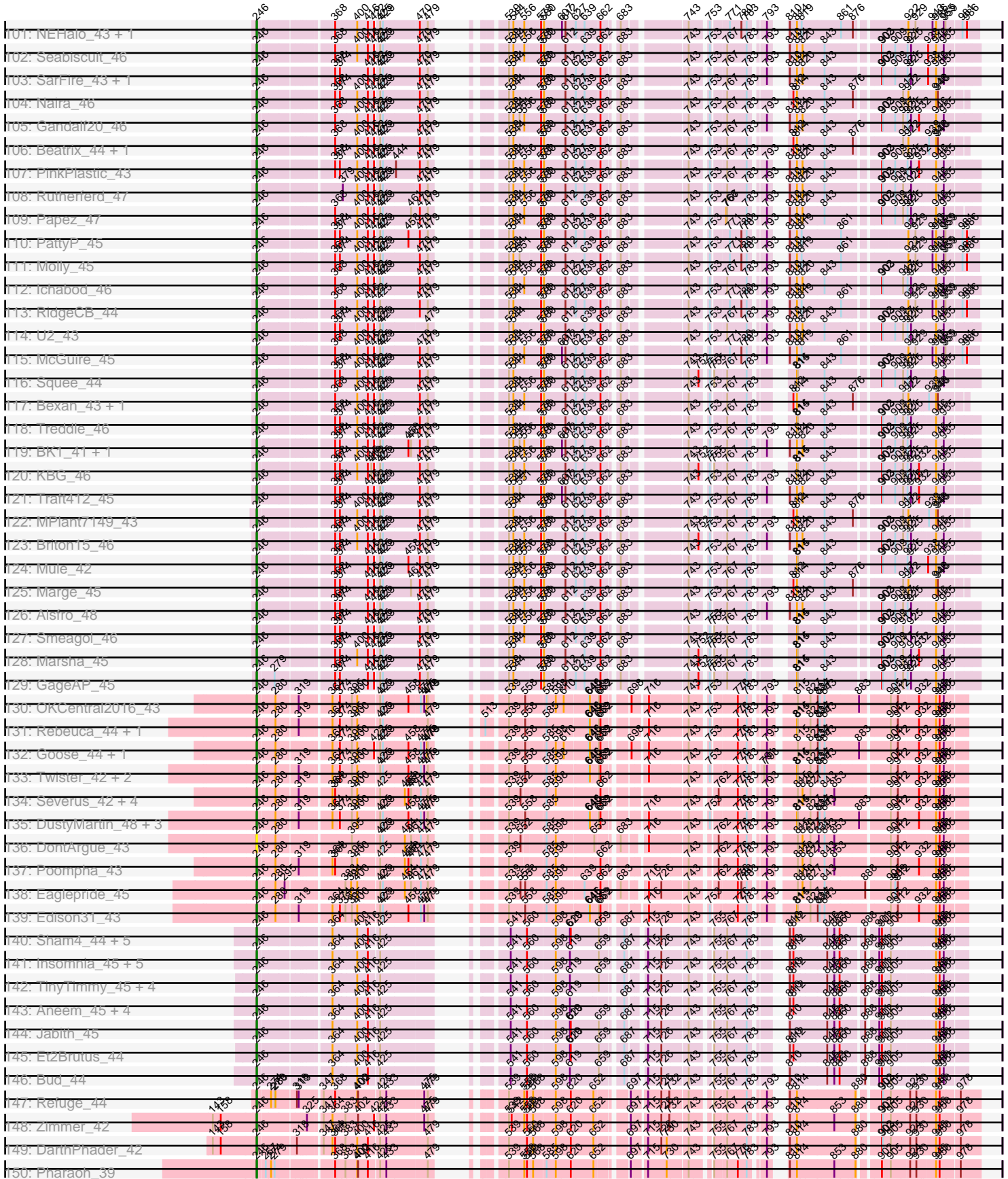


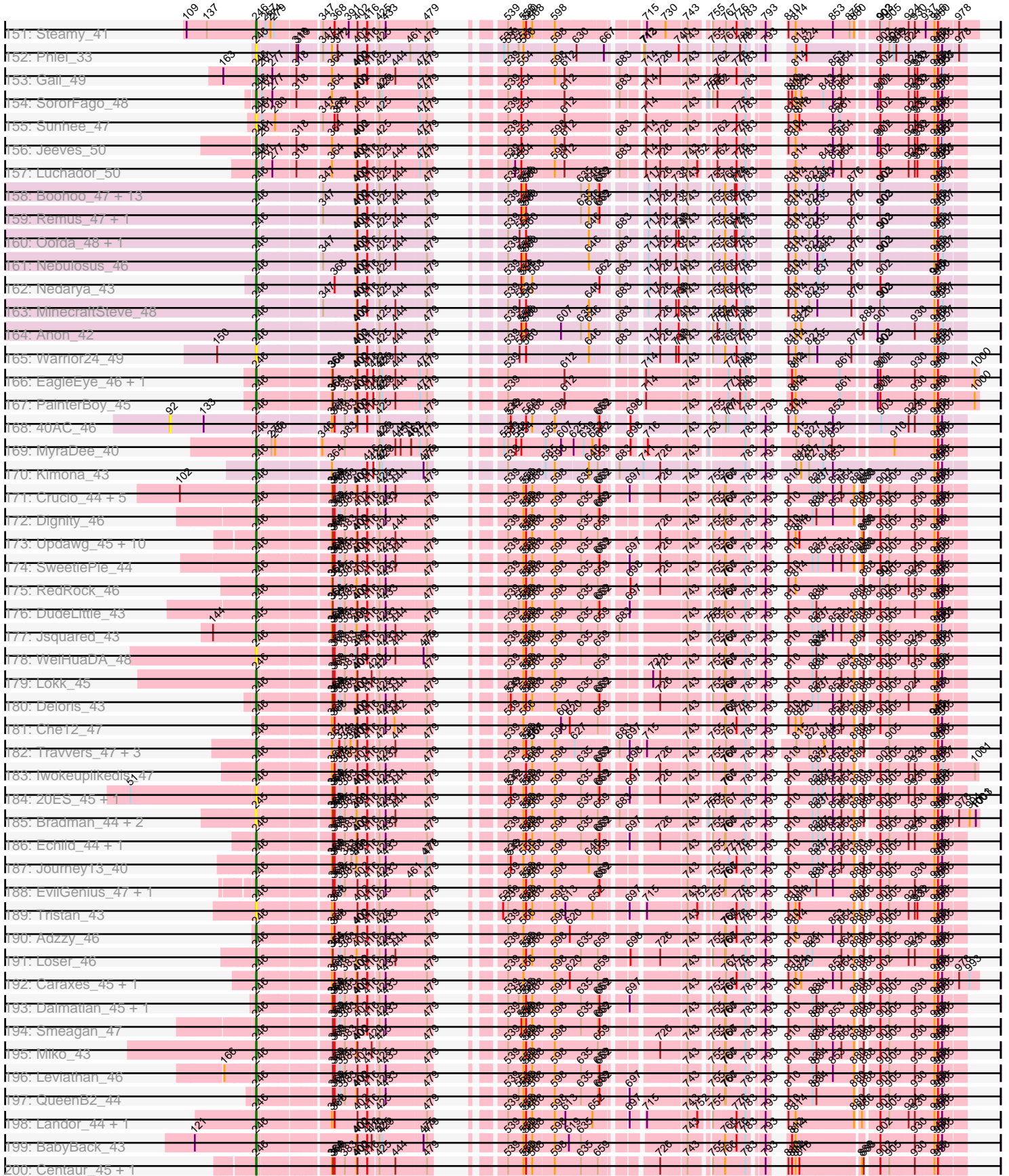




Pham 215634



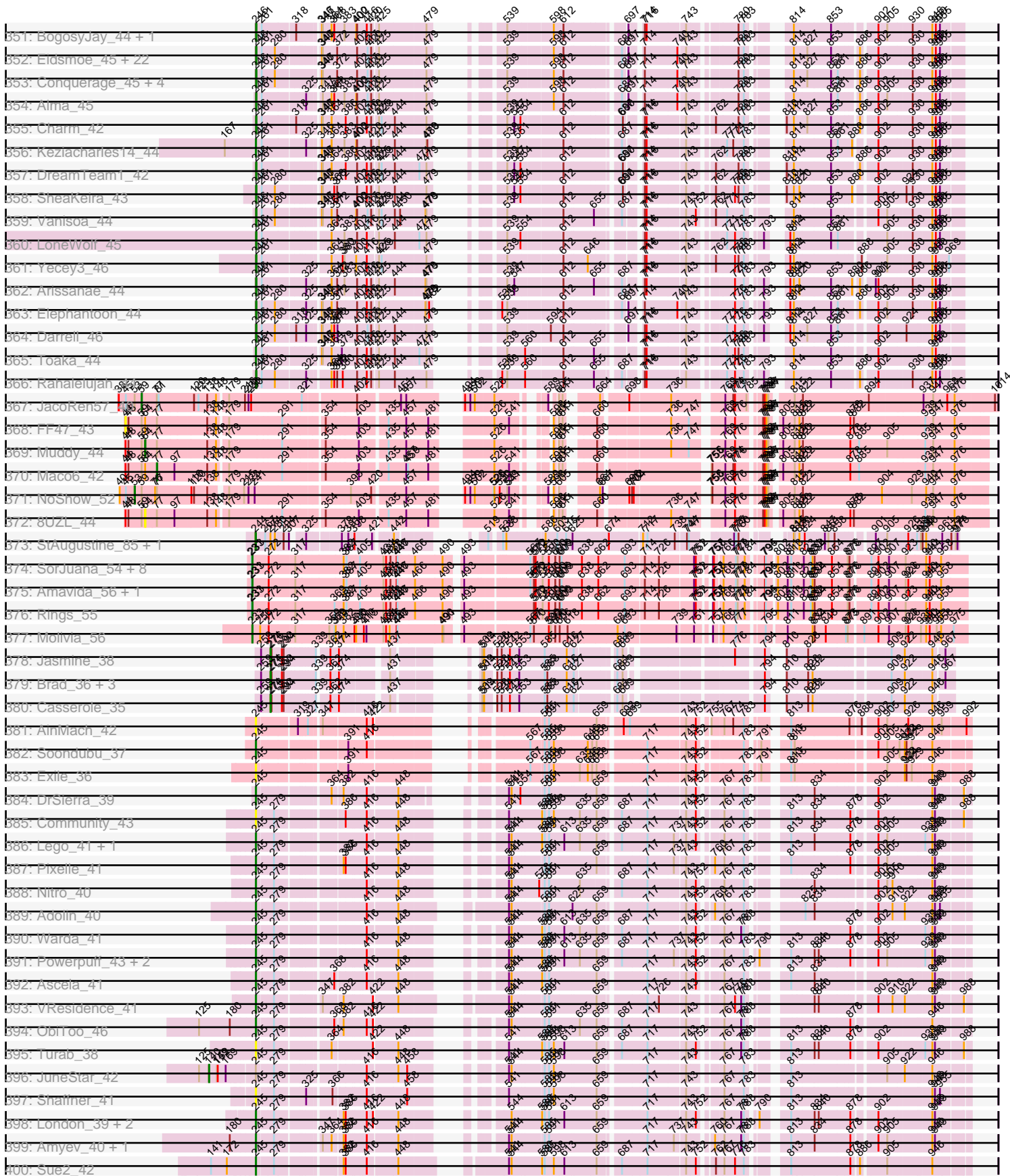
Pham 215634







