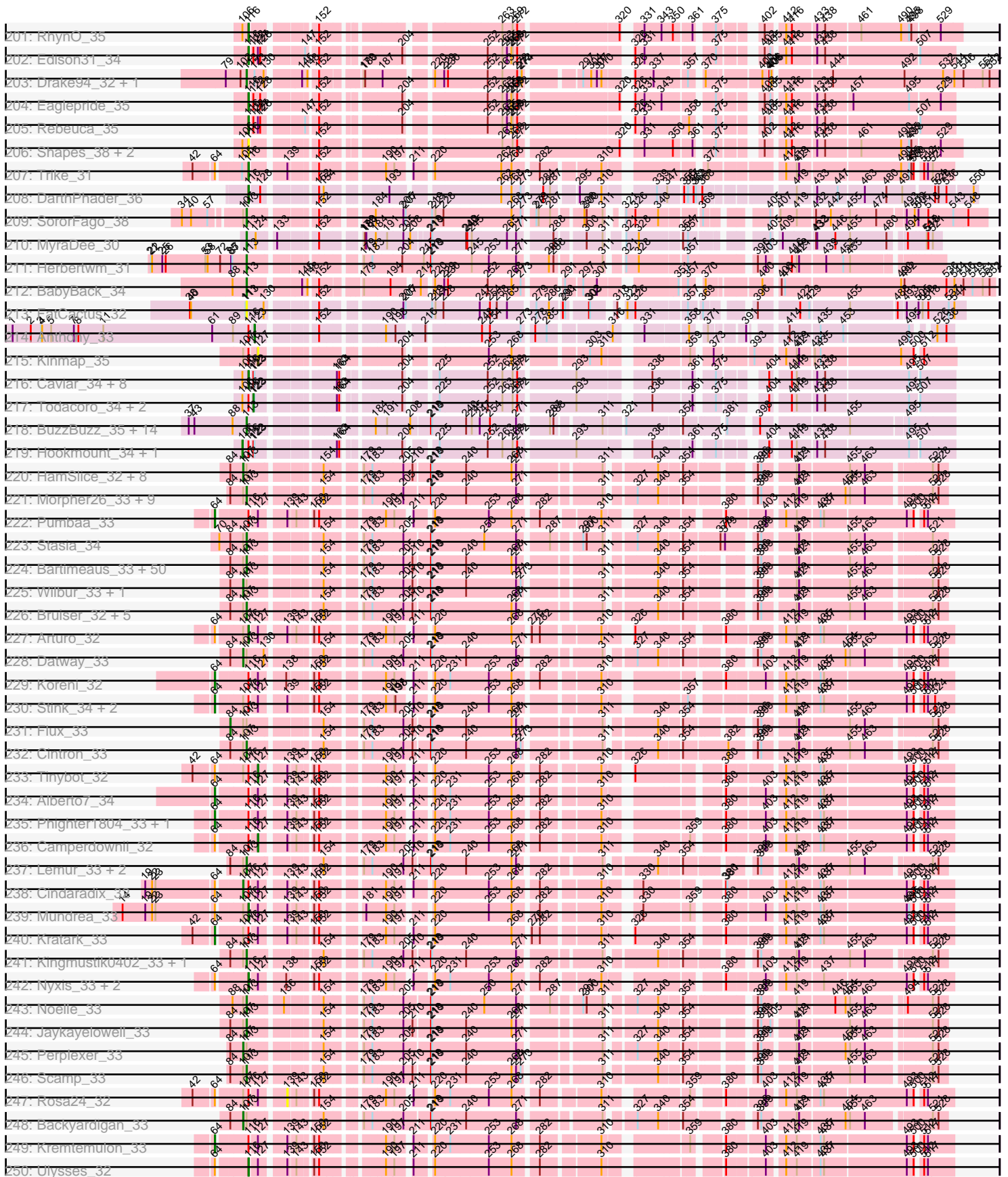






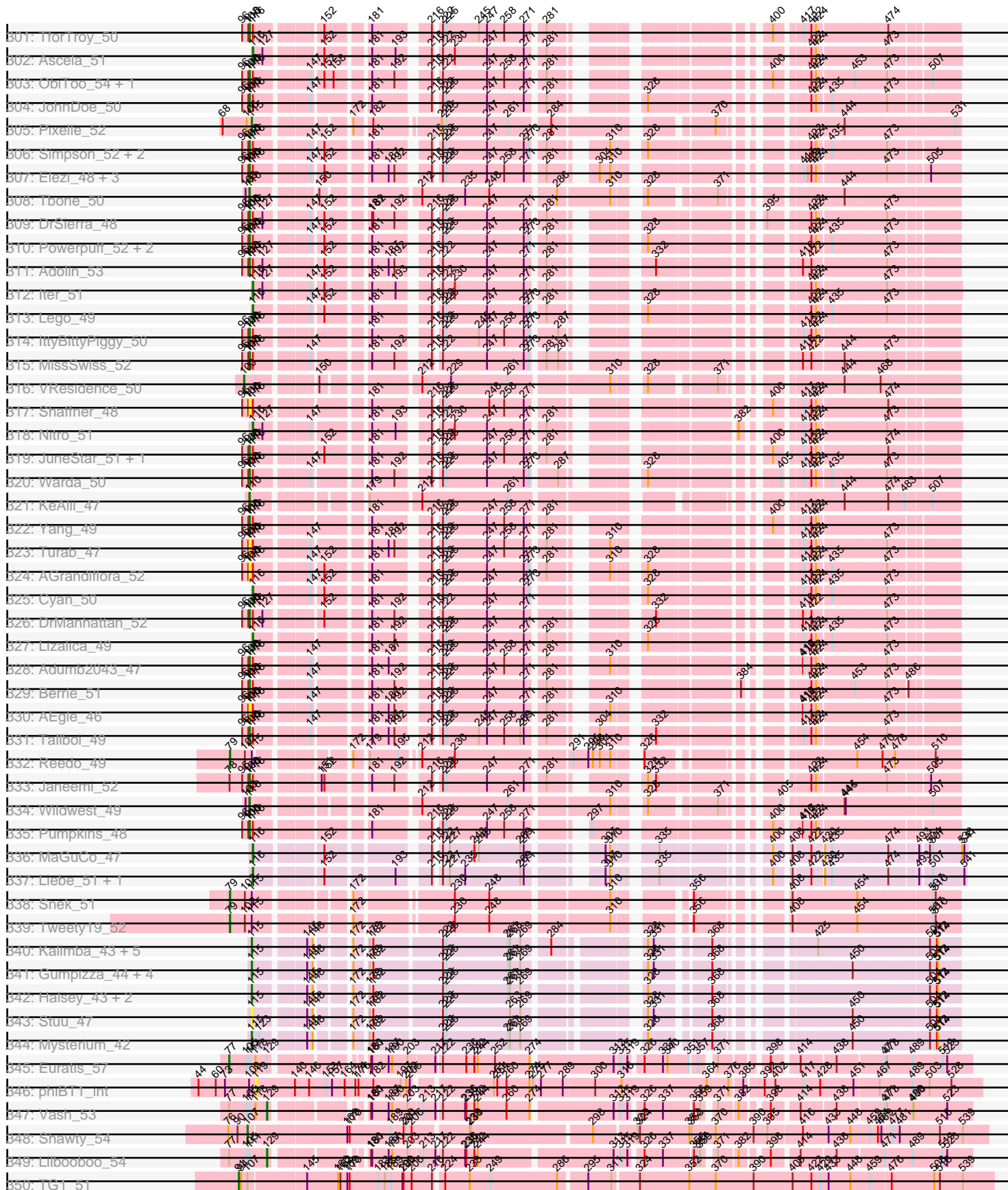


Pham 224137

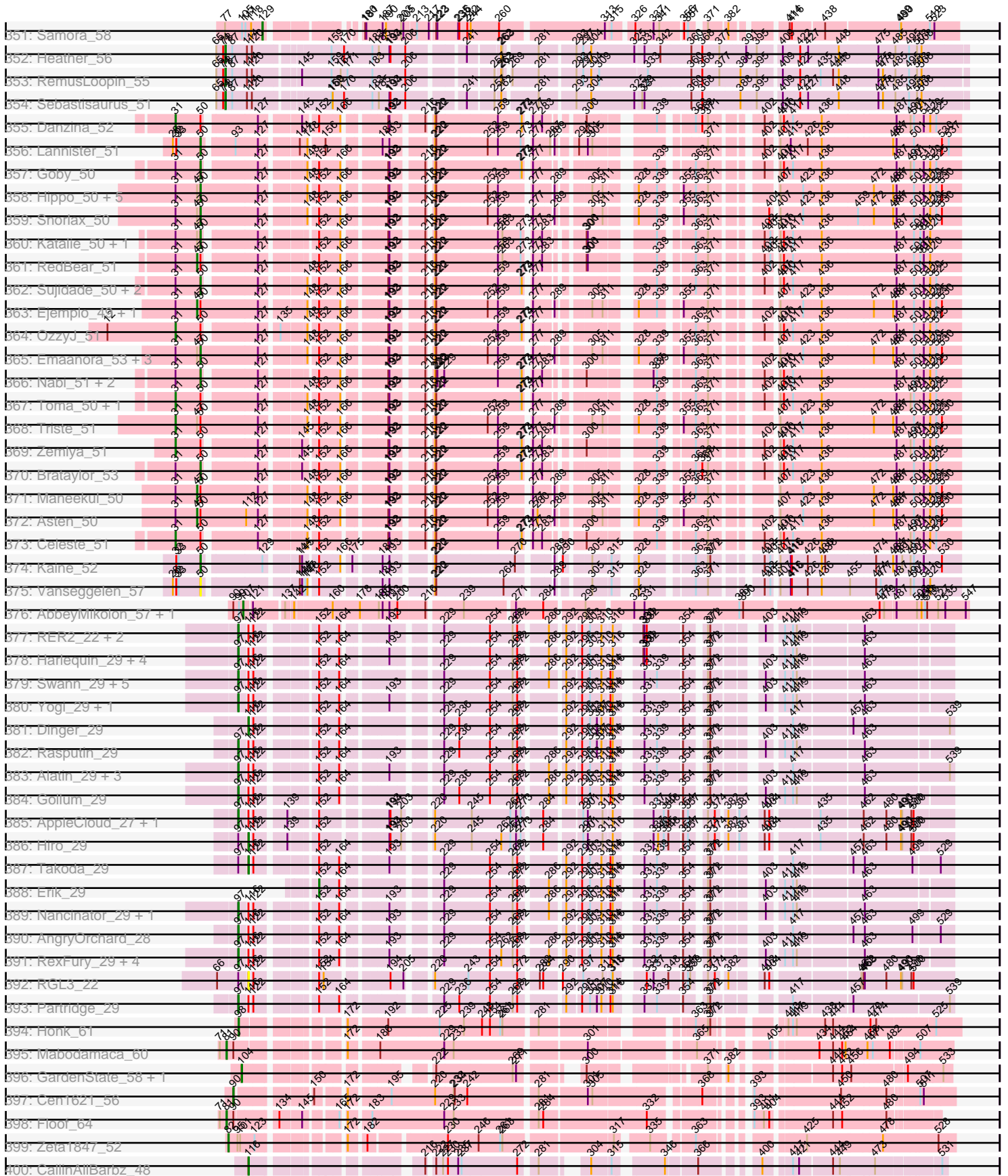




Pham 224137

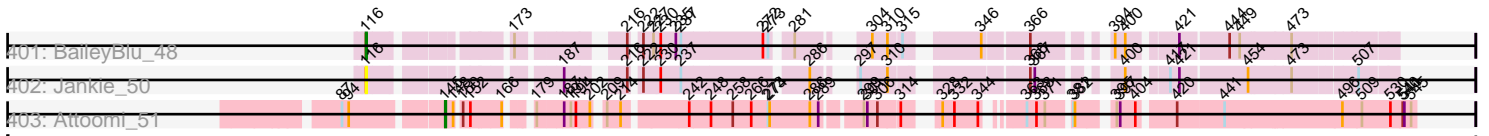


Pham 224137





# Pham 224137



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 224137 Report

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

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

Pham number 224137 has 622 members, 54 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_35
- Track 2 : Crispicous1\_36, DrFeelGood\_36
- Track 3 : Rajelicia\_37
- Track 4 : Zeuska\_38, Abrogate\_380
- Track 5 : PhrostyMug\_38
- Track 6 : LilBib\_37
- Track 7 : Bethlehem\_37
- Track 8 : GageAP\_39
- Track 9 : Marchy\_32
- Track 10 : Kugel\_38
- Track 11 : Chanagan\_36
- Track 12 : Tasp14\_38
- Track 13 : PascalRango\_38
- Track 14 : Cueylyss\_37
- Track 15 : Kykar\_36
- Track 16 : Scowl\_37
- Track 17 : Arcanine\_37
- Track 18 : ProMouse\_35
- Track 19 : TheloniousMonk\_39
- Track 20 : Ringer\_38
- Track 21 : Violet\_36
- Track 22 : Lesedi\_36
- Track 23 : HanShotFirst\_36
- Track 24 : Paphu\_36
- Track 25 : Kenmech\_40
- Track 26 : KBG\_38
- Track 27 : DD5\_38, Lockley\_38
- Track 28 : Rhynn\_37
- Track 29 : RidgeCB\_37
- Track 30 : Adahisdi\_38, Oogway\_36
- Track 31 : Rufus\_39
- Track 32 : Rutherford\_39
- Track 33 : Doom\_37

- Track 34 : Traft412\_39
- Track 35 : Dreamboat\_38, Jasper\_38
- Track 36 : Ciao\_37
- Track 37 : JackSparrow\_38
- Track 38 : HarryOW\_37
- Track 39 : Pari\_38
- Track 40 : BK1\_34, A6\_34
- Track 41 : JC27\_38
- Track 42 : Maroc7\_37
- Track 43 : Ichabod\_38
- Track 44 : Ashballer\_39
- Track 45 : Teodoridan\_35
- Track 46 : Pinto\_39
- Track 47 : McGuire\_38
- Track 48 : Arlo\_36
- Track 49 : Tripl3t\_38
- Track 50 : BillKnuckles\_38
- Track 51 : Sagefire\_39
- Track 52 : Ajay\_38
- Track 53 : Sibs6\_38
- Track 54 : KyMonks1A\_40
- Track 55 : Hermia\_40
- Track 56 : Perseus\_39
- Track 57 : Mkhusele\_38
- Track 58 : Turj99\_36, Magnito\_36
- Track 59 : Museum\_39
- Track 60 : GrecoEtereo\_39
- Track 61 : Fajezeel\_39, Greg\_39, Pippin\_39
- Track 62 : Kanely\_38
- Track 63 : PinkPlastic\_36
- Track 64 : Sanya\_36
- Track 65 : BigMau\_39
- Track 66 : Killigrew\_35
- Track 67 : Raid\_38
- Track 68 : STLscum\_38
- Track 69 : Sunshine924\_39
- Track 70 : Zeeculate\_37
- Track 71 : Big3\_37
- Track 72 : Eyeball\_37, LunarLander\_39
- Track 73 : Bexan\_35, StrongArm\_36
- Track 74 : QTRlifeCrisis\_38
- Track 75 : Nhonho\_37
- Track 76 : U2\_37
- Track 77 : SkiPole\_40
- Track 78 : Jerm2\_38
- Track 79 : KSSJEB\_37
- Track 80 : Forsytheast\_37, Corvo\_38
- Track 81 : SarFire\_37
- Track 82 : PhineBark\_37
- Track 83 : ConceptII\_39
- Track 84 : Ohno789\_37
- Track 85 : Bob3\_36
- Track 86 : Seabiscuit\_39

- Track 87 : JuliaChild\_39, Swole\_39
- Track 88 : Petruccio\_38
- Track 89 : Espresso\_37
- Track 90 : Lopton\_38
- Track 91 : Lamina13\_37
- Track 92 : Atkinbua\_39
- Track 93 : Inyanga\_35, Iqorha\_35
- Track 94 : Dulcie\_36
- Track 95 : Phlippers\_35
- Track 96 : Bxb1\_35
- Track 97 : Dexes\_37
- Track 98 : TwoPeat\_38
- Track 99 : Licorice\_39
- Track 100 : Anglerfish\_39
- Track 101 : Levia\_33
- Track 102 : MrGordo\_37
- Track 103 : Francis47\_37
- Track 104 : Altman\_39
- Track 105 : GMonster\_36
- Track 106 : Smairt\_38
- Track 107 : Smeagol\_39
- Track 108 : AFIS\_37
- Track 109 : Petp2012\_39, Molly\_39
- Track 110 : Fascinus\_36, Bigfoot\_35
- Track 111 : Jorgensen\_37
- Track 112 : Papez\_39
- Track 113 : Wheeler\_38
- Track 114 : Manatee\_38
- Track 115 : Euphoria\_37
- Track 116 : BarrowTuph\_36
- Track 117 : Marcell\_37
- Track 118 : Michley\_37
- Track 119 : Sorpresa\_37
- Track 120 : Sandaddy\_37
- Track 121 : SpikeBT\_39
- Track 122 : MetalQZJ\_37, MaryBeth\_37
- Track 123 : Thor\_37
- Track 124 : Briton15\_39
- Track 125 : Pita2\_39, PSullivan\_36
- Track 126 : Mryolo\_35
- Track 127 : Ruotula\_37
- Track 128 : Paraselene\_36
- Track 129 : Nerujay\_38
- Track 130 : Parliament\_36
- Track 131 : Bircsak\_37
- Track 132 : Peterson\_40
- Track 133 : Pepe\_33
- Track 134 : Rohr\_38
- Track 135 : ILeeKay\_39
- Track 136 : Marco3\_37
- Track 137 : BeesKnees\_38
- Track 138 : PattyP\_39
- Track 139 : Squee\_38, Naira\_38, Fenn\_38

- Track 140 : Topgun\_36
- Track 141 : Alvin\_38
- Track 142 : Seanderson\_38
- Track 143 : Bigchungji\_37
- Track 144 : Acme\_40
- Track 145 : Sumter\_36
- Track 146 : Payneful\_37
- Track 147 : Burton\_38
- Track 148 : Slagathor\_38
- Track 149 : Tote\_34
- Track 150 : Dussy\_38
- Track 151 : HermioneGrange\_37, Gandalf20\_38
- Track 152 : Gompeii16\_37
- Track 153 : Bones\_37
- Track 154 : Solon\_37
- Track 155 : Blue\_37
- Track 156 : Trouble\_38
- Track 157 : Edtherson\_38
- Track 158 : Marsha\_37
- Track 159 : Snazzy\_36
- Track 160 : Graduation\_39
- Track 161 : Bruns\_36
- Track 162 : Switzer\_38
- Track 163 : PacerPaul\_38
- Track 164 : MPlant7149\_37
- Track 165 : Watermelon\_39
- Track 166 : PherrisBueller\_38
- Track 167 : Marge\_38
- Track 168 : Makemake\_38
- Track 169 : DreamCatcher\_40
- Track 170 : BaconJack\_40
- Track 171 : Monet\_39
- Track 172 : Froghopper\_37
- Track 173 : Wilkins\_36
- Track 174 : Alsfro\_41
- Track 175 : IgnatiusPatJac\_36
- Track 176 : Aeneas\_40
- Track 177 : Barriga\_37
- Track 178 : BPBiebs31\_38
- Track 179 : Zephyr\_38
- Track 180 : Gwendoluna\_40
- Track 181 : Dynamix\_38
- Track 182 : Pelly\_37
- Track 183 : Niza\_40
- Track 184 : Hope4ever\_37
- Track 185 : SwissCheese\_39, Moose\_37
- Track 186 : NEHalo\_37
- Track 187 : Norz\_39
- Track 188 : Abbyshoes\_39
- Track 189 : Magnar\_37
- Track 190 : CactusRose\_35
- Track 191 : McSinger\_38
- Track 192 : Treddle\_39

- Track 193 : Beatrix\_37
- Track 194 : WalterMcMickey\_34, Twister\_34, Topanga\_34
- Track 195 : DontArgue\_32
- Track 196 : Poompha\_32
- Track 197 : KittenMittens\_32
- Track 198 : Chupacabra\_33, OKCentral2016\_33
- Track 199 : PeaceMeal1\_32
- Track 200 : Kristoff\_35
- Track 201 : RhynO\_35
- Track 202 : Edison31\_34
- Track 203 : Drake94\_32, Severus\_32
- Track 204 : Eaglepride\_35
- Track 205 : Rebeuca\_35
- Track 206 : Shapes\_38, Rowdy\_38, DustyMartin\_38
- Track 207 : Trike\_31
- Track 208 : DarthPhader\_36
- Track 209 : SororFago\_38
- Track 210 : MyraDee\_30
- Track 211 : Herbertwm\_31
- Track 212 : BabyBack\_34
- Track 213 : FatCactus\_32
- Track 214 : Anthony\_33
- Track 215 : Kinmap\_35
- Track 216 : Caviar\_34, Margo\_34, QuinnKiro\_33, Noella\_34, ResDef\_34, Norbert\_33, Popcicle\_34, Panamaxus\_33, Pocahontas\_34
- Track 217 : Todacoro\_34, Texage\_33, Veracruz\_33
- Track 218 : BuzzBuzz\_35, Daishi\_35, Soshari\_38, Phoxy\_36, LarryKay\_36, Rummer\_36, Spike509\_36, Methuselah\_35, HashRod\_37, Louie6\_36, Bxz2\_34, TinyPebbles\_36, Misomonster\_38, KADY\_37, AgronaGT15\_36
- Track 219 : Hookmount\_34, Lambert1\_34
- Track 220 : HamSlice\_32, Maverick\_33, Peaches\_33, Bombshell\_33, Caelakin\_33, Holli\_33, Pipcraft\_33, Eros\_33, Burger\_32
- Track 221 : Morpher26\_33, Katalie136\_33, Wile\_33, Bumblebee11\_33, AbbysRanger\_33, Achebe\_32, PetiteSangsue\_33, Badger\_33, Xena\_33, Cici\_33
- Track 222 : Pumbaa\_33
- Track 223 : Stasia\_34
- Track 224 : Bartimeaus\_33, Ruin\_33, Albee\_33, JoongJeon\_33, Eris\_32, Annyong\_33, TiroTheta9\_33, Sabertooth\_33, OKaNui\_34, Millski\_32, Lorenzo\_33, Eapen\_33, Relief\_33, CentreCat\_33, Nemo27\_33, LappelDuVide\_33, Druantia\_33, Florean\_33, Skipitt\_33, Broseidon\_33, TygerBlood\_33, JetBlade\_33, Huxley\_33, Spino\_33, Roosevelt\_33, Cocoaberry\_33, Taquarus\_33, Kyee\_33, Baby16\_33, Chaph\_33, Phacado\_33, NorthStar\_33, Koan\_32, Gadost\_33, Deano\_33, Mayonnaise\_33, BubbleTrouble\_33, Connomayer\_33, Funston\_33, Wizard007\_33, NotAPhaseMom\_33, Thanksgivukkah\_33, MeeZee\_33, Blackmoor\_33, Houdini22\_33, Happiness\_33, Clarenza\_33, YoSam321\_33, Palestino\_32, Dhanush\_33, Citius\_33
- Track 225 : Wilbur\_33, Romney\_33
- Track 226 : Bruiser\_32, Mazhar510\_33, PeterPeter\_33, Wander\_33, Avle17\_33, Lunsford\_34
- Track 227 : Arturo\_32
- Track 228 : Datway\_33
- Track 229 : Koreni\_32
- Track 230 : Stink\_34, AvatarAhPeg\_34, Miramae\_33

- Track 231 : Flux\_33
- Track 232 : Cintron\_33
- Track 233 : Tinybot\_32
- Track 234 : Alberto7\_34
- Track 235 : Phighter1804\_33, DirtyDunning\_33
- Track 236 : Camperdownii\_32
- Track 237 : Lemur\_33, LittleB\_33, KFPoly\_33
- Track 238 : Cindaradix\_32
- Track 239 : Mundrea\_33
- Track 240 : Kratak\_33
- Track 241 : Kingmustik0402\_33, Iceman\_34
- Track 242 : Nyxis\_33, Phontbonne\_33, LittleGuy\_33
- Track 243 : Noelle\_33
- Track 244 : Jaykayelowell\_33
- Track 245 : Perplexer\_33
- Track 246 : Scamp\_33
- Track 247 : Rosa24\_32
- Track 248 : Backyardigan\_33
- Track 249 : Kremtemulon\_33
- Track 250 : Ulysses\_32
- Track 251 : Shygu2\_33
- Track 252 : Shaka\_33
- Track 253 : SenorClean\_32
- Track 254 : ICleared\_33
- Track 255 : LochMonster\_33
- Track 256 : Iracema64\_34
- Track 257 : Micasa\_30
- Track 258 : AgentM\_30, ForGetIt\_30, Lev2\_30, Phlorence\_30, Jovo\_30, Aragog\_30, Conspiracy\_30, Discoknowium\_30, Tiger\_30
- Track 259 : Milcery\_30, Tarynearal\_29, LittleCherry\_30, Theia\_28, Swirley\_30, George\_29, Bonamassa\_30, Cuco\_30
- Track 260 : Prinashel11\_31, HuhtaEnerson15\_30, Twigg\_30
- Track 261 : PickleBack\_30
- Track 262 : EITiger69\_31, Jabiru\_31
- Track 263 : Naca\_31
- Track 264 : Scorpia\_32
- Track 265 : Bluefalcon\_29
- Track 266 : Airmid\_31
- Track 267 : Ghoulboy\_30
- Track 268 : Dublin\_29, Midas2\_30
- Track 269 : PetterN\_32
- Track 270 : Chadwick\_32
- Track 271 : Zolita\_29, SydNat\_30
- Track 272 : Archetta\_30
- Track 273 : UnionJack\_31
- Track 274 : MarysWell\_29
- Track 275 : Coog\_30
- Track 276 : Benedict\_31
- Track 277 : Sheen\_34, Toro\_35, FlyCatcher\_36
- Track 278 : HINdeR\_33
- Track 279 : Timshel\_34
- Track 280 : DroogsArmy\_34
- Track 281 : PP\_41

- Track 282 : Smeadley\_30
- Track 283 : Danforth\_29
- Track 284 : Expelliarmus\_29
- Track 285 : Dixon\_30
- Track 286 : Phillis\_30
- Track 287 : Stephig9\_30
- Track 288 : Groundhog\_29
- Track 289 : Roary\_30
- Track 290 : Astro\_30
- Track 291 : NearlyHeadless\_30
- Track 292 : SheaKeira\_35
- Track 293 : Charm\_33
- Track 294 : DreamTeam1\_33
- Track 295 : AinMach\_48
- Track 296 : Community\_53, Tuck\_53
- Track 297 : Mudpuppy\_46
- Track 298 : Niobe\_48, Jstan\_50, Asa16\_48
- Track 299 : Phives\_54
- Track 300 : Amyev\_51, Tian\_50
- Track 301 : TforTroy\_50
- Track 302 : Ascela\_51
- Track 303 : ObiToo\_54, Crewmate\_55
- Track 304 : JohnDoe\_50
- Track 305 : Pixelle\_52
- Track 306 : Simpson\_52, Joemato\_50, Kaylissa\_51
- Track 307 : Elezi\_48, Eraser\_48, London\_48, Subaru\_49
- Track 308 : Tbone\_50
- Track 309 : DrSierra\_48
- Track 310 : Powerpuff\_52, Tutumahutu\_51, YesChef\_50
- Track 311 : Adolin\_53
- Track 312 : Iter\_51
- Track 313 : Lego\_49
- Track 314 : IttyBittyPiggy\_50
- Track 315 : MissSwiss\_52
- Track 316 : VResidence\_50
- Track 317 : Shaffner\_48
- Track 318 : Nitro\_51
- Track 319 : JuneStar\_51, Cassia\_48
- Track 320 : Warda\_50
- Track 321 : KeAlii\_47
- Track 322 : Yang\_49
- Track 323 : Turab\_47
- Track 324 : AGrandiflora\_52
- Track 325 : Cyan\_50
- Track 326 : DrManhattan\_52
- Track 327 : Lizalica\_49
- Track 328 : Adumb2043\_47
- Track 329 : Berrie\_51
- Track 330 : AEgle\_46
- Track 331 : Tallboi\_49
- Track 332 : Reedo\_49
- Track 333 : Janeemi\_52
- Track 334 : Wildwest\_49



- Track 335 : Pumpkins\_48
- Track 336 : MaGuCo\_47
- Track 337 : Liebe\_51, Maureen\_51
- Track 338 : Sneek\_51
- Track 339 : Tweety19\_52
- Track 340 : Kalimba\_43, Gambol\_44, Sabourin\_48, Donkey\_43, Sooty\_43, Cappuccino\_43
- Track 341 : Gumpizza\_44, RockScotty\_45, Giorgio\_44, Ashes\_43, Beaupre\_46
- Track 342 : Halsey\_43, Moss\_43, SpecialK\_43
- Track 343 : Stuu\_47
- Track 344 : Mysterium\_42
- Track 345 : Euratis\_57
- Track 346 : phiBT1\_int
- Track 347 : Vash\_53
- Track 348 : Shawty\_54
- Track 349 : Lilbooboo\_54
- Track 350 : TG1\_51
- Track 351 : Samora\_58
- Track 352 : Heather\_56
- Track 353 : RemusLoopin\_55
- Track 354 : Sebastisaurus\_51
- Track 355 : Danzina\_52
- Track 356 : Lannister\_51
- Track 357 : Goby\_50
- Track 358 : Hippo\_50, Dwayne\_50, Chucky\_50, BarryBee\_53, Whatever\_50, Werner\_50
- Track 359 : Snorlax\_50
- Track 360 : Katalie\_50, South40\_50
- Track 361 : RedBear\_51
- Track 362 : Sujidade\_50, Lika\_49, Godpower\_51
- Track 363 : Ejemplo\_49, TuanPN\_49
- Track 364 : OzzyJ\_51
- Track 365 : Emaanora\_53, SarahRose\_50, Yasdnil\_50, TagePhighter\_52
- Track 366 : Nabi\_51, Lorelei\_51, Rana\_51
- Track 367 : Toma\_50, Dattran\_52
- Track 368 : Triste\_51
- Track 369 : Zemlya\_51
- Track 370 : Brataylor\_53
- Track 371 : Maneekul\_50
- Track 372 : Asten\_50
- Track 373 : Celeste\_51
- Track 374 : Kaine\_52
- Track 375 : Vanseggelen\_57
- Track 376 : AbbeyMikolon\_57, Nesbitt\_55
- Track 377 : RER2\_22, PhailMary\_28, Alpacados\_28
- Track 378 : Harlequin\_29, Yoncess\_29, Bryce\_29, Jester\_29, BobbyDazzler\_29
- Track 379 : Swann\_29, TWAMP\_29, CosmicSans\_29, Phrankenstein\_29, Lillie\_29, Rhodalysa\_29
- Track 380 : Yogi\_29, Bonanza\_29
- Track 381 : Dinger\_29
- Track 382 : Rasputin\_29
- Track 383 : Alatin\_29, StCroix\_29, Shuman\_29, Naiad\_29
- Track 384 : Gollum\_29

- Track 385 : AppleCloud\_27, Krishelle\_29
- Track 386 : Hiro\_29
- Track 387 : Takoda\_29
- Track 388 : Erik\_29
- Track 389 : Nancinator\_29, Bradshaw\_29
- Track 390 : AngryOrchard\_28
- Track 391 : RexFury\_29, Espica\_29, Belenaria\_29, UhSalsa\_29, Natosaleda\_29
- Track 392 : RGL3\_22
- Track 393 : Partridge\_29
- Track 394 : Honk\_61
- Track 395 : Mabodamaca\_60
- Track 396 : GardenState\_58, IAmGroot\_57
- Track 397 : Cen1621\_56
- Track 398 : Floof\_64
- Track 399 : Zeta1847\_52
- Track 400 : CallinAllBarbz\_48
- Track 401 : BaileyBlu\_48
- Track 402 : Jankie\_50
- Track 403 : Attoomi\_51

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

The start number called the most often in the published annotations is 116, it was called in 209 of the 568 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abrogate\_380, Acme\_40, Adahisdi\_38, Aeneas\_40, AgentM\_30, Airmid\_31, Ajay\_38, Alsfro\_41, Altman\_39, Alvin\_38, Aragog\_30, Archetta\_30, Arlo\_36, Arturo\_32, Ascela\_51, BPBiabs31\_38, BaileyBlu\_48, Beatrix\_37, BeesKnees\_38, Benedict\_31, Bethlehem\_37, Bexan\_35, Big3\_37, BigMau\_39, Bigfoot\_35, BillKnuckles\_38, Bonamassa\_30, Bones\_37, Burton\_38, Bxb1\_35, CactusRose\_35, CallinAllBarbz\_48, Caviar\_34, Chadwick\_32, Chanagan\_36, Chargerpower\_35, Chupacabra\_33, ConceptII\_39, Conspiracy\_30, Crispicous1\_36, Cuco\_30, Cueyllyss\_37, Cyan\_50, DD5\_38, DarthPhader\_36, Dexes\_37, Dinger\_29, Discoknowium\_30, DontArgue\_32, Doom\_37, DrFeelGood\_36, Dreamboat\_38, DroogsArmy\_34, Dublin\_29, Dussy\_38, DustyMartin\_38, Eaglepride\_35, Edison31\_34, Edtherson\_38, ElTiger69\_31, Espresso\_37, Euphoria\_37, Eyeball\_37, Fajezeel\_39, Fascinus\_36, Fenn\_38, FlyCatcher\_36, ForGetIt\_30, GageAP\_39, Gandalf20\_38, George\_29, Gompeii16\_37, GrecoEtereo\_39, Greg\_39, HINdeR\_33, HanShotFirst\_36, HarryOW\_37, Hermia\_40, HermioneGrange\_37, Hiro\_29, ICleared\_33, IgnatiusPatJac\_36, Iter\_51, JC27\_38, Jabiru\_31, Jankie\_50, Jasper\_38, Jerm2\_38, Jorgensen\_37, Jovo\_30, JuliaChild\_39, KBG\_38, KSSJEB\_37, Kristoff\_35, Kugel\_38, KyMonks1A\_40, Lamina13\_37, Lego\_49, Lesedi\_36, Lev2\_30, Licorice\_39, Liebe\_51, LilBib\_37, LittleCherry\_30, LittleGuy\_33, Lizalica\_49, LochMonster\_33, Lockley\_38, Lopton\_38, LunarLander\_39, MaGuCo\_47, Magnar\_37, Makemake\_38, Marcell\_37, Marchy\_32, Margo\_34, Maroc7\_37, Marsha\_37, MaryBeth\_37, Maureen\_51, MetalQZJ\_37, Micasa\_30, Midas2\_30, Milcery\_30, Monet\_39, Moose\_37, MrGordo\_37, Mryolo\_35, Mundrea\_33, Naira\_38, Nhonho\_37, Nitro\_51, Niza\_40, Noella\_34, Norbert\_33, Norz\_39, Nyxis\_33, OKCentral2016\_33, Ohno789\_37, Oogway\_36, PSullivan\_36, PacerPaul\_38,

Panamaxus\_33, Papez\_39, Paraselene\_36, Pari\_38, Parliament\_36, PascalRango\_38, PattyP\_39, Pelly\_37, Perseus\_39, Peterson\_40, PetterN\_32, PherrisBueller\_38, Phlippers\_35, Phlorence\_30, Phontbonne\_33, PinkPlastic\_36, Pinto\_39, Pippin\_39, Pita2\_39, Pocahontas\_34, Popcicle\_34, QuinnKiro\_33, RGL3\_22, Rajelicia\_37, Rebeuca\_35, ResDef\_34, RhynO\_35, Rhynn\_37, RidgeCB\_37, Ringer\_38, Rowdy\_38, Rufus\_39, Rutherferd\_39, Sagefire\_39, Scorpia\_32, Seabiscuit\_39, Seanderson\_38, Shapes\_38, SheaKeira\_35, Sheen\_34, Sibs6\_38, SkiPole\_40, Slagathor\_38, Smairt\_38, Smeagol\_39, Snazzy\_36, Solon\_37, Squee\_38, StrongArm\_36, Sumter\_36, Sunshine924\_39, Swirley\_30, SwissCheese\_39, Switzer\_38, Swole\_39, SydNat\_30, Takoda\_29, Tarynearal\_29, Theia\_28, TheloniousMonk\_39, Tiger\_30, Timshel\_34, Topgun\_36, Toro\_35, Traft412\_39, Treddle\_39, Trike\_31, Tripl3t\_38, Trouble\_38, U2\_37, Ulysses\_32, Violet\_36, Wheeler\_38, Wilkins\_36, Zephyr\_38, Zeuska\_38, Zolita\_29,

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

- A6\_34, AEgle\_46, AFIS\_37, AGrandiflora\_52, Abbysshoes\_39, Adolin\_53, Adumb2043\_47, AinMach\_48, Alatin\_29, Alberto7\_34, Alpacados\_28, Anglerfish\_39, AngryOrchard\_28, Anthony\_33, AppleCloud\_27, Arcanine\_37, Asa16\_48, Ashballer\_39, Atkinbua\_39, AvatarAhPeg\_34, BK1\_34, BaconJack\_40, Barriga\_37, BarrowTuph\_36, Belenaria\_29, Berrie\_51, Bigchungu\_37, Bircsak\_37, Blue\_37, Bluefalcon\_29, Bob3\_36, BobbyDazzler\_29, Bonanza\_29, Bradshaw\_29, Briton15\_39, Bruns\_36, Bryce\_29, Camperdownii\_32, Cassia\_48, Ciao\_37, Cindaradix\_32, Coog\_30, Corvo\_38, CosmicSans\_29, Crewmate\_55, DirtyDunning\_33, DrManhattan\_52, DrSierra\_48, DreamCatcher\_40, Dulcie\_36, Dynamix\_38, Elezi\_48, Eraser\_48, Espica\_29, Forsytheast\_37, Francis47\_37, Froghopper\_37, GMonster\_36, Ghoulyboy\_30, Gollum\_29, Graduation\_39, Gwendoluna\_40, Harlequin\_29, Hookmount\_34, Hope4ever\_37, HuhtaEnerson15\_30, ILeeKay\_39, Ichabod\_38, Inyanga\_35, Iqorha\_35, Iracema64\_34, IttyBittyPiggy\_50, JackSparrow\_38, Janeemi\_52, Jester\_29, Joemato\_50, JohnDoe\_50, Jstan\_50, JuneStar\_51, Kanely\_38, Kaylissa\_51, Kenmech\_40, Killigrew\_35, Kinmap\_35, Koreni\_32, Kratark\_33, Kremtemulon\_33, Krishelle\_29, Kykar\_36, Lambert1\_34, Levia\_33, Lillie\_29, London\_48, MPlant7149\_37, Magnito\_36, Manatee\_38, Marco3\_37, Marge\_38, MarysWell\_29, McGuire\_38, McSinger\_38, Michley\_37, Miramae\_33, MissSwiss\_52, Mkhuseleli\_38, Molly\_39, Mudpuppy\_46, Museum\_39, NEHalo\_37, Naca\_31, Naiad\_29, Nancinator\_29, Natosaleda\_29, Nerujay\_38, Niobe\_48, ObiToo\_54, PP\_41, Paphu\_36, Partridge\_29, Payneful\_37, Petp2012\_39, Petruccio\_38, PhailMary\_28, Phighter1804\_33, PhineBark\_37, Phrankenstien\_29, PhrostyMug\_38, PickleBack\_30, Powerpuff\_52, Prinasse11\_31, ProMouse\_35, Pumbaa\_33, Pumpkins\_48, QTRLifeCrisis\_38, RER2\_22, Raid\_38, Rasputin\_29, RexFury\_29, Rhodalysa\_29, Rohr\_38, Rosa24\_32, Ruotula\_37, STLscum\_38, Sandaddy\_37, Sanya\_36, SarFire\_37, Scowl\_37, Shaffner\_48, Shuman\_29, Simpson\_52, Sorpresa\_37, SpikeBT\_39, StCroix\_29, Stink\_34, Subaru\_49, Swann\_29, TWAMP\_29, Tallboi\_49, Tasp14\_38, Teodoridan\_35, Texage\_33, TforTroy\_50, Thor\_37, Tinybot\_32, Todacoro\_34, Turab\_47, Turj99\_36, Tutumahutu\_51, Twigg\_30, TwoPeat\_38, UhSalsa\_29, UnionJack\_31, Veracruz\_33, Warda\_50, Watermelon\_39, Yang\_49, YesChef\_50, Yogi\_29, Yoncess\_29, Zeeculate\_37,

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

- AbbeyMikolon\_57, AbbysRanger\_33, Achebe\_32, AgronaGT15\_36, Albee\_33, Amyev\_51, Annyong\_33, Ashes\_43, Asten\_50, Astro\_30, Attoomi\_51, Avle17\_33, Baby16\_33, BabyBack\_34, Backyardigan\_33, Badger\_33, BarryBee\_53, Bartimeaus\_33, Beaupre\_46, Blackmoor\_33, Bombshell\_33, Brataylor\_53,

Broseidon\_33, Bruiser\_32, BubbleTrouble\_33, Bumblebee11\_33, Burger\_32, BuzzBuzz\_35, Bxz2\_34, Caelakin\_33, Cappuccino\_43, Celeste\_51, Cen1621\_56, CentreCat\_33, Chaph\_33, Charm\_33, Chucky\_50, Cici\_33, Cintron\_33, Citius\_33, Clarenza\_33, Cocoaberry\_33, Community\_53, Connomayer\_33, Daishi\_35, Danforth\_29, Danzina\_52, Dattran\_52, Datway\_33, Deano\_33, Dhanush\_33, Dixon\_30, Donkey\_43, Drake94\_32, DreamTeam1\_33, Druantia\_33, Dwayne\_50, Eapen\_33, Ejemplo\_49, Emaanora\_53, Erik\_29, Eris\_32, Eros\_33, Euratis\_57, Expelliarmus\_29, FatCactus\_32, Floof\_64, Florean\_33, Flux\_33, Funston\_33, Gadost\_33, Gambol\_44, GardenState\_58, Giorgio\_44, Goby\_50, Godpower\_51, Groundhog\_29, Gumpizza\_44, Halsey\_43, HamSlice\_32, Happiness\_33, HashRod\_37, Heather\_56, Herbertwm\_31, Hippo\_50, Holli\_33, Honk\_61, Houdini22\_33, Huxley\_33, IAmGroot\_57, Iceman\_34, Jaykayelowell\_33, JetBlade\_33, JoongJeon\_33, KADY\_37, KFPoly\_33, Kaine\_52, Kalimba\_43, Katalie136\_33, Katalie\_50, KeAlij\_47, Kingmustik0402\_33, KittenMittens\_32, Koan\_32, Kye\_33, Lannister\_51, LappelDuVide\_33, LarryKay\_36, Lemur\_33, Lika\_49, Lilbooboo\_54, LittleB\_33, Lorelei\_51, Lorenzo\_33, Louie6\_36, Lunsford\_34, Mabodamaca\_60, Maneekul\_50, Maverick\_33, Mayonnaise\_33, Mazhar510\_33, MeeZee\_33, Methuselah\_35, Millski\_32, Misomonster\_38, Morpher26\_33, Moss\_43, MyraDee\_30, Mysterium\_42, Nabi\_51, NearlyHeadless\_30, Nemo27\_33, Nesbitt\_55, Noelle\_33, NorthStar\_33, NotAPhaseMom\_33, OKaNui\_34, OzzyJ\_51, Palestino\_32, PeaceMeal1\_32, Peaches\_33, Pepe\_33, Perplexer\_33, PeterPeter\_33, PetiteSangsue\_33, Phacado\_33, Phillis\_30, Phives\_54, Phoxy\_36, Pipcraft\_33, Pixelle\_52, Poompha\_32, Rana\_51, RedBear\_51, Reedo\_49, Relief\_33, RemusLoopin\_55, Roary\_30, RockScotty\_45, Romney\_33, Roosevelt\_33, Ruin\_33, Rummer\_36, Sabertooth\_33, Sabourin\_48, Samora\_58, SarahRose\_50, Scamp\_33, Sebastisaurus\_51, SeniorClean\_32, Severus\_32, Shaka\_33, Shawty\_54, Shygu2\_33, Skipitt\_33, Smeadley\_30, Snek\_51, Snorlax\_50, Sooty\_43, SororFago\_38, Soshari\_38, South40\_50, SpecialK\_43, Spike509\_36, Spino\_33, Stasia\_34, Stephig9\_30, Stuu\_47, Sujidade\_50, TG1\_51, TagePhighter\_52, Taquarus\_33, Tbone\_50, Thanksgivukkah\_33, Tian\_50, TinyPebbles\_36, TiroTheta9\_33, Toma\_50, Topanga\_34, Tote\_34, Triste\_51, TuanPN\_49, Tuck\_53, Tweety19\_52, Twister\_34, TygerBlood\_33, VResidence\_50, Vanseggelen\_57, Vash\_53, WalterMcMickey\_34, Wander\_33, Werner\_50, Whatever\_50, Wilbur\_33, Wildwest\_49, Wile\_33, Wizard007\_33, Xena\_33, Yasdnil\_50, YoSam321\_33, Zemlya\_51, Zeta1847\_52, phiBT1\_int,

### Summary by start number:

#### Start 31:

- Found in 33 of 622 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 7 of 568
- Called 21.2% of time when present
- Phage (with cluster) where this start called: Celeste\_51 (BD1), Danzina\_52 (BD1), Dattran\_52 (BD1), OzzyJ\_51 (BD1), Toma\_50 (BD1), Triste\_51 (BD1), Zemlya\_51 (BD1),

#### Start 47:

- Found in 19 of 622 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 5 of 568
- Called 26.3% of time when present
- Phage (with cluster) where this start called: Asten\_50 (BD1), Ejemplo\_49 (BD1), Maneekul\_50 (BD1), RedBear\_51 (BD1), TuanPN\_49 (BD1),

Start 49:

- Found in 10 of 622 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 10.0% of time when present
- Phage (with cluster) where this start called: McGuire\_38 (A1),

Start 50:

- Found in 37 of 622 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 23 of 568
- Called 64.9% of time when present
- Phage (with cluster) where this start called: BarryBee\_53 (BD1), Brataylor\_53 (BD1), Chucky\_50 (BD1), Dwayne\_50 (BD1), Emaanora\_53 (BD1), Goby\_50 (BD1), Godpower\_51 (BD1), Hippo\_50 (BD1), Kaine\_52 (BD3), Katalie\_50 (BD1), Lannister\_51 (BD1), Lika\_49 (BD1), Lorelei\_51 (BD1), Nabi\_51 (BD1), Rana\_51 (BD1), SarahRose\_50 (BD1), Snorlax\_50 (BD1), South40\_50 (BD1), Sujidade\_50 (BD1), TagePhighter\_52 (BD1), Vanseggelen\_57 (BD3), Werner\_50 (BD1), Whatever\_50 (BD1), Yasdnil\_50 (BD1),

Start 51:

- Found in 5 of 622 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 20.0% of time when present
- Phage (with cluster) where this start called: PhrostyMug\_38 (A1),

Start 56:

- Found in 188 of 622 ( 30.2% ) of genes in pham
- Manual Annotations of this start: 26 of 568
- Called 15.4% of time when present
- Phage (with cluster) where this start called: Anglerfish\_39 (A1), Arcanine\_37 (A1), Ashballer\_39 (A1), Blue\_37 (A1), Corvo\_38 (A1), DreamCatcher\_40 (A1), Dynamix\_38 (A1), Forsytheast\_37 (A1), Froghopper\_37 (A1), Kenmech\_40 (A1), Kykar\_36 (A1), MPlant7149\_37 (A1), Magnito\_36 (A1), Marco3\_37 (A1), Michley\_37 (A1), Molly\_39 (A1), Nerujay\_38 (A1), Paphu\_36 (A1), Petp2012\_39 (A1), Petruccio\_38 (A1), ProMouse\_35 (A1), Raid\_38 (A1), Rohr\_38 (A1), Ruotula\_37 (A1), Sorpresa\_37 (A1), Thor\_37 (A1), Turj99\_36 (A1), TwoPeat\_38 (A1), Watermelon\_39 (A1),

Start 59:

- Found in 189 of 622 ( 30.4% ) of genes in pham
- Manual Annotations of this start: 2 of 568
- Called 1.6% of time when present
- Phage (with cluster) where this start called: Bob3\_36 (A1), Briton15\_39 (A1), McSinger\_38 (A1),

Start 62:

- Found in 188 of 622 ( 30.2% ) of genes in pham
- Manual Annotations of this start: 9 of 568
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Abbysshoes\_39 (A1), BaconJack\_40 (A1), Bircsak\_37 (A1), Hope4ever\_37 (A1), JackSparrow\_38 (A1), Marge\_38 (A1), NEHalo\_37 (A1), Scowl\_37 (A1), Tasp14\_38 (A1),

Start 63:

- Found in 188 of 622 ( 30.2% ) of genes in pham
- Manual Annotations of this start: 9 of 568
- Called 7.4% of time when present
- Phage (with cluster) where this start called: A6\_34 (A1), Atkinbua\_39 (A1), BK1\_34 (A1), Gwendoluna\_40 (A1), ILeeKay\_39 (A1), Ichabod\_38 (A1), Levia\_33 (A1), Manatee\_38 (A1), Mkhusele\_38 (A1), Payneful\_37 (A1), STLscum\_38 (A1), Sandaddy\_37 (A1), Sanya\_36 (A1), Teodoridan\_35 (A1),

#### Start 64:

- Found in 24 of 622 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 10 of 568
- Called 41.7% of time when present
- Phage (with cluster) where this start called: Alberto7\_34 (A4), AvatarAhPeg\_34 (A4), DirtyDunning\_33 (A4), Koreni\_32 (A4), Kratark\_33 (A4), Kremtemulon\_33 (A4), Miramae\_33 (A4), Phighter1804\_33 (A4), Pumbaa\_33 (A4), Stink\_34 (A4),

#### Start 75:

- Found in 189 of 622 ( 30.4% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 0.5% of time when present
- Phage (with cluster) where this start called: SarFire\_37 (A1),

#### Start 77:

- Found in 4 of 622 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Euratis\_57 (BB1),

#### Start 78:

- Found in 4 of 622 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Heather\_56 (BB2), RemusLoopin\_55 (BB2), Sebastisaurus\_51 (BB2),

#### Start 79:

- Found in 8 of 622 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Reedo\_49 (AZ1), Snek\_51 (AZ3), Tweety19\_52 (AZ3),

#### Start 80:

- Found in 20 of 622 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 15.0% of time when present
- Phage (with cluster) where this start called: AFIS\_37 (A1), Graduation\_39 (A1), SpikeBT\_39 (A1),

#### Start 81:

- Found in 2 of 622 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 568
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Floop\_64 (EH), Mabodamaca\_60 (EH),

Start 82:

- Found in 1 of 622 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zeta1847\_52 (EH),

Start 84:

- Found in 104 of 622 ( 16.7% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 1.0% of time when present
- Phage (with cluster) where this start called: Flux\_33 (A4),

Start 90:

- Found in 7 of 622 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 28.6% of time when present
- Phage (with cluster) where this start called: AinMach\_48 (AZ), Cen1621\_56 (EH),

Start 91:

- Found in 1 of 622 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TG1\_51 (BB1),

Start 97:

- Found in 36 of 622 ( 5.8% ) of genes in pham
- Manual Annotations of this start: 32 of 568
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Alatin\_29 (CA), Alpacados\_28 (CA), AngryOrchard\_28 (CA), AppleCloud\_27 (CA), Belenaria\_29 (CA), BobbyDazzler\_29 (CA), Bonanza\_29 (CA), Bradshaw\_29 (CA), Bryce\_29 (CA), CosmicSans\_29 (CA), Espica\_29 (CA), Gollum\_29 (CA), Harlequin\_29 (CA), Jester\_29 (CA), Krishelle\_29 (CA), Lillie\_29 (CA), Naiad\_29 (CA), Nancinator\_29 (CA), Natosaleda\_29 (CA), Partridge\_29 (CA), PhailMary\_28 (CA), Phrankenstein\_29 (CA), RER2\_22 (CA), Rasputin\_29 (CA), RexFury\_29 (CA), Rhodalysa\_29 (CA), Shuman\_29 (CA), StCroix\_29 (CA), Swann\_29 (CA), TWAMP\_29 (CA), UhSalsa\_29 (CA), Yogi\_29 (CA), Yoncess\_29 (CA),

Start 98:

- Found in 1 of 622 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Honk\_61 (EH),

Start 100:

- Found in 1 of 622 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 100.0% of time when present
- Phage (with cluster) where this start called: VResidence\_50 (AZ1),

Start 102:

- Found in 8 of 622 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 37.5% of time when present
- Phage (with cluster) where this start called: KittenMittens\_32 (A10), PeaceMeal1\_32 (A10), Poompha\_32 (A10),

#### Start 103:

- Found in 6 of 622 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 568
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Community\_53 (AZ1), PP\_41 (A7), Tuck\_53 (AZ1),

#### Start 104:

- Found in 2 of 622 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 568
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GardenState\_58 (EH), IAmGroot\_57 (EH),

#### Start 105:

- Found in 8 of 622 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Topanga\_34 (A10), Twister\_34 (A10), WalterMcMickey\_34 (A10),

#### Start 106:

- Found in 24 of 622 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 2 of 568
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Hookmount\_34 (A3), Lambert1\_34 (A3),

#### Start 107:

- Found in 113 of 622 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 19 of 568
- Called 16.8% of time when present
- Phage (with cluster) where this start called: AbbeyMikolon\_57 (BL), Backyardigan\_33 (A4), Bombshell\_33 (A4), Burger\_32 (A4), Caelakin\_33 (A4), Cindaradix\_32 (A4), Datway\_33 (A4), Eros\_33 (A4), HamSlice\_32 (A4), Holli\_33 (A4), Maverick\_33 (A4), Nesbitt\_55 (BL), Peaches\_33 (A4), Perplexer\_33 (A4), Pipcraft\_33 (A4), Romney\_33 (A4), Shaka\_33 (A4), Shawty\_54 (BB1), Wilbur\_33 (A4),

#### Start 110:

- Found in 42 of 622 ( 6.8% ) of genes in pham
- Manual Annotations of this start: 33 of 568
- Called 95.2% of time when present
- Phage (with cluster) where this start called: AEgle\_46 (AZ1), AGrandiflora\_52 (AZ1), Adolin\_53 (AZ1), Adumb2043\_47 (AZ1), Asa16\_48 (AZ1), Berrie\_51 (AZ1), Cassia\_48 (AZ1), Crewmate\_55 (AZ1), DrManhattan\_52 (AZ1), DrSierra\_48 (AZ1), Elezi\_48 (AZ1), Eraser\_48 (AZ1), IttyBittyPiggy\_50 (AZ1), Janeemi\_52 (AZ1), Joemato\_50 (AZ1), JohnDoe\_50 (AZ1), Jstan\_50 (AZ1), JuneStar\_51 (AZ1), Kaylissa\_51 (AZ1), KeAlii\_47 (AZ1), London\_48 (AZ1), MissSwiss\_52 (AZ1),



Mudpuppy\_46 (AZ1), Niobe\_48 (AZ1), ObiToo\_54 (AZ1), Phives\_54 (AZ1), Powerpuff\_52 (AZ1), Pumpkins\_48 (AZ1), Shaffner\_48 (AZ1), Simpson\_52 (AZ1), Subaru\_49 (AZ1), Tallboi\_49 (AZ1), Tbone\_50 (AZ1), TforTroy\_50 (AZ1), Turab\_47 (AZ1), Tutumahutu\_51 (AZ1), Warda\_50 (AZ1), Wildwest\_49 (AZ1), Yang\_49 (AZ1), YesChef\_50 (AZ1),

Start 113:

- Found in 130 of 622 ( 20.9% ) of genes in pham
- Manual Annotations of this start: 105 of 568
- Called 84.6% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_33 (A4), Achebe\_32 (A4), AgronaGT15\_36 (A3), Albee\_33 (A4), Annyong\_33 (A4), Astro\_30 (A8), Avle17\_33 (A4), Baby16\_33 (A4), BabyBack\_34 (A2), Badger\_33 (A4), Bartimeaus\_33 (A4), Blackmoor\_33 (A4), Broseidon\_33 (A4), Bruiser\_32 (A4), BubbleTrouble\_33 (A4), Bumblebee11\_33 (A4), BuzzBuzz\_35 (A3), Bxz2\_34 (A3), CentreCat\_33 (A4), Chaph\_33 (A4), Cici\_33 (A4), Cintron\_33 (A4), Citius\_33 (A4), Clarenza\_33 (A4), Cocoaberry\_33 (A4), Connomayer\_33 (A4), Daishi\_35 (A3), Danforth\_29 (A8), Deano\_33 (A4), Dhanush\_33 (A4), Dixon\_30 (A8), Drake94\_32 (A10), Druantia\_33 (A4), Eapen\_33 (A4), Eris\_32 (A4), Expelliarmus\_29 (A8), FatCactus\_32 (A20), Florean\_33 (A4), Funston\_33 (A4), Gadost\_33 (A4), Groundhog\_29 (A8), Happiness\_33 (A4), HashRod\_37 (A3), Herbertwm\_31 (A2), Houdini22\_33 (A4), Huxley\_33 (A4), Iceman\_34 (A4), Jaykayelowell\_33 (A4), JetBlade\_33 (A4), JoongJeon\_33 (A4), KADY\_37 (A3), KFPoly\_33 (A4), Katalie136\_33 (A4), Kingmustik0402\_33 (A4), Koan\_32 (A4), Kyee\_33 (A4), LappelDuVide\_33 (A4), LarryKay\_36 (A3), Lemur\_33 (A4), LittleB\_33 (A4), Lorenzo\_33 (A4), Louie6\_36 (A3), Lunsford\_34 (A4), Mayonnaise\_33 (A4), Mazhar510\_33 (A4), MeeZee\_33 (A4), Methuselah\_35 (A3), Millski\_32 (A4), Misomonster\_38 (A3), Morpher26\_33 (A4), MyraDee\_30 (A18), NearlyHeadless\_30 (A8), Nemo27\_33 (A4), Noelle\_33 (A4), NorthStar\_33 (A4), NotAPhaseMom\_33 (A4), OKaNui\_34 (A4), Palestino\_32 (A4), PeterPeter\_33 (A4), PetiteSangsue\_33 (A4), Phacado\_33 (A4), Phillis\_30 (A8), Phoxy\_36 (A3), Relief\_33 (A4), Roary\_30 (A8), Roosevelt\_33 (A4), Ruin\_33 (A4), Rummer\_36 (A3), Sabertooth\_33 (A4), Scamp\_33 (A4), Severus\_32 (A10), Shygu2\_33 (A4), Skipitt\_33 (A4), Smeadley\_30 (A8), SororFago\_38 (A14), Soshari\_38 (A3), Spike509\_36 (A3), Spino\_33 (A4), Stasia\_34 (A4), Stephig9\_30 (A8), Taquarus\_33 (A4), Thanksgivukkah\_33 (A4), TinyPebbles\_36 (A3), TiroTheta9\_33 (A4), TygerBlood\_33 (A4), Wander\_33 (A4), Wile\_33 (A4), Wizard007\_33 (A4), Xena\_33 (A4), YoSam321\_33 (A4),

Start 115:

- Found in 22 of 622 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 12 of 568
- Called 86.4% of time when present
- Phage (with cluster) where this start called: Amyev\_51 (AZ1), Ashes\_43 (AZ5), Beaupre\_46 (AZ5), Cappuccino\_43 (AZ5), Donkey\_43 (AZ5), Gambol\_44 (AZ5), Giorgio\_44 (AZ5), Gumpizza\_44 (AZ5), Halsey\_43 (AZ5), Kalimba\_43 (AZ5), Moss\_43 (AZ5), Mysterium\_42 (AZ5), Pixelle\_52 (AZ1), RockScotty\_45 (AZ5), Sabourin\_48 (AZ5), Sooty\_43 (AZ5), SpecialK\_43 (AZ5), Stuu\_47 (AZ5), Tian\_50 (AZ1),

Start 116:

- Found in 399 of 622 ( 64.1% ) of genes in pham
- Manual Annotations of this start: 209 of 568
- Called 54.9% of time when present

- Phage (with cluster) where this start called: Abrogate\_380 (A1), Acme\_40 (A1), Adahisdi\_38 (A1), Aeneas\_40 (A1), AgentM\_30 (A5), Airmid\_31 (A5), Ajay\_38 (A1), Alsfro\_41 (A1), Altman\_39 (A1), Alvin\_38 (A1), Aragog\_30 (A5), Archetta\_30 (A5), Arlo\_36 (A1), Arturo\_32 (A4), Ascela\_51 (AZ1), BPBiebs31\_38 (A1), BaileyBlu\_48 (FP), Beatrix\_37 (A1), BeesKnees\_38 (A1), Benedict\_31 (A5), Bethlehem\_37 (A1), Bexan\_35 (A1), Big3\_37 (A1), BigMau\_39 (A1), Bigfoot\_35 (A1), BillKnuckles\_38 (A1), Bonamassa\_30 (A5), Bones\_37 (A1), Burton\_38 (A1), Bxb1\_35 (A1), CactusRose\_35 (A1), CallinAllBarbz\_48 (FP), Caviar\_34 (A3), Chadwick\_32 (A5), Chanagan\_36 (A1), Chargerpower\_35 (A), Chupacabra\_33 (A10), ConceptII\_39 (A1), Conspiracy\_30 (A5), Crispicous1\_36 (A1), Cuco\_30 (A5), Cueyllyss\_37 (A1), Cyan\_50 (AZ1), DD5\_38 (A1), DarthPhader\_36 (A12), Dexes\_37 (A1), Dinger\_29 (CA), Discoknowium\_30 (A5), DontArgue\_32 (A10), Doom\_37 (A1), DrFeelGood\_36 (A1), Dreamboat\_38 (A1), DroogsArmy\_34 (A7), Dublin\_29 (A5), Dussy\_38 (A1), DustyMartin\_38 (A10), Eaglepride\_35 (A10), Edison31\_34 (A10), Edtherson\_38 (A1), EITiger69\_31 (A5), Espresso\_37 (A1), Euphoria\_37 (A1), Eyeball\_37 (A1), Fajezeel\_39 (A1), Fascinus\_36 (A1), Fenn\_38 (A1), FlyCatcher\_36 (A7), ForGetIt\_30 (A5), GageAP\_39 (A1), Gandalf20\_38 (A1), George\_29 (A5), Gompeii16\_37 (A1), GrecoEtereo\_39 (A1), Greg\_39 (A1), HINdeR\_33 (A7), HanShotFirst\_36 (A1), HarryOW\_37 (A1), Hermia\_40 (A1), HermioneGrange\_37 (A1), Hiro\_29 (CA), ICleared\_33 (A4), IgnatiusPatJac\_36 (A1), Iter\_51 (AZ1), JC27\_38 (A1), Jabiru\_31 (A5), Jankie\_50 (FP), Jasper\_38 (A1), Jerm2\_38 (A1), Jorgensen\_37 (A1), Jovo\_30 (A5), JuliaChild\_39 (A1), KBG\_38 (A1), KSSJEB\_37 (A1), Kristoff\_35 (A10), Kugel\_38 (A1), KyMonks1A\_40 (A1), Lamina13\_37 (A1), Lego\_49 (AZ1), Lesedi\_36 (A1), Lev2\_30 (A5), Licorice\_39 (A1), Liebe\_51 (AZ2), LilBib\_37 (A1), LittleCherry\_30 (A5), LittleGuy\_33 (A4), Lizalica\_49 (AZ1), LochMonster\_33 (A4), Lockley\_38 (A1), Lopton\_38 (A1), LunarLander\_39 (A1), MaGuCo\_47 (AZ2), Magnar\_37 (A1), Makemake\_38 (A1), Marcell\_37 (A1), Marchy\_32 (A1), Margo\_34 (A3), Maroc7\_37 (A1), Marsha\_37 (A1), MaryBeth\_37 (A1), Maureen\_51 (AZ2), MetalQZJ\_37 (A1), Micasa\_30 (A5), Midas2\_30 (A5), Milcery\_30 (A5), Monet\_39 (A1), Moose\_37 (A1), MrGordo\_37 (A1), Mryolo\_35 (A1), Mundrea\_33 (A4), Naira\_38 (A1), Nhonho\_37 (A1), Nitro\_51 (AZ1), Niza\_40 (A1), Noella\_34 (A3), Norbert\_33 (A3), Norz\_39 (A1), Nyxis\_33 (A4), OKCentral2016\_33 (A10), Ohno789\_37 (A1), Oogway\_36 (A1), PSullivan\_36 (A1), PacerPaul\_38 (A1), Panamaxus\_33 (A3), Papez\_39 (A1), Paraselene\_36 (A1), Pari\_38 (A1), Parliament\_36 (A1), PascalRango\_38 (A1), PattyP\_39 (A1), Pelly\_37 (A1), Perseus\_39 (A1), Peterson\_40 (A1), PetterN\_32 (A5), PherrisBueller\_38 (A1), Phlippers\_35 (A1), Phlorence\_30 (A5), Phontbonne\_33 (A4), PinkPlastic\_36 (A1), Pinto\_39 (A1), Pippin\_39 (A1), Pita2\_39 (A1), Pocahontas\_34 (A3), Popcicle\_34 (A3), QuinnKiro\_33 (A3), RGL3\_22 (CA), Rajelicia\_37 (A1), Rebeuca\_35 (A10), ResDef\_34 (A3), RhynO\_35 (A10), Rhynn\_37 (A1), RidgeCB\_37 (A1), Ringer\_38 (A1), Rowdy\_38 (A10), Rufus\_39 (A1), Rutherford\_39 (A1), Sagefire\_39 (A1), Scorpia\_32 (A5), Seabiscuit\_39 (A1), Seanderson\_38 (A1), Shapes\_38 (A10), SheaKeira\_35 (A9), Sheen\_34 (A7), Sibs6\_38 (A1), SkiPole\_40 (A1), Slagathor\_38 (A1), Smairt\_38 (A1), Smeagol\_39 (A1), Snazzy\_36 (A1), Solon\_37 (A1), Squee\_38 (A1), StrongArm\_36 (A1), Sumter\_36 (A1), Sunshine924\_39 (A1), Swirley\_30 (A5), SwissCheese\_39 (A1), Switzer\_38 (A1), Swole\_39 (A1), SydNat\_30 (A5), Takoda\_29 (CA), Tarynearal\_29 (A5), Theia\_28 (A5), TheloniousMonk\_39 (A1), Tiger\_30 (A5), Timshel\_34 (A7), Topgun\_36 (A1), Toro\_35 (A7), Traft412\_39 (A1), Treddle\_39 (A1), Trike\_31 (A10), Tripl3t\_38 (A1), Trouble\_38 (A1), U2\_37 (A1), Ulysses\_32 (A4), Violet\_36 (A1), Wheeler\_38 (A1), Wilkins\_36 (A1), Zephyr\_38 (A1), Zeuska\_38 (A1), Zolita\_29 (A5),

Start 117:

- Found in 2 of 622 ( 0.3% ) of genes in pham

- Manual Annotations of this start: 2 of 568
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Charm\_33 (A9), DreamTeam1\_33 (A9),

#### Start 119:

- Found in 1 of 622 ( 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: phiBT1\_int (BB1),

#### Start 122:

- Found in 57 of 622 ( 9.2% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 5.3% of time when present
- Phage (with cluster) where this start called: Texage\_33 (A3), Todacoro\_34 (A3), Veracruz\_33 (A3),

#### Start 123:

- Found in 40 of 622 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 2 of 568
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Anthony\_33 (A20), Museum\_39 (A1),

#### Start 126:

- Found in 122 of 622 ( 19.6% ) of genes in pham
- Manual Annotations of this start: 8 of 568
- Called 11.5% of time when present
- Phage (with cluster) where this start called: Barriga\_37 (A1), BarrowTuph\_36 (A1), Bigchungu\_37 (A1), Bruns\_36 (A1), Ciao\_37 (A1), Francis47\_37 (A1), GMonster\_36 (A1), Inyanga\_35 (A1), Iqorha\_35 (A1), Kanely\_38 (A1), Killigrew\_35 (A1), PhineBark\_37 (A1), QTRlifeCrisis\_38 (A1), Zeeculate\_37 (A1),

#### Start 127:

- Found in 72 of 622 ( 11.6% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Camperdownii\_32 (A4), Iracema64\_34 (A4), Kinmap\_35 (A21), Tinybot\_32 (A4),

#### Start 129:

- Found in 5 of 622 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Lilbooboo\_54 (BB1), Samora\_58 (BB1), Vash\_53 (BB1),

#### Start 130:

- Found in 46 of 622 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Bluefalcon\_29 (A5),

#### Start 131:

- Found in 40 of 622 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 3 of 568
- Called 7.5% of time when present
- Phage (with cluster) where this start called: Coog\_30 (A5), Naca\_31 (A5), UnionJack\_31 (A5),

#### Start 134:

- Found in 31 of 622 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 4 of 568
- Called 19.4% of time when present
- Phage (with cluster) where this start called: Ghoulboy\_30 (A5), HuhtaEnerson15\_30 (A5), MarysWell\_29 (A5), PickleBack\_30 (A5), Prinashe11\_31 (A5), Twigg\_30 (A5),

#### Start 139:

- Found in 22 of 622 ( 3.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Rosa24\_32 (A4),

#### Start 145:

- Found in 56 of 622 ( 9.0% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Attoomi\_51 (singleton),

#### Start 152:

- Found in 216 of 622 ( 34.7% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 0.5% of time when present
- Phage (with cluster) where this start called: Erik\_29 (CA),

#### Start 154:

- Found in 115 of 622 ( 18.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.9% of time when present
- Phage (with cluster) where this start called: SenorClean\_32 (A4),

#### Start 179:

- Found in 285 of 622 ( 45.8% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 0.4% of time when present
- Phage (with cluster) where this start called: Pepe\_33 (A1),

#### Start 181:

- Found in 272 of 622 ( 43.7% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 0.4% of time when present
- Phage (with cluster) where this start called: Dulcie\_36 (A1),

#### Start 226:

- Found in 214 of 622 ( 34.4% ) of genes in pham
- Manual Annotations of this start: 1 of 568
- Called 0.5% of time when present

- Phage (with cluster) where this start called: Tote\_34 (A1),

### **Summary by clusters:**

There are 29 clusters represented in this pham: FP, singleton, BL, A14, A10, A12, A18, A1, A3, A2, BD1, A4, A7, A9, A5, BB2, BB1, A, EH, CA, BD3, A8, AZ, A20, A21, AZ1, AZ2, AZ3, AZ5,

Info for manual annotations of cluster A:

- Start number 116 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 49 was manually annotated 1 time for cluster A1.
- Start number 51 was manually annotated 1 time for cluster A1.
- Start number 56 was manually annotated 26 times for cluster A1.
- Start number 59 was manually annotated 2 times for cluster A1.
- Start number 62 was manually annotated 9 times for cluster A1.
- Start number 63 was manually annotated 9 times for cluster A1.
- Start number 75 was manually annotated 1 time for cluster A1.
- Start number 80 was manually annotated 3 times for cluster A1.
- Start number 116 was manually annotated 133 times for cluster A1.
- Start number 123 was manually annotated 1 time for cluster A1.
- Start number 126 was manually annotated 8 times for cluster A1.
- Start number 179 was manually annotated 1 time for cluster A1.
- Start number 181 was manually annotated 1 time for cluster A1.
- Start number 226 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A10:

- Start number 102 was manually annotated 3 times for cluster A10.
- Start number 105 was manually annotated 3 times for cluster A10.
- Start number 113 was manually annotated 2 times for cluster A10.
- Start number 116 was manually annotated 8 times for cluster A10.

