32886), (380, 32892), (459, 33117),

Gene: Fulcrum\_34 Start: 29520, Stop: 30569, Start Num: 93

Candidate Starts for Fulcrum\_34:

(Start: 93 @29520 has 33 MA's), (143, 29634), (151, 29655), (173, 29730), (181, 29745), (212, 29808), (244, 29868), (293, 29970), (314, 30033), (362, 30204), (445, 30432),

Gene: Funsized\_35 Start: 35123, Stop: 36316, Start Num: 48

Candidate Starts for Funsized\_35:

(11, 34694), (38, 35066), (41, 35099), (Start: 48 @35123 has 84 MA's), (94, 35279), (112, 35327), (122, 35354), (131, 35369), (134, 35375), (155, 35432), (170, 35483), (171, 35486), (172, 35492), (179, 35507), (199, 35543), (204, 35552), (258, 35648), (271, 35672), (273, 35675), (309, 35804), (338, 35891), (355, 35945), (473, 36290), (475, 36296),

Gene: Fury\_53 Start: 35397, Stop: 36479, Start Num: 80

Candidate Starts for Fury\_53:

(Start: 80 @35397 has 33 MA's), (122, 35514), (214, 35742), (258, 35826), (261, 35832), (283, 35871), (303, 35886), (318, 35928), (363, 36093), (420, 36273), (465, 36411),

Gene: GOATification\_34 Start: 29520, Stop: 30569, Start Num: 93

Candidate Starts for GOATification\_34:

(Start: 93 @29520 has 33 MA's), (143, 29634), (151, 29655), (173, 29730), (181, 29745), (212, 29808), (244, 29868), (293, 29970), (314, 30033), (362, 30204), (445, 30432),

Gene: GRU1\_34 Start: 28214, Stop: 29290, Start Num: 79

Candidate Starts for GRU1\_34:

(40, 28052), (Start: 79 @28214 has 3 MA's), (Start: 117 @28322 has 3 MA's), (140, 28373), (149, 28400), (195, 28508), (234, 28592), (245, 28613), (250, 28619), (267, 28646), (356, 28874), (453, 29153), (473, 29264),

Gene: GTE5\_36 Start: 29539, Stop: 30600, Start Num: 79

Candidate Starts for GTE5\_36:

(60, 29476), (Start: 79 @29539 has 3 MA's), (Start: 117 @29647 has 3 MA's), (149, 29725), (195, 29833), (234, 29917), (245, 29938), (256, 29950), (267, 29971), (269, 29974), (465, 30529), (473, 30574),

Gene: GTE8\_33 Start: 29229, Stop: 30287, Start Num: 78

Candidate Starts for GTE8\_33:

(40, 29067), (Start: 78 @29229 has 2 MA's), (160, 29445), (246, 29628), (465, 30216), (473, 30261),

Gene: GalacticEye\_30 Start: 38068, Stop: 38970, Start Num: 137

Candidate Starts for GalacticEye\_30:

(Start: 137 @38068 has 35 MA's), (193, 38206), (223, 38275), (252, 38323), (301, 38386), (314, 38422), (358, 38590), (454, 38842), (473, 38947),

Gene: GaloreK\_22 Start: 21295, Stop: 22332, Start Num: 76

Candidate Starts for GaloreK\_22:

(68, 21271), (Start: 73 @21292 has 102 MA's), (Start: 76 @21295 has 170 MA's), (85, 21319), (142, 21457), (156, 21499), (181, 21568), (218, 21628), (243, 21673), (267, 21718), (314, 21799), (331, 21856), (337, 21880), (366, 21985), (385, 22057), (403, 22102), (465, 22267),

Gene: Ganymede\_29 Start: 23336, Stop: 24349, Start Num: 73

Candidate Starts for Ganymede\_29:

(17, 22892), (62, 23291), (Start: 73 @23336 has 102 MA's), (Start: 117 @23447 has 3 MA's), (165, 23561), (221, 23678), (246, 23720), (254, 23732), (311, 23771), (314, 23786), (336, 23864), (357, 23948), (361, 23960), (366, 23972), (380, 24011), (411, 24125), (443, 24194),

Gene: Gavriela\_22 Start: 21561, Stop: 22601, Start Num: 76

Candidate Starts for Gavriela\_22:

(Start: 76 @21561 has 170 MA's), (140, 21720), (142, 21726), (156, 21768), (178, 21834), (181, 21837), (218, 21897), (243, 21942), (267, 21987), (314, 22068), (331, 22125), (337, 22149), (366, 22254), (385, 22326), (403, 22371),

Gene: Genamy16\_33 Start: 27521, Stop: 28618, Start Num: 93

Candidate Starts for Genamy16\_33:

(Start: 93 @27521 has 33 MA's), (143, 27635), (183, 27728), (201, 27761), (203, 27764), (205, 27767), (212, 27785), (213, 27788), (218, 27800), (244, 27848), (278, 27911), (295, 27965), (325, 28061), (335, 28103), (393, 28337), (413, 28376), (446, 28463), (478, 28610),

Gene: GeneCoco\_33 Start: 32381, Stop: 33541, Start Num: 48

Candidate Starts for GeneCoco\_33:

(Start: 48 @32381 has 84 MA's), (81, 32492), (101, 32537), (138, 32636), (159, 32696), (170, 32732), (179, 32756), (204, 32801), (209, 32807), (237, 32858), (258, 32897), (259, 32900), (265, 32912), (275, 32927), (305, 32951), (314, 32984), (336, 33065), (344, 33110), (361, 33158), (374, 33194), (378, 33203), (380, 33209), (459, 33434),

Gene: Gengar\_27 Start: 23958, Stop: 25028, Start Num: 76

Candidate Starts for Gengar\_27:

(Start: 76 @23958 has 170 MA's), (145, 24132), (165, 24186), (188, 24243), (191, 24246), (198, 24261), (218, 24288), (239, 24327), (242, 24330), (249, 24342), (251, 24345), (252, 24348), (299, 24417), (317, 24471), (340, 24549), (351, 24594), (397, 24777),

Gene: Geraldini\_28 Start: 23332, Stop: 24345, Start Num: 73

Candidate Starts for Geraldini\_28:

(17, 22888), (62, 23287), (Start: 73 @23332 has 102 MA's), (Start: 117 @23443 has 3 MA's), (162, 23551), (165, 23557), (221, 23674), (246, 23716), (254, 23728), (314, 23782), (336, 23860), (357, 23944), (361, 23956), (366, 23968), (380, 24007), (411, 24121), (443, 24190),

Gene: Gibbin\_34 Start: 29619, Stop: 30668, Start Num: 93

Candidate Starts for Gibbin\_34:

(Start: 93 @29619 has 33 MA's), (143, 29733), (157, 29775), (173, 29829), (181, 29844), (212, 29907), (362, 30303), (379, 30348), (407, 30438), (445, 30531),

Gene: Glaske\_22 Start: 21561, Stop: 22601, Start Num: 76

Candidate Starts for Glaske\_22:

(Start: 76 @21561 has 170 MA's), (140, 21720), (142, 21726), (156, 21768), (178, 21834), (181, 21837), (218, 21897), (243, 21942), (267, 21987), (314, 22068), (331, 22125), (337, 22149), (366, 22254), (385, 22326), (403, 22371),

Gene: Glaske16\_32 Start: 26991, Stop: 28046, Start Num: 76

Candidate Starts for Glaske16\_32:

(Start: 76 @26991 has 170 MA's), (159, 27204), (171, 27240), (212, 27303), (251, 27375), (267, 27405), (279, 27426), (307, 27462), (317, 27498), (331, 27546), (336, 27567), (339, 27573), (342, 27603), (343, 27606), (358, 27654), (431, 27864), (450, 27918),

Gene: Glass\_33 Start: 32814, Stop: 33977, Start Num: 48

Candidate Starts for Glass\_33:

(Start: 46 @32808 has 10 MA's), (Start: 48 @32814 has 84 MA's), (56, 32853), (64, 32883), (81, 32928), (101, 32973), (138, 33072), (159, 33132), (170, 33168), (179, 33192), (204, 33237), (209, 33243), (237, 33294), (258, 33333), (259, 33336), (265, 33348), (275, 33363), (305, 33387), (314, 33420), (336, 33501), (344, 33546), (361, 33594), (374, 33630), (378, 33639), (380, 33645), (459, 33870),

Gene: GodPhather\_26 Start: 30204, Stop: 31373, Start Num: 46

Candidate Starts for GodPhather\_26:

(Start: 46 @30204 has 10 MA's), (Start: 48 @30210 has 84 MA's), (56, 30249), (64, 30279), (81, 30324), (101, 30369), (138, 30468), (159, 30528), (170, 30564), (179, 30588), (204, 30633), (209, 30639), (237, 30690), (258, 30729), (259, 30732), (265, 30744), (275, 30759), (305, 30783), (314, 30816), (336, 30897), (344, 30942), (361, 30990), (374, 31026), (378, 31035), (380, 31041), (459, 31266),

Gene: GrandSlam\_27 Start: 23849, Stop: 24916, Start Num: 100

Candidate Starts for GrandSlam\_27:

(Start: 100 @23849 has 14 MA's), (276, 24227), (323, 24368), (328, 24383), (331, 24395), (337, 24419), (357, 24503), (359, 24509), (370, 24542), (375, 24554), (406, 24650), (407, 24653), (413, 24674),

Gene: Gretellyn\_33 Start: 29878, Stop: 30933, Start Num: 93

Candidate Starts for Gretellyn\_33:

(Start: 93 @29878 has 33 MA's), (143, 29992), (157, 30034), (173, 30088), (181, 30103), (212, 30166), (244, 30226), (293, 30328), (314, 30391), (362, 30562), (445, 30796),

Gene: GrootJr\_46 Start: 35356, Stop: 36414, Start Num: 80

Candidate Starts for GrootJr\_46:

(1, 33916), (2, 34213), (5, 34444), (13, 34813), (40, 35191), (42, 35206), (Start: 46 @35224 has 10 MA's), (Start: 80 @35356 has 33 MA's), (217, 35701), (245, 35752), (277, 35800),

Gene: Gspu1\_26 Start: 21693, Stop: 22775, Start Num: 80

Candidate Starts for Gspu1\_26:

(Start: 80 @21693 has 33 MA's), (143, 21855), (159, 21903), (163, 21915), (206, 22017), (236, 22077), (252, 22110), (261, 22125), (283, 22164), (326, 22248), (334, 22278), (337, 22290), (380, 22437), (415, 22563), (443, 22620), (472, 22743),

Gene: Guanica15\_28 Start: 22542, Stop: 23603, Start Num: 73

Candidate Starts for Guanica15\_28:

(Start: 73 @22542 has 102 MA's), (Start: 117 @22656 has 3 MA's), (165, 22770), (170, 22791), (215, 22878), (230, 22899), (233, 22905), (320, 23013), (336, 23073), (363, 23193), (364, 23199), (365, 23205), (386, 23295), (430, 23421), (436, 23436),

Gene: Guillaume\_30 Start: 38118, Stop: 39020, Start Num: 137

Candidate Starts for Guillaume\_30:

(Start: 137 @38118 has 35 MA's), (193, 38256), (200, 38274), (223, 38325), (252, 38373), (301, 38436), (314, 38472), (358, 38640), (447, 38874), (454, 38892), (473, 38997),

Gene: Guillsminger\_27 Start: 23933, Stop: 25000, Start Num: 76

Candidate Starts for Guillsminger\_27:

(Start: 76 @23933 has 170 MA's), (120, 24050), (145, 24107), (161, 24155), (165, 24161), (188, 24218), (191, 24221), (198, 24236), (218, 24263), (239, 24302), (242, 24305), (249, 24317), (251, 24320), (252, 24323), (261, 24338), (297, 24383), (299, 24389), (317, 24443), (331, 24491), (340, 24521), (351, 24566), (385, 24695), (397, 24749),

Gene: HC\_22 Start: 21369, Stop: 22406, Start Num: 76

Candidate Starts for HC\_22:

(68, 21345), (Start: 73 @21366 has 102 MA's), (Start: 76 @21369 has 170 MA's), (85, 21393), (142, 21531), (156, 21573), (181, 21642), (218, 21702), (243, 21747), (267, 21792), (314, 21873), (331, 21930), (337, 21954), (366, 22059), (385, 22131), (403, 22176), (465, 22341),

Gene: HUHilltop\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for HUHilltop\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Hail2Pitt\_30 Start: 38595, Stop: 39497, Start Num: 137

Candidate Starts for Hail2Pitt\_30:

(Start: 137 @38595 has 35 MA's), (193, 38733), (223, 38802), (252, 38850), (301, 38913), (314, 38949), (317, 38958), (358, 39117), (447, 39351), (454, 39369), (473, 39474),

Gene: Hammy\_27 Start: 23691, Stop: 24695, Start Num: 73

Candidate Starts for Hammy\_27:

(Start: 73 @23691 has 102 MA's), (189, 23976), (221, 24033), (321, 24165), (330, 24192), (359, 24306), (405, 24459), (443, 24552), (444, 24555), (461, 24618), (465, 24630),

Gene: Hamood\_27 Start: 23849, Stop: 24916, Start Num: 100

Candidate Starts for Hamood\_27:

(Start: 100 @23849 has 14 MA's), (276, 24227), (323, 24368), (328, 24383), (331, 24395), (337, 24419), (357, 24503), (359, 24509), (370, 24542), (375, 24554), (406, 24650), (407, 24653), (413, 24674),

Gene: Harambe\_30 Start: 38385, Stop: 39287, Start Num: 137

Candidate Starts for Harambe\_30:

(Start: 137 @38385 has 35 MA's), (193, 38523), (223, 38592), (252, 38640), (301, 38703), (314, 38739), (358, 38907), (447, 39141), (454, 39159), (473, 39264),

Gene: Hedgerow\_33 Start: 32796, Stop: 33959, Start Num: 48

Candidate Starts for Hedgerow\_33:

(29, 32649), (Start: 46 @32790 has 10 MA's), (Start: 48 @32796 has 84 MA's), (56, 32835), (64, 32865), (81, 32910), (101, 32955), (138, 33054), (159, 33114), (170, 33150), (179, 33174), (204, 33219), (209, 33225), (237, 33276), (258, 33315), (259, 33318), (265, 33330), (275, 33345), (305, 33369), (314, 33402), (336, 33483), (361, 33576), (374, 33612), (378, 33621), (380, 33627), (391, 33687), (459, 33852),

Gene: HedwigODU\_28 Start: 23325, Stop: 24338, Start Num: 73

Candidate Starts for HedwigODU\_28:

(17, 22881), (28, 23028), (62, 23280), (Start: 73 @23325 has 102 MA's), (Start: 117 @23436 has 3 MA's), (165, 23550), (221, 23667), (246, 23709), (254, 23721), (314, 23775), (336, 23853), (361, 23949), (366, 23961), (377, 23991), (380, 24000), (411, 24114), (443, 24183),

Gene: Heftyboy\_27 Start: 24081, Stop: 25148, Start Num: 76

Candidate Starts for Heftyboy\_27:

(Start: 76 @24081 has 170 MA's), (120, 24198), (145, 24255), (161, 24303), (165, 24309), (188, 24366), (191, 24369), (198, 24384), (218, 24411), (239, 24450), (242, 24453), (249, 24465), (251, 24468), (252, 24471), (261, 24486), (297, 24531), (299, 24537), (317, 24591), (331, 24639), (340, 24669), (351, 24714), (385, 24843), (397, 24897),

Gene: Hello\_30 Start: 38347, Stop: 39249, Start Num: 137

Candidate Starts for Hello\_30:

(Start: 137 @38347 has 35 MA's), (193, 38485), (223, 38554), (252, 38602), (301, 38665), (314, 38701), (358, 38869), (454, 39121), (473, 39226),

Gene: HenryJackson\_32 Start: 32090, Stop: 33250, Start Num: 48

Candidate Starts for HenryJackson\_32:

(Start: 48 @32090 has 84 MA's), (81, 32201), (101, 32246), (138, 32345), (159, 32405), (170, 32441), (179, 32465), (204, 32510), (209, 32516), (237, 32567), (258, 32606), (259, 32609), (265, 32621), (275, 32636), (305, 32660), (314, 32693), (336, 32774), (344, 32819), (361, 32867), (374, 32903), (378, 32912), (380, 32918), (459, 33143),

Gene: HighStump\_32 Start: 32073, Stop: 33233, Start Num: 48

Candidate Starts for HighStump\_32:

(Start: 48 @32073 has 84 MA's), (81, 32184), (101, 32229), (138, 32328), (159, 32388), (170, 32424), (179, 32448), (204, 32493), (209, 32499), (237, 32550), (258, 32589), (259, 32592), (265, 32604), (275, 32619), (305, 32643), (314, 32676), (336, 32757), (344, 32802), (361, 32850), (374, 32886), (378, 32895), (380, 32901), (459, 33126),

Gene: Hilltopfarm\_28 Start: 26055, Stop: 27092, Start Num: 76

Candidate Starts for Hilltopfarm\_28:

(Start: 76 @26055 has 170 MA's), (123, 26178), (147, 26232), (159, 26268), (187, 26331), (218, 26379), (249, 26433), (251, 26436), (336, 26622), (342, 26658), (356, 26700), (361, 26718), (380, 26769),

Gene: HogWash\_32 Start: 32379, Stop: 33539, Start Num: 48

Candidate Starts for HogWash\_32:

(Start: 48 @32379 has 84 MA's), (81, 32490), (101, 32535), (138, 32634), (159, 32694), (170, 32730), (179, 32754), (204, 32799), (209, 32805), (237, 32856), (258, 32895), (259, 32898), (265, 32910), (275, 32925), (305, 32949), (314, 32982), (336, 33063), (344, 33108), (361, 33156), (374, 33192), (378, 33201), (380, 33207), (459, 33432),

Gene: Holeinone\_33 Start: 32676, Stop: 33839, Start Num: 48

Candidate Starts for Holeinone\_33:

(29, 32529), (Start: 46 @32670 has 10 MA's), (Start: 48 @32676 has 84 MA's), (56, 32715), (64, 32745), (81, 32790), (101, 32835), (138, 32934), (159, 32994), (170, 33030), (179, 33054), (204, 33099), (209, 33105), (237, 33156), (258, 33195), (259, 33198), (265, 33210), (275, 33225), (305, 33249), (314, 33282), (336, 33363), (361, 33456), (374, 33492), (378, 33501), (380, 33507), (459, 33732),

Gene: HomeFry\_50 Start: 34029, Stop: 35111, Start Num: 80

Candidate Starts for HomeFry\_50:

(Start: 80 @34029 has 33 MA's), (122, 34146), (199, 34341), (320, 34566),

Gene: Homura\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Homura\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Hosp\_025 Start: 28263, Stop: 29486, Start Num: 48

Candidate Starts for Hosp\_025:

(Start: 48 @28263 has 84 MA's), (56, 28302), (71, 28353), (81, 28374), (86, 28389), (101, 28419), (119, 28479), (131, 28500), (133, 28503), (154, 28560), (170, 28614), (171, 28617), (172, 28623), (233, 28737), (271, 28806), (296, 28911), (336, 29043), (339, 29049), (375, 29172), (391, 29232), (415, 29286), (419, 29292), (443, 29340),

Gene: HubbaBubba\_42 Start: 31720, Stop: 32760, Start Num: 79

Candidate Starts for HubbaBubba\_42:

(Start: 79 @31720 has 3 MA's), (129, 31852), (199, 32035), (314, 32242), (317, 32251), (336, 32320), (337, 32323), (357, 32407), (409, 32560), (441, 32644), (443, 32653), (444, 32656), (463, 32752),

Gene: Hurricane\_28 Start: 23950, Stop: 24975, Start Num: 76

Candidate Starts for Hurricane\_28:

(10, 23398), (14, 23464), (16, 23527), (19, 23560), (22, 23602), (33, 23761), (47, 23860), (59, 23917), (Start: 76 @23950 has 170 MA's), (128, 24073), (133, 24082), (143, 24109), (160, 24157), (165, 24169), (170, 24190), (196, 24241), (212, 24271), (323, 24424), (330, 24445), (345, 24517), (357, 24553), (362, 24568), (378, 24610), (380, 24616), (400, 24706), (438, 24805), (440, 24808), (464, 24907), (475, 24958),

Gene: Hyperbowlee\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Hyperbowlee\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: IPhane7\_31 Start: 26992, Stop: 28047, Start Num: 76

Candidate Starts for IPhane7\_31:

(Start: 76 @26992 has 170 MA's), (159, 27205), (171, 27241), (212, 27304), (251, 27376), (267, 27406), (279, 27427), (307, 27463), (317, 27499), (331, 27547), (336, 27568), (339, 27574), (342, 27604), (343, 27607), (358, 27655), (423, 27844), (431, 27865), (450, 27919),

Gene: IdentityCrisis\_21 Start: 19031, Stop: 20086, Start Num: 76

Candidate Starts for IdentityCrisis\_21:

(Start: 76 @19031 has 170 MA's), (120, 19148), (191, 19322), (261, 19439), (264, 19445), (337, 19610), (361, 19703), (379, 19751), (386, 19787), (421, 19880),