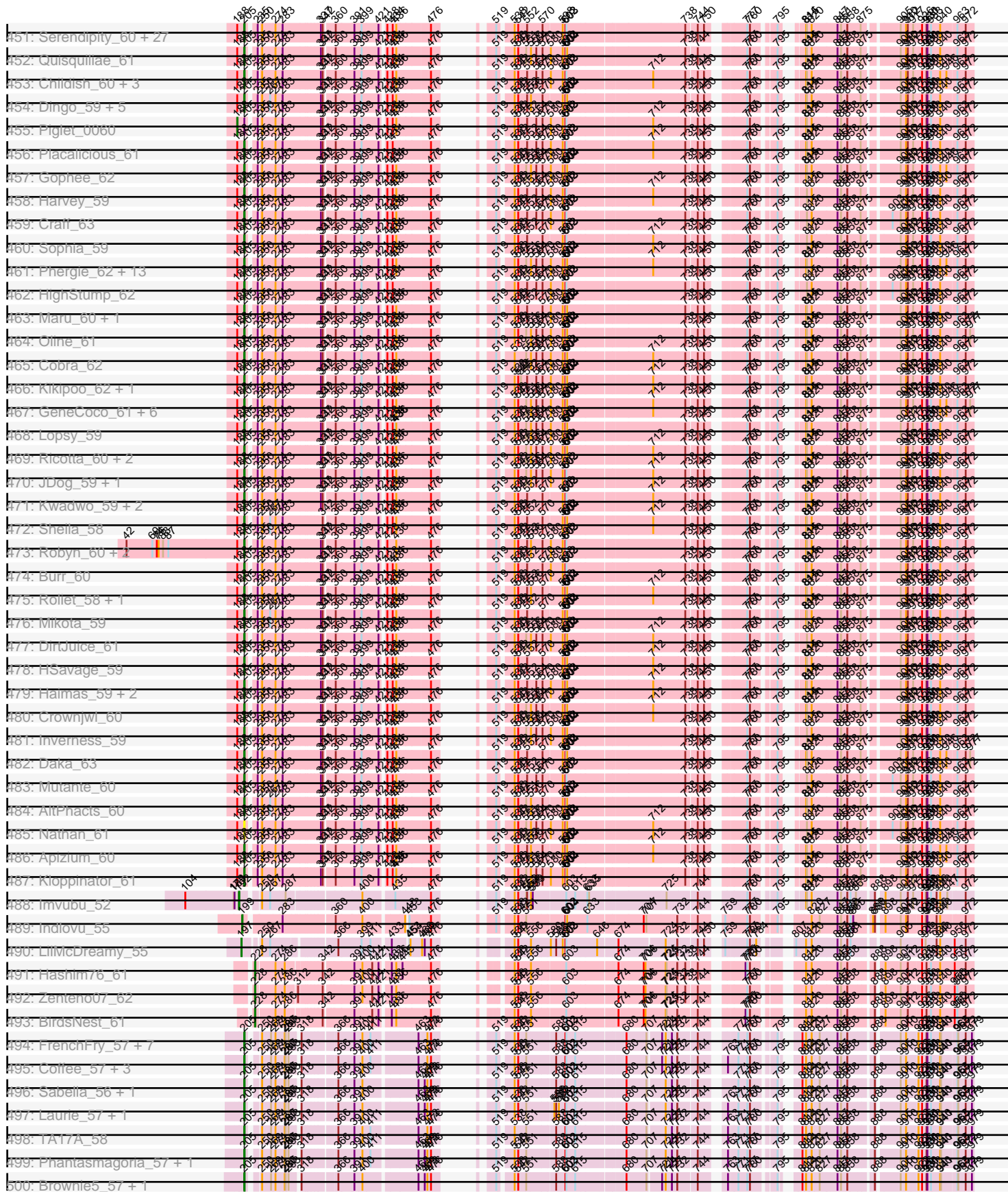




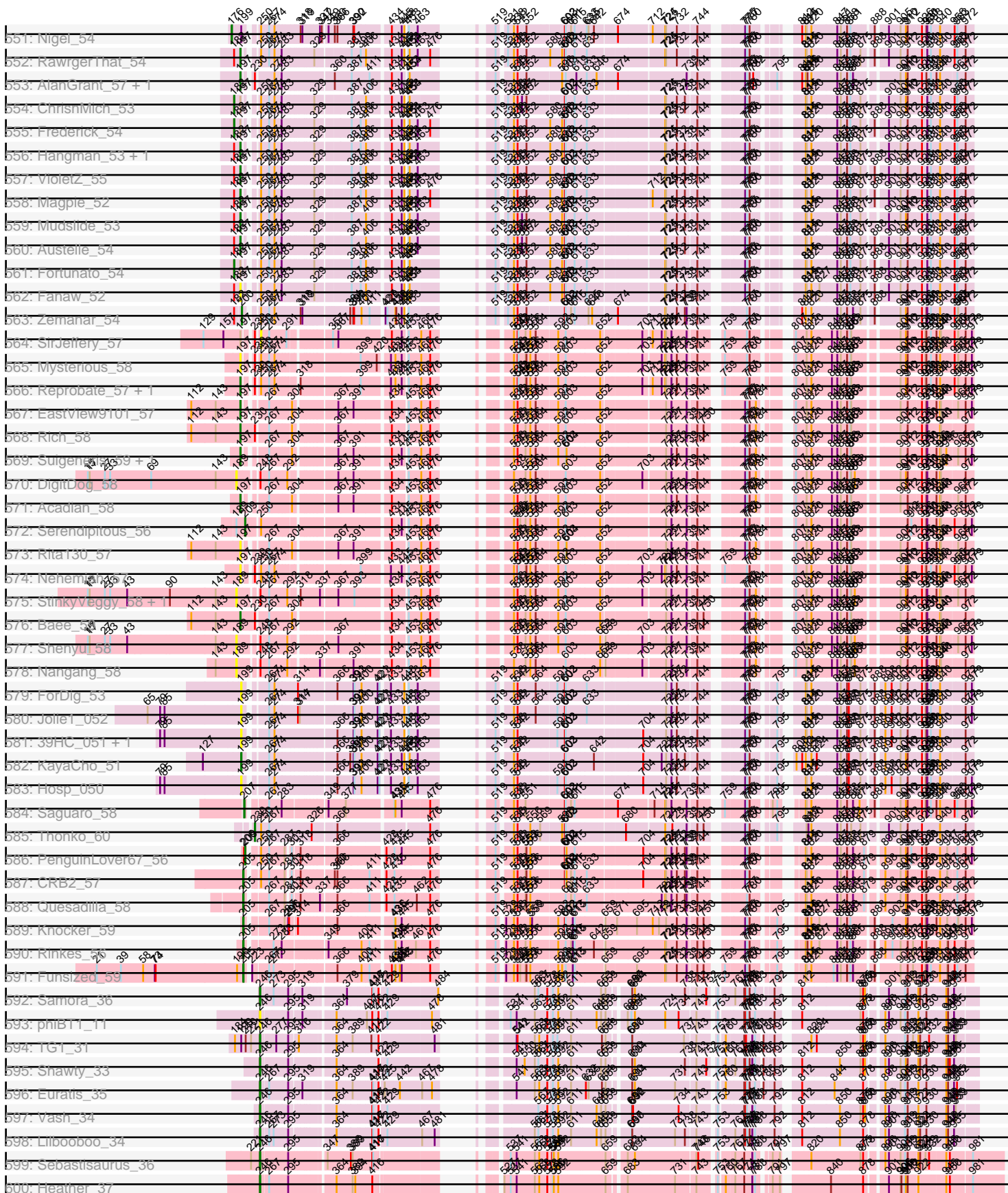




Pham 215634

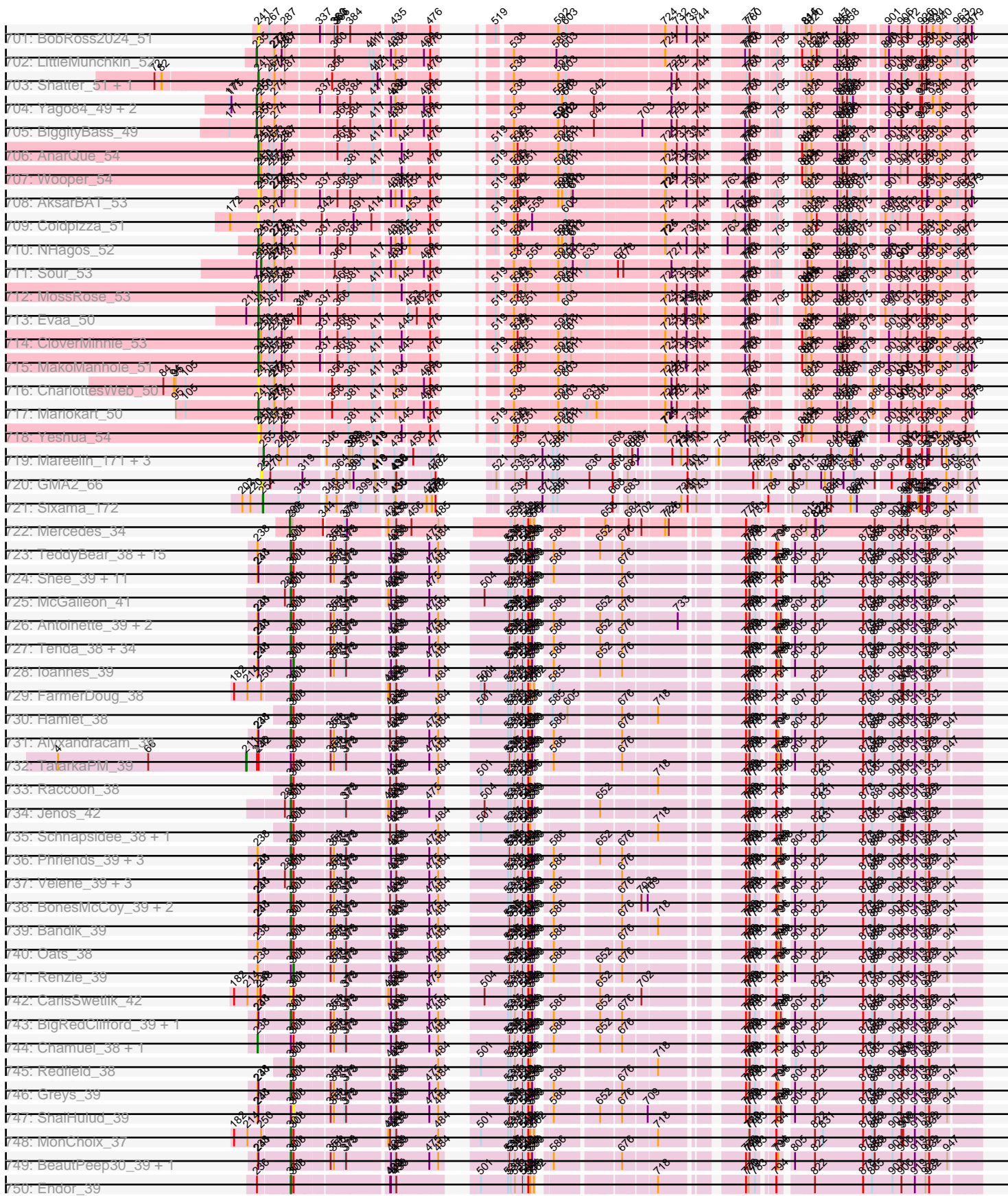




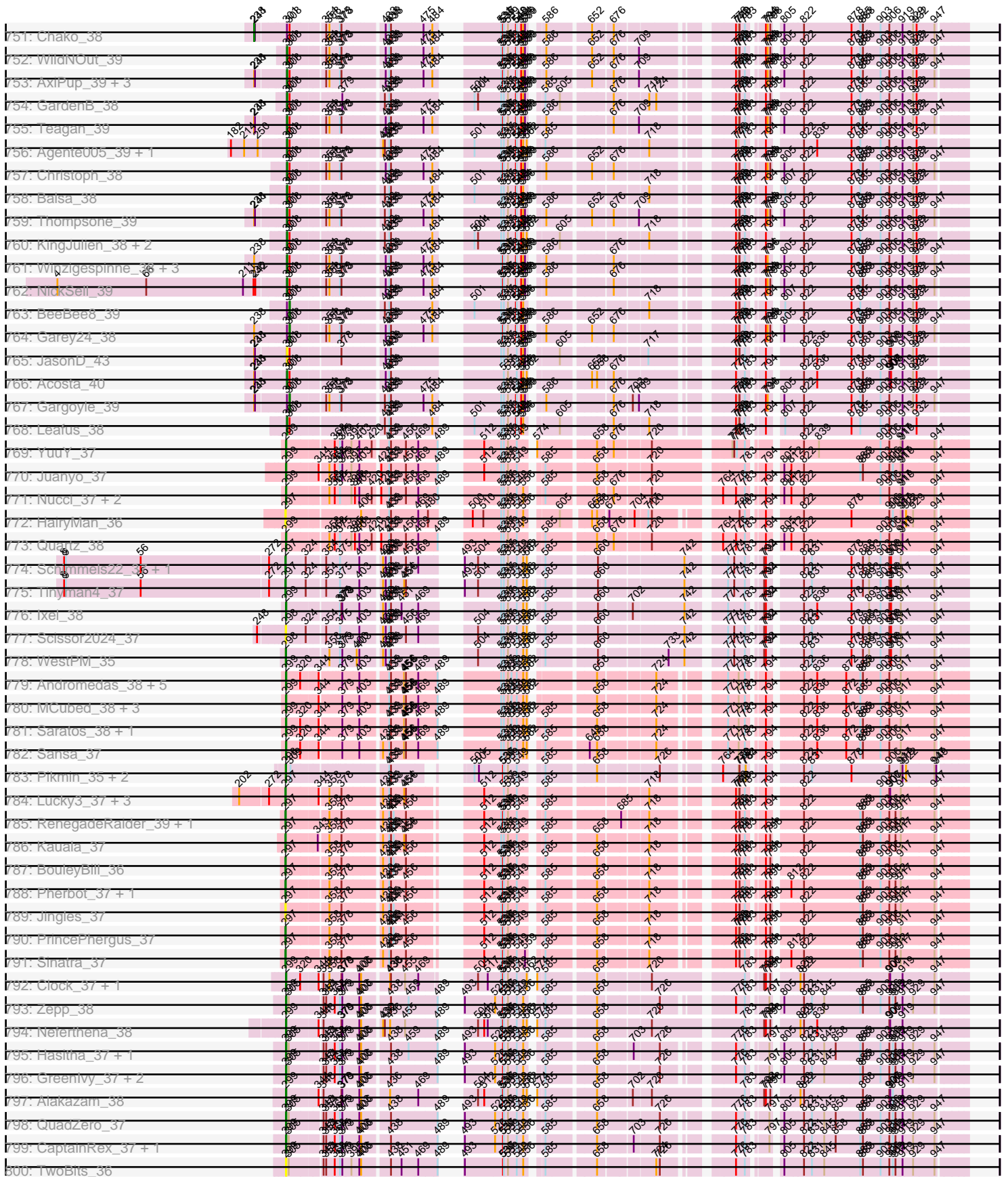


A large data table containing 50 rows and approximately 150 columns. The rows are labeled with IDs and names, such as '501: RemusLoopin\_36' through '550: Zareel\_42 + 4'. Each cell in the table contains a small number, often followed by a plus sign, representing specific data points or counts. The table is overlaid with a grid of red and green shaded cells, and vertical lines of various colors (green, red, blue) are present, possibly indicating specific columns or data groupings. The numbers in the cells are mostly in the range of 100-900.