Info for manual annotations of cluster A12:

- Start number 116 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A14:

- Start number 113 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A18:

- Start number 113 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 113 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 123 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 106 was manually annotated 2 times for cluster A3.
- Start number 113 was manually annotated 14 times for cluster A3.
- Start number 116 was manually annotated 9 times for cluster A3.

- Start number 122 was manually annotated 3 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 64 was manually annotated 10 times for cluster A4.
- Start number 84 was manually annotated 1 time for cluster A4.
- Start number 107 was manually annotated 16 times for cluster A4.
- Start number 113 was manually annotated 75 times for cluster A4.
- Start number 116 was manually annotated 8 times for cluster A4.
- Start number 127 was manually annotated 3 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 116 was manually annotated 30 times for cluster A5.
- Start number 130 was manually annotated 1 time for cluster A5.
- Start number 131 was manually annotated 3 times for cluster A5.
- Start number 134 was manually annotated 4 times for cluster A5.

Info for manual annotations of cluster A7:

- Start number 103 was manually annotated 1 time for cluster A7.
- Start number 116 was manually annotated 4 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 113 was manually annotated 10 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 116 was manually annotated 1 time for cluster A9.
- Start number 117 was manually annotated 2 times for cluster A9.

Info for manual annotations of cluster AZ1:

- Start number 79 was manually annotated 1 time for cluster AZ1.
- Start number 100 was manually annotated 1 time for cluster AZ1.
- Start number 103 was manually annotated 1 time for cluster AZ1.
- Start number 110 was manually annotated 33 times for cluster AZ1.
- Start number 115 was manually annotated 2 times for cluster AZ1.
- Start number 116 was manually annotated 6 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 116 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 79 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ5:

- Start number 115 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster BB1:

- Start number 77 was manually annotated 1 time for cluster BB1.
- Start number 91 was manually annotated 1 time for cluster BB1.
- Start number 107 was manually annotated 1 time for cluster BB1.
- Start number 129 was manually annotated 3 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 78 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster BD1:

- Start number 31 was manually annotated 7 times for cluster BD1.
- Start number 47 was manually annotated 5 times for cluster BD1.
- Start number 50 was manually annotated 22 times for cluster BD1.

Info for manual annotations of cluster BD3:

- Start number 50 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BL:

- Start number 107 was manually annotated 2 times for cluster BL.

Info for manual annotations of cluster CA:

- Start number 97 was manually annotated 32 times for cluster CA.
- Start number 116 was manually annotated 3 times for cluster CA.
- Start number 152 was manually annotated 1 time for cluster CA.

Info for manual annotations of cluster EH:

- Start number 81 was manually annotated 2 times for cluster EH.
- Start number 82 was manually annotated 1 time for cluster EH.
- Start number 90 was manually annotated 1 time for cluster EH.
- Start number 98 was manually annotated 1 time for cluster EH.
- Start number 104 was manually annotated 2 times for cluster EH.

Info for manual annotations of cluster FP:

- Start number 116 was manually annotated 2 times for cluster FP.

### **Gene Information:**

Gene: A6\_34 Start: 28460, Stop: 30028, Start Num: 63

Candidate Starts for A6\_34:

(Start: 56 @28445 has 26 MA's), (Start: 59 @28451 has 2 MA's), (Start: 62 @28457 has 9 MA's), (Start: 63 @28460 has 9 MA's), (Start: 75 @28475 has 1 MA's), (Start: 116 @28526 has 209 MA's), (Start: 123 @28535 has 2 MA's), (Start: 179 @28745 has 1 MA's), (Start: 181 @28751 has 1 MA's), (184, 28772), (Start: 226 @28901 has 1 MA's), (229, 28910), (230, 28919), (256, 29027), (263, 29048), (265, 29060), (271, 29084), (281, 29126), (307, 29255), (327, 29315), (341, 29372), (349, 29399), (357, 29426), (358, 29429), (362, 29441), (386, 29510), (398, 29543), (400, 29549), (408, 29582), (432, 29663), (436, 29678), (461, 29783), (492, 29897), (534, 29996), (544, 30020),

Gene: AEgle\_46 Start: 34374, Stop: 35792, Start Num: 110

Candidate Starts for AEgle\_46:

(96, 34356), (108, 34371), (Start: 110 @34374 has 33 MA's), (Start: 116 @34383 has 209 MA's), (147, 34497), (Start: 181 @34605 has 1 MA's), (187, 34638), (192, 34653), (216, 34716), (222, 34728), (225, 34737), (247, 34836), (271, 34929), (281, 34968), (310, 35073), (416, 35427), (417, 35430), (422, 35448), (424, 35460), (473, 35631),

Gene: AFIS\_37 Start: 29661, Stop: 31205, Start Num: 80

Candidate Starts for AFIS\_37:

(46, 29604), (Start: 49 @29616 has 1 MA's), (Start: 80 @29661 has 3 MA's), (Start: 116 @29706 has 209 MA's), (Start: 130 @29739 has 1 MA's), (Start: 179 @29925 has 1 MA's), (Start: 181 @29931 has 1 MA's), (184, 29952), (Start: 226 @30081 has 1 MA's), (229, 30090), (230, 30099), (256, 30207),

(263, 30228), (265, 30240), (307, 30435), (327, 30495), (341, 30552), (357, 30606), (362, 30621), (398, 30720), (408, 30759), (432, 30840), (436, 30855), (492, 31074), (534, 31173), (544, 31197),

Gene: AGrandiflora\_52 Start: 35693, Stop: 37111, Start Num: 110

Candidate Starts for AGrandiflora\_52:

(96, 35675), (108, 35690), (Start: 110 @35693 has 33 MA's), (Start: 116 @35702 has 209 MA's), (147, 35816), (Start: 152 @35840 has 1 MA's), (Start: 181 @35924 has 1 MA's), (216, 36035), (222, 36047), (225, 36056), (247, 36155), (271, 36248), (273, 36260), (281, 36287), (310, 36392), (328, 36446), (417, 36749), (422, 36767), (424, 36779), (435, 36812), (473, 36950),

Gene: AbbeyMikolon\_57 Start: 38291, Stop: 40006, Start Num: 107

Candidate Starts for AbbeyMikolon\_57:

(Start: 90 @38267 has 1 MA's), (99, 38282), (Start: 107 @38291 has 19 MA's), (121, 38309), (137, 38381), (142, 38399), (160, 38483), (178, 38555), (185, 38600), (187, 38609), (193, 38627), (200, 38648), (216, 38717), (239, 38801), (271, 38918), (284, 38987), (299, 39080), (325, 39185), (331, 39209), (387, 39443), (390, 39452), (476, 39788), (479, 39800), (487, 39827), (503, 39881), (508, 39893), (513, 39902), (516, 39908), (527, 39932), (535, 39944), (547, 39998),

Gene: AbbysRanger\_33 Start: 26661, Stop: 25147, Start Num: 113

Candidate Starts for AbbysRanger\_33:

(Start: 84 @26703 has 1 MA's), (Start: 107 @26670 has 19 MA's), (Start: 113 @26661 has 105 MA's), (154, 26499), (Start: 179 @26433 has 1 MA's), (183, 26415), (205, 26340), (218, 26277), (219, 26274), (240, 26187), (271, 26061), (311, 25878), (327, 25821), (340, 25767), (354, 25716), (396, 25587), (399, 25578), (419, 25503), (421, 25497), (454, 25383), (455, 25374), (463, 25335), (521, 25185), (528, 25170),

Gene: Abbysshoes\_39 Start: 29526, Stop: 31109, Start Num: 62

Candidate Starts for Abbysshoes\_39:

(Start: 56 @29514 has 26 MA's), (Start: 59 @29520 has 2 MA's), (Start: 62 @29526 has 9 MA's), (Start: 63 @29529 has 9 MA's), (Start: 75 @29544 has 1 MA's), (Start: 116 @29595 has 209 MA's), (124, 29607), (Start: 181 @29820 has 1 MA's), (183, 29832), (184, 29841), (194, 29874), (Start: 226 @29970 has 1 MA's), (229, 29979), (230, 29988), (256, 30096), (263, 30117), (265, 30129), (271, 30153), (281, 30195), (307, 30324), (327, 30384), (341, 30441), (349, 30468), (357, 30495), (358, 30498), (362, 30510), (386, 30579), (400, 30618), (408, 30651), (432, 30732), (436, 30747), (492, 30966),

Gene: Abrogate\_380 Start: 30330, Stop: 31832, Start Num: 116

Candidate Starts for Abrogate\_380:

(Start: 51 @30240 has 1 MA's), (Start: 56 @30249 has 26 MA's), (Start: 59 @30255 has 2 MA's), (Start: 62 @30261 has 9 MA's), (Start: 63 @30264 has 9 MA's), (Start: 75 @30279 has 1 MA's), (Start: 116 @30330 has 209 MA's), (Start: 126 @30345 has 8 MA's), (Start: 179 @30549 has 1 MA's), (Start: 181 @30555 has 1 MA's), (Start: 226 @30705 has 1 MA's), (229, 30714), (230, 30723), (256, 30831), (263, 30852), (265, 30864), (271, 30888), (281, 30930), (307, 31059), (327, 31119), (341, 31176), (349, 31203), (351, 31218), (354, 31221), (357, 31230), (358, 31233), (362, 31245), (400, 31353), (408, 31386), (432, 31467), (436, 31482), (492, 31701), (534, 31800), (544, 31824),

Gene: Achebe\_32 Start: 26644, Stop: 25130, Start Num: 113

Candidate Starts for Achebe\_32:

(Start: 84 @26686 has 1 MA's), (Start: 107 @26653 has 19 MA's), (Start: 113 @26644 has 105 MA's), (154, 26482), (Start: 179 @26416 has 1 MA's), (183, 26398), (205, 26323), (218, 26260), (219, 26257), (240, 26170), (271, 26044), (311, 25861), (327, 25804), (340, 25750), (354, 25699), (396, 25570), (399, 25561), (419, 25486), (421, 25480), (454, 25366), (455, 25357), (463, 25318), (521, 25168), (528, 25153),



Gene: Acme\_40 Start: 29877, Stop: 31391, Start Num: 116

Candidate Starts for Acme\_40:

(Start: 56 @29796 has 26 MA's), (Start: 59 @29802 has 2 MA's), (Start: 62 @29808 has 9 MA's), (Start: 63 @29811 has 9 MA's), (Start: 75 @29826 has 1 MA's), (Start: 116 @29877 has 209 MA's), (Start: 126 @29892 has 8 MA's), (148, 29994), (Start: 181 @30102 has 1 MA's), (184, 30123), (Start: 226 @30252 has 1 MA's), (229, 30261), (230, 30270), (231, 30276), (252, 30366), (256, 30378), (265, 30411), (273, 30447), (307, 30606), (327, 30666), (341, 30723), (349, 30750), (357, 30777), (358, 30780), (362, 30792), (386, 30861), (398, 30894), (400, 30900), (408, 30933), (432, 31014), (436, 31029), (461, 31134), (492, 31248),

Gene: Adahisdi\_38 Start: 29753, Stop: 31255, Start Num: 116

Candidate Starts for Adahisdi\_38:

(Start: 56 @29672 has 26 MA's), (Start: 59 @29678 has 2 MA's), (Start: 62 @29684 has 9 MA's), (Start: 63 @29687 has 9 MA's), (Start: 75 @29702 has 1 MA's), (Start: 116 @29753 has 209 MA's), (Start: 145 @29861 has 1 MA's), (Start: 181 @29978 has 1 MA's), (184, 29999), (Start: 226 @30128 has 1 MA's), (229, 30137), (230, 30146), (256, 30254), (263, 30275), (265, 30287), (271, 30311), (307, 30482), (327, 30542), (341, 30599), (349, 30626), (357, 30653), (358, 30656), (362, 30668), (386, 30737), (398, 30770), (400, 30776), (408, 30809), (432, 30890), (436, 30905), (461, 31010), (492, 31124), (534, 31223), (544, 31247),

Gene: Adolin\_53 Start: 34720, Stop: 36138, Start Num: 110

Candidate Starts for Adolin\_53:

(96, 34702), (108, 34717), (Start: 110 @34720 has 33 MA's), (Start: 116 @34729 has 209 MA's), (Start: 127 @34747 has 3 MA's), (Start: 152 @34867 has 1 MA's), (Start: 181 @34951 has 1 MA's), (187, 34984), (192, 34999), (216, 35062), (222, 35074), (247, 35182), (271, 35275), (281, 35314), (332, 35494), (416, 35773), (422, 35794), (473, 35977),

Gene: Adumb2043\_47 Start: 34394, Stop: 35812, Start Num: 110

Candidate Starts for Adumb2043\_47:

(96, 34376), (108, 34391), (Start: 110 @34394 has 33 MA's), (Start: 116 @34403 has 209 MA's), (147, 34517), (Start: 181 @34625 has 1 MA's), (187, 34658), (216, 34736), (222, 34748), (225, 34757), (247, 34856), (258, 34898), (271, 34949), (281, 34988), (310, 35093), (416, 35447), (417, 35450), (422, 35468), (424, 35480), (473, 35651),

Gene: Aeneas\_40 Start: 29906, Stop: 31408, Start Num: 116

Candidate Starts for Aeneas\_40:

(Start: 56 @29825 has 26 MA's), (Start: 59 @29831 has 2 MA's), (Start: 62 @29837 has 9 MA's), (Start: 63 @29840 has 9 MA's), (Start: 75 @29855 has 1 MA's), (Start: 116 @29906 has 209 MA's), (Start: 126 @29921 has 8 MA's), (128, 29930), (Start: 179 @30125 has 1 MA's), (Start: 181 @30131 has 1 MA's), (184, 30152), (Start: 226 @30281 has 1 MA's), (229, 30290), (230, 30299), (256, 30407), (263, 30428), (265, 30440), (271, 30464), (281, 30506), (307, 30635), (327, 30695), (341, 30752), (349, 30779), (357, 30806), (358, 30809), (362, 30821), (400, 30929), (408, 30962), (432, 31043), (436, 31058), (492, 31277), (534, 31376), (544, 31400),

Gene: AgentM\_30 Start: 25856, Stop: 24363, Start Num: 116

Candidate Starts for AgentM\_30:

(Start: 116 @25856 has 209 MA's), (Start: 130 @25823 has 1 MA's), (Start: 131 @25820 has 3 MA's), (Start: 134 @25802 has 4 MA's), (Start: 152 @25721 has 1 MA's), (196, 25577), (205, 25550), (222, 25502), (263, 25337), (268, 25313), (269, 25310), (273, 25289), (316, 25100), (371, 24929), (404, 24794), (416, 24752), (419, 24740), (443, 24656), (447, 24641), (453, 24626), (500, 24449), (521, 24419), (535, 24386),

Gene: AgronaGT15\_36 Start: 27130, Stop: 25562, Start Num: 113

Candidate Starts for AgronaGT15\_36:

(37, 27280), (43, 27265), (88, 27166), (Start: 113 @27130 has 105 MA's), (184, 26875), (191, 26851), (208, 26791), (218, 26743), (219, 26740), (240, 26653), (245, 26641), (247, 26620), (254, 26596), (271, 26527), (287, 26458), (288, 26449), (311, 26344), (321, 26299), (354, 26167), (381, 26083), (398, 26026), (455, 25819), (495, 25678),

Gene: AinMach\_48 Start: 34606, Stop: 36066, Start Num: 90

Candidate Starts for AinMach\_48:

(Start: 90 @34606 has 1 MA's), (Start: 116 @34645 has 209 MA's), (149, 34765), (194, 34918), (198, 34930), (216, 34975), (222, 34987), (227, 35005), (230, 35017), (268, 35176), (278, 35218), (311, 35338), (366, 35524), (377, 35578), (452, 35812), (454, 35821), (473, 35893),

Gene: Airmid\_31 Start: 25414, Stop: 23933, Start Num: 116

Candidate Starts for Airmid\_31:

(88, 25441), (Start: 116 @25414 has 209 MA's), (Start: 131 @25378 has 3 MA's), (Start: 152 @25279 has 1 MA's), (161, 25243), (Start: 181 @25195 has 1 MA's), (190, 25153), (198, 25129), (211, 25102), (220, 25063), (229, 25039), (231, 25024), (263, 24895), (334, 24601), (347, 24556), (354, 24526), (362, 24502), (371, 24487), (389, 24427), (403, 24376), (404, 24367), (429, 24280), (447, 24214), (500, 24022), (539, 23944),

Gene: Ajay\_38 Start: 29543, Stop: 31045, Start Num: 116

Candidate Starts for Ajay\_38:

(Start: 56 @29462 has 26 MA's), (Start: 59 @29468 has 2 MA's), (Start: 62 @29474 has 9 MA's), (Start: 63 @29477 has 9 MA's), (Start: 75 @29492 has 1 MA's), (Start: 116 @29543 has 209 MA's), (Start: 179 @29762 has 1 MA's), (Start: 181 @29768 has 1 MA's), (184, 29789), (222, 29906), (Start: 226 @29918 has 1 MA's), (229, 29927), (230, 29936), (231, 29942), (252, 30032), (256, 30044), (265, 30077), (307, 30272), (327, 30332), (341, 30389), (349, 30416), (357, 30443), (358, 30446), (362, 30458), (386, 30527), (398, 30560), (400, 30566), (408, 30599), (432, 30680), (436, 30695), (461, 30800), (492, 30914), (534, 31013), (544, 31037),

Gene: Alatin\_29 Start: 23703, Stop: 22195, Start Num: 97

Candidate Starts for Alatin\_29:

(Start: 97 @23703 has 32 MA's), (Start: 116 @23682 has 209 MA's), (Start: 122 @23676 has 3 MA's), (Start: 152 @23547 has 1 MA's), (164, 23499), (193, 23412), (229, 23307), (254, 23196), (269, 23136), (272, 23124), (286, 23061), (292, 23031), (296, 22998), (303, 22977), (310, 22947), (314, 22932), (316, 22926), (331, 22878), (339, 22845), (354, 22788), (371, 22749), (372, 22743), (417, 22593), (463, 22422), (539, 22206),

Gene: Albee\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Albee\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Alberto7\_34 Start: 26999, Stop: 25437, Start Num: 64

Candidate Starts for Alberto7\_34:

(Start: 64 @26999 has 10 MA's), (Start: 116 @26933 has 209 MA's), (Start: 127 @26915 has 3 MA's), (139, 26858), (143, 26840), (150, 26810), (Start: 152 @26798 has 1 MA's), (190, 26672), (197, 26651), (211, 26621), (220, 26582), (231, 26543), (253, 26453), (268, 26393), (282, 26339), (310, 26201), (380, 25970), (403, 25880), (412, 25844), (419, 25817), (435, 25763), (437, 25754), (493, 25544),

(500, 25526), (512, 25514), (517, 25505),

Gene: Alpacados\_28 Start: 23572, Stop: 22076, Start Num: 97

Candidate Starts for Alpacados\_28:

(Start: 97 @23572 has 32 MA's), (Start: 116 @23551 has 209 MA's), (Start: 122 @23545 has 3 MA's), (Start: 152 @23416 has 1 MA's), (164, 23368), (193, 23281), (229, 23176), (254, 23065), (269, 23005), (272, 22993), (286, 22930), (292, 22900), (296, 22867), (303, 22846), (310, 22816), (316, 22795), (330, 22750), (331, 22747), (332, 22741), (354, 22657), (371, 22618), (372, 22612), (403, 22516), (411, 22483), (417, 22462), (419, 22453), (463, 22291),

Gene: Alsfro\_41 Start: 29931, Stop: 31442, Start Num: 116

Candidate Starts for Alsfro\_41:

(Start: 116 @29931 has 209 MA's), (124, 29943), (Start: 126 @29946 has 8 MA's), (Start: 130 @29964 has 1 MA's), (Start: 145 @30039 has 1 MA's), (147, 30042), (Start: 152 @30066 has 1 MA's), (154, 30078), (Start: 179 @30150 has 1 MA's), (Start: 181 @30156 has 1 MA's), (183, 30168), (194, 30210), (204, 30240), (205, 30243), (Start: 226 @30306 has 1 MA's), (229, 30315), (230, 30324), (231, 30330), (252, 30420), (256, 30432), (265, 30465), (307, 30660), (327, 30720), (341, 30777), (357, 30831), (362, 30846), (398, 30945), (408, 30984), (409, 30987), (432, 31065), (436, 31080), (492, 31299),

Gene: Altman\_39 Start: 30360, Stop: 31874, Start Num: 116

Candidate Starts for Altman\_39:

(Start: 56 @30279 has 26 MA's), (Start: 59 @30285 has 2 MA's), (Start: 62 @30291 has 9 MA's), (Start: 63 @30294 has 9 MA's), (Start: 75 @30309 has 1 MA's), (Start: 116 @30360 has 209 MA's), (Start: 145 @30468 has 1 MA's), (Start: 179 @30579 has 1 MA's), (Start: 181 @30585 has 1 MA's), (184, 30606), (Start: 226 @30735 has 1 MA's), (229, 30744), (230, 30753), (256, 30861), (263, 30882), (265, 30894), (271, 30918), (281, 30960), (307, 31089), (327, 31149), (341, 31206), (349, 31233), (357, 31260), (358, 31263), (362, 31275), (386, 31344), (398, 31377), (400, 31383), (408, 31416), (432, 31497), (436, 31512), (461, 31617), (492, 31731),

Gene: Alvin\_38 Start: 30002, Stop: 31504, Start Num: 116

Candidate Starts for Alvin\_38:

(Start: 56 @29921 has 26 MA's), (Start: 59 @29927 has 2 MA's), (Start: 62 @29933 has 9 MA's), (Start: 63 @29936 has 9 MA's), (Start: 75 @29951 has 1 MA's), (Start: 116 @30002 has 209 MA's), (Start: 126 @30017 has 8 MA's), (Start: 179 @30221 has 1 MA's), (Start: 181 @30227 has 1 MA's), (184, 30248), (194, 30281), (Start: 226 @30377 has 1 MA's), (229, 30386), (230, 30395), (256, 30503), (263, 30524), (265, 30536), (271, 30560), (307, 30731), (327, 30791), (341, 30848), (357, 30902), (358, 30905), (362, 30917), (386, 30986), (400, 31025), (408, 31058), (432, 31139), (436, 31154), (461, 31259), (492, 31373), (534, 31472), (544, 31496),

Gene: Amyev\_51 Start: 37772, Stop: 39232, Start Num: 115

Candidate Starts for Amyev\_51:

(Start: 106 @37763 has 2 MA's), (Start: 115 @37772 has 12 MA's), (172, 37958), (182, 37991), (220, 38129), (225, 38141), (247, 38240), (261, 38291), (284, 38384), (370, 38717), (444, 38960), (531, 39218),

Gene: Anglerfish\_39 Start: 29761, Stop: 31353, Start Num: 56

Candidate Starts for Anglerfish\_39:

(Start: 56 @29761 has 26 MA's), (Start: 59 @29767 has 2 MA's), (Start: 62 @29773 has 9 MA's), (Start: 63 @29776 has 9 MA's), (Start: 75 @29791 has 1 MA's), (Start: 116 @29842 has 209 MA's), (Start: 126 @29857 has 8 MA's), (Start: 145 @29950 has 1 MA's), (Start: 179 @30061 has 1 MA's), (Start: 181 @30067 has 1 MA's), (Start: 226 @30217 has 1 MA's), (229, 30226), (230, 30235), (256, 30343), (263, 30364), (265, 30376), (271, 30400), (281, 30442), (307, 30571), (327, 30631), (341, 30688), (357, 30742), (358, 30745), (362, 30757), (408, 30895), (432, 30976), (436, 30991), (440,

31006), (492, 31210),

Gene: AngryOrchard\_28 Start: 23567, Stop: 22059, Start Num: 97

Candidate Starts for AngryOrchard\_28:

(Start: 97 @23567 has 32 MA's), (Start: 116 @23546 has 209 MA's), (Start: 122 @23540 has 3 MA's), (Start: 152 @23411 has 1 MA's), (164, 23363), (193, 23276), (229, 23171), (254, 23060), (269, 23000), (272, 22988), (292, 22895), (296, 22862), (303, 22841), (310, 22811), (314, 22796), (316, 22790), (331, 22742), (339, 22709), (354, 22652), (371, 22613), (372, 22607), (417, 22457), (457, 22316), (463, 22286), (499, 22160), (529, 22094),

Gene: Annyong\_33 Start: 26638, Stop: 25124, Start Num: 113

Candidate Starts for Annyong\_33:

(Start: 84 @26680 has 1 MA's), (Start: 107 @26647 has 19 MA's), (Start: 113 @26638 has 105 MA's), (154, 26476), (Start: 179 @26410 has 1 MA's), (183, 26392), (205, 26317), (210, 26293), (218, 26254), (219, 26251), (240, 26164), (268, 26050), (271, 26038), (311, 25855), (340, 25744), (354, 25693), (396, 25564), (399, 25555), (419, 25480), (421, 25474), (455, 25351), (463, 25312), (521, 25162), (528, 25147),

Gene: Anthony\_33 Start: 25025, Stop: 23601, Start Num: 123

Candidate Starts for Anthony\_33:

(1, 25649), (2, 25601), (3, 25574), (4, 25571), (5, 25547), (7, 25487), (8, 25475), (11, 25409), (61, 25121), (89, 25070), (Start: 116 @25034 has 209 MA's), (Start: 123 @25025 has 2 MA's), (Start: 152 @24899 has 1 MA's), (190, 24773), (198, 24749), (216, 24692), (248, 24569), (254, 24548), (273, 24470), (278, 24452), (285, 24422), (316, 24281), (331, 24236), (358, 24140), (371, 24113), (391, 24044), (414, 23978), (435, 23906), (453, 23846), (495, 23681), (526, 23645), (536, 23621),

Gene: AppleCloud\_27 Start: 23605, Stop: 22106, Start Num: 97

Candidate Starts for AppleCloud\_27:

(Start: 97 @23605 has 32 MA's), (Start: 116 @23584 has 209 MA's), (Start: 122 @23578 has 3 MA's), (139, 23509), (Start: 152 @23449 has 1 MA's), (193, 23311), (194, 23308), (203, 23281), (220, 23230), (245, 23140), (267, 23044), (271, 23029), (273, 23017), (284, 22978), (297, 22897), (301, 22885), (311, 22846), (316, 22828), (337, 22759), (345, 22732), (348, 22720), (354, 22696), (357, 22687), (371, 22657), (374, 22639), (382, 22618), (387, 22597), (402, 22564), (404, 22552), (435, 22444), (462, 22339), (480, 22279), (490, 22240), (491, 22237), (498, 22213), (500, 22207),

Gene: Aragog\_30 Start: 25886, Stop: 24393, Start Num: 116

Candidate Starts for Aragog\_30:

(Start: 116 @25886 has 209 MA's), (Start: 130 @25853 has 1 MA's), (Start: 131 @25850 has 3 MA's), (Start: 134 @25832 has 4 MA's), (Start: 152 @25751 has 1 MA's), (196, 25607), (205, 25580), (222, 25532), (263, 25367), (268, 25343), (269, 25340), (273, 25319), (316, 25130), (371, 24959), (404, 24824), (416, 24782), (419, 24770), (443, 24686), (447, 24671), (453, 24656), (500, 24479), (521, 24449), (535, 24416),

Gene: Arcanine\_37 Start: 28843, Stop: 30426, Start Num: 56

Candidate Starts for Arcanine\_37:

(Start: 56 @28843 has 26 MA's), (Start: 59 @28849 has 2 MA's), (Start: 62 @28855 has 9 MA's), (Start: 63 @28858 has 9 MA's), (Start: 75 @28873 has 1 MA's), (Start: 116 @28924 has 209 MA's), (Start: 126 @28939 has 8 MA's), (Start: 179 @29143 has 1 MA's), (Start: 181 @29149 has 1 MA's), (Start: 226 @29299 has 1 MA's), (229, 29308), (230, 29317), (256, 29425), (263, 29446), (265, 29458), (271, 29482), (281, 29524), (307, 29653), (327, 29713), (341, 29770), (349, 29797), (357, 29824), (358, 29827), (362, 29839), (386, 29908), (398, 29941), (400, 29947), (408, 29980), (432, 30061), (436, 30076), (461, 30181), (492, 30295), (534, 30394), (544, 30418),

Gene: Archetta\_30 Start: 25923, Stop: 24442, Start Num: 116

Candidate Starts for Archetta\_30:

(88, 25950), (Start: 116 @25923 has 209 MA's), (Start: 131 @25887 has 3 MA's), (Start: 152 @25788 has 1 MA's), (Start: 181 @25704 has 1 MA's), (190, 25662), (198, 25638), (211, 25611), (220, 25572), (229, 25548), (263, 25404), (334, 25110), (347, 25065), (354, 25035), (362, 25011), (371, 24996), (389, 24936), (403, 24885), (404, 24876), (419, 24822), (429, 24789), (447, 24723), (500, 24531), (539, 24453),

Gene: Arlo\_36 Start: 29428, Stop: 30942, Start Num: 116

Candidate Starts for Arlo\_36:

(Start: 56 @29347 has 26 MA's), (Start: 59 @29353 has 2 MA's), (Start: 62 @29359 has 9 MA's), (Start: 63 @29362 has 9 MA's), (Start: 75 @29377 has 1 MA's), (Start: 116 @29428 has 209 MA's), (Start: 179 @29647 has 1 MA's), (Start: 181 @29653 has 1 MA's), (184, 29674), (222, 29791), (Start: 226 @29803 has 1 MA's), (229, 29812), (230, 29821), (256, 29929), (263, 29950), (265, 29962), (271, 29986), (281, 30028), (307, 30157), (327, 30217), (341, 30274), (349, 30301), (357, 30328), (358, 30331), (362, 30343), (386, 30412), (398, 30445), (400, 30451), (408, 30484), (432, 30565), (436, 30580), (492, 30799),

Gene: Arturo\_32 Start: 26750, Stop: 25254, Start Num: 116

Candidate Starts for Arturo\_32:

(Start: 64 @26816 has 10 MA's), (Start: 107 @26759 has 19 MA's), (Start: 116 @26750 has 209 MA's), (Start: 127 @26732 has 3 MA's), (139, 26675), (143, 26657), (150, 26627), (Start: 152 @26615 has 1 MA's), (190, 26489), (197, 26468), (211, 26438), (220, 26399), (268, 26210), (276, 26174), (282, 26156), (310, 26018), (326, 25973), (380, 25787), (412, 25661), (419, 25634), (435, 25580), (437, 25571), (493, 25361), (500, 25343), (512, 25331), (517, 25322),

Gene: Asa16\_48 Start: 35961, Stop: 37382, Start Num: 110

Candidate Starts for Asa16\_48:

(96, 35943), (108, 35958), (Start: 110 @35961 has 33 MA's), (Start: 116 @35970 has 209 MA's), (147, 36084), (Start: 152 @36108 has 1 MA's), (Start: 181 @36192 has 1 MA's), (187, 36225), (192, 36240), (216, 36303), (222, 36315), (225, 36324), (247, 36423), (258, 36465), (271, 36516), (281, 36555), (304, 36633), (310, 36660), (328, 36714), (417, 37020), (419, 37029), (422, 37038), (424, 37050), (473, 37221), (505, 37308),

Gene: Ascela\_51 Start: 36003, Stop: 37418, Start Num: 116

Candidate Starts for Ascela\_51:

(Start: 116 @36003 has 209 MA's), (Start: 127 @36021 has 3 MA's), (Start: 152 @36141 has 1 MA's), (Start: 181 @36225 has 1 MA's), (193, 36276), (216, 36336), (222, 36348), (230, 36378), (247, 36456), (271, 36549), (281, 36588), (422, 37071), (424, 37083), (473, 37254),

Gene: Ashballer\_39 Start: 30219, Stop: 31802, Start Num: 56

Candidate Starts for Ashballer\_39:

(Start: 56 @30219 has 26 MA's), (Start: 59 @30225 has 2 MA's), (Start: 62 @30231 has 9 MA's), (Start: 63 @30234 has 9 MA's), (Start: 75 @30249 has 1 MA's), (Start: 116 @30300 has 209 MA's), (Start: 179 @30519 has 1 MA's), (Start: 181 @30525 has 1 MA's), (Start: 226 @30675 has 1 MA's), (229, 30684), (230, 30693), (256, 30801), (263, 30822), (265, 30834), (271, 30858), (281, 30900), (307, 31029), (327, 31089), (341, 31146), (349, 31173), (357, 31200), (362, 31215), (386, 31284), (400, 31323), (408, 31356), (432, 31437), (436, 31452), (492, 31671), (534, 31770), (544, 31794),

Gene: Ashes\_43 Start: 31555, Stop: 32994, Start Num: 115

Candidate Starts for Ashes\_43:

(Start: 115 @31555 has 12 MA's), (Start: 145 @31666 has 1 MA's), (148, 31675), (172, 31738), (Start: 179 @31762 has 1 MA's), (182, 31771), (222, 31921), (225, 31930), (261, 32086), (263, 32092), (269,

32119), (328, 32353), (331, 32368), (368, 32476), (450, 32746), (504, 32923), (512, 32938), (514, 32941),

Gene: Asten\_50 Start: 36160, Stop: 37782, Start Num: 47

Candidate Starts for Asten\_50:

(Start: 31 @36103 has 7 MA's), (Start: 47 @36160 has 5 MA's), (Start: 50 @36169 has 23 MA's), (112, 36289), (Start: 127 @36316 has 3 MA's), (148, 36415), (Start: 152 @36433 has 1 MA's), (166, 36484), (192, 36565), (193, 36568), (216, 36640), (220, 36649), (222, 36652), (252, 36778), (259, 36805), (277, 36874), (280, 36886), (289, 36919), (305, 36988), (311, 37015), (328, 37063), (339, 37111), (355, 37150), (371, 37207), (407, 37330), (423, 37390), (436, 37435), (472, 37564), (484, 37615), (487, 37624), (501, 37663), (511, 37687), (520, 37702), (525, 37717), (530, 37732),

Gene: Astro\_30 Start: 25018, Stop: 23516, Start Num: 113

Candidate Starts for Astro\_30:

(69, 25087), (Start: 84 @25060 has 1 MA's), (88, 25054), (Start: 113 @25018 has 105 MA's), (Start: 152 @24868 has 1 MA's), (184, 24763), (205, 24697), (208, 24679), (218, 24637), (219, 24634), (240, 24547), (268, 24433), (271, 24421), (290, 24328), (300, 24280), (311, 24238), (328, 24178), (354, 24076), (416, 23869), (446, 23764), (455, 23728), (463, 23689), (493, 23605), (518, 23557),

Gene: Atkinbua\_39 Start: 29777, Stop: 31345, Start Num: 63

Candidate Starts for Atkinbua\_39:

(Start: 56 @29762 has 26 MA's), (Start: 59 @29768 has 2 MA's), (Start: 62 @29774 has 9 MA's), (Start: 63 @29777 has 9 MA's), (Start: 75 @29792 has 1 MA's), (Start: 116 @29843 has 209 MA's), (Start: 179 @30062 has 1 MA's), (Start: 181 @30068 has 1 MA's), (184, 30089), (Start: 226 @30218 has 1 MA's), (229, 30227), (230, 30236), (256, 30344), (263, 30365), (265, 30377), (271, 30401), (281, 30443), (307, 30572), (327, 30632), (341, 30689), (349, 30716), (357, 30743), (362, 30758), (400, 30866), (408, 30899), (432, 30980), (436, 30995), (492, 31214), (534, 31313), (544, 31337),

Gene: Attoomi\_51 Start: 39130, Stop: 40542, Start Num: 145

Candidate Starts for Attoomi\_51:

(87, 38968), (94, 38980), (Start: 145 @39130 has 1 MA's), (148, 39142), (150, 39148), (Start: 152 @39160 has 1 MA's), (166, 39208), (Start: 179 @39232 has 1 MA's), (187, 39271), (191, 39283), (194, 39292), (202, 39316), (209, 39325), (214, 39349), (242, 39451), (248, 39484), (258, 39523), (266, 39556), (273, 39586), (274, 39589), (286, 39661), (289, 39676), (299, 39736), (301, 39742), (306, 39760), (314, 39793), (328, 39826), (332, 39847), (344, 39889), (363, 39931), (368, 39946), (371, 39961), (381, 39997), (382, 40000), (395, 40045), (397, 40051), (404, 40078), (420, 40135), (441, 40216), (496, 40414), (509, 40447), (530, 40498), (540, 40519), (541, 40522), (545, 40534),

Gene: AvatarAhPeg\_34 Start: 27306, Stop: 25744, Start Num: 64

Candidate Starts for AvatarAhPeg\_34:

(Start: 64 @27306 has 10 MA's), (Start: 107 @27249 has 19 MA's), (Start: 116 @27240 has 209 MA's), (Start: 127 @27222 has 3 MA's), (139, 27165), (150, 27117), (Start: 152 @27105 has 1 MA's), (190, 26979), (197, 26958), (198, 26955), (211, 26928), (220, 26889), (253, 26760), (268, 26700), (310, 26508), (357, 26346), (412, 26151), (419, 26124), (435, 26070), (437, 26061), (493, 25851), (500, 25833), (512, 25821), (517, 25812), (524, 25794),

Gene: Avle17\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Avle17\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: BK1\_34 Start: 28460, Stop: 30028, Start Num: 63

Candidate Starts for BK1\_34:

(Start: 56 @28445 has 26 MA's), (Start: 59 @28451 has 2 MA's), (Start: 62 @28457 has 9 MA's),  
(Start: 63 @28460 has 9 MA's), (Start: 75 @28475 has 1 MA's), (Start: 116 @28526 has 209 MA's),  
(Start: 123 @28535 has 2 MA's), (Start: 179 @28745 has 1 MA's), (Start: 181 @28751 has 1 MA's),  
(184, 28772), (Start: 226 @28901 has 1 MA's), (229, 28910), (230, 28919), (256, 29027), (263, 29048),  
(265, 29060), (271, 29084), (281, 29126), (307, 29255), (327, 29315), (341, 29372), (349, 29399),  
(357, 29426), (358, 29429), (362, 29441), (386, 29510), (398, 29543), (400, 29549), (408, 29582),  
(432, 29663), (436, 29678), (461, 29783), (492, 29897), (534, 29996), (544, 30020),

Gene: BPBiabs31\_38 Start: 29878, Stop: 31392, Start Num: 116

Candidate Starts for BPBiabs31\_38:

(Start: 56 @29797 has 26 MA's), (Start: 59 @29803 has 2 MA's), (Start: 62 @29809 has 9 MA's),  
(Start: 63 @29812 has 9 MA's), (Start: 75 @29827 has 1 MA's), (Start: 116 @29878 has 209 MA's),  
(Start: 126 @29893 has 8 MA's), (Start: 179 @30097 has 1 MA's), (Start: 181 @30103 has 1 MA's),  
(183, 30115), (184, 30124), (Start: 226 @30253 has 1 MA's), (229, 30262), (230, 30271), (256, 30379),  
(263, 30400), (265, 30412), (271, 30436), (281, 30478), (307, 30607), (327, 30667), (341, 30724),  
(357, 30778), (362, 30793), (400, 30901), (408, 30934), (432, 31015), (436, 31030), (461, 31135),  
(492, 31249),

Gene: Baby16\_33 Start: 26648, Stop: 25134, Start Num: 113

Candidate Starts for Baby16\_33:

(Start: 84 @26690 has 1 MA's), (Start: 107 @26657 has 19 MA's), (Start: 113 @26648 has 105 MA's),  
(154, 26486), (Start: 179 @26420 has 1 MA's), (183, 26402), (205, 26327), (210, 26303), (218, 26264),  
(219, 26261), (240, 26174), (268, 26060), (271, 26048), (311, 25865), (340, 25754), (354, 25703),  
(396, 25574), (399, 25565), (419, 25490), (421, 25484), (455, 25361), (463, 25322), (521, 25172),  
(528, 25157),

Gene: BabyBack\_34 Start: 26301, Stop: 27938, Start Num: 113

Candidate Starts for BabyBack\_34:

(88, 26265), (Start: 113 @26301 has 105 MA's), (Start: 145 @26418 has 1 MA's), (148, 26427), (Start:  
152 @26445 has 1 MA's), (Start: 179 @26529 has 1 MA's), (194, 26589), (214, 26649), (220, 26670),  
(229, 26694), (230, 26703), (252, 26799), (268, 26859), (273, 26883), (291, 26964), (297, 27003),  
(307, 27039), (351, 27204), (357, 27216), (370, 27240), (400, 27360), (408, 27393), (411, 27402),  
(490, 27699), (492, 27708), (536, 27810), (544, 27831), (546, 27855), (549, 27879), (551, 27906),  
(552, 27924),

Gene: Backyardigan\_33 Start: 26665, Stop: 25142, Start Num: 107

Candidate Starts for Backyardigan\_33:

(Start: 84 @26698 has 1 MA's), (Start: 107 @26665 has 19 MA's), (Start: 113 @26656 has 105 MA's),  
(154, 26494), (Start: 179 @26428 has 1 MA's), (183, 26410), (205, 26335), (218, 26272), (219, 26269),  
(240, 26182), (271, 26056), (311, 25873), (327, 25816), (340, 25762), (354, 25711), (396, 25582),  
(399, 25573), (419, 25498), (421, 25492), (454, 25378), (455, 25369), (463, 25330), (521, 25180),  
(528, 25165),

Gene: BaconJack\_40 Start: 29834, Stop: 31405, Start Num: 62

Candidate Starts for BaconJack\_40:

(Start: 56 @29822 has 26 MA's), (Start: 59 @29828 has 2 MA's), (Start: 62 @29834 has 9 MA's),  
(Start: 63 @29837 has 9 MA's), (Start: 75 @29852 has 1 MA's), (Start: 116 @29903 has 209 MA's),  
(Start: 179 @30122 has 1 MA's), (Start: 181 @30128 has 1 MA's), (184, 30149), (Start: 226 @30278  
has 1 MA's), (229, 30287), (230, 30296), (256, 30404), (263, 30425), (265, 30437), (271, 30461), (281,  
30503), (307, 30632), (327, 30692), (341, 30749), (349, 30776), (357, 30803), (358, 30806), (362,  
30818), (386, 30887), (400, 30926), (408, 30959), (432, 31040), (436, 31055), (461, 31160), (492,

31274), (534, 31373), (544, 31397),

Gene: Badger\_33 Start: 26645, Stop: 25131, Start Num: 113

Candidate Starts for Badger\_33:

(Start: 84 @26687 has 1 MA's), (Start: 107 @26654 has 19 MA's), (Start: 113 @26645 has 105 MA's), (154, 26483), (Start: 179 @26417 has 1 MA's), (183, 26399), (205, 26324), (218, 26261), (219, 26258), (240, 26171), (271, 26045), (311, 25862), (327, 25805), (340, 25751), (354, 25700), (396, 25571), (399, 25562), (419, 25487), (421, 25481), (454, 25367), (455, 25358), (463, 25319), (521, 25169), (528, 25154),

Gene: BaileyBlu\_48 Start: 34192, Stop: 35604, Start Num: 116

Candidate Starts for BaileyBlu\_48:

(Start: 116 @34192 has 209 MA's), (173, 34384), (216, 34522), (222, 34534), (227, 34552), (230, 34564), (235, 34591), (237, 34597), (272, 34738), (273, 34747), (281, 34774), (304, 34855), (310, 34882), (315, 34903), (346, 35002), (366, 35071), (394, 35164), (400, 35182), (421, 35254), (444, 35335), (449, 35353), (473, 35440),

Gene: Barriga\_37 Start: 29037, Stop: 30524, Start Num: 126

Candidate Starts for Barriga\_37:

(Start: 80 @28977 has 3 MA's), (Start: 116 @29022 has 209 MA's), (Start: 126 @29037 has 8 MA's), (Start: 179 @29241 has 1 MA's), (Start: 181 @29247 has 1 MA's), (Start: 226 @29397 has 1 MA's), (229, 29406), (230, 29415), (256, 29523), (263, 29544), (265, 29556), (271, 29580), (281, 29622), (307, 29751), (327, 29811), (341, 29868), (349, 29895), (357, 29922), (358, 29925), (362, 29937), (386, 30006), (398, 30039), (400, 30045), (408, 30078), (432, 30159), (436, 30174), (461, 30279), (492, 30393), (534, 30492), (544, 30516),

Gene: BarrowTuph\_36 Start: 29433, Stop: 30932, Start Num: 126

Candidate Starts for BarrowTuph\_36:

(Start: 56 @29337 has 26 MA's), (Start: 59 @29343 has 2 MA's), (Start: 62 @29349 has 9 MA's), (Start: 63 @29352 has 9 MA's), (Start: 75 @29367 has 1 MA's), (Start: 116 @29418 has 209 MA's), (Start: 126 @29433 has 8 MA's), (Start: 179 @29637 has 1 MA's), (Start: 181 @29643 has 1 MA's), (184, 29664), (222, 29781), (Start: 226 @29793 has 1 MA's), (229, 29802), (230, 29811), (252, 29907), (256, 29919), (263, 29940), (265, 29952), (271, 29976), (307, 30147), (327, 30207), (341, 30264), (349, 30291), (357, 30318), (362, 30333), (400, 30441), (432, 30555), (436, 30570), (492, 30789),

Gene: BarryBee\_53 Start: 36191, Stop: 37804, Start Num: 50

Candidate Starts for BarryBee\_53:

(Start: 31 @36125 has 7 MA's), (Start: 47 @36182 has 5 MA's), (Start: 50 @36191 has 23 MA's), (Start: 127 @36338 has 3 MA's), (148, 36437), (Start: 152 @36455 has 1 MA's), (166, 36506), (192, 36587), (193, 36590), (216, 36662), (220, 36671), (222, 36674), (252, 36800), (259, 36827), (277, 36896), (289, 36941), (305, 37010), (311, 37037), (328, 37085), (339, 37133), (355, 37172), (363, 37199), (371, 37229), (407, 37352), (423, 37412), (436, 37457), (472, 37586), (484, 37637), (487, 37646), (501, 37685), (511, 37709), (520, 37724), (525, 37739), (530, 37754),

Gene: Bartimeaus\_33 Start: 26639, Stop: 25125, Start Num: 113

Candidate Starts for Bartimeaus\_33:

(Start: 84 @26681 has 1 MA's), (Start: 107 @26648 has 19 MA's), (Start: 113 @26639 has 105 MA's), (154, 26477), (Start: 179 @26411 has 1 MA's), (183, 26393), (205, 26318), (210, 26294), (218, 26255), (219, 26252), (240, 26165), (268, 26051), (271, 26039), (311, 25856), (340, 25745), (354, 25694), (396, 25565), (399, 25556), (419, 25481), (421, 25475), (455, 25352), (463, 25313), (521, 25163), (528, 25148),

Gene: Beatrix\_37 Start: 30878, Stop: 32380, Start Num: 116



Candidate Starts for Beatrix\_37:

(Start: 56 @30797 has 26 MA's), (Start: 59 @30803 has 2 MA's), (Start: 62 @30809 has 9 MA's), (Start: 63 @30812 has 9 MA's), (Start: 75 @30827 has 1 MA's), (Start: 116 @30878 has 209 MA's), (Start: 126 @30893 has 8 MA's), (Start: 145 @30986 has 1 MA's), (Start: 179 @31097 has 1 MA's), (Start: 181 @31103 has 1 MA's), (194, 31157), (Start: 226 @31253 has 1 MA's), (229, 31262), (230, 31271), (256, 31379), (263, 31400), (271, 31436), (307, 31607), (327, 31667), (341, 31724), (349, 31751), (357, 31778), (358, 31781), (362, 31793), (400, 31901), (408, 31934), (432, 32015), (436, 32030), (492, 32249), (534, 32348), (544, 32372),

Gene: Beaupre\_46 Start: 31365, Stop: 32804, Start Num: 115

Candidate Starts for Beaupre\_46:

(Start: 115 @31365 has 12 MA's), (Start: 145 @31476 has 1 MA's), (148, 31485), (172, 31548), (Start: 179 @31572 has 1 MA's), (182, 31581), (222, 31731), (225, 31740), (261, 31896), (263, 31902), (269, 31929), (328, 32163), (331, 32178), (368, 32286), (450, 32556), (504, 32733), (512, 32748), (514, 32751),

Gene: BeesKnees\_38 Start: 29463, Stop: 30965, Start Num: 116

Candidate Starts for BeesKnees\_38:

(Start: 56 @29382 has 26 MA's), (Start: 59 @29388 has 2 MA's), (Start: 62 @29394 has 9 MA's), (Start: 63 @29397 has 9 MA's), (Start: 75 @29412 has 1 MA's), (Start: 116 @29463 has 209 MA's), (Start: 145 @29571 has 1 MA's), (Start: 179 @29682 has 1 MA's), (Start: 181 @29688 has 1 MA's), (184, 29709), (Start: 226 @29838 has 1 MA's), (229, 29847), (230, 29856), (256, 29964), (263, 29985), (265, 29997), (271, 30021), (281, 30063), (307, 30192), (327, 30252), (341, 30309), (349, 30336), (357, 30363), (362, 30378), (386, 30447), (400, 30486), (408, 30519), (436, 30615), (454, 30678), (461, 30720), (465, 30735), (492, 30834), (534, 30933), (544, 30957),

Gene: Belenaria\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Belenaria\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (193, 23345), (229, 23240), (254, 23129), (262, 23099), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Benedict\_31 Start: 25417, Stop: 23936, Start Num: 116

Candidate Starts for Benedict\_31:

(88, 25444), (Start: 116 @25417 has 209 MA's), (Start: 131 @25381 has 3 MA's), (Start: 152 @25282 has 1 MA's), (161, 25246), (Start: 181 @25198 has 1 MA's), (190, 25156), (198, 25132), (211, 25105), (220, 25066), (229, 25042), (231, 25027), (263, 24898), (334, 24604), (347, 24559), (354, 24529), (362, 24505), (371, 24490), (389, 24430), (403, 24379), (404, 24370), (419, 24316), (429, 24283), (447, 24217), (500, 24025), (539, 23947),

Gene: Berrie\_51 Start: 36108, Stop: 37529, Start Num: 110

Candidate Starts for Berrie\_51:

(96, 36090), (108, 36105), (Start: 110 @36108 has 33 MA's), (Start: 116 @36117 has 209 MA's), (147, 36231), (Start: 181 @36339 has 1 MA's), (192, 36387), (216, 36450), (222, 36462), (225, 36471), (247, 36570), (271, 36663), (281, 36702), (384, 37068), (422, 37185), (424, 37197), (453, 37290), (473, 37368), (486, 37416),

Gene: Bethlehem\_37 Start: 30167, Stop: 31669, Start Num: 116

Candidate Starts for Bethlehem\_37:

(Start: 56 @30086 has 26 MA's), (Start: 59 @30092 has 2 MA's), (Start: 62 @30098 has 9 MA's), (Start: 63 @30101 has 9 MA's), (Start: 75 @30116 has 1 MA's), (Start: 116 @30167 has 209 MA's),

(Start: 126 @30182 has 8 MA's), (164, 30347), (Start: 179 @30386 has 1 MA's), (Start: 181 @30392 has 1 MA's), (184, 30413), (Start: 226 @30542 has 1 MA's), (229, 30551), (230, 30560), (231, 30566), (252, 30656), (256, 30668), (265, 30701), (271, 30725), (281, 30767), (307, 30896), (327, 30956), (341, 31013), (357, 31067), (362, 31082), (400, 31190), (408, 31223), (432, 31304), (436, 31319), (461, 31424), (492, 31538), (534, 31637), (544, 31661),

Gene: Bexan\_35 Start: 30373, Stop: 31875, Start Num: 116

Candidate Starts for Bexan\_35:

(Start: 56 @30292 has 26 MA's), (Start: 59 @30298 has 2 MA's), (Start: 62 @30304 has 9 MA's), (Start: 63 @30307 has 9 MA's), (Start: 75 @30322 has 1 MA's), (Start: 116 @30373 has 209 MA's), (Start: 181 @30598 has 1 MA's), (222, 30736), (Start: 226 @30748 has 1 MA's), (229, 30757), (230, 30766), (256, 30874), (263, 30895), (265, 30907), (271, 30931), (281, 30973), (304, 31087), (307, 31102), (327, 31162), (341, 31219), (349, 31246), (357, 31273), (358, 31276), (362, 31288), (400, 31396), (408, 31429), (432, 31510), (436, 31525), (492, 31744), (534, 31843), (544, 31867),

Gene: Big3\_37 Start: 30045, Stop: 31547, Start Num: 116

Candidate Starts for Big3\_37:

(Start: 56 @29964 has 26 MA's), (Start: 59 @29970 has 2 MA's), (Start: 62 @29976 has 9 MA's), (Start: 63 @29979 has 9 MA's), (Start: 75 @29994 has 1 MA's), (Start: 116 @30045 has 209 MA's), (128, 30069), (Start: 181 @30270 has 1 MA's), (194, 30324), (Start: 226 @30420 has 1 MA's), (229, 30429), (230, 30438), (256, 30546), (263, 30567), (265, 30579), (271, 30603), (281, 30645), (307, 30774), (327, 30834), (341, 30891), (349, 30918), (357, 30945), (358, 30948), (362, 30960), (386, 31029), (400, 31068), (408, 31101), (432, 31182), (492, 31416), (534, 31515), (544, 31539),

Gene: BigMau\_39 Start: 29582, Stop: 31084, Start Num: 116

Candidate Starts for BigMau\_39:

(Start: 56 @29501 has 26 MA's), (Start: 59 @29507 has 2 MA's), (Start: 62 @29513 has 9 MA's), (Start: 63 @29516 has 9 MA's), (Start: 75 @29531 has 1 MA's), (Start: 116 @29582 has 209 MA's), (Start: 123 @29591 has 2 MA's), (Start: 126 @29597 has 8 MA's), (128, 29606), (Start: 130 @29615 has 1 MA's), (Start: 181 @29807 has 1 MA's), (183, 29819), (184, 29828), (194, 29861), (Start: 226 @29957 has 1 MA's), (229, 29966), (230, 29975), (256, 30083), (263, 30104), (265, 30116), (271, 30140), (281, 30182), (307, 30311), (327, 30371), (341, 30428), (349, 30455), (357, 30482), (358, 30485), (362, 30497), (386, 30566), (398, 30599), (400, 30605), (408, 30638), (432, 30719), (436, 30734), (461, 30839), (492, 30953), (534, 31052), (544, 31076),

Gene: Bigchungj\_37 Start: 29171, Stop: 30658, Start Num: 126

Candidate Starts for Bigchungj\_37:

(Start: 80 @29111 has 3 MA's), (Start: 116 @29156 has 209 MA's), (Start: 126 @29171 has 8 MA's), (154, 29303), (Start: 179 @29375 has 1 MA's), (Start: 181 @29381 has 1 MA's), (Start: 226 @29531 has 1 MA's), (229, 29540), (230, 29549), (256, 29657), (263, 29678), (265, 29690), (271, 29714), (281, 29756), (307, 29885), (327, 29945), (341, 30002), (349, 30029), (351, 30044), (354, 30047), (357, 30056), (358, 30059), (362, 30071), (400, 30179), (408, 30212), (419, 30251), (432, 30293), (436, 30308), (492, 30527), (534, 30626), (544, 30650),

Gene: Bigfoot\_35 Start: 28813, Stop: 30315, Start Num: 116

Candidate Starts for Bigfoot\_35:

(46, 28708), (Start: 49 @28720 has 1 MA's), (Start: 56 @28732 has 26 MA's), (Start: 59 @28738 has 2 MA's), (Start: 62 @28744 has 9 MA's), (Start: 63 @28747 has 9 MA's), (Start: 75 @28762 has 1 MA's), (Start: 116 @28813 has 209 MA's), (Start: 179 @29032 has 1 MA's), (Start: 181 @29038 has 1 MA's), (184, 29059), (Start: 226 @29188 has 1 MA's), (229, 29197), (230, 29206), (256, 29314), (263, 29335), (265, 29347), (271, 29371), (281, 29413), (307, 29542), (327, 29602), (341, 29659), (349, 29686), (357, 29713), (358, 29716), (362, 29728), (386, 29797), (400, 29836), (408, 29869), (432, 29950), (436, 29965), (461, 30070), (492, 30184), (534, 30283), (544, 30307),

Gene: BillKnuckles\_38 Start: 30267, Stop: 31769, Start Num: 116

Candidate Starts for BillKnuckles\_38:

(Start: 56 @30186 has 26 MA's), (Start: 59 @30192 has 2 MA's), (Start: 62 @30198 has 9 MA's), (Start: 63 @30201 has 9 MA's), (Start: 75 @30216 has 1 MA's), (Start: 116 @30267 has 209 MA's), (Start: 179 @30486 has 1 MA's), (Start: 181 @30492 has 1 MA's), (184, 30513), (Start: 226 @30642 has 1 MA's), (229, 30651), (230, 30660), (256, 30768), (263, 30789), (265, 30801), (271, 30825), (281, 30867), (307, 30996), (327, 31056), (341, 31113), (349, 31140), (357, 31167), (358, 31170), (362, 31182), (400, 31290), (408, 31323), (432, 31404), (436, 31419), (461, 31524), (492, 31638), (534, 31737), (544, 31761),