Gene: Illumine\_28 Start: 23339, Stop: 24352, Start Num: 73

Candidate Starts for Illumine\_28:

(Start: 73 @23339 has 102 MA's), (Start: 117 @23450 has 3 MA's), (122, 23459), (165, 23564), (209, 23660), (221, 23681), (246, 23723), (254, 23735), (314, 23789), (336, 23867), (361, 23963), (366, 23975), (380, 24014), (411, 24128), (443, 24197), (468, 24293),

Gene: Impisi\_22 Start: 20207, Stop: 21247, Start Num: 76

Candidate Starts for Impisi\_22:

(Start: 76 @20207 has 170 MA's), (142, 20372), (156, 20414), (181, 20483), (218, 20543), (243, 20588), (267, 20633), (312, 20702), (314, 20714), (331, 20771), (337, 20795), (366, 20900), (385, 20972), (403, 21017),

Gene: ImtiyazSitla\_32 Start: 31924, Stop: 33084, Start Num: 48

Candidate Starts for ImtiyazSitla\_32:

(Start: 48 @31924 has 84 MA's), (81, 32035), (101, 32080), (138, 32179), (159, 32239), (170, 32275), (179, 32299), (204, 32344), (209, 32350), (237, 32401), (258, 32440), (259, 32443), (265, 32455), (275, 32470), (305, 32494), (314, 32527), (336, 32608), (344, 32653), (361, 32701), (374, 32737), (378, 32746), (380, 32752), (459, 32977),

Gene: Inky\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Inky\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: InvictusManeo\_27 Start: 24083, Stop: 25147, Start Num: 76

Candidate Starts for InvictusManeo\_27:

(Start: 76 @24083 has 170 MA's), (110, 24173), (120, 24200), (147, 24263), (165, 24311), (177, 24350), (188, 24368), (218, 24413), (239, 24452), (267, 24500), (277, 24518), (317, 24593), (337, 24659), (359, 24749), (360, 24752), (361, 24755), (372, 24788), (394, 24887), (395, 24890), (432, 24974), (437, 24986), (470, 25103),

Gene: ItsyBitsy1\_33 Start: 32678, Stop: 33841, Start Num: 48

Candidate Starts for ItsyBitsy1\_33:

(29, 32531), (Start: 46 @32672 has 10 MA's), (Start: 48 @32678 has 84 MA's), (56, 32717), (64, 32747), (81, 32792), (101, 32837), (138, 32936), (159, 32996), (170, 33032), (179, 33056), (204, 33101), (209, 33107), (237, 33158), (258, 33197), (259, 33200), (265, 33212), (275, 33227), (305, 33251), (314, 33284), (336, 33365), (361, 33458), (374, 33494), (378, 33503), (380, 33509), (459,

33734),

Gene: Izel\_32 Start: 26991, Stop: 28046, Start Num: 76

Candidate Starts for Izel\_32:

(Start: 76 @26991 has 170 MA's), (159, 27204), (171, 27240), (212, 27303), (251, 27375), (267, 27405), (279, 27426), (307, 27462), (317, 27498), (331, 27546), (336, 27567), (339, 27573), (342, 27603), (343, 27606), (358, 27654), (431, 27864), (450, 27918),

Gene: JAWS\_28 Start: 23310, Stop: 24323, Start Num: 73

Candidate Starts for JAWS\_28:

(17, 22866), (62, 23265), (Start: 73 @23310 has 102 MA's), (Start: 117 @23421 has 3 MA's), (165, 23535), (221, 23652), (246, 23694), (254, 23706), (314, 23760), (336, 23838), (361, 23934), (377, 23976), (380, 23985), (411, 24099), (443, 24168),

Gene: JDog\_32 Start: 32090, Stop: 33250, Start Num: 48

Candidate Starts for JDog\_32:

(Start: 48 @32090 has 84 MA's), (81, 32201), (101, 32246), (138, 32345), (159, 32405), (170, 32441), (179, 32465), (204, 32510), (209, 32516), (237, 32567), (258, 32606), (259, 32609), (265, 32621), (275, 32636), (305, 32660), (314, 32693), (336, 32774), (344, 32819), (361, 32867), (374, 32903), (378, 32912), (380, 32918), (459, 33143),

Gene: JF1\_29 Start: 24585, Stop: 25589, Start Num: 76

Candidate Starts for JF1\_29:

(Start: 76 @24585 has 170 MA's), (Start: 104 @24654 has 1 MA's), (146, 24753), (162, 24798), (165, 24804), (185, 24858), (191, 24867), (212, 24903), (237, 24948), (247, 24969), (252, 24975), (254, 24978), (336, 25110), (337, 25113), (371, 25236), (380, 25257), (465, 25524),

Gene: Jalebi\_32 Start: 30054, Stop: 31103, Start Num: 93

Candidate Starts for Jalebi\_32:

(Start: 93 @30054 has 33 MA's), (143, 30168), (151, 30189), (173, 30264), (181, 30279), (212, 30342), (244, 30402), (293, 30504), (314, 30567), (362, 30738), (445, 30966),

Gene: Jamemuya19\_30 Start: 27111, Stop: 28208, Start Num: 93

Candidate Starts for Jamemuya19\_30:

(Start: 93 @27111 has 33 MA's), (143, 27225), (183, 27318), (201, 27351), (203, 27354), (205, 27357), (213, 27378), (218, 27390), (244, 27438), (278, 27501), (295, 27555), (325, 27651), (335, 27693), (393, 27927), (413, 27966), (446, 28053), (478, 28200),

Gene: Jams\_30 Start: 37556, Stop: 38458, Start Num: 137

Candidate Starts for Jams\_30:

(Start: 137 @37556 has 35 MA's), (193, 37694), (223, 37763), (252, 37811), (301, 37874), (314, 37910), (358, 38078), (454, 38330), (473, 38435),

Gene: Jarvi\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Jarvi\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Jayhawk\_28 Start: 23323, Stop: 24336, Start Num: 73

Candidate Starts for Jayhawk\_28:

(17, 22879), (28, 23026), (62, 23278), (Start: 73 @23323 has 102 MA's), (Start: 117 @23434 has 3 MA's), (165, 23548), (221, 23665), (246, 23707), (254, 23719), (314, 23773), (336, 23851), (361,

23947), (366, 23959), (377, 23989), (380, 23998), (411, 24112), (443, 24181),

Gene: Jebeks\_22 Start: 21284, Stop: 22321, Start Num: 76

Candidate Starts for Jebeks\_22:

(68, 21260), (Start: 73 @21281 has 102 MA's), (Start: 76 @21284 has 170 MA's), (85, 21308), (142, 21446), (156, 21488), (181, 21557), (218, 21617), (243, 21662), (267, 21707), (314, 21788), (331, 21845), (337, 21869), (366, 21974), (385, 22046), (403, 22091), (465, 22256),

Gene: Jeckyll\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Jeckyll\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Jellybones\_33 Start: 37898, Stop: 38800, Start Num: 137

Candidate Starts for Jellybones\_33:

(Start: 137 @37898 has 35 MA's), (207, 38066), (223, 38102), (236, 38117), (243, 38132), (252, 38144), (314, 38243), (337, 38324), (354, 38378), (429, 38615), (469, 38741), (475, 38783),

Gene: Jeon\_25 Start: 29946, Stop: 31115, Start Num: 46

Candidate Starts for Jeon\_25:

(Start: 46 @29946 has 10 MA's), (Start: 48 @29952 has 84 MA's), (56, 29991), (64, 30021), (81, 30066), (101, 30111), (138, 30210), (159, 30270), (170, 30306), (179, 30330), (204, 30375), (209, 30381), (237, 30432), (258, 30471), (259, 30474), (265, 30486), (275, 30501), (305, 30525), (314, 30558), (336, 30639), (344, 30684), (361, 30732), (374, 30768), (378, 30777), (380, 30783), (459, 31008),

Gene: Jifall16\_43 Start: 35628, Stop: 36686, Start Num: 80

Candidate Starts for Jifall16\_43:

(1, 34188), (2, 34485), (5, 34716), (13, 35085), (40, 35463), (42, 35478), (Start: 46 @35496 has 10 MA's), (Start: 80 @35628 has 33 MA's), (217, 35973), (245, 36024), (277, 36072),

Gene: Jillium\_32 Start: 32083, Stop: 33243, Start Num: 48

Candidate Starts for Jillium\_32:

(Start: 48 @32083 has 84 MA's), (81, 32194), (101, 32239), (138, 32338), (159, 32398), (170, 32434), (179, 32458), (204, 32503), (209, 32509), (237, 32560), (258, 32599), (259, 32602), (265, 32614), (275, 32629), (305, 32653), (314, 32686), (336, 32767), (344, 32812), (361, 32860), (374, 32896), (378, 32905), (380, 32911), (459, 33136),

Gene: John316\_33 Start: 37851, Stop: 38753, Start Num: 137

Candidate Starts for John316\_33:

(Start: 137 @37851 has 35 MA's), (193, 37986), (207, 38019), (223, 38055), (236, 38070), (243, 38085), (252, 38097), (314, 38196), (337, 38277), (354, 38331), (429, 38568), (469, 38694), (475, 38736),

Gene: Jolie1\_027 Start: 30065, Stop: 31273, Start Num: 48

Candidate Starts for Jolie1\_027:

(Start: 48 @30065 has 84 MA's), (56, 30104), (68, 30146), (70, 30155), (71, 30158), (81, 30179), (101, 30224), (112, 30263), (119, 30284), (131, 30305), (133, 30308), (154, 30365), (170, 30419), (171, 30422), (172, 30428), (192, 30464), (225, 30530), (233, 30542), (235, 30545), (238, 30551), (261, 30593), (290, 30674), (296, 30698), (337, 30833), (342, 30869), (375, 30959), (391, 31019), (415, 31073), (443, 31127),

Gene: Jolie2\_23 Start: 22241, Stop: 23368, Start Num: 48

Candidate Starts for Jolie2\_23:

(27, 22061), (38, 22184), (Start: 48 @22241 has 84 MA's), (170, 22592), (192, 22634), (229, 22709), (271, 22781), (309, 22820), (336, 22919), (337, 22922), (339, 22925), (377, 23051), (427, 23189),

Gene: Jormungandr\_30 Start: 38100, Stop: 39002, Start Num: 137

Candidate Starts for Jormungandr\_30:

(Start: 137 @38100 has 35 MA's), (193, 38238), (223, 38307), (252, 38355), (301, 38418), (314, 38454), (358, 38622), (447, 38856), (454, 38874), (473, 38979),

Gene: Joy99\_28 Start: 23285, Stop: 24298, Start Num: 73

Candidate Starts for Joy99\_28:

(17, 22841), (62, 23240), (Start: 73 @23285 has 102 MA's), (165, 23510), (221, 23627), (246, 23669), (254, 23681), (314, 23735), (336, 23813), (361, 23909), (377, 23951), (380, 23960), (411, 24074), (443, 24143),

Gene: Juliette\_30 Start: 24531, Stop: 25565, Start Num: 74

Candidate Starts for Juliette\_30:

(55, 24465), (Start: 74 @24531 has 5 MA's), (140, 24687), (141, 24690), (156, 24735), (159, 24744), (191, 24819), (243, 24906), (267, 24951), (314, 25032), (331, 25089), (337, 25113), (366, 25218), (385, 25290), (410, 25350), (465, 25500),

Gene: Jumbo\_25 Start: 36377, Stop: 37471, Start Num: 95

Candidate Starts for Jumbo\_25:

(Start: 95 @36377 has 3 MA's), (140, 36485), (194, 36602), (237, 36689), (307, 36851), (331, 36944), (336, 36965), (359, 37052), (446, 37319),

Gene: Jung\_22 Start: 21225, Stop: 22292, Start Num: 76

Candidate Starts for Jung\_22:

(68, 21201), (Start: 73 @21222 has 102 MA's), (Start: 76 @21225 has 170 MA's), (85, 21249), (140, 21381), (142, 21387), (156, 21429), (178, 21495), (181, 21498), (218, 21558), (243, 21603), (267, 21648), (314, 21729), (331, 21786), (337, 21810), (344, 21852), (384, 21981), (389, 22002),

Gene: Juniormint\_22 Start: 21325, Stop: 22380, Start Num: 76

Candidate Starts for Juniormint\_22:

(68, 21301), (Start: 73 @21322 has 102 MA's), (Start: 76 @21325 has 170 MA's), (85, 21349), (142, 21487), (156, 21529), (181, 21598), (218, 21676), (243, 21721), (267, 21766), (314, 21847), (331, 21904), (337, 21928), (366, 22033), (385, 22105), (403, 22150), (465, 22315),

Gene: Kabluna\_48 Start: 35054, Stop: 36109, Start Num: 80

Candidate Starts for Kabluna\_48:

(60, 34991), (Start: 80 @35054 has 33 MA's), (160, 35267), (246, 35450), (366, 35738), (473, 36083),

Gene: Kahve\_32 Start: 32087, Stop: 33247, Start Num: 48

Candidate Starts for Kahve\_32:

(Start: 48 @32087 has 84 MA's), (81, 32198), (101, 32243), (138, 32342), (159, 32402), (170, 32438), (179, 32462), (204, 32507), (209, 32513), (237, 32564), (258, 32603), (259, 32606), (265, 32618), (275, 32633), (305, 32657), (314, 32690), (336, 32771), (344, 32816), (361, 32864), (374, 32900), (378, 32909), (380, 32915), (459, 33140),

Gene: Kaleb\_33 Start: 32811, Stop: 33974, Start Num: 48

Candidate Starts for Kaleb\_33:

(29, 32664), (Start: 46 @32805 has 10 MA's), (Start: 48 @32811 has 84 MA's), (56, 32850), (64, 32880), (81, 32925), (101, 32970), (138, 33069), (159, 33129), (170, 33165), (179, 33189), (204, 33234), (209, 33240), (237, 33291), (258, 33330), (259, 33333), (265, 33345), (275, 33360), (305, 33384), (314, 33417), (336, 33498), (344, 33543), (361, 33591), (374, 33627), (378, 33636), (380, 33642), (459, 33867),

Gene: Kari\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Kari\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Kaseim\_30 Start: 37541, Stop: 38443, Start Num: 137

Candidate Starts for Kaseim\_30:

(Start: 137 @37541 has 35 MA's), (193, 37679), (223, 37748), (252, 37796), (301, 37859), (314, 37895), (358, 38063), (454, 38315), (473, 38420),

Gene: Katniss\_33 Start: 32386, Stop: 33546, Start Num: 48

Candidate Starts for Katniss\_33:

(Start: 48 @32386 has 84 MA's), (81, 32497), (101, 32542), (138, 32641), (159, 32701), (170, 32737), (179, 32761), (204, 32806), (209, 32812), (237, 32863), (258, 32902), (259, 32905), (265, 32917), (275, 32932), (305, 32956), (314, 32989), (336, 33070), (344, 33115), (361, 33163), (374, 33199), (378, 33208), (380, 33214), (459, 33439),

Gene: KayaCho\_27 Start: 30061, Stop: 31269, Start Num: 48

Candidate Starts for KayaCho\_27:

(9, 29536), (11, 29638), (Start: 48 @30061 has 84 MA's), (56, 30100), (71, 30154), (81, 30175), (86, 30190), (101, 30220), (Start: 104 @30235 has 1 MA's), (131, 30301), (133, 30304), (154, 30361), (155, 30364), (170, 30415), (171, 30418), (172, 30424), (174, 30430), (195, 30466), (233, 30538), (235, 30541), (261, 30589), (271, 30607), (296, 30694), (337, 30829), (374, 30952), (375, 30955), (391, 31015), (415, 31069), (419, 31075), (443, 31123),

Gene: Keshu\_28 Start: 23942, Stop: 24964, Start Num: 76

Candidate Starts for Keshu\_28:

(33, 23753), (47, 23852), (59, 23909), (Start: 76 @23942 has 170 MA's), (140, 24092), (160, 24149), (196, 24233), (212, 24263), (330, 24434), (337, 24464), (378, 24599), (398, 24692), (400, 24695), (409, 24716), (438, 24794), (459, 24863), (462, 24893),

Gene: Kevin1\_22 Start: 19999, Stop: 21036, Start Num: 74

Candidate Starts for Kevin1\_22:

(55, 19933), (Start: 74 @19999 has 5 MA's), (140, 20155), (142, 20161), (178, 20269), (191, 20287), (243, 20377), (267, 20422), (314, 20503), (337, 20584), (359, 20671), (366, 20689), (385, 20761), (403, 20806), (465, 20971),

Gene: Khan1\_33 Start: 32108, Stop: 33268, Start Num: 48

Candidate Starts for Khan1\_33:

(Start: 48 @32108 has 84 MA's), (81, 32219), (101, 32264), (138, 32363), (159, 32423), (170, 32459), (179, 32483), (204, 32528), (209, 32534), (237, 32585), (258, 32624), (259, 32627), (265, 32639), (275, 32654), (305, 32678), (314, 32711), (336, 32792), (344, 32837), (361, 32885), (374, 32921), (378, 32930), (380, 32936), (459, 33161),

Gene: KiSi\_27 Start: 22512, Stop: 23480, Start Num: 75

Candidate Starts for KiSi\_27:

(Start: 75 @22512 has 4 MA's), (143, 22674), (145, 22680), (153, 22701), (155, 22707), (169, 22749), (188, 22794), (212, 22836), (221, 22851), (314, 22959), (339, 23043), (431, 23319),

Gene: KidneyBean\_44 Start: 35752, Stop: 36810, Start Num: 80

Candidate Starts for KidneyBean\_44:

(1, 34312), (2, 34609), (5, 34840), (13, 35209), (40, 35587), (42, 35602), (Start: 46 @35620 has 10 MA's), (Start: 80 @35752 has 33 MA's), (217, 36097), (245, 36148), (277, 36196),

Gene: Kikipoo\_33 Start: 32377, Stop: 33537, Start Num: 48

Candidate Starts for Kikipoo\_33:

(Start: 48 @32377 has 84 MA's), (81, 32488), (101, 32533), (138, 32632), (159, 32692), (170, 32728), (179, 32752), (204, 32797), (209, 32803), (237, 32854), (258, 32893), (259, 32896), (265, 32908), (275, 32923), (305, 32947), (314, 32980), (336, 33061), (344, 33106), (361, 33154), (374, 33190), (378, 33199), (380, 33205), (459, 33430),

Gene: KilKor\_22 Start: 21561, Stop: 22601, Start Num: 76

Candidate Starts for KilKor\_22:

(Start: 76 @21561 has 170 MA's), (140, 21720), (142, 21726), (156, 21768), (178, 21834), (181, 21837), (218, 21897), (243, 21942), (267, 21987), (314, 22068), (331, 22125), (337, 22149), (366, 22254), (385, 22326), (403, 22371),

Gene: KleverKiS\_31 Start: 26972, Stop: 28027, Start Num: 76

Candidate Starts for KleverKiS\_31:

(Start: 76 @26972 has 170 MA's), (159, 27185), (171, 27221), (212, 27284), (251, 27356), (267, 27386), (279, 27407), (307, 27443), (317, 27479), (331, 27527), (336, 27548), (339, 27554), (342, 27584), (343, 27587), (358, 27635), (431, 27845), (450, 27899),

Gene: Kolhan\_33 Start: 32690, Stop: 33853, Start Num: 48

Candidate Starts for Kolhan\_33:

(29, 32543), (Start: 46 @32684 has 10 MA's), (Start: 48 @32690 has 84 MA's), (56, 32729), (64, 32759), (81, 32804), (101, 32849), (138, 32948), (159, 33008), (170, 33044), (179, 33068), (204, 33113), (209, 33119), (237, 33170), (258, 33209), (259, 33212), (265, 33224), (305, 33263), (314, 33296), (336, 33377), (361, 33470), (374, 33506), (378, 33515), (380, 33521), (459, 33746),

Gene: Kratio\_26 Start: 23714, Stop: 24778, Start Num: 76

Candidate Starts for Kratio\_26:

(Start: 76 @23714 has 170 MA's), (110, 23804), (121, 23834), (147, 23894), (165, 23942), (177, 23981), (188, 23999), (239, 24083), (267, 24131), (277, 24149), (317, 24224), (337, 24290), (359, 24380), (360, 24383), (361, 24386), (372, 24419), (394, 24518), (395, 24521), (432, 24605), (437, 24617), (470, 24734),

Gene: Kraw\_29 Start: 24509, Stop: 25513, Start Num: 76

Candidate Starts for Kraw\_29:

(Start: 76 @24509 has 170 MA's), (Start: 104 @24578 has 1 MA's), (146, 24677), (162, 24722), (165, 24728), (185, 24782), (191, 24791), (212, 24827), (237, 24872), (247, 24893), (252, 24899), (254, 24902), (336, 25034), (337, 25037), (371, 25160), (380, 25181), (465, 25448),

Gene: Kropertea\_21 Start: 21486, Stop: 22568, Start Num: 76

Candidate Starts for Kropertea\_21:

(Start: 76 @21486 has 170 MA's), (170, 21738), (189, 21777), (195, 21786), (196, 21789), (210, 21816), (215, 21825), (228, 21849), (258, 21903), (259, 21906), (302, 21960), (340, 22080), (343, 22113), (344, 22116), (366, 22176), (380, 22215), (382, 22230), (417, 22341), (439, 22389),

Gene: Krueger\_28 Start: 22638, Stop: 23633, Start Num: 76

Candidate Starts for Krueger\_28:

(47, 22548), (Start: 76 @22638 has 170 MA's), (Start: 115 @22737 has 1 MA's), (Start: 117 @22743 has 3 MA's), (174, 22893), (221, 22974), (237, 22998), (336, 23160), (337, 23163), (358, 23247), (374, 23292), (467, 23571), (471, 23592), (473, 23610),

Gene: Ksquared\_22 Start: 21321, Stop: 22358, Start Num: 76

Candidate Starts for Ksquared\_22:

(68, 21297), (Start: 73 @21318 has 102 MA's), (Start: 76 @21321 has 170 MA's), (85, 21345), (142, 21483), (156, 21525), (181, 21594), (218, 21654), (243, 21699), (267, 21744), (314, 21825), (331, 21882), (337, 21906), (366, 22011), (385, 22083), (403, 22128), (465, 22293),

Gene: Kurt\_44 Start: 35989, Stop: 37047, Start Num: 80

Candidate Starts for Kurt\_44:

(1, 34549), (2, 34846), (5, 35077), (13, 35446), (40, 35824), (42, 35839), (Start: 46 @35857 has 10 MA's), (Start: 80 @35989 has 33 MA's), (217, 36334), (245, 36385), (277, 36433),

Gene: Kwksand96\_32 Start: 31938, Stop: 33098, Start Num: 48

Candidate Starts for Kwksand96\_32:

(Start: 48 @31938 has 84 MA's), (81, 32049), (101, 32094), (138, 32193), (159, 32253), (170, 32289), (179, 32313), (204, 32358), (209, 32364), (237, 32415), (258, 32454), (259, 32457), (265, 32469), (275, 32484), (305, 32508), (314, 32541), (336, 32622), (344, 32667), (361, 32715), (374, 32751), (378, 32760), (380, 32766), (459, 32991),

Gene: Labelle\_37 Start: 32043, Stop: 33083, Start Num: 98

Candidate Starts for Labelle\_37:

(Start: 98 @32043 has 3 MA's), (130, 32121), (158, 32199), (272, 32412), (276, 32418), (303, 32496), (331, 32589), (339, 32616),

Gene: Labeouficaum\_32 Start: 31933, Stop: 33093, Start Num: 48

Candidate Starts for Labeouficaum\_32:

(Start: 48 @31933 has 84 MA's), (81, 32044), (101, 32089), (138, 32188), (159, 32248), (170, 32284), (179, 32308), (204, 32353), (209, 32359), (237, 32410), (258, 32449), (259, 32452), (265, 32464), (275, 32479), (305, 32503), (314, 32536), (336, 32617), (344, 32662), (361, 32710), (374, 32746), (378, 32755), (380, 32761), (459, 32986),

Gene: Lahirium\_30 Start: 38622, Stop: 39524, Start Num: 137

Candidate Starts for Lahirium\_30:

(Start: 137 @38622 has 35 MA's), (193, 38760), (223, 38829), (252, 38877), (301, 38940), (314, 38976), (358, 39144), (447, 39378), (454, 39396), (473, 39501),

Gene: Lambo\_33 Start: 29541, Stop: 30587, Start Num: 93

Candidate Starts for Lambo\_33:

(Start: 93 @29541 has 33 MA's), (143, 29655), (151, 29676), (173, 29751), (181, 29766), (288, 29964), (307, 30030), (311, 30042), (331, 30111), (371, 30252),

Gene: Langerak\_22 Start: 21280, Stop: 22320, Start Num: 73

Candidate Starts for Langerak\_22:

(68, 21259), (Start: 73 @21280 has 102 MA's), (Start: 76 @21283 has 170 MA's), (85, 21307), (142, 21445), (156, 21487), (181, 21556), (218, 21616), (243, 21661), (267, 21706), (314, 21787), (331, 21844), (337, 21868), (366, 21973), (385, 22045), (403, 22090), (465, 22255),

Gene: Lars\_33 Start: 32801, Stop: 33964, Start Num: 48

Candidate Starts for Lars\_33:

(29, 32654), (Start: 46 @32795 has 10 MA's), (Start: 48 @32801 has 84 MA's), (56, 32840), (64, 32870), (81, 32915), (101, 32960), (138, 33059), (159, 33119), (170, 33155), (179, 33179), (204, 33224), (209, 33230), (237, 33281), (258, 33320), (259, 33323), (265, 33335), (275, 33350), (305, 33374), (314, 33407), (336, 33488), (361, 33581), (374, 33617), (378, 33626), (380, 33632), (391, 33692), (459, 33857),

Gene: Larva\_28 Start: 23878, Stop: 24942, Start Num: 76

Candidate Starts for Larva\_28:

(Start: 76 @23878 has 170 MA's), (110, 23968), (121, 23998), (145, 24052), (147, 24058), (165, 24106), (177, 24145), (188, 24163), (191, 24166), (239, 24247), (267, 24295), (277, 24313), (337, 24454), (359, 24544), (360, 24547), (361, 24550), (372, 24583), (378, 24595), (394, 24682), (395, 24685), (437, 24781), (470, 24898),

Gene: LastHope\_28 Start: 22491, Stop: 23498, Start Num: 76

Candidate Starts for LastHope\_28:

(Start: 76 @22491 has 170 MA's), (165, 22710), (170, 22731), (197, 22785), (221, 22827), (258, 22887), (314, 22935), (329, 22983), (336, 23013), (361, 23109), (366, 23121), (380, 23160), (440, 23331), (443, 23343),

Gene: LaterM\_28 Start: 23256, Stop: 24269, Start Num: 73

Candidate Starts for LaterM\_28:

(Start: 73 @23256 has 102 MA's), (Start: 117 @23367 has 3 MA's), (165, 23481), (221, 23598), (246, 23640), (254, 23652), (314, 23706), (336, 23784), (361, 23880), (366, 23892), (380, 23931), (396, 24012), (411, 24045), (443, 24114), (468, 24210),

Gene: LavAbarElk\_31 Start: 27993, Stop: 29042, Start Num: 93

Candidate Starts for LavAbarElk\_31:

(Start: 93 @27993 has 33 MA's), (143, 28107), (151, 28128), (173, 28203), (181, 28218), (212, 28281), (244, 28341), (293, 28443), (314, 28506), (362, 28677), (407, 28812), (445, 28905),

Gene: Lavahound\_26 Start: 23365, Stop: 24360, Start Num: 73

Candidate Starts for Lavahound\_26:

(64, 23329), (Start: 73 @23365 has 102 MA's), (111, 23455), (Start: 117 @23476 has 3 MA's), (162, 23584), (165, 23590), (170, 23611), (177, 23632), (321, 23839), (336, 23893), (337, 23896), (358, 23980), (359, 23983), (380, 24040), (412, 24148),

Gene: LeMond\_27 Start: 22583, Stop: 23551, Start Num: 75

Candidate Starts for LeMond\_27:

(Start: 75 @22583 has 4 MA's), (133, 22718), (143, 22745), (145, 22751), (153, 22772), (155, 22778), (169, 22820), (188, 22865), (212, 22907), (221, 22922), (314, 23030), (339, 23114), (431, 23390),

Gene: Lea83\_28 Start: 23930, Stop: 24949, Start Num: 76

Candidate Starts for Lea83\_28:

(20, 23549), (21, 23561), (24, 23597), (26, 23621), (33, 23741), (47, 23840), (59, 23897), (Start: 76 @23930 has 170 MA's), (88, 23963), (133, 24062), (Start: 135 @24068 has 4 MA's), (140, 24080), (160, 24137), (162, 24143), (185, 24203), (221, 24266), (227, 24275), (247, 24311), (261, 24332), (267, 24344), (317, 24383), (336, 24452), (362, 24551), (380, 24599), (387, 24635), (408, 24698), (421, 24740), (443, 24788), (457, 24830), (473, 24926),

Gene: Lebo14\_29 Start: 24599, Stop: 25603, Start Num: 76

Candidate Starts for Lebo14\_29:

(Start: 76 @24599 has 170 MA's), (146, 24767), (151, 24779), (162, 24812), (165, 24818), (185, 24872), (191, 24881), (237, 24962), (247, 24983), (252, 24989), (254, 24992), (336, 25124), (337, 25127), (371, 25250),

Gene: Lephleur\_33 Start: 32688, Stop: 33857, Start Num: 46

Candidate Starts for Lephleur\_33:

(29, 32547), (Start: 46 @32688 has 10 MA's), (Start: 48 @32694 has 84 MA's), (56, 32733), (64, 32763), (81, 32808), (101, 32853), (138, 32952), (159, 33012), (170, 33048), (179, 33072), (204, 33117), (209, 33123), (237, 33174), (258, 33213), (259, 33216), (265, 33228), (275, 33243), (305, 33267), (314, 33300), (336, 33381), (361, 33474), (374, 33510), (378, 33519), (380, 33525), (459, 33750),

Gene: Leston\_27 Start: 24063, Stop: 25130, Start Num: 76

Candidate Starts for Leston\_27:

(Start: 76 @24063 has 170 MA's), (120, 24180), (145, 24237), (161, 24285), (165, 24291), (188, 24348), (191, 24351), (198, 24366), (218, 24393), (239, 24432), (242, 24435), (249, 24447), (251, 24450), (252, 24453), (261, 24468), (297, 24513), (299, 24519), (317, 24573), (331, 24621), (340, 24651), (351, 24696), (385, 24825), (397, 24879),

Gene: Lidong\_30 Start: 38356, Stop: 39258, Start Num: 137

Candidate Starts for Lidong\_30:

(Start: 137 @38356 has 35 MA's), (193, 38494), (223, 38563), (252, 38611), (301, 38674), (314, 38710), (358, 38878), (454, 39130), (473, 39235),

Gene: LilDirt\_26 Start: 23840, Stop: 24904, Start Num: 76

Candidate Starts for LilDirt\_26:

(Start: 76 @23840 has 170 MA's), (110, 23930), (120, 23957), (147, 24020), (165, 24068), (177, 24107), (188, 24125), (218, 24170), (239, 24209), (267, 24257), (277, 24275), (317, 24350), (337, 24416), (359, 24506), (360, 24509), (361, 24512), (372, 24545), (394, 24644), (395, 24647), (432, 24731), (437, 24743), (470, 24860),

Gene: LilMcDreamy\_28 Start: 31675, Stop: 32907, Start Num: 48

Candidate Starts for LilMcDreamy\_28:

(6, 30913), (7, 30922), (8, 31042), (11, 31252), (Start: 48 @31675 has 84 MA's), (56, 31714), (58, 31720), (81, 31792), (119, 31897), (131, 31918), (154, 31978), (171, 32035), (192, 32077), (202, 32101), (235, 32158), (258, 32200), (271, 32224), (287, 32251), (296, 32329), (336, 32464), (339, 32470), (375, 32593), (391, 32653), (398, 32671), (415, 32707), (419, 32713), (431, 32737), (443, 32761),

Gene: LilPharaoh\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for LilPharaoh\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: LilSmirk\_33 Start: 32688, Stop: 33851, Start Num: 48

Candidate Starts for LilSmirk\_33:

(29, 32541), (Start: 46 @32682 has 10 MA's), (Start: 48 @32688 has 84 MA's), (56, 32727), (64, 32757), (81, 32802), (101, 32847), (138, 32946), (159, 33006), (170, 33042), (179, 33066), (204, 33111), (209, 33117), (237, 33168), (258, 33207), (259, 33210), (265, 33222), (275, 33237), (305, 33261), (314, 33294), (336, 33375), (361, 33468), (374, 33504), (378, 33513), (380, 33519), (459, 33744),

Gene: Lila22\_32 Start: 29496, Stop: 30542, Start Num: 93

Candidate Starts for Lila22\_32:

(Start: 93 @29496 has 33 MA's), (143, 29610), (151, 29631), (173, 29706), (181, 29721), (212, 29784), (293, 29946), (371, 30207),

Gene: LilhomieP\_30 Start: 26992, Stop: 28047, Start Num: 76

Candidate Starts for LilhomieP\_30:

(Start: 76 @26992 has 170 MA's), (159, 27205), (171, 27241), (212, 27304), (251, 27376), (267, 27406), (279, 27427), (307, 27463), (317, 27499), (331, 27547), (336, 27568), (339, 27574), (342, 27604), (343, 27607), (358, 27655), (423, 27844), (431, 27865), (450, 27919),

Gene: LindNT\_28 Start: 23290, Stop: 24303, Start Num: 73

Candidate Starts for LindNT\_28:

(62, 23245), (Start: 73 @23290 has 102 MA's), (Start: 117 @23401 has 3 MA's), (165, 23515), (221, 23632), (246, 23674), (254, 23686), (314, 23740), (336, 23818), (357, 23902), (361, 23914), (366, 23926), (380, 23965), (468, 24244),

Gene: LizLemon\_33 Start: 32810, Stop: 33973, Start Num: 48

Candidate Starts for LizLemon\_33:

(29, 32663), (Start: 46 @32804 has 10 MA's), (Start: 48 @32810 has 84 MA's), (56, 32849), (64, 32879), (81, 32924), (101, 32969), (138, 33068), (159, 33128), (170, 33164), (179, 33188), (204, 33233), (209, 33239), (237, 33290), (258, 33329), (259, 33332), (265, 33344), (275, 33359), (305, 33383), (314, 33416), (336, 33497), (344, 33542), (361, 33590), (374, 33626), (378, 33635), (380, 33641), (459, 33866),

Gene: Llorens\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Llorens\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Lollipop1437\_50 Start: 36962, Stop: 38023, Start Num: 80

Candidate Starts for Lollipop1437\_50:

(Start: 80 @36962 has 33 MA's), (150, 37148), (232, 37334), (234, 37337), (339, 37547),

Gene: LongHai\_26 Start: 22028, Stop: 23053, Start Num: 90

Candidate Starts for LongHai\_26:

(Start: 90 @22028 has 2 MA's), (130, 22118), (237, 22337), (238, 22340), (244, 22352), (303, 22484), (314, 22520), (331, 22571), (342, 22628), (422, 22865), (463, 22991),

Gene: Longacauda\_32 Start: 32077, Stop: 33237, Start Num: 48

Candidate Starts for Longacauda\_32:

(Start: 48 @32077 has 84 MA's), (81, 32188), (101, 32233), (138, 32332), (159, 32392), (170, 32428), (179, 32452), (204, 32497), (209, 32503), (237, 32554), (258, 32593), (259, 32596), (265, 32608), (275, 32623), (305, 32647), (314, 32680), (336, 32761), (344, 32806), (361, 32854), (374, 32890), (378, 32899), (380, 32905), (459, 33130),

Gene: LordVader\_21 Start: 19492, Stop: 20529, Start Num: 76

Candidate Starts for LordVader\_21:

(Start: 76 @19492 has 170 MA's), (85, 19516), (142, 19654), (156, 19696), (181, 19765), (218, 19825), (243, 19870), (267, 19915), (312, 19984), (331, 20053), (337, 20077), (366, 20182), (385, 20254), (403, 20299),

Gene: LuckyLeo\_32 Start: 28919, Stop: 29908, Start Num: 115

Candidate Starts for LuckyLeo\_32:

(Start: 93 @28862 has 33 MA's), (Start: 115 @28919 has 1 MA's), (155, 29009), (157, 29018), (159, 29024), (162, 29033), (181, 29087), (288, 29285), (307, 29351), (311, 29363), (331, 29432), (371, 29573), (407, 29681),

Gene: Luker\_31 Start: 38575, Stop: 39477, Start Num: 137

Candidate Starts for Luker\_31:

(Start: 137 @38575 has 35 MA's), (193, 38713), (223, 38782), (252, 38830), (301, 38893), (314, 38929), (358, 39097), (447, 39331), (454, 39349), (473, 39454),

Gene: Lunahalos\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Lunahalos\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: MacKat\_28 Start: 23333, Stop: 24346, Start Num: 73

Candidate Starts for MacKat\_28:

(17, 22889), (62, 23288), (Start: 73 @23333 has 102 MA's), (Start: 117 @23444 has 3 MA's), (165, 23558), (221, 23675), (246, 23717), (254, 23729), (314, 23783), (336, 23861), (357, 23945), (361, 23957), (366, 23969), (377, 23999), (380, 24008), (411, 24122), (443, 24191),

Gene: MacnCheese\_29 Start: 24319, Stop: 25308, Start Num: 76

Candidate Starts for MacnCheese\_29:

(47, 24199), (59, 24256), (Start: 76 @24319 has 170 MA's), (88, 24352), (133, 24448), (Start: 135 @24454 has 4 MA's), (161, 24526), (237, 24676), (247, 24697), (264, 24724), (337, 24841), (357, 24919), (361, 24931), (362, 24934), (461, 25231),

Gene: Maco6\_23 Start: 20985, Stop: 22013, Start Num: 90

Candidate Starts for Maco6\_23:

(Start: 90 @20985 has 2 MA's), (130, 21075), (158, 21144), (161, 21153), (203, 21231), (237, 21294), (238, 21297), (303, 21441), (314, 21477), (331, 21528), (342, 21585), (422, 21825), (463, 21951),

Gene: Madruga\_36 Start: 31712, Stop: 32752, Start Num: 98

Candidate Starts for Madruga\_36:

(Start: 98 @31712 has 3 MA's), (130, 31790), (158, 31868), (272, 32081), (276, 32087), (303, 32165), (331, 32258), (339, 32285),

Gene: Majeke\_22 Start: 21305, Stop: 22342, Start Num: 76

Candidate Starts for Majeke\_22:

(68, 21281), (Start: 73 @21302 has 102 MA's), (Start: 76 @21305 has 170 MA's), (85, 21329), (142, 21467), (156, 21509), (181, 21578), (218, 21638), (243, 21683), (267, 21728), (314, 21809), (331, 21866), (337, 21890), (366, 21995), (385, 22067), (403, 22112), (465, 22277),

Gene: MakCheese\_24 Start: 21714, Stop: 22658, Start Num: 140

Candidate Starts for MakCheese\_24:

(Start: 95 @21606 has 3 MA's), (140, 21714), (194, 21855), (225, 21927), (244, 21960), (317, 22134), (329, 22173), (331, 22182), (366, 22305), (378, 22338), (392, 22410), (416, 22458), (420, 22461), (445, 22524),

Gene: MalagasyRose\_28 Start: 22698, Stop: 23777, Start Num: 76

Candidate Starts for MalagasyRose\_28:

(Start: 76 @22698 has 170 MA's), (84, 22719), (118, 22812), (139, 22854), (140, 22857), (145, 22872), (165, 22926), (171, 22947), (177, 22965), (218, 23028), (230, 23049), (252, 23088), (267, 23115), (277, 23133), (317, 23211), (322, 23229), (380, 23424), (389, 23484), (439, 23607),

Gene: Malithi\_22 Start: 21221, Stop: 22261, Start Num: 73

Candidate Starts for Malithi\_22:

(68, 21200), (Start: 73 @21221 has 102 MA's), (Start: 76 @21224 has 170 MA's), (85, 21248), (142, 21386), (156, 21428), (181, 21497), (218, 21557), (243, 21602), (267, 21647), (314, 21728), (331, 21785), (337, 21809), (366, 21914), (385, 21986), (403, 22031), (465, 22196),

Gene: Malthus\_30 Start: 24509, Stop: 25513, Start Num: 76

Candidate Starts for Malthus\_30:

(Start: 76 @24509 has 170 MA's), (Start: 104 @24578 has 1 MA's), (146, 24677), (162, 24722), (165, 24728), (185, 24782), (191, 24791), (212, 24827), (237, 24872), (247, 24893), (252, 24899), (254, 24902), (336, 25034), (337, 25037), (371, 25160), (380, 25181), (440, 25352), (465, 25448),

Gene: Mangethe\_22 Start: 21305, Stop: 22342, Start Num: 76

Candidate Starts for Mangethe\_22:

(68, 21281), (Start: 73 @21302 has 102 MA's), (Start: 76 @21305 has 170 MA's), (85, 21329), (142, 21467), (156, 21509), (181, 21578), (218, 21638), (243, 21683), (267, 21728), (314, 21809), (331, 21866), (337, 21890), (366, 21995), (385, 22067), (403, 22112), (465, 22277),

Gene: Manilisa\_32 Start: 27398, Stop: 28474, Start Num: 99

Candidate Starts for Manilisa\_32:

(Start: 99 @27398 has 1 MA's), (144, 27515), (155, 27545), (173, 27608), (210, 27683), (212, 27686), (248, 27755), (255, 27767), (297, 27860), (331, 27962), (335, 27977), (350, 28034),

Gene: Mao1\_27 Start: 28750, Stop: 29910, Start Num: 48

Candidate Starts for Mao1\_27:

(Start: 48 @28750 has 84 MA's), (54, 28786), (64, 28819), (81, 28864), (101, 28909), (102, 28912), (170, 29104), (179, 29128), (184, 29134), (209, 29179), (210, 29182), (237, 29230), (271, 29293), (273, 29296), (306, 29329), (329, 29404), (336, 29434), (371, 29557), (375, 29566), (378, 29572), (475, 29893),

Gene: Marcoliusprime\_25 Start: 21282, Stop: 22277, Start Num: 76

Candidate Starts for Marcoliusprime\_25:

(33, 21099), (47, 21198), (Start: 76 @21282 has 170 MA's), (108, 21363), (Start: 115 @21387 has 1 MA's), (143, 21447), (162, 21501), (165, 21507), (212, 21609), (213, 21612), (243, 21660), (246, 21666), (270, 21708), (314, 21732), (339, 21816), (359, 21900), (380, 21957), (473, 22254),

Gene: MarkPhew\_28 Start: 22462, Stop: 23448, Start Num: 76

Candidate Starts for MarkPhew\_28:

(Start: 76 @22462 has 170 MA's), (116, 22567), (145, 22630), (153, 22651), (155, 22657), (160, 22672), (169, 22699), (197, 22759), (212, 22786), (277, 22891), (337, 22990), (358, 23074), (371, 23113), (424, 23263), (449, 23317), (457, 23332),

Gene: Marshawn\_29 Start: 23145, Stop: 24104, Start Num: 76

Candidate Starts for Marshawn\_29:

(Start: 76 @23145 has 170 MA's), (87, 23175), (141, 23301), (146, 23316), (160, 23355), (169, 23382), (215, 23475), (221, 23484), (246, 23526), (314, 23592), (336, 23670), (337, 23673), (362, 23766), (399, 23874), (413, 23910),

Gene: Mask\_28 Start: 28743, Stop: 29903, Start Num: 48

Candidate Starts for Mask\_28:

(Start: 48 @28743 has 84 MA's), (54, 28779), (64, 28812), (81, 28857), (101, 28902), (102, 28905), (170, 29097), (179, 29121), (184, 29127), (200, 29160), (204, 29166), (209, 29172), (210, 29175), (237, 29223), (271, 29286), (273, 29289), (306, 29322), (329, 29397), (336, 29427), (371, 29550), (375, 29559), (378, 29565),

Gene: Maskar\_32 Start: 31924, Stop: 33084, Start Num: 48

Candidate Starts for Maskar\_32:

(Start: 48 @31924 has 84 MA's), (81, 32035), (101, 32080), (138, 32179), (159, 32239), (170, 32275), (179, 32299), (204, 32344), (209, 32350), (237, 32401), (258, 32440), (259, 32443), (265, 32455), (275, 32470), (305, 32494), (314, 32527), (336, 32608), (344, 32653), (361, 32701), (374, 32737), (378, 32746), (380, 32752), (459, 32977),

Gene: MasterPo\_33 Start: 32691, Stop: 33860, Start Num: 46

Candidate Starts for MasterPo\_33:

(Start: 46 @32691 has 10 MA's), (Start: 48 @32697 has 84 MA's), (56, 32736), (64, 32766), (81, 32811), (101, 32856), (138, 32955), (159, 33015), (170, 33051), (179, 33075), (204, 33120), (209, 33126), (237, 33177), (258, 33216), (259, 33219), (265, 33231), (275, 33246), (305, 33270), (314, 33303), (336, 33384), (344, 33429), (361, 33477), (374, 33513), (378, 33522), (380, 33528), (459, 33753),

Gene: McMater\_28 Start: 22728, Stop: 23693, Start Num: 73

Candidate Starts for McMater\_28:

(Start: 73 @22728 has 102 MA's), (77, 22734), (140, 22887), (146, 22905), (153, 22923), (165, 22956), (177, 22998), (212, 23058), (221, 23073), (336, 23259), (337, 23262), (356, 23334), (380, 23403), (392, 23451), (399, 23466), (414, 23499), (434, 23538), (467, 23637),

Gene: Mdavu\_24 Start: 22888, Stop: 23895, Start Num: 76

Candidate Starts for Mdavu\_24:

(61, 22837), (65, 22849), (Start: 76 @22888 has 170 MA's), (103, 22948), (133, 23020), (153, 23074), (160, 23095), (221, 23224), (247, 23269), (251, 23272), (313, 23329), (314, 23332), (328, 23377), (337, 23413), (361, 23509), (366, 23521), (397, 23641), (452, 23773),

Gene: MeaningOfLife\_28 Start: 23292, Stop: 24305, Start Num: 73

Candidate Starts for MeaningOfLife\_28:

(17, 22848), (62, 23247), (Start: 73 @23292 has 102 MA's), (Start: 117 @23403 has 3 MA's), (162, 23511), (165, 23517), (221, 23634), (246, 23676), (254, 23688), (314, 23742), (336, 23820), (357, 23904), (361, 23916), (366, 23928), (380, 23967), (411, 24081), (443, 24150),

Gene: Megiddo\_22 Start: 21561, Stop: 22601, Start Num: 76

Candidate Starts for Megiddo\_22:

(Start: 76 @21561 has 170 MA's), (140, 21720), (142, 21726), (156, 21768), (178, 21834), (181, 21837), (218, 21897), (243, 21942), (267, 21987), (314, 22068), (331, 22125), (337, 22149), (366, 22254), (385, 22326), (403, 22371),

Gene: Megsy\_28 Start: 23293, Stop: 24306, Start Num: 73

Candidate Starts for Megsy\_28:

(17, 22849), (62, 23248), (Start: 73 @23293 has 102 MA's), (Start: 117 @23404 has 3 MA's), (165, 23518), (221, 23635), (246, 23677), (254, 23689), (314, 23743), (336, 23821), (357, 23905), (361, 23917), (366, 23929), (380, 23968), (468, 24247),

Gene: MelsMeow\_32 Start: 31973, Stop: 33133, Start Num: 48

Candidate Starts for MelsMeow\_32:

(Start: 48 @31973 has 84 MA's), (81, 32084), (101, 32129), (138, 32228), (159, 32288), (170, 32324), (179, 32348), (204, 32393), (209, 32399), (237, 32450), (258, 32489), (259, 32492), (265, 32504), (275, 32519), (305, 32543), (314, 32576), (336, 32657), (344, 32702), (361, 32750), (374, 32786), (378, 32795), (380, 32801), (459, 33026),

Gene: MerCougar\_46 Start: 36238, Stop: 37293, Start Num: 80

Candidate Starts for MerCougar\_46:

(60, 36175), (Start: 80 @36238 has 33 MA's), (160, 36451), (234, 36610), (246, 36634), (366, 36922), (465, 37222), (473, 37267),

Gene: Mesh1\_33 Start: 32382, Stop: 33542, Start Num: 48

Candidate Starts for Mesh1\_33:

(Start: 48 @32382 has 84 MA's), (81, 32493), (101, 32538), (138, 32637), (159, 32697), (170, 32733), (179, 32757), (204, 32802), (209, 32808), (237, 32859), (258, 32898), (259, 32901), (265, 32913), (275, 32928), (305, 32952), (314, 32985), (336, 33066), (344, 33111), (361, 33159), (374, 33195), (378, 33204), (380, 33210), (459, 33435),

Gene: Meyran\_29 Start: 27126, Stop: 28187, Start Num: 105

Candidate Starts for Meyran\_29:

(Start: 96 @27099 has 5 MA's), (Start: 105 @27126 has 1 MA's), (173, 27309), (248, 27456), (297, 27561), (323, 27642), (331, 27669), (335, 27684), (350, 27747), (366, 27807), (450, 28044),

Gene: MichelleMyBell\_22 Start: 20029, Stop: 21114, Start Num: 76

Candidate Starts for MichelleMyBell\_22:

(55, 19963), (Start: 76 @20029 has 170 MA's), (142, 20191), (181, 20302), (218, 20362), (243, 20407), (314, 20533), (317, 20542), (331, 20590),

Gene: Milly\_25 Start: 21282, Stop: 22277, Start Num: 76

Candidate Starts for Milly\_25:

(33, 21099), (47, 21198), (Start: 76 @21282 has 170 MA's), (108, 21363), (Start: 115 @21387 has 1 MA's), (143, 21447), (162, 21501), (165, 21507), (212, 21609), (213, 21612), (243, 21660), (246, 21666), (270, 21708), (314, 21732), (339, 21816), (359, 21900), (380, 21957), (473, 22254),

Gene: Mima20\_31 Start: 29243, Stop: 30292, Start Num: 93

Candidate Starts for Mima20\_31:

(Start: 93 @29243 has 33 MA's), (126, 29318), (143, 29357), (151, 29378), (173, 29453), (181, 29468), (212, 29531), (244, 29591), (293, 29693), (362, 29927), (407, 30062), (445, 30155),

Gene: Minos\_31 Start: 38098, Stop: 39000, Start Num: 137

Candidate Starts for Minos\_31:

(Start: 137 @38098 has 35 MA's), (193, 38236), (223, 38305), (252, 38353), (301, 38416), (314, 38452), (358, 38620), (454, 38872), (473, 38977),

Gene: Miryou\_27 Start: 23918, Stop: 24985, Start Num: 76

Candidate Starts for Miryou\_27:

(Start: 76 @23918 has 170 MA's), (120, 24035), (145, 24092), (161, 24140), (165, 24146), (188, 24203), (191, 24206), (198, 24221), (218, 24248), (239, 24287), (242, 24290), (249, 24302), (251, 24305), (252, 24308), (261, 24323), (297, 24368), (299, 24374), (317, 24428), (331, 24476), (340, 24506), (351, 24551), (385, 24680), (397, 24734),

Gene: MissDaisy\_29 Start: 24351, Stop: 25355, Start Num: 76

Candidate Starts for MissDaisy\_29:

(Start: 76 @24351 has 170 MA's), (146, 24519), (162, 24564), (165, 24570), (185, 24624), (237, 24714), (247, 24735), (254, 24744), (336, 24876), (337, 24879), (371, 25002), (380, 25023), (465, 25290),

Gene: Mitti\_29 Start: 24509, Stop: 25513, Start Num: 76

Candidate Starts for Mitti\_29:

(Start: 76 @24509 has 170 MA's), (146, 24677), (162, 24722), (165, 24728), (185, 24782), (237, 24872), (247, 24893), (254, 24902), (336, 25034), (337, 25037), (356, 25112), (380, 25181), (455, 25391),

Gene: MoiGyank\_35 Start: 29924, Stop: 30973, Start Num: 93

Candidate Starts for MoiGyank\_35:

(Start: 93 @29924 has 33 MA's), (126, 29999), (143, 30038), (151, 30059), (173, 30134), (181, 30149), (212, 30212), (244, 30272), (293, 30374), (314, 30437), (362, 30608), (445, 30836),

Gene: MrPhizzler\_33 Start: 32085, Stop: 33245, Start Num: 48

Candidate Starts for MrPhizzler\_33:

(Start: 48 @32085 has 84 MA's), (81, 32196), (101, 32241), (138, 32340), (159, 32400), (170, 32436), (179, 32460), (204, 32505), (209, 32511), (237, 32562), (258, 32601), (259, 32604), (265, 32616), (275, 32631), (305, 32655), (314, 32688), (336, 32769), (344, 32814), (361, 32862), (374, 32898), (378, 32907), (380, 32913), (459, 33138),

Gene: MrWormie\_30 Start: 37259, Stop: 38161, Start Num: 137

Candidate Starts for MrWormie\_30:

(Start: 137 @37259 has 35 MA's), (193, 37397), (223, 37466), (252, 37514), (301, 37577), (314, 37613), (358, 37781), (454, 38033), (473, 38138),

Gene: Msay19\_34 Start: 38032, Stop: 38934, Start Num: 137

Candidate Starts for Msay19\_34:

(Start: 137 @38032 has 35 MA's), (175, 38137), (193, 38167), (206, 38197), (211, 38209), (261, 38293), (301, 38341), (314, 38377), (337, 38458), (354, 38512), (379, 38602), (429, 38749), (475, 38917),

Gene: Muddy\_25 Start: 21935, Stop: 22960, Start Num: 90

Candidate Starts for Muddy\_25:

(Start: 90 @21935 has 2 MA's), (130, 22025), (203, 22181), (237, 22244), (238, 22247), (303, 22391), (314, 22427), (331, 22478), (342, 22535), (409, 22733), (422, 22772), (463, 22898),

Gene: Mufasa\_25 Start: 21302, Stop: 22327, Start Num: 76

Candidate Starts for Mufasa\_25:

(47, 21218), (Start: 76 @21302 has 170 MA's), (Start: 115 @21407 has 1 MA's), (143, 21467), (162, 21521), (165, 21527), (199, 21608), (202, 21614), (212, 21629), (213, 21632), (339, 21836), (472, 22295),

Gene: Mulch\_27 Start: 23315, Stop: 24382, Start Num: 100

Candidate Starts for Mulch\_27:

(Start: 100 @23315 has 14 MA's), (180, 23525), (276, 23693), (323, 23834), (328, 23849), (331, 23861), (337, 23885), (357, 23969), (369, 24005), (406, 24116),

Gene: Murucutumbu\_28 Start: 23275, Stop: 24288, Start Num: 73

Candidate Starts for Murucutumbu\_28:

(Start: 73 @23275 has 102 MA's), (Start: 117 @23386 has 3 MA's), (165, 23500), (221, 23617), (246, 23659), (314, 23725), (336, 23803), (337, 23806), (361, 23899), (366, 23911), (371, 23929), (380,

23950), (411, 24064), (443, 24133), (468, 24229),

Gene: Mynx\_28 Start: 23339, Stop: 24352, Start Num: 73

Candidate Starts for Mynx\_28:

(17, 22895), (62, 23294), (Start: 73 @23339 has 102 MA's), (165, 23564), (221, 23681), (246, 23723), (254, 23735), (314, 23789), (336, 23867), (361, 23963), (366, 23975), (377, 24005), (380, 24014), (411, 24128), (443, 24197),

Gene: Nadeem\_27 Start: 23315, Stop: 24382, Start Num: 100

Candidate Starts for Nadeem\_27:

(Start: 100 @23315 has 14 MA's), (180, 23525), (276, 23693), (323, 23834), (328, 23849), (331, 23861), (337, 23885), (357, 23969), (406, 24116),

Gene: NancyRae\_27 Start: 23321, Stop: 24388, Start Num: 100

Candidate Starts for NancyRae\_27:

(Start: 100 @23321 has 14 MA's), (180, 23531), (276, 23699), (323, 23840), (328, 23855), (331, 23867), (337, 23891), (357, 23975), (369, 24011), (406, 24122),

Gene: NatB6\_44 Start: 35025, Stop: 36083, Start Num: 80

Candidate Starts for NatB6\_44:

(1, 33585), (2, 33882), (5, 34113), (13, 34482), (40, 34860), (42, 34875), (Start: 46 @34893 has 10 MA's), (Start: 80 @35025 has 33 MA's), (217, 35370), (245, 35421), (277, 35469),

Gene: Nathan\_33 Start: 32407, Stop: 33567, Start Num: 48

Candidate Starts for Nathan\_33:

(Start: 48 @32407 has 84 MA's), (81, 32518), (101, 32563), (138, 32662), (159, 32722), (170, 32758), (179, 32782), (204, 32827), (209, 32833), (237, 32884), (258, 32923), (259, 32926), (265, 32938), (275, 32953), (305, 32977), (314, 33010), (336, 33091), (344, 33136), (361, 33184), (374, 33220), (378, 33229), (380, 33235), (459, 33460),

Gene: Nazo\_22 Start: 21497, Stop: 22546, Start Num: 76

Candidate Starts for Nazo\_22:

(Start: 76 @21497 has 170 MA's), (84, 21518), (142, 21659), (153, 21689), (159, 21710), (187, 21773), (213, 21812), (308, 21971), (342, 22103), (374, 22199), (466, 22484),

Gene: Necropolis\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Necropolis\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Neighly\_28 Start: 23877, Stop: 24941, Start Num: 76

Candidate Starts for Neighly\_28:

(Start: 76 @23877 has 170 MA's), (110, 23967), (121, 23997), (145, 24051), (147, 24057), (165, 24105), (177, 24144), (188, 24162), (191, 24165), (239, 24246), (267, 24294), (277, 24312), (337, 24453), (359, 24543), (360, 24546), (361, 24549), (372, 24582), (378, 24594), (394, 24681), (395, 24684), (437, 24780), (470, 24897),

Gene: Neoevie\_30 Start: 38362, Stop: 39264, Start Num: 137

Candidate Starts for Neoevie\_30:

(Start: 137 @38362 has 35 MA's), (193, 38500), (223, 38569), (252, 38617), (301, 38680), (314, 38716), (317, 38725), (358, 38884), (447, 39118), (454, 39136), (473, 39241),

Gene: Newt\_31 Start: 38589, Stop: 39491, Start Num: 137

Candidate Starts for Newt\_31:

(Start: 137 @38589 has 35 MA's), (193, 38727), (223, 38796), (252, 38844), (301, 38907), (314, 38943), (358, 39111), (454, 39363), (473, 39468),

Gene: Nibb\_27 Start: 22603, Stop: 23589, Start Num: 76

Candidate Starts for Nibb\_27:

(Start: 76 @22603 has 170 MA's), (116, 22708), (141, 22759), (145, 22771), (153, 22792), (155, 22798), (160, 22813), (169, 22840), (197, 22900), (212, 22927), (267, 23020), (277, 23032), (334, 23119), (337, 23131), (358, 23215), (371, 23254), (381, 23281), (401, 23350), (424, 23404),

Gene: Nikao\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for Nikao\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: Niklas\_28 Start: 22731, Stop: 23696, Start Num: 73

Candidate Starts for Niklas\_28:

(Start: 73 @22731 has 102 MA's), (77, 22737), (140, 22890), (146, 22908), (153, 22926), (165, 22959), (177, 23001), (212, 23061), (221, 23076), (336, 23262), (337, 23265), (356, 23337), (380, 23406), (392, 23454), (399, 23469), (414, 23502), (434, 23541), (467, 23640),

Gene: Nimi13\_30 Start: 38107, Stop: 39009, Start Num: 137

Candidate Starts for Nimi13\_30:

(Start: 137 @38107 has 35 MA's), (193, 38245), (223, 38314), (252, 38362), (301, 38425), (314, 38461), (317, 38470), (358, 38629), (447, 38863), (454, 38881), (473, 38986),

Gene: NorManre\_34 Start: 29125, Stop: 30174, Start Num: 93

Candidate Starts for NorManre\_34:

(Start: 93 @29125 has 33 MA's), (126, 29200), (143, 29239), (151, 29260), (173, 29335), (181, 29350), (212, 29413), (314, 29638), (362, 29809), (445, 30037), (456, 30082),

Gene: NosilaM\_48 Start: 35951, Stop: 37006, Start Num: 80

Candidate Starts for NosilaM\_48:

(Start: 80 @35951 has 33 MA's), (160, 36164), (246, 36347), (366, 36635), (473, 36980),

Gene: NovaSharks\_32 Start: 27111, Stop: 28208, Start Num: 93

Candidate Starts for NovaSharks\_32:

(Start: 93 @27111 has 33 MA's), (143, 27225), (183, 27318), (201, 27351), (203, 27354), (205, 27357), (213, 27378), (218, 27390), (244, 27438), (278, 27501), (295, 27555), (325, 27651), (335, 27693), (393, 27927), (413, 27966), (446, 28053), (478, 28200),

Gene: November\_26 Start: 23628, Stop: 24632, Start Num: 73

Candidate Starts for November\_26:

(23, 23256), (64, 23592), (Start: 73 @23628 has 102 MA's), (113, 23730), (160, 23841), (170, 23874), (221, 23970), (330, 24129), (359, 24243), (405, 24396), (443, 24489),

Gene: NovumRegina\_44 Start: 35355, Stop: 36413, Start Num: 80

Candidate Starts for NovumRegina\_44:

(1, 33915), (2, 34212), (5, 34443), (13, 34812), (40, 35190), (42, 35205), (Start: 46 @35223 has 10 MA's), (Start: 80 @35355 has 33 MA's), (217, 35700), (245, 35751), (277, 35799),

Gene: Nutello\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for Nutello\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: Nyceirae\_31 Start: 26839, Stop: 27909, Start Num: 96

Candidate Starts for Nyceirae\_31:

(Start: 96 @26839 has 5 MA's), (127, 26920), (140, 26944), (173, 27049), (203, 27106), (212, 27127), (238, 27175), (297, 27301), (314, 27352), (331, 27409), (335, 27424), (366, 27541),

Gene: OkiRoe\_27 Start: 23934, Stop: 25001, Start Num: 76

Candidate Starts for OkiRoe\_27:

(Start: 76 @23934 has 170 MA's), (120, 24051), (145, 24108), (161, 24156), (165, 24162), (191, 24222), (198, 24237), (218, 24264), (239, 24303), (242, 24306), (249, 24318), (251, 24321), (252, 24324), (261, 24339), (297, 24384), (299, 24390), (317, 24444), (331, 24492), (340, 24522), (351, 24567), (385, 24696), (397, 24750),

Gene: OmniCritical\_29 Start: 24494, Stop: 25498, Start Num: 76

Candidate Starts for OmniCritical\_29:

(Start: 76 @24494 has 170 MA's), (146, 24662), (162, 24707), (165, 24713), (185, 24767), (191, 24776), (237, 24857), (247, 24878), (252, 24884), (254, 24887), (336, 25019), (337, 25022), (371, 25145), (455, 25376),

Gene: Omnicron\_28 Start: 22797, Stop: 23876, Start Num: 76

Candidate Starts for Omnicron\_28:

(Start: 76 @22797 has 170 MA's), (86, 22824), (145, 22971), (147, 22977), (165, 23025), (177, 23064), (188, 23082), (198, 23100), (239, 23166), (261, 23202), (274, 23226), (277, 23232), (321, 23325), (347, 23427), (359, 23472), (378, 23517), (379, 23520), (382, 23538), (386, 23559), (393, 23601), (402, 23619), (439, 23715), (440, 23718), (475, 23859),

Gene: Opia\_33 Start: 32684, Stop: 33847, Start Num: 48

Candidate Starts for Opia\_33:

(29, 32537), (Start: 46 @32678 has 10 MA's), (Start: 48 @32684 has 84 MA's), (56, 32723), (64, 32753), (81, 32798), (101, 32843), (138, 32942), (159, 33002), (170, 33038), (179, 33062), (204, 33107), (209, 33113), (237, 33164), (258, 33203), (259, 33206), (265, 33218), (275, 33233), (305, 33257), (314, 33290), (336, 33371), (361, 33464), (374, 33500), (378, 33509), (380, 33515), (459, 33740),

Gene: Orion\_33 Start: 32366, Stop: 33526, Start Num: 48

Candidate Starts for Orion\_33:

(Start: 48 @32366 has 84 MA's), (81, 32477), (101, 32522), (138, 32621), (159, 32681), (170, 32717), (179, 32741), (204, 32786), (209, 32792), (237, 32843), (258, 32882), (259, 32885), (265, 32897), (275, 32912), (305, 32936), (314, 32969), (336, 33050), (344, 33095), (361, 33143), (374, 33179), (378, 33188), (380, 33194), (459, 33419),

Gene: Oscar\_27 Start: 22584, Stop: 23552, Start Num: 75

Candidate Starts for Oscar\_27:

(Start: 75 @22584 has 4 MA's), (143, 22746), (145, 22752), (153, 22773), (155, 22779), (169, 22821), (188, 22866), (212, 22908), (221, 22923), (314, 23031), (339, 23115), (431, 23391),

Gene: OtterstedtS21\_33 Start: 29200, Stop: 30249, Start Num: 93

Candidate Starts for OtterstedtS21\_33:

(Start: 93 @29200 has 33 MA's), (143, 29314), (157, 29356), (173, 29410), (181, 29425), (212, 29488), (244, 29548), (293, 29650), (314, 29713), (362, 29884), (445, 30112),

Gene: Outis\_46 Start: 35932, Stop: 36987, Start Num: 80

Candidate Starts for Outis\_46:

(60, 35869), (Start: 80 @35932 has 33 MA's), (160, 36145), (234, 36304), (246, 36328), (366, 36616), (465, 36916), (473, 36961),

Gene: PG1\_33 Start: 32379, Stop: 33539, Start Num: 48

Candidate Starts for PG1\_33:

(Start: 48 @32379 has 84 MA's), (81, 32490), (101, 32535), (138, 32634), (159, 32694), (170, 32730), (179, 32754), (204, 32799), (209, 32805), (237, 32856), (258, 32895), (259, 32898), (265, 32910), (275, 32925), (305, 32949), (314, 32982), (336, 33063), (344, 33108), (361, 33156), (374, 33192), (378, 33201), (380, 33207), (459, 33432),

Gene: Padfoot\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Padfoot\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Padpat\_28 Start: 23316, Stop: 24329, Start Num: 73

Candidate Starts for Padpat\_28:

(17, 22872), (62, 23271), (Start: 73 @23316 has 102 MA's), (165, 23541), (221, 23658), (246, 23700), (254, 23712), (314, 23766), (336, 23844), (361, 23940), (366, 23952), (377, 23982), (380, 23991), (411, 24105), (443, 24174),

Gene: Panchino\_21 Start: 20180, Stop: 21217, Start Num: 76

Candidate Starts for Panchino\_21:

(Start: 76 @20180 has 170 MA's), (140, 20336), (142, 20342), (178, 20450), (191, 20468), (243, 20558), (267, 20603), (314, 20684), (337, 20765), (359, 20852), (366, 20870), (385, 20942), (403, 20987), (465, 21152),

Gene: Paola\_27 Start: 23933, Stop: 25000, Start Num: 76

Candidate Starts for Paola\_27:

(Start: 76 @23933 has 170 MA's), (120, 24050), (145, 24107), (161, 24155), (165, 24161), (188, 24218), (191, 24221), (198, 24236), (218, 24263), (239, 24302), (242, 24305), (249, 24317), (251, 24320), (252, 24323), (261, 24338), (297, 24383), (299, 24389), (317, 24443), (331, 24491), (340, 24521), (351, 24566), (385, 24695), (397, 24749),

Gene: Parada\_27 Start: 23315, Stop: 24382, Start Num: 100

Candidate Starts for Parada\_27:

(Start: 100 @23315 has 14 MA's), (180, 23525), (276, 23693), (323, 23834), (328, 23849), (331, 23861), (337, 23885), (357, 23969), (369, 24005), (406, 24116),

Gene: ParvusTarda\_33 Start: 28670, Stop: 29716, Start Num: 93

Candidate Starts for ParvusTarda\_33:

(Start: 93 @28670 has 33 MA's), (143, 28784), (151, 28805), (173, 28880), (181, 28895), (212, 28958), (293, 29120), (362, 29354),

Gene: Patience\_38 Start: 32593, Stop: 33633, Start Num: 98

Candidate Starts for Patience\_38:

(Start: 98 @32593 has 3 MA's), (130, 32671), (158, 32749), (272, 32962), (276, 32968), (303, 33046), (331, 33139), (339, 33166),

Gene: Patio\_48 Start: 36198, Stop: 37259, Start Num: 80

Candidate Starts for Patio\_48:

(Start: 80 @36198 has 33 MA's), (150, 36384), (232, 36570), (234, 36573), (339, 36783),

Gene: Patos\_34 Start: 29125, Stop: 30174, Start Num: 93

Candidate Starts for Patos\_34:

(Start: 93 @29125 has 33 MA's), (126, 29200), (143, 29239), (151, 29260), (173, 29335), (181, 29350), (212, 29413), (314, 29638), (362, 29809), (445, 30037), (456, 30082),

Gene: Patt\_29 Start: 24327, Stop: 25331, Start Num: 76

Candidate Starts for Patt\_29:

(Start: 76 @24327 has 170 MA's), (146, 24495), (162, 24540), (165, 24546), (185, 24600), (237, 24690), (247, 24711), (254, 24720), (336, 24852), (337, 24855), (378, 24993), (390, 25062),

Gene: Peanam\_28 Start: 22728, Stop: 23693, Start Num: 73

Candidate Starts for Peanam\_28:

(Start: 73 @22728 has 102 MA's), (77, 22734), (140, 22887), (146, 22905), (153, 22923), (165, 22956), (177, 22998), (212, 23058), (221, 23073), (254, 23127), (336, 23259), (337, 23262), (356, 23334), (380, 23403), (392, 23451), (399, 23466), (414, 23499), (434, 23538), (467, 23637),

Gene: PeanutPie\_22 Start: 21330, Stop: 22343, Start Num: 85

Candidate Starts for PeanutPie\_22:

(68, 21282), (Start: 73 @21303 has 102 MA's), (Start: 76 @21306 has 170 MA's), (85, 21330), (142, 21468), (156, 21510), (181, 21579), (218, 21639), (243, 21684), (267, 21729), (314, 21810), (331, 21867), (337, 21891), (366, 21996), (385, 22068), (403, 22113), (465, 22278),

Gene: Peel\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Peel\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: PegLeg\_31 Start: 26991, Stop: 28046, Start Num: 76

Candidate Starts for PegLeg\_31:

(Start: 76 @26991 has 170 MA's), (159, 27204), (171, 27240), (212, 27303), (251, 27375), (267, 27405), (279, 27426), (307, 27462), (317, 27498), (331, 27546), (336, 27567), (339, 27573), (342, 27603), (343, 27606), (358, 27654), (423, 27843), (431, 27864), (450, 27918),

Gene: Pemberton\_48 Start: 33038, Stop: 34129, Start Num: 80

Candidate Starts for Pemberton\_48:

(Start: 80 @33038 has 33 MA's), (92, 33071), (129, 33167), (199, 33350), (232, 33419), (314, 33557), (318, 33569), (319, 33572),

Gene: Phalm\_22 Start: 21561, Stop: 22601, Start Num: 76

Candidate Starts for Phalm\_22:

(Start: 76 @21561 has 170 MA's), (140, 21720), (142, 21726), (156, 21768), (178, 21834), (181, 21837), (218, 21897), (243, 21942), (267, 21987), (314, 22068), (331, 22125), (337, 22149), (366, 22254), (385, 22326), (403, 22371),

Gene: Phantasmagoria\_33 Start: 32695, Stop: 33858, Start Num: 48

Candidate Starts for Phantasmagoria\_33:

(Start: 46 @32689 has 10 MA's), (Start: 48 @32695 has 84 MA's), (56, 32734), (64, 32764), (81, 32809), (101, 32854), (138, 32953), (159, 33013), (170, 33049), (179, 33073), (204, 33118), (209, 33124), (237, 33175), (258, 33214), (259, 33217), (265, 33229), (275, 33244), (305, 33268), (314, 33301), (336, 33382), (344, 33427), (361, 33475), (374, 33511), (378, 33520), (380, 33526), (459, 33751),

Gene: Pharb\_27 Start: 23529, Stop: 24596, Start Num: 72

Candidate Starts for Pharb\_27:

(Start: 72 @23529 has 4 MA's), (88, 23565), (91, 23568), (Start: 117 @23634 has 3 MA's), (133, 23661), (151, 23709), (160, 23736), (165, 23748), (170, 23769), (202, 23835), (254, 23919), (298, 23976), (300, 23979), (336, 24111), (337, 24114), (341, 24147), (349, 24162), (379, 24255), (399, 24345),

Gene: Phareon\_33 Start: 32078, Stop: 33238, Start Num: 48

Candidate Starts for Phareon\_33:

(Start: 48 @32078 has 84 MA's), (81, 32189), (101, 32234), (138, 32333), (159, 32393), (170, 32429), (179, 32453), (204, 32498), (209, 32504), (237, 32555), (258, 32594), (259, 32597), (265, 32609), (275, 32624), (305, 32648), (314, 32681), (336, 32762), (344, 32807), (361, 32855), (374, 32891), (378, 32900), (380, 32906), (459, 33131),

Gene: PhatCats2014\_33 Start: 32383, Stop: 33543, Start Num: 48

Candidate Starts for PhatCats2014\_33:

(Start: 48 @32383 has 84 MA's), (81, 32494), (101, 32539), (138, 32638), (159, 32698), (170, 32734), (179, 32758), (204, 32803), (209, 32809), (237, 32860), (258, 32899), (259, 32902), (265, 32914), (275, 32929), (305, 32953), (314, 32986), (336, 33067), (344, 33112), (361, 33160), (374, 33196), (378, 33205), (380, 33211), (459, 33436),

Gene: Phayonce\_22 Start: 21448, Stop: 22485, Start Num: 76

Candidate Starts for Phayonce\_22:

(Start: 76 @21448 has 170 MA's), (142, 21610), (159, 21661), (171, 21697), (187, 21724), (218, 21772), (251, 21829), (270, 21865), (336, 22018), (342, 22054), (366, 22126), (410, 22261), (431, 22315), (460, 22393),

Gene: Phegasus\_22 Start: 21305, Stop: 22342, Start Num: 76

Candidate Starts for Phegasus\_22:

(68, 21281), (Start: 73 @21302 has 102 MA's), (Start: 76 @21305 has 170 MA's), (85, 21329), (142, 21467), (156, 21509), (181, 21578), (218, 21638), (243, 21683), (267, 21728), (314, 21809), (331, 21866), (337, 21890), (366, 21995), (385, 22067), (403, 22112), (465, 22277),

Gene: PhelpsODU\_28 Start: 22720, Stop: 23781, Start Num: 76

Candidate Starts for PhelpsODU\_28:

(47, 22630), (59, 22687), (Start: 76 @22720 has 170 MA's), (Start: 115 @22819 has 1 MA's), (160, 22927), (165, 22939), (170, 22960), (221, 23056), (300, 23170), (313, 23221), (341, 23338), (418, 23581), (426, 23599), (443, 23638),

Gene: Phineas\_22 Start: 21670, Stop: 22707, Start Num: 76

Candidate Starts for Phineas\_22:

(Start: 76 @21670 has 170 MA's), (142, 21835), (156, 21877), (178, 21943), (181, 21946), (191, 21961), (243, 22048), (267, 22093), (314, 22174), (331, 22231), (337, 22255), (366, 22360), (385, 22432), (403, 22477),

Gene: Phishy\_30 Start: 26793, Stop: 27842, Start Num: 95

Candidate Starts for Phishy\_30:

(Start: 95 @26793 has 3 MA's), (173, 27003), (212, 27081), (272, 27189), (323, 27339), (327, 27351), (331, 27366), (382, 27543), (409, 27618),

Gene: Phomeo\_43 Start: 35624, Stop: 36682, Start Num: 80

Candidate Starts for Phomeo\_43:

(1, 34184), (2, 34481), (5, 34712), (13, 35081), (40, 35459), (42, 35474), (Start: 46 @35492 has 10 MA's), (Start: 80 @35624 has 33 MA's), (217, 35969), (245, 36020), (277, 36068),

Gene: Phrank\_28 Start: 22670, Stop: 23731, Start Num: 76

Candidate Starts for Phrank\_28:

(Start: 76 @22670 has 170 MA's), (109, 22748), (110, 22751), (Start: 115 @22769 has 1 MA's), (160, 22877), (169, 22904), (170, 22910), (221, 23006), (230, 23018), (300, 23120), (313, 23171), (341, 23288), (418, 23531), (426, 23549), (443, 23588),

Gene: Phrann\_21 Start: 20409, Stop: 21479, Start Num: 73

Candidate Starts for Phrann\_21:

(Start: 73 @20409 has 102 MA's), (Start: 76 @20412 has 170 MA's), (142, 20574), (156, 20616), (181, 20685), (218, 20745), (243, 20790), (267, 20835), (312, 20904), (314, 20916), (331, 20973), (337, 20997), (384, 21168),

Gene: Piatt\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Piatt\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Piglet\_0032 Start: 32482, Stop: 33642, Start Num: 48

Candidate Starts for Piglet\_0032:

(Start: 48 @32482 has 84 MA's), (81, 32593), (101, 32638), (138, 32737), (159, 32797), (170, 32833), (179, 32857), (204, 32902), (209, 32908), (237, 32959), (258, 32998), (259, 33001), (265, 33013), (275, 33028), (305, 33052), (314, 33085), (336, 33166), (344, 33211), (361, 33259), (374, 33295), (378, 33304), (380, 33310), (459, 33535),

Gene: Pimento\_27 Start: 22790, Stop: 23857, Start Num: 96

Candidate Starts for Pimento\_27:

(52, 22655), (Start: 96 @22790 has 5 MA's), (190, 23009), (244, 23111), (268, 23153), (276, 23165), (323, 23309), (331, 23336), (337, 23360), (370, 23483), (392, 23573), (406, 23591),

Gene: Pinkman\_32 Start: 31931, Stop: 33091, Start Num: 48

Candidate Starts for Pinkman\_32:

(Start: 48 @31931 has 84 MA's), (81, 32042), (101, 32087), (138, 32186), (159, 32246), (170, 32282), (179, 32306), (204, 32351), (209, 32357), (237, 32408), (258, 32447), (259, 32450), (265, 32462), (275, 32477), (305, 32501), (314, 32534), (336, 32615), (344, 32660), (361, 32708), (374, 32744), (378, 32753), (380, 32759), (459, 32984),

Gene: Pipsqueak\_33 Start: 32373, Stop: 33533, Start Num: 48

Candidate Starts for Pipsqueak\_33:

(Start: 48 @32373 has 84 MA's), (81, 32484), (101, 32529), (138, 32628), (159, 32688), (170, 32724), (179, 32748), (204, 32793), (209, 32799), (237, 32850), (258, 32889), (259, 32892), (265, 32904), (275, 32919), (305, 32943), (314, 32976), (336, 33057), (344, 33102), (361, 33150), (374, 33186), (378, 33195), (380, 33201), (459, 33426),

Gene: Pisa1\_27 Start: 23391, Stop: 24404, Start Num: 73

Candidate Starts for Pisa1\_27:

(Start: 73 @23391 has 102 MA's), (Start: 117 @23502 has 3 MA's), (161, 23607), (165, 23616), (197, 23691), (221, 23733), (246, 23775), (254, 23787), (314, 23841), (336, 23919), (361, 24015), (366, 24027), (374, 24051), (443, 24249), (468, 24345),

Gene: Pisa4\_27 Start: 23391, Stop: 24404, Start Num: 73

Candidate Starts for Pisa4\_27:

(Start: 73 @23391 has 102 MA's), (Start: 117 @23502 has 3 MA's), (161, 23607), (165, 23616), (197, 23691), (221, 23733), (246, 23775), (254, 23787), (314, 23841), (336, 23919), (361, 24015), (366, 24027), (374, 24051), (443, 24249), (468, 24345),

Gene: Pixie\_28 Start: 23724, Stop: 24788, Start Num: 76

Candidate Starts for Pixie\_28:

(10, 23172), (14, 23238), (16, 23301), (18, 23313), (19, 23334), (22, 23376), (33, 23535), (47, 23634), (59, 23691), (Start: 76 @23724 has 170 MA's), (133, 23856), (Start: 135 @23862 has 4 MA's), (160, 23931), (162, 23937), (185, 23997), (197, 24018), (204, 24033), (252, 24111), (336, 24303), (341, 24339), (357, 24387), (371, 24429), (411, 24555),

Gene: Pleakley\_53 Start: 35398, Stop: 36480, Start Num: 80

Candidate Starts for Pleakley\_53:

(Start: 80 @35398 has 33 MA's), (122, 35515), (214, 35743), (258, 35827), (261, 35833), (283, 35872), (303, 35887), (318, 35929), (363, 36094), (420, 36274), (465, 36412),

Gene: Pokerus\_27 Start: 23273, Stop: 24286, Start Num: 73

Candidate Starts for Pokerus\_27:

(17, 22829), (62, 23228), (Start: 73 @23273 has 102 MA's), (Start: 117 @23384 has 3 MA's), (165, 23498), (221, 23615), (246, 23657), (254, 23669), (314, 23723), (336, 23801), (361, 23897), (366, 23909), (377, 23939), (380, 23948), (411, 24062), (443, 24131),

Gene: Poland\_34 Start: 38011, Stop: 38913, Start Num: 137

Candidate Starts for Poland\_34:

(Start: 137 @38011 has 35 MA's), (175, 38116), (193, 38146), (206, 38176), (211, 38188), (261, 38272), (301, 38320), (314, 38356), (337, 38437), (354, 38491), (379, 38581), (429, 38728), (475, 38896),

Gene: Polkaroo\_22 Start: 21315, Stop: 22352, Start Num: 76

Candidate Starts for Polkaroo\_22:

(68, 21291), (Start: 73 @21312 has 102 MA's), (Start: 76 @21315 has 170 MA's), (85, 21339), (142, 21477), (156, 21519), (181, 21588), (218, 21648), (243, 21693), (267, 21738), (314, 21819), (331, 21876), (337, 21900), (366, 22005), (385, 22077), (403, 22122), (465, 22287),

Gene: Pops\_33 Start: 32387, Stop: 33547, Start Num: 48

Candidate Starts for Pops\_33:

(Start: 48 @32387 has 84 MA's), (81, 32498), (101, 32543), (138, 32642), (159, 32702), (170, 32738), (179, 32762), (204, 32807), (209, 32813), (237, 32864), (258, 32903), (259, 32906), (265, 32918), (275, 32933), (305, 32957), (314, 32990), (336, 33071), (344, 33116), (361, 33164), (374, 33200), (378, 33209), (380, 33215), (459, 33440),

Gene: PrinceCharming\_33 Start: 32795, Stop: 33964, Start Num: 46

Candidate Starts for PrinceCharming\_33:

(29, 32654), (Start: 46 @32795 has 10 MA's), (Start: 48 @32801 has 84 MA's), (56, 32840), (64, 32870), (81, 32915), (101, 32960), (138, 33059), (159, 33119), (170, 33155), (179, 33179), (204,

33224), (209, 33230), (237, 33281), (258, 33320), (259, 33323), (265, 33335), (275, 33350), (305, 33374), (314, 33407), (336, 33488), (361, 33581), (374, 33617), (378, 33626), (380, 33632), (459, 33857),

Gene: Prithvi\_28 Start: 23290, Stop: 24303, Start Num: 73

Candidate Starts for Prithvi\_28:

(62, 23245), (Start: 73 @23290 has 102 MA's), (Start: 117 @23401 has 3 MA's), (165, 23515), (221, 23632), (246, 23674), (254, 23686), (314, 23740), (336, 23818), (357, 23902), (361, 23914), (366, 23926), (380, 23965), (468, 24244),

Gene: Psycho\_28 Start: 24008, Stop: 25072, Start Num: 76

Candidate Starts for Psycho\_28:

(Start: 76 @24008 has 170 MA's), (110, 24098), (121, 24128), (145, 24182), (147, 24188), (165, 24236), (177, 24275), (188, 24293), (191, 24296), (239, 24377), (267, 24425), (277, 24443), (337, 24584), (359, 24674), (360, 24677), (361, 24680), (372, 24713), (378, 24725), (394, 24812), (395, 24815), (437, 24911), (470, 25028),

Gene: Pupper\_126 Start: 83200, Stop: 84090, Start Num: 135

Candidate Starts for Pupper\_126:

(Start: 135 @83200 has 4 MA's), (269, 83473), (380, 83770), (396, 83839), (443, 83935),

Gene: Purky\_22 Start: 21124, Stop: 22170, Start Num: 76

Candidate Starts for Purky\_22:

(Start: 76 @21124 has 170 MA's), (159, 21337), (218, 21448), (243, 21490), (245, 21493), (282, 21562), (336, 21694), (342, 21730), (379, 21838), (431, 21991), (434, 22000), (440, 22012),

Gene: Qhanda\_30 Start: 24605, Stop: 25609, Start Num: 76

Candidate Starts for Qhanda\_30:

(Start: 76 @24605 has 170 MA's), (146, 24773), (162, 24818), (165, 24824), (185, 24878), (191, 24887), (237, 24968), (247, 24989), (252, 24995), (254, 24998), (336, 25130), (337, 25133), (371, 25256),

Gene: Quby\_21 Start: 21546, Stop: 22553, Start Num: 107

Candidate Starts for Quby\_21:

(Start: 76 @21468 has 170 MA's), (107, 21546), (170, 21720), (189, 21759), (210, 21798), (228, 21831), (270, 21909), (302, 21942), (350, 22104), (426, 22338), (439, 22371), (447, 22395), (457, 22440),

Gene: QuincyRose\_27 Start: 23336, Stop: 24349, Start Num: 73

Candidate Starts for QuincyRose\_27:

(17, 22892), (62, 23291), (Start: 73 @23336 has 102 MA's), (Start: 117 @23447 has 3 MA's), (165, 23561), (221, 23678), (246, 23720), (254, 23732), (311, 23771), (314, 23786), (336, 23864), (357, 23948), (361, 23960), (366, 23972), (380, 24011), (411, 24125), (443, 24194),

Gene: Ramen\_28 Start: 23322, Stop: 24335, Start Num: 73

Candidate Starts for Ramen\_28:

(17, 22878), (62, 23277), (Start: 73 @23322 has 102 MA's), (Start: 117 @23433 has 3 MA's), (165, 23547), (221, 23664), (246, 23706), (254, 23718), (314, 23772), (336, 23850), (361, 23946), (377, 23988), (380, 23997), (411, 24111), (443, 24180),

Gene: Ranch\_33 Start: 28024, Stop: 29073, Start Num: 93

Candidate Starts for Ranch\_33:

(Start: 93 @28024 has 33 MA's), (143, 28138), (157, 28180), (173, 28234), (181, 28249), (212, 28312), (314, 28537), (362, 28708), (445, 28936), (456, 28981),

Gene: Rando14\_28 Start: 22698, Stop: 23777, Start Num: 76

Candidate Starts for Rando14\_28:

(Start: 76 @22698 has 170 MA's), (82, 22716), (121, 22818), (145, 22872), (146, 22875), (147, 22878), (165, 22926), (176, 22962), (177, 22965), (178, 22968), (198, 23001), (261, 23103), (267, 23115), (274, 23127), (277, 23133), (284, 23145), (303, 23166), (327, 23244), (339, 23286), (347, 23328), (359, 23373), (393, 23502),

Gene: Rapunzel97\_28 Start: 23323, Stop: 24336, Start Num: 73

Candidate Starts for Rapunzel97\_28:

(17, 22879), (28, 23026), (62, 23278), (Start: 73 @23323 has 102 MA's), (Start: 117 @23434 has 3 MA's), (165, 23548), (221, 23665), (246, 23707), (254, 23719), (314, 23773), (336, 23851), (361, 23947), (366, 23959), (377, 23989), (380, 23998), (411, 24112), (443, 24181),

Gene: RavenCo17\_26 Start: 23835, Stop: 24911, Start Num: 96

Candidate Starts for RavenCo17\_26:

(52, 23700), (Start: 96 @23835 has 5 MA's), (152, 23973), (173, 24045), (191, 24075), (268, 24225), (276, 24237), (292, 24279), (294, 24291), (314, 24348), (331, 24399), (350, 24471), (378, 24564), (439, 24726), (470, 24867),

Gene: Raymond7\_21 Start: 20415, Stop: 21500, Start Num: 76

Candidate Starts for Raymond7\_21:

(Start: 76 @20415 has 170 MA's), (142, 20577), (181, 20688), (187, 20697), (191, 20703), (218, 20748), (243, 20793), (314, 20919), (317, 20928), (331, 20976),

Gene: RazorC\_31 Start: 27503, Stop: 28600, Start Num: 93

Candidate Starts for RazorC\_31:

(Start: 93 @27503 has 33 MA's), (143, 27617), (183, 27710), (201, 27743), (203, 27746), (205, 27749), (213, 27770), (218, 27782), (244, 27830), (278, 27893), (295, 27947), (325, 28043), (335, 28085), (393, 28319), (413, 28358), (446, 28445), (478, 28592),

Gene: Rebel\_21 Start: 19868, Stop: 20905, Start Num: 76

Candidate Starts for Rebel\_21:

(32, 19631), (36, 19673), (39, 19703), (45, 19733), (53, 19793), (69, 19847), (Start: 76 @19868 has 170 MA's), (142, 20030), (156, 20072), (181, 20141), (218, 20201), (243, 20246), (267, 20291), (312, 20360), (331, 20429), (337, 20453), (366, 20558), (385, 20630), (403, 20675),

Gene: RedRaider\_52 Start: 38220, Stop: 39278, Start Num: 80

Candidate Starts for RedRaider\_52:

(Start: 80 @38220 has 33 MA's), (146, 38394), (164, 38448), (241, 38610), (277, 38664), (366, 38907), (465, 39207),

Gene: Reindeer\_30 Start: 26952, Stop: 28001, Start Num: 76

Candidate Starts for Reindeer\_30:

(Start: 76 @26952 has 170 MA's), (89, 26988), (159, 27165), (187, 27228), (188, 27231), (216, 27270), (222, 27285), (252, 27336), (279, 27384), (317, 27453), (331, 27501), (336, 27522), (339, 27528), (342, 27558), (366, 27630), (410, 27765), (431, 27819), (448, 27870), (451, 27876), (460, 27909),

Gene: Reptar3000\_29 Start: 24320, Stop: 25324, Start Num: 76

Candidate Starts for Reptar3000\_29:

(Start: 76 @24320 has 170 MA's), (146, 24488), (162, 24533), (165, 24539), (185, 24593), (191, 24602), (237, 24683), (247, 24704), (254, 24713), (336, 24845), (337, 24848), (378, 24986), (390, 25055), (465, 25259),

Gene: Rhinoforte\_33 Start: 32804, Stop: 33967, Start Num: 48

Candidate Starts for Rhinoforte\_33:

(29, 32657), (Start: 46 @32798 has 10 MA's), (Start: 48 @32804 has 84 MA's), (56, 32843), (64, 32873), (81, 32918), (101, 32963), (138, 33062), (159, 33122), (170, 33158), (179, 33182), (204, 33227), (209, 33233), (237, 33284), (258, 33323), (259, 33326), (265, 33338), (275, 33353), (305, 33377), (314, 33410), (336, 33491), (344, 33536), (361, 33584), (374, 33620), (378, 33629), (380, 33635), (391, 33695), (459, 33860),

Gene: Richo\_28 Start: 22728, Stop: 23693, Start Num: 73

Candidate Starts for Richo\_28:

(Start: 73 @22728 has 102 MA's), (77, 22734), (140, 22887), (146, 22905), (153, 22923), (165, 22956), (177, 22998), (212, 23058), (221, 23073), (336, 23259), (337, 23262), (356, 23334), (380, 23403), (392, 23451), (399, 23466), (414, 23499), (434, 23538), (467, 23637),

Gene: Rimu\_33 Start: 32105, Stop: 33265, Start Num: 48

Candidate Starts for Rimu\_33:

(Start: 48 @32105 has 84 MA's), (81, 32216), (101, 32261), (138, 32360), (159, 32420), (170, 32456), (179, 32480), (204, 32525), (209, 32531), (237, 32582), (258, 32621), (259, 32624), (265, 32636), (275, 32651), (305, 32675), (314, 32708), (336, 32789), (344, 32834), (361, 32882), (374, 32918), (378, 32927), (380, 32933), (459, 33158),

Gene: Rinke\_34 Start: 33816, Stop: 35012, Start Num: 48

Candidate Starts for Rinke\_34:

(38, 33759), (43, 33795), (Start: 48 @33816 has 84 MA's), (57, 33861), (69, 33906), (81, 33939), (89, 33963), (101, 33984), (Start: 104 @33999 has 1 MA's), (Start: 105 @34005 has 1 MA's), (119, 34044), (122, 34050), (131, 34065), (Start: 135 @34074 has 4 MA's), (148, 34110), (154, 34125), (156, 34134), (166, 34161), (167, 34164), (172, 34188), (174, 34194), (204, 34251), (208, 34254), (233, 34302), (235, 34305), (240, 34317), (256, 34344), (261, 34353), (262, 34356), (285, 34380), (296, 34431), (309, 34470), (314, 34491), (335, 34563), (336, 34569), (367, 34677), (375, 34698), (380, 34710), (415, 34812), (420, 34821), (458, 34914),

Gene: Rosebush\_33 Start: 32811, Stop: 33974, Start Num: 48

Candidate Starts for Rosebush\_33:

(29, 32664), (Start: 46 @32805 has 10 MA's), (Start: 48 @32811 has 84 MA's), (56, 32850), (64, 32880), (81, 32925), (101, 32970), (138, 33069), (159, 33129), (170, 33165), (179, 33189), (204, 33234), (209, 33240), (237, 33291), (258, 33330), (259, 33333), (265, 33345), (275, 33360), (305, 33384), (314, 33417), (336, 33498), (361, 33591), (374, 33627), (378, 33636), (380, 33642), (391, 33702), (459, 33867),

Gene: Rosmarinus\_28 Start: 23344, Stop: 24357, Start Num: 73

Candidate Starts for Rosmarinus\_28:

(17, 22900), (62, 23299), (Start: 73 @23344 has 102 MA's), (165, 23569), (221, 23686), (246, 23728), (254, 23740), (314, 23794), (336, 23872), (361, 23968), (377, 24010), (380, 24019), (411, 24133), (443, 24202),

Gene: Rota\_32 Start: 29482, Stop: 30456, Start Num: 126

Candidate Starts for Rota\_32:

(Start: 93 @29407 has 33 MA's), (126, 29482), (143, 29521), (157, 29563), (173, 29617), (181, 29632), (212, 29695), (314, 29920), (362, 30091), (445, 30319),

Gene: Rubeelu\_22 Start: 19998, Stop: 21038, Start Num: 74

Candidate Starts for Rubeelu\_22:

(55, 19932), (Start: 74 @19998 has 5 MA's), (140, 20157), (142, 20163), (178, 20271), (181, 20274), (191, 20289), (243, 20379), (267, 20424), (314, 20505), (331, 20562), (337, 20586), (359, 20673), (366, 20691), (385, 20763), (403, 20808), (465, 20973),

Gene: Rukungu\_33 Start: 29795, Stop: 30766, Start Num: 126

Candidate Starts for Rukungu\_33:

(Start: 93 @29720 has 33 MA's), (126, 29795), (143, 29834), (151, 29855), (173, 29930), (181, 29945), (212, 30008), (244, 30068), (314, 30233), (362, 30404),

Gene: Rumi\_32 Start: 27114, Stop: 28211, Start Num: 93

Candidate Starts for Rumi\_32:

(Start: 93 @27114 has 33 MA's), (143, 27228), (183, 27321), (201, 27354), (203, 27357), (205, 27360), (213, 27381), (218, 27393), (244, 27441), (278, 27504), (295, 27558), (325, 27654), (335, 27696), (368, 27822), (393, 27930), (413, 27969), (446, 28056), (478, 28203),

Gene: Ruthiejr\_29 Start: 24262, Stop: 25296, Start Num: 74

Candidate Starts for Ruthiejr\_29:

(55, 24196), (Start: 74 @24262 has 5 MA's), (140, 24418), (141, 24421), (156, 24466), (159, 24475), (191, 24550), (243, 24637), (267, 24682), (314, 24763), (331, 24820), (337, 24844), (366, 24949), (385, 25021), (410, 25081), (465, 25231),

Gene: SCentae\_125 Start: 83353, Stop: 84243, Start Num: 135

Candidate Starts for SCentae\_125:

(Start: 135 @83353 has 4 MA's), (443, 84088),

Gene: Salvus\_26 Start: 22028, Stop: 23053, Start Num: 90

Candidate Starts for Salvus\_26:

(Start: 90 @22028 has 2 MA's), (130, 22118), (237, 22337), (238, 22340), (244, 22352), (303, 22484), (314, 22520), (331, 22571), (342, 22628), (422, 22865), (463, 22991),

Gene: SamScheppers\_27 Start: 24552, Stop: 25625, Start Num: 73

Candidate Starts for SamScheppers\_27:

(Start: 73 @24552 has 102 MA's), (Start: 76 @24555 has 170 MA's), (168, 24795), (181, 24831), (187, 24840), (191, 24846), (218, 24891), (243, 24936), (252, 24954), (267, 24981), (314, 25062), (331, 25119), (337, 25143),

Gene: Sampudon\_33 Start: 30054, Stop: 31103, Start Num: 93

Candidate Starts for Sampudon\_33:

(Start: 93 @30054 has 33 MA's), (143, 30168), (151, 30189), (173, 30264), (181, 30279), (212, 30342), (244, 30402), (293, 30504), (314, 30567), (362, 30738), (445, 30966),

Gene: SamuelLPlaqson\_28 Start: 23284, Stop: 24297, Start Num: 73

Candidate Starts for SamuelLPlaqson\_28:

(62, 23239), (Start: 73 @23284 has 102 MA's), (Start: 117 @23395 has 3 MA's), (165, 23509), (221, 23626), (246, 23668), (254, 23680), (314, 23734), (336, 23812), (361, 23908), (366, 23920), (380, 23959), (387, 23995), (443, 24142), (468, 24238),

Gene: Sbash\_21 Start: 21030, Stop: 22079, Start Num: 76

Candidate Starts for Sbash\_21:

(Start: 76 @21030 has 170 MA's), (142, 21192), (159, 21243), (187, 21306), (251, 21411), (336, 21600), (342, 21636), (366, 21708), (410, 21843), (431, 21897), (460, 21987),

Gene: Scarlett\_27 Start: 22586, Stop: 23545, Start Num: 75

Candidate Starts for Scarlett\_27:

(Start: 75 @22586 has 4 MA's), (143, 22748), (145, 22754), (153, 22775), (155, 22781), (169, 22823), (188, 22868), (212, 22910), (221, 22925), (314, 23033), (339, 23117), (431, 23393),

Gene: Scitech\_21 Start: 20194, Stop: 21228, Start Num: 76

Candidate Starts for Scitech\_21:

(Start: 76 @20194 has 170 MA's), (140, 20350), (142, 20356), (178, 20464), (181, 20467), (191, 20482), (243, 20569), (267, 20614), (314, 20695), (331, 20752), (337, 20776), (366, 20881), (385, 20953), (403, 20998),

Gene: Scoot17C\_33 Start: 32368, Stop: 33528, Start Num: 48

Candidate Starts for Scoot17C\_33:

(Start: 48 @32368 has 84 MA's), (81, 32479), (101, 32524), (138, 32623), (159, 32683), (170, 32719), (179, 32743), (204, 32788), (209, 32794), (237, 32845), (258, 32884), (259, 32887), (265, 32899), (275, 32914), (305, 32938), (314, 32971), (336, 33052), (344, 33097), (361, 33145), (374, 33181), (378, 33190), (380, 33196), (459, 33421),

Gene: Scuba\_53 Start: 35472, Stop: 36554, Start Num: 80

Candidate Starts for Scuba\_53:

(Start: 80 @35472 has 33 MA's), (122, 35589), (214, 35817), (258, 35901), (261, 35907), (303, 35961), (465, 36486),

Gene: Sejanus\_28 Start: 29684, Stop: 30844, Start Num: 48

Candidate Starts for Sejanus\_28:

(Start: 48 @29684 has 84 MA's), (54, 29720), (64, 29753), (81, 29798), (101, 29843), (102, 29846), (170, 30038), (179, 30062), (184, 30068), (209, 30113), (210, 30116), (237, 30164), (271, 30227), (273, 30230), (306, 30263), (329, 30338), (336, 30368), (371, 30491), (375, 30500), (378, 30506), (475, 30827),

Gene: Serendipity\_33 Start: 32393, Stop: 33553, Start Num: 48

Candidate Starts for Serendipity\_33:

(Start: 48 @32393 has 84 MA's), (81, 32504), (101, 32549), (138, 32648), (159, 32708), (170, 32744), (179, 32768), (204, 32813), (209, 32819), (237, 32870), (258, 32909), (259, 32912), (265, 32924), (275, 32939), (305, 32963), (314, 32996), (336, 33077), (344, 33122), (361, 33170), (374, 33206), (378, 33215), (380, 33221), (459, 33446),

Gene: SgtBeansprout\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for SgtBeansprout\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: Shadow1\_27 Start: 22543, Stop: 23604, Start Num: 76

Candidate Starts for Shadow1\_27:

(47, 22453), (Start: 76 @22543 has 170 MA's), (110, 22624), (Start: 115 @22642 has 1 MA's), (160, 22750), (165, 22762), (170, 22783), (221, 22879), (300, 22993), (313, 23044), (341, 23161), (349, 23176), (366, 23233), (380, 23272), (443, 23461),

Gene: Shaobing\_28 Start: 22728, Stop: 23693, Start Num: 73

Candidate Starts for Shaobing\_28:

(Start: 73 @22728 has 102 MA's), (77, 22734), (140, 22887), (146, 22905), (153, 22923), (165, 22956), (177, 22998), (212, 23058), (221, 23073), (336, 23259), (337, 23262), (356, 23334), (380, 23403), (392, 23451), (399, 23466), (414, 23499), (434, 23538), (467, 23637),

Gene: ShedlockHolmes\_28 Start: 23930, Stop: 24949, Start Num: 76

Candidate Starts for ShedlockHolmes\_28:

(20, 23549), (21, 23561), (24, 23597), (26, 23621), (33, 23741), (47, 23840), (59, 23897), (Start: 76 @23930 has 170 MA's), (88, 23963), (133, 24062), (Start: 135 @24068 has 4 MA's), (140, 24080), (160, 24137), (162, 24143), (185, 24203), (221, 24266), (227, 24275), (247, 24311), (261, 24332), (267, 24344), (317, 24383), (336, 24452), (362, 24551), (380, 24599), (387, 24635), (408, 24698), (421, 24740), (443, 24788), (457, 24830), (473, 24926),

Gene: Shelley\_30 Start: 37583, Stop: 38485, Start Num: 137

Candidate Starts for Shelley\_30:

(Start: 137 @37583 has 35 MA's), (193, 37721), (223, 37790), (252, 37838), (301, 37901), (314, 37937), (358, 38105), (454, 38357), (473, 38462),

Gene: ShiaSurprise\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for ShiaSurprise\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (Start: 117 @23467 has 3 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (366, 23992), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Shweta\_21 Start: 20201, Stop: 21238, Start Num: 76

Candidate Starts for Shweta\_21:

(Start: 76 @20201 has 170 MA's), (140, 20357), (142, 20363), (156, 20405), (178, 20471), (181, 20474), (218, 20534), (243, 20579), (267, 20624), (314, 20705), (331, 20762), (337, 20786), (366, 20891), (385, 20963), (403, 21008),

Gene: SirPhilip\_27 Start: 22229, Stop: 23257, Start Num: 76

Candidate Starts for SirPhilip\_27:

(Start: 76 @22229 has 170 MA's), (146, 22400), (153, 22418), (169, 22466), (197, 22526), (221, 22568), (233, 22586), (246, 22610), (311, 22661), (317, 22685), (333, 22742), (337, 22757), (356, 22829), (380, 22898),

Gene: Skinny\_32 Start: 27432, Stop: 28493, Start Num: 76

Candidate Starts for Skinny\_32:

(Start: 76 @27432 has 170 MA's), (89, 27468), (106, 27510), (145, 27600), (153, 27621), (161, 27648), (187, 27711), (240, 27801), (248, 27813), (254, 27822), (281, 27867), (317, 27933), (337, 28005), (359, 28095), (366, 28113), (393, 28230), (398, 28242), (437, 28332),

Gene: SkinnyPete\_21 Start: 20204, Stop: 21241, Start Num: 76

Candidate Starts for SkinnyPete\_21:

(Start: 76 @20204 has 170 MA's), (140, 20360), (142, 20366), (178, 20474), (191, 20492), (243, 20582), (267, 20627), (314, 20708), (337, 20789), (359, 20876), (366, 20894), (385, 20966), (403, 21011), (465, 21176),

Gene: Skog\_188 Start: 113083, Stop: 113973, Start Num: 135

Candidate Starts for Skog\_188:

(Start: 135 @113083 has 4 MA's), (149, 113122), (174, 113194), (269, 113356), (396, 113722), (443, 113818),

Gene: Skysand\_47 Start: 36418, Stop: 37479, Start Num: 80

Candidate Starts for Skysand\_47:

(Start: 80 @36418 has 33 MA's), (150, 36604), (232, 36790), (234, 36793), (339, 37003),

Gene: Slarp\_29 Start: 24596, Stop: 25600, Start Num: 76

Candidate Starts for Slarp\_29:

(Start: 76 @24596 has 170 MA's), (146, 24764), (162, 24809), (165, 24815), (185, 24869), (191, 24878), (237, 24959), (247, 24980), (252, 24986), (254, 24989), (336, 25121), (337, 25124), (371, 25247),

Gene: SlimJimmy\_30 Start: 26975, Stop: 28030, Start Num: 76

Candidate Starts for SlimJimmy\_30:

(Start: 76 @26975 has 170 MA's), (159, 27188), (171, 27224), (212, 27287), (251, 27359), (267, 27389), (279, 27410), (307, 27446), (317, 27482), (331, 27530), (336, 27551), (339, 27557), (342, 27587), (343, 27590), (358, 27638), (431, 27848), (450, 27902),

Gene: Slimphazie\_28 Start: 23323, Stop: 24336, Start Num: 73

Candidate Starts for Slimphazie\_28:

(17, 22879), (28, 23026), (62, 23278), (Start: 73 @23323 has 102 MA's), (Start: 117 @23434 has 3 MA's), (165, 23548), (221, 23665), (246, 23707), (254, 23719), (314, 23773), (336, 23851), (361, 23947), (366, 23959), (377, 23989), (380, 23998), (411, 24112), (443, 24181),

Gene: SoSeph\_27 Start: 24081, Stop: 25148, Start Num: 76

Candidate Starts for SoSeph\_27:

(Start: 76 @24081 has 170 MA's), (120, 24198), (145, 24255), (161, 24303), (165, 24309), (188, 24366), (191, 24369), (198, 24384), (218, 24411), (239, 24450), (242, 24453), (249, 24465), (251, 24468), (252, 24471), (261, 24486), (297, 24531), (299, 24537), (317, 24591), (331, 24639), (340, 24669), (351, 24714), (385, 24843), (397, 24897),

Gene: Solosis\_32 Start: 32084, Stop: 33244, Start Num: 48

Candidate Starts for Solosis\_32:

(Start: 48 @32084 has 84 MA's), (81, 32195), (101, 32240), (138, 32339), (159, 32399), (170, 32435), (179, 32459), (204, 32504), (209, 32510), (237, 32561), (258, 32600), (259, 32603), (265, 32615), (275, 32630), (305, 32654), (314, 32687), (336, 32768), (344, 32813), (361, 32861), (374, 32897), (378, 32906), (380, 32912), (459, 33137),

Gene: Sonah\_22 Start: 21289, Stop: 22326, Start Num: 76

Candidate Starts for Sonah\_22:

(68, 21265), (Start: 73 @21286 has 102 MA's), (Start: 76 @21289 has 170 MA's), (85, 21313), (142, 21451), (156, 21493), (181, 21562), (218, 21622), (243, 21667), (267, 21712), (314, 21793), (331, 21850), (337, 21874), (366, 21979), (385, 22051), (403, 22096), (465, 22261),

Gene: Sparky\_21 Start: 21885, Stop: 22931, Start Num: 76

Candidate Starts for Sparky\_21:

(Start: 76 @21885 has 170 MA's), (159, 22098), (161, 22104), (218, 22209), (243, 22251), (245, 22254), (282, 22323), (336, 22455), (342, 22491), (379, 22599), (431, 22752), (434, 22761), (440, 22773),

Gene: Spock\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Spock\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: Sprinklemunch\_22 Start: 21828, Stop: 22874, Start Num: 95

Candidate Starts for Sprinklemunch\_22:

(Start: 95 @21828 has 3 MA's), (140, 21933), (173, 22038), (253, 22194), (263, 22212), (266, 22215), (291, 22269), (331, 22398), (378, 22554), (392, 22626), (416, 22674), (420, 22677), (433, 22710),

Gene: StarStruck\_46 Start: 35932, Stop: 36987, Start Num: 80

Candidate Starts for StarStruck\_46:

(60, 35869), (Start: 80 @35932 has 33 MA's), (160, 36145), (234, 36304), (246, 36328), (366, 36616), (465, 36916), (473, 36961),

Gene: Stargaze\_23 Start: 23284, Stop: 24429, Start Num: 48

Candidate Starts for Stargaze\_23:

(4, 22495), (8, 22654), (9, 22762), (11, 22864), (41, 23260), (Start: 48 @23284 has 84 MA's), (81, 23395), (86, 23410), (131, 23521), (155, 23584), (159, 23599), (224, 23746), (233, 23761), (261, 23812), (304, 23845), (321, 23908), (335, 23959), (337, 23968), (383, 24136),

Gene: StevieRay\_22 Start: 21290, Stop: 22327, Start Num: 76

Candidate Starts for StevieRay\_22:

(68, 21266), (Start: 73 @21287 has 102 MA's), (Start: 76 @21290 has 170 MA's), (85, 21314), (142, 21452), (156, 21494), (181, 21563), (218, 21623), (243, 21668), (267, 21713), (314, 21794), (331, 21851), (337, 21875), (366, 21980), (385, 22052), (403, 22097), (465, 22262),

Gene: Sticker17\_30 Start: 38098, Stop: 39000, Start Num: 137

Candidate Starts for Sticker17\_30:

(Start: 137 @38098 has 35 MA's), (193, 38236), (223, 38305), (252, 38353), (301, 38416), (314, 38452), (358, 38620), (447, 38854), (454, 38872), (473, 38977),

Gene: Stinson\_29 Start: 23565, Stop: 24578, Start Num: 73

Candidate Starts for Stinson\_29:

(Start: 73 @23565 has 102 MA's), (Start: 117 @23676 has 3 MA's), (165, 23790), (221, 23907), (246, 23949), (314, 24015), (317, 24024), (336, 24093), (361, 24189), (366, 24201), (411, 24354), (443, 24423), (468, 24519),

Gene: Stormer\_32 Start: 27117, Stop: 28214, Start Num: 93

Candidate Starts for Stormer\_32:

(Start: 93 @27117 has 33 MA's), (143, 27231), (183, 27324), (201, 27357), (203, 27360), (205, 27363), (212, 27381), (213, 27384), (244, 27444), (272, 27495), (278, 27507), (286, 27519), (295, 27561), (325, 27657), (335, 27699), (393, 27933), (413, 27972), (446, 28059), (478, 28206),

Gene: StressBall\_22 Start: 21561, Stop: 22601, Start Num: 76

Candidate Starts for StressBall\_22:

(Start: 76 @21561 has 170 MA's), (140, 21720), (142, 21726), (156, 21768), (178, 21834), (181, 21837), (218, 21897), (243, 21942), (267, 21987), (314, 22068), (331, 22125), (337, 22149), (366, 22254), (385, 22326), (403, 22371),

Gene: Strobilo\_25 Start: 21282, Stop: 22277, Start Num: 76

Candidate Starts for Strobilo\_25:

(47, 21198), (Start: 76 @21282 has 170 MA's), (108, 21363), (Start: 115 @21387 has 1 MA's), (143, 21447), (162, 21501), (165, 21507), (212, 21609), (213, 21612), (243, 21660), (246, 21666), (313, 21729), (314, 21732), (327, 21774), (339, 21816), (359, 21900), (380, 21957), (473, 22254),

Gene: Sukkupi\_46 Start: 34612, Stop: 35703, Start Num: 80

Candidate Starts for Sukkupi\_46:

(Start: 80 @34612 has 33 MA's), (92, 34645), (129, 34741), (199, 34924), (232, 34993), (314, 35131), (318, 35143), (319, 35146),

Gene: Sulley\_28 Start: 23289, Stop: 24302, Start Num: 73

Candidate Starts for Sulley\_28:

(Start: 73 @23289 has 102 MA's), (Start: 117 @23400 has 3 MA's), (165, 23514), (221, 23631), (254, 23685), (314, 23739), (336, 23817), (361, 23913), (366, 23925), (377, 23955), (380, 23964), (411, 24078), (443, 24147),

Gene: Sunflower1121\_27 Start: 22555, Stop: 23616, Start Num: 76

Candidate Starts for Sunflower1121\_27:

(47, 22465), (Start: 76 @22555 has 170 MA's), (110, 22636), (Start: 115 @22654 has 1 MA's), (160, 22762), (165, 22774), (170, 22795), (221, 22891), (300, 23005), (313, 23056), (341, 23173), (366, 23245), (380, 23284), (413, 23404), (443, 23473),

Gene: SuperSonics\_37 Start: 31769, Stop: 32809, Start Num: 98

Candidate Starts for SuperSonics\_37:

(Start: 98 @31769 has 3 MA's), (130, 31847), (158, 31925), (272, 32138), (276, 32144), (303, 32222), (331, 32315), (339, 32342),

Gene: SuperSulley\_46 Start: 36118, Stop: 37173, Start Num: 80

Candidate Starts for SuperSulley\_46:

(Start: 80 @36118 has 33 MA's), (160, 36331), (246, 36514), (366, 36802), (473, 37147),

Gene: Syra333\_28 Start: 22645, Stop: 23640, Start Num: 76

Candidate Starts for Syra333\_28:

(47, 22555), (Start: 76 @22645 has 170 MA's), (Start: 115 @22744 has 1 MA's), (Start: 117 @22750 has 3 MA's), (174, 22900), (221, 22981), (336, 23167), (337, 23170), (358, 23254), (361, 23263), (374, 23299), (425, 23449), (471, 23599), (473, 23617),

Gene: TBond007\_28 Start: 23723, Stop: 24787, Start Num: 76

Candidate Starts for TBond007\_28:

(10, 23171), (14, 23237), (16, 23300), (19, 23333), (22, 23375), (33, 23534), (47, 23633), (59, 23690), (Start: 76 @23723 has 170 MA's), (133, 23855), (Start: 135 @23861 has 4 MA's), (160, 23930), (162, 23936), (185, 23996), (197, 24017), (204, 24032), (252, 24110), (336, 24302), (341, 24338), (357, 24386), (371, 24428), (411, 24554),

Gene: TClif\_28 Start: 22714, Stop: 23739, Start Num: 76

Candidate Starts for TClif\_28:

(Start: 76 @22714 has 170 MA's), (113, 22813), (Start: 115 @22816 has 1 MA's), (143, 22876), (158, 22921), (170, 22957), (213, 23041), (243, 23089), (316, 23173), (323, 23197), (337, 23248), (357, 23329), (444, 23581), (457, 23620), (473, 23716),

Gene: TM4\_25 Start: 21422, Stop: 22426, Start Num: 76

Candidate Starts for TM4\_25:

(Start: 76 @21422 has 170 MA's), (Start: 115 @21527 has 1 MA's), (143, 21587), (146, 21596), (162, 21641), (165, 21647), (185, 21701), (215, 21755), (252, 21815), (270, 21848), (314, 21872), (337, 21953), (339, 21956), (359, 22040), (371, 22076), (473, 22403),

Gene: Tachez\_28 Start: 23285, Stop: 24298, Start Num: 73

Candidate Starts for Tachez\_28:

(17, 22841), (28, 22988), (62, 23240), (Start: 73 @23285 has 102 MA's), (Start: 117 @23396 has 3 MA's), (165, 23510), (221, 23627), (246, 23669), (254, 23681), (314, 23735), (336, 23813), (361, 23909), (366, 23921), (377, 23951), (380, 23960), (411, 24074), (443, 24143),

Gene: TaiwanKao\_29 Start: 23407, Stop: 24309, Start Num: 117

Candidate Starts for TaiwanKao\_29:

(62, 23251), (Start: 73 @23296 has 102 MA's), (Start: 117 @23407 has 3 MA's), (165, 23521), (221, 23638), (246, 23680), (254, 23692), (314, 23746), (336, 23824), (357, 23908), (361, 23920), (366, 23932), (380, 23971), (401, 24061), (468, 24250),

Gene: Taquito\_27 Start: 24633, Stop: 25676, Start Num: 72

Candidate Starts for Taquito\_27:

(Start: 72 @24633 has 4 MA's), (Start: 76 @24636 has 170 MA's), (168, 24876), (181, 24912), (187, 24921), (191, 24927), (218, 24972), (243, 25017), (252, 25035), (267, 25062), (314, 25143), (331, 25200), (337, 25224), (366, 25329), (385, 25401), (403, 25446),

Gene: Teal\_30 Start: 38566, Stop: 39468, Start Num: 137

Candidate Starts for Teal\_30:

(Start: 137 @38566 has 35 MA's), (193, 38704), (223, 38773), (252, 38821), (301, 38884), (314, 38920), (358, 39088), (454, 39340), (473, 39445),

Gene: Techage\_22 Start: 21290, Stop: 22327, Start Num: 76

Candidate Starts for Techage\_22:

(68, 21266), (Start: 73 @21287 has 102 MA's), (Start: 76 @21290 has 170 MA's), (85, 21314), (142, 21452), (156, 21494), (181, 21563), (218, 21623), (243, 21668), (267, 21713), (314, 21794), (331, 21851), (337, 21875), (366, 21980), (385, 22052), (403, 22097), (465, 22262),

Gene: Teejan\_24 Start: 22861, Stop: 23907, Start Num: 65

Candidate Starts for Teejan\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: Thespis\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Thespis\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: ThreeOh3D2\_33 Start: 32374, Stop: 33534, Start Num: 48

Candidate Starts for ThreeOh3D2\_33:

(Start: 48 @32374 has 84 MA's), (81, 32485), (101, 32530), (138, 32629), (159, 32689), (170, 32725), (179, 32749), (204, 32794), (209, 32800), (237, 32851), (258, 32890), (259, 32893), (265, 32905), (275, 32920), (305, 32944), (314, 32977), (336, 33058), (344, 33103), (361, 33151), (374, 33187), (378, 33196), (380, 33202), (459, 33427),

Gene: ThulaThula\_22 Start: 21454, Stop: 22491, Start Num: 76

Candidate Starts for ThulaThula\_22:

(Start: 76 @21454 has 170 MA's), (142, 21616), (159, 21667), (171, 21703), (187, 21730), (218, 21778), (251, 21835), (270, 21871), (336, 22024), (342, 22060), (366, 22132), (410, 22267), (431, 22321), (460, 22399),

Gene: Thyatira\_27 Start: 23933, Stop: 25000, Start Num: 76

Candidate Starts for Thyatira\_27:

(Start: 76 @23933 has 170 MA's), (120, 24050), (145, 24107), (161, 24155), (165, 24161), (188, 24218), (191, 24221), (198, 24236), (218, 24263), (239, 24302), (242, 24305), (249, 24317), (251, 24320), (252, 24323), (261, 24338), (297, 24383), (299, 24389), (317, 24443), (331, 24491), (340, 24521), (351, 24566), (385, 24695), (397, 24749), (416, 24794),

Gene: Tierra\_28 Start: 23391, Stop: 24452, Start Num: 76

Candidate Starts for Tierra\_28:

(Start: 76 @23391 has 170 MA's), (109, 23469), (110, 23472), (Start: 115 @23490 has 1 MA's), (136, 23532), (160, 23598), (170, 23631), (221, 23727), (230, 23739), (300, 23841), (313, 23892), (341, 24009), (418, 24252), (426, 24270), (443, 24309),

Gene: Tigress9\_29 Start: 22638, Stop: 23633, Start Num: 76

Candidate Starts for Tigress9\_29:

(47, 22548), (Start: 76 @22638 has 170 MA's), (Start: 115 @22737 has 1 MA's), (Start: 117 @22743 has 3 MA's), (174, 22893), (221, 22974), (237, 22998), (336, 23160), (337, 23163), (358, 23247), (374, 23292), (467, 23571), (471, 23592), (473, 23610),

Gene: Tillicus\_32 Start: 28456, Stop: 29502, Start Num: 93

Candidate Starts for Tillicus\_32:

(Start: 93 @28456 has 33 MA's), (Start: 115 @28513 has 1 MA's), (155, 28603), (157, 28612), (159, 28618), (162, 28627), (181, 28681), (291, 28897), (293, 28906), (307, 28945), (311, 28957), (331, 29026), (362, 29140), (371, 29167), (407, 29275),

Gene: Tinciduntolum\_34 Start: 32810, Stop: 33979, Start Num: 46

Candidate Starts for Tinciduntolum\_34:

(29, 32669), (Start: 46 @32810 has 10 MA's), (Start: 48 @32816 has 84 MA's), (56, 32855), (64, 32885), (81, 32930), (101, 32975), (138, 33074), (159, 33134), (170, 33170), (179, 33194), (204, 33239), (209, 33245), (237, 33296), (258, 33335), (259, 33338), (265, 33350), (275, 33365), (305, 33389), (314, 33422), (336, 33503), (361, 33596), (374, 33632), (378, 33641), (380, 33647), (391, 33707), (459, 33872),

Gene: TingHuaYa\_28 Start: 22494, Stop: 23501, Start Num: 76

Candidate Starts for TingHuaYa\_28:

(Start: 76 @22494 has 170 MA's), (114, 22593), (165, 22713), (170, 22734), (221, 22830), (314, 22938), (336, 23016), (361, 23112), (366, 23124), (380, 23163), (440, 23334), (443, 23346),

Gene: TiniBug\_28 Start: 23281, Stop: 24294, Start Num: 73

Candidate Starts for TiniBug\_28:

(62, 23236), (Start: 73 @23281 has 102 MA's), (Start: 117 @23392 has 3 MA's), (165, 23506), (221, 23623), (254, 23677), (314, 23731), (336, 23809), (361, 23905), (366, 23917), (380, 23956), (387, 23992), (409, 24061), (443, 24139), (468, 24235),

Gene: Tiri\_28 Start: 23328, Stop: 24341, Start Num: 73

Candidate Starts for Tiri\_28:

(17, 22884), (62, 23283), (Start: 73 @23328 has 102 MA's), (Start: 117 @23439 has 3 MA's), (165, 23553), (221, 23670), (246, 23712), (254, 23724), (314, 23778), (336, 23856), (357, 23940), (361, 23952), (366, 23964), (380, 24003), (411, 24117), (443, 24186),

Gene: Topper\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Topper\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145),

(443, 24214),

Gene: Torres\_24 Start: 22900, Stop: 23907, Start Num: 76

Candidate Starts for Torres\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: Tortellini\_22 Start: 21866, Stop: 22936, Start Num: 76

Candidate Starts for Tortellini\_22:

(Start: 76 @21866 has 170 MA's), (168, 22106), (181, 22142), (187, 22151), (191, 22157), (218, 22202), (243, 22247), (252, 22265), (267, 22292), (314, 22373), (337, 22454), (379, 22592), (380, 22595),

Gene: Towmatter\_36 Start: 34440, Stop: 35507, Start Num: 78

Candidate Starts for Towmatter\_36:

(Start: 78 @34440 has 2 MA's), (219, 34785), (243, 34830), (260, 34860), (373, 35151), (376, 35157), (381, 35175), (394, 35241), (396, 35244), (409, 35262), (424, 35310), (477, 35496),

Gene: TpudiCK\_32 Start: 26991, Stop: 28046, Start Num: 76

Candidate Starts for TpudiCK\_32:

(Start: 76 @26991 has 170 MA's), (159, 27204), (171, 27240), (212, 27303), (251, 27375), (267, 27405), (279, 27426), (307, 27462), (317, 27498), (331, 27546), (336, 27567), (339, 27573), (342, 27603), (343, 27606), (358, 27654), (423, 27843), (431, 27864), (450, 27918),

Gene: Tracker\_44 Start: 34752, Stop: 35810, Start Num: 80

Candidate Starts for Tracker\_44:

(1, 33312), (2, 33609), (5, 33840), (13, 34209), (40, 34587), (42, 34602), (Start: 46 @34620 has 10 MA's), (Start: 80 @34752 has 33 MA's), (217, 35097), (245, 35148), (277, 35196),

Gene: Tres\_33 Start: 32691, Stop: 33854, Start Num: 48

Candidate Starts for Tres\_33:

(29, 32544), (Start: 46 @32685 has 10 MA's), (Start: 48 @32691 has 84 MA's), (56, 32730), (64, 32760), (81, 32805), (101, 32850), (138, 32949), (159, 33009), (170, 33045), (179, 33069), (204, 33114), (209, 33120), (237, 33171), (258, 33210), (259, 33213), (265, 33225), (275, 33240), (305, 33264), (314, 33297), (336, 33378), (361, 33471), (374, 33507), (378, 33516), (380, 33522), (459, 33747),

Gene: TreyKay\_28 Start: 23290, Stop: 24303, Start Num: 73

Candidate Starts for TreyKay\_28:

(62, 23245), (Start: 73 @23290 has 102 MA's), (Start: 117 @23401 has 3 MA's), (165, 23515), (221, 23632), (246, 23674), (254, 23686), (314, 23740), (336, 23818), (357, 23902), (361, 23914), (366, 23926), (380, 23965), (468, 24244),

Gene: TribelTrouble\_27 Start: 23874, Stop: 24935, Start Num: 76

Candidate Starts for TribelTrouble\_27:

(47, 23769), (Start: 76 @23874 has 170 MA's), (88, 23907), (106, 23946), (128, 23997), (133, 24006), (143, 24033), (160, 24081), (185, 24147), (204, 24183), (213, 24198), (225, 24216), (227, 24219), (237, 24234), (298, 24321), (341, 24492), (443, 24792),

Gene: Trice\_24 Start: 22861, Stop: 23907, Start Num: 65

Candidate Starts for Trice\_24:

(61, 22849), (65, 22861), (Start: 76 @22900 has 170 MA's), (103, 22960), (133, 23032), (153, 23086), (160, 23107), (221, 23236), (247, 23281), (251, 23284), (313, 23341), (314, 23344), (328, 23389), (337, 23425), (361, 23521), (366, 23533), (397, 23653), (452, 23785),

Gene: TruffulaTree\_28 Start: 23319, Stop: 24332, Start Num: 73

Candidate Starts for TruffulaTree\_28:

(17, 22875), (62, 23274), (Start: 73 @23319 has 102 MA's), (165, 23544), (221, 23661), (246, 23703), (254, 23715), (314, 23769), (336, 23847), (361, 23943), (366, 23955), (377, 23985), (380, 23994), (411, 24108), (443, 24177),

Gene: Trypo\_33 Start: 32370, Stop: 33530, Start Num: 48

Candidate Starts for Trypo\_33:

(Start: 48 @32370 has 84 MA's), (81, 32481), (101, 32526), (138, 32625), (159, 32685), (170, 32721), (179, 32745), (204, 32790), (209, 32796), (237, 32847), (258, 32886), (259, 32889), (265, 32901), (275, 32916), (305, 32940), (314, 32973), (336, 33054), (344, 33099), (361, 33147), (374, 33183), (378, 33192), (380, 33198), (459, 33423),

Gene: Twitch\_28 Start: 23356, Stop: 24369, Start Num: 73

Candidate Starts for Twitch\_28:

(17, 22912), (62, 23311), (Start: 73 @23356 has 102 MA's), (165, 23581), (221, 23698), (246, 23740), (254, 23752), (314, 23806), (336, 23884), (361, 23980), (377, 24022), (380, 24031), (411, 24145), (443, 24214),

Gene: TyDawg\_31 Start: 26992, Stop: 28047, Start Num: 76

Candidate Starts for TyDawg\_31:

(Start: 76 @26992 has 170 MA's), (159, 27205), (171, 27241), (212, 27304), (251, 27376), (267, 27406), (279, 27427), (307, 27463), (317, 27499), (331, 27547), (336, 27568), (339, 27574), (342, 27604), (343, 27607), (358, 27655), (423, 27844), (431, 27865), (450, 27919),

Gene: Typha\_28 Start: 26025, Stop: 27062, Start Num: 76

Candidate Starts for Typha\_28:

(Start: 76 @26025 has 170 MA's), (123, 26148), (147, 26202), (159, 26238), (187, 26301), (218, 26349), (249, 26403), (251, 26406), (336, 26592), (342, 26628), (356, 26670), (361, 26688), (380, 26739),

Gene: TyrionL\_32 Start: 31933, Stop: 33093, Start Num: 48

Candidate Starts for TyrionL\_32:

(Start: 48 @31933 has 84 MA's), (81, 32044), (101, 32089), (138, 32188), (159, 32248), (170, 32284), (179, 32308), (204, 32353), (209, 32359), (237, 32410), (258, 32449), (259, 32452), (265, 32464), (275, 32479), (305, 32503), (314, 32536), (336, 32617), (344, 32662), (361, 32710), (374, 32746), (378, 32755), (380, 32761), (459, 32986),

Gene: Unicorn\_28 Start: 22720, Stop: 23781, Start Num: 76

Candidate Starts for Unicorn\_28:

(47, 22630), (59, 22687), (Start: 76 @22720 has 170 MA's), (Start: 115 @22819 has 1 MA's), (160, 22927), (165, 22939), (170, 22960), (221, 23056), (300, 23170), (313, 23221), (341, 23338), (418, 23581), (426, 23599), (443, 23638),

Gene: Urkel\_28 Start: 23284, Stop: 24297, Start Num: 73

Candidate Starts for Urkel\_28:

(62, 23239), (Start: 73 @23284 has 102 MA's), (Start: 117 @23395 has 3 MA's), (165, 23509), (221, 23626), (246, 23668), (254, 23680), (314, 23734), (336, 23812), (361, 23908), (366, 23920), (380, 23959), (387, 23995), (443, 24142), (468, 24238),

Gene: Validus\_28 Start: 22666, Stop: 23631, Start Num: 73

Candidate Starts for Validus\_28:

(64, 22630), (Start: 73 @22666 has 102 MA's), (77, 22672), (Start: 117 @22780 has 3 MA's), (133, 22807), (153, 22861), (177, 22936), (233, 23029), (264, 23083), (336, 23197), (337, 23200), (359, 23284), (380, 23341), (394, 23395), (414, 23437), (434, 23476),

Gene: Veliki\_28 Start: 23359, Stop: 24372, Start Num: 73

Candidate Starts for Veliki\_28:

(17, 22915), (28, 23062), (62, 23314), (Start: 73 @23359 has 102 MA's), (Start: 117 @23470 has 3 MA's), (165, 23584), (221, 23701), (246, 23743), (254, 23755), (314, 23809), (336, 23887), (361, 23983), (366, 23995), (377, 24025), (380, 24034), (411, 24148), (443, 24217),

Gene: Venti\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Venti\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Vidya\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Vidya\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Vista\_33 Start: 32374, Stop: 33534, Start Num: 48

Candidate Starts for Vista\_33:

(Start: 48 @32374 has 84 MA's), (81, 32485), (101, 32530), (138, 32629), (159, 32689), (170, 32725), (179, 32749), (204, 32794), (209, 32800), (237, 32851), (258, 32890), (259, 32893), (265, 32905), (275, 32920), (305, 32944), (314, 32977), (336, 33058), (344, 33103), (361, 33151), (374, 33187), (378, 33196), (380, 33202), (459, 33427),

Gene: ViviJ\_26 Start: 23840, Stop: 24904, Start Num: 76

Candidate Starts for ViviJ\_26:

(Start: 76 @23840 has 170 MA's), (110, 23930), (120, 23957), (147, 24020), (165, 24068), (177, 24107), (188, 24125), (218, 24170), (239, 24209), (267, 24257), (277, 24275), (317, 24350), (337, 24416), (359, 24506), (360, 24509), (361, 24512), (372, 24545), (394, 24644), (395, 24647), (432, 24731), (437, 24743), (470, 24860),

Gene: Vordorf\_31 Start: 26927, Stop: 27976, Start Num: 96

Candidate Starts for Vordorf\_31:

(Start: 96 @26927 has 5 MA's), (160, 27092), (173, 27137), (212, 27215), (276, 27329), (297, 27392), (314, 27443), (323, 27473), (331, 27500), (416, 27776),

Gene: WST1\_22 Start: 19043, Stop: 20098, Start Num: 76

Candidate Starts for WST1\_22:

(Start: 76 @19043 has 170 MA's), (120, 19160), (191, 19334), (261, 19451), (264, 19457), (337, 19622), (361, 19715), (379, 19763), (386, 19799), (421, 19892),

Gene: Wallhey\_32 Start: 31937, Stop: 33097, Start Num: 48

Candidate Starts for Wallhey\_32:

(Start: 48 @31937 has 84 MA's), (81, 32048), (101, 32093), (138, 32192), (159, 32252), (170, 32288), (179, 32312), (204, 32357), (209, 32363), (237, 32414), (258, 32453), (259, 32456), (265, 32468),

(275, 32483), (305, 32507), (314, 32540), (336, 32621), (344, 32666), (361, 32714), (374, 32750), (378, 32759), (380, 32765), (459, 32990),

Gene: Waterdiva\_33 Start: 32366, Stop: 33526, Start Num: 48

Candidate Starts for Waterdiva\_33:

(Start: 48 @32366 has 84 MA's), (81, 32477), (101, 32522), (138, 32621), (159, 32681), (170, 32717), (179, 32741), (204, 32786), (209, 32792), (237, 32843), (258, 32882), (259, 32885), (265, 32897), (275, 32912), (305, 32936), (314, 32969), (336, 33050), (344, 33095), (361, 33143), (374, 33179), (378, 33188), (380, 33194), (459, 33419),

Gene: Waterfoul\_27 Start: 23954, Stop: 25021, Start Num: 76

Candidate Starts for Waterfoul\_27:

(Start: 76 @23954 has 170 MA's), (120, 24071), (161, 24176), (165, 24182), (191, 24242), (198, 24257), (218, 24284), (239, 24323), (242, 24326), (249, 24338), (251, 24341), (252, 24344), (261, 24359), (297, 24404), (299, 24410), (317, 24464), (331, 24512), (340, 24542), (351, 24587), (385, 24716), (397, 24770),

Gene: West99\_33 Start: 32811, Stop: 33974, Start Num: 48

Candidate Starts for West99\_33:

(29, 32664), (Start: 46 @32805 has 10 MA's), (Start: 48 @32811 has 84 MA's), (56, 32850), (64, 32880), (81, 32925), (101, 32970), (138, 33069), (159, 33129), (170, 33165), (179, 33189), (204, 33234), (209, 33240), (237, 33291), (258, 33330), (259, 33333), (265, 33345), (275, 33360), (305, 33384), (314, 33417), (336, 33498), (344, 33543), (361, 33591), (374, 33627), (378, 33636), (380, 33642), (459, 33867),

Gene: WheatThin\_27 Start: 23315, Stop: 24382, Start Num: 100

Candidate Starts for WheatThin\_27:

(Start: 100 @23315 has 14 MA's), (180, 23525), (276, 23693), (323, 23834), (328, 23849), (331, 23861), (337, 23885), (357, 23969), (406, 24116),

Gene: Wheezy\_44 Start: 34957, Stop: 36015, Start Num: 80

Candidate Starts for Wheezy\_44:

(1, 33517), (2, 33814), (5, 34045), (13, 34414), (40, 34792), (42, 34807), (Start: 46 @34825 has 10 MA's), (Start: 80 @34957 has 33 MA's), (217, 35302), (245, 35353), (277, 35401),

Gene: WhoseManz\_46 Start: 32658, Stop: 33761, Start Num: 80

Candidate Starts for WhoseManz\_46:

(Start: 80 @32658 has 33 MA's), (92, 32691), (129, 32787), (199, 32970), (314, 33177), (317, 33186), (336, 33255), (337, 33258), (357, 33342), (376, 33393), (409, 33495), (441, 33579), (443, 33588), (444, 33591),

Gene: Willsammy\_22 Start: 21571, Stop: 22605, Start Num: 76

Candidate Starts for Willsammy\_22:

(Start: 76 @21571 has 170 MA's), (140, 21727), (142, 21733), (178, 21841), (181, 21844), (191, 21859), (243, 21946), (267, 21991), (314, 22072), (331, 22129), (337, 22153), (366, 22258), (385, 22330), (403, 22375),

Gene: Wintermute\_29 Start: 24585, Stop: 25589, Start Num: 76

Candidate Starts for Wintermute\_29:

(Start: 76 @24585 has 170 MA's), (Start: 104 @24654 has 1 MA's), (146, 24753), (162, 24798), (185, 24858), (191, 24867), (212, 24903), (237, 24948), (247, 24969), (252, 24975), (254, 24978), (336, 25110), (337, 25113), (371, 25236), (380, 25257), (465, 25524),

Gene: Woes\_30 Start: 38617, Stop: 39519, Start Num: 137

Candidate Starts for Woes\_30:

(Start: 137 @38617 has 35 MA's), (193, 38755), (223, 38824), (252, 38872), (301, 38935), (314, 38971), (454, 39391), (473, 39496),

Gene: Wojtek\_32 Start: 28749, Stop: 29798, Start Num: 93

Candidate Starts for Wojtek\_32:

(Start: 93 @28749 has 33 MA's), (143, 28863), (157, 28905), (173, 28959), (181, 28974), (212, 29037), (314, 29262), (362, 29433), (445, 29661), (456, 29706),

Gene: Xavia\_22 Start: 21888, Stop: 22955, Start Num: 76

Candidate Starts for Xavia\_22:

(Start: 76 @21888 has 170 MA's), (142, 22050), (156, 22092), (181, 22161), (218, 22221), (243, 22266), (252, 22284), (267, 22311), (314, 22392), (331, 22449), (337, 22473), (384, 22644),

Gene: Xeno\_21 Start: 20200, Stop: 21240, Start Num: 76

Candidate Starts for Xeno\_21:

(Start: 76 @20200 has 170 MA's), (142, 20365), (156, 20407), (181, 20476), (218, 20536), (243, 20581), (267, 20626), (314, 20707), (331, 20764), (337, 20788), (366, 20893), (385, 20965), (403, 21010),

Gene: Ximenita\_29 Start: 22823, Stop: 23818, Start Num: 76

Candidate Starts for Ximenita\_29:

(47, 22733), (Start: 76 @22823 has 170 MA's), (Start: 115 @22922 has 1 MA's), (Start: 117 @22928 has 3 MA's), (174, 23078), (221, 23159), (336, 23345), (337, 23348), (358, 23432), (425, 23627), (467, 23756), (471, 23777), (473, 23795),

Gene: Y10\_29 Start: 24585, Stop: 25589, Start Num: 76

Candidate Starts for Y10\_29:

(Start: 76 @24585 has 170 MA's), (Start: 104 @24654 has 1 MA's), (146, 24753), (162, 24798), (165, 24804), (185, 24858), (191, 24867), (212, 24903), (237, 24948), (247, 24969), (252, 24975), (254, 24978), (336, 25110), (337, 25113), (371, 25236), (380, 25257), (465, 25524),

Gene: Y2\_29 Start: 24585, Stop: 25589, Start Num: 76

Candidate Starts for Y2\_29:

(Start: 76 @24585 has 170 MA's), (Start: 104 @24654 has 1 MA's), (146, 24753), (162, 24798), (165, 24804), (185, 24858), (191, 24867), (212, 24903), (237, 24948), (247, 24969), (252, 24975), (254, 24978), (336, 25110), (337, 25113), (371, 25236), (380, 25257), (465, 25524),

Gene: YangYin\_23 Start: 23308, Stop: 24453, Start Num: 48

Candidate Starts for YangYin\_23:

(3, 22318), (4, 22519), (8, 22678), (41, 23284), (Start: 48 @23308 has 84 MA's), (81, 23419), (86, 23434), (131, 23545), (155, 23608), (159, 23623), (224, 23770), (233, 23785), (261, 23836), (321, 23932), (322, 23938), (335, 23983), (337, 23992), (374, 24121), (383, 24160),

Gene: YasnayaPolyana\_29 Start: 24655, Stop: 25590, Start Num: 104

Candidate Starts for YasnayaPolyana\_29:

(Start: 76 @24586 has 170 MA's), (Start: 104 @24655 has 1 MA's), (146, 24754), (162, 24799), (185, 24859), (191, 24868), (212, 24904), (237, 24949), (247, 24970), (252, 24976), (254, 24979), (336, 25111), (337, 25114), (371, 25237), (380, 25258), (465, 25525),

Gene: Yikes\_34 Start: 30133, Stop: 31182, Start Num: 93

Candidate Starts for Yikes\_34:

(Start: 93 @30133 has 33 MA's), (143, 30247), (157, 30289), (173, 30343), (181, 30358), (212, 30421), (362, 30817), (407, 30952), (445, 31045),

Gene: Yndexa\_46 Start: 34612, Stop: 35703, Start Num: 80

Candidate Starts for Yndexa\_46:

(Start: 80 @34612 has 33 MA's), (92, 34645), (129, 34741), (199, 34924), (232, 34993), (314, 35131), (318, 35143), (319, 35146),

Gene: YoureAdopted\_27 Start: 23292, Stop: 24305, Start Num: 73

Candidate Starts for YoureAdopted\_27:

(17, 22848), (28, 22995), (62, 23247), (Start: 73 @23292 has 102 MA's), (Start: 117 @23403 has 3 MA's), (165, 23517), (221, 23634), (246, 23676), (254, 23688), (314, 23742), (336, 23820), (361, 23916), (366, 23928), (377, 23958), (380, 23967), (386, 24000), (411, 24081), (443, 24150),

Gene: Yuna\_29 Start: 23206, Stop: 24168, Start Num: 73

Candidate Starts for Yuna\_29:

(Start: 73 @23206 has 102 MA's), (179, 23476), (186, 23485), (202, 23518), (210, 23530), (215, 23539), (233, 23566), (323, 23689), (337, 23740), (356, 23809), (362, 23830), (404, 23950),

Gene: Yunkel11\_28 Start: 22542, Stop: 23603, Start Num: 73

Candidate Starts for Yunkel11\_28:

(Start: 73 @22542 has 102 MA's), (Start: 117 @22656 has 3 MA's), (165, 22770), (170, 22791), (215, 22878), (230, 22899), (233, 22905), (320, 23013), (336, 23073), (363, 23193), (364, 23199), (365, 23205), (386, 23295), (430, 23421), (436, 23436),

Gene: Zabiza\_28 Start: 23323, Stop: 24336, Start Num: 73

Candidate Starts for Zabiza\_28:

(17, 22879), (28, 23026), (62, 23278), (Start: 73 @23323 has 102 MA's), (Start: 117 @23434 has 3 MA's), (165, 23548), (221, 23665), (246, 23707), (254, 23719), (314, 23773), (336, 23851), (361, 23947), (366, 23959), (377, 23989), (380, 23998), (411, 24112), (443, 24181),

Gene: Zany\_32 Start: 29660, Stop: 30706, Start Num: 93

Candidate Starts for Zany\_32:

(Start: 93 @29660 has 33 MA's), (143, 29774), (151, 29795), (173, 29870), (181, 29885), (212, 29948), (244, 30008), (293, 30110), (362, 30344),

Gene: Zavala\_28 Start: 23298, Stop: 24311, Start Num: 73

Candidate Starts for Zavala\_28:

(17, 22854), (62, 23253), (Start: 73 @23298 has 102 MA's), (165, 23523), (221, 23640), (246, 23682), (254, 23694), (314, 23748), (336, 23826), (361, 23922), (366, 23934), (377, 23964), (380, 23973), (411, 24087), (443, 24156),

Gene: Zilizebeth\_22 Start: 21299, Stop: 22336, Start Num: 76

Candidate Starts for Zilizebeth\_22:

(68, 21275), (Start: 73 @21296 has 102 MA's), (Start: 76 @21299 has 170 MA's), (85, 21323), (142, 21461), (156, 21503), (181, 21572), (218, 21632), (243, 21677), (267, 21722), (314, 21803), (331, 21860), (337, 21884), (366, 21989), (385, 22061), (403, 22106), (465, 22271),

Gene: Zodiariah\_22 Start: 21904, Stop: 22950, Start Num: 95

Candidate Starts for Zodiariah\_22:

(Start: 95 @21904 has 3 MA's), (140, 22009), (173, 22114), (263, 22288), (266, 22291), (331, 22474), (378, 22630), (392, 22702), (416, 22750), (420, 22753), (433, 22786),

Gene: ZoeJ\_25 Start: 21223, Stop: 22245, Start Num: 76

Candidate Starts for ZoeJ\_25:

(33, 21040), (47, 21139), (Start: 76 @21223 has 170 MA's), (Start: 115 @21325 has 1 MA's), (141, 21379), (143, 21385), (162, 21439), (165, 21445), (166, 21448), (199, 21526), (212, 21547), (213, 21550), (246, 21604), (339, 21754), (472, 22213), (473, 22222),

Gene: Zonia\_33 Start: 32387, Stop: 33547, Start Num: 48

Candidate Starts for Zonia\_33:

(Start: 48 @32387 has 84 MA's), (81, 32498), (101, 32543), (138, 32642), (159, 32702), (170, 32738), (179, 32762), (204, 32807), (209, 32813), (237, 32864), (258, 32903), (259, 32906), (265, 32918), (275, 32933), (305, 32957), (314, 32990), (336, 33071), (344, 33116), (361, 33164), (374, 33200), (378, 33209), (380, 33215), (459, 33440),