Gene: Bircsak\_37 Start: 29814, Stop: 31382, Start Num: 62

Candidate Starts for Bircsak\_37:

(Start: 56 @29802 has 26 MA's), (Start: 59 @29808 has 2 MA's), (Start: 62 @29814 has 9 MA's), (Start: 63 @29817 has 9 MA's), (Start: 75 @29832 has 1 MA's), (Start: 116 @29883 has 209 MA's), (Start: 126 @29898 has 8 MA's), (128, 29907), (Start: 179 @30102 has 1 MA's), (Start: 181 @30108 has 1 MA's), (184, 30129), (Start: 226 @30258 has 1 MA's), (229, 30267), (230, 30276), (256, 30384), (263, 30405), (265, 30417), (271, 30441), (307, 30612), (327, 30672), (341, 30729), (349, 30756), (357, 30783), (358, 30786), (362, 30798), (398, 30897), (408, 30936), (409, 30939), (432, 31017), (436, 31032), (492, 31251), (534, 31350), (544, 31374),

Gene: Blackmoor\_33 Start: 26639, Stop: 25125, Start Num: 113

Candidate Starts for Blackmoor\_33:

(Start: 84 @26681 has 1 MA's), (Start: 107 @26648 has 19 MA's), (Start: 113 @26639 has 105 MA's), (154, 26477), (Start: 179 @26411 has 1 MA's), (183, 26393), (205, 26318), (210, 26294), (218, 26255), (219, 26252), (240, 26165), (268, 26051), (271, 26039), (311, 25856), (340, 25745), (354, 25694), (396, 25565), (399, 25556), (419, 25481), (421, 25475), (455, 25352), (463, 25313), (521, 25163), (528, 25148),

Gene: Blue\_37 Start: 29798, Stop: 31393, Start Num: 56

Candidate Starts for Blue\_37:

(Start: 56 @29798 has 26 MA's), (Start: 59 @29804 has 2 MA's), (Start: 62 @29810 has 9 MA's), (Start: 63 @29813 has 9 MA's), (Start: 75 @29828 has 1 MA's), (Start: 116 @29879 has 209 MA's), (Start: 126 @29894 has 8 MA's), (128, 29903), (Start: 179 @30098 has 1 MA's), (Start: 181 @30104 has 1 MA's), (Start: 226 @30254 has 1 MA's), (229, 30263), (230, 30272), (256, 30380), (263, 30401), (265, 30413), (271, 30437), (281, 30479), (307, 30608), (327, 30668), (341, 30725), (349, 30752), (357, 30779), (358, 30782), (362, 30794), (400, 30902), (408, 30935), (432, 31016), (436, 31031), (492, 31250),

Gene: Bluefalcon\_29 Start: 25903, Stop: 24443, Start Num: 130

Candidate Starts for Bluefalcon\_29:

(Start: 116 @25936 has 209 MA's), (Start: 130 @25903 has 1 MA's), (Start: 131 @25900 has 3 MA's), (Start: 134 @25882 has 4 MA's), (Start: 152 @25801 has 1 MA's), (196, 25657), (205, 25630), (222, 25582), (263, 25417), (268, 25393), (269, 25390), (273, 25369), (316, 25180), (357, 25039), (371, 25009), (416, 24832), (419, 24820), (443, 24736), (447, 24721), (453, 24706), (500, 24529), (521, 24499), (535, 24466),

Gene: Bob3\_36 Start: 28857, Stop: 30434, Start Num: 59

Candidate Starts for Bob3\_36:

(Start: 56 @28851 has 26 MA's), (Start: 59 @28857 has 2 MA's), (Start: 62 @28863 has 9 MA's), (Start: 63 @28866 has 9 MA's), (Start: 75 @28881 has 1 MA's), (Start: 116 @28932 has 209 MA's), (Start: 181 @29157 has 1 MA's), (183, 29169), (184, 29178), (194, 29211), (222, 29295), (Start: 226 @29307 has 1 MA's), (229, 29316), (230, 29325), (252, 29421), (256, 29433), (265, 29466), (307,

29661), (327, 29721), (341, 29778), (357, 29832), (362, 29847), (398, 29949), (400, 29955), (408, 29988), (409, 29991), (425, 30054), (436, 30084), (461, 30189), (492, 30303), (534, 30402), (544, 30426),

Gene: BobbyDazzler\_29 Start: 23682, Stop: 22186, Start Num: 97

Candidate Starts for BobbyDazzler\_29:

(Start: 97 @23682 has 32 MA's), (Start: 116 @23661 has 209 MA's), (Start: 122 @23655 has 3 MA's), (Start: 152 @23526 has 1 MA's), (164, 23478), (193, 23391), (229, 23286), (254, 23175), (269, 23115), (272, 23103), (286, 23040), (292, 23010), (296, 22977), (303, 22956), (310, 22926), (316, 22905), (330, 22860), (331, 22857), (332, 22851), (354, 22767), (371, 22728), (372, 22722), (411, 22593), (417, 22572), (419, 22563), (463, 22401),

Gene: Bombshell\_33 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Bombshell\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Bonamassa\_30 Start: 25777, Stop: 24284, Start Num: 116

Candidate Starts for Bonamassa\_30:

(Start: 116 @25777 has 209 MA's), (Start: 130 @25744 has 1 MA's), (Start: 131 @25741 has 3 MA's), (Start: 134 @25723 has 4 MA's), (Start: 152 @25642 has 1 MA's), (196, 25498), (205, 25471), (222, 25423), (263, 25258), (268, 25234), (269, 25231), (273, 25210), (316, 25021), (357, 24880), (371, 24850), (416, 24673), (419, 24661), (443, 24577), (447, 24562), (453, 24547), (500, 24370), (521, 24340), (535, 24307),

Gene: Bonanza\_29 Start: 23610, Stop: 22114, Start Num: 97

Candidate Starts for Bonanza\_29:

(Start: 97 @23610 has 32 MA's), (Start: 116 @23589 has 209 MA's), (Start: 122 @23583 has 3 MA's), (Start: 152 @23454 has 1 MA's), (164, 23406), (193, 23319), (229, 23214), (254, 23103), (269, 23043), (272, 23031), (292, 22938), (296, 22905), (303, 22884), (310, 22854), (314, 22839), (316, 22833), (331, 22785), (354, 22695), (371, 22656), (372, 22650), (403, 22554), (411, 22521), (417, 22500), (419, 22491), (463, 22329),

Gene: Bones\_37 Start: 29287, Stop: 30786, Start Num: 116

Candidate Starts for Bones\_37:

(Start: 80 @29242 has 3 MA's), (Start: 116 @29287 has 209 MA's), (Start: 126 @29302 has 8 MA's), (128, 29311), (154, 29434), (Start: 179 @29506 has 1 MA's), (Start: 181 @29512 has 1 MA's), (194, 29566), (Start: 226 @29662 has 1 MA's), (229, 29671), (230, 29680), (256, 29788), (263, 29809), (265, 29821), (271, 29845), (281, 29887), (307, 30016), (327, 30076), (341, 30133), (349, 30160), (357, 30187), (358, 30190), (362, 30202), (398, 30301), (408, 30340), (432, 30421), (436, 30436), (461, 30541), (492, 30655), (495, 30667), (534, 30754), (544, 30778),

Gene: Bradshaw\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Bradshaw\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (193, 23345), (229, 23240), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Brataylor\_53 Start: 35602, Stop: 37179, Start Num: 50

Candidate Starts for Brataylor\_53:

(Start: 31 @35536 has 7 MA's), (Start: 50 @35602 has 23 MA's), (Start: 127 @35722 has 3 MA's), (Start: 145 @35812 has 1 MA's), (Start: 152 @35839 has 1 MA's), (166, 35890), (192, 35971), (193, 35974), (216, 36046), (220, 36055), (222, 36058), (259, 36211), (273, 36268), (274, 36271), (277, 36280), (283, 36304), (339, 36508), (363, 36574), (368, 36589), (371, 36604), (402, 36703), (407, 36727), (410, 36736), (417, 36760), (436, 36832), (487, 37021), (501, 37060), (511, 37084), (520, 37099), (525, 37114),

Gene: Briton15\_39 Start: 29603, Stop: 31180, Start Num: 59

Candidate Starts for Briton15\_39:

(Start: 56 @29597 has 26 MA's), (Start: 59 @29603 has 2 MA's), (Start: 62 @29609 has 9 MA's), (Start: 63 @29612 has 9 MA's), (Start: 75 @29627 has 1 MA's), (Start: 116 @29678 has 209 MA's), (148, 29795), (Start: 179 @29897 has 1 MA's), (Start: 181 @29903 has 1 MA's), (Start: 226 @30053 has 1 MA's), (229, 30062), (230, 30071), (256, 30179), (263, 30200), (265, 30212), (271, 30236), (281, 30278), (307, 30407), (327, 30467), (341, 30524), (349, 30551), (357, 30578), (358, 30581), (362, 30593), (400, 30701), (408, 30734), (432, 30815), (436, 30830), (492, 31049), (534, 31148), (544, 31172),

Gene: Broseidon\_33 Start: 26639, Stop: 25125, Start Num: 113

Candidate Starts for Broseidon\_33:

(Start: 84 @26681 has 1 MA's), (Start: 107 @26648 has 19 MA's), (Start: 113 @26639 has 105 MA's), (154, 26477), (Start: 179 @26411 has 1 MA's), (183, 26393), (205, 26318), (210, 26294), (218, 26255), (219, 26252), (240, 26165), (268, 26051), (271, 26039), (311, 25856), (340, 25745), (354, 25694), (396, 25565), (399, 25556), (419, 25481), (421, 25475), (455, 25352), (463, 25313), (521, 25163), (528, 25148),

Gene: Bruiser\_32 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Bruiser\_32:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Bruns\_36 Start: 29373, Stop: 30860, Start Num: 126

Candidate Starts for Bruns\_36:

(Start: 56 @29277 has 26 MA's), (Start: 59 @29283 has 2 MA's), (Start: 62 @29289 has 9 MA's), (Start: 63 @29292 has 9 MA's), (Start: 75 @29307 has 1 MA's), (Start: 116 @29358 has 209 MA's), (Start: 126 @29373 has 8 MA's), (Start: 179 @29577 has 1 MA's), (Start: 181 @29583 has 1 MA's), (183, 29595), (184, 29604), (222, 29721), (Start: 226 @29733 has 1 MA's), (229, 29742), (230, 29751), (256, 29859), (263, 29880), (265, 29892), (271, 29916), (307, 30087), (327, 30147), (341, 30204), (349, 30231), (357, 30258), (362, 30273), (386, 30342), (400, 30381), (408, 30414), (409, 30417), (432, 30495), (436, 30510), (461, 30615), (492, 30729), (534, 30828), (544, 30852),

Gene: Bryce\_29 Start: 23611, Stop: 22115, Start Num: 97

Candidate Starts for Bryce\_29:

(Start: 97 @23611 has 32 MA's), (Start: 116 @23590 has 209 MA's), (Start: 122 @23584 has 3 MA's), (Start: 152 @23455 has 1 MA's), (164, 23407), (193, 23320), (229, 23215), (254, 23104), (269, 23044), (272, 23032), (286, 22969), (292, 22939), (296, 22906), (303, 22885), (310, 22855), (316, 22834), (330, 22789), (331, 22786), (332, 22780), (354, 22696), (371, 22657), (372, 22651), (411, 22522), (417, 22501), (419, 22492), (463, 22330),

Gene: BubbleTrouble\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for BubbleTrouble\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Bumblebee11\_33 Start: 26647, Stop: 25133, Start Num: 113

Candidate Starts for Bumblebee11\_33:

(Start: 84 @26689 has 1 MA's), (Start: 107 @26656 has 19 MA's), (Start: 113 @26647 has 105 MA's), (154, 26485), (Start: 179 @26419 has 1 MA's), (183, 26401), (205, 26326), (218, 26263), (219, 26260), (240, 26173), (271, 26047), (311, 25864), (327, 25807), (340, 25753), (354, 25702), (396, 25573), (399, 25564), (419, 25489), (421, 25483), (454, 25369), (455, 25360), (463, 25321), (521, 25171), (528, 25156),

Gene: Burger\_32 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Burger\_32:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Burton\_38 Start: 29535, Stop: 31049, Start Num: 116

Candidate Starts for Burton\_38:

(Start: 56 @29454 has 26 MA's), (Start: 59 @29460 has 2 MA's), (Start: 62 @29466 has 9 MA's), (Start: 63 @29469 has 9 MA's), (Start: 75 @29484 has 1 MA's), (Start: 116 @29535 has 209 MA's), (Start: 123 @29544 has 2 MA's), (Start: 126 @29550 has 8 MA's), (128, 29559), (Start: 130 @29568 has 1 MA's), (148, 29652), (Start: 152 @29670 has 1 MA's), (Start: 179 @29754 has 1 MA's), (Start: 181 @29760 has 1 MA's), (183, 29772), (184, 29781), (222, 29898), (Start: 226 @29910 has 1 MA's), (229, 29919), (230, 29928), (252, 30024), (256, 30036), (265, 30069), (307, 30264), (327, 30324), (341, 30381), (357, 30435), (358, 30438), (362, 30450), (398, 30552), (400, 30558), (408, 30591), (432, 30672), (436, 30687), (461, 30792), (492, 30906),

Gene: BuzzBuzz\_35 Start: 27309, Stop: 25741, Start Num: 113

Candidate Starts for BuzzBuzz\_35:

(37, 27459), (43, 27444), (88, 27345), (Start: 113 @27309 has 105 MA's), (184, 27054), (191, 27030), (208, 26970), (218, 26922), (219, 26919), (240, 26832), (245, 26820), (247, 26799), (254, 26775), (271, 26706), (287, 26637), (288, 26628), (311, 26523), (321, 26478), (354, 26346), (381, 26262), (398, 26205), (455, 25998), (495, 25857),

Gene: Bxb1\_35 Start: 29491, Stop: 30993, Start Num: 116

Candidate Starts for Bxb1\_35:

(Start: 56 @29410 has 26 MA's), (Start: 59 @29416 has 2 MA's), (Start: 62 @29422 has 9 MA's), (Start: 63 @29425 has 9 MA's), (Start: 75 @29440 has 1 MA's), (Start: 116 @29491 has 209 MA's), (Start: 179 @29710 has 1 MA's), (Start: 181 @29716 has 1 MA's), (184, 29737), (Start: 226 @29866 has 1 MA's), (229, 29875), (230, 29884), (256, 29992), (263, 30013), (265, 30025), (271, 30049), (281, 30091), (304, 30205), (307, 30220), (327, 30280), (341, 30337), (349, 30364), (357, 30391), (358, 30394), (362, 30406), (386, 30475), (398, 30508), (400, 30514), (408, 30547), (432, 30628), (436, 30643), (492, 30862), (534, 30961), (544, 30985),

Gene: Bxz2\_34 Start: 27316, Stop: 25748, Start Num: 113

Candidate Starts for Bxz2\_34:

(37, 27466), (43, 27451), (88, 27352), (Start: 113 @27316 has 105 MA's), (184, 27061), (191, 27037), (208, 26977), (218, 26929), (219, 26926), (240, 26839), (245, 26827), (247, 26806), (254, 26782), (271, 26713), (287, 26644), (288, 26635), (311, 26530), (321, 26485), (354, 26353), (381, 26269), (398, 26212), (455, 26005), (495, 25864),

Gene: CactusRose\_35 Start: 28926, Stop: 30428, Start Num: 116

Candidate Starts for CactusRose\_35:

(17, 28689), (19, 28692), (21, 28707), (30, 28770), (Start: 80 @28881 has 3 MA's), (Start: 116 @28926 has 209 MA's), (Start: 126 @28941 has 8 MA's), (Start: 145 @29034 has 1 MA's), (Start: 179 @29145 has 1 MA's), (Start: 181 @29151 has 1 MA's), (184, 29172), (222, 29289), (Start: 226 @29301 has 1 MA's), (229, 29310), (230, 29319), (252, 29415), (256, 29427), (265, 29460), (273, 29496), (307, 29655), (327, 29715), (341, 29772), (357, 29826), (358, 29829), (362, 29841), (400, 29949), (408, 29982), (432, 30063), (436, 30078), (461, 30183), (492, 30297), (534, 30396), (544, 30420),

Gene: Caelakin\_33 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Caelakin\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: CallinAllBarbz\_48 Start: 34767, Stop: 36179, Start Num: 116

Candidate Starts for CallinAllBarbz\_48:

(Start: 116 @34767 has 209 MA's), (216, 35097), (222, 35109), (227, 35127), (230, 35139), (235, 35166), (237, 35172), (272, 35313), (281, 35349), (304, 35430), (315, 35478), (346, 35577), (366, 35646), (400, 35757), (417, 35814), (421, 35829), (444, 35910), (449, 35928), (473, 36015), (531, 36165),

Gene: Camperdownii\_32 Start: 26250, Stop: 24772, Start Num: 127

Candidate Starts for Camperdownii\_32:

(Start: 64 @26334 has 10 MA's), (Start: 116 @26268 has 209 MA's), (Start: 127 @26250 has 3 MA's), (139, 26193), (143, 26175), (150, 26145), (Start: 152 @26133 has 1 MA's), (190, 26007), (197, 25986), (211, 25956), (220, 25917), (231, 25878), (253, 25788), (268, 25728), (282, 25674), (310, 25536), (359, 25368), (380, 25305), (403, 25215), (412, 25179), (419, 25152), (435, 25098), (437, 25089), (493, 24879), (500, 24861), (512, 24849), (517, 24840),

Gene: Cappuccino\_43 Start: 31421, Stop: 32860, Start Num: 115

Candidate Starts for Cappuccino\_43:

(Start: 115 @31421 has 12 MA's), (Start: 145 @31532 has 1 MA's), (148, 31541), (172, 31604), (Start: 179 @31628 has 1 MA's), (182, 31637), (222, 31787), (225, 31796), (261, 31952), (263, 31958), (269, 31985), (284, 32045), (328, 32219), (331, 32234), (368, 32342), (425, 32525), (504, 32789), (512, 32804), (514, 32807),

Gene: Cassia\_48 Start: 35110, Stop: 36528, Start Num: 110

Candidate Starts for Cassia\_48:

(96, 35092), (108, 35107), (Start: 110 @35110 has 33 MA's), (Start: 116 @35119 has 209 MA's), (Start: 152 @35257 has 1 MA's), (Start: 181 @35341 has 1 MA's), (216, 35452), (222, 35464), (225, 35473), (247, 35572), (258, 35614), (271, 35665), (281, 35704), (400, 36109), (417, 36166), (422, 36184), (424, 36196), (474, 36370),

Gene: Caviar\_34 Start: 27229, Stop: 25721, Start Num: 116

Candidate Starts for Caviar\_34:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752), (263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257), (404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: Celeste\_51 Start: 35002, Stop: 36645, Start Num: 31

Candidate Starts for Celeste\_51:

(Start: 31 @35002 has 7 MA's), (Start: 50 @35068 has 23 MA's), (Start: 127 @35188 has 3 MA's), (148, 35287), (Start: 152 @35305 has 1 MA's), (192, 35437), (193, 35440), (216, 35512), (220, 35521), (222, 35524), (259, 35677), (273, 35734), (274, 35737), (277, 35746), (283, 35770), (300, 35839), (339, 35974), (363, 36040), (371, 36070), (402, 36169), (407, 36193), (410, 36202), (417, 36226), (436, 36298), (487, 36487), (497, 36517), (501, 36526), (511, 36550), (520, 36565), (525, 36580),

Gene: Cen1621\_56 Start: 37861, Stop: 39441, Start Num: 90

Candidate Starts for Cen1621\_56:

(Start: 90 @37861 has 1 MA's), (150, 38014), (172, 38071), (195, 38158), (220, 38272), (233, 38320), (234, 38323), (242, 38353), (281, 38518), (301, 38638), (305, 38650), (368, 38890), (393, 38965), (450, 39169), (480, 39283), (507, 39349), (511, 39358),

Gene: CentreCat\_33 Start: 26640, Stop: 25126, Start Num: 113

Candidate Starts for CentreCat\_33:

(Start: 84 @26682 has 1 MA's), (Start: 107 @26649 has 19 MA's), (Start: 113 @26640 has 105 MA's), (154, 26478), (Start: 179 @26412 has 1 MA's), (183, 26394), (205, 26319), (210, 26295), (218, 26256), (219, 26253), (240, 26166), (268, 26052), (271, 26040), (311, 25857), (340, 25746), (354, 25695), (396, 25566), (399, 25557), (419, 25482), (421, 25476), (455, 25353), (463, 25314), (521, 25164), (528, 25149),

Gene: Chadwick\_32 Start: 25311, Stop: 23830, Start Num: 116

Candidate Starts for Chadwick\_32:

(88, 25338), (Start: 116 @25311 has 209 MA's), (Start: 131 @25275 has 3 MA's), (Start: 152 @25176 has 1 MA's), (Start: 181 @25092 has 1 MA's), (190, 25050), (198, 25026), (211, 24999), (220, 24960), (229, 24936), (263, 24792), (334, 24498), (347, 24453), (354, 24423), (362, 24399), (371, 24384), (389, 24324), (403, 24273), (404, 24264), (419, 24210), (429, 24177), (447, 24111), (453, 24096), (463, 24048), (500, 23919), (539, 23841),

Gene: Chanagan\_36 Start: 28977, Stop: 30479, Start Num: 116

Candidate Starts for Chanagan\_36:

(Start: 49 @28887 has 1 MA's), (Start: 80 @28932 has 3 MA's), (Start: 116 @28977 has 209 MA's), (Start: 126 @28992 has 8 MA's), (154, 29124), (Start: 179 @29196 has 1 MA's), (Start: 181 @29202 has 1 MA's), (Start: 226 @29352 has 1 MA's), (229, 29361), (230, 29370), (256, 29478), (263, 29499), (265, 29511), (271, 29535), (281, 29577), (307, 29706), (327, 29766), (341, 29823), (349, 29850), (357, 29877), (362, 29892), (386, 29961), (398, 29994), (400, 30000), (408, 30033), (432, 30114), (436, 30129), (461, 30234), (492, 30348), (534, 30447), (544, 30471),

Gene: Chaph\_33 Start: 26648, Stop: 25134, Start Num: 113

Candidate Starts for Chaph\_33:

(Start: 84 @26690 has 1 MA's), (Start: 107 @26657 has 19 MA's), (Start: 113 @26648 has 105 MA's), (154, 26486), (Start: 179 @26420 has 1 MA's), (183, 26402), (205, 26327), (210, 26303), (218, 26264), (219, 26261), (240, 26174), (268, 26060), (271, 26048), (311, 25865), (340, 25754), (354, 25703), (396, 25574), (399, 25565), (419, 25490), (421, 25484), (455, 25361), (463, 25322), (521, 25172), (528, 25157),

Gene: Chargerpower\_35 Start: 26253, Stop: 24691, Start Num: 116



Candidate Starts for Chargerpower\_35:

(Start: 116 @26253 has 209 MA's), (Start: 152 @26118 has 1 MA's), (225, 25890), (262, 25737), (263, 25734), (268, 25710), (273, 25686), (284, 25647), (287, 25629), (310, 25518), (316, 25497), (354, 25365), (356, 25362), (357, 25356), (362, 25341), (368, 25323), (440, 25056), (447, 25029), (459, 24984), (460, 24978), (463, 24966), (480, 24909), (491, 24867), (493, 24855), (498, 24843), (500, 24837), (528, 24786),

Gene: Charm\_33 Start: 26356, Stop: 24809, Start Num: 117

Candidate Starts for Charm\_33:

(58, 26449), (85, 26401), (99, 26380), (Start: 107 @26371 has 19 MA's), (Start: 117 @26356 has 2 MA's), (128, 26326), (184, 26107), (207, 26035), (219, 25969), (221, 25960), (228, 25939), (234, 25909), (252, 25831), (253, 25828), (279, 25723), (286, 25690), (300, 25615), (311, 25573), (321, 25555), (326, 25531), (357, 25414), (369, 25384), (396, 25303), (416, 25231), (419, 25219), (453, 25105), (455, 25090), (472, 25027), (474, 25021), (480, 24994), (493, 24958), (494, 24955), (502, 24937), (525, 24886),

Gene: Chucky\_50 Start: 36208, Stop: 37821, Start Num: 50

Candidate Starts for Chucky\_50:

(Start: 31 @36142 has 7 MA's), (Start: 47 @36199 has 5 MA's), (Start: 50 @36208 has 23 MA's), (Start: 127 @36355 has 3 MA's), (148, 36454), (Start: 152 @36472 has 1 MA's), (166, 36523), (192, 36604), (193, 36607), (216, 36679), (220, 36688), (222, 36691), (252, 36817), (259, 36844), (277, 36913), (289, 36958), (305, 37027), (311, 37054), (328, 37102), (339, 37150), (355, 37189), (363, 37216), (371, 37246), (407, 37369), (423, 37429), (436, 37474), (472, 37603), (484, 37654), (487, 37663), (501, 37702), (511, 37726), (520, 37741), (525, 37756), (530, 37771),

Gene: Chupacabra\_33 Start: 26669, Stop: 25161, Start Num: 116

Candidate Starts for Chupacabra\_33:

(Start: 116 @26669 has 209 MA's), (Start: 127 @26651 has 3 MA's), (128, 26645), (147, 26558), (Start: 152 @26534 has 1 MA's), (204, 26369), (252, 26192), (263, 26153), (265, 26141), (268, 26129), (269, 26126), (272, 26114), (326, 25868), (331, 25847), (371, 25718), (375, 25697), (405, 25604), (412, 25580), (416, 25565), (433, 25508), (438, 25487),

Gene: Ciao\_37 Start: 29363, Stop: 30862, Start Num: 126

Candidate Starts for Ciao\_37:

(Start: 56 @29267 has 26 MA's), (Start: 59 @29273 has 2 MA's), (Start: 62 @29279 has 9 MA's), (Start: 63 @29282 has 9 MA's), (Start: 75 @29297 has 1 MA's), (Start: 116 @29348 has 209 MA's), (Start: 126 @29363 has 8 MA's), (Start: 179 @29567 has 1 MA's), (Start: 181 @29573 has 1 MA's), (184, 29594), (222, 29711), (Start: 226 @29723 has 1 MA's), (229, 29732), (230, 29741), (256, 29849), (263, 29870), (265, 29882), (271, 29906), (281, 29948), (307, 30077), (327, 30137), (341, 30194), (349, 30221), (357, 30248), (358, 30251), (362, 30263), (386, 30332), (398, 30365), (400, 30371), (408, 30404), (432, 30485), (436, 30500), (461, 30605), (492, 30719),

Gene: Cici\_33 Start: 26641, Stop: 25127, Start Num: 113

Candidate Starts for Cici\_33:

(Start: 84 @26683 has 1 MA's), (Start: 107 @26650 has 19 MA's), (Start: 113 @26641 has 105 MA's), (154, 26479), (Start: 179 @26413 has 1 MA's), (183, 26395), (205, 26320), (218, 26257), (219, 26254), (240, 26167), (271, 26041), (311, 25858), (327, 25801), (340, 25747), (354, 25696), (396, 25567), (399, 25558), (419, 25483), (421, 25477), (454, 25363), (455, 25354), (463, 25315), (521, 25165), (528, 25150),

Gene: Cindaradix\_32 Start: 26384, Stop: 24879, Start Num: 107

Candidate Starts for Cindaradix\_32:

(19, 26615), (22, 26597), (23, 26588), (Start: 64 @26441 has 10 MA's), (Start: 107 @26384 has 19 MA's), (Start: 116 @26375 has 209 MA's), (Start: 127 @26357 has 3 MA's), (139, 26300), (143, 26282), (150, 26252), (Start: 152 @26240 has 1 MA's), (190, 26114), (197, 26093), (211, 26063), (220, 26024), (253, 25895), (268, 25835), (282, 25781), (310, 25643), (330, 25580), (380, 25412), (381, 25409), (412, 25286), (419, 25259), (435, 25205), (437, 25196), (493, 24986), (500, 24968), (512, 24956), (517, 24947),

Gene: Cintron\_33 Start: 26703, Stop: 25171, Start Num: 113

Candidate Starts for Cintron\_33:

(Start: 84 @26745 has 1 MA's), (Start: 107 @26712 has 19 MA's), (Start: 113 @26703 has 105 MA's), (154, 26541), (Start: 179 @26475 has 1 MA's), (183, 26457), (205, 26382), (210, 26358), (218, 26319), (219, 26316), (240, 26229), (271, 26103), (273, 26091), (311, 25920), (340, 25809), (354, 25758), (382, 25659), (396, 25611), (399, 25602), (419, 25527), (421, 25521), (455, 25398), (463, 25359), (521, 25209), (528, 25194),

Gene: Citius\_33 Start: 26652, Stop: 25138, Start Num: 113

Candidate Starts for Citius\_33:

(Start: 84 @26694 has 1 MA's), (Start: 107 @26661 has 19 MA's), (Start: 113 @26652 has 105 MA's), (154, 26490), (Start: 179 @26424 has 1 MA's), (183, 26406), (205, 26331), (210, 26307), (218, 26268), (219, 26265), (240, 26178), (268, 26064), (271, 26052), (311, 25869), (340, 25758), (354, 25707), (396, 25578), (399, 25569), (419, 25494), (421, 25488), (455, 25365), (463, 25326), (521, 25176), (528, 25161),

Gene: Clarenza\_33 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for Clarenza\_33:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (240, 26160), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: Cocoaberry\_33 Start: 26641, Stop: 25127, Start Num: 113

Candidate Starts for Cocoaberry\_33:

(Start: 84 @26683 has 1 MA's), (Start: 107 @26650 has 19 MA's), (Start: 113 @26641 has 105 MA's), (154, 26479), (Start: 179 @26413 has 1 MA's), (183, 26395), (205, 26320), (210, 26296), (218, 26257), (219, 26254), (240, 26167), (268, 26053), (271, 26041), (311, 25858), (340, 25747), (354, 25696), (396, 25567), (399, 25558), (419, 25483), (421, 25477), (455, 25354), (463, 25315), (521, 25165), (528, 25150),

Gene: Community\_53 Start: 37437, Stop: 38921, Start Num: 103

Candidate Starts for Community\_53:

(Start: 103 @37437 has 2 MA's), (Start: 110 @37446 has 33 MA's), (212, 37767), (276, 38046), (310, 38220), (371, 38412), (444, 38649), (489, 38811),

Gene: ConceptII\_39 Start: 30495, Stop: 32009, Start Num: 116

Candidate Starts for ConceptII\_39:

(Start: 56 @30414 has 26 MA's), (Start: 59 @30420 has 2 MA's), (Start: 62 @30426 has 9 MA's), (Start: 63 @30429 has 9 MA's), (Start: 75 @30444 has 1 MA's), (Start: 116 @30495 has 209 MA's), (Start: 181 @30720 has 1 MA's), (Start: 226 @30870 has 1 MA's), (229, 30879), (230, 30888), (256, 30996), (263, 31017), (265, 31029), (271, 31053), (281, 31095), (307, 31224), (327, 31284), (341, 31341), (349, 31368), (357, 31395), (362, 31410), (398, 31512), (400, 31518), (408, 31551), (409, 31554), (432, 31632), (436, 31647), (461, 31752), (492, 31866),

Gene: Connomayer\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Connomayer\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Conspiracy\_30 Start: 25686, Stop: 24193, Start Num: 116

Candidate Starts for Conspiracy\_30:

(Start: 116 @25686 has 209 MA's), (Start: 130 @25653 has 1 MA's), (Start: 131 @25650 has 3 MA's), (Start: 134 @25632 has 4 MA's), (Start: 152 @25551 has 1 MA's), (196, 25407), (205, 25380), (222, 25332), (263, 25167), (268, 25143), (269, 25140), (273, 25119), (316, 24930), (371, 24759), (404, 24624), (416, 24582), (419, 24570), (443, 24486), (447, 24471), (453, 24456), (500, 24279), (521, 24249), (535, 24216),

Gene: Coog\_30 Start: 25790, Stop: 24333, Start Num: 131

Candidate Starts for Coog\_30:

(Start: 116 @25826 has 209 MA's), (Start: 130 @25793 has 1 MA's), (Start: 131 @25790 has 3 MA's), (Start: 134 @25772 has 4 MA's), (Start: 152 @25691 has 1 MA's), (196, 25547), (205, 25520), (222, 25472), (263, 25307), (268, 25283), (269, 25280), (273, 25259), (287, 25202), (316, 25070), (357, 24929), (371, 24899), (416, 24722), (419, 24710), (443, 24626), (447, 24611), (453, 24596), (500, 24419), (521, 24389), (535, 24356),

Gene: Corvo\_38 Start: 30261, Stop: 31844, Start Num: 56

Candidate Starts for Corvo\_38:

(Start: 56 @30261 has 26 MA's), (Start: 59 @30267 has 2 MA's), (Start: 62 @30273 has 9 MA's), (Start: 63 @30276 has 9 MA's), (Start: 75 @30291 has 1 MA's), (Start: 116 @30342 has 209 MA's), (Start: 126 @30357 has 8 MA's), (128, 30366), (Start: 179 @30561 has 1 MA's), (Start: 181 @30567 has 1 MA's), (183, 30579), (184, 30588), (Start: 226 @30717 has 1 MA's), (229, 30726), (230, 30735), (256, 30843), (263, 30864), (265, 30876), (271, 30900), (307, 31071), (327, 31131), (341, 31188), (357, 31242), (358, 31245), (362, 31257), (400, 31365), (408, 31398), (419, 31437), (432, 31479), (436, 31494), (492, 31713), (534, 31812), (544, 31836),

Gene: CosmicSans\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for CosmicSans\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (229, 23240), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Crewmate\_55 Start: 36855, Stop: 38273, Start Num: 110

Candidate Starts for Crewmate\_55:

(96, 36837), (108, 36852), (Start: 110 @36855 has 33 MA's), (Start: 116 @36864 has 209 MA's), (147, 36978), (Start: 152 @37002 has 1 MA's), (158, 37023), (Start: 181 @37086 has 1 MA's), (192, 37134), (216, 37197), (222, 37209), (247, 37317), (258, 37359), (271, 37410), (281, 37449), (400, 37854), (422, 37929), (424, 37941), (453, 38034), (473, 38112), (507, 38202),

Gene: Crispicous1\_36 Start: 28941, Stop: 30443, Start Num: 116

Candidate Starts for Crispicous1\_36:

(Start: 56 @28860 has 26 MA's), (Start: 59 @28866 has 2 MA's), (Start: 62 @28872 has 9 MA's), (Start: 63 @28875 has 9 MA's), (Start: 75 @28890 has 1 MA's), (Start: 116 @28941 has 209 MA's),

(Start: 145 @29049 has 1 MA's), (Start: 179 @29160 has 1 MA's), (Start: 181 @29166 has 1 MA's), (194, 29220), (222, 29304), (Start: 226 @29316 has 1 MA's), (229, 29325), (230, 29334), (256, 29442), (263, 29463), (265, 29475), (271, 29499), (281, 29541), (307, 29670), (327, 29730), (341, 29787), (349, 29814), (357, 29841), (358, 29844), (362, 29856), (386, 29925), (398, 29958), (400, 29964), (408, 29997), (432, 30078), (436, 30093), (492, 30312), (534, 30411), (544, 30435),

Gene: Cuco\_30 Start: 25776, Stop: 24283, Start Num: 116

Candidate Starts for Cuco\_30:

(Start: 116 @25776 has 209 MA's), (Start: 130 @25743 has 1 MA's), (Start: 131 @25740 has 3 MA's), (Start: 134 @25722 has 4 MA's), (Start: 152 @25641 has 1 MA's), (196, 25497), (205, 25470), (222, 25422), (263, 25257), (268, 25233), (269, 25230), (273, 25209), (316, 25020), (357, 24879), (371, 24849), (416, 24672), (419, 24660), (443, 24576), (447, 24561), (453, 24546), (500, 24369), (521, 24339), (535, 24306),

Gene: Cueyllyss\_37 Start: 29520, Stop: 31019, Start Num: 116

Candidate Starts for Cueyllyss\_37:

(Start: 80 @29475 has 3 MA's), (Start: 116 @29520 has 209 MA's), (Start: 126 @29535 has 8 MA's), (128, 29544), (154, 29667), (Start: 179 @29739 has 1 MA's), (Start: 181 @29745 has 1 MA's), (194, 29799), (Start: 226 @29895 has 1 MA's), (229, 29904), (230, 29913), (256, 30021), (263, 30042), (265, 30054), (271, 30078), (281, 30120), (307, 30249), (327, 30309), (341, 30366), (349, 30393), (357, 30420), (358, 30423), (362, 30435), (398, 30534), (408, 30573), (432, 30654), (436, 30669), (461, 30774), (492, 30888), (534, 30987), (544, 31011),

Gene: Cyan\_50 Start: 35259, Stop: 36668, Start Num: 116

Candidate Starts for Cyan\_50:

(Start: 116 @35259 has 209 MA's), (147, 35373), (Start: 152 @35397 has 1 MA's), (Start: 181 @35481 has 1 MA's), (216, 35592), (222, 35604), (225, 35613), (247, 35712), (271, 35805), (273, 35817), (328, 36003), (417, 36306), (422, 36324), (424, 36336), (435, 36369), (473, 36507),

Gene: DD5\_38 Start: 30268, Stop: 31770, Start Num: 116

Candidate Starts for DD5\_38:

(Start: 56 @30187 has 26 MA's), (Start: 59 @30193 has 2 MA's), (Start: 62 @30199 has 9 MA's), (Start: 63 @30202 has 9 MA's), (Start: 75 @30217 has 1 MA's), (Start: 116 @30268 has 209 MA's), (Start: 123 @30277 has 2 MA's), (Start: 126 @30283 has 8 MA's), (128, 30292), (Start: 179 @30487 has 1 MA's), (Start: 181 @30493 has 1 MA's), (184, 30514), (222, 30631), (Start: 226 @30643 has 1 MA's), (229, 30652), (230, 30661), (256, 30769), (263, 30790), (265, 30802), (271, 30826), (281, 30868), (307, 30997), (327, 31057), (341, 31114), (357, 31168), (362, 31183), (398, 31285), (400, 31291), (432, 31405), (436, 31420), (492, 31639), (534, 31738), (544, 31762),

Gene: Daishi\_35 Start: 26150, Stop: 24582, Start Num: 113

Candidate Starts for Daishi\_35:

(37, 26300), (43, 26285), (88, 26186), (Start: 113 @26150 has 105 MA's), (184, 25895), (191, 25871), (208, 25811), (218, 25763), (219, 25760), (240, 25673), (245, 25661), (247, 25640), (254, 25616), (271, 25547), (287, 25478), (288, 25469), (311, 25364), (321, 25319), (354, 25187), (381, 25103), (398, 25046), (455, 24839), (495, 24698),

Gene: Danforth\_29 Start: 24993, Stop: 23491, Start Num: 113

Candidate Starts for Danforth\_29:

(69, 25062), (Start: 84 @25035 has 1 MA's), (88, 25029), (Start: 113 @24993 has 105 MA's), (Start: 152 @24843 has 1 MA's), (184, 24738), (205, 24672), (208, 24654), (218, 24612), (219, 24609), (240, 24522), (271, 24396), (290, 24303), (300, 24255), (311, 24213), (328, 24153), (354, 24051), (396, 23916), (416, 23844), (446, 23739), (454, 23712), (455, 23703), (493, 23580), (518, 23532),

Gene: Danzina\_52 Start: 35300, Stop: 36943, Start Num: 31

Candidate Starts for Danzina\_52:

(Start: 31 @35300 has 7 MA's), (Start: 50 @35366 has 23 MA's), (Start: 127 @35486 has 3 MA's), (Start: 145 @35576 has 1 MA's), (Start: 152 @35603 has 1 MA's), (166, 35654), (192, 35735), (193, 35738), (216, 35810), (220, 35819), (222, 35822), (259, 35975), (273, 36032), (274, 36035), (277, 36044), (283, 36068), (300, 36137), (339, 36272), (363, 36338), (368, 36353), (371, 36368), (402, 36467), (407, 36491), (410, 36500), (417, 36524), (436, 36596), (487, 36785), (497, 36815), (501, 36824), (511, 36848), (520, 36863), (525, 36878),

Gene: DARTHPhader\_36 Start: 28430, Stop: 26865, Start Num: 116

Candidate Starts for DARTHPhader\_36:

(Start: 116 @28430 has 209 MA's), (128, 28406), (Start: 152 @28295 has 1 MA's), (154, 28283), (193, 28160), (262, 27911), (268, 27884), (273, 27860), (284, 27821), (287, 27803), (295, 27749), (310, 27692), (339, 27593), (347, 27569), (356, 27536), (357, 27530), (362, 27515), (363, 27509), (368, 27497), (419, 27302), (433, 27257), (447, 27203), (463, 27140), (480, 27083), (491, 27041), (524, 26969), (528, 26960), (536, 26939), (550, 26876),

Gene: Dattran\_52 Start: 35171, Stop: 36814, Start Num: 31

Candidate Starts for Dattran\_52:

(Start: 31 @35171 has 7 MA's), (Start: 50 @35237 has 23 MA's), (Start: 127 @35357 has 3 MA's), (148, 35456), (Start: 152 @35474 has 1 MA's), (166, 35525), (192, 35606), (193, 35609), (216, 35681), (220, 35690), (222, 35693), (273, 35903), (274, 35906), (277, 35915), (339, 36143), (363, 36209), (371, 36239), (402, 36338), (407, 36362), (410, 36371), (417, 36395), (436, 36467), (487, 36656), (497, 36686), (501, 36695), (511, 36719), (520, 36734), (525, 36749),

Gene: Datway\_33 Start: 26665, Stop: 25142, Start Num: 107

Candidate Starts for Datway\_33:

(Start: 84 @26698 has 1 MA's), (Start: 107 @26665 has 19 MA's), (Start: 113 @26656 has 105 MA's), (Start: 130 @26611 has 1 MA's), (154, 26494), (Start: 179 @26428 has 1 MA's), (183, 26410), (205, 26335), (218, 26272), (219, 26269), (240, 26182), (271, 26056), (311, 25873), (327, 25816), (340, 25762), (354, 25711), (396, 25582), (399, 25573), (419, 25498), (421, 25492), (454, 25378), (455, 25369), (463, 25330), (521, 25180), (528, 25165),

Gene: Deano\_33 Start: 26645, Stop: 25131, Start Num: 113

Candidate Starts for Deano\_33:

(Start: 84 @26687 has 1 MA's), (Start: 107 @26654 has 19 MA's), (Start: 113 @26645 has 105 MA's), (154, 26483), (Start: 179 @26417 has 1 MA's), (183, 26399), (205, 26324), (210, 26300), (218, 26261), (219, 26258), (240, 26171), (268, 26057), (271, 26045), (311, 25862), (340, 25751), (354, 25700), (396, 25571), (399, 25562), (419, 25487), (421, 25481), (455, 25358), (463, 25319), (521, 25169), (528, 25154),

Gene: Dexes\_37 Start: 29719, Stop: 31221, Start Num: 116

Candidate Starts for Dexes\_37:

(16, 29482), (18, 29485), (20, 29500), (29, 29563), (Start: 56 @29638 has 26 MA's), (Start: 59 @29644 has 2 MA's), (Start: 62 @29650 has 9 MA's), (Start: 63 @29653 has 9 MA's), (Start: 75 @29668 has 1 MA's), (Start: 116 @29719 has 209 MA's), (Start: 181 @29944 has 1 MA's), (184, 29965), (204, 30028), (Start: 226 @30094 has 1 MA's), (229, 30103), (230, 30112), (256, 30220), (263, 30241), (265, 30253), (271, 30277), (281, 30319), (307, 30448), (327, 30508), (341, 30565), (349, 30592), (357, 30619), (358, 30622), (362, 30634), (398, 30736), (400, 30742), (408, 30775), (432, 30856), (436, 30871), (492, 31090), (534, 31189), (544, 31213),

Gene: Dhanush\_33 Start: 26640, Stop: 25126, Start Num: 113

Candidate Starts for Dhanush\_33:

(Start: 84 @26682 has 1 MA's), (Start: 107 @26649 has 19 MA's), (Start: 113 @26640 has 105 MA's), (154, 26478), (Start: 179 @26412 has 1 MA's), (183, 26394), (205, 26319), (210, 26295), (218, 26256), (219, 26253), (240, 26166), (268, 26052), (271, 26040), (311, 25857), (340, 25746), (354, 25695), (396, 25566), (399, 25557), (419, 25482), (421, 25476), (455, 25353), (463, 25314), (521, 25164), (528, 25149),

Gene: Dinger\_29 Start: 23598, Stop: 22111, Start Num: 116

Candidate Starts for Dinger\_29:

(Start: 116 @23598 has 209 MA's), (Start: 122 @23592 has 3 MA's), (Start: 152 @23463 has 1 MA's), (164, 23415), (229, 23223), (236, 23184), (254, 23112), (269, 23052), (272, 23040), (292, 22947), (296, 22914), (303, 22893), (307, 22875), (310, 22863), (314, 22848), (316, 22842), (331, 22794), (339, 22761), (354, 22704), (371, 22665), (372, 22659), (417, 22509), (457, 22368), (463, 22338), (539, 22122),

Gene: DirtyDunning\_33 Start: 26700, Stop: 25138, Start Num: 64

Candidate Starts for DirtyDunning\_33:

(Start: 64 @26700 has 10 MA's), (Start: 116 @26634 has 209 MA's), (Start: 127 @26616 has 3 MA's), (139, 26559), (143, 26541), (150, 26511), (Start: 152 @26499 has 1 MA's), (190, 26373), (197, 26352), (211, 26322), (220, 26283), (231, 26244), (253, 26154), (268, 26094), (282, 26040), (310, 25902), (380, 25671), (403, 25581), (412, 25545), (419, 25518), (435, 25464), (437, 25455), (493, 25245), (500, 25227), (512, 25215), (517, 25206),

Gene: Discoknowium\_30 Start: 25895, Stop: 24402, Start Num: 116

Candidate Starts for Discoknowium\_30:

(Start: 116 @25895 has 209 MA's), (Start: 130 @25862 has 1 MA's), (Start: 131 @25859 has 3 MA's), (Start: 134 @25841 has 4 MA's), (Start: 152 @25760 has 1 MA's), (196, 25616), (205, 25589), (222, 25541), (263, 25376), (268, 25352), (269, 25349), (273, 25328), (316, 25139), (371, 24968), (404, 24833), (416, 24791), (419, 24779), (443, 24695), (447, 24680), (453, 24665), (500, 24488), (521, 24458), (535, 24425),

Gene: Dixon\_30 Start: 25012, Stop: 23510, Start Num: 113

Candidate Starts for Dixon\_30:

(69, 25081), (Start: 84 @25054 has 1 MA's), (88, 25048), (Start: 113 @25012 has 105 MA's), (Start: 152 @24862 has 1 MA's), (184, 24757), (205, 24691), (208, 24673), (218, 24631), (219, 24628), (240, 24541), (271, 24415), (290, 24322), (300, 24274), (311, 24232), (328, 24172), (354, 24070), (396, 23935), (416, 23863), (446, 23758), (455, 23722), (463, 23683), (493, 23599), (518, 23551),

Gene: Donkey\_43 Start: 31411, Stop: 32850, Start Num: 115

Candidate Starts for Donkey\_43:

(Start: 115 @31411 has 12 MA's), (Start: 145 @31522 has 1 MA's), (148, 31531), (172, 31594), (Start: 179 @31618 has 1 MA's), (182, 31627), (222, 31777), (225, 31786), (261, 31942), (263, 31948), (269, 31975), (284, 32035), (328, 32209), (331, 32224), (368, 32332), (425, 32515), (504, 32779), (512, 32794), (514, 32797),

Gene: DontArgue\_32 Start: 25416, Stop: 23920, Start Num: 116

Candidate Starts for DontArgue\_32:

(70, 25482), (Start: 107 @25425 has 19 MA's), (Start: 116 @25416 has 209 MA's), (Start: 127 @25398 has 3 MA's), (147, 25305), (Start: 152 @25281 has 1 MA's), (Start: 181 @25197 has 1 MA's), (190, 25155), (198, 25131), (211, 25104), (220, 25065), (253, 24936), (268, 24876), (282, 24822), (310, 24684), (402, 24366), (412, 24327), (419, 24300), (431, 24261), (435, 24246), (437, 24237), (490, 24042), (495, 24021), (498, 24015), (500, 24009), (512, 23997), (517, 23988), (521, 23976), (542, 23925),

Gene: Doom\_37 Start: 29713, Stop: 31212, Start Num: 116

Candidate Starts for Doom\_37:

(Start: 56 @29632 has 26 MA's), (Start: 59 @29638 has 2 MA's), (Start: 62 @29644 has 9 MA's), (Start: 63 @29647 has 9 MA's), (Start: 75 @29662 has 1 MA's), (Start: 116 @29713 has 209 MA's), (Start: 126 @29728 has 8 MA's), (Start: 145 @29821 has 1 MA's), (Start: 179 @29932 has 1 MA's), (Start: 181 @29938 has 1 MA's), (184, 29959), (Start: 226 @30088 has 1 MA's), (229, 30097), (230, 30106), (256, 30214), (263, 30235), (265, 30247), (271, 30271), (281, 30313), (307, 30442), (327, 30502), (341, 30559), (349, 30586), (357, 30613), (358, 30616), (362, 30628), (398, 30727), (408, 30766), (409, 30769), (432, 30847), (436, 30862), (492, 31081), (534, 31180), (544, 31204),

Gene: DrFeelGood\_36 Start: 29804, Stop: 31306, Start Num: 116

Candidate Starts for DrFeelGood\_36:

(Start: 56 @29723 has 26 MA's), (Start: 59 @29729 has 2 MA's), (Start: 62 @29735 has 9 MA's), (Start: 63 @29738 has 9 MA's), (Start: 75 @29753 has 1 MA's), (Start: 116 @29804 has 209 MA's), (Start: 145 @29912 has 1 MA's), (Start: 179 @30023 has 1 MA's), (Start: 181 @30029 has 1 MA's), (194, 30083), (222, 30167), (Start: 226 @30179 has 1 MA's), (229, 30188), (230, 30197), (256, 30305), (263, 30326), (265, 30338), (271, 30362), (281, 30404), (307, 30533), (327, 30593), (341, 30650), (349, 30677), (357, 30704), (358, 30707), (362, 30719), (386, 30788), (398, 30821), (400, 30827), (408, 30860), (432, 30941), (436, 30956), (492, 31175), (534, 31274), (544, 31298),

Gene: DrManhattan\_52 Start: 34287, Stop: 35705, Start Num: 110

Candidate Starts for DrManhattan\_52:

(96, 34269), (108, 34284), (Start: 110 @34287 has 33 MA's), (Start: 116 @34296 has 209 MA's), (Start: 127 @34314 has 3 MA's), (Start: 152 @34434 has 1 MA's), (Start: 181 @34518 has 1 MA's), (192, 34566), (216, 34629), (222, 34641), (247, 34749), (271, 34842), (332, 35061), (416, 35340), (422, 35361), (473, 35544),

Gene: DrSierra\_48 Start: 34086, Stop: 35504, Start Num: 110

Candidate Starts for DrSierra\_48:

(96, 34068), (108, 34083), (Start: 110 @34086 has 33 MA's), (Start: 116 @34095 has 209 MA's), (Start: 127 @34113 has 3 MA's), (147, 34209), (Start: 152 @34233 has 1 MA's), (Start: 181 @34317 has 1 MA's), (182, 34320), (192, 34365), (216, 34428), (222, 34440), (225, 34449), (247, 34548), (271, 34641), (281, 34680), (395, 35070), (422, 35160), (424, 35172), (473, 35343),

Gene: Drake94\_32 Start: 23843, Stop: 25489, Start Num: 113

Candidate Starts for Drake94\_32:

(Start: 79 @23795 has 3 MA's), (Start: 102 @23834 has 3 MA's), (Start: 113 @23843 has 105 MA's), (Start: 123 @23861 has 2 MA's), (Start: 130 @23885 has 1 MA's), (Start: 145 @23960 has 1 MA's), (148, 23969), (Start: 152 @23987 has 1 MA's), (Start: 179 @24071 has 1 MA's), (180, 24074), (187, 24110), (220, 24212), (229, 24236), (230, 24245), (252, 24341), (263, 24377), (272, 24416), (273, 24425), (274, 24428), (297, 24545), (304, 24566), (307, 24581), (310, 24593), (326, 24641), (337, 24686), (357, 24758), (370, 24782), (400, 24902), (404, 24920), (405, 24923), (406, 24926), (444, 25061), (492, 25250), (532, 25343), (544, 25373), (546, 25397), (551, 25445), (552, 25463),

Gene: DreamCatcher\_40 Start: 30683, Stop: 32266, Start Num: 56

Candidate Starts for DreamCatcher\_40:

(Start: 56 @30683 has 26 MA's), (Start: 59 @30689 has 2 MA's), (Start: 62 @30695 has 9 MA's), (Start: 63 @30698 has 9 MA's), (Start: 75 @30713 has 1 MA's), (Start: 116 @30764 has 209 MA's), (148, 30881), (Start: 179 @30983 has 1 MA's), (Start: 181 @30989 has 1 MA's), (184, 31010), (222, 31127), (Start: 226 @31139 has 1 MA's), (229, 31148), (230, 31157), (256, 31265), (263, 31286), (265, 31298), (271, 31322), (281, 31364), (307, 31493), (327, 31553), (341, 31610), (349, 31637), (357, 31664), (358, 31667), (362, 31679), (386, 31748), (398, 31781), (400, 31787), (408, 31820), (432, 31901), (436, 31916), (461, 32021), (492, 32135), (534, 32234), (544, 32258),

Gene: DreamTeam1\_33 Start: 26239, Stop: 24692, Start Num: 117

Candidate Starts for DreamTeam1\_33:

(58, 26332), (85, 26284), (99, 26263), (Start: 107 @26254 has 19 MA's), (Start: 117 @26239 has 2 MA's), (128, 26209), (155, 26080), (184, 25990), (207, 25918), (219, 25852), (221, 25843), (228, 25822), (234, 25792), (252, 25714), (253, 25711), (279, 25606), (286, 25573), (300, 25498), (311, 25456), (321, 25438), (326, 25414), (357, 25297), (369, 25267), (396, 25186), (416, 25114), (419, 25102), (453, 24988), (455, 24973), (474, 24904), (493, 24841), (494, 24838), (502, 24820), (525, 24769),

Gene: Dreamboat\_38 Start: 29353, Stop: 30855, Start Num: 116

Candidate Starts for Dreamboat\_38:

(Start: 56 @29272 has 26 MA's), (Start: 59 @29278 has 2 MA's), (Start: 62 @29284 has 9 MA's), (Start: 63 @29287 has 9 MA's), (Start: 75 @29302 has 1 MA's), (Start: 116 @29353 has 209 MA's), (Start: 126 @29368 has 8 MA's), (148, 29470), (Start: 152 @29488 has 1 MA's), (154, 29500), (Start: 179 @29572 has 1 MA's), (Start: 181 @29578 has 1 MA's), (183, 29590), (184, 29599), (222, 29716), (Start: 226 @29728 has 1 MA's), (229, 29737), (230, 29746), (252, 29842), (256, 29854), (263, 29875), (265, 29887), (271, 29911), (281, 29953), (307, 30082), (327, 30142), (341, 30199), (357, 30253), (362, 30268), (398, 30370), (400, 30376), (408, 30409), (409, 30412), (419, 30448), (425, 30475), (436, 30505), (492, 30724), (534, 30823), (544, 30847),

Gene: DroogsArmy\_34 Start: 29062, Stop: 27602, Start Num: 116

Candidate Starts for DroogsArmy\_34:

(35, 29215), (83, 29110), (92, 29095), (Start: 116 @29062 has 209 MA's), (Start: 122 @29056 has 3 MA's), (Start: 127 @29044 has 3 MA's), (128, 29038), (151, 28933), (Start: 152 @28927 has 1 MA's), (161, 28891), (194, 28789), (205, 28756), (216, 28720), (229, 28687), (272, 28507), (304, 28357), (315, 28312), (357, 28168), (374, 28120), (404, 28039), (407, 28027), (409, 28021), (419, 27985), (435, 27931), (443, 27901), (539, 27613),

Gene: Druantia\_33 Start: 26640, Stop: 25126, Start Num: 113

Candidate Starts for Druantia\_33:

(Start: 84 @26682 has 1 MA's), (Start: 107 @26649 has 19 MA's), (Start: 113 @26640 has 105 MA's), (154, 26478), (Start: 179 @26412 has 1 MA's), (183, 26394), (205, 26319), (210, 26295), (218, 26256), (219, 26253), (240, 26166), (268, 26052), (271, 26040), (311, 25857), (340, 25746), (354, 25695), (396, 25566), (399, 25557), (419, 25482), (421, 25476), (455, 25353), (463, 25314), (521, 25164), (528, 25149),

Gene: Dublin\_29 Start: 25745, Stop: 24252, Start Num: 116

Candidate Starts for Dublin\_29:

(Start: 116 @25745 has 209 MA's), (Start: 130 @25712 has 1 MA's), (Start: 131 @25709 has 3 MA's), (Start: 134 @25691 has 4 MA's), (Start: 152 @25610 has 1 MA's), (196, 25466), (205, 25439), (222, 25391), (263, 25226), (268, 25202), (269, 25199), (273, 25178), (287, 25121), (316, 24989), (357, 24848), (371, 24818), (416, 24641), (419, 24629), (443, 24545), (447, 24530), (453, 24515), (500, 24338), (521, 24308), (535, 24275),

Gene: Dulcie\_36 Start: 29273, Stop: 30550, Start Num: 181

Candidate Starts for Dulcie\_36:

(Start: 56 @28967 has 26 MA's), (Start: 59 @28973 has 2 MA's), (Start: 62 @28979 has 9 MA's), (Start: 63 @28982 has 9 MA's), (Start: 75 @28997 has 1 MA's), (Start: 116 @29048 has 209 MA's), (Start: 126 @29063 has 8 MA's), (128, 29072), (Start: 179 @29267 has 1 MA's), (Start: 181 @29273 has 1 MA's), (222, 29411), (Start: 226 @29423 has 1 MA's), (229, 29432), (230, 29441), (256, 29549), (263, 29570), (265, 29582), (271, 29606), (281, 29648), (307, 29777), (327, 29837), (341, 29894), (349, 29921), (357, 29948), (358, 29951), (362, 29963), (400, 30071), (408, 30104), (432, 30185),



(436, 30200), (461, 30305), (463, 30314), (492, 30419), (534, 30518), (544, 30542),

Gene: Dussy\_38 Start: 29615, Stop: 31129, Start Num: 116

Candidate Starts for Dussy\_38:

(Start: 56 @29534 has 26 MA's), (Start: 59 @29540 has 2 MA's), (Start: 62 @29546 has 9 MA's), (Start: 63 @29549 has 9 MA's), (Start: 75 @29564 has 1 MA's), (Start: 116 @29615 has 209 MA's), (124, 29627), (Start: 181 @29840 has 1 MA's), (183, 29852), (184, 29861), (194, 29894), (Start: 226 @29990 has 1 MA's), (229, 29999), (230, 30008), (256, 30116), (263, 30137), (265, 30149), (271, 30173), (281, 30215), (307, 30344), (327, 30404), (341, 30461), (349, 30488), (357, 30515), (358, 30518), (362, 30530), (386, 30599), (400, 30638), (408, 30671), (432, 30752), (436, 30767), (492, 30986),

Gene: DustyMartin\_38 Start: 26956, Stop: 25430, Start Num: 116

Candidate Starts for DustyMartin\_38:

(Start: 106 @26971 has 2 MA's), (Start: 116 @26956 has 209 MA's), (Start: 152 @26821 has 1 MA's), (263, 26440), (269, 26413), (272, 26401), (320, 26161), (331, 26134), (350, 26062), (361, 26023), (375, 25984), (402, 25906), (412, 25867), (416, 25852), (433, 25795), (438, 25774), (461, 25687), (490, 25582), (495, 25561), (498, 25555), (529, 25486),

Gene: Dwayne\_50 Start: 36196, Stop: 37809, Start Num: 50

Candidate Starts for Dwayne\_50:

(Start: 31 @36130 has 7 MA's), (Start: 47 @36187 has 5 MA's), (Start: 50 @36196 has 23 MA's), (Start: 127 @36343 has 3 MA's), (148, 36442), (Start: 152 @36460 has 1 MA's), (166, 36511), (192, 36592), (193, 36595), (216, 36667), (220, 36676), (222, 36679), (252, 36805), (259, 36832), (277, 36901), (289, 36946), (305, 37015), (311, 37042), (328, 37090), (339, 37138), (355, 37177), (363, 37204), (371, 37234), (407, 37357), (423, 37417), (436, 37462), (472, 37591), (484, 37642), (487, 37651), (501, 37690), (511, 37714), (520, 37729), (525, 37744), (530, 37759),

Gene: Dynamix\_38 Start: 29367, Stop: 30950, Start Num: 56

Candidate Starts for Dynamix\_38:

(Start: 56 @29367 has 26 MA's), (Start: 59 @29373 has 2 MA's), (Start: 62 @29379 has 9 MA's), (Start: 63 @29382 has 9 MA's), (Start: 75 @29397 has 1 MA's), (Start: 116 @29448 has 209 MA's), (Start: 126 @29463 has 8 MA's), (Start: 179 @29667 has 1 MA's), (Start: 181 @29673 has 1 MA's), (222, 29811), (Start: 226 @29823 has 1 MA's), (229, 29832), (230, 29841), (231, 29847), (252, 29937), (256, 29949), (265, 29982), (300, 30150), (307, 30177), (327, 30237), (341, 30294), (349, 30321), (357, 30348), (362, 30363), (386, 30432), (400, 30471), (408, 30504), (425, 30570), (436, 30600), (454, 30663), (461, 30705), (465, 30720), (492, 30819), (534, 30918), (544, 30942),

Gene: Eaglepride\_35 Start: 26850, Stop: 25342, Start Num: 116

Candidate Starts for Eaglepride\_35:

(Start: 116 @26850 has 209 MA's), (Start: 122 @26844 has 3 MA's), (128, 26826), (Start: 152 @26715 has 1 MA's), (204, 26550), (252, 26373), (263, 26334), (265, 26322), (268, 26310), (269, 26307), (272, 26295), (320, 26055), (326, 26049), (331, 26028), (343, 25983), (375, 25878), (402, 25800), (405, 25785), (412, 25761), (416, 25746), (433, 25689), (438, 25668), (457, 25602), (495, 25455), (529, 25380),

Gene: Eapen\_33 Start: 26635, Stop: 25121, Start Num: 113

Candidate Starts for Eapen\_33:

(Start: 84 @26677 has 1 MA's), (Start: 107 @26644 has 19 MA's), (Start: 113 @26635 has 105 MA's), (154, 26473), (Start: 179 @26407 has 1 MA's), (183, 26389), (205, 26314), (210, 26290), (218, 26251), (219, 26248), (240, 26161), (268, 26047), (271, 26035), (311, 25852), (340, 25741), (354, 25690), (396, 25561), (399, 25552), (419, 25477), (421, 25471), (455, 25348), (463, 25309), (521, 25159), (528, 25144),

Gene: Edison31\_34 Start: 26880, Stop: 25372, Start Num: 116

Candidate Starts for Edison31\_34:

(Start: 116 @26880 has 209 MA's), (Start: 122 @26874 has 3 MA's), (Start: 127 @26862 has 3 MA's), (128, 26856), (147, 26769), (Start: 152 @26745 has 1 MA's), (204, 26580), (252, 26403), (263, 26364), (265, 26352), (268, 26340), (269, 26337), (272, 26325), (326, 26079), (331, 26058), (375, 25908), (402, 25830), (405, 25815), (412, 25791), (416, 25776), (433, 25719), (438, 25698), (507, 25464),

Gene: Edtherson\_38 Start: 30287, Stop: 31789, Start Num: 116

Candidate Starts for Edtherson\_38:

(Start: 56 @30206 has 26 MA's), (Start: 59 @30212 has 2 MA's), (Start: 62 @30218 has 9 MA's), (Start: 63 @30221 has 9 MA's), (Start: 75 @30236 has 1 MA's), (Start: 116 @30287 has 209 MA's), (Start: 126 @30302 has 8 MA's), (Start: 179 @30506 has 1 MA's), (Start: 181 @30512 has 1 MA's), (184, 30533), (Start: 226 @30662 has 1 MA's), (229, 30671), (230, 30680), (256, 30788), (263, 30809), (265, 30821), (271, 30845), (281, 30887), (307, 31016), (327, 31076), (341, 31133), (349, 31160), (357, 31187), (362, 31202), (386, 31271), (400, 31310), (408, 31343), (432, 31424), (436, 31439), (461, 31544), (492, 31658), (534, 31757), (544, 31781),

Gene: Ejemplo\_49 Start: 36125, Stop: 37747, Start Num: 47

Candidate Starts for Ejemplo\_49:

(Start: 31 @36068 has 7 MA's), (Start: 47 @36125 has 5 MA's), (Start: 50 @36134 has 23 MA's), (Start: 127 @36281 has 3 MA's), (148, 36380), (Start: 152 @36398 has 1 MA's), (166, 36449), (192, 36530), (193, 36533), (216, 36605), (220, 36614), (222, 36617), (252, 36743), (259, 36770), (277, 36839), (289, 36884), (305, 36953), (311, 36980), (328, 37028), (339, 37076), (355, 37115), (371, 37172), (407, 37295), (423, 37355), (436, 37400), (472, 37529), (484, 37580), (487, 37589), (501, 37628), (511, 37652), (520, 37667), (525, 37682), (530, 37697),

Gene: EITiger69\_31 Start: 25415, Stop: 23934, Start Num: 116

Candidate Starts for EITiger69\_31:

(88, 25442), (Start: 116 @25415 has 209 MA's), (Start: 131 @25379 has 3 MA's), (Start: 152 @25280 has 1 MA's), (161, 25244), (Start: 181 @25196 has 1 MA's), (190, 25154), (198, 25130), (211, 25103), (220, 25064), (229, 25040), (231, 25025), (263, 24896), (334, 24602), (338, 24584), (347, 24557), (354, 24527), (362, 24503), (371, 24488), (389, 24428), (403, 24377), (404, 24368), (419, 24314), (429, 24281), (447, 24215), (463, 24152), (500, 24023), (539, 23945),

Gene: Elezi\_48 Start: 35958, Stop: 37379, Start Num: 110

Candidate Starts for Elezi\_48:

(96, 35940), (108, 35955), (Start: 110 @35958 has 33 MA's), (Start: 116 @35967 has 209 MA's), (147, 36081), (Start: 152 @36105 has 1 MA's), (Start: 181 @36189 has 1 MA's), (187, 36222), (192, 36237), (216, 36300), (222, 36312), (225, 36321), (247, 36420), (258, 36462), (271, 36513), (281, 36552), (304, 36630), (310, 36657), (417, 37017), (419, 37026), (422, 37035), (424, 37047), (473, 37218), (505, 37305),

Gene: Emaanora\_53 Start: 36119, Stop: 37732, Start Num: 50

Candidate Starts for Emaanora\_53:

(Start: 31 @36053 has 7 MA's), (Start: 47 @36110 has 5 MA's), (Start: 50 @36119 has 23 MA's), (Start: 127 @36266 has 3 MA's), (148, 36365), (Start: 152 @36383 has 1 MA's), (166, 36434), (192, 36515), (193, 36518), (216, 36590), (220, 36599), (222, 36602), (252, 36728), (259, 36755), (277, 36824), (289, 36869), (305, 36938), (311, 36965), (328, 37013), (339, 37061), (355, 37100), (363, 37127), (371, 37157), (407, 37280), (423, 37340), (436, 37385), (472, 37514), (484, 37565), (487, 37574), (501, 37613), (511, 37637), (520, 37652), (525, 37667), (530, 37682),

Gene: Eraser\_48 Start: 35968, Stop: 37389, Start Num: 110

Candidate Starts for Eraser\_48:

(96, 35950), (108, 35965), (Start: 110 @35968 has 33 MA's), (Start: 116 @35977 has 209 MA's), (147, 36091), (Start: 152 @36115 has 1 MA's), (Start: 181 @36199 has 1 MA's), (187, 36232), (192, 36247), (216, 36310), (222, 36322), (225, 36331), (247, 36430), (258, 36472), (271, 36523), (281, 36562), (304, 36640), (310, 36667), (417, 37027), (419, 37036), (422, 37045), (424, 37057), (473, 37228), (505, 37315),

Gene: Erik\_29 Start: 23479, Stop: 22139, Start Num: 152

Candidate Starts for Erik\_29:

(Start: 152 @23479 has 1 MA's), (164, 23431), (229, 23239), (254, 23128), (269, 23068), (272, 23056), (286, 22993), (292, 22963), (296, 22930), (303, 22909), (310, 22879), (314, 22864), (316, 22858), (331, 22810), (339, 22777), (354, 22720), (371, 22681), (372, 22675), (403, 22579), (411, 22546), (417, 22525), (419, 22516), (463, 22354),

Gene: Eris\_32 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Eris\_32:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Eros\_33 Start: 26648, Stop: 25125, Start Num: 107

Candidate Starts for Eros\_33:

(Start: 84 @26681 has 1 MA's), (Start: 107 @26648 has 19 MA's), (Start: 113 @26639 has 105 MA's), (154, 26477), (Start: 179 @26411 has 1 MA's), (183, 26393), (205, 26318), (210, 26294), (218, 26255), (219, 26252), (240, 26165), (268, 26051), (271, 26039), (311, 25856), (340, 25745), (354, 25694), (396, 25565), (399, 25556), (419, 25481), (421, 25475), (455, 25352), (463, 25313), (521, 25163), (528, 25148),

Gene: Espica\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Espica\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (193, 23345), (229, 23240), (254, 23129), (262, 23099), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Espresso\_37 Start: 29637, Stop: 31136, Start Num: 116

Candidate Starts for Espresso\_37:

(Start: 56 @29556 has 26 MA's), (Start: 59 @29562 has 2 MA's), (Start: 62 @29568 has 9 MA's), (Start: 63 @29571 has 9 MA's), (Start: 75 @29586 has 1 MA's), (Start: 116 @29637 has 209 MA's), (Start: 126 @29652 has 8 MA's), (128, 29661), (Start: 181 @29862 has 1 MA's), (183, 29874), (Start: 226 @30012 has 1 MA's), (229, 30021), (230, 30030), (231, 30036), (256, 30138), (263, 30159), (265, 30171), (271, 30195), (307, 30366), (327, 30426), (341, 30483), (357, 30537), (358, 30540), (362, 30552), (408, 30690), (419, 30729), (425, 30756), (436, 30786), (461, 30891), (492, 31005), (534, 31104), (544, 31128),

Gene: Euphoria\_37 Start: 29484, Stop: 30986, Start Num: 116

Candidate Starts for Euphoria\_37:

(Start: 56 @29403 has 26 MA's), (Start: 59 @29409 has 2 MA's), (Start: 62 @29415 has 9 MA's), (Start: 63 @29418 has 9 MA's), (Start: 75 @29433 has 1 MA's), (Start: 116 @29484 has 209 MA's), (Start: 126 @29499 has 8 MA's), (Start: 179 @29703 has 1 MA's), (Start: 181 @29709 has 1 MA's),

(Start: 226 @29859 has 1 MA's), (229, 29868), (230, 29877), (256, 29985), (263, 30006), (265, 30018), (271, 30042), (281, 30084), (307, 30213), (327, 30273), (341, 30330), (349, 30357), (357, 30384), (358, 30387), (362, 30399), (400, 30507), (408, 30540), (432, 30621), (436, 30636), (461, 30741), (492, 30855), (495, 30867), (534, 30954), (544, 30978),

Gene: Euratis\_57 Start: 38667, Stop: 40322, Start Num: 77

Candidate Starts for Euratis\_57:

(Start: 77 @38667 has 1 MA's), (Start: 105 @38712 has 3 MA's), (111, 38721), (118, 38733), (Start: 129 @38763 has 3 MA's), (180, 38949), (Start: 181 @38952 has 1 MA's), (187, 38985), (190, 38994), (203, 39033), (217, 39099), (222, 39111), (236, 39171), (242, 39189), (244, 39198), (252, 39240), (274, 39327), (313, 39525), (315, 39537), (319, 39555), (326, 39582), (337, 39627), (340, 39639), (351, 39693), (357, 39705), (371, 39735), (398, 39834), (414, 39894), (438, 39978), (471, 40095), (473, 40101), (489, 40167), (519, 40245), (523, 40257),

Gene: Expelliarmus\_29 Start: 24979, Stop: 23477, Start Num: 113

Candidate Starts for Expelliarmus\_29:

(69, 25048), (Start: 84 @25021 has 1 MA's), (88, 25015), (Start: 113 @24979 has 105 MA's), (Start: 152 @24829 has 1 MA's), (184, 24724), (205, 24658), (208, 24640), (218, 24598), (219, 24595), (240, 24508), (247, 24475), (271, 24382), (290, 24289), (300, 24241), (311, 24199), (328, 24139), (354, 24037), (396, 23902), (416, 23830), (446, 23725), (454, 23698), (455, 23689), (493, 23566), (505, 23536), (518, 23518),

Gene: Eyeball\_37 Start: 29191, Stop: 30690, Start Num: 116

Candidate Starts for Eyeball\_37:

(Start: 56 @29110 has 26 MA's), (Start: 59 @29116 has 2 MA's), (Start: 62 @29122 has 9 MA's), (Start: 63 @29125 has 9 MA's), (Start: 75 @29140 has 1 MA's), (Start: 116 @29191 has 209 MA's), (Start: 179 @29410 has 1 MA's), (Start: 181 @29416 has 1 MA's), (184, 29437), (Start: 226 @29566 has 1 MA's), (229, 29575), (230, 29584), (256, 29692), (263, 29713), (265, 29725), (271, 29749), (281, 29791), (307, 29920), (327, 29980), (341, 30037), (349, 30064), (357, 30091), (358, 30094), (362, 30106), (398, 30205), (408, 30244), (432, 30325), (436, 30340), (461, 30445), (492, 30559), (534, 30658), (544, 30682),

Gene: Fajezeel\_39 Start: 29706, Stop: 31220, Start Num: 116

Candidate Starts for Fajezeel\_39:

(Start: 56 @29625 has 26 MA's), (Start: 59 @29631 has 2 MA's), (Start: 62 @29637 has 9 MA's), (Start: 63 @29640 has 9 MA's), (Start: 75 @29655 has 1 MA's), (Start: 116 @29706 has 209 MA's), (Start: 126 @29721 has 8 MA's), (Start: 179 @29925 has 1 MA's), (Start: 181 @29931 has 1 MA's), (184, 29952), (222, 30069), (Start: 226 @30081 has 1 MA's), (229, 30090), (230, 30099), (256, 30207), (263, 30228), (265, 30240), (271, 30264), (281, 30306), (307, 30435), (327, 30495), (341, 30552), (349, 30579), (357, 30606), (358, 30609), (362, 30621), (386, 30690), (398, 30723), (400, 30729), (408, 30762), (432, 30843), (436, 30858), (461, 30963), (492, 31077),

Gene: Fascinus\_36 Start: 28964, Stop: 30466, Start Num: 116

Candidate Starts for Fascinus\_36:

(46, 28859), (Start: 49 @28871 has 1 MA's), (Start: 56 @28883 has 26 MA's), (Start: 59 @28889 has 2 MA's), (Start: 62 @28895 has 9 MA's), (Start: 63 @28898 has 9 MA's), (Start: 75 @28913 has 1 MA's), (Start: 116 @28964 has 209 MA's), (Start: 179 @29183 has 1 MA's), (Start: 181 @29189 has 1 MA's), (184, 29210), (Start: 226 @29339 has 1 MA's), (229, 29348), (230, 29357), (256, 29465), (263, 29486), (265, 29498), (271, 29522), (281, 29564), (307, 29693), (327, 29753), (341, 29810), (349, 29837), (357, 29864), (358, 29867), (362, 29879), (386, 29948), (400, 29987), (408, 30020), (432, 30101), (436, 30116), (461, 30221), (492, 30335), (534, 30434), (544, 30458),

Gene: FatCactus\_32 Start: 25084, Stop: 23525, Start Num: 113

Candidate Starts for FatCactus\_32:

(38, 25234), (40, 25231), (111, 25087), (Start: 113 @25084 has 105 MA's), (Start: 130 @25039 has 1 MA's), (Start: 152 @24934 has 1 MA's), (205, 24763), (207, 24757), (219, 24691), (221, 24682), (228, 24661), (247, 24571), (254, 24547), (258, 24529), (265, 24502), (279, 24445), (286, 24412), (290, 24385), (291, 24379), (302, 24331), (303, 24328), (318, 24280), (322, 24274), (326, 24253), (357, 24136), (369, 24106), (396, 24022), (422, 23929), (429, 23905), (455, 23809), (488, 23695), (493, 23677), (505, 23647), (509, 23638), (518, 23623), (537, 23569), (544, 23554),

Gene: Fenn\_38 Start: 31030, Stop: 32544, Start Num: 116

Candidate Starts for Fenn\_38:

(Start: 56 @30949 has 26 MA's), (Start: 59 @30955 has 2 MA's), (Start: 62 @30961 has 9 MA's), (Start: 63 @30964 has 9 MA's), (Start: 75 @30979 has 1 MA's), (Start: 116 @31030 has 209 MA's), (Start: 181 @31255 has 1 MA's), (184, 31276), (222, 31393), (Start: 226 @31405 has 1 MA's), (229, 31414), (230, 31423), (256, 31531), (263, 31552), (265, 31564), (271, 31588), (281, 31630), (307, 31759), (327, 31819), (341, 31876), (357, 31930), (362, 31945), (400, 32053), (408, 32086), (409, 32089), (432, 32167), (436, 32182), (437, 32188), (492, 32401), (495, 32413),

Gene: Floof\_64 Start: 39661, Stop: 41214, Start Num: 81

Candidate Starts for Floof\_64:

(71, 39643), (Start: 81 @39661 has 2 MA's), (Start: 90 @39679 has 1 MA's), (Start: 134 @39766 has 4 MA's), (Start: 145 @39820 has 1 MA's), (165, 39886), (172, 39892), (183, 39934), (229, 40114), (233, 40138), (281, 40336), (284, 40348), (332, 40603), (393, 40783), (401, 40807), (404, 40819), (444, 40963), (452, 40987), (480, 41098),

Gene: Florean\_33 Start: 26636, Stop: 25122, Start Num: 113

Candidate Starts for Florean\_33:

(Start: 84 @26678 has 1 MA's), (Start: 107 @26645 has 19 MA's), (Start: 113 @26636 has 105 MA's), (154, 26474), (Start: 179 @26408 has 1 MA's), (183, 26390), (205, 26315), (210, 26291), (218, 26252), (219, 26249), (240, 26162), (268, 26048), (271, 26036), (311, 25853), (340, 25742), (354, 25691), (396, 25562), (399, 25553), (419, 25478), (421, 25472), (455, 25349), (463, 25310), (521, 25160), (528, 25145),

Gene: Flux\_33 Start: 26681, Stop: 25125, Start Num: 84

Candidate Starts for Flux\_33:

(Start: 84 @26681 has 1 MA's), (Start: 107 @26648 has 19 MA's), (Start: 113 @26639 has 105 MA's), (154, 26477), (Start: 179 @26411 has 1 MA's), (183, 26393), (205, 26318), (210, 26294), (218, 26255), (219, 26252), (240, 26165), (268, 26051), (271, 26039), (311, 25856), (340, 25745), (354, 25694), (396, 25565), (399, 25556), (419, 25481), (421, 25475), (455, 25352), (463, 25313), (521, 25163), (528, 25148),

Gene: FlyCatcher\_36 Start: 28870, Stop: 27362, Start Num: 116

Candidate Starts for FlyCatcher\_36:

(Start: 106 @28885 has 2 MA's), (Start: 116 @28870 has 209 MA's), (154, 28723), (204, 28570), (225, 28510), (252, 28393), (263, 28354), (268, 28330), (269, 28327), (272, 28315), (293, 28180), (326, 28069), (331, 28048), (336, 28027), (361, 27937), (374, 27901), (375, 27898), (398, 27832), (404, 27808), (412, 27781), (416, 27766), (419, 27754), (429, 27721), (438, 27688), (490, 27496), (495, 27475), (507, 27454), (529, 27400),

Gene: ForGetIt\_30 Start: 25711, Stop: 24218, Start Num: 116

Candidate Starts for ForGetIt\_30:

(Start: 116 @25711 has 209 MA's), (Start: 130 @25678 has 1 MA's), (Start: 131 @25675 has 3 MA's), (Start: 134 @25657 has 4 MA's), (Start: 152 @25576 has 1 MA's), (196, 25432), (205, 25405), (222, 25357), (263, 25192), (268, 25168), (269, 25165), (273, 25144), (316, 24955), (371, 24784), (404,

24649), (416, 24607), (419, 24595), (443, 24511), (447, 24496), (453, 24481), (500, 24304), (521, 24274), (535, 24241),

Gene: Forsytheast\_37 Start: 29539, Stop: 31122, Start Num: 56

Candidate Starts for Forsytheast\_37:

(Start: 56 @29539 has 26 MA's), (Start: 59 @29545 has 2 MA's), (Start: 62 @29551 has 9 MA's), (Start: 63 @29554 has 9 MA's), (Start: 75 @29569 has 1 MA's), (Start: 116 @29620 has 209 MA's), (Start: 126 @29635 has 8 MA's), (128, 29644), (Start: 179 @29839 has 1 MA's), (Start: 181 @29845 has 1 MA's), (183, 29857), (184, 29866), (Start: 226 @29995 has 1 MA's), (229, 30004), (230, 30013), (256, 30121), (263, 30142), (265, 30154), (271, 30178), (307, 30349), (327, 30409), (341, 30466), (357, 30520), (358, 30523), (362, 30535), (400, 30643), (408, 30676), (419, 30715), (432, 30757), (436, 30772), (492, 30991), (534, 31090), (544, 31114),

Gene: Francis47\_37 Start: 30069, Stop: 31553, Start Num: 126

Candidate Starts for Francis47\_37:

(Start: 56 @29973 has 26 MA's), (Start: 59 @29979 has 2 MA's), (Start: 62 @29985 has 9 MA's), (Start: 63 @29988 has 9 MA's), (Start: 75 @30003 has 1 MA's), (Start: 116 @30054 has 209 MA's), (Start: 126 @30069 has 8 MA's), (Start: 179 @30273 has 1 MA's), (Start: 181 @30279 has 1 MA's), (184, 30300), (Start: 226 @30429 has 1 MA's), (229, 30438), (230, 30447), (256, 30555), (263, 30576), (265, 30588), (271, 30612), (307, 30783), (327, 30843), (341, 30900), (349, 30927), (357, 30954), (358, 30957), (362, 30969), (398, 31068), (408, 31107), (409, 31110), (432, 31188), (436, 31203), (492, 31422), (534, 31521), (544, 31545),

Gene: Froghopper\_37 Start: 28895, Stop: 30478, Start Num: 56

Candidate Starts for Froghopper\_37:

(Start: 56 @28895 has 26 MA's), (Start: 59 @28901 has 2 MA's), (Start: 62 @28907 has 9 MA's), (Start: 63 @28910 has 9 MA's), (Start: 75 @28925 has 1 MA's), (Start: 116 @28976 has 209 MA's), (Start: 181 @29201 has 1 MA's), (Start: 226 @29351 has 1 MA's), (229, 29360), (230, 29369), (256, 29477), (263, 29498), (265, 29510), (271, 29534), (307, 29705), (327, 29765), (341, 29822), (357, 29876), (358, 29879), (362, 29891), (386, 29960), (400, 29999), (408, 30032), (432, 30113), (436, 30128), (461, 30233), (492, 30347), (495, 30359), (534, 30446), (544, 30470),

Gene: Funston\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Funston\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: GMonster\_36 Start: 28801, Stop: 30288, Start Num: 126

Candidate Starts for GMonster\_36:

(Start: 56 @28705 has 26 MA's), (Start: 59 @28711 has 2 MA's), (Start: 62 @28717 has 9 MA's), (Start: 63 @28720 has 9 MA's), (Start: 75 @28735 has 1 MA's), (Start: 116 @28786 has 209 MA's), (Start: 123 @28795 has 2 MA's), (Start: 126 @28801 has 8 MA's), (128, 28810), (Start: 179 @29005 has 1 MA's), (Start: 181 @29011 has 1 MA's), (184, 29032), (Start: 226 @29161 has 1 MA's), (229, 29170), (230, 29179), (256, 29287), (263, 29308), (265, 29320), (271, 29344), (307, 29515), (327, 29575), (341, 29632), (349, 29659), (357, 29686), (358, 29689), (362, 29701), (400, 29809), (408, 29842), (432, 29923), (436, 29938), (461, 30043), (492, 30157), (495, 30169), (534, 30256), (544, 30280),

Gene: Gadost\_33 Start: 26641, Stop: 25127, Start Num: 113

Candidate Starts for Gadost\_33:

(Start: 84 @26683 has 1 MA's), (Start: 107 @26650 has 19 MA's), (Start: 113 @26641 has 105 MA's), (154, 26479), (Start: 179 @26413 has 1 MA's), (183, 26395), (205, 26320), (210, 26296), (218, 26257), (219, 26254), (240, 26167), (268, 26053), (271, 26041), (311, 25858), (340, 25747), (354, 25696), (396, 25567), (399, 25558), (419, 25483), (421, 25477), (455, 25354), (463, 25315), (521, 25165), (528, 25150),

Gene: GageAP\_39 Start: 29769, Stop: 31271, Start Num: 116

Candidate Starts for GageAP\_39:

(39, 29655), (Start: 56 @29688 has 26 MA's), (Start: 59 @29694 has 2 MA's), (Start: 62 @29700 has 9 MA's), (Start: 63 @29703 has 9 MA's), (Start: 75 @29718 has 1 MA's), (Start: 116 @29769 has 209 MA's), (Start: 179 @29988 has 1 MA's), (Start: 181 @29994 has 1 MA's), (184, 30015), (Start: 226 @30144 has 1 MA's), (229, 30153), (230, 30162), (256, 30270), (263, 30291), (265, 30303), (271, 30327), (281, 30369), (307, 30498), (327, 30558), (341, 30615), (349, 30642), (357, 30669), (358, 30672), (362, 30684), (386, 30753), (400, 30792), (408, 30825), (432, 30906), (436, 30921), (492, 31140), (495, 31152), (534, 31239), (544, 31263),

Gene: Gambol\_44 Start: 31430, Stop: 32869, Start Num: 115

Candidate Starts for Gambol\_44:

(Start: 115 @31430 has 12 MA's), (Start: 145 @31541 has 1 MA's), (148, 31550), (172, 31613), (Start: 179 @31637 has 1 MA's), (182, 31646), (222, 31796), (225, 31805), (261, 31961), (263, 31967), (269, 31994), (284, 32054), (328, 32228), (331, 32243), (368, 32351), (425, 32534), (504, 32798), (512, 32813), (514, 32816),

Gene: Gandalf20\_38 Start: 30239, Stop: 31741, Start Num: 116

Candidate Starts for Gandalf20\_38:

(Start: 56 @30158 has 26 MA's), (Start: 59 @30164 has 2 MA's), (Start: 62 @30170 has 9 MA's), (Start: 63 @30173 has 9 MA's), (Start: 75 @30188 has 1 MA's), (Start: 116 @30239 has 209 MA's), (124, 30251), (Start: 181 @30464 has 1 MA's), (183, 30476), (184, 30485), (194, 30518), (Start: 226 @30614 has 1 MA's), (229, 30623), (230, 30632), (256, 30740), (263, 30761), (265, 30773), (271, 30797), (281, 30839), (307, 30968), (327, 31028), (341, 31085), (349, 31112), (357, 31139), (358, 31142), (362, 31154), (386, 31223), (398, 31256), (400, 31262), (408, 31295), (432, 31376), (436, 31391), (461, 31496), (492, 31610), (534, 31709), (544, 31733),

Gene: GardenState\_58 Start: 37501, Stop: 38922, Start Num: 104

Candidate Starts for GardenState\_58:

(Start: 104 @37501 has 2 MA's), (222, 37861), (269, 38053), (271, 38062), (300, 38167), (371, 38401), (382, 38440), (444, 38641), (452, 38665), (456, 38686), (494, 38812), (533, 38899),

Gene: George\_29 Start: 25777, Stop: 24284, Start Num: 116

Candidate Starts for George\_29:

(Start: 116 @25777 has 209 MA's), (Start: 130 @25744 has 1 MA's), (Start: 131 @25741 has 3 MA's), (Start: 134 @25723 has 4 MA's), (Start: 152 @25642 has 1 MA's), (196, 25498), (205, 25471), (222, 25423), (263, 25258), (268, 25234), (269, 25231), (273, 25210), (316, 25021), (357, 24880), (371, 24850), (416, 24673), (419, 24661), (443, 24577), (447, 24562), (453, 24547), (500, 24370), (521, 24340), (535, 24307),

Gene: Ghouboy\_30 Start: 25972, Stop: 24533, Start Num: 134

Candidate Starts for Ghouboy\_30:

(Start: 116 @26026 has 209 MA's), (Start: 130 @25993 has 1 MA's), (Start: 131 @25990 has 3 MA's), (Start: 134 @25972 has 4 MA's), (Start: 152 @25891 has 1 MA's), (188, 25771), (196, 25747), (205, 25720), (222, 25672), (263, 25507), (268, 25483), (269, 25480), (273, 25459), (287, 25402), (316, 25270), (357, 25129), (371, 25099), (404, 24964), (416, 24922), (419, 24910), (443, 24826), (447, 24811), (453, 24796), (500, 24619), (521, 24589),

Gene: Giorgio\_44 Start: 31348, Stop: 32787, Start Num: 115

Candidate Starts for Giorgio\_44:

(Start: 115 @31348 has 12 MA's), (Start: 145 @31459 has 1 MA's), (148, 31468), (172, 31531), (Start: 179 @31555 has 1 MA's), (182, 31564), (222, 31714), (225, 31723), (261, 31879), (263, 31885), (269, 31912), (328, 32146), (331, 32161), (368, 32269), (450, 32539), (504, 32716), (512, 32731), (514, 32734),

Gene: Goby\_50 Start: 35136, Stop: 36713, Start Num: 50

Candidate Starts for Goby\_50:

(Start: 31 @35070 has 7 MA's), (Start: 50 @35136 has 23 MA's), (Start: 127 @35256 has 3 MA's), (148, 35355), (Start: 152 @35373 has 1 MA's), (166, 35424), (192, 35505), (193, 35508), (216, 35580), (220, 35589), (222, 35592), (273, 35802), (274, 35805), (277, 35814), (339, 36042), (363, 36108), (371, 36138), (402, 36237), (407, 36261), (410, 36270), (417, 36294), (436, 36366), (487, 36555), (497, 36585), (501, 36594), (511, 36618), (520, 36633), (525, 36648),

Gene: Godpower\_51 Start: 35115, Stop: 36692, Start Num: 50

Candidate Starts for Godpower\_51:

(Start: 31 @35049 has 7 MA's), (Start: 50 @35115 has 23 MA's), (Start: 127 @35235 has 3 MA's), (148, 35334), (Start: 152 @35352 has 1 MA's), (166, 35403), (192, 35484), (193, 35487), (216, 35559), (220, 35568), (222, 35571), (259, 35724), (273, 35781), (274, 35784), (277, 35793), (339, 36021), (363, 36087), (371, 36117), (402, 36216), (407, 36240), (410, 36249), (417, 36273), (436, 36345), (487, 36534), (501, 36573), (511, 36597), (520, 36612), (525, 36627),

Gene: Gollum\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Gollum\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (229, 23240), (236, 23201), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Gompeii16\_37 Start: 29884, Stop: 31383, Start Num: 116

Candidate Starts for Gompeii16\_37:

(Start: 56 @29803 has 26 MA's), (Start: 59 @29809 has 2 MA's), (Start: 62 @29815 has 9 MA's), (Start: 63 @29818 has 9 MA's), (Start: 75 @29833 has 1 MA's), (Start: 116 @29884 has 209 MA's), (Start: 126 @29899 has 8 MA's), (128, 29908), (Start: 179 @30103 has 1 MA's), (Start: 181 @30109 has 1 MA's), (184, 30130), (Start: 226 @30259 has 1 MA's), (229, 30268), (230, 30277), (256, 30385), (263, 30406), (265, 30418), (271, 30442), (307, 30613), (327, 30673), (341, 30730), (349, 30757), (357, 30784), (358, 30787), (362, 30799), (398, 30898), (408, 30937), (409, 30940), (432, 31018), (436, 31033), (492, 31252), (534, 31351), (544, 31375),

Gene: Graduation\_39 Start: 30062, Stop: 31606, Start Num: 80

Candidate Starts for Graduation\_39:

(Start: 80 @30062 has 3 MA's), (Start: 116 @30107 has 209 MA's), (Start: 126 @30122 has 8 MA's), (128, 30131), (154, 30254), (Start: 179 @30326 has 1 MA's), (Start: 181 @30332 has 1 MA's), (194, 30386), (Start: 226 @30482 has 1 MA's), (229, 30491), (230, 30500), (256, 30608), (263, 30629), (265, 30641), (271, 30665), (281, 30707), (307, 30836), (327, 30896), (341, 30953), (349, 30980), (357, 31007), (358, 31010), (362, 31022), (398, 31121), (408, 31160), (432, 31241), (436, 31256), (461, 31361), (492, 31475), (495, 31487), (534, 31574), (544, 31598),

Gene: GrecoEtereo\_39 Start: 30180, Stop: 31682, Start Num: 116

Candidate Starts for GrecoEtereo\_39:



(Start: 56 @30099 has 26 MA's), (Start: 59 @30105 has 2 MA's), (Start: 62 @30111 has 9 MA's), (Start: 63 @30114 has 9 MA's), (Start: 75 @30129 has 1 MA's), (Start: 116 @30180 has 209 MA's), (Start: 126 @30195 has 8 MA's), (Start: 181 @30405 has 1 MA's), (Start: 226 @30555 has 1 MA's), (229, 30564), (230, 30573), (256, 30681), (263, 30702), (265, 30714), (271, 30738), (281, 30780), (307, 30909), (327, 30969), (341, 31026), (357, 31080), (362, 31095), (386, 31164), (398, 31197), (400, 31203), (408, 31236), (409, 31239), (432, 31317), (436, 31332), (461, 31437), (492, 31551), (534, 31650), (544, 31674),

Gene: Greg\_39 Start: 29706, Stop: 31220, Start Num: 116

Candidate Starts for Greg\_39:

(Start: 56 @29625 has 26 MA's), (Start: 59 @29631 has 2 MA's), (Start: 62 @29637 has 9 MA's), (Start: 63 @29640 has 9 MA's), (Start: 75 @29655 has 1 MA's), (Start: 116 @29706 has 209 MA's), (Start: 126 @29721 has 8 MA's), (Start: 179 @29925 has 1 MA's), (Start: 181 @29931 has 1 MA's), (184, 29952), (222, 30069), (Start: 226 @30081 has 1 MA's), (229, 30090), (230, 30099), (256, 30207), (263, 30228), (265, 30240), (271, 30264), (281, 30306), (307, 30435), (327, 30495), (341, 30552), (349, 30579), (357, 30606), (358, 30609), (362, 30621), (386, 30690), (398, 30723), (400, 30729), (408, 30762), (432, 30843), (436, 30858), (461, 30963), (492, 31077),

Gene: Groundhog\_29 Start: 24980, Stop: 23478, Start Num: 113

Candidate Starts for Groundhog\_29:

(69, 25052), (Start: 84 @25022 has 1 MA's), (88, 25016), (Start: 113 @24980 has 105 MA's), (Start: 152 @24830 has 1 MA's), (184, 24725), (205, 24659), (208, 24641), (218, 24599), (219, 24596), (240, 24509), (271, 24383), (290, 24290), (300, 24242), (311, 24200), (328, 24140), (354, 24038), (396, 23903), (416, 23831), (446, 23726), (454, 23699), (455, 23690), (493, 23567), (518, 23519),

Gene: Gumpizza\_44 Start: 31304, Stop: 32743, Start Num: 115

Candidate Starts for Gumpizza\_44:

(Start: 115 @31304 has 12 MA's), (Start: 145 @31415 has 1 MA's), (148, 31424), (172, 31487), (Start: 179 @31511 has 1 MA's), (182, 31520), (222, 31670), (225, 31679), (261, 31835), (263, 31841), (269, 31868), (328, 32102), (331, 32117), (368, 32225), (450, 32495), (504, 32672), (512, 32687), (514, 32690),

Gene: Gwendoluna\_40 Start: 31439, Stop: 33007, Start Num: 63

Candidate Starts for Gwendoluna\_40:

(Start: 56 @31424 has 26 MA's), (Start: 59 @31430 has 2 MA's), (Start: 62 @31436 has 9 MA's), (Start: 63 @31439 has 9 MA's), (Start: 75 @31454 has 1 MA's), (Start: 116 @31505 has 209 MA's), (Start: 126 @31520 has 8 MA's), (Start: 179 @31724 has 1 MA's), (Start: 181 @31730 has 1 MA's), (184, 31751), (Start: 226 @31880 has 1 MA's), (229, 31889), (230, 31898), (256, 32006), (263, 32027), (265, 32039), (271, 32063), (281, 32105), (307, 32234), (327, 32294), (341, 32351), (349, 32378), (357, 32405), (358, 32408), (362, 32420), (386, 32489), (400, 32528), (408, 32561), (432, 32642), (436, 32657), (440, 32672), (461, 32762), (492, 32876), (534, 32975), (544, 32999),

Gene: HINdeR\_33 Start: 29171, Stop: 27708, Start Num: 116

Candidate Starts for HINdeR\_33:

(54, 29273), (67, 29243), (86, 29210), (Start: 116 @29171 has 209 MA's), (Start: 152 @29036 has 1 MA's), (161, 29000), (190, 28910), (197, 28889), (198, 28886), (220, 28820), (229, 28796), (231, 28781), (245, 28730), (261, 28658), (262, 28655), (265, 28640), (267, 28631), (285, 28556), (287, 28547), (304, 28463), (320, 28397), (383, 28208), (405, 28139), (418, 28091), (437, 28025), (443, 28004), (473, 27899), (512, 27785), (522, 27761), (529, 27743), (539, 27719), (542, 27713),

Gene: Halsey\_43 Start: 31558, Stop: 32997, Start Num: 115

Candidate Starts for Halsey\_43:

(Start: 115 @31558 has 12 MA's), (Start: 145 @31669 has 1 MA's), (148, 31678), (172, 31741), (Start: 179 @31765 has 1 MA's), (182, 31774), (222, 31924), (225, 31933), (261, 32089), (263, 32095), (269, 32122), (328, 32356), (368, 32479), (504, 32926), (512, 32941), (514, 32944),

Gene: HamSlice\_32 Start: 26644, Stop: 25121, Start Num: 107

Candidate Starts for HamSlice\_32:

(Start: 84 @26677 has 1 MA's), (Start: 107 @26644 has 19 MA's), (Start: 113 @26635 has 105 MA's), (154, 26473), (Start: 179 @26407 has 1 MA's), (183, 26389), (205, 26314), (210, 26290), (218, 26251), (219, 26248), (240, 26161), (268, 26047), (271, 26035), (311, 25852), (340, 25741), (354, 25690), (396, 25561), (399, 25552), (419, 25477), (421, 25471), (455, 25348), (463, 25309), (521, 25159), (528, 25144),

Gene: HanShotFirst\_36 Start: 28972, Stop: 30474, Start Num: 116

Candidate Starts for HanShotFirst\_36:

(16, 28735), (18, 28738), (20, 28753), (29, 28816), (Start: 56 @28891 has 26 MA's), (Start: 59 @28897 has 2 MA's), (Start: 62 @28903 has 9 MA's), (Start: 63 @28906 has 9 MA's), (Start: 75 @28921 has 1 MA's), (Start: 116 @28972 has 209 MA's), (Start: 126 @28987 has 8 MA's), (Start: 145 @29080 has 1 MA's), (Start: 179 @29191 has 1 MA's), (Start: 181 @29197 has 1 MA's), (184, 29218), (222, 29335), (Start: 226 @29347 has 1 MA's), (229, 29356), (230, 29365), (252, 29461), (256, 29473), (263, 29494), (265, 29506), (271, 29530), (307, 29701), (327, 29761), (341, 29818), (357, 29872), (362, 29887), (398, 29989), (400, 29995), (408, 30028), (409, 30031), (425, 30094), (436, 30124), (461, 30229), (492, 30343), (534, 30442), (544, 30466),

Gene: Happiness\_33 Start: 26642, Stop: 25128, Start Num: 113

Candidate Starts for Happiness\_33:

(Start: 84 @26684 has 1 MA's), (Start: 107 @26651 has 19 MA's), (Start: 113 @26642 has 105 MA's), (154, 26480), (Start: 179 @26414 has 1 MA's), (183, 26396), (205, 26321), (210, 26297), (218, 26258), (219, 26255), (240, 26168), (268, 26054), (271, 26042), (311, 25859), (340, 25748), (354, 25697), (396, 25568), (399, 25559), (419, 25484), (421, 25478), (455, 25355), (463, 25316), (521, 25166), (528, 25151),

Gene: Harlequin\_29 Start: 23641, Stop: 22145, Start Num: 97

Candidate Starts for Harlequin\_29:

(Start: 97 @23641 has 32 MA's), (Start: 116 @23620 has 209 MA's), (Start: 122 @23614 has 3 MA's), (Start: 152 @23485 has 1 MA's), (164, 23437), (193, 23350), (229, 23245), (254, 23134), (269, 23074), (272, 23062), (286, 22999), (292, 22969), (296, 22936), (303, 22915), (310, 22885), (316, 22864), (330, 22819), (331, 22816), (332, 22810), (354, 22726), (371, 22687), (372, 22681), (411, 22552), (417, 22531), (419, 22522), (463, 22360),

Gene: HarryOW\_37 Start: 29352, Stop: 30854, Start Num: 116

Candidate Starts for HarryOW\_37:

(Start: 56 @29271 has 26 MA's), (Start: 59 @29277 has 2 MA's), (Start: 62 @29283 has 9 MA's), (Start: 63 @29286 has 9 MA's), (Start: 116 @29352 has 209 MA's), (Start: 179 @29571 has 1 MA's), (Start: 181 @29577 has 1 MA's), (184, 29598), (Start: 226 @29727 has 1 MA's), (229, 29736), (230, 29745), (256, 29853), (263, 29874), (265, 29886), (271, 29910), (281, 29952), (307, 30081), (327, 30141), (341, 30198), (357, 30252), (362, 30267), (386, 30336), (398, 30369), (400, 30375), (408, 30408), (409, 30411), (432, 30489), (436, 30504), (461, 30609), (492, 30723), (534, 30822), (544, 30846),

Gene: HashRod\_37 Start: 27309, Stop: 25741, Start Num: 113

Candidate Starts for HashRod\_37:

(37, 27459), (43, 27444), (88, 27345), (Start: 113 @27309 has 105 MA's), (184, 27054), (191, 27030), (208, 26970), (218, 26922), (219, 26919), (240, 26832), (245, 26820), (247, 26799), (254, 26775),

(271, 26706), (287, 26637), (288, 26628), (311, 26523), (321, 26478), (354, 26346), (381, 26262), (398, 26205), (455, 25998), (495, 25857),

Gene: Heather\_56 Start: 38485, Stop: 40254, Start Num: 78

Candidate Starts for Heather\_56:

(65, 38461), (74, 38479), (Start: 78 @38485 has 3 MA's), (87, 38500), (114, 38539), (120, 38551), (159, 38728), (170, 38761), (183, 38833), (185, 38848), (193, 38875), (194, 38878), (206, 38914), (241, 39040), (262, 39112), (263, 39115), (281, 39187), (293, 39274), (297, 39292), (304, 39313), (325, 39424), (331, 39445), (342, 39487), (360, 39559), (368, 39586), (377, 39628), (391, 39694), (395, 39721), (409, 39775), (422, 39820), (427, 39841), (448, 39922), (475, 40024), (485, 40069), (495, 40105), (503, 40126), (508, 40138),

Gene: Herbertwm\_31 Start: 25845, Stop: 24304, Start Num: 113

Candidate Starts for Herbertwm\_31:

(21, 26094), (22, 26091), (25, 26064), (26, 26055), (53, 25950), (58, 25944), (72, 25911), (85, 25884), (87, 25881), (Start: 113 @25845 has 105 MA's), (Start: 179 @25617 has 1 MA's), (183, 25599), (204, 25527), (215, 25470), (218, 25452), (219, 25449), (245, 25350), (253, 25308), (271, 25236), (286, 25170), (288, 25158), (311, 25053), (321, 25023), (328, 24993), (357, 24882), (396, 24729), (403, 24708), (416, 24657), (419, 24645), (421, 24639), (439, 24576), (453, 24531), (455, 24516),

Gene: Hermia\_40 Start: 30907, Stop: 32409, Start Num: 116

Candidate Starts for Hermia\_40:

(Start: 56 @30826 has 26 MA's), (Start: 59 @30832 has 2 MA's), (Start: 62 @30838 has 9 MA's), (Start: 63 @30841 has 9 MA's), (Start: 75 @30856 has 1 MA's), (Start: 116 @30907 has 209 MA's), (Start: 126 @30922 has 8 MA's), (Start: 179 @31126 has 1 MA's), (Start: 181 @31132 has 1 MA's), (184, 31153), (222, 31270), (Start: 226 @31282 has 1 MA's), (229, 31291), (230, 31300), (252, 31396), (256, 31408), (263, 31429), (265, 31441), (271, 31465), (307, 31636), (327, 31696), (341, 31753), (349, 31780), (357, 31807), (362, 31822), (386, 31891), (400, 31930), (408, 31963), (432, 32044), (436, 32059), (461, 32164), (492, 32278), (534, 32377), (544, 32401),

Gene: HermioneGrange\_37 Start: 29320, Stop: 30822, Start Num: 116

Candidate Starts for HermioneGrange\_37:

(Start: 56 @29239 has 26 MA's), (Start: 59 @29245 has 2 MA's), (Start: 62 @29251 has 9 MA's), (Start: 63 @29254 has 9 MA's), (Start: 75 @29269 has 1 MA's), (Start: 116 @29320 has 209 MA's), (124, 29332), (Start: 181 @29545 has 1 MA's), (183, 29557), (184, 29566), (194, 29599), (Start: 226 @29695 has 1 MA's), (229, 29704), (230, 29713), (256, 29821), (263, 29842), (265, 29854), (271, 29878), (281, 29920), (307, 30049), (327, 30109), (341, 30166), (349, 30193), (357, 30220), (358, 30223), (362, 30235), (386, 30304), (398, 30337), (400, 30343), (408, 30376), (432, 30457), (436, 30472), (461, 30577), (492, 30691), (534, 30790), (544, 30814),

Gene: Hippo\_50 Start: 36182, Stop: 37795, Start Num: 50

Candidate Starts for Hippo\_50:

(Start: 31 @36116 has 7 MA's), (Start: 47 @36173 has 5 MA's), (Start: 50 @36182 has 23 MA's), (Start: 127 @36329 has 3 MA's), (148, 36428), (Start: 152 @36446 has 1 MA's), (166, 36497), (192, 36578), (193, 36581), (216, 36653), (220, 36662), (222, 36665), (252, 36791), (259, 36818), (277, 36887), (289, 36932), (305, 37001), (311, 37028), (328, 37076), (339, 37124), (355, 37163), (363, 37190), (371, 37220), (407, 37343), (423, 37403), (436, 37448), (472, 37577), (484, 37628), (487, 37637), (501, 37676), (511, 37700), (520, 37715), (525, 37730), (530, 37745),

Gene: Hiro\_29 Start: 23875, Stop: 22397, Start Num: 116

Candidate Starts for Hiro\_29:

(Start: 97 @23896 has 32 MA's), (Start: 116 @23875 has 209 MA's), (Start: 122 @23869 has 3 MA's), (139, 23800), (Start: 152 @23740 has 1 MA's), (193, 23602), (194, 23599), (203, 23572), (220, 23521),

(245, 23431), (262, 23359), (267, 23335), (271, 23320), (273, 23308), (284, 23269), (297, 23188), (301, 23176), (311, 23137), (316, 23119), (337, 23050), (340, 23038), (345, 23023), (348, 23011), (354, 22987), (357, 22978), (371, 22948), (374, 22930), (382, 22909), (387, 22888), (402, 22855), (404, 22843), (435, 22735), (462, 22630), (480, 22570), (490, 22531), (491, 22528), (498, 22504), (500, 22498),

Gene: Holli\_33 Start: 26436, Stop: 24913, Start Num: 107

Candidate Starts for Holli\_33:

(Start: 84 @26469 has 1 MA's), (Start: 107 @26436 has 19 MA's), (Start: 113 @26427 has 105 MA's), (154, 26265), (Start: 179 @26199 has 1 MA's), (183, 26181), (205, 26106), (210, 26082), (218, 26043), (219, 26040), (240, 25953), (268, 25839), (271, 25827), (311, 25644), (340, 25533), (354, 25482), (396, 25353), (399, 25344), (419, 25269), (421, 25263), (455, 25140), (463, 25101), (521, 24951), (528, 24936),

Gene: Honk\_61 Start: 38228, Stop: 39772, Start Num: 98

Candidate Starts for Honk\_61:

(Start: 98 @38228 has 1 MA's), (172, 38429), (192, 38507), (225, 38630), (239, 38690), (248, 38738), (254, 38759), (261, 38786), (263, 38792), (281, 38870), (363, 39188), (371, 39218), (372, 39224), (413, 39353), (417, 39365), (419, 39374), (438, 39449), (444, 39470), (470, 39560), (474, 39575), (525, 39707),

Gene: Hookmount\_34 Start: 27245, Stop: 25722, Start Num: 106

Candidate Starts for Hookmount\_34:

(Start: 106 @27245 has 2 MA's), (Start: 116 @27230 has 209 MA's), (Start: 122 @27224 has 3 MA's), (Start: 123 @27221 has 2 MA's), (163, 27053), (164, 27047), (204, 26930), (225, 26870), (252, 26753), (263, 26714), (269, 26687), (272, 26675), (293, 26540), (336, 26387), (361, 26297), (375, 26258), (404, 26168), (416, 26126), (419, 26114), (433, 26069), (438, 26048), (495, 25835), (507, 25814),

Gene: Hope4ever\_37 Start: 29718, Stop: 31289, Start Num: 62

Candidate Starts for Hope4ever\_37:

(Start: 56 @29706 has 26 MA's), (Start: 59 @29712 has 2 MA's), (Start: 62 @29718 has 9 MA's), (Start: 63 @29721 has 9 MA's), (Start: 75 @29736 has 1 MA's), (Start: 116 @29787 has 209 MA's), (Start: 123 @29796 has 2 MA's), (Start: 126 @29802 has 8 MA's), (128, 29811), (Start: 179 @30006 has 1 MA's), (Start: 181 @30012 has 1 MA's), (222, 30150), (Start: 226 @30162 has 1 MA's), (229, 30171), (230, 30180), (256, 30288), (263, 30309), (265, 30321), (271, 30345), (281, 30387), (307, 30516), (327, 30576), (341, 30633), (357, 30687), (358, 30690), (362, 30702), (386, 30771), (400, 30810), (408, 30843), (432, 30924), (436, 30939), (461, 31044), (492, 31158), (534, 31257), (544, 31281),

Gene: Houdini22\_33 Start: 26641, Stop: 25127, Start Num: 113

Candidate Starts for Houdini22\_33:

(Start: 84 @26683 has 1 MA's), (Start: 107 @26650 has 19 MA's), (Start: 113 @26641 has 105 MA's), (154, 26479), (Start: 179 @26413 has 1 MA's), (183, 26395), (205, 26320), (210, 26296), (218, 26257), (219, 26254), (240, 26167), (268, 26053), (271, 26041), (311, 25858), (340, 25747), (354, 25696), (396, 25567), (399, 25558), (419, 25483), (421, 25477), (455, 25354), (463, 25315), (521, 25165), (528, 25150),

Gene: HuhtaEnerson15\_30 Start: 25723, Stop: 24284, Start Num: 134

Candidate Starts for HuhtaEnerson15\_30:

(Start: 116 @25777 has 209 MA's), (Start: 130 @25744 has 1 MA's), (Start: 131 @25741 has 3 MA's), (Start: 134 @25723 has 4 MA's), (Start: 152 @25642 has 1 MA's), (196, 25498), (205, 25471), (222, 25423), (263, 25258), (268, 25234), (269, 25231), (273, 25210), (316, 25021), (357, 24880), (371, 24850), (416, 24673), (419, 24661), (443, 24577), (447, 24562), (453, 24547), (500, 24370), (521,

24340), (535, 24307),

Gene: Huxley\_33 Start: 26698, Stop: 25184, Start Num: 113

Candidate Starts for Huxley\_33:

(Start: 84 @26740 has 1 MA's), (Start: 107 @26707 has 19 MA's), (Start: 113 @26698 has 105 MA's), (154, 26536), (Start: 179 @26470 has 1 MA's), (183, 26452), (205, 26377), (210, 26353), (218, 26314), (219, 26311), (240, 26224), (268, 26110), (271, 26098), (311, 25915), (340, 25804), (354, 25753), (396, 25624), (399, 25615), (419, 25540), (421, 25534), (455, 25411), (463, 25372), (521, 25222), (528, 25207),

Gene: IAmGroot\_57 Start: 37709, Stop: 39130, Start Num: 104

Candidate Starts for IAmGroot\_57:

(Start: 104 @37709 has 2 MA's), (222, 38069), (269, 38261), (271, 38270), (300, 38375), (371, 38609), (382, 38648), (444, 38849), (452, 38873), (456, 38894), (494, 39020), (533, 39107),

Gene: ICleared\_33 Start: 26628, Stop: 25132, Start Num: 116

Candidate Starts for ICleared\_33:

(Start: 64 @26694 has 10 MA's), (Start: 116 @26628 has 209 MA's), (Start: 127 @26610 has 3 MA's), (138, 26556), (150, 26505), (Start: 152 @26493 has 1 MA's), (190, 26367), (197, 26346), (211, 26316), (220, 26277), (231, 26238), (253, 26148), (268, 26088), (282, 26034), (310, 25896), (380, 25665), (403, 25575), (412, 25539), (419, 25512), (435, 25458), (437, 25449), (493, 25239), (500, 25221), (512, 25209), (517, 25200),

Gene: ILeeKay\_39 Start: 29491, Stop: 31056, Start Num: 63

Candidate Starts for ILeeKay\_39:

(Start: 56 @29476 has 26 MA's), (Start: 59 @29482 has 2 MA's), (Start: 62 @29488 has 9 MA's), (Start: 63 @29491 has 9 MA's), (Start: 75 @29506 has 1 MA's), (Start: 116 @29557 has 209 MA's), (Start: 123 @29566 has 2 MA's), (Start: 126 @29572 has 8 MA's), (128, 29581), (Start: 179 @29776 has 1 MA's), (Start: 181 @29782 has 1 MA's), (Start: 226 @29932 has 1 MA's), (229, 29941), (230, 29950), (256, 30058), (263, 30079), (265, 30091), (271, 30115), (281, 30157), (307, 30286), (327, 30346), (341, 30403), (349, 30430), (357, 30457), (362, 30472), (398, 30571), (408, 30610), (432, 30691), (436, 30706), (461, 30811), (492, 30925), (534, 31024), (544, 31048),

Gene: Iceman\_34 Start: 26926, Stop: 25412, Start Num: 113

Candidate Starts for Iceman\_34:

(Start: 84 @26968 has 1 MA's), (Start: 107 @26935 has 19 MA's), (Start: 113 @26926 has 105 MA's), (154, 26764), (Start: 179 @26698 has 1 MA's), (183, 26680), (205, 26605), (210, 26581), (218, 26542), (219, 26539), (240, 26452), (271, 26326), (311, 26143), (340, 26032), (354, 25981), (396, 25852), (399, 25843), (419, 25768), (421, 25762), (455, 25639), (463, 25600), (521, 25450), (528, 25435),

Gene: Ichabod\_38 Start: 29525, Stop: 31093, Start Num: 63

Candidate Starts for Ichabod\_38:

(Start: 56 @29510 has 26 MA's), (Start: 59 @29516 has 2 MA's), (Start: 62 @29522 has 9 MA's), (Start: 63 @29525 has 9 MA's), (Start: 75 @29540 has 1 MA's), (Start: 116 @29591 has 209 MA's), (Start: 145 @29699 has 1 MA's), (Start: 179 @29810 has 1 MA's), (Start: 181 @29816 has 1 MA's), (184, 29837), (Start: 226 @29966 has 1 MA's), (229, 29975), (230, 29984), (256, 30092), (263, 30113), (265, 30125), (271, 30149), (307, 30320), (327, 30380), (341, 30437), (349, 30464), (357, 30491), (362, 30506), (386, 30575), (398, 30608), (400, 30614), (408, 30647), (432, 30728), (436, 30743), (461, 30848), (492, 30962), (534, 31061), (544, 31085),

Gene: IgnatiusPatJac\_36 Start: 29287, Stop: 30789, Start Num: 116

Candidate Starts for IgnatiusPatJac\_36:

(16, 29050), (18, 29053), (20, 29068), (29, 29131), (Start: 56 @29206 has 26 MA's), (Start: 59 @29212 has 2 MA's), (Start: 62 @29218 has 9 MA's), (Start: 63 @29221 has 9 MA's), (Start: 75 @29236 has 1 MA's), (Start: 116 @29287 has 209 MA's), (Start: 126 @29302 has 8 MA's), (128, 29311), (Start: 181 @29512 has 1 MA's), (183, 29524), (184, 29533), (Start: 226 @29662 has 1 MA's), (229, 29671), (230, 29680), (256, 29788), (263, 29809), (265, 29821), (271, 29845), (281, 29887), (307, 30016), (327, 30076), (341, 30133), (357, 30187), (358, 30190), (362, 30202), (386, 30271), (400, 30310), (408, 30343), (432, 30424), (436, 30439), (461, 30544), (492, 30658), (495, 30670), (534, 30757), (544, 30781),

Gene: Inyanga\_35 Start: 28750, Stop: 30237, Start Num: 126

Candidate Starts for Inyanga\_35:

(Start: 56 @28654 has 26 MA's), (Start: 59 @28660 has 2 MA's), (Start: 62 @28666 has 9 MA's), (Start: 63 @28669 has 9 MA's), (Start: 75 @28684 has 1 MA's), (Start: 116 @28735 has 209 MA's), (Start: 126 @28750 has 8 MA's), (Start: 181 @28960 has 1 MA's), (Start: 226 @29110 has 1 MA's), (229, 29119), (230, 29128), (256, 29236), (263, 29257), (265, 29269), (271, 29293), (281, 29335), (304, 29449), (307, 29464), (327, 29524), (341, 29581), (349, 29608), (357, 29635), (362, 29650), (386, 29719), (400, 29758), (408, 29791), (432, 29872), (436, 29887), (492, 30106), (534, 30205), (544, 30229),

Gene: Iqorha\_35 Start: 28749, Stop: 30236, Start Num: 126

Candidate Starts for Iqorha\_35:

(Start: 56 @28653 has 26 MA's), (Start: 59 @28659 has 2 MA's), (Start: 62 @28665 has 9 MA's), (Start: 63 @28668 has 9 MA's), (Start: 75 @28683 has 1 MA's), (Start: 116 @28734 has 209 MA's), (Start: 126 @28749 has 8 MA's), (Start: 181 @28959 has 1 MA's), (Start: 226 @29109 has 1 MA's), (229, 29118), (230, 29127), (256, 29235), (263, 29256), (265, 29268), (271, 29292), (281, 29334), (304, 29448), (307, 29463), (327, 29523), (341, 29580), (349, 29607), (357, 29634), (362, 29649), (386, 29718), (400, 29757), (408, 29790), (432, 29871), (436, 29886), (492, 30105), (534, 30204), (544, 30228),

Gene: Iracema64\_34 Start: 26931, Stop: 25453, Start Num: 127

Candidate Starts for Iracema64\_34:

(Start: 64 @27015 has 10 MA's), (Start: 116 @26949 has 209 MA's), (Start: 127 @26931 has 3 MA's), (139, 26874), (143, 26856), (150, 26826), (Start: 152 @26814 has 1 MA's), (190, 26688), (197, 26667), (211, 26637), (220, 26598), (231, 26559), (253, 26469), (268, 26409), (282, 26355), (310, 26217), (380, 25986), (403, 25896), (412, 25860), (419, 25833), (435, 25779), (437, 25770), (493, 25560), (500, 25542), (512, 25530), (517, 25521),

Gene: Iter\_51 Start: 35996, Stop: 37411, Start Num: 116

Candidate Starts for Iter\_51:

(Start: 116 @35996 has 209 MA's), (Start: 127 @36014 has 3 MA's), (147, 36110), (Start: 152 @36134 has 1 MA's), (Start: 181 @36218 has 1 MA's), (193, 36269), (216, 36329), (222, 36341), (230, 36371), (247, 36449), (271, 36542), (281, 36581), (422, 37064), (424, 37076), (473, 37247),

Gene: IttyBittyPiggy\_50 Start: 34701, Stop: 36119, Start Num: 110

Candidate Starts for IttyBittyPiggy\_50:

(96, 34683), (108, 34698), (Start: 110 @34701 has 33 MA's), (Start: 116 @34710 has 209 MA's), (Start: 181 @34932 has 1 MA's), (216, 35043), (222, 35055), (225, 35064), (245, 35142), (247, 35163), (258, 35205), (271, 35256), (273, 35268), (287, 35322), (417, 35757), (422, 35775), (424, 35787),

Gene: JC27\_38 Start: 29870, Stop: 31372, Start Num: 116

Candidate Starts for JC27\_38:

(Start: 56 @29789 has 26 MA's), (Start: 59 @29795 has 2 MA's), (Start: 62 @29801 has 9 MA's), (Start: 63 @29804 has 9 MA's), (Start: 75 @29819 has 1 MA's), (Start: 116 @29870 has 209 MA's),

(Start: 179 @30089 has 1 MA's), (Start: 181 @30095 has 1 MA's), (Start: 226 @30245 has 1 MA's), (229, 30254), (230, 30263), (256, 30371), (263, 30392), (265, 30404), (271, 30428), (281, 30470), (307, 30599), (327, 30659), (341, 30716), (349, 30743), (357, 30770), (362, 30785), (386, 30854), (400, 30893), (408, 30926), (432, 31007), (436, 31022), (492, 31241), (534, 31340), (544, 31364),

Gene: Jabiru\_31 Start: 25464, Stop: 23983, Start Num: 116

Candidate Starts for Jabiru\_31:

(88, 25491), (Start: 116 @25464 has 209 MA's), (Start: 131 @25428 has 3 MA's), (Start: 152 @25329 has 1 MA's), (161, 25293), (Start: 181 @25245 has 1 MA's), (190, 25203), (198, 25179), (211, 25152), (220, 25113), (229, 25089), (231, 25074), (263, 24945), (334, 24651), (338, 24633), (347, 24606), (354, 24576), (362, 24552), (371, 24537), (389, 24477), (403, 24426), (404, 24417), (419, 24363), (429, 24330), (447, 24264), (463, 24201), (500, 24072), (539, 23994),

Gene: JackSparrow\_38 Start: 29845, Stop: 31416, Start Num: 62

Candidate Starts for JackSparrow\_38:

(Start: 56 @29833 has 26 MA's), (Start: 59 @29839 has 2 MA's), (Start: 62 @29845 has 9 MA's), (Start: 63 @29848 has 9 MA's), (Start: 75 @29863 has 1 MA's), (Start: 116 @29914 has 209 MA's), (128, 29938), (Start: 179 @30133 has 1 MA's), (Start: 181 @30139 has 1 MA's), (Start: 226 @30289 has 1 MA's), (229, 30298), (230, 30307), (256, 30415), (263, 30436), (265, 30448), (271, 30472), (281, 30514), (307, 30643), (327, 30703), (341, 30760), (349, 30787), (357, 30814), (362, 30829), (386, 30898), (400, 30937), (408, 30970), (432, 31051), (436, 31066), (461, 31171), (492, 31285), (534, 31384), (544, 31408),

Gene: Janeemi\_52 Start: 36965, Stop: 38386, Start Num: 110

Candidate Starts for Janeemi\_52:

(Start: 78 @36914 has 3 MA's), (96, 36947), (108, 36962), (Start: 110 @36965 has 33 MA's), (Start: 116 @36974 has 209 MA's), (151, 37106), (Start: 152 @37112 has 1 MA's), (Start: 181 @37196 has 1 MA's), (192, 37244), (216, 37307), (222, 37319), (225, 37328), (247, 37427), (271, 37520), (281, 37559), (328, 37718), (332, 37739), (422, 38042), (424, 38054), (473, 38225), (505, 38312),

Gene: Jankie\_50 Start: 33484, Stop: 34896, Start Num: 116

Candidate Starts for Jankie\_50:

(Start: 116 @33484 has 209 MA's), (187, 33736), (216, 33814), (222, 33826), (230, 33856), (237, 33889), (286, 34093), (297, 34126), (310, 34174), (366, 34363), (367, 34369), (400, 34474), (417, 34531), (421, 34546), (454, 34660), (473, 34732), (507, 34831),

Gene: Jasper\_38 Start: 29239, Stop: 30741, Start Num: 116

Candidate Starts for Jasper\_38:

(Start: 56 @29158 has 26 MA's), (Start: 59 @29164 has 2 MA's), (Start: 62 @29170 has 9 MA's), (Start: 63 @29173 has 9 MA's), (Start: 75 @29188 has 1 MA's), (Start: 116 @29239 has 209 MA's), (Start: 126 @29254 has 8 MA's), (148, 29356), (Start: 152 @29374 has 1 MA's), (154, 29386), (Start: 179 @29458 has 1 MA's), (Start: 181 @29464 has 1 MA's), (183, 29476), (184, 29485), (222, 29602), (Start: 226 @29614 has 1 MA's), (229, 29623), (230, 29632), (252, 29728), (256, 29740), (263, 29761), (265, 29773), (271, 29797), (281, 29839), (307, 29968), (327, 30028), (341, 30085), (357, 30139), (362, 30154), (398, 30256), (400, 30262), (408, 30295), (409, 30298), (419, 30334), (425, 30361), (436, 30391), (492, 30610), (534, 30709), (544, 30733),

Gene: Jaykayelowell\_33 Start: 26633, Stop: 25119, Start Num: 113

Candidate Starts for Jaykayelowell\_33:

(Start: 84 @26675 has 1 MA's), (Start: 107 @26642 has 19 MA's), (Start: 113 @26633 has 105 MA's), (154, 26471), (Start: 179 @26405 has 1 MA's), (183, 26387), (205, 26312), (210, 26288), (218, 26249), (219, 26246), (240, 26159), (268, 26045), (271, 26033), (311, 25850), (340, 25739), (354, 25688), (396, 25559), (399, 25550), (405, 25526), (419, 25475), (421, 25469), (455, 25346), (463, 25307),

(521, 25157), (528, 25142),

Gene: Jerm2\_38 Start: 29575, Stop: 31077, Start Num: 116

Candidate Starts for Jerm2\_38:

(Start: 56 @29494 has 26 MA's), (Start: 59 @29500 has 2 MA's), (Start: 62 @29506 has 9 MA's), (Start: 63 @29509 has 9 MA's), (Start: 75 @29524 has 1 MA's), (Start: 116 @29575 has 209 MA's), (Start: 126 @29590 has 8 MA's), (Start: 181 @29800 has 1 MA's), (183, 29812), (184, 29821), (194, 29854), (Start: 226 @29950 has 1 MA's), (229, 29959), (230, 29968), (256, 30076), (263, 30097), (265, 30109), (271, 30133), (281, 30175), (307, 30304), (327, 30364), (341, 30421), (349, 30448), (357, 30475), (358, 30478), (362, 30490), (386, 30559), (398, 30592), (400, 30598), (408, 30631), (432, 30712), (436, 30727), (461, 30832), (492, 30946), (534, 31045), (544, 31069),

Gene: Jester\_29 Start: 23572, Stop: 22076, Start Num: 97

Candidate Starts for Jester\_29:

(Start: 97 @23572 has 32 MA's), (Start: 116 @23551 has 209 MA's), (Start: 122 @23545 has 3 MA's), (Start: 152 @23416 has 1 MA's), (164, 23368), (193, 23281), (229, 23176), (254, 23065), (269, 23005), (272, 22993), (286, 22930), (292, 22900), (296, 22867), (303, 22846), (310, 22816), (316, 22795), (330, 22750), (331, 22747), (332, 22741), (354, 22657), (371, 22618), (372, 22612), (411, 22483), (417, 22462), (419, 22453), (463, 22291),

Gene: JetBlade\_33 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for JetBlade\_33:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (240, 26160), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: Joemato\_50 Start: 35318, Stop: 36736, Start Num: 110

Candidate Starts for Joemato\_50:

(96, 35300), (108, 35315), (Start: 110 @35318 has 33 MA's), (Start: 116 @35327 has 209 MA's), (147, 35441), (Start: 152 @35465 has 1 MA's), (Start: 181 @35549 has 1 MA's), (216, 35660), (222, 35672), (225, 35681), (247, 35780), (271, 35873), (273, 35885), (281, 35912), (310, 36017), (328, 36071), (422, 36392), (424, 36404), (435, 36437), (473, 36575),

Gene: JohnDoe\_50 Start: 35314, Stop: 36732, Start Num: 110

Candidate Starts for JohnDoe\_50:

(96, 35296), (108, 35311), (Start: 110 @35314 has 33 MA's), (Start: 116 @35323 has 209 MA's), (147, 35437), (Start: 181 @35545 has 1 MA's), (216, 35656), (222, 35668), (225, 35677), (247, 35776), (271, 35869), (281, 35908), (328, 36067), (422, 36388), (424, 36400), (435, 36433), (473, 36571),

Gene: JoongJeon\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for JoongJeon\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Jorgensen\_37 Start: 29286, Stop: 30788, Start Num: 116

Candidate Starts for Jorgensen\_37:

(Start: 56 @29205 has 26 MA's), (Start: 59 @29211 has 2 MA's), (Start: 62 @29217 has 9 MA's), (Start: 63 @29220 has 9 MA's), (Start: 75 @29235 has 1 MA's), (Start: 116 @29286 has 209 MA's),



(Start: 126 @29301 has 8 MA's), (Start: 181 @29511 has 1 MA's), (184, 29532), (Start: 226 @29661 has 1 MA's), (229, 29670), (230, 29679), (256, 29787), (263, 29808), (265, 29820), (271, 29844), (281, 29886), (307, 30015), (327, 30075), (341, 30132), (349, 30159), (357, 30186), (358, 30189), (362, 30201), (398, 30303), (400, 30309), (408, 30342), (419, 30381), (432, 30423), (436, 30438), (492, 30657), (534, 30756), (544, 30780),

Gene: Jovo\_30 Start: 25967, Stop: 24474, Start Num: 116

Candidate Starts for Jovo\_30:

(Start: 116 @25967 has 209 MA's), (Start: 130 @25934 has 1 MA's), (Start: 131 @25931 has 3 MA's), (Start: 134 @25913 has 4 MA's), (Start: 152 @25832 has 1 MA's), (196, 25688), (205, 25661), (222, 25613), (263, 25448), (268, 25424), (269, 25421), (273, 25400), (316, 25211), (371, 25040), (404, 24905), (416, 24863), (419, 24851), (443, 24767), (447, 24752), (453, 24737), (500, 24560), (521, 24530), (535, 24497),

Gene: Jstan\_50 Start: 35963, Stop: 37384, Start Num: 110

Candidate Starts for Jstan\_50:

(96, 35945), (108, 35960), (Start: 110 @35963 has 33 MA's), (Start: 116 @35972 has 209 MA's), (147, 36086), (Start: 152 @36110 has 1 MA's), (Start: 181 @36194 has 1 MA's), (187, 36227), (192, 36242), (216, 36305), (222, 36317), (225, 36326), (247, 36425), (258, 36467), (271, 36518), (281, 36557), (304, 36635), (310, 36662), (328, 36716), (417, 37022), (419, 37031), (422, 37040), (424, 37052), (473, 37223), (505, 37310),

Gene: JuliaChild\_39 Start: 30024, Stop: 31526, Start Num: 116

Candidate Starts for JuliaChild\_39:

(Start: 56 @29943 has 26 MA's), (Start: 59 @29949 has 2 MA's), (Start: 62 @29955 has 9 MA's), (Start: 63 @29958 has 9 MA's), (Start: 75 @29973 has 1 MA's), (Start: 116 @30024 has 209 MA's), (Start: 126 @30039 has 8 MA's), (Start: 179 @30243 has 1 MA's), (Start: 181 @30249 has 1 MA's), (184, 30270), (194, 30303), (Start: 226 @30399 has 1 MA's), (229, 30408), (230, 30417), (254, 30519), (256, 30525), (263, 30546), (265, 30558), (271, 30582), (281, 30624), (307, 30753), (327, 30813), (341, 30870), (349, 30897), (357, 30924), (358, 30927), (362, 30939), (398, 31041), (400, 31047), (408, 31080), (409, 31083), (432, 31161), (436, 31176), (440, 31191), (461, 31281), (492, 31395), (534, 31494), (544, 31518),

Gene: JuneStar\_51 Start: 38077, Stop: 39495, Start Num: 110

Candidate Starts for JuneStar\_51:

(96, 38059), (108, 38074), (Start: 110 @38077 has 33 MA's), (Start: 116 @38086 has 209 MA's), (Start: 152 @38224 has 1 MA's), (Start: 181 @38308 has 1 MA's), (216, 38419), (222, 38431), (225, 38440), (247, 38539), (258, 38581), (271, 38632), (281, 38671), (400, 39076), (417, 39133), (422, 39151), (424, 39163), (474, 39337),

Gene: KADY\_37 Start: 27309, Stop: 25741, Start Num: 113

Candidate Starts for KADY\_37:

(37, 27459), (43, 27444), (88, 27345), (Start: 113 @27309 has 105 MA's), (184, 27054), (191, 27030), (208, 26970), (218, 26922), (219, 26919), (240, 26832), (245, 26820), (247, 26799), (254, 26775), (271, 26706), (287, 26637), (288, 26628), (311, 26523), (321, 26478), (354, 26346), (381, 26262), (398, 26205), (455, 25998), (495, 25857),

Gene: KBG\_38 Start: 30500, Stop: 31999, Start Num: 116

Candidate Starts for KBG\_38:

(Start: 56 @30419 has 26 MA's), (Start: 59 @30425 has 2 MA's), (Start: 62 @30431 has 9 MA's), (Start: 63 @30434 has 9 MA's), (Start: 75 @30449 has 1 MA's), (Start: 116 @30500 has 209 MA's), (136, 30566), (Start: 145 @30608 has 1 MA's), (Start: 179 @30719 has 1 MA's), (Start: 181 @30725 has 1 MA's), (184, 30746), (Start: 226 @30875 has 1 MA's), (229, 30884), (230, 30893), (231, 30899),

(256, 31001), (263, 31022), (265, 31034), (271, 31058), (281, 31100), (307, 31229), (327, 31289), (341, 31346), (349, 31373), (357, 31400), (358, 31403), (362, 31415), (398, 31514), (408, 31553), (409, 31556), (432, 31634), (436, 31649), (492, 31868), (534, 31967), (544, 31991),

Gene: KFPoly\_33 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for KFPoly\_33:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (240, 26160), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: KSSJEB\_37 Start: 29202, Stop: 30704, Start Num: 116

Candidate Starts for KSSJEB\_37:

(Start: 56 @29121 has 26 MA's), (Start: 59 @29127 has 2 MA's), (Start: 62 @29133 has 9 MA's), (Start: 63 @29136 has 9 MA's), (Start: 75 @29151 has 1 MA's), (Start: 116 @29202 has 209 MA's), (148, 29319), (Start: 179 @29421 has 1 MA's), (Start: 181 @29427 has 1 MA's), (184, 29448), (222, 29565), (Start: 226 @29577 has 1 MA's), (229, 29586), (230, 29595), (256, 29703), (265, 29736), (300, 29904), (307, 29931), (327, 29991), (341, 30048), (349, 30075), (357, 30102), (362, 30117), (386, 30186), (400, 30225), (408, 30258), (425, 30324), (436, 30354), (454, 30417), (461, 30459), (492, 30573), (534, 30672), (544, 30696),

Gene: Kaine\_52 Start: 36736, Stop: 38322, Start Num: 50

Candidate Starts for Kaine\_52:

(32, 36673), (33, 36679), (Start: 50 @36736 has 23 MA's), (Start: 129 @36874 has 3 MA's), (144, 36946), (Start: 145 @36952 has 1 MA's), (Start: 152 @36979 has 1 MA's), (166, 37030), (175, 37042), (187, 37096), (193, 37114), (220, 37195), (222, 37198), (270, 37393), (289, 37465), (290, 37474), (305, 37531), (315, 37573), (328, 37603), (363, 37717), (371, 37747), (372, 37753), (402, 37846), (405, 37861), (407, 37870), (415, 37897), (416, 37900), (426, 37942), (436, 37975), (438, 37984), (474, 38110), (484, 38155), (487, 38164), (491, 38179), (497, 38194), (501, 38203), (511, 38227), (530, 38272),

Gene: Kalimba\_43 Start: 31408, Stop: 32847, Start Num: 115

Candidate Starts for Kalimba\_43:

(Start: 115 @31408 has 12 MA's), (Start: 145 @31519 has 1 MA's), (148, 31528), (172, 31591), (Start: 179 @31615 has 1 MA's), (182, 31624), (222, 31774), (225, 31783), (261, 31939), (263, 31945), (269, 31972), (284, 32032), (328, 32206), (331, 32221), (368, 32329), (425, 32512), (504, 32776), (512, 32791), (514, 32794),

Gene: Kanely\_38 Start: 30151, Stop: 31650, Start Num: 126

Candidate Starts for Kanely\_38:

(Start: 49 @30046 has 1 MA's), (Start: 80 @30091 has 3 MA's), (Start: 116 @30136 has 209 MA's), (Start: 126 @30151 has 8 MA's), (Start: 145 @30244 has 1 MA's), (Start: 179 @30355 has 1 MA's), (Start: 181 @30361 has 1 MA's), (184, 30382), (Start: 226 @30511 has 1 MA's), (229, 30520), (230, 30529), (256, 30637), (263, 30658), (265, 30670), (271, 30694), (281, 30736), (307, 30865), (327, 30925), (341, 30982), (349, 31009), (357, 31036), (358, 31039), (362, 31051), (386, 31120), (398, 31153), (400, 31159), (408, 31192), (432, 31273), (436, 31288), (461, 31393), (492, 31507),

Gene: Katalie\_50 Start: 36352, Stop: 37929, Start Num: 50

Candidate Starts for Katalie\_50:

(Start: 31 @36286 has 7 MA's), (Start: 47 @36343 has 5 MA's), (Start: 50 @36352 has 23 MA's), (Start: 127 @36472 has 3 MA's), (Start: 152 @36589 has 1 MA's), (166, 36640), (192, 36721), (193, 36724), (216, 36796), (220, 36805), (222, 36808), (259, 36961), (263, 36970), (273, 37018), (277,

37030), (283, 37054), (300, 37123), (301, 37126), (339, 37258), (363, 37324), (371, 37354), (402, 37453), (405, 37468), (407, 37477), (410, 37486), (417, 37510), (436, 37582), (487, 37771), (501, 37810), (507, 37825), (511, 37834), (520, 37849),

Gene: Katalie136\_33 Start: 26647, Stop: 25133, Start Num: 113

Candidate Starts for Katalie136\_33:

(Start: 84 @26689 has 1 MA's), (Start: 107 @26656 has 19 MA's), (Start: 113 @26647 has 105 MA's), (154, 26485), (Start: 179 @26419 has 1 MA's), (183, 26401), (205, 26326), (218, 26263), (219, 26260), (240, 26173), (271, 26047), (311, 25864), (327, 25807), (340, 25753), (354, 25702), (396, 25573), (399, 25564), (419, 25489), (421, 25483), (454, 25369), (455, 25360), (463, 25321), (521, 25171), (528, 25156),

Gene: Kaylissa\_51 Start: 35709, Stop: 37127, Start Num: 110

Candidate Starts for Kaylissa\_51:

(96, 35691), (108, 35706), (Start: 110 @35709 has 33 MA's), (Start: 116 @35718 has 209 MA's), (147, 35832), (Start: 152 @35856 has 1 MA's), (Start: 181 @35940 has 1 MA's), (216, 36051), (222, 36063), (225, 36072), (247, 36171), (271, 36264), (273, 36276), (281, 36303), (310, 36408), (328, 36462), (422, 36783), (424, 36795), (435, 36828), (473, 36966),

Gene: KeAlii\_47 Start: 34815, Stop: 36296, Start Num: 110

Candidate Starts for KeAlii\_47:

(Start: 110 @34815 has 33 MA's), (Start: 179 @35031 has 1 MA's), (212, 35142), (261, 35355), (444, 36024), (474, 36132), (483, 36174), (507, 36228),

Gene: Kenmech\_40 Start: 30663, Stop: 32255, Start Num: 56

Candidate Starts for Kenmech\_40:

(Start: 56 @30663 has 26 MA's), (Start: 59 @30669 has 2 MA's), (Start: 62 @30675 has 9 MA's), (Start: 63 @30678 has 9 MA's), (Start: 75 @30693 has 1 MA's), (Start: 116 @30744 has 209 MA's), (Start: 126 @30759 has 8 MA's), (Start: 179 @30963 has 1 MA's), (Start: 181 @30969 has 1 MA's), (Start: 226 @31119 has 1 MA's), (229, 31128), (230, 31137), (256, 31245), (263, 31266), (265, 31278), (271, 31302), (281, 31344), (304, 31458), (307, 31473), (327, 31533), (341, 31590), (349, 31617), (357, 31644), (362, 31659), (408, 31797), (419, 31836), (432, 31878), (436, 31893), (492, 32112),

Gene: Killigrew\_35 Start: 28933, Stop: 30432, Start Num: 126

Candidate Starts for Killigrew\_35:

(Start: 56 @28837 has 26 MA's), (Start: 59 @28843 has 2 MA's), (Start: 62 @28849 has 9 MA's), (Start: 63 @28852 has 9 MA's), (Start: 75 @28867 has 1 MA's), (Start: 116 @28918 has 209 MA's), (Start: 126 @28933 has 8 MA's), (Start: 145 @29026 has 1 MA's), (Start: 179 @29137 has 1 MA's), (Start: 181 @29143 has 1 MA's), (184, 29164), (Start: 226 @29293 has 1 MA's), (229, 29302), (230, 29311), (231, 29317), (252, 29407), (256, 29419), (265, 29452), (307, 29647), (327, 29707), (341, 29764), (349, 29791), (357, 29818), (362, 29833), (398, 29935), (400, 29941), (408, 29974), (409, 29977), (432, 30055), (436, 30070), (492, 30289),

Gene: Kingmustik0402\_33 Start: 26629, Stop: 25115, Start Num: 113

Candidate Starts for Kingmustik0402\_33:

(Start: 84 @26671 has 1 MA's), (Start: 107 @26638 has 19 MA's), (Start: 113 @26629 has 105 MA's), (154, 26467), (Start: 179 @26401 has 1 MA's), (183, 26383), (205, 26308), (210, 26284), (218, 26245), (219, 26242), (240, 26155), (271, 26029), (311, 25846), (340, 25735), (354, 25684), (396, 25555), (399, 25546), (419, 25471), (421, 25465), (455, 25342), (463, 25303), (521, 25153), (528, 25138),

Gene: Kinmap\_35 Start: 26619, Stop: 25138, Start Num: 127

Candidate Starts for Kinmap\_35:

(Start: 107 @26646 has 19 MA's), (Start: 116 @26637 has 209 MA's), (Start: 127 @26619 has 3 MA's), (204, 26337), (253, 26160), (268, 26100), (303, 25938), (310, 25908), (359, 25740), (373, 25701), (393, 25617), (412, 25551), (419, 25524), (421, 25518), (431, 25485), (435, 25470), (490, 25266), (500, 25233), (512, 25221),

Gene: KittenMittens\_32 Start: 23842, Stop: 25497, Start Num: 102

Candidate Starts for KittenMittens\_32:

(Start: 79 @23803 has 3 MA's), (Start: 102 @23842 has 3 MA's), (Start: 113 @23851 has 105 MA's), (Start: 123 @23869 has 2 MA's), (Start: 130 @23893 has 1 MA's), (Start: 145 @23968 has 1 MA's), (148, 23977), (Start: 152 @23995 has 1 MA's), (Start: 179 @24079 has 1 MA's), (187, 24118), (220, 24220), (229, 24244), (230, 24253), (252, 24349), (263, 24385), (272, 24424), (273, 24433), (274, 24436), (297, 24553), (304, 24574), (307, 24589), (310, 24601), (326, 24649), (337, 24694), (357, 24766), (370, 24790), (400, 24910), (404, 24928), (405, 24931), (406, 24934), (444, 25069), (492, 25258), (532, 25351), (544, 25381), (546, 25405), (551, 25453), (552, 25471),

Gene: Koan\_32 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Koan\_32:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Koreni\_32 Start: 26343, Stop: 24781, Start Num: 64

Candidate Starts for Koreni\_32:

(Start: 64 @26343 has 10 MA's), (Start: 116 @26277 has 209 MA's), (Start: 127 @26259 has 3 MA's), (138, 26205), (150, 26154), (Start: 152 @26142 has 1 MA's), (190, 26016), (197, 25995), (211, 25965), (220, 25926), (231, 25887), (253, 25797), (268, 25737), (282, 25683), (310, 25545), (380, 25314), (403, 25224), (412, 25188), (419, 25161), (435, 25107), (437, 25098), (493, 24888), (500, 24870), (512, 24858), (517, 24849),

Gene: Kratak\_33 Start: 26699, Stop: 25137, Start Num: 64

Candidate Starts for Kratak\_33:

(42, 26747), (Start: 64 @26699 has 10 MA's), (Start: 107 @26642 has 19 MA's), (Start: 116 @26633 has 209 MA's), (Start: 127 @26615 has 3 MA's), (139, 26558), (143, 26540), (150, 26510), (Start: 152 @26498 has 1 MA's), (190, 26372), (197, 26351), (211, 26321), (220, 26282), (268, 26093), (276, 26057), (282, 26039), (310, 25901), (326, 25856), (380, 25670), (412, 25544), (419, 25517), (435, 25463), (437, 25454), (493, 25244), (500, 25226), (512, 25214), (517, 25205),

Gene: Kremtemulon\_33 Start: 26749, Stop: 25187, Start Num: 64

Candidate Starts for Kremtemulon\_33:

(Start: 64 @26749 has 10 MA's), (Start: 116 @26683 has 209 MA's), (Start: 127 @26665 has 3 MA's), (139, 26608), (143, 26590), (150, 26560), (Start: 152 @26548 has 1 MA's), (190, 26422), (197, 26401), (211, 26371), (220, 26332), (231, 26293), (253, 26203), (268, 26143), (282, 26089), (310, 25951), (359, 25783), (380, 25720), (403, 25630), (412, 25594), (419, 25567), (435, 25513), (437, 25504), (493, 25294), (500, 25276), (512, 25264), (517, 25255),

Gene: Krishelle\_29 Start: 23947, Stop: 22448, Start Num: 97

Candidate Starts for Krishelle\_29:

(Start: 97 @23947 has 32 MA's), (Start: 116 @23926 has 209 MA's), (Start: 122 @23920 has 3 MA's), (139, 23851), (Start: 152 @23791 has 1 MA's), (193, 23653), (194, 23650), (203, 23623), (220, 23572), (245, 23482), (267, 23386), (271, 23371), (273, 23359), (284, 23320), (297, 23239), (301, 23227), (311, 23188), (316, 23170), (337, 23101), (345, 23074), (348, 23062), (354, 23038), (357, 23029),

(371, 22999), (374, 22981), (382, 22960), (387, 22939), (402, 22906), (404, 22894), (435, 22786), (462, 22681), (480, 22621), (490, 22582), (491, 22579), (498, 22555), (500, 22549),

Gene: Kristoff\_35 Start: 27044, Stop: 25536, Start Num: 116

Candidate Starts for Kristoff\_35:

(Start: 116 @27044 has 209 MA's), (Start: 122 @27038 has 3 MA's), (Start: 127 @27026 has 3 MA's), (128, 27020), (147, 26933), (Start: 152 @26909 has 1 MA's), (204, 26744), (252, 26567), (263, 26528), (265, 26516), (268, 26504), (269, 26501), (272, 26489), (326, 26243), (331, 26222), (375, 26072), (405, 25979), (412, 25955), (416, 25940), (433, 25883), (438, 25862), (507, 25628),

Gene: Kugel\_38 Start: 29732, Stop: 31234, Start Num: 116

Candidate Starts for Kugel\_38:

(Start: 56 @29651 has 26 MA's), (Start: 59 @29657 has 2 MA's), (Start: 62 @29663 has 9 MA's), (Start: 63 @29666 has 9 MA's), (Start: 75 @29681 has 1 MA's), (Start: 116 @29732 has 209 MA's), (Start: 179 @29951 has 1 MA's), (Start: 181 @29957 has 1 MA's), (184, 29978), (222, 30095), (Start: 226 @30107 has 1 MA's), (229, 30116), (230, 30125), (256, 30233), (263, 30254), (265, 30266), (271, 30290), (281, 30332), (307, 30461), (327, 30521), (341, 30578), (357, 30632), (362, 30647), (400, 30755), (408, 30788), (432, 30869), (436, 30884), (461, 30989), (492, 31103), (495, 31115), (534, 31202), (544, 31226),

Gene: KyMonks1A\_40 Start: 29951, Stop: 31453, Start Num: 116

Candidate Starts for KyMonks1A\_40:

(Start: 56 @29870 has 26 MA's), (Start: 59 @29876 has 2 MA's), (Start: 62 @29882 has 9 MA's), (Start: 63 @29885 has 9 MA's), (Start: 75 @29900 has 1 MA's), (Start: 116 @29951 has 209 MA's), (Start: 179 @30170 has 1 MA's), (Start: 181 @30176 has 1 MA's), (184, 30197), (Start: 226 @30326 has 1 MA's), (229, 30335), (230, 30344), (256, 30452), (263, 30473), (265, 30485), (271, 30509), (281, 30551), (307, 30680), (327, 30740), (341, 30797), (349, 30824), (357, 30851), (362, 30866), (398, 30968), (400, 30974), (408, 31007), (432, 31088), (436, 31103), (492, 31322), (534, 31421), (544, 31445),

Gene: Kyee\_33 Start: 26635, Stop: 25121, Start Num: 113

Candidate Starts for Kyee\_33:

(Start: 84 @26677 has 1 MA's), (Start: 107 @26644 has 19 MA's), (Start: 113 @26635 has 105 MA's), (154, 26473), (Start: 179 @26407 has 1 MA's), (183, 26389), (205, 26314), (210, 26290), (218, 26251), (219, 26248), (240, 26161), (268, 26047), (271, 26035), (311, 25852), (340, 25741), (354, 25690), (396, 25561), (399, 25552), (419, 25477), (421, 25471), (455, 25348), (463, 25309), (521, 25159), (528, 25144),

Gene: Kykar\_36 Start: 28846, Stop: 30429, Start Num: 56

Candidate Starts for Kykar\_36:

(Start: 56 @28846 has 26 MA's), (Start: 59 @28852 has 2 MA's), (Start: 62 @28858 has 9 MA's), (Start: 63 @28861 has 9 MA's), (Start: 75 @28876 has 1 MA's), (Start: 116 @28927 has 209 MA's), (Start: 126 @28942 has 8 MA's), (Start: 179 @29146 has 1 MA's), (Start: 181 @29152 has 1 MA's), (184, 29173), (222, 29290), (Start: 226 @29302 has 1 MA's), (229, 29311), (230, 29320), (256, 29428), (263, 29449), (265, 29461), (271, 29485), (281, 29527), (307, 29656), (327, 29716), (341, 29773), (349, 29800), (357, 29827), (358, 29830), (362, 29842), (400, 29950), (408, 29983), (432, 30064), (436, 30079), (461, 30184), (492, 30298), (534, 30397), (544, 30421),

Gene: Lambert1\_34 Start: 27244, Stop: 25721, Start Num: 106

Candidate Starts for Lambert1\_34:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752), (263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257),

(404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: Lamina13\_37 Start: 29040, Stop: 30542, Start Num: 116

Candidate Starts for Lamina13\_37:

(Start: 56 @28959 has 26 MA's), (Start: 59 @28965 has 2 MA's), (Start: 62 @28971 has 9 MA's), (Start: 63 @28974 has 9 MA's), (Start: 75 @28989 has 1 MA's), (Start: 116 @29040 has 209 MA's), (Start: 126 @29055 has 8 MA's), (128, 29064), (Start: 181 @29265 has 1 MA's), (Start: 226 @29415 has 1 MA's), (229, 29424), (230, 29433), (252, 29529), (256, 29541), (263, 29562), (265, 29574), (271, 29598), (281, 29640), (307, 29769), (327, 29829), (341, 29886), (357, 29940), (362, 29955), (400, 30063), (408, 30096), (432, 30177), (436, 30192), (461, 30297), (492, 30411), (534, 30510), (544, 30534),

Gene: Lannister\_51 Start: 35058, Stop: 36647, Start Num: 50

Candidate Starts for Lannister\_51:

(28, 34986), (32, 34995), (33, 35001), (Start: 50 @35058 has 23 MA's), (93, 35130), (Start: 127 @35184 has 3 MA's), (144, 35268), (148, 35283), (156, 35316), (187, 35418), (193, 35436), (220, 35517), (222, 35520), (252, 35646), (259, 35673), (273, 35730), (277, 35742), (287, 35784), (289, 35787), (294, 35826), (301, 35844), (305, 35856), (371, 36072), (402, 36171), (407, 36195), (415, 36222), (426, 36267), (436, 36300), (484, 36480), (487, 36489), (501, 36528), (530, 36597), (537, 36615),

Gene: LappelDuVide\_33 Start: 26636, Stop: 25122, Start Num: 113

Candidate Starts for LappelDuVide\_33:

(Start: 84 @26678 has 1 MA's), (Start: 107 @26645 has 19 MA's), (Start: 113 @26636 has 105 MA's), (154, 26474), (Start: 179 @26408 has 1 MA's), (183, 26390), (205, 26315), (210, 26291), (218, 26252), (219, 26249), (240, 26162), (268, 26048), (271, 26036), (311, 25853), (340, 25742), (354, 25691), (396, 25562), (399, 25553), (419, 25478), (421, 25472), (455, 25349), (463, 25310), (521, 25160), (528, 25145),

Gene: LarryKay\_36 Start: 27311, Stop: 25743, Start Num: 113

Candidate Starts for LarryKay\_36:

(37, 27461), (43, 27446), (88, 27347), (Start: 113 @27311 has 105 MA's), (184, 27056), (191, 27032), (208, 26972), (218, 26924), (219, 26921), (240, 26834), (245, 26822), (247, 26801), (254, 26777), (271, 26708), (287, 26639), (288, 26630), (311, 26525), (321, 26480), (354, 26348), (381, 26264), (398, 26207), (455, 26000), (495, 25859),

Gene: Lego\_49 Start: 35038, Stop: 36447, Start Num: 116

Candidate Starts for Lego\_49:

(Start: 116 @35038 has 209 MA's), (147, 35152), (Start: 152 @35176 has 1 MA's), (Start: 181 @35260 has 1 MA's), (216, 35371), (222, 35383), (225, 35392), (247, 35491), (271, 35584), (273, 35596), (281, 35623), (328, 35782), (422, 36103), (424, 36115), (435, 36148), (473, 36286),

Gene: Lemur\_33 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for Lemur\_33:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (240, 26160), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: Lesedi\_36 Start: 29315, Stop: 30817, Start Num: 116

Candidate Starts for Lesedi\_36:

(Start: 56 @29234 has 26 MA's), (Start: 59 @29240 has 2 MA's), (Start: 62 @29246 has 9 MA's), (Start: 63 @29249 has 9 MA's), (Start: 75 @29264 has 1 MA's), (Start: 116 @29315 has 209 MA's), (Start: 179 @29534 has 1 MA's), (Start: 181 @29540 has 1 MA's), (184, 29561), (Start: 226 @29690 has 1 MA's), (229, 29699), (230, 29708), (256, 29816), (263, 29837), (265, 29849), (271, 29873), (281, 29915), (307, 30044), (327, 30104), (341, 30161), (357, 30215), (362, 30230), (400, 30338), (408, 30371), (432, 30452), (436, 30467), (461, 30572), (492, 30686), (534, 30785), (544, 30809),

Gene: Lev2\_30 Start: 25599, Stop: 24106, Start Num: 116

Candidate Starts for Lev2\_30:

(Start: 116 @25599 has 209 MA's), (Start: 130 @25566 has 1 MA's), (Start: 131 @25563 has 3 MA's), (Start: 134 @25545 has 4 MA's), (Start: 152 @25464 has 1 MA's), (196, 25320), (205, 25293), (222, 25245), (263, 25080), (268, 25056), (269, 25053), (273, 25032), (316, 24843), (371, 24672), (404, 24537), (416, 24495), (419, 24483), (443, 24399), (447, 24384), (453, 24369), (500, 24192), (521, 24162), (535, 24129),

Gene: Levia\_33 Start: 29230, Stop: 30810, Start Num: 63

Candidate Starts for Levia\_33:

(Start: 56 @29215 has 26 MA's), (Start: 59 @29221 has 2 MA's), (Start: 62 @29227 has 9 MA's), (Start: 63 @29230 has 9 MA's), (Start: 75 @29245 has 1 MA's), (Start: 116 @29296 has 209 MA's), (Start: 126 @29311 has 8 MA's), (Start: 179 @29515 has 1 MA's), (Start: 181 @29521 has 1 MA's), (184, 29542), (222, 29659), (Start: 226 @29671 has 1 MA's), (229, 29680), (230, 29689), (252, 29785), (256, 29797), (263, 29818), (265, 29830), (271, 29854), (307, 30025), (327, 30085), (341, 30142), (349, 30169), (357, 30196), (358, 30199), (362, 30211), (400, 30319), (432, 30433), (436, 30448), (492, 30667),

Gene: Licorice\_39 Start: 30385, Stop: 31887, Start Num: 116

Candidate Starts for Licorice\_39:

(Start: 56 @30304 has 26 MA's), (Start: 59 @30310 has 2 MA's), (Start: 62 @30316 has 9 MA's), (Start: 63 @30319 has 9 MA's), (Start: 75 @30334 has 1 MA's), (Start: 116 @30385 has 209 MA's), (Start: 181 @30610 has 1 MA's), (Start: 226 @30760 has 1 MA's), (229, 30769), (230, 30778), (256, 30886), (263, 30907), (265, 30919), (271, 30943), (281, 30985), (307, 31114), (327, 31174), (341, 31231), (349, 31258), (357, 31285), (362, 31300), (386, 31369), (400, 31408), (408, 31441), (432, 31522), (436, 31537), (492, 31756), (534, 31855), (544, 31879),

Gene: Liebe\_51 Start: 37490, Stop: 38902, Start Num: 116

Candidate Starts for Liebe\_51:

(Start: 116 @37490 has 209 MA's), (Start: 152 @37628 has 1 MA's), (193, 37763), (216, 37823), (222, 37835), (227, 37853), (235, 37892), (269, 38027), (271, 38036), (307, 38168), (310, 38180), (335, 38261), (400, 38471), (408, 38504), (422, 38546), (430, 38573), (435, 38591), (474, 38732), (493, 38795), (507, 38819), (541, 38897),

Gene: Lika\_49 Start: 35118, Stop: 36695, Start Num: 50

Candidate Starts for Lika\_49:

(Start: 31 @35052 has 7 MA's), (Start: 50 @35118 has 23 MA's), (Start: 127 @35238 has 3 MA's), (148, 35337), (Start: 152 @35355 has 1 MA's), (166, 35406), (192, 35487), (193, 35490), (216, 35562), (220, 35571), (222, 35574), (259, 35727), (273, 35784), (274, 35787), (277, 35796), (339, 36024), (363, 36090), (371, 36120), (402, 36219), (407, 36243), (410, 36252), (417, 36276), (436, 36348), (487, 36537), (501, 36576), (511, 36600), (520, 36615), (525, 36630),

Gene: LilBib\_37 Start: 30176, Stop: 31678, Start Num: 116

Candidate Starts for LilBib\_37:

(Start: 56 @30095 has 26 MA's), (Start: 59 @30101 has 2 MA's), (Start: 62 @30107 has 9 MA's), (Start: 63 @30110 has 9 MA's), (Start: 75 @30125 has 1 MA's), (Start: 116 @30176 has 209 MA's),

(Start: 126 @30191 has 8 MA's), (Start: 179 @30395 has 1 MA's), (Start: 181 @30401 has 1 MA's), (183, 30413), (184, 30422), (Start: 226 @30551 has 1 MA's), (229, 30560), (230, 30569), (256, 30677), (265, 30710), (271, 30734), (281, 30776), (307, 30905), (327, 30965), (341, 31022), (349, 31049), (357, 31076), (362, 31091), (400, 31199), (408, 31232), (432, 31313), (436, 31328), (461, 31433), (492, 31547), (534, 31646), (544, 31670),

Gene: Lilbooboo\_54 Start: 38473, Stop: 40032, Start Num: 129

Candidate Starts for Lilbooboo\_54:

(Start: 77 @38377 has 1 MA's), (Start: 105 @38422 has 3 MA's), (111, 38431), (Start: 129 @38473 has 3 MA's), (180, 38659), (Start: 181 @38662 has 1 MA's), (187, 38695), (190, 38704), (203, 38743), (213, 38779), (217, 38809), (222, 38821), (235, 38878), (236, 38881), (242, 38899), (244, 38908), (313, 39235), (315, 39247), (319, 39265), (326, 39292), (337, 39337), (356, 39409), (357, 39415), (359, 39421), (371, 39445), (382, 39490), (398, 39544), (414, 39604), (438, 39688), (471, 39805), (489, 39877), (519, 39955), (523, 39967),

Gene: Lillie\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Lillie\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (229, 23240), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: LittleB\_33 Start: 26638, Stop: 25124, Start Num: 113

Candidate Starts for LittleB\_33:

(Start: 84 @26680 has 1 MA's), (Start: 107 @26647 has 19 MA's), (Start: 113 @26638 has 105 MA's), (154, 26476), (Start: 179 @26410 has 1 MA's), (183, 26392), (205, 26317), (210, 26293), (218, 26254), (219, 26251), (240, 26164), (268, 26050), (271, 26038), (311, 25855), (340, 25744), (354, 25693), (396, 25564), (399, 25555), (419, 25480), (421, 25474), (455, 25351), (463, 25312), (521, 25162), (528, 25147),

Gene: LittleCherry\_30 Start: 25778, Stop: 24285, Start Num: 116

Candidate Starts for LittleCherry\_30:

(Start: 116 @25778 has 209 MA's), (Start: 130 @25745 has 1 MA's), (Start: 131 @25742 has 3 MA's), (Start: 134 @25724 has 4 MA's), (Start: 152 @25643 has 1 MA's), (196, 25499), (205, 25472), (222, 25424), (263, 25259), (268, 25235), (269, 25232), (273, 25211), (316, 25022), (357, 24881), (371, 24851), (416, 24674), (419, 24662), (443, 24578), (447, 24563), (453, 24548), (500, 24371), (521, 24341), (535, 24308),

Gene: LittleGuy\_33 Start: 26578, Stop: 25082, Start Num: 116

Candidate Starts for LittleGuy\_33:

(Start: 64 @26644 has 10 MA's), (Start: 116 @26578 has 209 MA's), (Start: 127 @26560 has 3 MA's), (138, 26506), (150, 26455), (Start: 152 @26443 has 1 MA's), (190, 26317), (197, 26296), (211, 26266), (220, 26227), (231, 26188), (253, 26098), (268, 26038), (282, 25984), (310, 25846), (380, 25615), (403, 25525), (412, 25489), (419, 25462), (437, 25399), (493, 25189), (500, 25171), (512, 25159), (517, 25150),

Gene: Lizalica\_49 Start: 34782, Stop: 36191, Start Num: 116

Candidate Starts for Lizalica\_49:

(Start: 116 @34782 has 209 MA's), (Start: 181 @35004 has 1 MA's), (192, 35052), (216, 35115), (222, 35127), (225, 35136), (247, 35235), (271, 35328), (281, 35367), (328, 35526), (417, 35829), (422, 35847), (424, 35859), (435, 35892), (473, 36030),



Gene: LochMonster\_33 Start: 26613, Stop: 25117, Start Num: 116

Candidate Starts for LochMonster\_33:

(Start: 64 @26679 has 10 MA's), (Start: 116 @26613 has 209 MA's), (Start: 127 @26595 has 3 MA's), (139, 26538), (143, 26520), (150, 26490), (Start: 152 @26478 has 1 MA's), (190, 26352), (197, 26331), (211, 26301), (220, 26262), (231, 26223), (253, 26133), (268, 26073), (282, 26019), (310, 25881), (380, 25650), (403, 25560), (412, 25524), (419, 25497), (435, 25443), (437, 25434), (493, 25224), (500, 25206), (512, 25194), (517, 25185),

Gene: Lockley\_38 Start: 29430, Stop: 30932, Start Num: 116

Candidate Starts for Lockley\_38:

(Start: 56 @29349 has 26 MA's), (Start: 59 @29355 has 2 MA's), (Start: 62 @29361 has 9 MA's), (Start: 63 @29364 has 9 MA's), (Start: 75 @29379 has 1 MA's), (Start: 116 @29430 has 209 MA's), (Start: 123 @29439 has 2 MA's), (Start: 126 @29445 has 8 MA's), (128, 29454), (Start: 179 @29649 has 1 MA's), (Start: 181 @29655 has 1 MA's), (184, 29676), (222, 29793), (Start: 226 @29805 has 1 MA's), (229, 29814), (230, 29823), (256, 29931), (263, 29952), (265, 29964), (271, 29988), (281, 30030), (307, 30159), (327, 30219), (341, 30276), (357, 30330), (362, 30345), (398, 30447), (400, 30453), (432, 30567), (436, 30582), (492, 30801), (534, 30900), (544, 30924),

Gene: London\_48 Start: 35959, Stop: 37380, Start Num: 110

Candidate Starts for London\_48:

(96, 35941), (108, 35956), (Start: 110 @35959 has 33 MA's), (Start: 116 @35968 has 209 MA's), (147, 36082), (Start: 152 @36106 has 1 MA's), (Start: 181 @36190 has 1 MA's), (187, 36223), (192, 36238), (216, 36301), (222, 36313), (225, 36322), (247, 36421), (258, 36463), (271, 36514), (281, 36553), (304, 36631), (310, 36658), (417, 37018), (419, 37027), (422, 37036), (424, 37048), (473, 37219), (505, 37306),

Gene: Lopton\_38 Start: 30822, Stop: 32324, Start Num: 116

Candidate Starts for Lopton\_38:

(Start: 56 @30741 has 26 MA's), (Start: 59 @30747 has 2 MA's), (Start: 62 @30753 has 9 MA's), (Start: 63 @30756 has 9 MA's), (Start: 75 @30771 has 1 MA's), (Start: 116 @30822 has 209 MA's), (148, 30939), (Start: 179 @31041 has 1 MA's), (Start: 181 @31047 has 1 MA's), (184, 31068), (222, 31185), (Start: 226 @31197 has 1 MA's), (229, 31206), (230, 31215), (256, 31323), (263, 31344), (265, 31356), (271, 31380), (281, 31422), (307, 31551), (327, 31611), (341, 31668), (349, 31695), (357, 31722), (358, 31725), (362, 31737), (386, 31806), (400, 31845), (408, 31878), (432, 31959), (436, 31974), (461, 32079), (492, 32193), (534, 32292), (544, 32316),

Gene: Lorelei\_51 Start: 35146, Stop: 36723, Start Num: 50

Candidate Starts for Lorelei\_51:

(Start: 31 @35080 has 7 MA's), (Start: 50 @35146 has 23 MA's), (Start: 127 @35266 has 3 MA's), (Start: 152 @35383 has 1 MA's), (166, 35434), (192, 35515), (193, 35518), (216, 35590), (220, 35599), (222, 35602), (223, 35605), (229, 35623), (259, 35755), (273, 35812), (274, 35815), (277, 35824), (283, 35848), (300, 35917), (337, 36043), (339, 36052), (363, 36118), (371, 36148), (402, 36247), (407, 36271), (410, 36280), (417, 36304), (436, 36376), (487, 36565), (501, 36604), (511, 36628), (520, 36643), (525, 36658),

Gene: Lorenzo\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Lorenzo\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Louie6\_36 Start: 27310, Stop: 25742, Start Num: 113

Candidate Starts for Louie6\_36:

(37, 27460), (43, 27445), (88, 27346), (Start: 113 @27310 has 105 MA's), (184, 27055), (191, 27031), (208, 26971), (218, 26923), (219, 26920), (240, 26833), (245, 26821), (247, 26800), (254, 26776), (271, 26707), (287, 26638), (288, 26629), (311, 26524), (321, 26479), (354, 26347), (381, 26263), (398, 26206), (455, 25999), (495, 25858),

Gene: LunarLander\_39 Start: 29509, Stop: 31008, Start Num: 116

Candidate Starts for LunarLander\_39:

(Start: 56 @29428 has 26 MA's), (Start: 59 @29434 has 2 MA's), (Start: 62 @29440 has 9 MA's), (Start: 63 @29443 has 9 MA's), (Start: 75 @29458 has 1 MA's), (Start: 116 @29509 has 209 MA's), (Start: 179 @29728 has 1 MA's), (Start: 181 @29734 has 1 MA's), (184, 29755), (Start: 226 @29884 has 1 MA's), (229, 29893), (230, 29902), (256, 30010), (263, 30031), (265, 30043), (271, 30067), (281, 30109), (307, 30238), (327, 30298), (341, 30355), (349, 30382), (357, 30409), (358, 30412), (362, 30424), (398, 30523), (408, 30562), (432, 30643), (436, 30658), (461, 30763), (492, 30877), (534, 30976), (544, 31000),

Gene: Lunsford\_34 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for Lunsford\_34:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: MPlant7149\_37 Start: 29019, Stop: 30602, Start Num: 56

Candidate Starts for MPlant7149\_37:

(Start: 56 @29019 has 26 MA's), (Start: 59 @29025 has 2 MA's), (Start: 62 @29031 has 9 MA's), (Start: 63 @29034 has 9 MA's), (Start: 75 @29049 has 1 MA's), (Start: 116 @29100 has 209 MA's), (Start: 145 @29208 has 1 MA's), (Start: 179 @29319 has 1 MA's), (Start: 181 @29325 has 1 MA's), (183, 29337), (184, 29346), (194, 29379), (222, 29463), (Start: 226 @29475 has 1 MA's), (229, 29484), (230, 29493), (256, 29601), (263, 29622), (265, 29634), (271, 29658), (281, 29700), (307, 29829), (327, 29889), (341, 29946), (349, 29973), (351, 29988), (354, 29991), (357, 30000), (358, 30003), (362, 30015), (386, 30084), (400, 30123), (408, 30156), (432, 30237), (436, 30252), (461, 30357), (492, 30471), (534, 30570), (544, 30594),

Gene: MaGuCo\_47 Start: 36178, Stop: 37593, Start Num: 116

Candidate Starts for MaGuCo\_47:

(Start: 116 @36178 has 209 MA's), (Start: 152 @36316 has 1 MA's), (216, 36511), (222, 36523), (227, 36541), (242, 36601), (245, 36610), (269, 36715), (271, 36724), (307, 36856), (310, 36868), (335, 36949), (400, 37159), (408, 37192), (422, 37234), (430, 37261), (435, 37279), (474, 37420), (493, 37483), (504, 37501), (507, 37507), (538, 37579), (541, 37585),

Gene: Mabodamaca\_60 Start: 40399, Stop: 41982, Start Num: 81

Candidate Starts for Mabodamaca\_60:

(71, 40381), (Start: 81 @40399 has 2 MA's), (Start: 90 @40417 has 1 MA's), (172, 40633), (186, 40693), (229, 40855), (233, 40879), (301, 41197), (365, 41431), (405, 41554), (434, 41659), (444, 41695), (452, 41719), (454, 41728), (466, 41782), (471, 41794), (482, 41839), (507, 41896),

Gene: Magnar\_37 Start: 29288, Stop: 30790, Start Num: 116

Candidate Starts for Magnar\_37:

(Start: 56 @29207 has 26 MA's), (Start: 59 @29213 has 2 MA's), (Start: 62 @29219 has 9 MA's), (Start: 63 @29222 has 9 MA's), (Start: 75 @29237 has 1 MA's), (Start: 116 @29288 has 209 MA's), (Start: 126 @29303 has 8 MA's), (Start: 179 @29507 has 1 MA's), (Start: 181 @29513 has 1 MA's),

(183, 29525), (184, 29534), (222, 29651), (Start: 226 @29663 has 1 MA's), (229, 29672), (230, 29681), (256, 29789), (263, 29810), (265, 29822), (271, 29846), (281, 29888), (307, 30017), (327, 30077), (341, 30134), (349, 30161), (357, 30188), (358, 30191), (362, 30203), (386, 30272), (400, 30311), (408, 30344), (432, 30425), (436, 30440), (461, 30545), (492, 30659), (534, 30758), (544, 30782),

Gene: Magnito\_36 Start: 29012, Stop: 30595, Start Num: 56

Candidate Starts for Magnito\_36:

(Start: 56 @29012 has 26 MA's), (Start: 59 @29018 has 2 MA's), (Start: 62 @29024 has 9 MA's), (Start: 63 @29027 has 9 MA's), (Start: 75 @29042 has 1 MA's), (Start: 116 @29093 has 209 MA's), (Start: 179 @29312 has 1 MA's), (Start: 181 @29318 has 1 MA's), (184, 29339), (Start: 226 @29468 has 1 MA's), (229, 29477), (230, 29486), (256, 29594), (263, 29615), (265, 29627), (271, 29651), (281, 29693), (307, 29822), (327, 29882), (341, 29939), (357, 29993), (358, 29996), (362, 30008), (400, 30116), (408, 30149), (409, 30152), (432, 30230), (436, 30245), (461, 30350), (465, 30365), (492, 30464), (534, 30563), (544, 30587),

Gene: Makemake\_38 Start: 30742, Stop: 32256, Start Num: 116

Candidate Starts for Makemake\_38:

(Start: 56 @30661 has 26 MA's), (Start: 59 @30667 has 2 MA's), (Start: 62 @30673 has 9 MA's), (Start: 63 @30676 has 9 MA's), (Start: 75 @30691 has 1 MA's), (Start: 116 @30742 has 209 MA's), (Start: 126 @30757 has 8 MA's), (Start: 179 @30961 has 1 MA's), (Start: 181 @30967 has 1 MA's), (184, 30988), (222, 31105), (Start: 226 @31117 has 1 MA's), (229, 31126), (230, 31135), (231, 31141), (252, 31231), (256, 31243), (265, 31276), (307, 31471), (316, 31504), (327, 31531), (341, 31588), (357, 31642), (362, 31657), (400, 31765), (408, 31798), (432, 31879), (436, 31894), (492, 32113),

Gene: Manatee\_38 Start: 29063, Stop: 30628, Start Num: 63

Candidate Starts for Manatee\_38:

(Start: 56 @29048 has 26 MA's), (Start: 59 @29054 has 2 MA's), (Start: 62 @29060 has 9 MA's), (Start: 63 @29063 has 9 MA's), (Start: 75 @29078 has 1 MA's), (Start: 116 @29129 has 209 MA's), (Start: 179 @29348 has 1 MA's), (Start: 181 @29354 has 1 MA's), (184, 29375), (222, 29492), (Start: 226 @29504 has 1 MA's), (229, 29513), (230, 29522), (231, 29528), (252, 29618), (256, 29630), (263, 29651), (265, 29663), (271, 29687), (281, 29729), (307, 29858), (327, 29918), (341, 29975), (346, 29990), (357, 30029), (362, 30044), (408, 30182), (419, 30221), (425, 30248), (436, 30278), (492, 30497), (534, 30596), (544, 30620),

Gene: Maneekul\_50 Start: 36203, Stop: 37825, Start Num: 47

Candidate Starts for Maneekul\_50:

(Start: 31 @36146 has 7 MA's), (Start: 47 @36203 has 5 MA's), (Start: 50 @36212 has 23 MA's), (Start: 127 @36359 has 3 MA's), (148, 36458), (Start: 152 @36476 has 1 MA's), (166, 36527), (192, 36608), (193, 36611), (216, 36683), (220, 36692), (222, 36695), (252, 36821), (259, 36848), (277, 36917), (289, 36962), (305, 37031), (311, 37058), (328, 37106), (339, 37154), (355, 37193), (363, 37220), (371, 37250), (407, 37373), (423, 37433), (436, 37478), (472, 37607), (484, 37658), (487, 37667), (501, 37706), (511, 37730), (520, 37745), (525, 37760), (530, 37775),

Gene: Marcell\_37 Start: 29790, Stop: 31292, Start Num: 116

Candidate Starts for Marcell\_37:

(Start: 56 @29709 has 26 MA's), (Start: 59 @29715 has 2 MA's), (Start: 63 @29724 has 9 MA's), (Start: 75 @29739 has 1 MA's), (Start: 116 @29790 has 209 MA's), (Start: 179 @30009 has 1 MA's), (Start: 181 @30015 has 1 MA's), (184, 30036), (194, 30069), (Start: 226 @30165 has 1 MA's), (229, 30174), (230, 30183), (256, 30291), (263, 30312), (265, 30324), (271, 30348), (281, 30390), (307, 30519), (327, 30579), (341, 30636), (357, 30690), (358, 30693), (362, 30705), (400, 30813), (408, 30846), (432, 30927), (436, 30942), (461, 31047), (492, 31161), (534, 31260), (544, 31284),

Gene: Marchy\_32 Start: 26377, Stop: 27891, Start Num: 116

Candidate Starts for Marchy\_32:

(Start: 56 @26296 has 26 MA's), (Start: 59 @26302 has 2 MA's), (Start: 62 @26308 has 9 MA's), (Start: 63 @26311 has 9 MA's), (Start: 75 @26326 has 1 MA's), (Start: 116 @26377 has 209 MA's), (Start: 179 @26596 has 1 MA's), (Start: 181 @26602 has 1 MA's), (184, 26623), (Start: 226 @26752 has 1 MA's), (229, 26761), (230, 26770), (252, 26866), (256, 26878), (265, 26911), (273, 26947), (307, 27106), (327, 27166), (341, 27223), (357, 27277), (362, 27292), (400, 27400), (419, 27472), (432, 27514), (436, 27529), (492, 27748),

Gene: Marco3\_37 Start: 29594, Stop: 31177, Start Num: 56

Candidate Starts for Marco3\_37:

(Start: 56 @29594 has 26 MA's), (Start: 59 @29600 has 2 MA's), (Start: 62 @29606 has 9 MA's), (Start: 63 @29609 has 9 MA's), (Start: 75 @29624 has 1 MA's), (Start: 116 @29675 has 209 MA's), (Start: 145 @29783 has 1 MA's), (Start: 179 @29894 has 1 MA's), (Start: 181 @29900 has 1 MA's), (184, 29921), (222, 30038), (Start: 226 @30050 has 1 MA's), (229, 30059), (230, 30068), (256, 30176), (263, 30197), (265, 30209), (271, 30233), (281, 30275), (307, 30404), (327, 30464), (341, 30521), (357, 30575), (358, 30578), (362, 30590), (400, 30698), (408, 30731), (432, 30812), (436, 30827), (461, 30932), (492, 31046), (534, 31145), (544, 31169),

Gene: Marge\_38 Start: 30106, Stop: 31677, Start Num: 62

Candidate Starts for Marge\_38:

(Start: 59 @30100 has 2 MA's), (Start: 62 @30106 has 9 MA's), (Start: 63 @30109 has 9 MA's), (Start: 75 @30124 has 1 MA's), (Start: 116 @30175 has 209 MA's), (Start: 179 @30394 has 1 MA's), (Start: 181 @30400 has 1 MA's), (184, 30421), (Start: 226 @30550 has 1 MA's), (229, 30559), (230, 30568), (256, 30676), (263, 30697), (265, 30709), (271, 30733), (281, 30775), (307, 30904), (327, 30964), (341, 31021), (349, 31048), (357, 31075), (358, 31078), (362, 31090), (386, 31159), (400, 31198), (408, 31231), (432, 31312), (436, 31327), (461, 31432), (492, 31546), (534, 31645), (544, 31669),

Gene: Margo\_34 Start: 27255, Stop: 25747, Start Num: 116

Candidate Starts for Margo\_34:

(Start: 106 @27270 has 2 MA's), (Start: 116 @27255 has 209 MA's), (Start: 122 @27249 has 3 MA's), (Start: 123 @27246 has 2 MA's), (163, 27078), (164, 27072), (204, 26955), (225, 26895), (252, 26778), (263, 26739), (269, 26712), (272, 26700), (293, 26565), (336, 26412), (361, 26322), (375, 26283), (404, 26193), (416, 26151), (419, 26139), (433, 26094), (438, 26073), (495, 25860), (507, 25839),

Gene: Maroc7\_37 Start: 29274, Stop: 30776, Start Num: 116

Candidate Starts for Maroc7\_37:

(Start: 56 @29193 has 26 MA's), (Start: 59 @29199 has 2 MA's), (Start: 62 @29205 has 9 MA's), (Start: 63 @29208 has 9 MA's), (Start: 75 @29223 has 1 MA's), (Start: 116 @29274 has 209 MA's), (Start: 126 @29289 has 8 MA's), (Start: 179 @29493 has 1 MA's), (Start: 181 @29499 has 1 MA's), (Start: 226 @29649 has 1 MA's), (229, 29658), (230, 29667), (256, 29775), (263, 29796), (265, 29808), (271, 29832), (281, 29874), (307, 30003), (327, 30063), (341, 30120), (349, 30147), (357, 30174), (358, 30177), (362, 30189), (386, 30258), (398, 30291), (400, 30297), (408, 30330), (432, 30411), (436, 30426), (461, 30531), (492, 30645), (534, 30744), (544, 30768),

Gene: Marsha\_37 Start: 30335, Stop: 31873, Start Num: 116

Candidate Starts for Marsha\_37:

(Start: 56 @30254 has 26 MA's), (Start: 59 @30260 has 2 MA's), (Start: 62 @30266 has 9 MA's), (Start: 63 @30269 has 9 MA's), (Start: 75 @30284 has 1 MA's), (Start: 116 @30335 has 209 MA's), (Start: 179 @30554 has 1 MA's), (Start: 181 @30560 has 1 MA's), (Start: 226 @30710 has 1 MA's), (229, 30719), (230, 30728), (231, 30734), (256, 30836), (265, 30869), (273, 30905), (307, 31064), (327, 31124), (341, 31181), (349, 31208), (357, 31235), (362, 31250), (398, 31352), (400, 31358), (408, 31391), (409, 31394), (432, 31472), (436, 31487), (492, 31706),

Gene: MaryBeth\_37 Start: 29595, Stop: 31097, Start Num: 116

Candidate Starts for MaryBeth\_37:

(Start: 56 @29514 has 26 MA's), (Start: 59 @29520 has 2 MA's), (Start: 62 @29526 has 9 MA's),  
(Start: 63 @29529 has 9 MA's), (Start: 75 @29544 has 1 MA's), (Start: 116 @29595 has 209 MA's),  
(Start: 126 @29610 has 8 MA's), (Start: 179 @29814 has 1 MA's), (Start: 181 @29820 has 1 MA's),  
(183, 29832), (184, 29841), (Start: 226 @29970 has 1 MA's), (229, 29979), (230, 29988), (256, 30096),  
(263, 30117), (265, 30129), (271, 30153), (281, 30195), (307, 30324), (327, 30384), (341, 30441),  
(349, 30468), (357, 30495), (358, 30498), (362, 30510), (400, 30618), (408, 30651), (432, 30732),  
(436, 30747), (461, 30852), (492, 30966), (534, 31065), (544, 31089),

Gene: MarysWell\_29 Start: 25772, Stop: 24333, Start Num: 134

Candidate Starts for MarysWell\_29:

(Start: 116 @25826 has 209 MA's), (Start: 130 @25793 has 1 MA's), (Start: 131 @25790 has 3 MA's),  
(Start: 134 @25772 has 4 MA's), (Start: 152 @25691 has 1 MA's), (196, 25547), (205, 25520), (222,  
25472), (263, 25307), (268, 25283), (269, 25280), (273, 25259), (316, 25070), (357, 24929), (371,  
24899), (416, 24722), (419, 24710), (443, 24626), (447, 24611), (453, 24596), (500, 24419), (521,  
24389), (522, 24386), (535, 24356),

Gene: Maureen\_51 Start: 37489, Stop: 38901, Start Num: 116

Candidate Starts for Maureen\_51:

(Start: 116 @37489 has 209 MA's), (Start: 152 @37627 has 1 MA's), (193, 37762), (216, 37822), (222,  
37834), (227, 37852), (235, 37891), (269, 38026), (271, 38035), (307, 38167), (310, 38179), (335,  
38260), (400, 38470), (408, 38503), (422, 38545), (430, 38572), (435, 38590), (474, 38731), (493,  
38794), (507, 38818), (541, 38896),

Gene: Maverick\_33 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Maverick\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's),  
(154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253),  
(219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692),  
(396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161),  
(528, 25146),

Gene: Mayonnaise\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Mayonnaise\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's),  
(154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253),  
(219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692),  
(396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161),  
(528, 25146),

Gene: Mazhar510\_33 Start: 26638, Stop: 25124, Start Num: 113

Candidate Starts for Mazhar510\_33:

(Start: 84 @26680 has 1 MA's), (Start: 107 @26647 has 19 MA's), (Start: 113 @26638 has 105 MA's),  
(154, 26476), (Start: 179 @26410 has 1 MA's), (183, 26392), (205, 26317), (210, 26293), (218, 26254),  
(219, 26251), (268, 26050), (271, 26038), (311, 25855), (340, 25744), (354, 25693), (396, 25564),  
(399, 25555), (419, 25480), (421, 25474), (455, 25351), (463, 25312), (521, 25162), (528, 25147),

Gene: McGuire\_38 Start: 29330, Stop: 30922, Start Num: 49

Candidate Starts for McGuire\_38:

(Start: 49 @29330 has 1 MA's), (Start: 80 @29375 has 3 MA's), (Start: 116 @29420 has 209 MA's),  
(Start: 126 @29435 has 8 MA's), (128, 29444), (148, 29537), (Start: 179 @29639 has 1 MA's), (Start:  
181 @29645 has 1 MA's), (184, 29666), (222, 29783), (Start: 226 @29795 has 1 MA's), (229, 29804),

(230, 29813), (256, 29921), (263, 29942), (265, 29954), (271, 29978), (281, 30020), (307, 30149), (327, 30209), (341, 30266), (349, 30293), (357, 30320), (358, 30323), (362, 30335), (386, 30404), (398, 30437), (400, 30443), (408, 30476), (432, 30557), (436, 30572), (461, 30677), (492, 30791), (534, 30890), (544, 30914),

Gene: McSinger\_38 Start: 29906, Stop: 31483, Start Num: 59

Candidate Starts for McSinger\_38:

(Start: 56 @29900 has 26 MA's), (Start: 59 @29906 has 2 MA's), (Start: 62 @29912 has 9 MA's), (Start: 63 @29915 has 9 MA's), (Start: 75 @29930 has 1 MA's), (Start: 116 @29981 has 209 MA's), (Start: 179 @30200 has 1 MA's), (Start: 181 @30206 has 1 MA's), (Start: 226 @30356 has 1 MA's), (229, 30365), (230, 30374), (256, 30482), (263, 30503), (265, 30515), (271, 30539), (281, 30581), (307, 30710), (327, 30770), (341, 30827), (349, 30854), (357, 30881), (358, 30884), (362, 30896), (386, 30965), (400, 31004), (408, 31037), (432, 31118), (436, 31133), (461, 31238), (492, 31352), (495, 31364), (534, 31451), (544, 31475),

Gene: MeeZee\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for MeeZee\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: MetalQZJ\_37 Start: 29595, Stop: 31097, Start Num: 116

Candidate Starts for MetalQZJ\_37:

(Start: 56 @29514 has 26 MA's), (Start: 59 @29520 has 2 MA's), (Start: 62 @29526 has 9 MA's), (Start: 63 @29529 has 9 MA's), (Start: 75 @29544 has 1 MA's), (Start: 116 @29595 has 209 MA's), (Start: 126 @29610 has 8 MA's), (Start: 179 @29814 has 1 MA's), (Start: 181 @29820 has 1 MA's), (183, 29832), (184, 29841), (Start: 226 @29970 has 1 MA's), (229, 29979), (230, 29988), (256, 30096), (263, 30117), (265, 30129), (271, 30153), (281, 30195), (307, 30324), (327, 30384), (341, 30441), (349, 30468), (357, 30495), (358, 30498), (362, 30510), (400, 30618), (408, 30651), (432, 30732), (436, 30747), (461, 30852), (492, 30966), (534, 31065), (544, 31089),

Gene: Methuselah\_35 Start: 27305, Stop: 25737, Start Num: 113

Candidate Starts for Methuselah\_35:

(37, 27455), (43, 27440), (88, 27341), (Start: 113 @27305 has 105 MA's), (184, 27050), (191, 27026), (208, 26966), (218, 26918), (219, 26915), (240, 26828), (245, 26816), (247, 26795), (254, 26771), (271, 26702), (287, 26633), (288, 26624), (311, 26519), (321, 26474), (354, 26342), (381, 26258), (398, 26201), (455, 25994), (495, 25853),

Gene: Micasa\_30 Start: 25752, Stop: 24259, Start Num: 116

Candidate Starts for Micasa\_30:

(Start: 116 @25752 has 209 MA's), (Start: 130 @25719 has 1 MA's), (Start: 131 @25716 has 3 MA's), (Start: 134 @25698 has 4 MA's), (Start: 152 @25617 has 1 MA's), (196, 25473), (205, 25446), (222, 25398), (232, 25356), (263, 25233), (268, 25209), (269, 25206), (273, 25185), (287, 25128), (316, 24996), (357, 24855), (371, 24825), (416, 24648), (419, 24636), (443, 24552), (447, 24537), (453, 24522), (500, 24345), (521, 24315),

Gene: Michley\_37 Start: 29186, Stop: 30769, Start Num: 56

Candidate Starts for Michley\_37:

(Start: 56 @29186 has 26 MA's), (Start: 59 @29192 has 2 MA's), (Start: 62 @29198 has 9 MA's), (Start: 63 @29201 has 9 MA's), (Start: 75 @29216 has 1 MA's), (Start: 116 @29267 has 209 MA's), (Start: 126 @29282 has 8 MA's), (Start: 179 @29486 has 1 MA's), (Start: 181 @29492 has 1 MA's),

(183, 29504), (184, 29513), (Start: 226 @29642 has 1 MA's), (229, 29651), (230, 29660), (256, 29768), (263, 29789), (265, 29801), (271, 29825), (281, 29867), (307, 29996), (327, 30056), (341, 30113), (349, 30140), (357, 30167), (358, 30170), (362, 30182), (400, 30290), (408, 30323), (432, 30404), (436, 30419), (461, 30524), (492, 30638), (534, 30737), (544, 30761),

Gene: Midas2\_30 Start: 25826, Stop: 24333, Start Num: 116

Candidate Starts for Midas2\_30:

(Start: 116 @25826 has 209 MA's), (Start: 130 @25793 has 1 MA's), (Start: 131 @25790 has 3 MA's), (Start: 134 @25772 has 4 MA's), (Start: 152 @25691 has 1 MA's), (196, 25547), (205, 25520), (222, 25472), (263, 25307), (268, 25283), (269, 25280), (273, 25259), (287, 25202), (316, 25070), (357, 24929), (371, 24899), (416, 24722), (419, 24710), (443, 24626), (447, 24611), (453, 24596), (500, 24419), (521, 24389), (535, 24356),

Gene: Milcery\_30 Start: 25782, Stop: 24289, Start Num: 116

Candidate Starts for Milcery\_30:

(Start: 116 @25782 has 209 MA's), (Start: 130 @25749 has 1 MA's), (Start: 131 @25746 has 3 MA's), (Start: 134 @25728 has 4 MA's), (Start: 152 @25647 has 1 MA's), (196, 25503), (205, 25476), (222, 25428), (263, 25263), (268, 25239), (269, 25236), (273, 25215), (316, 25026), (357, 24885), (371, 24855), (416, 24678), (419, 24666), (443, 24582), (447, 24567), (453, 24552), (500, 24375), (521, 24345), (535, 24312),

Gene: Millski\_32 Start: 26641, Stop: 25127, Start Num: 113

Candidate Starts for Millski\_32:

(Start: 84 @26683 has 1 MA's), (Start: 107 @26650 has 19 MA's), (Start: 113 @26641 has 105 MA's), (154, 26479), (Start: 179 @26413 has 1 MA's), (183, 26395), (205, 26320), (210, 26296), (218, 26257), (219, 26254), (240, 26167), (268, 26053), (271, 26041), (311, 25858), (340, 25747), (354, 25696), (396, 25567), (399, 25558), (419, 25483), (421, 25477), (455, 25354), (463, 25315), (521, 25165), (528, 25150),

Gene: Miramae\_33 Start: 26969, Stop: 25407, Start Num: 64

Candidate Starts for Miramae\_33:

(Start: 64 @26969 has 10 MA's), (Start: 107 @26912 has 19 MA's), (Start: 116 @26903 has 209 MA's), (Start: 127 @26885 has 3 MA's), (139, 26828), (150, 26780), (Start: 152 @26768 has 1 MA's), (190, 26642), (197, 26621), (198, 26618), (211, 26591), (220, 26552), (253, 26423), (268, 26363), (310, 26171), (357, 26009), (412, 25814), (419, 25787), (435, 25733), (437, 25724), (493, 25514), (500, 25496), (512, 25484), (517, 25475), (524, 25457),

Gene: Misomonster\_38 Start: 27308, Stop: 25740, Start Num: 113

Candidate Starts for Misomonster\_38:

(37, 27458), (43, 27443), (88, 27344), (Start: 113 @27308 has 105 MA's), (184, 27053), (191, 27029), (208, 26969), (218, 26921), (219, 26918), (240, 26831), (245, 26819), (247, 26798), (254, 26774), (271, 26705), (287, 26636), (288, 26627), (311, 26522), (321, 26477), (354, 26345), (381, 26261), (398, 26204), (455, 25997), (495, 25856),

Gene: MissSwiss\_52 Start: 34520, Stop: 35938, Start Num: 110

Candidate Starts for MissSwiss\_52:

(96, 34502), (108, 34517), (Start: 110 @34520 has 33 MA's), (Start: 116 @34529 has 209 MA's), (147, 34643), (Start: 181 @34751 has 1 MA's), (192, 34799), (216, 34862), (222, 34874), (247, 34982), (271, 35075), (273, 35087), (281, 35114), (287, 35141), (416, 35573), (422, 35594), (444, 35672), (473, 35777),

Gene: Mkhuseli\_38 Start: 29400, Stop: 30968, Start Num: 63

Candidate Starts for Mkhuseli\_38:

(Start: 56 @29385 has 26 MA's), (Start: 59 @29391 has 2 MA's), (Start: 62 @29397 has 9 MA's), (Start: 63 @29400 has 9 MA's), (Start: 75 @29415 has 1 MA's), (Start: 116 @29466 has 209 MA's), (Start: 126 @29481 has 8 MA's), (151, 29595), (Start: 179 @29685 has 1 MA's), (Start: 181 @29691 has 1 MA's), (183, 29703), (Start: 226 @29841 has 1 MA's), (229, 29850), (230, 29859), (256, 29967), (263, 29988), (265, 30000), (271, 30024), (281, 30066), (307, 30195), (327, 30255), (341, 30312), (349, 30339), (357, 30366), (358, 30369), (362, 30381), (386, 30450), (398, 30483), (400, 30489), (408, 30522), (432, 30603), (436, 30618), (492, 30837), (506, 30873), (534, 30936), (544, 30960),

Gene: Molly\_39 Start: 29294, Stop: 30877, Start Num: 56

Candidate Starts for Molly\_39:

(Start: 56 @29294 has 26 MA's), (Start: 59 @29300 has 2 MA's), (Start: 62 @29306 has 9 MA's), (Start: 63 @29309 has 9 MA's), (Start: 75 @29324 has 1 MA's), (Start: 116 @29375 has 209 MA's), (124, 29387), (Start: 181 @29600 has 1 MA's), (183, 29612), (184, 29621), (194, 29654), (Start: 226 @29750 has 1 MA's), (229, 29759), (230, 29768), (256, 29876), (263, 29897), (265, 29909), (271, 29933), (281, 29975), (307, 30104), (327, 30164), (341, 30221), (349, 30248), (357, 30275), (358, 30278), (362, 30290), (386, 30359), (398, 30392), (400, 30398), (408, 30431), (432, 30512), (436, 30527), (461, 30632), (492, 30746), (534, 30845), (544, 30869),

Gene: Monet\_39 Start: 30804, Stop: 32306, Start Num: 116

Candidate Starts for Monet\_39:

(Start: 56 @30723 has 26 MA's), (Start: 59 @30729 has 2 MA's), (Start: 62 @30735 has 9 MA's), (Start: 63 @30738 has 9 MA's), (Start: 75 @30753 has 1 MA's), (Start: 116 @30804 has 209 MA's), (128, 30828), (Start: 179 @31023 has 1 MA's), (Start: 181 @31029 has 1 MA's), (184, 31050), (Start: 226 @31179 has 1 MA's), (229, 31188), (230, 31197), (256, 31305), (263, 31326), (265, 31338), (271, 31362), (281, 31404), (307, 31533), (327, 31593), (341, 31650), (349, 31677), (357, 31704), (362, 31719), (386, 31788), (400, 31827), (408, 31860), (432, 31941), (436, 31956), (461, 32061), (492, 32175), (495, 32187), (534, 32274), (544, 32298),

Gene: Moose\_37 Start: 29620, Stop: 31122, Start Num: 116

Candidate Starts for Moose\_37:

(Start: 56 @29539 has 26 MA's), (Start: 59 @29545 has 2 MA's), (Start: 62 @29551 has 9 MA's), (Start: 63 @29554 has 9 MA's), (Start: 75 @29569 has 1 MA's), (Start: 116 @29620 has 209 MA's), (Start: 126 @29635 has 8 MA's), (128, 29644), (Start: 179 @29839 has 1 MA's), (Start: 181 @29845 has 1 MA's), (183, 29857), (184, 29866), (Start: 226 @29995 has 1 MA's), (229, 30004), (230, 30013), (256, 30121), (263, 30142), (265, 30154), (271, 30178), (307, 30349), (327, 30409), (341, 30466), (357, 30520), (358, 30523), (362, 30535), (400, 30643), (408, 30676), (419, 30715), (432, 30757), (436, 30772), (492, 30991), (534, 31090), (544, 31114),

Gene: Morpher26\_33 Start: 26647, Stop: 25133, Start Num: 113

Candidate Starts for Morpher26\_33:

(Start: 84 @26689 has 1 MA's), (Start: 107 @26656 has 19 MA's), (Start: 113 @26647 has 105 MA's), (154, 26485), (Start: 179 @26419 has 1 MA's), (183, 26401), (205, 26326), (218, 26263), (219, 26260), (240, 26173), (271, 26047), (311, 25864), (327, 25807), (340, 25753), (354, 25702), (396, 25573), (399, 25564), (419, 25489), (421, 25483), (454, 25369), (455, 25360), (463, 25321), (521, 25171), (528, 25156),

Gene: Moss\_43 Start: 31498, Stop: 32937, Start Num: 115

Candidate Starts for Moss\_43:

(Start: 115 @31498 has 12 MA's), (Start: 145 @31609 has 1 MA's), (148, 31618), (172, 31681), (Start: 179 @31705 has 1 MA's), (182, 31714), (222, 31864), (225, 31873), (261, 32029), (263, 32035), (269, 32062), (328, 32296), (368, 32419), (504, 32866), (512, 32881), (514, 32884),

Gene: MrGordo\_37 Start: 29130, Stop: 30632, Start Num: 116



Candidate Starts for MrGordo\_37:

(Start: 56 @29049 has 26 MA's), (Start: 59 @29055 has 2 MA's), (Start: 62 @29061 has 9 MA's), (Start: 63 @29064 has 9 MA's), (Start: 75 @29079 has 1 MA's), (Start: 116 @29130 has 209 MA's), (128, 29154), (Start: 181 @29355 has 1 MA's), (194, 29409), (Start: 226 @29505 has 1 MA's), (229, 29514), (230, 29523), (256, 29631), (263, 29652), (265, 29664), (271, 29688), (281, 29730), (307, 29859), (327, 29919), (341, 29976), (349, 30003), (351, 30018), (354, 30021), (357, 30030), (358, 30033), (362, 30045), (386, 30114), (398, 30147), (400, 30153), (408, 30186), (409, 30189), (432, 30267), (436, 30282), (461, 30387), (492, 30501), (534, 30600), (544, 30624),

Gene: Mryolo\_35 Start: 29138, Stop: 30640, Start Num: 116

Candidate Starts for Mryolo\_35:

(Start: 80 @29093 has 3 MA's), (Start: 116 @29138 has 209 MA's), (Start: 126 @29153 has 8 MA's), (154, 29285), (Start: 179 @29357 has 1 MA's), (Start: 181 @29363 has 1 MA's), (222, 29501), (Start: 226 @29513 has 1 MA's), (229, 29522), (230, 29531), (256, 29639), (263, 29660), (265, 29672), (271, 29696), (281, 29738), (307, 29867), (327, 29927), (341, 29984), (357, 30038), (362, 30053), (398, 30155), (400, 30161), (408, 30194), (409, 30197), (425, 30260), (436, 30290), (461, 30395), (492, 30509), (534, 30608), (544, 30632),

Gene: Mudpuppy\_46 Start: 34970, Stop: 36388, Start Num: 110

Candidate Starts for Mudpuppy\_46:

(96, 34952), (108, 34967), (Start: 110 @34970 has 33 MA's), (Start: 116 @34979 has 209 MA's), (147, 35093), (Start: 181 @35201 has 1 MA's), (216, 35312), (222, 35324), (225, 35333), (247, 35432), (271, 35525), (273, 35537), (287, 35591), (328, 35723), (405, 35990), (417, 36026), (422, 36044), (424, 36056), (435, 36089), (473, 36227),

Gene: Mundrea\_33 Start: 26612, Stop: 25116, Start Num: 116

Candidate Starts for Mundrea\_33:

(14, 26912), (19, 26852), (22, 26834), (23, 26825), (Start: 64 @26678 has 10 MA's), (Start: 107 @26621 has 19 MA's), (Start: 116 @26612 has 209 MA's), (Start: 127 @26594 has 3 MA's), (139, 26537), (143, 26519), (150, 26489), (Start: 152 @26477 has 1 MA's), (Start: 181 @26393 has 1 MA's), (190, 26351), (197, 26330), (220, 26261), (253, 26132), (268, 26072), (282, 26018), (310, 25880), (330, 25817), (359, 25712), (380, 25649), (403, 25559), (412, 25523), (419, 25496), (435, 25442), (437, 25433), (493, 25223), (495, 25217), (500, 25205), (512, 25193), (517, 25184),

Gene: Museum\_39 Start: 29483, Stop: 30988, Start Num: 123

Candidate Starts for Museum\_39:

(Start: 56 @29393 has 26 MA's), (Start: 59 @29399 has 2 MA's), (Start: 62 @29405 has 9 MA's), (Start: 63 @29408 has 9 MA's), (Start: 75 @29423 has 1 MA's), (Start: 116 @29474 has 209 MA's), (Start: 123 @29483 has 2 MA's), (Start: 126 @29489 has 8 MA's), (128, 29498), (Start: 130 @29507 has 1 MA's), (148, 29591), (Start: 152 @29609 has 1 MA's), (Start: 179 @29693 has 1 MA's), (Start: 181 @29699 has 1 MA's), (183, 29711), (184, 29720), (222, 29837), (Start: 226 @29849 has 1 MA's), (229, 29858), (230, 29867), (252, 29963), (256, 29975), (265, 30008), (307, 30203), (327, 30263), (341, 30320), (357, 30374), (358, 30377), (362, 30389), (398, 30491), (400, 30497), (408, 30530), (432, 30611), (436, 30626), (461, 30731), (492, 30845),

Gene: MyraDee\_30 Start: 24175, Stop: 22685, Start Num: 113

Candidate Starts for MyraDee\_30:

(Start: 113 @24175 has 105 MA's), (124, 24151), (133, 24112), (Start: 152 @24025 has 1 MA's), (Start: 179 @23947 has 1 MA's), (180, 23944), (Start: 181 @23941 has 1 MA's), (184, 23920), (191, 23896), (205, 23854), (208, 23836), (218, 23794), (219, 23791), (240, 23704), (242, 23701), (245, 23692), (265, 23602), (271, 23578), (288, 23500), (300, 23437), (311, 23395), (321, 23365), (328, 23335), (354, 23233), (357, 23224), (405, 23074), (409, 23059), (432, 22981), (433, 22978), (446, 22930), (455, 22894), (480, 22798), (494, 22768), (515, 22723), (518, 22720), (521, 22708),

Gene: Mysterium\_42 Start: 31330, Stop: 32769, Start Num: 115

Candidate Starts for Mysterium\_42:

(Start: 115 @31330 has 12 MA's), (Start: 123 @31342 has 2 MA's), (Start: 145 @31441 has 1 MA's), (148, 31450), (172, 31513), (Start: 179 @31537 has 1 MA's), (182, 31546), (222, 31696), (225, 31705), (261, 31861), (263, 31867), (269, 31894), (328, 32128), (368, 32251), (450, 32521), (504, 32698), (512, 32713), (514, 32716),

Gene: NEHalo\_37 Start: 29293, Stop: 30861, Start Num: 62

Candidate Starts for NEHalo\_37:

(Start: 56 @29281 has 26 MA's), (Start: 59 @29287 has 2 MA's), (Start: 62 @29293 has 9 MA's), (Start: 63 @29296 has 9 MA's), (Start: 75 @29311 has 1 MA's), (Start: 116 @29362 has 209 MA's), (Start: 126 @29377 has 8 MA's), (128, 29386), (Start: 179 @29581 has 1 MA's), (Start: 181 @29587 has 1 MA's), (184, 29608), (Start: 226 @29737 has 1 MA's), (229, 29746), (230, 29755), (231, 29761), (252, 29851), (256, 29863), (265, 29896), (281, 29962), (307, 30091), (327, 30151), (341, 30208), (357, 30262), (358, 30265), (362, 30277), (408, 30415), (409, 30418), (419, 30454), (432, 30496), (436, 30511), (461, 30616), (492, 30730), (534, 30829), (544, 30853),

Gene: Nabi\_51 Start: 35146, Stop: 36723, Start Num: 50

Candidate Starts for Nabi\_51:

(Start: 31 @35080 has 7 MA's), (Start: 50 @35146 has 23 MA's), (Start: 127 @35266 has 3 MA's), (Start: 152 @35383 has 1 MA's), (166, 35434), (192, 35515), (193, 35518), (216, 35590), (220, 35599), (222, 35602), (223, 35605), (229, 35623), (259, 35755), (273, 35812), (274, 35815), (277, 35824), (283, 35848), (300, 35917), (337, 36043), (339, 36052), (363, 36118), (371, 36148), (402, 36247), (407, 36271), (410, 36280), (417, 36304), (436, 36376), (487, 36565), (501, 36604), (511, 36628), (520, 36643), (525, 36658),

Gene: Naca\_31 Start: 25915, Stop: 24470, Start Num: 131

Candidate Starts for Naca\_31:

(88, 25978), (Start: 116 @25951 has 209 MA's), (Start: 131 @25915 has 3 MA's), (Start: 152 @25816 has 1 MA's), (Start: 181 @25732 has 1 MA's), (190, 25690), (198, 25666), (211, 25639), (220, 25600), (229, 25576), (263, 25432), (334, 25138), (347, 25093), (354, 25063), (362, 25039), (371, 25024), (389, 24964), (403, 24913), (404, 24904), (419, 24850), (429, 24817), (447, 24751), (500, 24559), (539, 24481),

Gene: Naiad\_29 Start: 23649, Stop: 22141, Start Num: 97

Candidate Starts for Naiad\_29:

(Start: 97 @23649 has 32 MA's), (Start: 116 @23628 has 209 MA's), (Start: 122 @23622 has 3 MA's), (Start: 152 @23493 has 1 MA's), (164, 23445), (193, 23358), (229, 23253), (254, 23142), (269, 23082), (272, 23070), (286, 23007), (292, 22977), (296, 22944), (303, 22923), (310, 22893), (314, 22878), (316, 22872), (331, 22824), (339, 22791), (354, 22734), (371, 22695), (372, 22689), (417, 22539), (463, 22368), (539, 22152),

Gene: Naira\_38 Start: 31077, Stop: 32591, Start Num: 116

Candidate Starts for Naira\_38:

(Start: 56 @30996 has 26 MA's), (Start: 59 @31002 has 2 MA's), (Start: 62 @31008 has 9 MA's), (Start: 63 @31011 has 9 MA's), (Start: 75 @31026 has 1 MA's), (Start: 116 @31077 has 209 MA's), (Start: 181 @31302 has 1 MA's), (184, 31323), (222, 31440), (Start: 226 @31452 has 1 MA's), (229, 31461), (230, 31470), (256, 31578), (263, 31599), (265, 31611), (271, 31635), (281, 31677), (307, 31806), (327, 31866), (341, 31923), (357, 31977), (362, 31992), (400, 32100), (408, 32133), (409, 32136), (432, 32214), (436, 32229), (437, 32235), (492, 32448), (495, 32460),

Gene: Nancinator\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Nancinator\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (193, 23345), (229, 23240), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Natosaleda\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Natosaleda\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (193, 23345), (229, 23240), (254, 23129), (262, 23099), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: NearlyHeadless\_30 Start: 25032, Stop: 23530, Start Num: 113

Candidate Starts for NearlyHeadless\_30:

(69, 25101), (Start: 84 @25074 has 1 MA's), (88, 25068), (Start: 113 @25032 has 105 MA's), (Start: 152 @24882 has 1 MA's), (184, 24777), (205, 24711), (208, 24693), (218, 24651), (219, 24648), (240, 24561), (247, 24528), (268, 24447), (271, 24435), (290, 24342), (300, 24294), (311, 24252), (328, 24192), (354, 24090), (396, 23955), (416, 23883), (446, 23778), (455, 23742), (463, 23703), (493, 23619), (518, 23571),

Gene: Nemo27\_33 Start: 26636, Stop: 25122, Start Num: 113

Candidate Starts for Nemo27\_33:

(Start: 84 @26678 has 1 MA's), (Start: 107 @26645 has 19 MA's), (Start: 113 @26636 has 105 MA's), (154, 26474), (Start: 179 @26408 has 1 MA's), (183, 26390), (205, 26315), (210, 26291), (218, 26252), (219, 26249), (240, 26162), (268, 26048), (271, 26036), (311, 25853), (340, 25742), (354, 25691), (396, 25562), (399, 25553), (419, 25478), (421, 25472), (455, 25349), (463, 25310), (521, 25160), (528, 25145),

Gene: Nerujay\_38 Start: 29948, Stop: 31531, Start Num: 56

Candidate Starts for Nerujay\_38:

(Start: 56 @29948 has 26 MA's), (Start: 59 @29954 has 2 MA's), (Start: 62 @29960 has 9 MA's), (Start: 63 @29963 has 9 MA's), (Start: 75 @29978 has 1 MA's), (Start: 116 @30029 has 209 MA's), (Start: 126 @30044 has 8 MA's), (Start: 179 @30248 has 1 MA's), (Start: 181 @30254 has 1 MA's), (184, 30275), (Start: 226 @30404 has 1 MA's), (229, 30413), (230, 30422), (256, 30530), (263, 30551), (265, 30563), (271, 30587), (281, 30629), (307, 30758), (327, 30818), (341, 30875), (349, 30902), (357, 30929), (362, 30944), (398, 31046), (400, 31052), (408, 31085), (432, 31166), (436, 31181), (461, 31286), (492, 31400), (534, 31499), (544, 31523),

Gene: Nesbitt\_55 Start: 38186, Stop: 39901, Start Num: 107

Candidate Starts for Nesbitt\_55:

(Start: 90 @38162 has 1 MA's), (99, 38177), (Start: 107 @38186 has 19 MA's), (121, 38204), (137, 38276), (142, 38294), (160, 38378), (178, 38450), (185, 38495), (187, 38504), (193, 38522), (200, 38543), (216, 38612), (239, 38696), (271, 38813), (284, 38882), (299, 38975), (325, 39080), (331, 39104), (387, 39338), (390, 39347), (476, 39683), (479, 39695), (487, 39722), (503, 39776), (508, 39788), (513, 39797), (516, 39803), (527, 39827), (535, 39839), (547, 39893),

Gene: Nhonho\_37 Start: 29766, Stop: 31268, Start Num: 116

Candidate Starts for Nhonho\_37:

(Start: 80 @29721 has 3 MA's), (Start: 116 @29766 has 209 MA's), (Start: 126 @29781 has 8 MA's), (Start: 179 @29985 has 1 MA's), (Start: 181 @29991 has 1 MA's), (Start: 226 @30141 has 1 MA's),

(229, 30150), (230, 30159), (256, 30267), (263, 30288), (265, 30300), (271, 30324), (281, 30366), (307, 30495), (327, 30555), (341, 30612), (349, 30639), (357, 30666), (358, 30669), (362, 30681), (386, 30750), (398, 30783), (400, 30789), (408, 30822), (432, 30903), (436, 30918), (461, 31023), (492, 31137), (534, 31236), (544, 31260),

Gene: Niobe\_48 Start: 35962, Stop: 37383, Start Num: 110

Candidate Starts for Niobe\_48:

(96, 35944), (108, 35959), (Start: 110 @35962 has 33 MA's), (Start: 116 @35971 has 209 MA's), (147, 36085), (Start: 152 @36109 has 1 MA's), (Start: 181 @36193 has 1 MA's), (187, 36226), (192, 36241), (216, 36304), (222, 36316), (225, 36325), (247, 36424), (258, 36466), (271, 36517), (281, 36556), (304, 36634), (310, 36661), (328, 36715), (417, 37021), (419, 37030), (422, 37039), (424, 37051), (473, 37222), (505, 37309),

Gene: Nitro\_51 Start: 37058, Stop: 38473, Start Num: 116

Candidate Starts for Nitro\_51:

(Start: 116 @37058 has 209 MA's), (Start: 127 @37076 has 3 MA's), (147, 37172), (Start: 181 @37280 has 1 MA's), (193, 37331), (216, 37391), (222, 37403), (230, 37433), (247, 37511), (271, 37604), (281, 37643), (382, 38003), (417, 38108), (422, 38126), (424, 38138), (473, 38309),

Gene: Niza\_40 Start: 30658, Stop: 32160, Start Num: 116

Candidate Starts for Niza\_40:

(Start: 56 @30577 has 26 MA's), (Start: 59 @30583 has 2 MA's), (Start: 62 @30589 has 9 MA's), (Start: 63 @30592 has 9 MA's), (Start: 75 @30607 has 1 MA's), (Start: 116 @30658 has 209 MA's), (Start: 126 @30673 has 8 MA's), (Start: 179 @30877 has 1 MA's), (Start: 181 @30883 has 1 MA's), (Start: 226 @31033 has 1 MA's), (229, 31042), (230, 31051), (256, 31159), (263, 31180), (265, 31192), (271, 31216), (281, 31258), (307, 31387), (327, 31447), (341, 31504), (357, 31558), (358, 31561), (362, 31573), (400, 31681), (408, 31714), (432, 31795), (436, 31810), (461, 31915), (492, 32029), (534, 32128), (544, 32152),

Gene: Noella\_34 Start: 27230, Stop: 25722, Start Num: 116

Candidate Starts for Noella\_34:

(Start: 106 @27245 has 2 MA's), (Start: 116 @27230 has 209 MA's), (Start: 122 @27224 has 3 MA's), (Start: 123 @27221 has 2 MA's), (163, 27053), (164, 27047), (204, 26930), (225, 26870), (252, 26753), (263, 26714), (269, 26687), (272, 26675), (293, 26540), (336, 26387), (361, 26297), (375, 26258), (404, 26168), (416, 26126), (419, 26114), (433, 26069), (438, 26048), (495, 25835), (507, 25814),

Gene: Noelle\_33 Start: 26735, Stop: 25200, Start Num: 113

Candidate Starts for Noelle\_33:

(88, 26771), (Start: 107 @26744 has 19 MA's), (Start: 113 @26735 has 105 MA's), (136, 26654), (154, 26573), (Start: 179 @26507 has 1 MA's), (183, 26489), (205, 26414), (218, 26351), (219, 26348), (250, 26219), (271, 26135), (287, 26066), (297, 26003), (300, 25994), (311, 25952), (327, 25895), (340, 25841), (354, 25790), (396, 25640), (399, 25631), (419, 25556), (446, 25463), (454, 25436), (455, 25427), (463, 25388), (494, 25301), (521, 25238), (528, 25223),

Gene: Norbert\_33 Start: 27229, Stop: 25721, Start Num: 116

Candidate Starts for Norbert\_33:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752), (263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257), (404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: NorthStar\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for NorthStar\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Norz\_39 Start: 30310, Stop: 31824, Start Num: 116

Candidate Starts for Norz\_39:

(Start: 56 @30229 has 26 MA's), (Start: 59 @30235 has 2 MA's), (Start: 62 @30241 has 9 MA's), (Start: 63 @30244 has 9 MA's), (Start: 75 @30259 has 1 MA's), (Start: 116 @30310 has 209 MA's), (Start: 126 @30325 has 8 MA's), (Start: 145 @30418 has 1 MA's), (Start: 179 @30529 has 1 MA's), (Start: 181 @30535 has 1 MA's), (184, 30556), (Start: 226 @30685 has 1 MA's), (229, 30694), (230, 30703), (256, 30811), (263, 30832), (265, 30844), (271, 30868), (281, 30910), (307, 31039), (327, 31099), (341, 31156), (349, 31183), (351, 31198), (354, 31201), (357, 31210), (358, 31213), (362, 31225), (398, 31327), (400, 31333), (408, 31366), (409, 31369), (432, 31447), (436, 31462), (461, 31567), (492, 31681),

Gene: NotAPhaseMom\_33 Start: 26641, Stop: 25127, Start Num: 113

Candidate Starts for NotAPhaseMom\_33:

(Start: 84 @26683 has 1 MA's), (Start: 107 @26650 has 19 MA's), (Start: 113 @26641 has 105 MA's), (154, 26479), (Start: 179 @26413 has 1 MA's), (183, 26395), (205, 26320), (210, 26296), (218, 26257), (219, 26254), (240, 26167), (268, 26053), (271, 26041), (311, 25858), (340, 25747), (354, 25696), (396, 25567), (399, 25558), (419, 25483), (421, 25477), (455, 25354), (463, 25315), (521, 25165), (528, 25150),

Gene: Nyxis\_33 Start: 26572, Stop: 25076, Start Num: 116

Candidate Starts for Nyxis\_33:

(Start: 64 @26638 has 10 MA's), (Start: 116 @26572 has 209 MA's), (Start: 127 @26554 has 3 MA's), (138, 26500), (150, 26449), (Start: 152 @26437 has 1 MA's), (190, 26311), (197, 26290), (211, 26260), (220, 26221), (231, 26182), (253, 26092), (268, 26032), (282, 25978), (310, 25840), (380, 25609), (403, 25519), (412, 25483), (419, 25456), (437, 25393), (493, 25183), (500, 25165), (512, 25153), (517, 25144),

Gene: OKCentral2016\_33 Start: 26376, Stop: 24868, Start Num: 116

Candidate Starts for OKCentral2016\_33:

(Start: 116 @26376 has 209 MA's), (Start: 127 @26358 has 3 MA's), (128, 26352), (147, 26265), (Start: 152 @26241 has 1 MA's), (204, 26076), (252, 25899), (263, 25860), (265, 25848), (268, 25836), (269, 25833), (272, 25821), (326, 25575), (331, 25554), (371, 25425), (375, 25404), (405, 25311), (412, 25287), (416, 25272), (433, 25215), (438, 25194),

Gene: OKaNui\_34 Start: 26690, Stop: 25176, Start Num: 113

Candidate Starts for OKaNui\_34:

(Start: 84 @26732 has 1 MA's), (Start: 107 @26699 has 19 MA's), (Start: 113 @26690 has 105 MA's), (154, 26528), (Start: 179 @26462 has 1 MA's), (183, 26444), (205, 26369), (210, 26345), (218, 26306), (219, 26303), (240, 26216), (268, 26102), (271, 26090), (311, 25907), (340, 25796), (354, 25745), (396, 25616), (399, 25607), (419, 25532), (421, 25526), (455, 25403), (463, 25364), (521, 25214), (528, 25199),

Gene: ObiToo\_54 Start: 36249, Stop: 37667, Start Num: 110

Candidate Starts for ObiToo\_54:

(96, 36231), (108, 36246), (Start: 110 @36249 has 33 MA's), (Start: 116 @36258 has 209 MA's), (147, 36372), (Start: 152 @36396 has 1 MA's), (158, 36417), (Start: 181 @36480 has 1 MA's), (192, 36528), (216, 36591), (222, 36603), (247, 36711), (258, 36753), (271, 36804), (281, 36843), (400, 37248),

(422, 37323), (424, 37335), (453, 37428), (473, 37506), (507, 37596),

Gene: Ohno789\_37 Start: 29422, Stop: 30924, Start Num: 116

Candidate Starts for Ohno789\_37:

(Start: 56 @29341 has 26 MA's), (Start: 59 @29347 has 2 MA's), (Start: 62 @29353 has 9 MA's),  
(Start: 63 @29356 has 9 MA's), (Start: 75 @29371 has 1 MA's), (Start: 116 @29422 has 209 MA's),  
(Start: 126 @29437 has 8 MA's), (Start: 179 @29641 has 1 MA's), (Start: 181 @29647 has 1 MA's),  
(Start: 226 @29797 has 1 MA's), (229, 29806), (230, 29815), (256, 29923), (263, 29944), (265, 29956),  
(271, 29980), (307, 30151), (327, 30211), (341, 30268), (357, 30322), (362, 30337), (398, 30439),  
(400, 30445), (408, 30478), (409, 30481), (432, 30559), (436, 30574), (461, 30679), (492, 30793),  
(534, 30892), (544, 30916),

Gene: Oogway\_36 Start: 28960, Stop: 30462, Start Num: 116

Candidate Starts for Oogway\_36:

(Start: 56 @28879 has 26 MA's), (Start: 59 @28885 has 2 MA's), (Start: 62 @28891 has 9 MA's),  
(Start: 63 @28894 has 9 MA's), (Start: 75 @28909 has 1 MA's), (Start: 116 @28960 has 209 MA's),  
(Start: 145 @29068 has 1 MA's), (Start: 181 @29185 has 1 MA's), (184, 29206), (Start: 226 @29335  
has 1 MA's), (229, 29344), (230, 29353), (256, 29461), (263, 29482), (265, 29494), (271, 29518), (307,  
29689), (327, 29749), (341, 29806), (349, 29833), (357, 29860), (358, 29863), (362, 29875), (386,  
29944), (398, 29977), (400, 29983), (408, 30016), (432, 30097), (436, 30112), (461, 30217), (492,  
30331), (534, 30430), (544, 30454),

Gene: OzzyJ\_51 Start: 36081, Stop: 37724, Start Num: 31

Candidate Starts for OzzyJ\_51:

(12, 35901), (Start: 31 @36081 has 7 MA's), (Start: 50 @36147 has 23 MA's), (Start: 127 @36267 has  
3 MA's), (135, 36306), (148, 36366), (Start: 152 @36384 has 1 MA's), (166, 36435), (192, 36516),  
(193, 36519), (216, 36591), (220, 36600), (222, 36603), (259, 36756), (273, 36813), (274, 36816),  
(277, 36825), (363, 37119), (371, 37149), (402, 37248), (407, 37272), (410, 37281), (417, 37305),  
(436, 37377), (487, 37566), (501, 37605), (511, 37629), (520, 37644), (525, 37659),

Gene: PP\_41 Start: 31804, Stop: 30374, Start Num: 103

Candidate Starts for PP\_41:

(Start: 103 @31804 has 2 MA's), (Start: 116 @31789 has 209 MA's), (143, 31696), (197, 31507), (268,  
31252), (326, 31051), (340, 30994), (371, 30904), (373, 30889), (443, 30658), (447, 30643), (536,  
30388),

Gene: PSullivan\_36 Start: 28595, Stop: 30097, Start Num: 116

Candidate Starts for PSullivan\_36:

(Start: 56 @28514 has 26 MA's), (Start: 59 @28520 has 2 MA's), (Start: 62 @28526 has 9 MA's),  
(Start: 63 @28529 has 9 MA's), (Start: 75 @28544 has 1 MA's), (Start: 116 @28595 has 209 MA's),  
(Start: 123 @28604 has 2 MA's), (Start: 126 @28610 has 8 MA's), (148, 28712), (Start: 152 @28730  
has 1 MA's), (154, 28742), (Start: 179 @28814 has 1 MA's), (Start: 181 @28820 has 1 MA's), (183,  
28832), (184, 28841), (222, 28958), (Start: 226 @28970 has 1 MA's), (229, 28979), (230, 28988), (254,  
29090), (256, 29096), (263, 29117), (265, 29129), (281, 29195), (307, 29324), (327, 29384), (341,  
29441), (357, 29495), (362, 29510), (398, 29612), (400, 29618), (408, 29651), (409, 29654), (425,  
29717), (436, 29747), (461, 29852), (492, 29966), (534, 30065), (544, 30089),

Gene: PacerPaul\_38 Start: 29421, Stop: 30920, Start Num: 116

Candidate Starts for PacerPaul\_38:

(Start: 56 @29340 has 26 MA's), (Start: 59 @29346 has 2 MA's), (Start: 62 @29352 has 9 MA's),  
(Start: 63 @29355 has 9 MA's), (Start: 75 @29370 has 1 MA's), (Start: 116 @29421 has 209 MA's),  
(Start: 126 @29436 has 8 MA's), (Start: 179 @29640 has 1 MA's), (Start: 181 @29646 has 1 MA's),  
(184, 29667), (Start: 226 @29796 has 1 MA's), (229, 29805), (230, 29814), (256, 29922), (263, 29943),

(265, 29955), (271, 29979), (307, 30150), (327, 30210), (341, 30267), (349, 30294), (357, 30321), (358, 30324), (362, 30336), (398, 30435), (408, 30474), (409, 30477), (432, 30555), (436, 30570), (492, 30789), (534, 30888), (544, 30912),

Gene: Palestino\_32 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Palestino\_32:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Panamaxus\_33 Start: 27229, Stop: 25721, Start Num: 116

Candidate Starts for Panamaxus\_33:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752), (263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257), (404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: Papez\_39 Start: 31106, Stop: 32608, Start Num: 116

Candidate Starts for Papez\_39:

(Start: 56 @31025 has 26 MA's), (Start: 59 @31031 has 2 MA's), (Start: 62 @31037 has 9 MA's), (Start: 63 @31040 has 9 MA's), (Start: 75 @31055 has 1 MA's), (Start: 116 @31106 has 209 MA's), (Start: 126 @31121 has 8 MA's), (Start: 179 @31325 has 1 MA's), (Start: 181 @31331 has 1 MA's), (184, 31352), (Start: 226 @31481 has 1 MA's), (229, 31490), (230, 31499), (256, 31607), (263, 31628), (265, 31640), (271, 31664), (281, 31706), (307, 31835), (327, 31895), (341, 31952), (349, 31979), (357, 32006), (358, 32009), (362, 32021), (386, 32090), (400, 32129), (408, 32162), (432, 32243), (436, 32258), (461, 32363), (492, 32477), (534, 32576), (544, 32600),

Gene: Paphu\_36 Start: 29268, Stop: 30851, Start Num: 56

Candidate Starts for Paphu\_36:

(Start: 56 @29268 has 26 MA's), (Start: 59 @29274 has 2 MA's), (Start: 62 @29280 has 9 MA's), (Start: 63 @29283 has 9 MA's), (Start: 75 @29298 has 1 MA's), (Start: 116 @29349 has 209 MA's), (Start: 126 @29364 has 8 MA's), (128, 29373), (Start: 179 @29568 has 1 MA's), (Start: 181 @29574 has 1 MA's), (184, 29595), (Start: 226 @29724 has 1 MA's), (229, 29733), (230, 29742), (256, 29850), (263, 29871), (265, 29883), (271, 29907), (281, 29949), (307, 30078), (327, 30138), (341, 30195), (349, 30222), (357, 30249), (362, 30264), (386, 30333), (400, 30372), (408, 30405), (432, 30486), (436, 30501), (461, 30606), (492, 30720), (495, 30732), (534, 30819), (544, 30843),

Gene: Paraselene\_36 Start: 29765, Stop: 31279, Start Num: 116

Candidate Starts for Paraselene\_36:

(Start: 56 @29684 has 26 MA's), (Start: 59 @29690 has 2 MA's), (Start: 62 @29696 has 9 MA's), (Start: 63 @29699 has 9 MA's), (Start: 75 @29714 has 1 MA's), (Start: 116 @29765 has 209 MA's), (Start: 179 @29984 has 1 MA's), (Start: 181 @29990 has 1 MA's), (183, 30002), (184, 30011), (222, 30128), (Start: 226 @30140 has 1 MA's), (229, 30149), (230, 30158), (256, 30266), (263, 30287), (265, 30299), (271, 30323), (281, 30365), (304, 30479), (307, 30494), (327, 30554), (341, 30611), (349, 30638), (357, 30665), (358, 30668), (362, 30680), (400, 30788), (408, 30821), (432, 30902), (436, 30917), (492, 31136),

Gene: Pari\_38 Start: 29191, Stop: 30693, Start Num: 116

Candidate Starts for Pari\_38:

(Start: 80 @29146 has 3 MA's), (Start: 116 @29191 has 209 MA's), (Start: 126 @29206 has 8 MA's), (128, 29215), (Start: 181 @29416 has 1 MA's), (194, 29470), (Start: 226 @29566 has 1 MA's), (229,

29575), (230, 29584), (256, 29692), (263, 29713), (265, 29725), (271, 29749), (281, 29791), (307, 29920), (327, 29980), (341, 30037), (357, 30091), (362, 30106), (398, 30208), (400, 30214), (408, 30247), (432, 30328), (436, 30343), (461, 30448), (492, 30562), (534, 30661), (544, 30685),

Gene: Parliament\_36 Start: 29511, Stop: 31013, Start Num: 116

Candidate Starts for Parliament\_36:

(Start: 56 @29430 has 26 MA's), (Start: 59 @29436 has 2 MA's), (Start: 62 @29442 has 9 MA's), (Start: 63 @29445 has 9 MA's), (Start: 75 @29460 has 1 MA's), (Start: 116 @29511 has 209 MA's), (Start: 181 @29736 has 1 MA's), (Start: 226 @29886 has 1 MA's), (229, 29895), (230, 29904), (252, 30000), (256, 30012), (263, 30033), (265, 30045), (271, 30069), (281, 30111), (307, 30240), (327, 30300), (341, 30357), (357, 30411), (362, 30426), (400, 30534), (408, 30567), (432, 30648), (436, 30663), (492, 30882), (534, 30981), (544, 31005),

Gene: Partridge\_29 Start: 23682, Stop: 22174, Start Num: 97

Candidate Starts for Partridge\_29:

(Start: 97 @23682 has 32 MA's), (Start: 116 @23661 has 209 MA's), (Start: 122 @23655 has 3 MA's), (Start: 152 @23526 has 1 MA's), (164, 23478), (229, 23286), (236, 23247), (254, 23175), (269, 23115), (272, 23103), (292, 23010), (296, 22977), (303, 22956), (307, 22938), (310, 22926), (314, 22911), (316, 22905), (331, 22857), (339, 22824), (354, 22767), (371, 22728), (372, 22722), (417, 22572), (457, 22431), (539, 22185),

Gene: PascalRango\_38 Start: 29461, Stop: 30963, Start Num: 116

Candidate Starts for PascalRango\_38:

(Start: 56 @29380 has 26 MA's), (Start: 59 @29386 has 2 MA's), (Start: 62 @29392 has 9 MA's), (Start: 63 @29395 has 9 MA's), (Start: 75 @29410 has 1 MA's), (Start: 116 @29461 has 209 MA's), (Start: 179 @29680 has 1 MA's), (Start: 181 @29686 has 1 MA's), (184, 29707), (Start: 226 @29836 has 1 MA's), (229, 29845), (230, 29854), (256, 29962), (263, 29983), (265, 29995), (271, 30019), (281, 30061), (307, 30190), (327, 30250), (341, 30307), (349, 30334), (357, 30361), (362, 30376), (400, 30484), (408, 30517), (432, 30598), (436, 30613), (492, 30832), (534, 30931), (544, 30955),

Gene: PattyP\_39 Start: 29688, Stop: 31190, Start Num: 116

Candidate Starts for PattyP\_39:

(Start: 56 @29607 has 26 MA's), (Start: 59 @29613 has 2 MA's), (Start: 62 @29619 has 9 MA's), (Start: 63 @29622 has 9 MA's), (Start: 75 @29637 has 1 MA's), (Start: 116 @29688 has 209 MA's), (124, 29700), (Start: 181 @29913 has 1 MA's), (183, 29925), (184, 29934), (194, 29967), (Start: 226 @30063 has 1 MA's), (229, 30072), (230, 30081), (256, 30189), (263, 30210), (265, 30222), (271, 30246), (281, 30288), (307, 30417), (327, 30477), (341, 30534), (357, 30588), (358, 30591), (362, 30603), (386, 30672), (398, 30705), (400, 30711), (408, 30744), (432, 30825), (436, 30840), (461, 30945), (492, 31059), (534, 31158), (544, 31182),

Gene: Payneful\_37 Start: 29028, Stop: 30608, Start Num: 63

Candidate Starts for Payneful\_37:

(Start: 56 @29013 has 26 MA's), (Start: 59 @29019 has 2 MA's), (Start: 62 @29025 has 9 MA's), (Start: 63 @29028 has 9 MA's), (Start: 75 @29043 has 1 MA's), (Start: 116 @29094 has 209 MA's), (Start: 179 @29313 has 1 MA's), (Start: 181 @29319 has 1 MA's), (184, 29340), (Start: 226 @29469 has 1 MA's), (229, 29478), (230, 29487), (252, 29583), (256, 29595), (265, 29628), (273, 29664), (307, 29823), (327, 29883), (341, 29940), (357, 29994), (362, 30009), (400, 30117), (419, 30189), (432, 30231), (436, 30246), (492, 30465),

Gene: PeaceMeal1\_32 Start: 23843, Stop: 25498, Start Num: 102

Candidate Starts for PeaceMeal1\_32:

(Start: 79 @23804 has 3 MA's), (Start: 102 @23843 has 3 MA's), (Start: 113 @23852 has 105 MA's), (Start: 123 @23870 has 2 MA's), (Start: 130 @23894 has 1 MA's), (Start: 145 @23969 has 1 MA's),



(148, 23978), (Start: 152 @23996 has 1 MA's), (Start: 179 @24080 has 1 MA's), (180, 24083), (187, 24119), (220, 24221), (229, 24245), (230, 24254), (252, 24350), (272, 24425), (273, 24434), (274, 24437), (297, 24554), (304, 24575), (307, 24590), (310, 24602), (326, 24650), (337, 24695), (357, 24767), (370, 24791), (400, 24911), (404, 24929), (405, 24932), (406, 24935), (444, 25070), (492, 25259), (532, 25352), (544, 25382), (546, 25406), (551, 25454), (552, 25472),

Gene: Peaches\_33 Start: 26645, Stop: 25122, Start Num: 107

Candidate Starts for Peaches\_33:

(Start: 84 @26678 has 1 MA's), (Start: 107 @26645 has 19 MA's), (Start: 113 @26636 has 105 MA's), (154, 26474), (Start: 179 @26408 has 1 MA's), (183, 26390), (205, 26315), (210, 26291), (218, 26252), (219, 26249), (240, 26162), (268, 26048), (271, 26036), (311, 25853), (340, 25742), (354, 25691), (396, 25562), (399, 25553), (419, 25478), (421, 25472), (455, 25349), (463, 25310), (521, 25160), (528, 25145),

Gene: Pelly\_37 Start: 29661, Stop: 31163, Start Num: 116

Candidate Starts for Pelly\_37:

(Start: 56 @29580 has 26 MA's), (Start: 59 @29586 has 2 MA's), (Start: 62 @29592 has 9 MA's), (Start: 63 @29595 has 9 MA's), (Start: 75 @29610 has 1 MA's), (Start: 116 @29661 has 209 MA's), (Start: 126 @29676 has 8 MA's), (128, 29685), (Start: 179 @29880 has 1 MA's), (Start: 181 @29886 has 1 MA's), (184, 29907), (Start: 226 @30036 has 1 MA's), (229, 30045), (230, 30054), (256, 30162), (263, 30183), (265, 30195), (271, 30219), (281, 30261), (307, 30390), (327, 30450), (341, 30507), (357, 30561), (358, 30564), (362, 30576), (400, 30684), (408, 30717), (432, 30798), (436, 30813), (461, 30918), (492, 31032), (534, 31131), (544, 31155),

Gene: Pepe\_33 Start: 27246, Stop: 28529, Start Num: 179

Candidate Starts for Pepe\_33:

(Start: 179 @27246 has 1 MA's), (Start: 181 @27252 has 1 MA's), (184, 27273), (222, 27390), (Start: 226 @27402 has 1 MA's), (229, 27411), (230, 27420), (231, 27426), (252, 27516), (256, 27528), (265, 27561), (307, 27756), (327, 27816), (341, 27873), (357, 27927), (362, 27942), (400, 28050), (408, 28083), (432, 28164), (436, 28179), (492, 28398), (534, 28497), (544, 28521),

Gene: Perplexer\_33 Start: 26653, Stop: 25130, Start Num: 107

Candidate Starts for Perplexer\_33:

(Start: 84 @26686 has 1 MA's), (Start: 107 @26653 has 19 MA's), (Start: 113 @26644 has 105 MA's), (154, 26482), (Start: 179 @26416 has 1 MA's), (183, 26398), (205, 26323), (218, 26260), (219, 26257), (240, 26170), (271, 26044), (311, 25861), (327, 25804), (340, 25750), (354, 25699), (396, 25570), (399, 25561), (419, 25486), (421, 25480), (454, 25366), (455, 25357), (463, 25318), (521, 25168), (528, 25153),

Gene: Perseus\_39 Start: 30449, Stop: 31951, Start Num: 116

Candidate Starts for Perseus\_39:

(Start: 51 @30359 has 1 MA's), (Start: 56 @30368 has 26 MA's), (Start: 59 @30374 has 2 MA's), (Start: 62 @30380 has 9 MA's), (Start: 63 @30383 has 9 MA's), (Start: 75 @30398 has 1 MA's), (Start: 116 @30449 has 209 MA's), (Start: 126 @30464 has 8 MA's), (Start: 179 @30668 has 1 MA's), (Start: 181 @30674 has 1 MA's), (222, 30812), (Start: 226 @30824 has 1 MA's), (229, 30833), (230, 30842), (256, 30950), (263, 30971), (265, 30983), (271, 31007), (281, 31049), (307, 31178), (327, 31238), (341, 31295), (349, 31322), (357, 31349), (358, 31352), (362, 31364), (400, 31472), (408, 31505), (432, 31586), (436, 31601), (492, 31820), (534, 31919), (544, 31943),

Gene: PeterPeter\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for PeterPeter\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253),

(219, 26250), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Peterson\_40 Start: 31280, Stop: 32779, Start Num: 116

Candidate Starts for Peterson\_40:

(Start: 116 @31280 has 209 MA's), (Start: 179 @31499 has 1 MA's), (Start: 181 @31505 has 1 MA's), (183, 31517), (184, 31526), (194, 31559), (204, 31589), (205, 31592), (Start: 226 @31655 has 1 MA's), (230, 31673), (252, 31769), (256, 31781), (265, 31814), (284, 31892), (286, 31907), (307, 32009), (327, 32069), (337, 32111), (341, 32126), (349, 32153), (351, 32168), (354, 32171), (357, 32180), (362, 32195), (398, 32294), (408, 32333), (419, 32372), (421, 32378), (432, 32414), (436, 32429), (440, 32444), (458, 32519), (492, 32648), (534, 32747), (544, 32771),

Gene: PetiteSangsue\_33 Start: 26647, Stop: 25133, Start Num: 113

Candidate Starts for PetiteSangsue\_33:

(Start: 84 @26689 has 1 MA's), (Start: 107 @26656 has 19 MA's), (Start: 113 @26647 has 105 MA's), (154, 26485), (Start: 179 @26419 has 1 MA's), (183, 26401), (205, 26326), (218, 26263), (219, 26260), (240, 26173), (271, 26047), (311, 25864), (327, 25807), (340, 25753), (354, 25702), (396, 25573), (399, 25564), (419, 25489), (421, 25483), (454, 25369), (455, 25360), (463, 25321), (521, 25171), (528, 25156),

Gene: Petp2012\_39 Start: 30278, Stop: 31861, Start Num: 56

Candidate Starts for Petp2012\_39:

(Start: 56 @30278 has 26 MA's), (Start: 59 @30284 has 2 MA's), (Start: 62 @30290 has 9 MA's), (Start: 63 @30293 has 9 MA's), (Start: 75 @30308 has 1 MA's), (Start: 116 @30359 has 209 MA's), (124, 30371), (Start: 181 @30584 has 1 MA's), (183, 30596), (184, 30605), (194, 30638), (Start: 226 @30734 has 1 MA's), (229, 30743), (230, 30752), (256, 30860), (263, 30881), (265, 30893), (271, 30917), (281, 30959), (307, 31088), (327, 31148), (341, 31205), (349, 31232), (357, 31259), (358, 31262), (362, 31274), (386, 31343), (398, 31376), (400, 31382), (408, 31415), (432, 31496), (436, 31511), (461, 31616), (492, 31730), (534, 31829), (544, 31853),

Gene: Petruccio\_38 Start: 29593, Stop: 31176, Start Num: 56

Candidate Starts for Petruccio\_38:

(Start: 56 @29593 has 26 MA's), (Start: 59 @29599 has 2 MA's), (Start: 62 @29605 has 9 MA's), (Start: 63 @29608 has 9 MA's), (Start: 75 @29623 has 1 MA's), (Start: 116 @29674 has 209 MA's), (Start: 126 @29689 has 8 MA's), (Start: 181 @29899 has 1 MA's), (Start: 226 @30049 has 1 MA's), (230, 30067), (256, 30175), (263, 30196), (265, 30208), (271, 30232), (281, 30274), (307, 30403), (327, 30463), (341, 30520), (349, 30547), (357, 30574), (358, 30577), (362, 30589), (390, 30667), (400, 30697), (408, 30730), (419, 30769), (432, 30811), (436, 30826), (461, 30931), (492, 31045), (534, 31144), (544, 31168),

Gene: PetterN\_32 Start: 25311, Stop: 23830, Start Num: 116

Candidate Starts for PetterN\_32:

(88, 25338), (Start: 116 @25311 has 209 MA's), (Start: 131 @25275 has 3 MA's), (Start: 152 @25176 has 1 MA's), (161, 25140), (Start: 181 @25092 has 1 MA's), (190, 25050), (198, 25026), (211, 24999), (220, 24960), (229, 24936), (263, 24792), (334, 24498), (347, 24453), (354, 24423), (362, 24399), (371, 24384), (389, 24324), (403, 24273), (404, 24264), (419, 24210), (429, 24177), (447, 24111), (463, 24048), (500, 23919), (539, 23841),

Gene: Phacado\_33 Start: 26636, Stop: 25122, Start Num: 113

Candidate Starts for Phacado\_33:

(Start: 84 @26678 has 1 MA's), (Start: 107 @26645 has 19 MA's), (Start: 113 @26636 has 105 MA's), (154, 26474), (Start: 179 @26408 has 1 MA's), (183, 26390), (205, 26315), (210, 26291), (218, 26252), (219, 26249), (240, 26162), (268, 26048), (271, 26036), (311, 25853), (340, 25742), (354, 25691),

(396, 25562), (399, 25553), (419, 25478), (421, 25472), (455, 25349), (463, 25310), (521, 25160), (528, 25145),

Gene: PhailMary\_28 Start: 23958, Stop: 22462, Start Num: 97

Candidate Starts for PhailMary\_28:

(Start: 97 @23958 has 32 MA's), (Start: 116 @23937 has 209 MA's), (Start: 122 @23931 has 3 MA's), (Start: 152 @23802 has 1 MA's), (164, 23754), (193, 23667), (229, 23562), (254, 23451), (269, 23391), (272, 23379), (286, 23316), (292, 23286), (296, 23253), (303, 23232), (310, 23202), (316, 23181), (330, 23136), (331, 23133), (332, 23127), (354, 23043), (371, 23004), (372, 22998), (403, 22902), (411, 22869), (417, 22848), (419, 22839), (463, 22677),

Gene: PherrisBueller\_38 Start: 29250, Stop: 30752, Start Num: 116

Candidate Starts for PherrisBueller\_38:

(Start: 56 @29169 has 26 MA's), (Start: 59 @29175 has 2 MA's), (Start: 62 @29181 has 9 MA's), (Start: 75 @29199 has 1 MA's), (Start: 116 @29250 has 209 MA's), (Start: 181 @29475 has 1 MA's), (Start: 226 @29625 has 1 MA's), (229, 29634), (230, 29643), (263, 29772), (265, 29784), (271, 29808), (307, 29979), (327, 30039), (341, 30096), (357, 30150), (358, 30153), (362, 30165), (400, 30273), (408, 30306), (432, 30387), (436, 30402), (492, 30621), (534, 30720), (544, 30744),

Gene: Phighter1804\_33 Start: 26682, Stop: 25120, Start Num: 64

Candidate Starts for Phighter1804\_33:

(Start: 64 @26682 has 10 MA's), (Start: 116 @26616 has 209 MA's), (Start: 127 @26598 has 3 MA's), (139, 26541), (143, 26523), (150, 26493), (Start: 152 @26481 has 1 MA's), (190, 26355), (197, 26334), (211, 26304), (220, 26265), (231, 26226), (253, 26136), (268, 26076), (282, 26022), (310, 25884), (380, 25653), (403, 25563), (412, 25527), (419, 25500), (435, 25446), (437, 25437), (493, 25227), (500, 25209), (512, 25197), (517, 25188),

Gene: Phillis\_30 Start: 25078, Stop: 23576, Start Num: 113

Candidate Starts for Phillis\_30:

(69, 25147), (Start: 84 @25120 has 1 MA's), (88, 25114), (Start: 113 @25078 has 105 MA's), (Start: 152 @24928 has 1 MA's), (184, 24823), (205, 24757), (208, 24739), (218, 24697), (219, 24694), (240, 24607), (271, 24481), (290, 24388), (300, 24340), (311, 24298), (328, 24238), (354, 24136), (396, 24001), (416, 23929), (446, 23824), (455, 23788), (463, 23749), (472, 23725), (518, 23617),

Gene: PhineBark\_37 Start: 30329, Stop: 31828, Start Num: 126

Candidate Starts for PhineBark\_37:

(Start: 56 @30233 has 26 MA's), (Start: 59 @30239 has 2 MA's), (Start: 62 @30245 has 9 MA's), (Start: 63 @30248 has 9 MA's), (Start: 75 @30263 has 1 MA's), (Start: 116 @30314 has 209 MA's), (Start: 126 @30329 has 8 MA's), (Start: 179 @30533 has 1 MA's), (Start: 181 @30539 has 1 MA's), (184, 30560), (222, 30677), (Start: 226 @30689 has 1 MA's), (229, 30698), (230, 30707), (252, 30803), (256, 30815), (263, 30836), (265, 30848), (271, 30872), (307, 31043), (327, 31103), (341, 31160), (349, 31187), (357, 31214), (358, 31217), (362, 31229), (400, 31337), (432, 31451), (436, 31466), (492, 31685),

Gene: Phives\_54 Start: 37471, Stop: 38946, Start Num: 110

Candidate Starts for Phives\_54:

(Start: 103 @37462 has 2 MA's), (Start: 110 @37471 has 33 MA's), (212, 37792), (276, 38071), (310, 38245), (371, 38437), (444, 38674), (489, 38836),

Gene: Phlippers\_35 Start: 29975, Stop: 31474, Start Num: 116

Candidate Starts for Phlippers\_35:

(Start: 49 @29885 has 1 MA's), (Start: 80 @29930 has 3 MA's), (Start: 116 @29975 has 209 MA's), (Start: 126 @29990 has 8 MA's), (128, 29999), (Start: 181 @30200 has 1 MA's), (222, 30338), (Start:

226 @30350 has 1 MA's), (229, 30359), (230, 30368), (256, 30476), (263, 30497), (265, 30509), (271, 30533), (281, 30575), (307, 30704), (327, 30764), (341, 30821), (349, 30848), (357, 30875), (358, 30878), (362, 30890), (398, 30989), (408, 31028), (432, 31109), (436, 31124), (461, 31229), (492, 31343), (534, 31442), (544, 31466),

Gene: Phlorence\_30 Start: 25886, Stop: 24393, Start Num: 116

Candidate Starts for Phlorence\_30:

(Start: 116 @25886 has 209 MA's), (Start: 130 @25853 has 1 MA's), (Start: 131 @25850 has 3 MA's), (Start: 134 @25832 has 4 MA's), (Start: 152 @25751 has 1 MA's), (196, 25607), (205, 25580), (222, 25532), (263, 25367), (268, 25343), (269, 25340), (273, 25319), (316, 25130), (371, 24959), (404, 24824), (416, 24782), (419, 24770), (443, 24686), (447, 24671), (453, 24656), (500, 24479), (521, 24449), (535, 24416),

Gene: Phontbonne\_33 Start: 26573, Stop: 25077, Start Num: 116

Candidate Starts for Phontbonne\_33:

(Start: 64 @26639 has 10 MA's), (Start: 116 @26573 has 209 MA's), (Start: 127 @26555 has 3 MA's), (138, 26501), (150, 26450), (Start: 152 @26438 has 1 MA's), (190, 26312), (197, 26291), (211, 26261), (220, 26222), (231, 26183), (253, 26093), (268, 26033), (282, 25979), (310, 25841), (380, 25610), (403, 25520), (412, 25484), (419, 25457), (437, 25394), (493, 25184), (500, 25166), (512, 25154), (517, 25145),

Gene: Phoxy\_36 Start: 27306, Stop: 25738, Start Num: 113

Candidate Starts for Phoxy\_36:

(37, 27456), (43, 27441), (88, 27342), (Start: 113 @27306 has 105 MA's), (184, 27051), (191, 27027), (208, 26967), (218, 26919), (219, 26916), (240, 26829), (245, 26817), (247, 26796), (254, 26772), (271, 26703), (287, 26634), (288, 26625), (311, 26520), (321, 26475), (354, 26343), (381, 26259), (398, 26202), (455, 25995), (495, 25854),

Gene: Phrankenstein\_29 Start: 23582, Stop: 22086, Start Num: 97

Candidate Starts for Phrankenstein\_29:

(Start: 97 @23582 has 32 MA's), (Start: 116 @23561 has 209 MA's), (Start: 122 @23555 has 3 MA's), (Start: 152 @23426 has 1 MA's), (164, 23378), (229, 23186), (254, 23075), (269, 23015), (272, 23003), (286, 22940), (292, 22910), (296, 22877), (303, 22856), (310, 22826), (314, 22811), (316, 22805), (331, 22757), (339, 22724), (354, 22667), (371, 22628), (372, 22622), (403, 22526), (411, 22493), (417, 22472), (419, 22463), (463, 22301),

Gene: PhrostyMug\_38 Start: 29522, Stop: 31114, Start Num: 51

Candidate Starts for PhrostyMug\_38:

(Start: 51 @29522 has 1 MA's), (Start: 56 @29531 has 26 MA's), (Start: 59 @29537 has 2 MA's), (Start: 62 @29543 has 9 MA's), (Start: 63 @29546 has 9 MA's), (Start: 75 @29561 has 1 MA's), (Start: 116 @29612 has 209 MA's), (Start: 126 @29627 has 8 MA's), (Start: 179 @29831 has 1 MA's), (Start: 181 @29837 has 1 MA's), (Start: 226 @29987 has 1 MA's), (229, 29996), (230, 30005), (256, 30113), (263, 30134), (265, 30146), (271, 30170), (281, 30212), (307, 30341), (327, 30401), (341, 30458), (357, 30512), (362, 30527), (400, 30635), (408, 30668), (421, 30713), (432, 30749), (436, 30764), (492, 30983), (534, 31082), (544, 31106),

Gene: PickleBack\_30 Start: 25546, Stop: 24107, Start Num: 134

Candidate Starts for PickleBack\_30:

(Start: 116 @25600 has 209 MA's), (Start: 130 @25567 has 1 MA's), (Start: 131 @25564 has 3 MA's), (Start: 134 @25546 has 4 MA's), (Start: 152 @25465 has 1 MA's), (196, 25321), (205, 25294), (222, 25246), (263, 25081), (268, 25057), (269, 25054), (273, 25033), (316, 24844), (371, 24673), (404, 24538), (416, 24496), (419, 24484), (443, 24400), (447, 24385), (453, 24370), (500, 24193), (521, 24163), (535, 24130),

Gene: PinkPlastic\_36 Start: 29201, Stop: 30703, Start Num: 116

Candidate Starts for PinkPlastic\_36:

(Start: 56 @29120 has 26 MA's), (Start: 59 @29126 has 2 MA's), (Start: 62 @29132 has 9 MA's),  
(Start: 63 @29135 has 9 MA's), (Start: 75 @29150 has 1 MA's), (Start: 116 @29201 has 209 MA's),  
(Start: 126 @29216 has 8 MA's), (Start: 179 @29420 has 1 MA's), (Start: 181 @29426 has 1 MA's),  
(222, 29564), (Start: 226 @29576 has 1 MA's), (229, 29585), (230, 29594), (256, 29702), (263, 29723),  
(265, 29735), (281, 29801), (307, 29930), (327, 29990), (341, 30047), (349, 30074), (357, 30101),  
(362, 30116), (386, 30185), (398, 30218), (400, 30224), (408, 30257), (432, 30338), (436, 30353),  
(461, 30458), (492, 30572), (534, 30671), (544, 30695),

Gene: Pinto\_39 Start: 29632, Stop: 31134, Start Num: 116

Candidate Starts for Pinto\_39:

(45, 29530), (Start: 50 @29542 has 23 MA's), (Start: 56 @29551 has 26 MA's), (Start: 59 @29557 has  
2 MA's), (Start: 62 @29563 has 9 MA's), (Start: 63 @29566 has 9 MA's), (Start: 75 @29581 has 1  
MA's), (Start: 116 @29632 has 209 MA's), (Start: 123 @29641 has 2 MA's), (Start: 126 @29647 has 8  
MA's), (128, 29656), (Start: 130 @29665 has 1 MA's), (Start: 179 @29851 has 1 MA's), (Start: 181  
@29857 has 1 MA's), (183, 29869), (184, 29878), (222, 29995), (Start: 226 @30007 has 1 MA's), (229,  
30016), (230, 30025), (252, 30121), (256, 30133), (265, 30166), (281, 30232), (307, 30361), (327,  
30421), (341, 30478), (357, 30532), (362, 30547), (398, 30649), (400, 30655), (408, 30688), (409,  
30691), (425, 30754), (436, 30784), (461, 30889), (492, 31003), (534, 31102), (544, 31126),

Gene: Pipcraft\_33 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Pipcraft\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's),  
(154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253),  
(219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692),  
(396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161),  
(528, 25146),

Gene: Pippin\_39 Start: 29765, Stop: 31279, Start Num: 116

Candidate Starts for Pippin\_39:

(Start: 56 @29684 has 26 MA's), (Start: 59 @29690 has 2 MA's), (Start: 62 @29696 has 9 MA's),  
(Start: 63 @29699 has 9 MA's), (Start: 75 @29714 has 1 MA's), (Start: 116 @29765 has 209 MA's),  
(Start: 126 @29780 has 8 MA's), (Start: 179 @29984 has 1 MA's), (Start: 181 @29990 has 1 MA's),  
(184, 30011), (222, 30128), (Start: 226 @30140 has 1 MA's), (229, 30149), (230, 30158), (256, 30266),  
(263, 30287), (265, 30299), (271, 30323), (281, 30365), (307, 30494), (327, 30554), (341, 30611),  
(349, 30638), (357, 30665), (358, 30668), (362, 30680), (386, 30749), (398, 30782), (400, 30788),  
(408, 30821), (432, 30902), (436, 30917), (461, 31022), (492, 31136),

Gene: Pita2\_39 Start: 30092, Stop: 31594, Start Num: 116

Candidate Starts for Pita2\_39:

(Start: 56 @30011 has 26 MA's), (Start: 59 @30017 has 2 MA's), (Start: 62 @30023 has 9 MA's),  
(Start: 63 @30026 has 9 MA's), (Start: 75 @30041 has 1 MA's), (Start: 116 @30092 has 209 MA's),  
(Start: 123 @30101 has 2 MA's), (Start: 126 @30107 has 8 MA's), (148, 30209), (Start: 152 @30227  
has 1 MA's), (154, 30239), (Start: 179 @30311 has 1 MA's), (Start: 181 @30317 has 1 MA's), (183,  
30329), (184, 30338), (222, 30455), (Start: 226 @30467 has 1 MA's), (229, 30476), (230, 30485), (254,  
30587), (256, 30593), (263, 30614), (265, 30626), (281, 30692), (307, 30821), (327, 30881), (341,  
30938), (357, 30992), (362, 31007), (398, 31109), (400, 31115), (408, 31148), (409, 31151), (425,  
31214), (436, 31244), (461, 31349), (492, 31463), (534, 31562), (544, 31586),

Gene: Pixelle\_52 Start: 38117, Stop: 39577, Start Num: 115

Candidate Starts for Pixelle\_52:

(68, 38054), (Start: 106 @38108 has 2 MA's), (Start: 115 @38117 has 12 MA's), (172, 38303), (182, 38336), (220, 38474), (225, 38486), (247, 38585), (261, 38636), (284, 38729), (370, 39062), (444, 39305), (531, 39563),

Gene: Pocahontas\_34 Start: 27226, Stop: 25718, Start Num: 116

Candidate Starts for Pocahontas\_34:

(Start: 106 @27241 has 2 MA's), (Start: 116 @27226 has 209 MA's), (Start: 122 @27220 has 3 MA's), (Start: 123 @27217 has 2 MA's), (163, 27049), (164, 27043), (204, 26926), (225, 26866), (252, 26749), (263, 26710), (269, 26683), (272, 26671), (293, 26536), (336, 26383), (361, 26293), (375, 26254), (404, 26164), (416, 26122), (419, 26110), (433, 26065), (438, 26044), (495, 25831), (507, 25810),

Gene: Poompha\_32 Start: 23841, Stop: 25496, Start Num: 102

Candidate Starts for Poompha\_32:

(Start: 79 @23802 has 3 MA's), (Start: 102 @23841 has 3 MA's), (Start: 113 @23850 has 105 MA's), (Start: 123 @23868 has 2 MA's), (Start: 130 @23892 has 1 MA's), (Start: 145 @23967 has 1 MA's), (148, 23976), (Start: 152 @23994 has 1 MA's), (Start: 179 @24078 has 1 MA's), (180, 24081), (187, 24117), (220, 24219), (229, 24243), (230, 24252), (252, 24348), (263, 24384), (272, 24423), (273, 24432), (274, 24435), (297, 24552), (304, 24573), (307, 24588), (310, 24600), (326, 24648), (337, 24693), (357, 24765), (370, 24789), (400, 24909), (404, 24927), (405, 24930), (406, 24933), (444, 25068), (492, 25257), (532, 25350), (544, 25380), (546, 25404), (551, 25452), (552, 25470),

Gene: Popcicle\_34 Start: 27226, Stop: 25718, Start Num: 116

Candidate Starts for Popcicle\_34:

(Start: 106 @27241 has 2 MA's), (Start: 116 @27226 has 209 MA's), (Start: 122 @27220 has 3 MA's), (Start: 123 @27217 has 2 MA's), (163, 27049), (164, 27043), (204, 26926), (225, 26866), (252, 26749), (263, 26710), (269, 26683), (272, 26671), (293, 26536), (336, 26383), (361, 26293), (375, 26254), (404, 26164), (416, 26122), (419, 26110), (433, 26065), (438, 26044), (495, 25831), (507, 25810),

Gene: Powerpuff\_52 Start: 36416, Stop: 37834, Start Num: 110

Candidate Starts for Powerpuff\_52:

(96, 36398), (108, 36413), (Start: 110 @36416 has 33 MA's), (Start: 116 @36425 has 209 MA's), (147, 36539), (Start: 152 @36563 has 1 MA's), (Start: 181 @36647 has 1 MA's), (216, 36758), (222, 36770), (225, 36779), (247, 36878), (271, 36971), (273, 36983), (281, 37010), (328, 37169), (422, 37490), (424, 37502), (435, 37535), (473, 37673),

Gene: Prin Ashe11\_31 Start: 25691, Stop: 24252, Start Num: 134

Candidate Starts for Prin Ashe11\_31:

(Start: 116 @25745 has 209 MA's), (Start: 130 @25712 has 1 MA's), (Start: 131 @25709 has 3 MA's), (Start: 134 @25691 has 4 MA's), (Start: 152 @25610 has 1 MA's), (196, 25466), (205, 25439), (222, 25391), (263, 25226), (268, 25202), (269, 25199), (273, 25178), (316, 24989), (357, 24848), (371, 24818), (416, 24641), (419, 24629), (443, 24545), (447, 24530), (453, 24515), (500, 24338), (521, 24308), (535, 24275),

Gene: ProMouse\_35 Start: 29463, Stop: 31043, Start Num: 56

Candidate Starts for ProMouse\_35:

(17, 29307), (19, 29310), (21, 29325), (30, 29388), (Start: 56 @29463 has 26 MA's), (Start: 59 @29469 has 2 MA's), (Start: 62 @29475 has 9 MA's), (Start: 63 @29478 has 9 MA's), (Start: 75 @29493 has 1 MA's), (Start: 116 @29544 has 209 MA's), (Start: 126 @29559 has 8 MA's), (Start: 179 @29763 has 1 MA's), (Start: 181 @29769 has 1 MA's), (184, 29790), (222, 29907), (Start: 226 @29919 has 1 MA's), (229, 29928), (230, 29937), (231, 29943), (252, 30033), (256, 30045), (265, 30078), (281, 30144), (307, 30273), (327, 30333), (341, 30390), (357, 30444), (362, 30459), (398, 30558), (408, 30597), (409, 30600), (432, 30678), (436, 30693), (492, 30912), (534, 31011), (544, 31035),

Gene: Pumbaa\_33 Start: 26690, Stop: 25128, Start Num: 64

Candidate Starts for Pumbaa\_33:

(Start: 64 @26690 has 10 MA's), (Start: 116 @26624 has 209 MA's), (Start: 127 @26606 has 3 MA's), (139, 26549), (143, 26531), (150, 26501), (Start: 152 @26489 has 1 MA's), (190, 26363), (197, 26342), (211, 26312), (220, 26273), (253, 26144), (268, 26084), (282, 26030), (310, 25892), (380, 25661), (403, 25571), (412, 25535), (419, 25508), (435, 25454), (437, 25445), (493, 25235), (500, 25217), (512, 25205), (517, 25196),

Gene: Pumpkins\_48 Start: 35749, Stop: 37167, Start Num: 110

Candidate Starts for Pumpkins\_48:

(96, 35731), (108, 35746), (Start: 110 @35749 has 33 MA's), (Start: 116 @35758 has 209 MA's), (Start: 181 @35980 has 1 MA's), (216, 36091), (222, 36103), (225, 36112), (247, 36211), (258, 36253), (271, 36304), (297, 36400), (400, 36748), (416, 36802), (417, 36805), (422, 36823), (424, 36835),

Gene: QTRlifeCrisis\_38 Start: 30185, Stop: 31672, Start Num: 126

Candidate Starts for QTRlifeCrisis\_38:

(Start: 56 @30089 has 26 MA's), (Start: 59 @30095 has 2 MA's), (Start: 62 @30101 has 9 MA's), (Start: 63 @30104 has 9 MA's), (Start: 75 @30119 has 1 MA's), (Start: 116 @30170 has 209 MA's), (Start: 126 @30185 has 8 MA's), (Start: 179 @30389 has 1 MA's), (Start: 181 @30395 has 1 MA's), (183, 30407), (184, 30416), (Start: 226 @30545 has 1 MA's), (229, 30554), (230, 30563), (256, 30671), (263, 30692), (265, 30704), (271, 30728), (281, 30770), (307, 30899), (312, 30917), (327, 30959), (341, 31016), (349, 31043), (357, 31070), (358, 31073), (362, 31085), (386, 31154), (398, 31187), (400, 31193), (408, 31226), (432, 31307), (436, 31322), (461, 31427), (492, 31541), (534, 31640), (544, 31664),

Gene: QuinnKiro\_33 Start: 27229, Stop: 25721, Start Num: 116

Candidate Starts for QuinnKiro\_33:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752), (263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257), (404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: RER2\_22 Start: 20508, Stop: 19012, Start Num: 97

Candidate Starts for RER2\_22:

(Start: 97 @20508 has 32 MA's), (Start: 116 @20487 has 209 MA's), (Start: 122 @20481 has 3 MA's), (Start: 152 @20352 has 1 MA's), (164, 20304), (193, 20217), (229, 20112), (254, 20001), (269, 19941), (272, 19929), (286, 19866), (292, 19836), (296, 19803), (303, 19782), (310, 19752), (316, 19731), (330, 19686), (331, 19683), (332, 19677), (354, 19593), (371, 19554), (372, 19548), (403, 19452), (411, 19419), (417, 19398), (419, 19389), (463, 19227),

Gene: RGL3\_22 Start: 20966, Stop: 19488, Start Num: 116

Candidate Starts for RGL3\_22:

(66, 21038), (Start: 97 @20987 has 32 MA's), (Start: 116 @20966 has 209 MA's), (Start: 122 @20960 has 3 MA's), (Start: 152 @20831 has 1 MA's), (154, 20819), (194, 20690), (205, 20657), (220, 20612), (243, 20528), (254, 20477), (272, 20408), (282, 20369), (284, 20360), (290, 20324), (297, 20279), (311, 20228), (315, 20213), (316, 20210), (332, 20159), (337, 20141), (348, 20102), (354, 20078), (357, 20069), (359, 20063), (371, 20039), (374, 20021), (382, 20000), (402, 19946), (404, 19934), (461, 19727), (462, 19721), (463, 19718), (480, 19661), (490, 19622), (491, 19619), (498, 19595), (500, 19589),

Gene: Raid\_38 Start: 29509, Stop: 31092, Start Num: 56

Candidate Starts for Raid\_38:

(Start: 56 @29509 has 26 MA's), (Start: 59 @29515 has 2 MA's), (Start: 62 @29521 has 9 MA's), (Start: 63 @29524 has 9 MA's), (Start: 75 @29539 has 1 MA's), (Start: 116 @29590 has 209 MA's), (Start: 126 @29605 has 8 MA's), (128, 29614), (Start: 181 @29815 has 1 MA's), (183, 29827), (222, 29953), (Start: 226 @29965 has 1 MA's), (229, 29974), (230, 29983), (256, 30091), (263, 30112), (265, 30124), (271, 30148), (281, 30190), (307, 30319), (327, 30379), (341, 30436), (357, 30490), (362, 30505), (398, 30607), (400, 30613), (408, 30646), (432, 30727), (436, 30742), (492, 30961), (534, 31060), (544, 31084),

Gene: Rajelicia\_37 Start: 29587, Stop: 31089, Start Num: 116

Candidate Starts for Rajelicia\_37:

(Start: 56 @29506 has 26 MA's), (Start: 59 @29512 has 2 MA's), (Start: 62 @29518 has 9 MA's), (Start: 63 @29521 has 9 MA's), (Start: 75 @29536 has 1 MA's), (Start: 116 @29587 has 209 MA's), (Start: 126 @29602 has 8 MA's), (Start: 181 @29812 has 1 MA's), (183, 29824), (184, 29833), (Start: 226 @29962 has 1 MA's), (229, 29971), (230, 29980), (256, 30088), (263, 30109), (265, 30121), (271, 30145), (281, 30187), (307, 30316), (327, 30376), (341, 30433), (349, 30460), (357, 30487), (358, 30490), (362, 30502), (386, 30571), (398, 30604), (400, 30610), (408, 30643), (432, 30724), (436, 30739), (461, 30844), (492, 30958), (534, 31057), (544, 31081),

Gene: Rana\_51 Start: 35146, Stop: 36723, Start Num: 50

Candidate Starts for Rana\_51:

(Start: 31 @35080 has 7 MA's), (Start: 50 @35146 has 23 MA's), (Start: 127 @35266 has 3 MA's), (Start: 152 @35383 has 1 MA's), (166, 35434), (192, 35515), (193, 35518), (216, 35590), (220, 35599), (222, 35602), (223, 35605), (229, 35623), (259, 35755), (273, 35812), (274, 35815), (277, 35824), (283, 35848), (300, 35917), (337, 36043), (339, 36052), (363, 36118), (371, 36148), (402, 36247), (407, 36271), (410, 36280), (417, 36304), (436, 36376), (487, 36565), (501, 36604), (511, 36628), (520, 36643), (525, 36658),

Gene: Rasputin\_29 Start: 23605, Stop: 22109, Start Num: 97

Candidate Starts for Rasputin\_29:

(Start: 97 @23605 has 32 MA's), (Start: 116 @23584 has 209 MA's), (Start: 122 @23578 has 3 MA's), (Start: 152 @23449 has 1 MA's), (164, 23401), (229, 23209), (236, 23170), (254, 23098), (269, 23038), (272, 23026), (292, 22933), (296, 22900), (303, 22879), (307, 22861), (310, 22849), (314, 22834), (316, 22828), (331, 22780), (339, 22747), (354, 22690), (371, 22651), (372, 22645), (403, 22549), (411, 22516), (417, 22495), (419, 22486), (463, 22324),

Gene: Rebeuca\_35 Start: 27045, Stop: 25537, Start Num: 116

Candidate Starts for Rebeuca\_35:

(Start: 116 @27045 has 209 MA's), (Start: 122 @27039 has 3 MA's), (Start: 127 @27027 has 3 MA's), (128, 27021), (147, 26934), (Start: 152 @26910 has 1 MA's), (204, 26745), (252, 26568), (263, 26529), (265, 26517), (268, 26505), (269, 26502), (272, 26490), (326, 26244), (331, 26223), (358, 26121), (375, 26073), (402, 25995), (405, 25980), (412, 25956), (416, 25941), (433, 25884), (438, 25863), (507, 25629),

Gene: RedBear\_51 Start: 36343, Stop: 37929, Start Num: 47

Candidate Starts for RedBear\_51:

(Start: 31 @36286 has 7 MA's), (Start: 47 @36343 has 5 MA's), (Start: 50 @36352 has 23 MA's), (Start: 127 @36472 has 3 MA's), (Start: 152 @36589 has 1 MA's), (166, 36640), (192, 36721), (193, 36724), (216, 36796), (220, 36805), (222, 36808), (259, 36961), (263, 36970), (273, 37018), (277, 37030), (283, 37054), (300, 37123), (301, 37126), (339, 37258), (363, 37324), (371, 37354), (402, 37453), (405, 37468), (407, 37477), (410, 37486), (417, 37510), (436, 37582), (487, 37771), (501, 37810), (507, 37825), (511, 37834), (520, 37849),

Gene: Reedo\_49 Start: 33722, Stop: 35224, Start Num: 79



Candidate Starts for Reedo\_49:

(Start: 79 @33722 has 3 MA's), (Start: 102 @33761 has 3 MA's), (Start: 115 @33779 has 12 MA's), (172, 33959), (Start: 179 @33983 has 1 MA's), (195, 34046), (212, 34082), (230, 34160), (291, 34430), (295, 34469), (298, 34481), (304, 34499), (310, 34526), (326, 34571), (454, 34985), (470, 35045), (478, 35078), (510, 35162),

Gene: Relief\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Relief\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: RemusLoopin\_55 Start: 38615, Stop: 40381, Start Num: 78

Candidate Starts for RemusLoopin\_55:

(65, 38591), (74, 38609), (Start: 78 @38615 has 3 MA's), (87, 38630), (114, 38669), (120, 38681), (Start: 145 @38789 has 1 MA's), (159, 38858), (167, 38882), (171, 38900), (183, 38963), (206, 39044), (257, 39230), (262, 39242), (263, 39245), (269, 39257), (281, 39317), (293, 39404), (297, 39422), (304, 39443), (309, 39464), (333, 39584), (360, 39689), (368, 39716), (377, 39758), (388, 39809), (395, 39851), (409, 39905), (422, 39950), (435, 40004), (444, 40037), (448, 40052), (475, 40154), (478, 40166), (485, 40199), (495, 40235), (503, 40256), (508, 40268),

Gene: ResDef\_34 Start: 27229, Stop: 25721, Start Num: 116

Candidate Starts for ResDef\_34:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752), (263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257), (404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: RexFury\_29 Start: 23667, Stop: 22171, Start Num: 97

Candidate Starts for RexFury\_29:

(Start: 97 @23667 has 32 MA's), (Start: 116 @23646 has 209 MA's), (Start: 122 @23640 has 3 MA's), (Start: 152 @23511 has 1 MA's), (164, 23463), (193, 23376), (229, 23271), (254, 23160), (262, 23130), (269, 23100), (272, 23088), (286, 23025), (292, 22995), (296, 22962), (303, 22941), (310, 22911), (314, 22896), (316, 22890), (331, 22842), (339, 22809), (354, 22752), (371, 22713), (372, 22707), (403, 22611), (411, 22578), (417, 22557), (419, 22548), (463, 22386),

Gene: Rhodalysa\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Rhodalysa\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (229, 23240), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: RhynO\_35 Start: 27045, Stop: 25519, Start Num: 116

Candidate Starts for RhynO\_35:

(Start: 106 @27060 has 2 MA's), (Start: 116 @27045 has 209 MA's), (Start: 152 @26910 has 1 MA's), (263, 26529), (269, 26502), (272, 26490), (320, 26250), (331, 26223), (343, 26178), (350, 26151), (361, 26112), (375, 26073), (402, 25995), (412, 25956), (416, 25941), (433, 25884), (438, 25863), (461, 25776), (490, 25671), (495, 25650), (498, 25644), (529, 25575),

Gene: Rhynn\_37 Start: 29603, Stop: 31105, Start Num: 116

Candidate Starts for Rhynn\_37:

(Start: 56 @29522 has 26 MA's), (Start: 59 @29528 has 2 MA's), (Start: 62 @29534 has 9 MA's), (Start: 63 @29537 has 9 MA's), (Start: 75 @29552 has 1 MA's), (Start: 116 @29603 has 209 MA's), (Start: 126 @29618 has 8 MA's), (136, 29669), (Start: 181 @29828 has 1 MA's), (Start: 226 @29978 has 1 MA's), (229, 29987), (230, 29996), (256, 30104), (263, 30125), (265, 30137), (271, 30161), (281, 30203), (307, 30332), (327, 30392), (341, 30449), (349, 30476), (357, 30503), (362, 30518), (386, 30587), (400, 30626), (408, 30659), (432, 30740), (436, 30755), (461, 30860), (492, 30974), (534, 31073), (544, 31097),

Gene: RidgeCB\_37 Start: 29192, Stop: 30691, Start Num: 116

Candidate Starts for RidgeCB\_37:

(Start: 80 @29147 has 3 MA's), (Start: 116 @29192 has 209 MA's), (Start: 126 @29207 has 8 MA's), (128, 29216), (154, 29339), (Start: 179 @29411 has 1 MA's), (Start: 181 @29417 has 1 MA's), (184, 29438), (194, 29471), (Start: 226 @29567 has 1 MA's), (229, 29576), (230, 29585), (256, 29693), (263, 29714), (265, 29726), (271, 29750), (281, 29792), (307, 29921), (327, 29981), (341, 30038), (349, 30065), (357, 30092), (358, 30095), (362, 30107), (398, 30206), (408, 30245), (432, 30326), (436, 30341), (461, 30446), (492, 30560), (495, 30572), (534, 30659), (544, 30683),

Gene: Ringer\_38 Start: 30000, Stop: 31502, Start Num: 116

Candidate Starts for Ringer\_38:

(Start: 51 @29910 has 1 MA's), (Start: 56 @29919 has 26 MA's), (Start: 59 @29925 has 2 MA's), (Start: 62 @29931 has 9 MA's), (Start: 63 @29934 has 9 MA's), (Start: 75 @29949 has 1 MA's), (Start: 116 @30000 has 209 MA's), (Start: 126 @30015 has 8 MA's), (128, 30024), (Start: 179 @30219 has 1 MA's), (Start: 181 @30225 has 1 MA's), (Start: 226 @30375 has 1 MA's), (229, 30384), (230, 30393), (231, 30399), (252, 30489), (256, 30501), (265, 30534), (307, 30729), (327, 30789), (341, 30846), (357, 30900), (362, 30915), (398, 31017), (400, 31023), (408, 31056), (432, 31137), (436, 31152), (492, 31371), (534, 31470), (544, 31494),

Gene: Roary\_30 Start: 24978, Stop: 23476, Start Num: 113

Candidate Starts for Roary\_30:

(69, 25047), (Start: 84 @25020 has 1 MA's), (88, 25014), (Start: 113 @24978 has 105 MA's), (Start: 152 @24828 has 1 MA's), (184, 24723), (205, 24657), (208, 24639), (218, 24597), (219, 24594), (240, 24507), (268, 24393), (271, 24381), (290, 24288), (300, 24240), (311, 24198), (328, 24138), (354, 24036), (396, 23901), (416, 23829), (421, 23811), (446, 23724), (455, 23688), (463, 23649), (493, 23565), (518, 23517),

Gene: RockScotty\_45 Start: 31328, Stop: 32767, Start Num: 115

Candidate Starts for RockScotty\_45:

(Start: 115 @31328 has 12 MA's), (Start: 145 @31439 has 1 MA's), (148, 31448), (172, 31511), (Start: 179 @31535 has 1 MA's), (182, 31544), (222, 31694), (225, 31703), (261, 31859), (263, 31865), (269, 31892), (328, 32126), (331, 32141), (368, 32249), (450, 32519), (504, 32696), (512, 32711), (514, 32714),

Gene: Rohr\_38 Start: 29540, Stop: 31123, Start Num: 56

Candidate Starts for Rohr\_38:

(Start: 56 @29540 has 26 MA's), (Start: 59 @29546 has 2 MA's), (Start: 62 @29552 has 9 MA's), (Start: 63 @29555 has 9 MA's), (Start: 75 @29570 has 1 MA's), (Start: 116 @29621 has 209 MA's), (Start: 123 @29630 has 2 MA's), (Start: 126 @29636 has 8 MA's), (128, 29645), (Start: 130 @29654 has 1 MA's), (Start: 181 @29846 has 1 MA's), (183, 29858), (184, 29867), (194, 29900), (Start: 226 @29996 has 1 MA's), (229, 30005), (230, 30014), (256, 30122), (263, 30143), (265, 30155), (271, 30179), (281, 30221), (307, 30350), (327, 30410), (341, 30467), (349, 30494), (357, 30521), (358, 30524), (362, 30536), (386, 30605), (398, 30638), (400, 30644), (408, 30677), (432, 30758), (436,

30773), (461, 30878), (492, 30992), (534, 31091), (544, 31115),

Gene: Romney\_33 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Romney\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (271, 26037), (273, 26025), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Roosevelt\_33 Start: 26639, Stop: 25125, Start Num: 113

Candidate Starts for Roosevelt\_33:

(Start: 84 @26681 has 1 MA's), (Start: 107 @26648 has 19 MA's), (Start: 113 @26639 has 105 MA's), (154, 26477), (Start: 179 @26411 has 1 MA's), (183, 26393), (205, 26318), (210, 26294), (218, 26255), (219, 26252), (240, 26165), (268, 26051), (271, 26039), (311, 25856), (340, 25745), (354, 25694), (396, 25565), (399, 25556), (419, 25481), (421, 25475), (455, 25352), (463, 25313), (521, 25163), (528, 25148),

Gene: Rosa24\_32 Start: 26548, Stop: 25127, Start Num: 139

Candidate Starts for Rosa24\_32:

(42, 26737), (Start: 64 @26689 has 10 MA's), (Start: 107 @26632 has 19 MA's), (Start: 116 @26623 has 209 MA's), (Start: 127 @26605 has 3 MA's), (139, 26548), (143, 26530), (150, 26500), (Start: 152 @26488 has 1 MA's), (190, 26362), (197, 26341), (211, 26311), (220, 26272), (231, 26233), (253, 26143), (268, 26083), (282, 26029), (310, 25891), (359, 25723), (380, 25660), (403, 25570), (412, 25534), (419, 25507), (435, 25453), (437, 25444), (493, 25234), (500, 25216), (512, 25204), (517, 25195),

Gene: Rowdy\_38 Start: 26956, Stop: 25430, Start Num: 116

Candidate Starts for Rowdy\_38:

(Start: 106 @26971 has 2 MA's), (Start: 116 @26956 has 209 MA's), (Start: 152 @26821 has 1 MA's), (263, 26440), (269, 26413), (272, 26401), (320, 26161), (331, 26134), (350, 26062), (361, 26023), (375, 25984), (402, 25906), (412, 25867), (416, 25852), (433, 25795), (438, 25774), (461, 25687), (490, 25582), (495, 25561), (498, 25555), (529, 25486),

Gene: Rufus\_39 Start: 29957, Stop: 31459, Start Num: 116

Candidate Starts for Rufus\_39:

(Start: 56 @29876 has 26 MA's), (Start: 59 @29882 has 2 MA's), (Start: 62 @29888 has 9 MA's), (Start: 63 @29891 has 9 MA's), (Start: 75 @29906 has 1 MA's), (Start: 116 @29957 has 209 MA's), (Start: 179 @30176 has 1 MA's), (Start: 181 @30182 has 1 MA's), (184, 30203), (222, 30320), (Start: 226 @30332 has 1 MA's), (229, 30341), (230, 30350), (256, 30458), (263, 30479), (265, 30491), (271, 30515), (281, 30557), (307, 30686), (327, 30746), (341, 30803), (349, 30830), (357, 30857), (362, 30872), (400, 30980), (408, 31013), (425, 31079), (436, 31109), (461, 31214), (492, 31328), (534, 31427), (544, 31451),

Gene: Ruin\_33 Start: 26633, Stop: 25119, Start Num: 113

Candidate Starts for Ruin\_33:

(Start: 84 @26675 has 1 MA's), (Start: 107 @26642 has 19 MA's), (Start: 113 @26633 has 105 MA's), (154, 26471), (Start: 179 @26405 has 1 MA's), (183, 26387), (205, 26312), (210, 26288), (218, 26249), (219, 26246), (240, 26159), (268, 26045), (271, 26033), (311, 25850), (340, 25739), (354, 25688), (396, 25559), (399, 25550), (419, 25475), (421, 25469), (455, 25346), (463, 25307), (521, 25157), (528, 25142),

Gene: Rummer\_36 Start: 27306, Stop: 25738, Start Num: 113

Candidate Starts for Rummer\_36:

(37, 27456), (43, 27441), (88, 27342), (Start: 113 @27306 has 105 MA's), (184, 27051), (191, 27027), (208, 26967), (218, 26919), (219, 26916), (240, 26829), (245, 26817), (247, 26796), (254, 26772), (271, 26703), (287, 26634), (288, 26625), (311, 26520), (321, 26475), (354, 26343), (381, 26259), (398, 26202), (455, 25995), (495, 25854),

Gene: Ruotula\_37 Start: 30065, Stop: 31648, Start Num: 56

Candidate Starts for Ruotula\_37:

(Start: 56 @30065 has 26 MA's), (Start: 59 @30071 has 2 MA's), (Start: 62 @30077 has 9 MA's), (Start: 63 @30080 has 9 MA's), (Start: 75 @30095 has 1 MA's), (Start: 116 @30146 has 209 MA's), (Start: 145 @30254 has 1 MA's), (Start: 181 @30371 has 1 MA's), (184, 30392), (Start: 226 @30521 has 1 MA's), (229, 30530), (230, 30539), (256, 30647), (263, 30668), (265, 30680), (271, 30704), (281, 30746), (307, 30875), (327, 30935), (341, 30992), (357, 31046), (362, 31061), (386, 31130), (400, 31169), (408, 31202), (432, 31283), (436, 31298), (492, 31517), (534, 31616), (544, 31640),

Gene: Rutherferd\_39 Start: 30225, Stop: 31727, Start Num: 116

Candidate Starts for Rutherferd\_39:

(Start: 56 @30144 has 26 MA's), (Start: 59 @30150 has 2 MA's), (Start: 62 @30156 has 9 MA's), (Start: 63 @30159 has 9 MA's), (Start: 75 @30174 has 1 MA's), (Start: 116 @30225 has 209 MA's), (128, 30249), (Start: 179 @30444 has 1 MA's), (Start: 181 @30450 has 1 MA's), (183, 30462), (184, 30471), (Start: 226 @30600 has 1 MA's), (229, 30609), (230, 30618), (256, 30726), (263, 30747), (265, 30759), (271, 30783), (281, 30825), (307, 30954), (327, 31014), (341, 31071), (349, 31098), (357, 31125), (362, 31140), (398, 31242), (400, 31248), (408, 31281), (432, 31362), (436, 31377), (492, 31596), (534, 31695), (544, 31719),

Gene: STLscum\_38 Start: 30309, Stop: 31877, Start Num: 63

Candidate Starts for STLscum\_38:

(Start: 56 @30294 has 26 MA's), (Start: 59 @30300 has 2 MA's), (Start: 62 @30306 has 9 MA's), (Start: 63 @30309 has 9 MA's), (Start: 75 @30324 has 1 MA's), (Start: 116 @30375 has 209 MA's), (Start: 145 @30483 has 1 MA's), (Start: 179 @30594 has 1 MA's), (Start: 181 @30600 has 1 MA's), (184, 30621), (Start: 226 @30750 has 1 MA's), (229, 30759), (230, 30768), (256, 30876), (263, 30897), (265, 30909), (271, 30933), (281, 30975), (307, 31104), (327, 31164), (341, 31221), (349, 31248), (357, 31275), (358, 31278), (362, 31290), (400, 31398), (408, 31431), (432, 31512), (436, 31527), (461, 31632), (492, 31746), (534, 31845), (544, 31869),

Gene: Sabertooth\_33 Start: 26636, Stop: 25122, Start Num: 113

Candidate Starts for Sabertooth\_33:

(Start: 84 @26678 has 1 MA's), (Start: 107 @26645 has 19 MA's), (Start: 113 @26636 has 105 MA's), (154, 26474), (Start: 179 @26408 has 1 MA's), (183, 26390), (205, 26315), (210, 26291), (218, 26252), (219, 26249), (240, 26162), (268, 26048), (271, 26036), (311, 25853), (340, 25742), (354, 25691), (396, 25562), (399, 25553), (419, 25478), (421, 25472), (455, 25349), (463, 25310), (521, 25160), (528, 25145),

Gene: Sabourin\_48 Start: 31408, Stop: 32847, Start Num: 115

Candidate Starts for Sabourin\_48:

(Start: 115 @31408 has 12 MA's), (Start: 145 @31519 has 1 MA's), (148, 31528), (172, 31591), (Start: 179 @31615 has 1 MA's), (182, 31624), (222, 31774), (225, 31783), (261, 31939), (263, 31945), (269, 31972), (284, 32032), (328, 32206), (331, 32221), (368, 32329), (425, 32512), (504, 32776), (512, 32791), (514, 32794),

Gene: Sagefire\_39 Start: 30397, Stop: 31899, Start Num: 116

Candidate Starts for Sagefire\_39:

(Start: 56 @30316 has 26 MA's), (Start: 59 @30322 has 2 MA's), (Start: 62 @30328 has 9 MA's), (Start: 63 @30331 has 9 MA's), (Start: 75 @30346 has 1 MA's), (Start: 116 @30397 has 209 MA's), (Start: 123 @30406 has 2 MA's), (Start: 145 @30505 has 1 MA's), (148, 30514), (Start: 181 @30622 has 1 MA's), (184, 30643), (Start: 226 @30772 has 1 MA's), (229, 30781), (230, 30790), (256, 30898), (263, 30919), (265, 30931), (271, 30955), (281, 30997), (307, 31126), (327, 31186), (341, 31243), (349, 31270), (357, 31297), (358, 31300), (362, 31312), (398, 31414), (400, 31420), (432, 31534), (436, 31549), (461, 31654), (492, 31768), (534, 31867), (544, 31891),

Gene: Samora\_58 Start: 39277, Stop: 40836, Start Num: 129

Candidate Starts for Samora\_58:

(Start: 77 @39181 has 1 MA's), (Start: 105 @39226 has 3 MA's), (111, 39235), (118, 39247), (Start: 129 @39277 has 3 MA's), (180, 39463), (Start: 181 @39466 has 1 MA's), (187, 39499), (190, 39508), (203, 39547), (205, 39553), (213, 39583), (217, 39613), (222, 39625), (223, 39628), (235, 39682), (236, 39685), (242, 39703), (244, 39712), (260, 39781), (313, 40039), (315, 40051), (326, 40096), (337, 40141), (341, 40156), (356, 40213), (357, 40219), (371, 40249), (382, 40294), (414, 40408), (416, 40414), (438, 40492), (489, 40681), (490, 40684), (519, 40759), (523, 40771),

Gene: Sandaddy\_37 Start: 29421, Stop: 30989, Start Num: 63

Candidate Starts for Sandaddy\_37:

(Start: 56 @29406 has 26 MA's), (Start: 59 @29412 has 2 MA's), (Start: 62 @29418 has 9 MA's), (Start: 63 @29421 has 9 MA's), (Start: 75 @29436 has 1 MA's), (Start: 116 @29487 has 209 MA's), (Start: 179 @29706 has 1 MA's), (Start: 181 @29712 has 1 MA's), (184, 29733), (Start: 226 @29862 has 1 MA's), (229, 29871), (230, 29880), (256, 29988), (265, 30021), (271, 30045), (281, 30087), (307, 30216), (327, 30276), (341, 30333), (349, 30360), (357, 30387), (358, 30390), (362, 30402), (386, 30471), (400, 30510), (408, 30543), (432, 30624), (436, 30639), (461, 30744), (492, 30858), (534, 30957), (544, 30981),

Gene: Sanya\_36 Start: 30102, Stop: 31670, Start Num: 63

Candidate Starts for Sanya\_36:

(Start: 56 @30087 has 26 MA's), (Start: 59 @30093 has 2 MA's), (Start: 62 @30099 has 9 MA's), (Start: 63 @30102 has 9 MA's), (Start: 75 @30117 has 1 MA's), (Start: 116 @30168 has 209 MA's), (Start: 123 @30177 has 2 MA's), (Start: 126 @30183 has 8 MA's), (128, 30192), (Start: 179 @30387 has 1 MA's), (Start: 181 @30393 has 1 MA's), (Start: 226 @30543 has 1 MA's), (229, 30552), (230, 30561), (256, 30669), (263, 30690), (265, 30702), (271, 30726), (281, 30768), (307, 30897), (327, 30957), (341, 31014), (357, 31068), (362, 31083), (400, 31191), (408, 31224), (432, 31305), (436, 31320), (461, 31425), (492, 31539), (534, 31638), (544, 31662),

Gene: SarFire\_37 Start: 29648, Stop: 31210, Start Num: 75

Candidate Starts for SarFire\_37:

(Start: 56 @29618 has 26 MA's), (Start: 59 @29624 has 2 MA's), (Start: 62 @29630 has 9 MA's), (Start: 63 @29633 has 9 MA's), (Start: 75 @29648 has 1 MA's), (Start: 116 @29699 has 209 MA's), (Start: 179 @29918 has 1 MA's), (Start: 181 @29924 has 1 MA's), (183, 29936), (184, 29945), (Start: 226 @30074 has 1 MA's), (229, 30083), (230, 30092), (256, 30200), (263, 30221), (265, 30233), (271, 30257), (281, 30299), (307, 30428), (327, 30488), (341, 30545), (349, 30572), (357, 30599), (358, 30602), (362, 30614), (398, 30713), (408, 30752), (432, 30833), (436, 30848), (492, 31067),

Gene: SarahRose\_50 Start: 36181, Stop: 37794, Start Num: 50

Candidate Starts for SarahRose\_50:

(Start: 31 @36115 has 7 MA's), (Start: 47 @36172 has 5 MA's), (Start: 50 @36181 has 23 MA's), (Start: 127 @36328 has 3 MA's), (148, 36427), (Start: 152 @36445 has 1 MA's), (166, 36496), (192, 36577), (193, 36580), (216, 36652), (220, 36661), (222, 36664), (252, 36790), (259, 36817), (277, 36886), (289, 36931), (305, 37000), (311, 37027), (328, 37075), (339, 37123), (355, 37162), (363, 37189), (371, 37219), (407, 37342), (423, 37402), (436, 37447), (472, 37576), (484, 37627), (487,

37636), (501, 37675), (511, 37699), (520, 37714), (525, 37729), (530, 37744),

Gene: Scamp\_33 Start: 26639, Stop: 25125, Start Num: 113

Candidate Starts for Scamp\_33:

(Start: 84 @26681 has 1 MA's), (Start: 107 @26648 has 19 MA's), (Start: 113 @26639 has 105 MA's), (154, 26477), (Start: 179 @26411 has 1 MA's), (183, 26393), (205, 26318), (210, 26294), (218, 26255), (219, 26252), (240, 26165), (268, 26051), (271, 26039), (273, 26027), (311, 25856), (340, 25745), (354, 25694), (396, 25565), (399, 25556), (419, 25481), (421, 25475), (455, 25352), (463, 25313), (521, 25163), (528, 25148),

Gene: Scorpia\_32 Start: 25388, Stop: 23907, Start Num: 116

Candidate Starts for Scorpia\_32:

(88, 25415), (Start: 116 @25388 has 209 MA's), (Start: 131 @25352 has 3 MA's), (Start: 152 @25253 has 1 MA's), (Start: 181 @25169 has 1 MA's), (190, 25127), (198, 25103), (211, 25076), (220, 25037), (229, 25013), (263, 24869), (334, 24575), (338, 24557), (347, 24530), (354, 24500), (362, 24476), (371, 24461), (389, 24401), (403, 24350), (404, 24341), (419, 24287), (429, 24254), (447, 24188), (500, 23996), (539, 23918),

Gene: Scowl\_37 Start: 29862, Stop: 31430, Start Num: 62

Candidate Starts for Scowl\_37:

(Start: 56 @29850 has 26 MA's), (Start: 59 @29856 has 2 MA's), (Start: 62 @29862 has 9 MA's), (Start: 63 @29865 has 9 MA's), (Start: 75 @29880 has 1 MA's), (Start: 116 @29931 has 209 MA's), (Start: 179 @30150 has 1 MA's), (Start: 181 @30156 has 1 MA's), (184, 30177), (Start: 226 @30306 has 1 MA's), (229, 30315), (230, 30324), (256, 30432), (263, 30453), (265, 30465), (271, 30489), (281, 30531), (307, 30660), (327, 30720), (341, 30777), (357, 30831), (358, 30834), (362, 30846), (408, 30984), (432, 31065), (436, 31080), (461, 31185), (492, 31299), (495, 31311), (534, 31398), (544, 31422),

Gene: Seabiscuit\_39 Start: 29433, Stop: 30935, Start Num: 116

Candidate Starts for Seabiscuit\_39:

(Start: 56 @29352 has 26 MA's), (Start: 59 @29358 has 2 MA's), (Start: 62 @29364 has 9 MA's), (Start: 63 @29367 has 9 MA's), (Start: 75 @29382 has 1 MA's), (Start: 116 @29433 has 209 MA's), (Start: 179 @29652 has 1 MA's), (Start: 181 @29658 has 1 MA's), (222, 29796), (Start: 226 @29808 has 1 MA's), (229, 29817), (230, 29826), (231, 29832), (252, 29922), (256, 29934), (265, 29967), (300, 30135), (307, 30162), (327, 30222), (341, 30279), (349, 30306), (357, 30333), (362, 30348), (386, 30417), (400, 30456), (408, 30489), (425, 30555), (436, 30585), (454, 30648), (461, 30690), (465, 30705), (492, 30804), (534, 30903), (544, 30927),

Gene: Seanderson\_38 Start: 30061, Stop: 31563, Start Num: 116

Candidate Starts for Seanderson\_38:

(Start: 56 @29980 has 26 MA's), (Start: 59 @29986 has 2 MA's), (Start: 62 @29992 has 9 MA's), (Start: 63 @29995 has 9 MA's), (Start: 75 @30010 has 1 MA's), (Start: 116 @30061 has 209 MA's), (Start: 181 @30286 has 1 MA's), (184, 30307), (Start: 226 @30436 has 1 MA's), (229, 30445), (230, 30454), (256, 30562), (263, 30583), (265, 30595), (271, 30619), (307, 30790), (327, 30850), (341, 30907), (349, 30934), (357, 30961), (358, 30964), (362, 30976), (386, 31045), (398, 31078), (400, 31084), (408, 31117), (432, 31198), (436, 31213), (461, 31318), (492, 31432), (534, 31531), (544, 31555),

Gene: Sebastisaurus\_51 Start: 38899, Stop: 40668, Start Num: 78

Candidate Starts for Sebastisaurus\_51:

(65, 38875), (74, 38893), (Start: 78 @38899 has 3 MA's), (87, 38914), (114, 38953), (120, 38965), (159, 39142), (160, 39145), (170, 39175), (183, 39247), (185, 39262), (193, 39289), (194, 39292), (206, 39328), (241, 39454), (257, 39514), (262, 39526), (281, 39601), (293, 39688), (304, 39727),

(325, 39838), (329, 39853), (331, 39859), (360, 39973), (368, 40000), (388, 40093), (395, 40135), (409, 40189), (422, 40234), (427, 40255), (448, 40336), (475, 40438), (478, 40450), (485, 40483), (495, 40519), (503, 40540), (508, 40552),

Gene: SenorClean\_32 Start: 26475, Stop: 25123, Start Num: 154

Candidate Starts for SenorClean\_32:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Severus\_32 Start: 23850, Stop: 25496, Start Num: 113

Candidate Starts for Severus\_32:

(Start: 79 @23802 has 3 MA's), (Start: 102 @23841 has 3 MA's), (Start: 113 @23850 has 105 MA's), (Start: 123 @23868 has 2 MA's), (Start: 130 @23892 has 1 MA's), (Start: 145 @23967 has 1 MA's), (148, 23976), (Start: 152 @23994 has 1 MA's), (Start: 179 @24078 has 1 MA's), (180, 24081), (187, 24117), (220, 24219), (229, 24243), (230, 24252), (252, 24348), (263, 24384), (272, 24423), (273, 24432), (274, 24435), (297, 24552), (304, 24573), (307, 24588), (310, 24600), (326, 24648), (337, 24693), (357, 24765), (370, 24789), (400, 24909), (404, 24927), (405, 24930), (406, 24933), (444, 25068), (492, 25257), (532, 25350), (544, 25380), (546, 25404), (551, 25452), (552, 25470),

Gene: Shaffner\_48 Start: 35742, Stop: 37160, Start Num: 110

Candidate Starts for Shaffner\_48:

(96, 35724), (108, 35739), (Start: 110 @35742 has 33 MA's), (Start: 116 @35751 has 209 MA's), (Start: 181 @35973 has 1 MA's), (216, 36084), (222, 36096), (225, 36105), (248, 36207), (258, 36246), (271, 36297), (400, 36741), (417, 36798), (422, 36816), (424, 36828), (474, 37002),

Gene: Shaka\_33 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Shaka\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Shapes\_38 Start: 26956, Stop: 25430, Start Num: 116

Candidate Starts for Shapes\_38:

(Start: 106 @26971 has 2 MA's), (Start: 116 @26956 has 209 MA's), (Start: 152 @26821 has 1 MA's), (263, 26440), (269, 26413), (272, 26401), (320, 26161), (331, 26134), (350, 26062), (361, 26023), (375, 25984), (402, 25906), (412, 25867), (416, 25852), (433, 25795), (438, 25774), (461, 25687), (490, 25582), (495, 25561), (498, 25555), (529, 25486),

Gene: Shawty\_54 Start: 37457, Stop: 39295, Start Num: 107

Candidate Starts for Shawty\_54:

(76, 37409), (Start: 90 @37433 has 1 MA's), (Start: 107 @37457 has 19 MA's), (169, 37703), (170, 37709), (189, 37811), (200, 37844), (201, 37850), (206, 37865), (238, 37994), (239, 37997), (298, 38294), (323, 38399), (324, 38405), (352, 38531), (353, 38537), (370, 38600), (390, 38699), (395, 38735), (416, 38822), (433, 38888), (448, 38945), (459, 38993), (464, 39014), (469, 39023), (477, 39047), (481, 39065), (516, 39170), (539, 39230),

Gene: SheaKeira\_35 Start: 26656, Stop: 25103, Start Num: 116

Candidate Starts for SheaKeira\_35:

(52, 26761), (55, 26755), (Start: 116 @26656 has 209 MA's), (141, 26575), (Start: 152 @26521 has 1 MA's), (205, 26350), (268, 26116), (273, 26092), (310, 25924), (331, 25858), (354, 25771), (357, 25762), (363, 25741), (380, 25681), (419, 25531), (447, 25432), (450, 25423), (493, 25258), (500, 25240), (528, 25192), (530, 25183),

Gene: Sheen\_34 Start: 28925, Stop: 27417, Start Num: 116

Candidate Starts for Sheen\_34:

(Start: 106 @28940 has 2 MA's), (Start: 116 @28925 has 209 MA's), (154, 28778), (204, 28625), (225, 28565), (252, 28448), (263, 28409), (268, 28385), (269, 28382), (272, 28370), (293, 28235), (326, 28124), (331, 28103), (336, 28082), (361, 27992), (374, 27956), (375, 27953), (398, 27887), (404, 27863), (412, 27836), (416, 27821), (419, 27809), (429, 27776), (438, 27743), (490, 27551), (495, 27530), (507, 27509), (529, 27455),

Gene: Shuman\_29 Start: 23649, Stop: 22141, Start Num: 97

Candidate Starts for Shuman\_29:

(Start: 97 @23649 has 32 MA's), (Start: 116 @23628 has 209 MA's), (Start: 122 @23622 has 3 MA's), (Start: 152 @23493 has 1 MA's), (164, 23445), (193, 23358), (229, 23253), (254, 23142), (269, 23082), (272, 23070), (286, 23007), (292, 22977), (296, 22944), (303, 22923), (310, 22893), (314, 22878), (316, 22872), (331, 22824), (339, 22791), (354, 22734), (371, 22695), (372, 22689), (417, 22539), (463, 22368), (539, 22152),

Gene: Shygu2\_33 Start: 26631, Stop: 25117, Start Num: 113

Candidate Starts for Shygu2\_33:

(Start: 84 @26673 has 1 MA's), (Start: 107 @26640 has 19 MA's), (Start: 113 @26631 has 105 MA's), (Start: 130 @26586 has 1 MA's), (154, 26469), (Start: 179 @26403 has 1 MA's), (183, 26385), (205, 26310), (210, 26286), (218, 26247), (219, 26244), (240, 26157), (268, 26043), (271, 26031), (311, 25848), (327, 25791), (340, 25737), (354, 25686), (396, 25557), (399, 25548), (419, 25473), (421, 25467), (454, 25353), (455, 25344), (463, 25305), (521, 25155), (528, 25140),

Gene: Sibs6\_38 Start: 28591, Stop: 30105, Start Num: 116

Candidate Starts for Sibs6\_38:

(Start: 56 @28510 has 26 MA's), (Start: 59 @28516 has 2 MA's), (Start: 62 @28522 has 9 MA's), (Start: 63 @28525 has 9 MA's), (Start: 75 @28540 has 1 MA's), (Start: 116 @28591 has 209 MA's), (Start: 126 @28606 has 8 MA's), (Start: 179 @28810 has 1 MA's), (Start: 181 @28816 has 1 MA's), (184, 28837), (Start: 226 @28966 has 1 MA's), (229, 28975), (230, 28984), (252, 29080), (256, 29092), (265, 29125), (273, 29161), (307, 29320), (327, 29380), (341, 29437), (357, 29491), (362, 29506), (400, 29614), (408, 29647), (409, 29650), (432, 29728), (436, 29743), (492, 29962),

Gene: Simpson\_52 Start: 35322, Stop: 36740, Start Num: 110

Candidate Starts for Simpson\_52:

(96, 35304), (108, 35319), (Start: 110 @35322 has 33 MA's), (Start: 116 @35331 has 209 MA's), (147, 35445), (Start: 152 @35469 has 1 MA's), (Start: 181 @35553 has 1 MA's), (216, 35664), (222, 35676), (225, 35685), (247, 35784), (271, 35877), (273, 35889), (281, 35916), (310, 36021), (328, 36075), (422, 36396), (424, 36408), (435, 36441), (473, 36579),

Gene: SkiPole\_40 Start: 29928, Stop: 31442, Start Num: 116

Candidate Starts for SkiPole\_40:

(46, 29826), (Start: 49 @29838 has 1 MA's), (Start: 56 @29847 has 26 MA's), (Start: 59 @29853 has 2 MA's), (Start: 62 @29859 has 9 MA's), (Start: 63 @29862 has 9 MA's), (Start: 75 @29877 has 1 MA's), (Start: 116 @29928 has 209 MA's), (Start: 126 @29943 has 8 MA's), (128, 29952), (Start: 181 @30153 has 1 MA's), (183, 30165), (184, 30174), (Start: 226 @30303 has 1 MA's), (229, 30312), (230, 30321), (256, 30429), (263, 30450), (265, 30462), (271, 30486), (281, 30528), (307, 30657), (327, 30717), (341, 30774), (349, 30801), (357, 30828), (362, 30843), (386, 30912), (400, 30951), (408, 30984),



(432, 31065), (436, 31080), (461, 31185), (492, 31299),

Gene: Skipitt\_33 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for Skipitt\_33:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (240, 26160), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: Slagathor\_38 Start: 29511, Stop: 31013, Start Num: 116

Candidate Starts for Slagathor\_38:

(Start: 56 @29430 has 26 MA's), (Start: 59 @29436 has 2 MA's), (Start: 62 @29442 has 9 MA's), (Start: 63 @29445 has 9 MA's), (Start: 75 @29460 has 1 MA's), (Start: 116 @29511 has 209 MA's), (Start: 126 @29526 has 8 MA's), (Start: 181 @29736 has 1 MA's), (183, 29748), (184, 29757), (Start: 226 @29886 has 1 MA's), (229, 29895), (230, 29904), (256, 30012), (263, 30033), (265, 30045), (271, 30069), (281, 30111), (307, 30240), (327, 30300), (341, 30357), (349, 30384), (357, 30411), (358, 30414), (362, 30426), (386, 30495), (398, 30528), (400, 30534), (408, 30567), (432, 30648), (436, 30663), (461, 30768), (492, 30882), (534, 30981), (544, 31005),

Gene: Smairt\_38 Start: 29608, Stop: 31107, Start Num: 116

Candidate Starts for Smairt\_38:

(Start: 49 @29518 has 1 MA's), (Start: 80 @29563 has 3 MA's), (Start: 116 @29608 has 209 MA's), (Start: 126 @29623 has 8 MA's), (128, 29632), (154, 29755), (Start: 179 @29827 has 1 MA's), (Start: 181 @29833 has 1 MA's), (184, 29854), (Start: 226 @29983 has 1 MA's), (229, 29992), (230, 30001), (256, 30109), (263, 30130), (265, 30142), (271, 30166), (281, 30208), (307, 30337), (327, 30397), (341, 30454), (349, 30481), (357, 30508), (358, 30511), (362, 30523), (398, 30622), (408, 30661), (409, 30664), (432, 30742), (436, 30757), (492, 30976), (534, 31075), (544, 31099),

Gene: Smeadley\_30 Start: 25011, Stop: 23509, Start Num: 113

Candidate Starts for Smeadley\_30:

(69, 25080), (Start: 84 @25053 has 1 MA's), (88, 25047), (Start: 113 @25011 has 105 MA's), (Start: 152 @24861 has 1 MA's), (184, 24756), (205, 24690), (208, 24672), (218, 24630), (219, 24627), (240, 24540), (247, 24507), (271, 24414), (290, 24321), (300, 24273), (311, 24231), (328, 24171), (354, 24069), (416, 23862), (446, 23757), (455, 23721), (463, 23682), (493, 23598), (518, 23550),

Gene: Smeagol\_39 Start: 30836, Stop: 32335, Start Num: 116

Candidate Starts for Smeagol\_39:

(Start: 116 @30836 has 209 MA's), (Start: 126 @30851 has 8 MA's), (Start: 145 @30944 has 1 MA's), (Start: 152 @30971 has 1 MA's), (154, 30983), (Start: 179 @31055 has 1 MA's), (Start: 181 @31061 has 1 MA's), (183, 31073), (184, 31082), (194, 31115), (204, 31145), (205, 31148), (Start: 226 @31211 has 1 MA's), (230, 31229), (252, 31325), (256, 31337), (265, 31370), (271, 31394), (284, 31448), (286, 31463), (292, 31493), (307, 31565), (327, 31625), (337, 31667), (341, 31682), (349, 31709), (351, 31724), (354, 31727), (357, 31736), (362, 31751), (398, 31850), (408, 31889), (419, 31928), (421, 31934), (432, 31970), (436, 31985), (440, 32000), (461, 32090), (492, 32204), (493, 32210), (534, 32303), (544, 32327),

Gene: Snazzy\_36 Start: 29422, Stop: 30936, Start Num: 116

Candidate Starts for Snazzy\_36:

(Start: 56 @29341 has 26 MA's), (Start: 59 @29347 has 2 MA's), (Start: 62 @29353 has 9 MA's), (Start: 63 @29356 has 9 MA's), (Start: 75 @29371 has 1 MA's), (Start: 116 @29422 has 209 MA's), (Start: 126 @29437 has 8 MA's), (Start: 179 @29641 has 1 MA's), (Start: 181 @29647 has 1 MA's), (222, 29785), (Start: 226 @29797 has 1 MA's), (229, 29806), (230, 29815), (252, 29911), (256, 29923),

(265, 29956), (273, 29992), (307, 30151), (327, 30211), (341, 30268), (349, 30295), (357, 30322), (362, 30337), (398, 30439), (400, 30445), (408, 30478), (409, 30481), (419, 30517), (432, 30559), (436, 30574), (461, 30679), (492, 30793),

Gene: Snek\_51 Start: 34577, Stop: 36082, Start Num: 79

Candidate Starts for Snek\_51:

(Start: 79 @34577 has 3 MA's), (Start: 102 @34616 has 3 MA's), (Start: 115 @34634 has 12 MA's), (172, 34820), (230, 35021), (248, 35102), (310, 35387), (356, 35516), (408, 35681), (454, 35843), (507, 36014), (510, 36020),

Gene: Snorlax\_50 Start: 36206, Stop: 37819, Start Num: 50

Candidate Starts for Snorlax\_50:

(Start: 31 @36140 has 7 MA's), (Start: 47 @36197 has 5 MA's), (Start: 50 @36206 has 23 MA's), (Start: 127 @36353 has 3 MA's), (148, 36452), (Start: 152 @36470 has 1 MA's), (166, 36521), (192, 36602), (193, 36605), (216, 36677), (220, 36686), (222, 36689), (252, 36815), (259, 36842), (277, 36911), (289, 36956), (305, 37025), (311, 37052), (328, 37100), (339, 37148), (355, 37187), (363, 37214), (371, 37244), (404, 37355), (407, 37367), (423, 37427), (436, 37472), (459, 37562), (472, 37601), (484, 37652), (487, 37661), (501, 37700), (511, 37724), (520, 37739), (525, 37754), (530, 37769),

Gene: Solon\_37 Start: 29718, Stop: 31220, Start Num: 116

Candidate Starts for Solon\_37:

(Start: 56 @29637 has 26 MA's), (Start: 59 @29643 has 2 MA's), (Start: 62 @29649 has 9 MA's), (Start: 63 @29652 has 9 MA's), (Start: 75 @29667 has 1 MA's), (Start: 116 @29718 has 209 MA's), (Start: 145 @29826 has 1 MA's), (Start: 179 @29937 has 1 MA's), (Start: 181 @29943 has 1 MA's), (184, 29964), (Start: 226 @30093 has 1 MA's), (229, 30102), (230, 30111), (256, 30219), (263, 30240), (265, 30252), (271, 30276), (281, 30318), (307, 30447), (327, 30507), (341, 30564), (349, 30591), (357, 30618), (362, 30633), (386, 30702), (400, 30741), (408, 30774), (432, 30855), (436, 30870), (461, 30975), (492, 31089), (495, 31101), (534, 31188), (544, 31212),

Gene: Sooty\_43 Start: 31423, Stop: 32862, Start Num: 115

Candidate Starts for Sooty\_43:

(Start: 115 @31423 has 12 MA's), (Start: 145 @31534 has 1 MA's), (148, 31543), (172, 31606), (Start: 179 @31630 has 1 MA's), (182, 31639), (222, 31789), (225, 31798), (261, 31954), (263, 31960), (269, 31987), (284, 32047), (328, 32221), (331, 32236), (368, 32344), (425, 32527), (504, 32791), (512, 32806), (514, 32809),

Gene: SororFago\_38 Start: 28571, Stop: 26961, Start Num: 113

Candidate Starts for SororFago\_38:

(34, 28712), (40, 28688), (57, 28649), (Start: 107 @28580 has 19 MA's), (Start: 113 @28571 has 105 MA's), (Start: 152 @28421 has 1 MA's), (184, 28316), (205, 28250), (207, 28244), (219, 28178), (221, 28169), (228, 28148), (268, 27977), (273, 27953), (279, 27932), (281, 27926), (287, 27896), (298, 27830), (300, 27824), (311, 27782), (321, 27764), (326, 27740), (340, 27683), (369, 27593), (405, 27479), (407, 27470), (419, 27428), (432, 27386), (442, 27347), (455, 27299), (474, 27230), (493, 27167), (502, 27146), (505, 27137), (518, 27113), (543, 27050), (548, 27011),

Gene: Sorpresa\_37 Start: 29408, Stop: 30991, Start Num: 56

Candidate Starts for Sorpresa\_37:

(Start: 56 @29408 has 26 MA's), (Start: 59 @29414 has 2 MA's), (Start: 62 @29420 has 9 MA's), (Start: 63 @29423 has 9 MA's), (Start: 75 @29438 has 1 MA's), (Start: 116 @29489 has 209 MA's), (Start: 179 @29708 has 1 MA's), (Start: 181 @29714 has 1 MA's), (184, 29735), (Start: 226 @29864 has 1 MA's), (229, 29873), (230, 29882), (256, 29990), (265, 30023), (271, 30047), (281, 30089), (307, 30218), (327, 30278), (341, 30335), (349, 30362), (357, 30389), (358, 30392), (362, 30404), (386,

30473), (400, 30512), (408, 30545), (432, 30626), (436, 30641), (461, 30746), (492, 30860), (534, 30959), (544, 30983),

Gene: Soshari\_38 Start: 27305, Stop: 25737, Start Num: 113

Candidate Starts for Soshari\_38:

(37, 27455), (43, 27440), (88, 27341), (Start: 113 @27305 has 105 MA's), (184, 27050), (191, 27026), (208, 26966), (218, 26918), (219, 26915), (240, 26828), (245, 26816), (247, 26795), (254, 26771), (271, 26702), (287, 26633), (288, 26624), (311, 26519), (321, 26474), (354, 26342), (381, 26258), (398, 26201), (455, 25994), (495, 25853),

Gene: South40\_50 Start: 36352, Stop: 37929, Start Num: 50

Candidate Starts for South40\_50:

(Start: 31 @36286 has 7 MA's), (Start: 47 @36343 has 5 MA's), (Start: 50 @36352 has 23 MA's), (Start: 127 @36472 has 3 MA's), (Start: 152 @36589 has 1 MA's), (166, 36640), (192, 36721), (193, 36724), (216, 36796), (220, 36805), (222, 36808), (259, 36961), (263, 36970), (273, 37018), (277, 37030), (283, 37054), (300, 37123), (301, 37126), (339, 37258), (363, 37324), (371, 37354), (402, 37453), (405, 37468), (407, 37477), (410, 37486), (417, 37510), (436, 37582), (487, 37771), (501, 37810), (507, 37825), (511, 37834), (520, 37849),

Gene: SpecialK\_43 Start: 31407, Stop: 32846, Start Num: 115

Candidate Starts for SpecialK\_43:

(Start: 115 @31407 has 12 MA's), (Start: 145 @31518 has 1 MA's), (148, 31527), (172, 31590), (Start: 179 @31614 has 1 MA's), (182, 31623), (222, 31773), (225, 31782), (261, 31938), (263, 31944), (269, 31971), (328, 32205), (368, 32328), (504, 32775), (512, 32790), (514, 32793),

Gene: Spike509\_36 Start: 27306, Stop: 25738, Start Num: 113

Candidate Starts for Spike509\_36:

(37, 27456), (43, 27441), (88, 27342), (Start: 113 @27306 has 105 MA's), (184, 27051), (191, 27027), (208, 26967), (218, 26919), (219, 26916), (240, 26829), (245, 26817), (247, 26796), (254, 26772), (271, 26703), (287, 26634), (288, 26625), (311, 26520), (321, 26475), (354, 26343), (381, 26259), (398, 26202), (455, 25995), (495, 25854),

Gene: SpikeBT\_39 Start: 30421, Stop: 31968, Start Num: 80

Candidate Starts for SpikeBT\_39:

(Start: 80 @30421 has 3 MA's), (Start: 116 @30466 has 209 MA's), (Start: 130 @30499 has 1 MA's), (Start: 179 @30685 has 1 MA's), (Start: 181 @30691 has 1 MA's), (184, 30712), (Start: 226 @30841 has 1 MA's), (229, 30850), (230, 30859), (256, 30967), (263, 30988), (265, 31000), (271, 31024), (281, 31066), (307, 31195), (327, 31255), (341, 31312), (349, 31339), (357, 31366), (358, 31369), (362, 31381), (386, 31450), (400, 31489), (408, 31522), (432, 31603), (436, 31618), (492, 31837), (495, 31849), (534, 31936), (544, 31960),

Gene: Spino\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Spino\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Squee\_38 Start: 30273, Stop: 31787, Start Num: 116

Candidate Starts for Squee\_38:

(Start: 56 @30192 has 26 MA's), (Start: 59 @30198 has 2 MA's), (Start: 62 @30204 has 9 MA's), (Start: 63 @30207 has 9 MA's), (Start: 75 @30222 has 1 MA's), (Start: 116 @30273 has 209 MA's),

(Start: 181 @30498 has 1 MA's), (184, 30519), (222, 30636), (Start: 226 @30648 has 1 MA's), (229, 30657), (230, 30666), (256, 30774), (263, 30795), (265, 30807), (271, 30831), (281, 30873), (307, 31002), (327, 31062), (341, 31119), (357, 31173), (362, 31188), (400, 31296), (408, 31329), (409, 31332), (432, 31410), (436, 31425), (437, 31431), (492, 31644), (495, 31656),

Gene: StCroix\_29 Start: 23649, Stop: 22141, Start Num: 97

Candidate Starts for StCroix\_29:

(Start: 97 @23649 has 32 MA's), (Start: 116 @23628 has 209 MA's), (Start: 122 @23622 has 3 MA's), (Start: 152 @23493 has 1 MA's), (164, 23445), (193, 23358), (229, 23253), (254, 23142), (269, 23082), (272, 23070), (286, 23007), (292, 22977), (296, 22944), (303, 22923), (310, 22893), (314, 22878), (316, 22872), (331, 22824), (339, 22791), (354, 22734), (371, 22695), (372, 22689), (417, 22539), (463, 22368), (539, 22152),

Gene: Stasia\_34 Start: 27079, Stop: 25547, Start Num: 113

Candidate Starts for Stasia\_34:

(70, 27148), (Start: 84 @27121 has 1 MA's), (Start: 107 @27088 has 19 MA's), (Start: 113 @27079 has 105 MA's), (154, 26917), (Start: 179 @26851 has 1 MA's), (183, 26833), (205, 26758), (218, 26695), (219, 26692), (250, 26563), (271, 26479), (287, 26410), (297, 26347), (300, 26338), (311, 26296), (327, 26239), (340, 26185), (354, 26134), (378, 26053), (379, 26041), (396, 25987), (399, 25978), (419, 25903), (421, 25897), (455, 25774), (463, 25735), (521, 25585),

Gene: Stephig9\_30 Start: 24993, Stop: 23491, Start Num: 113

Candidate Starts for Stephig9\_30:

(69, 25062), (Start: 84 @25035 has 1 MA's), (88, 25029), (Start: 113 @24993 has 105 MA's), (Start: 152 @24843 has 1 MA's), (184, 24738), (205, 24672), (208, 24654), (218, 24612), (219, 24609), (240, 24522), (271, 24396), (290, 24303), (300, 24255), (311, 24213), (328, 24153), (354, 24051), (416, 23844), (446, 23739), (455, 23703), (463, 23664), (493, 23580), (518, 23532),

Gene: Stink\_34 Start: 27306, Stop: 25744, Start Num: 64

Candidate Starts for Stink\_34:

(Start: 64 @27306 has 10 MA's), (Start: 107 @27249 has 19 MA's), (Start: 116 @27240 has 209 MA's), (Start: 127 @27222 has 3 MA's), (139, 27165), (150, 27117), (Start: 152 @27105 has 1 MA's), (190, 26979), (197, 26958), (198, 26955), (211, 26928), (220, 26889), (253, 26760), (268, 26700), (310, 26508), (357, 26346), (412, 26151), (419, 26124), (435, 26070), (437, 26061), (493, 25851), (500, 25833), (512, 25821), (517, 25812), (524, 25794),

Gene: StrongArm\_36 Start: 30501, Stop: 32003, Start Num: 116

Candidate Starts for StrongArm\_36:

(Start: 56 @30420 has 26 MA's), (Start: 59 @30426 has 2 MA's), (Start: 62 @30432 has 9 MA's), (Start: 63 @30435 has 9 MA's), (Start: 75 @30450 has 1 MA's), (Start: 116 @30501 has 209 MA's), (Start: 181 @30726 has 1 MA's), (222, 30864), (Start: 226 @30876 has 1 MA's), (229, 30885), (230, 30894), (256, 31002), (263, 31023), (265, 31035), (271, 31059), (281, 31101), (304, 31215), (307, 31230), (327, 31290), (341, 31347), (349, 31374), (357, 31401), (358, 31404), (362, 31416), (400, 31524), (408, 31557), (432, 31638), (436, 31653), (492, 31872), (534, 31971), (544, 31995),

Gene: Stuu\_47 Start: 31520, Stop: 32959, Start Num: 115

Candidate Starts for Stuu\_47:

(Start: 115 @31520 has 12 MA's), (Start: 145 @31631 has 1 MA's), (148, 31640), (172, 31703), (Start: 179 @31727 has 1 MA's), (182, 31736), (222, 31886), (225, 31895), (263, 32057), (269, 32084), (328, 32318), (331, 32333), (368, 32441), (450, 32711), (504, 32888), (512, 32903), (514, 32906),

Gene: Subaru\_49 Start: 35958, Stop: 37379, Start Num: 110

Candidate Starts for Subaru\_49:

(96, 35940), (108, 35955), (Start: 110 @35958 has 33 MA's), (Start: 116 @35967 has 209 MA's), (147, 36081), (Start: 152 @36105 has 1 MA's), (Start: 181 @36189 has 1 MA's), (187, 36222), (192, 36237), (216, 36300), (222, 36312), (225, 36321), (247, 36420), (258, 36462), (271, 36513), (281, 36552), (304, 36630), (310, 36657), (417, 37017), (419, 37026), (422, 37035), (424, 37047), (473, 37218), (505, 37305),

Gene: Sujidade\_50 Start: 35406, Stop: 36983, Start Num: 50

Candidate Starts for Sujidade\_50:

(Start: 31 @35340 has 7 MA's), (Start: 50 @35406 has 23 MA's), (Start: 127 @35526 has 3 MA's), (148, 35625), (Start: 152 @35643 has 1 MA's), (166, 35694), (192, 35775), (193, 35778), (216, 35850), (220, 35859), (222, 35862), (259, 36015), (273, 36072), (274, 36075), (277, 36084), (339, 36312), (363, 36378), (371, 36408), (402, 36507), (407, 36531), (410, 36540), (417, 36564), (436, 36636), (487, 36825), (501, 36864), (511, 36888), (520, 36903), (525, 36918),

Gene: Sumter\_36 Start: 29449, Stop: 30951, Start Num: 116

Candidate Starts for Sumter\_36:

(Start: 56 @29368 has 26 MA's), (Start: 59 @29374 has 2 MA's), (Start: 62 @29380 has 9 MA's), (Start: 63 @29383 has 9 MA's), (Start: 75 @29398 has 1 MA's), (Start: 116 @29449 has 209 MA's), (Start: 179 @29668 has 1 MA's), (Start: 181 @29674 has 1 MA's), (Start: 226 @29824 has 1 MA's), (229, 29833), (230, 29842), (256, 29950), (263, 29971), (265, 29983), (271, 30007), (281, 30049), (307, 30178), (327, 30238), (341, 30295), (349, 30322), (357, 30349), (358, 30352), (362, 30364), (400, 30472), (408, 30505), (432, 30586), (436, 30601), (461, 30706), (492, 30820), (534, 30919), (544, 30943),

Gene: Sunshine924\_39 Start: 29417, Stop: 30931, Start Num: 116

Candidate Starts for Sunshine924\_39:

(Start: 80 @29372 has 3 MA's), (Start: 116 @29417 has 209 MA's), (Start: 126 @29432 has 8 MA's), (128, 29441), (148, 29534), (Start: 179 @29636 has 1 MA's), (Start: 181 @29642 has 1 MA's), (184, 29663), (193, 29693), (222, 29780), (Start: 226 @29792 has 1 MA's), (229, 29801), (230, 29810), (256, 29918), (263, 29939), (265, 29951), (271, 29975), (281, 30017), (307, 30146), (327, 30206), (341, 30263), (357, 30317), (358, 30320), (362, 30332), (398, 30434), (400, 30440), (408, 30473), (421, 30518), (432, 30554), (436, 30569), (492, 30788),

Gene: Swann\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for Swann\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (229, 23240), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Swirley\_30 Start: 25753, Stop: 24260, Start Num: 116

Candidate Starts for Swirley\_30:

(Start: 116 @25753 has 209 MA's), (Start: 130 @25720 has 1 MA's), (Start: 131 @25717 has 3 MA's), (Start: 134 @25699 has 4 MA's), (Start: 152 @25618 has 1 MA's), (196, 25474), (205, 25447), (222, 25399), (263, 25234), (268, 25210), (269, 25207), (273, 25186), (316, 24997), (357, 24856), (371, 24826), (416, 24649), (419, 24637), (443, 24553), (447, 24538), (453, 24523), (500, 24346), (521, 24316), (535, 24283),

Gene: SwissCheese\_39 Start: 30120, Stop: 31622, Start Num: 116

Candidate Starts for SwissCheese\_39:

(Start: 56 @30039 has 26 MA's), (Start: 59 @30045 has 2 MA's), (Start: 62 @30051 has 9 MA's), (Start: 63 @30054 has 9 MA's), (Start: 75 @30069 has 1 MA's), (Start: 116 @30120 has 209 MA's),

(Start: 126 @30135 has 8 MA's), (128, 30144), (Start: 179 @30339 has 1 MA's), (Start: 181 @30345 has 1 MA's), (183, 30357), (184, 30366), (Start: 226 @30495 has 1 MA's), (229, 30504), (230, 30513), (256, 30621), (263, 30642), (265, 30654), (271, 30678), (307, 30849), (327, 30909), (341, 30966), (357, 31020), (358, 31023), (362, 31035), (400, 31143), (408, 31176), (419, 31215), (432, 31257), (436, 31272), (492, 31491), (534, 31590), (544, 31614),

Gene: Switzer\_38 Start: 29527, Stop: 31029, Start Num: 116

Candidate Starts for Switzer\_38:

(Start: 56 @29446 has 26 MA's), (Start: 59 @29452 has 2 MA's), (Start: 62 @29458 has 9 MA's), (Start: 63 @29461 has 9 MA's), (Start: 75 @29476 has 1 MA's), (Start: 116 @29527 has 209 MA's), (Start: 181 @29752 has 1 MA's), (Start: 226 @29902 has 1 MA's), (229, 29911), (230, 29920), (256, 30028), (263, 30049), (265, 30061), (271, 30085), (281, 30127), (307, 30256), (327, 30316), (341, 30373), (349, 30400), (357, 30427), (362, 30442), (400, 30550), (408, 30583), (432, 30664), (436, 30679), (461, 30784), (492, 30898), (534, 30997), (544, 31021),

Gene: Swole\_39 Start: 29499, Stop: 31001, Start Num: 116

Candidate Starts for Swole\_39:

(Start: 56 @29418 has 26 MA's), (Start: 59 @29424 has 2 MA's), (Start: 62 @29430 has 9 MA's), (Start: 63 @29433 has 9 MA's), (Start: 75 @29448 has 1 MA's), (Start: 116 @29499 has 209 MA's), (Start: 126 @29514 has 8 MA's), (Start: 179 @29718 has 1 MA's), (Start: 181 @29724 has 1 MA's), (184, 29745), (194, 29778), (Start: 226 @29874 has 1 MA's), (229, 29883), (230, 29892), (254, 29994), (256, 30000), (263, 30021), (265, 30033), (271, 30057), (281, 30099), (307, 30228), (327, 30288), (341, 30345), (349, 30372), (357, 30399), (358, 30402), (362, 30414), (398, 30516), (400, 30522), (408, 30555), (409, 30558), (432, 30636), (436, 30651), (440, 30666), (461, 30756), (492, 30870), (534, 30969), (544, 30993),

Gene: SydNat\_30 Start: 26035, Stop: 24545, Start Num: 116

Candidate Starts for SydNat\_30:

(Start: 116 @26035 has 209 MA's), (Start: 130 @26002 has 1 MA's), (Start: 131 @25999 has 3 MA's), (Start: 134 @25981 has 4 MA's), (Start: 152 @25900 has 1 MA's), (188, 25780), (196, 25756), (205, 25729), (222, 25681), (263, 25519), (268, 25495), (269, 25492), (273, 25471), (287, 25414), (316, 25282), (357, 25141), (371, 25111), (404, 24976), (416, 24934), (419, 24922), (443, 24838), (447, 24823), (453, 24808), (500, 24631), (521, 24601),

Gene: TG1\_51 Start: 37133, Stop: 39013, Start Num: 91

Candidate Starts for TG1\_51:

(Start: 91 @37133 has 1 MA's), (94, 37139), (Start: 107 @37154 has 19 MA's), (Start: 145 @37295 has 1 MA's), (160, 37376), (162, 37382), (169, 37400), (170, 37406), (183, 37478), (185, 37493), (189, 37508), (199, 37538), (200, 37541), (206, 37562), (216, 37610), (224, 37628), (238, 37691), (249, 37742), (286, 37913), (295, 37976), (311, 38036), (324, 38099), (352, 38228), (370, 38297), (390, 38396), (408, 38498), (422, 38546), (429, 38570), (433, 38591), (448, 38648), (459, 38696), (476, 38747), (508, 38858), (516, 38873), (539, 38933),

Gene: TWAMP\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for TWAMP\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (229, 23240), (254, 23129), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: TagePighter\_52 Start: 36182, Stop: 37795, Start Num: 50

Candidate Starts for TagePighter\_52:

(Start: 31 @36116 has 7 MA's), (Start: 47 @36173 has 5 MA's), (Start: 50 @36182 has 23 MA's), (Start: 127 @36329 has 3 MA's), (148, 36428), (Start: 152 @36446 has 1 MA's), (166, 36497), (192, 36578), (193, 36581), (216, 36653), (220, 36662), (222, 36665), (252, 36791), (259, 36818), (277, 36887), (289, 36932), (305, 37001), (311, 37028), (328, 37076), (339, 37124), (355, 37163), (363, 37190), (371, 37220), (407, 37343), (423, 37403), (436, 37448), (472, 37577), (484, 37628), (487, 37637), (501, 37676), (511, 37700), (520, 37715), (525, 37730), (530, 37745),

Gene: Takoda\_29 Start: 23587, Stop: 22100, Start Num: 116

Candidate Starts for Takoda\_29:

(Start: 97 @23608 has 32 MA's), (Start: 116 @23587 has 209 MA's), (Start: 122 @23581 has 3 MA's), (Start: 152 @23452 has 1 MA's), (164, 23404), (193, 23317), (229, 23212), (254, 23101), (269, 23041), (272, 23029), (292, 22936), (296, 22903), (303, 22882), (310, 22852), (314, 22837), (316, 22831), (331, 22783), (339, 22750), (354, 22693), (371, 22654), (372, 22648), (417, 22498), (457, 22357), (463, 22327), (499, 22201), (529, 22135),

Gene: Tallboi\_49 Start: 36309, Stop: 37727, Start Num: 110

Candidate Starts for Tallboi\_49:

(96, 36291), (108, 36306), (Start: 110 @36309 has 33 MA's), (Start: 116 @36318 has 209 MA's), (147, 36432), (Start: 181 @36540 has 1 MA's), (187, 36573), (192, 36588), (216, 36651), (222, 36663), (225, 36672), (245, 36750), (247, 36771), (258, 36813), (269, 36855), (271, 36864), (281, 36903), (304, 36981), (332, 37083), (417, 37365), (422, 37383), (424, 37395), (473, 37566),

Gene: Taquarus\_33 Start: 26640, Stop: 25126, Start Num: 113

Candidate Starts for Taquarus\_33:

(Start: 84 @26682 has 1 MA's), (Start: 107 @26649 has 19 MA's), (Start: 113 @26640 has 105 MA's), (154, 26478), (Start: 179 @26412 has 1 MA's), (183, 26394), (205, 26319), (210, 26295), (218, 26256), (219, 26253), (240, 26166), (268, 26052), (271, 26040), (311, 25857), (340, 25746), (354, 25695), (396, 25566), (399, 25557), (419, 25482), (421, 25476), (455, 25353), (463, 25314), (521, 25164), (528, 25149),

Gene: Tarynearal\_29 Start: 25775, Stop: 24282, Start Num: 116

Candidate Starts for Tarynearal\_29:

(Start: 116 @25775 has 209 MA's), (Start: 130 @25742 has 1 MA's), (Start: 131 @25739 has 3 MA's), (Start: 134 @25721 has 4 MA's), (Start: 152 @25640 has 1 MA's), (196, 25496), (205, 25469), (222, 25421), (263, 25256), (268, 25232), (269, 25229), (273, 25208), (316, 25019), (357, 24878), (371, 24848), (416, 24671), (419, 24659), (443, 24575), (447, 24560), (453, 24545), (500, 24368), (521, 24338), (535, 24305),

Gene: Tasp14\_38 Start: 29595, Stop: 31166, Start Num: 62

Candidate Starts for Tasp14\_38:

(Start: 56 @29583 has 26 MA's), (Start: 59 @29589 has 2 MA's), (Start: 62 @29595 has 9 MA's), (Start: 63 @29598 has 9 MA's), (Start: 75 @29613 has 1 MA's), (Start: 116 @29664 has 209 MA's), (Start: 126 @29679 has 8 MA's), (128, 29688), (Start: 181 @29889 has 1 MA's), (Start: 226 @30039 has 1 MA's), (229, 30048), (230, 30057), (252, 30153), (256, 30165), (263, 30186), (265, 30198), (271, 30222), (281, 30264), (307, 30393), (327, 30453), (341, 30510), (357, 30564), (362, 30579), (400, 30687), (408, 30720), (432, 30801), (436, 30816), (461, 30921), (492, 31035), (534, 31134), (544, 31158),

Gene: Tbone\_50 Start: 35812, Stop: 37287, Start Num: 110

Candidate Starts for Tbone\_50:

(Start: 103 @35803 has 2 MA's), (Start: 110 @35812 has 33 MA's), (150, 35941), (212, 36133), (235, 36238), (248, 36298), (286, 36457), (310, 36586), (328, 36637), (371, 36778), (444, 37015),

Gene: Teodoridan\_35 Start: 28860, Stop: 30437, Start Num: 63

Candidate Starts for Teodoridan\_35:

(Start: 56 @28845 has 26 MA's), (Start: 59 @28851 has 2 MA's), (Start: 62 @28857 has 9 MA's),  
(Start: 63 @28860 has 9 MA's), (Start: 75 @28875 has 1 MA's), (Start: 116 @28926 has 209 MA's),  
(Start: 179 @29145 has 1 MA's), (Start: 181 @29151 has 1 MA's), (184, 29172), (Start: 226 @29301  
has 1 MA's), (229, 29310), (230, 29319), (256, 29427), (263, 29448), (265, 29460), (271, 29484), (281,  
29526), (307, 29655), (327, 29715), (341, 29772), (357, 29826), (362, 29841), (398, 29940), (432,  
30060), (436, 30075), (461, 30180), (492, 30294),

Gene: Texage\_33 Start: 27224, Stop: 25722, Start Num: 122

Candidate Starts for Texage\_33:

(Start: 106 @27245 has 2 MA's), (Start: 116 @27230 has 209 MA's), (Start: 122 @27224 has 3 MA's),  
(Start: 123 @27221 has 2 MA's), (163, 27053), (164, 27047), (204, 26930), (225, 26870), (252, 26753),  
(263, 26714), (269, 26687), (272, 26675), (293, 26540), (336, 26387), (361, 26297), (375, 26258),  
(404, 26168), (416, 26126), (419, 26114), (433, 26069), (438, 26048), (495, 25835), (507, 25814),

Gene: TforTroy\_50 Start: 35647, Stop: 37065, Start Num: 110

Candidate Starts for TforTroy\_50:

(96, 35629), (108, 35644), (Start: 110 @35647 has 33 MA's), (Start: 116 @35656 has 209 MA's),  
(Start: 152 @35794 has 1 MA's), (Start: 181 @35878 has 1 MA's), (216, 35989), (222, 36001), (225,  
36010), (245, 36088), (247, 36109), (258, 36151), (271, 36202), (281, 36241), (400, 36646), (417,  
36703), (422, 36721), (424, 36733), (474, 36907),

Gene: Thanksgivukkah\_33 Start: 26638, Stop: 25124, Start Num: 113

Candidate Starts for Thanksgivukkah\_33:

(Start: 84 @26680 has 1 MA's), (Start: 107 @26647 has 19 MA's), (Start: 113 @26638 has 105 MA's),  
(154, 26476), (Start: 179 @26410 has 1 MA's), (183, 26392), (205, 26317), (210, 26293), (218, 26254),  
(219, 26251), (240, 26164), (268, 26050), (271, 26038), (311, 25855), (340, 25744), (354, 25693),  
(396, 25564), (399, 25555), (419, 25480), (421, 25474), (455, 25351), (463, 25312), (521, 25162),  
(528, 25147),

Gene: Theia\_28 Start: 25799, Stop: 24306, Start Num: 116

Candidate Starts for Theia\_28:

(Start: 116 @25799 has 209 MA's), (Start: 130 @25766 has 1 MA's), (Start: 131 @25763 has 3 MA's),  
(Start: 134 @25745 has 4 MA's), (Start: 152 @25664 has 1 MA's), (196, 25520), (205, 25493), (222,  
25445), (263, 25280), (268, 25256), (269, 25253), (273, 25232), (316, 25043), (357, 24902), (371,  
24872), (416, 24695), (419, 24683), (443, 24599), (447, 24584), (453, 24569), (500, 24392), (521,  
24362), (535, 24329),

Gene: TheloniousMonk\_39 Start: 31068, Stop: 32570, Start Num: 116

Candidate Starts for TheloniousMonk\_39:

(Start: 56 @30987 has 26 MA's), (Start: 59 @30993 has 2 MA's), (Start: 62 @30999 has 9 MA's),  
(Start: 63 @31002 has 9 MA's), (Start: 75 @31017 has 1 MA's), (Start: 116 @31068 has 209 MA's),  
(Start: 126 @31083 has 8 MA's), (Start: 181 @31293 has 1 MA's), (Start: 226 @31443 has 1 MA's),  
(229, 31452), (230, 31461), (256, 31569), (263, 31590), (265, 31602), (271, 31626), (281, 31668),  
(307, 31797), (327, 31857), (341, 31914), (349, 31941), (357, 31968), (362, 31983), (386, 32052),  
(400, 32091), (408, 32124), (432, 32205), (436, 32220), (492, 32439), (534, 32538), (544, 32562),

Gene: Thor\_37 Start: 28976, Stop: 30568, Start Num: 56

Candidate Starts for Thor\_37:

(Start: 56 @28976 has 26 MA's), (Start: 59 @28982 has 2 MA's), (Start: 62 @28988 has 9 MA's),  
(Start: 63 @28991 has 9 MA's), (Start: 75 @29006 has 1 MA's), (Start: 116 @29057 has 209 MA's),  
(Start: 179 @29276 has 1 MA's), (Start: 181 @29282 has 1 MA's), (183, 29294), (184, 29303), (Start:



226 @29432 has 1 MA's), (229, 29441), (230, 29450), (256, 29558), (263, 29579), (265, 29591), (271, 29615), (281, 29657), (307, 29786), (327, 29846), (341, 29903), (349, 29930), (357, 29957), (358, 29960), (362, 29972), (398, 30071), (408, 30110), (432, 30191), (436, 30206), (492, 30425),

Gene: Tian\_50 Start: 37772, Stop: 39232, Start Num: 115

Candidate Starts for Tian\_50:

(Start: 106 @37763 has 2 MA's), (Start: 115 @37772 has 12 MA's), (172, 37958), (182, 37991), (220, 38129), (225, 38141), (247, 38240), (261, 38291), (284, 38384), (370, 38717), (444, 38960), (531, 39218),

Gene: Tiger\_30 Start: 25677, Stop: 24184, Start Num: 116

Candidate Starts for Tiger\_30:

(Start: 116 @25677 has 209 MA's), (Start: 130 @25644 has 1 MA's), (Start: 131 @25641 has 3 MA's), (Start: 134 @25623 has 4 MA's), (Start: 152 @25542 has 1 MA's), (196, 25398), (205, 25371), (222, 25323), (263, 25158), (268, 25134), (269, 25131), (273, 25110), (316, 24921), (371, 24750), (404, 24615), (416, 24573), (419, 24561), (443, 24477), (447, 24462), (453, 24447), (500, 24270), (521, 24240), (535, 24207),

Gene: Timshel\_34 Start: 29292, Stop: 27832, Start Num: 116

Candidate Starts for Timshel\_34:

(9, 29691), (15, 29562), (36, 29445), (83, 29340), (92, 29325), (Start: 116 @29292 has 209 MA's), (Start: 122 @29286 has 3 MA's), (Start: 127 @29274 has 3 MA's), (128, 29268), (151, 29163), (Start: 152 @29157 has 1 MA's), (161, 29121), (194, 29019), (205, 28986), (216, 28950), (229, 28917), (272, 28737), (304, 28587), (315, 28542), (357, 28398), (374, 28350), (404, 28269), (407, 28257), (409, 28251), (419, 28215), (435, 28161), (443, 28131), (539, 27843),

Gene: TinyPebbles\_36 Start: 27311, Stop: 25743, Start Num: 113

Candidate Starts for TinyPebbles\_36:

(37, 27461), (43, 27446), (88, 27347), (Start: 113 @27311 has 105 MA's), (184, 27056), (191, 27032), (208, 26972), (218, 26924), (219, 26921), (240, 26834), (245, 26822), (247, 26801), (254, 26777), (271, 26708), (287, 26639), (288, 26630), (311, 26525), (321, 26480), (354, 26348), (381, 26264), (398, 26207), (455, 26000), (495, 25859),

Gene: Tinybot\_32 Start: 26607, Stop: 25129, Start Num: 127

Candidate Starts for Tinybot\_32:

(42, 26739), (Start: 64 @26691 has 10 MA's), (Start: 107 @26634 has 19 MA's), (Start: 116 @26625 has 209 MA's), (Start: 127 @26607 has 3 MA's), (139, 26550), (143, 26532), (150, 26502), (Start: 152 @26490 has 1 MA's), (190, 26364), (197, 26343), (211, 26313), (220, 26274), (253, 26145), (268, 26085), (282, 26031), (310, 25893), (326, 25848), (380, 25662), (412, 25536), (419, 25509), (435, 25455), (437, 25446), (493, 25236), (500, 25218), (512, 25206), (517, 25197),

Gene: TiroTheta9\_33 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for TiroTheta9\_33:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (240, 26160), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: Todacoro\_34 Start: 27223, Stop: 25721, Start Num: 122

Candidate Starts for Todacoro\_34:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752),

(263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257), (404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: Toma\_50 Start: 35070, Stop: 36713, Start Num: 31

Candidate Starts for Toma\_50:

(Start: 31 @35070 has 7 MA's), (Start: 50 @35136 has 23 MA's), (Start: 127 @35256 has 3 MA's), (148, 35355), (Start: 152 @35373 has 1 MA's), (166, 35424), (192, 35505), (193, 35508), (216, 35580), (220, 35589), (222, 35592), (273, 35802), (274, 35805), (277, 35814), (339, 36042), (363, 36108), (371, 36138), (402, 36237), (407, 36261), (410, 36270), (417, 36294), (436, 36366), (487, 36555), (497, 36585), (501, 36594), (511, 36618), (520, 36633), (525, 36648),

Gene: Topanga\_34 Start: 26894, Stop: 25461, Start Num: 105

Candidate Starts for Topanga\_34:

(Start: 105 @26894 has 3 MA's), (143, 26792), (Start: 152 @26750 has 1 MA's), (193, 26615), (197, 26603), (198, 26600), (222, 26531), (229, 26510), (247, 26423), (248, 26420), (255, 26399), (272, 26330), (326, 26144), (403, 25901), (404, 25892), (419, 25838), (447, 25739), (498, 25553),

Gene: Topgun\_36 Start: 28914, Stop: 30413, Start Num: 116

Candidate Starts for Topgun\_36:

(40, 28800), (48, 28818), (Start: 56 @28833 has 26 MA's), (Start: 59 @28839 has 2 MA's), (Start: 62 @28845 has 9 MA's), (Start: 63 @28848 has 9 MA's), (Start: 75 @28863 has 1 MA's), (Start: 116 @28914 has 209 MA's), (Start: 123 @28923 has 2 MA's), (Start: 126 @28929 has 8 MA's), (128, 28938), (Start: 179 @29133 has 1 MA's), (Start: 181 @29139 has 1 MA's), (184, 29160), (Start: 226 @29289 has 1 MA's), (229, 29298), (230, 29307), (256, 29415), (263, 29436), (265, 29448), (271, 29472), (281, 29514), (307, 29643), (327, 29703), (341, 29760), (349, 29787), (357, 29814), (358, 29817), (362, 29829), (398, 29928), (408, 29967), (409, 29970), (432, 30048), (436, 30063), (492, 30282), (534, 30381), (544, 30405),

Gene: Toro\_35 Start: 28870, Stop: 27362, Start Num: 116

Candidate Starts for Toro\_35:

(Start: 106 @28885 has 2 MA's), (Start: 116 @28870 has 209 MA's), (154, 28723), (204, 28570), (225, 28510), (252, 28393), (263, 28354), (268, 28330), (269, 28327), (272, 28315), (293, 28180), (326, 28069), (331, 28048), (336, 28027), (361, 27937), (374, 27901), (375, 27898), (398, 27832), (404, 27808), (412, 27781), (416, 27766), (419, 27754), (429, 27721), (438, 27688), (490, 27496), (495, 27475), (507, 27454), (529, 27400),

Gene: Tote\_34 Start: 27141, Stop: 28268, Start Num: 226

Candidate Starts for Tote\_34:

(6, 26229), (10, 26322), (13, 26370), (24, 26487), (27, 26514), (41, 26568), (Start: 75 @26634 has 1 MA's), (125, 26700), (132, 26727), (168, 26916), (177, 26961), (194, 27045), (Start: 226 @27141 has 1 MA's), (229, 27150), (230, 27159), (254, 27261), (256, 27267), (263, 27288), (265, 27300), (271, 27324), (281, 27366), (307, 27495), (327, 27555), (341, 27612), (349, 27639), (357, 27666), (358, 27669), (362, 27681), (398, 27783), (400, 27789), (408, 27822), (409, 27825), (432, 27903), (436, 27918), (440, 27933), (461, 28023), (492, 28137), (534, 28236), (544, 28260),

Gene: Traft412\_39 Start: 30521, Stop: 32023, Start Num: 116

Candidate Starts for Traft412\_39:

(Start: 56 @30440 has 26 MA's), (Start: 59 @30446 has 2 MA's), (Start: 62 @30452 has 9 MA's), (Start: 63 @30455 has 9 MA's), (Start: 75 @30470 has 1 MA's), (Start: 116 @30521 has 209 MA's), (Start: 126 @30536 has 8 MA's), (128, 30545), (Start: 181 @30746 has 1 MA's), (184, 30767), (Start: 226 @30896 has 1 MA's), (229, 30905), (230, 30914), (256, 31022), (263, 31043), (265, 31055), (271, 31079), (307, 31250), (327, 31310), (341, 31367), (357, 31421), (358, 31424), (362, 31436), (386, 31505), (400, 31544), (408, 31577), (432, 31658), (436, 31673), (461, 31778), (492, 31892), (534,

31991), (544, 32015),

Gene: Treddle\_39 Start: 30758, Stop: 32260, Start Num: 116

Candidate Starts for Treddle\_39:

(Start: 56 @30677 has 26 MA's), (Start: 59 @30683 has 2 MA's), (Start: 62 @30689 has 9 MA's), (Start: 63 @30692 has 9 MA's), (Start: 75 @30707 has 1 MA's), (Start: 116 @30758 has 209 MA's), (Start: 126 @30773 has 8 MA's), (Start: 179 @30977 has 1 MA's), (Start: 181 @30983 has 1 MA's), (184, 31004), (Start: 226 @31133 has 1 MA's), (229, 31142), (230, 31151), (256, 31259), (263, 31280), (265, 31292), (271, 31316), (281, 31358), (307, 31487), (327, 31547), (341, 31604), (349, 31631), (357, 31658), (362, 31673), (386, 31742), (400, 31781), (408, 31814), (432, 31895), (436, 31910), (461, 32015), (492, 32129), (495, 32141), (534, 32228), (544, 32252),

Gene: Trike\_31 Start: 25248, Stop: 23752, Start Num: 116

Candidate Starts for Trike\_31:

(42, 25362), (Start: 64 @25314 has 10 MA's), (Start: 105 @25260 has 3 MA's), (Start: 116 @25248 has 209 MA's), (139, 25173), (Start: 152 @25113 has 1 MA's), (190, 24987), (197, 24966), (211, 24936), (220, 24897), (262, 24735), (268, 24708), (282, 24654), (310, 24516), (371, 24324), (412, 24159), (419, 24132), (421, 24126), (490, 23874), (495, 23853), (498, 23847), (500, 23841), (512, 23829), (517, 23820), (521, 23808),

Gene: Tripl3t\_38 Start: 30269, Stop: 31771, Start Num: 116

Candidate Starts for Tripl3t\_38:

(Start: 56 @30188 has 26 MA's), (Start: 59 @30194 has 2 MA's), (Start: 62 @30200 has 9 MA's), (Start: 63 @30203 has 9 MA's), (Start: 75 @30218 has 1 MA's), (Start: 116 @30269 has 209 MA's), (124, 30281), (Start: 181 @30494 has 1 MA's), (183, 30506), (184, 30515), (194, 30548), (Start: 226 @30644 has 1 MA's), (229, 30653), (230, 30662), (256, 30770), (263, 30791), (265, 30803), (271, 30827), (281, 30869), (307, 30998), (327, 31058), (341, 31115), (349, 31142), (357, 31169), (362, 31184), (400, 31292), (408, 31325), (432, 31406), (436, 31421), (461, 31526), (492, 31640), (534, 31739), (544, 31763),

Gene: Triste\_51 Start: 36115, Stop: 37794, Start Num: 31

Candidate Starts for Triste\_51:

(Start: 31 @36115 has 7 MA's), (Start: 47 @36172 has 5 MA's), (Start: 50 @36181 has 23 MA's), (Start: 127 @36328 has 3 MA's), (148, 36427), (Start: 152 @36445 has 1 MA's), (166, 36496), (192, 36577), (193, 36580), (216, 36652), (220, 36661), (222, 36664), (252, 36790), (259, 36817), (277, 36886), (289, 36931), (305, 37000), (311, 37027), (328, 37075), (339, 37123), (355, 37162), (363, 37189), (371, 37219), (407, 37342), (423, 37402), (436, 37447), (472, 37576), (484, 37627), (487, 37636), (501, 37675), (511, 37699), (520, 37714), (525, 37729), (530, 37744),

Gene: Trouble\_38 Start: 30371, Stop: 31873, Start Num: 116

Candidate Starts for Trouble\_38:

(Start: 56 @30290 has 26 MA's), (Start: 59 @30296 has 2 MA's), (Start: 62 @30302 has 9 MA's), (Start: 63 @30305 has 9 MA's), (Start: 75 @30320 has 1 MA's), (Start: 116 @30371 has 209 MA's), (Start: 179 @30590 has 1 MA's), (Start: 181 @30596 has 1 MA's), (184, 30617), (222, 30734), (Start: 226 @30746 has 1 MA's), (229, 30755), (230, 30764), (256, 30872), (263, 30893), (265, 30905), (307, 31100), (327, 31160), (341, 31217), (349, 31244), (357, 31271), (358, 31274), (362, 31286), (400, 31394), (408, 31427), (432, 31508), (436, 31523), (461, 31628), (492, 31742), (534, 31841), (544, 31865),

Gene: TuanPN\_49 Start: 36125, Stop: 37747, Start Num: 47

Candidate Starts for TuanPN\_49:

(Start: 31 @36068 has 7 MA's), (Start: 47 @36125 has 5 MA's), (Start: 50 @36134 has 23 MA's), (Start: 127 @36281 has 3 MA's), (148, 36380), (Start: 152 @36398 has 1 MA's), (166, 36449), (192,

36530), (193, 36533), (216, 36605), (220, 36614), (222, 36617), (252, 36743), (259, 36770), (277, 36839), (289, 36884), (305, 36953), (311, 36980), (328, 37028), (339, 37076), (355, 37115), (371, 37172), (407, 37295), (423, 37355), (436, 37400), (472, 37529), (484, 37580), (487, 37589), (501, 37628), (511, 37652), (520, 37667), (525, 37682), (530, 37697),

Gene: Tuck\_53 Start: 37345, Stop: 38829, Start Num: 103

Candidate Starts for Tuck\_53:

(Start: 103 @37345 has 2 MA's), (Start: 110 @37354 has 33 MA's), (212, 37675), (276, 37954), (310, 38128), (371, 38320), (444, 38557), (489, 38719),

Gene: Turab\_47 Start: 34417, Stop: 35835, Start Num: 110

Candidate Starts for Turab\_47:

(96, 34399), (108, 34414), (Start: 110 @34417 has 33 MA's), (Start: 116 @34426 has 209 MA's), (147, 34540), (Start: 181 @34648 has 1 MA's), (187, 34681), (192, 34696), (216, 34759), (222, 34771), (225, 34780), (247, 34879), (258, 34921), (271, 34972), (281, 35011), (310, 35116), (417, 35473), (422, 35491), (424, 35503), (473, 35674),

Gene: Turj99\_36 Start: 29282, Stop: 30865, Start Num: 56

Candidate Starts for Turj99\_36:

(Start: 56 @29282 has 26 MA's), (Start: 59 @29288 has 2 MA's), (Start: 62 @29294 has 9 MA's), (Start: 63 @29297 has 9 MA's), (Start: 75 @29312 has 1 MA's), (Start: 116 @29363 has 209 MA's), (Start: 179 @29582 has 1 MA's), (Start: 181 @29588 has 1 MA's), (184, 29609), (Start: 226 @29738 has 1 MA's), (229, 29747), (230, 29756), (256, 29864), (263, 29885), (265, 29897), (271, 29921), (281, 29963), (307, 30092), (327, 30152), (341, 30209), (357, 30263), (358, 30266), (362, 30278), (400, 30386), (408, 30419), (409, 30422), (432, 30500), (436, 30515), (461, 30620), (465, 30635), (492, 30734), (534, 30833), (544, 30857),

Gene: Tutumahutu\_51 Start: 35299, Stop: 36717, Start Num: 110

Candidate Starts for Tutumahutu\_51:

(96, 35281), (108, 35296), (Start: 110 @35299 has 33 MA's), (Start: 116 @35308 has 209 MA's), (147, 35422), (Start: 152 @35446 has 1 MA's), (Start: 181 @35530 has 1 MA's), (216, 35641), (222, 35653), (225, 35662), (247, 35761), (271, 35854), (273, 35866), (281, 35893), (328, 36052), (422, 36373), (424, 36385), (435, 36418), (473, 36556),

Gene: Tweety19\_52 Start: 34578, Stop: 36083, Start Num: 79

Candidate Starts for Tweety19\_52:

(Start: 79 @34578 has 3 MA's), (Start: 102 @34617 has 3 MA's), (Start: 115 @34635 has 12 MA's), (172, 34821), (230, 35022), (248, 35103), (310, 35388), (356, 35517), (408, 35682), (454, 35844), (507, 36015), (510, 36021),

Gene: Twigg\_30 Start: 25694, Stop: 24255, Start Num: 134

Candidate Starts for Twigg\_30:

(Start: 116 @25748 has 209 MA's), (Start: 130 @25715 has 1 MA's), (Start: 131 @25712 has 3 MA's), (Start: 134 @25694 has 4 MA's), (Start: 152 @25613 has 1 MA's), (196, 25469), (205, 25442), (222, 25394), (263, 25229), (268, 25205), (269, 25202), (273, 25181), (316, 24992), (357, 24851), (371, 24821), (416, 24644), (419, 24632), (443, 24548), (447, 24533), (453, 24518), (500, 24341), (521, 24311), (535, 24278),

Gene: Twister\_34 Start: 26802, Stop: 25369, Start Num: 105

Candidate Starts for Twister\_34:

(Start: 105 @26802 has 3 MA's), (143, 26700), (Start: 152 @26658 has 1 MA's), (193, 26523), (197, 26511), (198, 26508), (222, 26439), (229, 26418), (247, 26331), (248, 26328), (255, 26307), (272, 26238), (326, 26052), (403, 25809), (404, 25800), (419, 25746), (447, 25647), (498, 25461),

Gene: TwoPeat\_38 Start: 29780, Stop: 31363, Start Num: 56

Candidate Starts for TwoPeat\_38:

(Start: 56 @29780 has 26 MA's), (Start: 59 @29786 has 2 MA's), (Start: 62 @29792 has 9 MA's), (Start: 63 @29795 has 9 MA's), (Start: 75 @29810 has 1 MA's), (Start: 116 @29861 has 209 MA's), (Start: 126 @29876 has 8 MA's), (Start: 145 @29969 has 1 MA's), (Start: 179 @30080 has 1 MA's), (Start: 181 @30086 has 1 MA's), (Start: 226 @30236 has 1 MA's), (229, 30245), (230, 30254), (256, 30362), (263, 30383), (265, 30395), (271, 30419), (281, 30461), (307, 30590), (327, 30650), (341, 30707), (349, 30734), (357, 30761), (362, 30776), (400, 30884), (408, 30917), (432, 30998), (436, 31013), (461, 31118), (492, 31232), (534, 31331), (544, 31355),

Gene: TygerBlood\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for TygerBlood\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: U2\_37 Start: 29511, Stop: 31013, Start Num: 116

Candidate Starts for U2\_37:

(Start: 49 @29421 has 1 MA's), (Start: 80 @29466 has 3 MA's), (Start: 116 @29511 has 209 MA's), (Start: 126 @29526 has 8 MA's), (128, 29535), (148, 29628), (Start: 179 @29730 has 1 MA's), (Start: 181 @29736 has 1 MA's), (184, 29757), (Start: 226 @29886 has 1 MA's), (229, 29895), (230, 29904), (231, 29910), (256, 30012), (263, 30033), (265, 30045), (271, 30069), (307, 30240), (327, 30300), (341, 30357), (357, 30411), (358, 30414), (362, 30426), (400, 30534), (408, 30567), (432, 30648), (436, 30663), (461, 30768), (492, 30882), (534, 30981), (544, 31005),

Gene: UhSalsa\_29 Start: 23636, Stop: 22140, Start Num: 97

Candidate Starts for UhSalsa\_29:

(Start: 97 @23636 has 32 MA's), (Start: 116 @23615 has 209 MA's), (Start: 122 @23609 has 3 MA's), (Start: 152 @23480 has 1 MA's), (164, 23432), (193, 23345), (229, 23240), (254, 23129), (262, 23099), (269, 23069), (272, 23057), (286, 22994), (292, 22964), (296, 22931), (303, 22910), (310, 22880), (314, 22865), (316, 22859), (331, 22811), (339, 22778), (354, 22721), (371, 22682), (372, 22676), (403, 22580), (411, 22547), (417, 22526), (419, 22517), (463, 22355),

Gene: Ulysses\_32 Start: 26359, Stop: 24863, Start Num: 116

Candidate Starts for Ulysses\_32:

(Start: 64 @26425 has 10 MA's), (Start: 116 @26359 has 209 MA's), (Start: 127 @26341 has 3 MA's), (139, 26284), (143, 26266), (150, 26236), (Start: 152 @26224 has 1 MA's), (190, 26098), (197, 26077), (211, 26047), (220, 26008), (253, 25879), (268, 25819), (282, 25765), (310, 25627), (380, 25396), (403, 25306), (412, 25270), (419, 25243), (435, 25189), (437, 25180), (493, 24970), (500, 24952), (512, 24940), (517, 24931),

Gene: UnionJack\_31 Start: 25014, Stop: 23569, Start Num: 131

Candidate Starts for UnionJack\_31:

(88, 25077), (Start: 116 @25050 has 209 MA's), (Start: 131 @25014 has 3 MA's), (Start: 152 @24915 has 1 MA's), (Start: 181 @24831 has 1 MA's), (190, 24789), (198, 24765), (211, 24738), (220, 24699), (229, 24675), (263, 24531), (308, 24324), (334, 24237), (347, 24192), (354, 24162), (362, 24138), (371, 24123), (403, 24012), (404, 24003), (419, 23949), (429, 23916), (447, 23850), (463, 23787), (500, 23658), (539, 23580),

Gene: VResidence\_50 Start: 34666, Stop: 36156, Start Num: 100

Candidate Starts for VResidence\_50:

(Start: 100 @34666 has 1 MA's), (150, 34810), (212, 35002), (229, 35071), (261, 35215), (310, 35455), (328, 35506), (371, 35647), (444, 35884), (468, 35974),

Gene: Vanseggelen\_57 Start: 36594, Stop: 38177, Start Num: 50

Candidate Starts for Vanseggelen\_57:

(28, 36522), (32, 36531), (33, 36537), (Start: 50 @36594 has 23 MA's), (144, 36804), (Start: 145 @36810 has 1 MA's), (147, 36813), (148, 36819), (Start: 152 @36837 has 1 MA's), (187, 36954), (193, 36972), (220, 37053), (222, 37056), (264, 37218), (289, 37320), (305, 37386), (315, 37428), (328, 37458), (363, 37572), (371, 37602), (402, 37701), (405, 37716), (407, 37725), (415, 37752), (416, 37755), (426, 37797), (436, 37830), (455, 37899), (474, 37965), (477, 37977), (487, 38019), (497, 38049), (501, 38058), (511, 38082), (520, 38097),

Gene: Vash\_53 Start: 39034, Stop: 40593, Start Num: 129

Candidate Starts for Vash\_53:

(Start: 77 @38938 has 1 MA's), (Start: 105 @38983 has 3 MA's), (111, 38992), (118, 39004), (Start: 129 @39034 has 3 MA's), (180, 39220), (Start: 181 @39223 has 1 MA's), (187, 39256), (190, 39265), (203, 39304), (213, 39340), (217, 39370), (222, 39382), (235, 39439), (236, 39442), (242, 39460), (244, 39469), (260, 39538), (274, 39598), (313, 39796), (315, 39808), (319, 39826), (326, 39853), (337, 39898), (356, 39970), (359, 39982), (371, 40006), (382, 40051), (398, 40105), (414, 40165), (438, 40249), (471, 40366), (473, 40372), (489, 40438), (490, 40441), (523, 40528),

Gene: Veracruz\_33 Start: 27223, Stop: 25721, Start Num: 122

Candidate Starts for Veracruz\_33:

(Start: 106 @27244 has 2 MA's), (Start: 116 @27229 has 209 MA's), (Start: 122 @27223 has 3 MA's), (Start: 123 @27220 has 2 MA's), (163, 27052), (164, 27046), (204, 26929), (225, 26869), (252, 26752), (263, 26713), (269, 26686), (272, 26674), (293, 26539), (336, 26386), (361, 26296), (375, 26257), (404, 26167), (416, 26125), (419, 26113), (433, 26068), (438, 26047), (495, 25834), (507, 25813),

Gene: Violet\_36 Start: 29937, Stop: 31439, Start Num: 116

Candidate Starts for Violet\_36:

(Start: 56 @29856 has 26 MA's), (Start: 59 @29862 has 2 MA's), (Start: 62 @29868 has 9 MA's), (Start: 63 @29871 has 9 MA's), (Start: 75 @29886 has 1 MA's), (Start: 116 @29937 has 209 MA's), (Start: 126 @29952 has 8 MA's), (Start: 179 @30156 has 1 MA's), (Start: 181 @30162 has 1 MA's), (184, 30183), (Start: 226 @30312 has 1 MA's), (229, 30321), (230, 30330), (231, 30336), (252, 30426), (256, 30438), (265, 30471), (273, 30507), (307, 30666), (327, 30726), (341, 30783), (349, 30810), (357, 30837), (362, 30852), (398, 30954), (400, 30960), (408, 30993), (409, 30996), (432, 31074), (436, 31089), (492, 31308), (534, 31407), (544, 31431),

Gene: WalterMcMickey\_34 Start: 26802, Stop: 25369, Start Num: 105

Candidate Starts for WalterMcMickey\_34:

(Start: 105 @26802 has 3 MA's), (143, 26700), (Start: 152 @26658 has 1 MA's), (193, 26523), (197, 26511), (198, 26508), (222, 26439), (229, 26418), (247, 26331), (248, 26328), (255, 26307), (272, 26238), (326, 26052), (403, 25809), (404, 25800), (419, 25746), (447, 25647), (498, 25461),

Gene: Wander\_33 Start: 26637, Stop: 25123, Start Num: 113

Candidate Starts for Wander\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (268, 26049), (271, 26037), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Warda\_50 Start: 35363, Stop: 36781, Start Num: 110

Candidate Starts for Warda\_50:

(96, 35345), (108, 35360), (Start: 110 @35363 has 33 MA's), (Start: 116 @35372 has 209 MA's), (147, 35486), (Start: 181 @35594 has 1 MA's), (192, 35642), (216, 35705), (222, 35717), (225, 35726), (247, 35825), (271, 35918), (273, 35930), (287, 35984), (328, 36116), (405, 36383), (417, 36419), (422, 36437), (424, 36449), (435, 36482), (473, 36620),

Gene: Watermelon\_39 Start: 30238, Stop: 31821, Start Num: 56

Candidate Starts for Watermelon\_39:

(Start: 56 @30238 has 26 MA's), (Start: 59 @30244 has 2 MA's), (Start: 62 @30250 has 9 MA's), (Start: 63 @30253 has 9 MA's), (Start: 75 @30268 has 1 MA's), (Start: 116 @30319 has 209 MA's), (Start: 126 @30334 has 8 MA's), (Start: 179 @30538 has 1 MA's), (Start: 181 @30544 has 1 MA's), (Start: 226 @30694 has 1 MA's), (229, 30703), (230, 30712), (256, 30820), (263, 30841), (265, 30853), (271, 30877), (281, 30919), (307, 31048), (327, 31108), (341, 31165), (349, 31192), (357, 31219), (358, 31222), (362, 31234), (400, 31342), (408, 31375), (432, 31456), (436, 31471), (461, 31576), (492, 31690), (534, 31789), (544, 31813),

Gene: Werner\_50 Start: 36179, Stop: 37792, Start Num: 50

Candidate Starts for Werner\_50:

(Start: 31 @36113 has 7 MA's), (Start: 47 @36170 has 5 MA's), (Start: 50 @36179 has 23 MA's), (Start: 127 @36326 has 3 MA's), (148, 36425), (Start: 152 @36443 has 1 MA's), (166, 36494), (192, 36575), (193, 36578), (216, 36650), (220, 36659), (222, 36662), (252, 36788), (259, 36815), (277, 36884), (289, 36929), (305, 36998), (311, 37025), (328, 37073), (339, 37121), (355, 37160), (363, 37187), (371, 37217), (407, 37340), (423, 37400), (436, 37445), (472, 37574), (484, 37625), (487, 37634), (501, 37673), (511, 37697), (520, 37712), (525, 37727), (530, 37742),

Gene: Whatever\_50 Start: 36205, Stop: 37818, Start Num: 50

Candidate Starts for Whatever\_50:

(Start: 31 @36139 has 7 MA's), (Start: 47 @36196 has 5 MA's), (Start: 50 @36205 has 23 MA's), (Start: 127 @36352 has 3 MA's), (148, 36451), (Start: 152 @36469 has 1 MA's), (166, 36520), (192, 36601), (193, 36604), (216, 36676), (220, 36685), (222, 36688), (252, 36814), (259, 36841), (277, 36910), (289, 36955), (305, 37024), (311, 37051), (328, 37099), (339, 37147), (355, 37186), (363, 37213), (371, 37243), (407, 37366), (423, 37426), (436, 37471), (472, 37600), (484, 37651), (487, 37660), (501, 37699), (511, 37723), (520, 37738), (525, 37753), (530, 37768),

Gene: Wheeler\_38 Start: 29849, Stop: 31351, Start Num: 116

Candidate Starts for Wheeler\_38:

(Start: 80 @29804 has 3 MA's), (Start: 116 @29849 has 209 MA's), (Start: 126 @29864 has 8 MA's), (154, 29996), (Start: 179 @30068 has 1 MA's), (Start: 181 @30074 has 1 MA's), (183, 30086), (184, 30095), (Start: 226 @30224 has 1 MA's), (229, 30233), (230, 30242), (256, 30350), (263, 30371), (265, 30383), (271, 30407), (281, 30449), (307, 30578), (327, 30638), (341, 30695), (349, 30722), (357, 30749), (362, 30764), (386, 30833), (400, 30872), (408, 30905), (432, 30986), (436, 31001), (461, 31106), (492, 31220), (534, 31319), (544, 31343),

Gene: Wilbur\_33 Start: 26646, Stop: 25123, Start Num: 107

Candidate Starts for Wilbur\_33:

(Start: 84 @26679 has 1 MA's), (Start: 107 @26646 has 19 MA's), (Start: 113 @26637 has 105 MA's), (154, 26475), (Start: 179 @26409 has 1 MA's), (183, 26391), (205, 26316), (210, 26292), (218, 26253), (219, 26250), (240, 26163), (271, 26037), (273, 26025), (311, 25854), (340, 25743), (354, 25692), (396, 25563), (399, 25554), (419, 25479), (421, 25473), (455, 25350), (463, 25311), (521, 25161), (528, 25146),

Gene: Wildwest\_49 Start: 35283, Stop: 36758, Start Num: 110

Candidate Starts for Wildwest\_49:

(Start: 103 @35274 has 2 MA's), (Start: 110 @35283 has 33 MA's), (212, 35604), (261, 35817), (310, 36057), (328, 36108), (371, 36249), (405, 36345), (444, 36486), (445, 36489), (507, 36690),

Gene: Wile\_33 Start: 26657, Stop: 25143, Start Num: 113

Candidate Starts for Wile\_33:

(Start: 84 @26699 has 1 MA's), (Start: 107 @26666 has 19 MA's), (Start: 113 @26657 has 105 MA's), (154, 26495), (Start: 179 @26429 has 1 MA's), (183, 26411), (205, 26336), (218, 26273), (219, 26270), (240, 26183), (271, 26057), (311, 25874), (327, 25817), (340, 25763), (354, 25712), (396, 25583), (399, 25574), (419, 25499), (421, 25493), (454, 25379), (455, 25370), (463, 25331), (521, 25181), (528, 25166),

Gene: Wilkins\_36 Start: 28845, Stop: 30344, Start Num: 116

Candidate Starts for Wilkins\_36:

(40, 28731), (48, 28749), (Start: 56 @28764 has 26 MA's), (Start: 59 @28770 has 2 MA's), (Start: 62 @28776 has 9 MA's), (Start: 63 @28779 has 9 MA's), (Start: 75 @28794 has 1 MA's), (Start: 116 @28845 has 209 MA's), (Start: 179 @29064 has 1 MA's), (Start: 181 @29070 has 1 MA's), (184, 29091), (Start: 226 @29220 has 1 MA's), (229, 29229), (230, 29238), (256, 29346), (263, 29367), (265, 29379), (271, 29403), (281, 29445), (307, 29574), (327, 29634), (341, 29691), (349, 29718), (357, 29745), (358, 29748), (362, 29760), (398, 29859), (408, 29898), (432, 29979), (436, 29994), (461, 30099), (492, 30213), (534, 30312), (544, 30336),

Gene: Wizard007\_33 Start: 26642, Stop: 25128, Start Num: 113

Candidate Starts for Wizard007\_33:

(Start: 84 @26684 has 1 MA's), (Start: 107 @26651 has 19 MA's), (Start: 113 @26642 has 105 MA's), (154, 26480), (Start: 179 @26414 has 1 MA's), (183, 26396), (205, 26321), (210, 26297), (218, 26258), (219, 26255), (240, 26168), (268, 26054), (271, 26042), (311, 25859), (340, 25748), (354, 25697), (396, 25568), (399, 25559), (419, 25484), (421, 25478), (455, 25355), (463, 25316), (521, 25166), (528, 25151),

Gene: Xena\_33 Start: 26644, Stop: 25130, Start Num: 113

Candidate Starts for Xena\_33:

(Start: 84 @26686 has 1 MA's), (Start: 107 @26653 has 19 MA's), (Start: 113 @26644 has 105 MA's), (154, 26482), (Start: 179 @26416 has 1 MA's), (183, 26398), (205, 26323), (218, 26260), (219, 26257), (240, 26170), (271, 26044), (311, 25861), (327, 25804), (340, 25750), (354, 25699), (396, 25570), (399, 25561), (419, 25486), (421, 25480), (454, 25366), (455, 25357), (463, 25318), (521, 25168), (528, 25153),

Gene: Yang\_49 Start: 35473, Stop: 36891, Start Num: 110

Candidate Starts for Yang\_49:

(96, 35455), (108, 35470), (Start: 110 @35473 has 33 MA's), (Start: 116 @35482 has 209 MA's), (Start: 181 @35704 has 1 MA's), (216, 35815), (222, 35827), (225, 35836), (247, 35935), (258, 35977), (271, 36028), (281, 36067), (400, 36472), (417, 36529), (422, 36547), (424, 36559),

Gene: Yasdnii\_50 Start: 36231, Stop: 37844, Start Num: 50

Candidate Starts for Yasdnii\_50:

(Start: 31 @36165 has 7 MA's), (Start: 47 @36222 has 5 MA's), (Start: 50 @36231 has 23 MA's), (Start: 127 @36378 has 3 MA's), (148, 36477), (Start: 152 @36495 has 1 MA's), (166, 36546), (192, 36627), (193, 36630), (216, 36702), (220, 36711), (222, 36714), (252, 36840), (259, 36867), (277, 36936), (289, 36981), (305, 37050), (311, 37077), (328, 37125), (339, 37173), (355, 37212), (363, 37239), (371, 37269), (407, 37392), (423, 37452), (436, 37497), (472, 37626), (484, 37677), (487, 37686), (501, 37725), (511, 37749), (520, 37764), (525, 37779), (530, 37794),

Gene: YesChef\_50 Start: 35275, Stop: 36693, Start Num: 110



Candidate Starts for YesChef\_50:

(96, 35257), (108, 35272), (Start: 110 @35275 has 33 MA's), (Start: 116 @35284 has 209 MA's), (147, 35398), (Start: 152 @35422 has 1 MA's), (Start: 181 @35506 has 1 MA's), (216, 35617), (222, 35629), (225, 35638), (247, 35737), (271, 35830), (273, 35842), (281, 35869), (328, 36028), (422, 36349), (424, 36361), (435, 36394), (473, 36532),

Gene: YoSam321\_33 Start: 26634, Stop: 25120, Start Num: 113

Candidate Starts for YoSam321\_33:

(Start: 84 @26676 has 1 MA's), (Start: 107 @26643 has 19 MA's), (Start: 113 @26634 has 105 MA's), (154, 26472), (Start: 179 @26406 has 1 MA's), (183, 26388), (205, 26313), (210, 26289), (218, 26250), (219, 26247), (240, 26160), (268, 26046), (271, 26034), (311, 25851), (340, 25740), (354, 25689), (396, 25560), (399, 25551), (419, 25476), (421, 25470), (455, 25347), (463, 25308), (521, 25158), (528, 25143),

Gene: Yogi\_29 Start: 23610, Stop: 22114, Start Num: 97

Candidate Starts for Yogi\_29:

(Start: 97 @23610 has 32 MA's), (Start: 116 @23589 has 209 MA's), (Start: 122 @23583 has 3 MA's), (Start: 152 @23454 has 1 MA's), (164, 23406), (193, 23319), (229, 23214), (254, 23103), (269, 23043), (272, 23031), (292, 22938), (296, 22905), (303, 22884), (310, 22854), (314, 22839), (316, 22833), (331, 22785), (354, 22695), (371, 22656), (372, 22650), (403, 22554), (411, 22521), (417, 22500), (419, 22491), (463, 22329),

Gene: Yoncess\_29 Start: 23611, Stop: 22115, Start Num: 97

Candidate Starts for Yoncess\_29:

(Start: 97 @23611 has 32 MA's), (Start: 116 @23590 has 209 MA's), (Start: 122 @23584 has 3 MA's), (Start: 152 @23455 has 1 MA's), (164, 23407), (193, 23320), (229, 23215), (254, 23104), (269, 23044), (272, 23032), (286, 22969), (292, 22939), (296, 22906), (303, 22885), (310, 22855), (316, 22834), (330, 22789), (331, 22786), (332, 22780), (354, 22696), (371, 22657), (372, 22651), (411, 22522), (417, 22501), (419, 22492), (463, 22330),

Gene: Zeeculate\_37 Start: 30186, Stop: 31673, Start Num: 126

Candidate Starts for Zeeculate\_37:

(Start: 56 @30090 has 26 MA's), (Start: 59 @30096 has 2 MA's), (Start: 62 @30102 has 9 MA's), (Start: 63 @30105 has 9 MA's), (Start: 75 @30120 has 1 MA's), (Start: 116 @30171 has 209 MA's), (Start: 126 @30186 has 8 MA's), (Start: 179 @30390 has 1 MA's), (Start: 181 @30396 has 1 MA's), (222, 30534), (Start: 226 @30546 has 1 MA's), (229, 30555), (230, 30564), (256, 30672), (263, 30693), (265, 30705), (271, 30729), (281, 30771), (304, 30885), (307, 30900), (327, 30960), (335, 30993), (341, 31017), (349, 31044), (357, 31071), (362, 31086), (386, 31155), (398, 31188), (400, 31194), (408, 31227), (432, 31308), (436, 31323), (461, 31428), (492, 31542), (534, 31641), (544, 31665),

Gene: Zemlya\_51 Start: 35100, Stop: 36743, Start Num: 31

Candidate Starts for Zemlya\_51:

(Start: 31 @35100 has 7 MA's), (Start: 50 @35166 has 23 MA's), (Start: 127 @35286 has 3 MA's), (Start: 145 @35376 has 1 MA's), (Start: 152 @35403 has 1 MA's), (166, 35454), (192, 35535), (193, 35538), (216, 35610), (220, 35619), (222, 35622), (259, 35775), (273, 35832), (274, 35835), (277, 35844), (283, 35868), (300, 35937), (339, 36072), (363, 36138), (371, 36168), (402, 36267), (407, 36291), (410, 36300), (417, 36324), (436, 36396), (487, 36585), (497, 36615), (501, 36624), (511, 36648), (520, 36663), (525, 36678),

Gene: Zephyr\_38 Start: 29921, Stop: 31423, Start Num: 116

Candidate Starts for Zephyr\_38:

(Start: 56 @29840 has 26 MA's), (Start: 59 @29846 has 2 MA's), (Start: 62 @29852 has 9 MA's), (Start: 63 @29855 has 9 MA's), (Start: 75 @29870 has 1 MA's), (Start: 116 @29921 has 209 MA's),

(Start: 123 @29930 has 2 MA's), (Start: 179 @30140 has 1 MA's), (Start: 181 @30146 has 1 MA's), (183, 30158), (Start: 226 @30296 has 1 MA's), (229, 30305), (230, 30314), (231, 30320), (252, 30410), (256, 30422), (263, 30443), (265, 30455), (271, 30479), (281, 30521), (307, 30650), (327, 30710), (341, 30767), (357, 30821), (358, 30824), (362, 30836), (398, 30938), (400, 30944), (408, 30977), (432, 31058), (436, 31073), (492, 31292), (534, 31391), (544, 31415),

Gene: Zeta1847\_52 Start: 36962, Stop: 38524, Start Num: 82

Candidate Starts for Zeta1847\_52:

(Start: 82 @36962 has 1 MA's), (95, 36986), (101, 36992), (Start: 123 @37022 has 2 MA's), (172, 37193), (182, 37226), (230, 37394), (246, 37469), (261, 37523), (263, 37529), (317, 37790), (335, 37856), (363, 37946), (425, 38147), (478, 38342), (528, 38483),

Gene: Zeuska\_38 Start: 30100, Stop: 31602, Start Num: 116

Candidate Starts for Zeuska\_38:

(Start: 51 @30010 has 1 MA's), (Start: 56 @30019 has 26 MA's), (Start: 59 @30025 has 2 MA's), (Start: 62 @30031 has 9 MA's), (Start: 63 @30034 has 9 MA's), (Start: 75 @30049 has 1 MA's), (Start: 116 @30100 has 209 MA's), (Start: 126 @30115 has 8 MA's), (Start: 179 @30319 has 1 MA's), (Start: 181 @30325 has 1 MA's), (Start: 226 @30475 has 1 MA's), (229, 30484), (230, 30493), (256, 30601), (263, 30622), (265, 30634), (271, 30658), (281, 30700), (307, 30829), (327, 30889), (341, 30946), (349, 30973), (351, 30988), (354, 30991), (357, 31000), (358, 31003), (362, 31015), (400, 31123), (408, 31156), (432, 31237), (436, 31252), (492, 31471), (534, 31570), (544, 31594),

Gene: Zolita\_29 Start: 26039, Stop: 24546, Start Num: 116

Candidate Starts for Zolita\_29:

(Start: 116 @26039 has 209 MA's), (Start: 130 @26006 has 1 MA's), (Start: 131 @26003 has 3 MA's), (Start: 134 @25985 has 4 MA's), (Start: 152 @25904 has 1 MA's), (188, 25784), (196, 25760), (205, 25733), (222, 25685), (263, 25520), (268, 25496), (269, 25493), (273, 25472), (287, 25415), (316, 25283), (357, 25142), (371, 25112), (404, 24977), (416, 24935), (419, 24923), (443, 24839), (447, 24824), (453, 24809), (500, 24632), (521, 24602),

Gene: phiBT1\_int Start: 38804, Stop: 40588, Start Num: 119

Candidate Starts for phiBT1\_int:

(44, 38654), (60, 38699), (73, 38723), (109, 38786), (119, 38804), (140, 38906), (146, 38942), (153, 38984), (157, 38999), (164, 39032), (174, 39056), (176, 39059), (182, 39098), (197, 39161), (202, 39176), (205, 39185), (251, 39359), (254, 39368), (260, 39392), (274, 39452), (275, 39461), (277, 39476), (289, 39533), (300, 39611), (316, 39680), (364, 39896), (376, 39953), (385, 39983), (392, 40028), (402, 40055), (417, 40130), (428, 40172), (451, 40259), (467, 40322), (489, 40406), (503, 40451), (528, 40508),