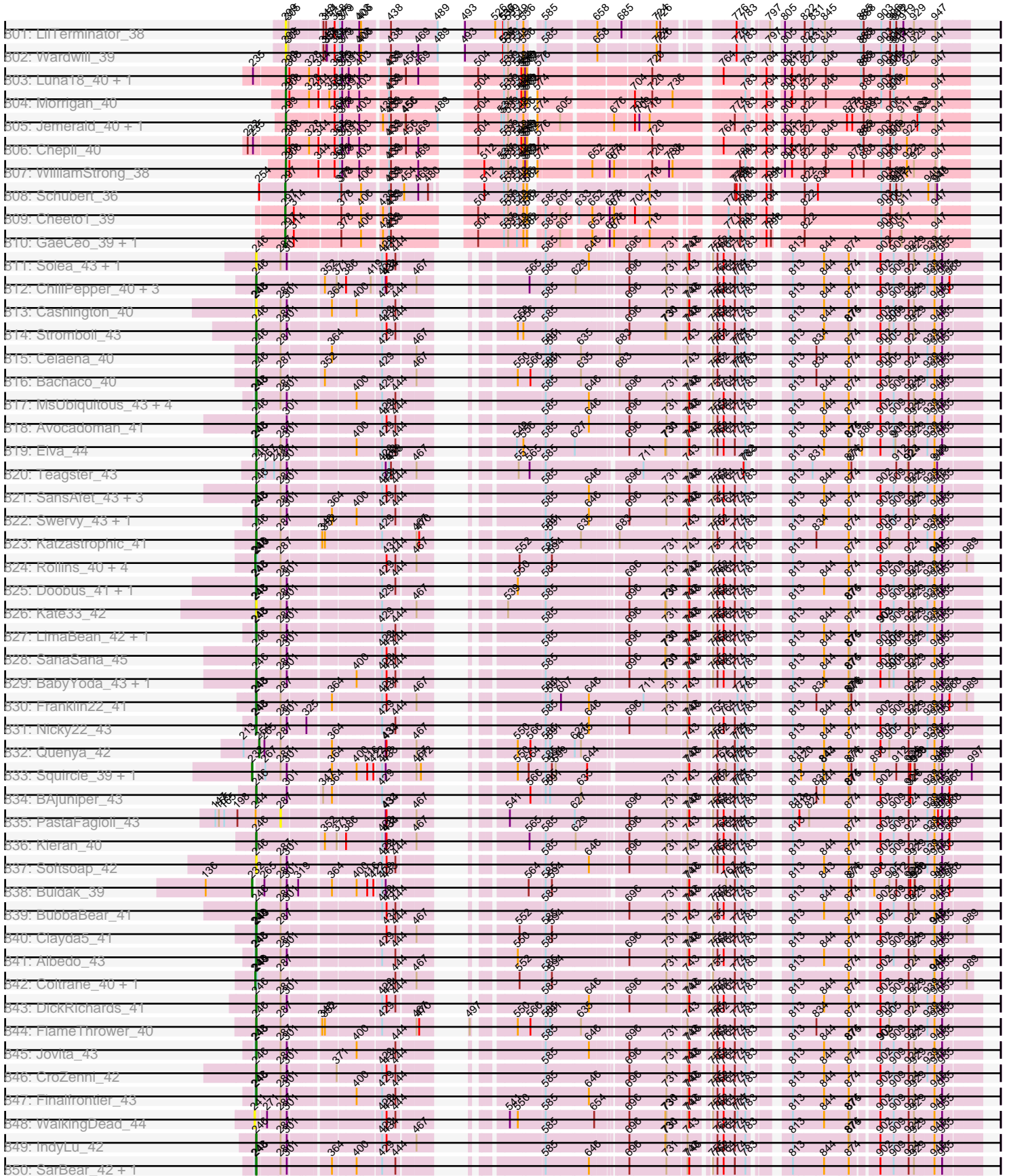


Pham 215634

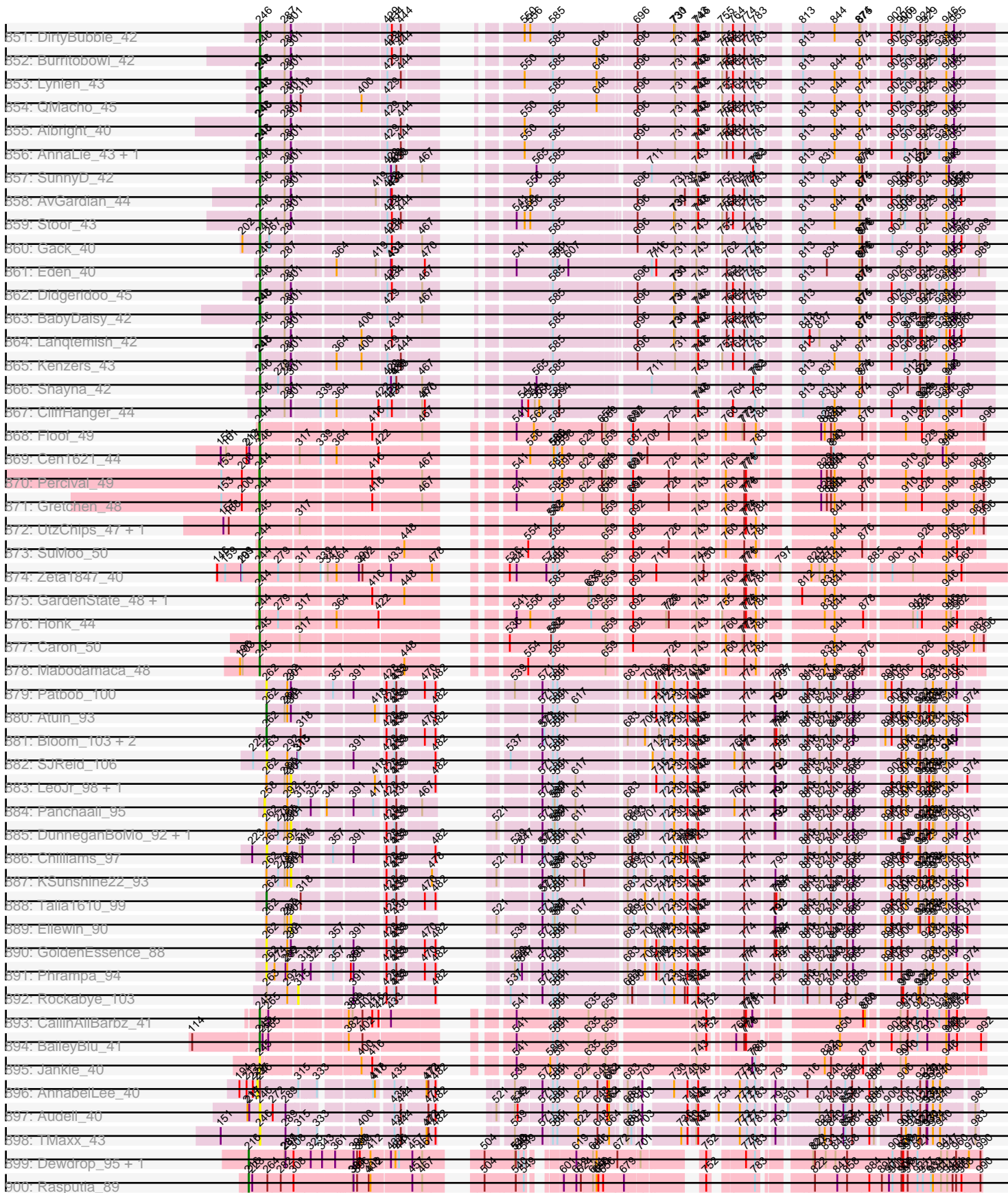




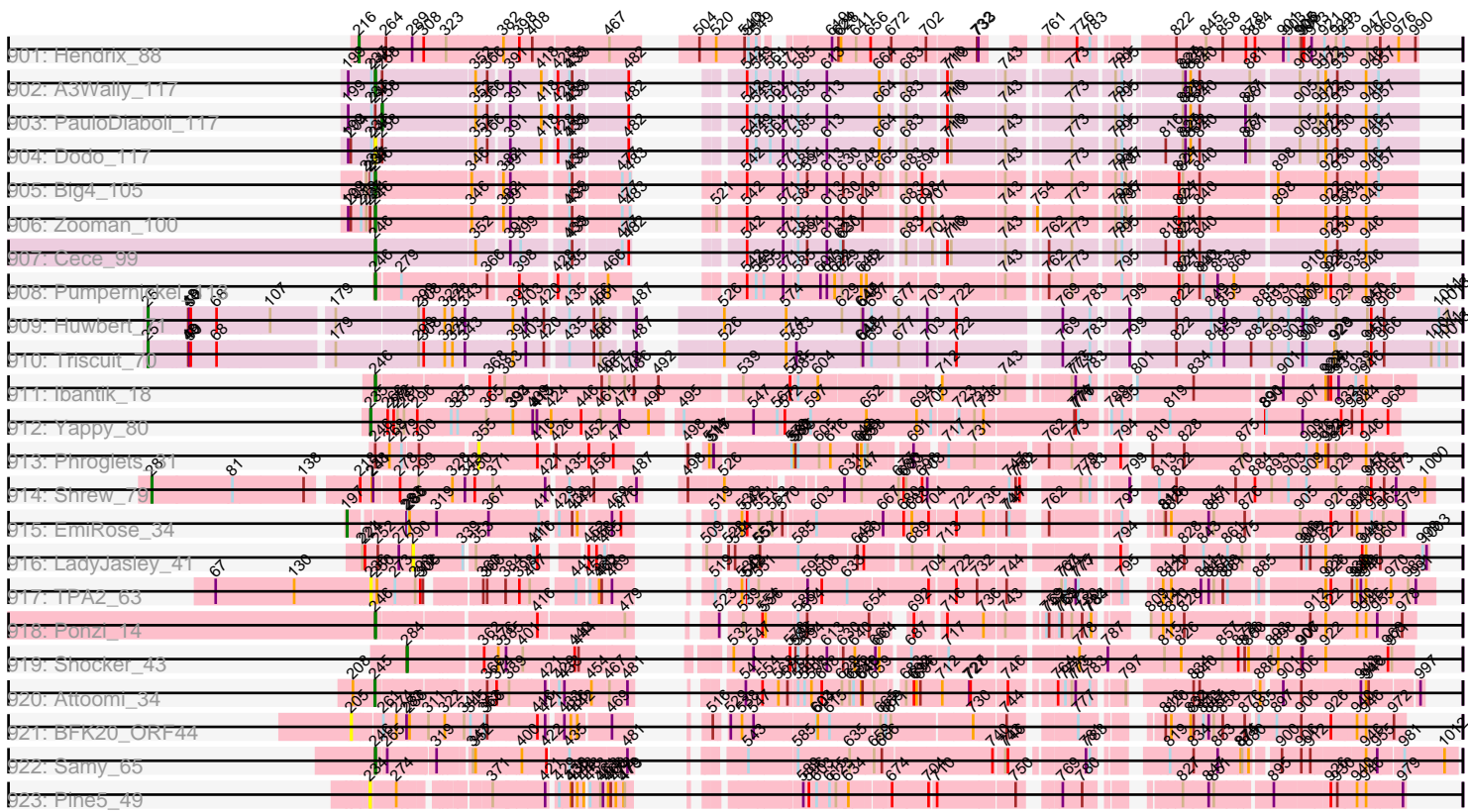
Pham 215634



Pham 215634



Pham 215634



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 215634 Report

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

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

Pham number 215634 has 1943 members, 261 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_44
- Track 2 : lLeeKay\_49, Fushigi\_43, Sumter\_42
- Track 3 : Slagathor\_47, Arcanine\_46, Ringer\_46
- Track 4 : Marchy\_39, Adahisdi\_44, Payneful\_44
- Track 5 : Blue\_44
- Track 6 : Burton\_44, Museum\_45
- Track 7 : JuliaChild\_45, Swole\_45, TwoPeat\_45, Tote\_40
- Track 8 : Parliament\_44, Manatee\_45, BarrowTuph\_45
- Track 9 : LilBib\_45
- Track 10 : Turj99\_42, Magnito\_42
- Track 11 : Kugel\_46
- Track 12 : Marco3\_47, Paphu\_43, Oogway\_42
- Track 13 : GrecoEtereo\_45, GMonster\_42, HanShotFirst\_43, Big3\_43, CactusRose\_42, Paraselene\_43, HarryOW\_43, Tripl3t\_45, Gwendoluna\_47
- Track 14 : Greg\_47, Fajezeel\_47, Pippin\_47, Ciao\_45
- Track 15 : Jasper\_46, Dreamboat\_46
- Track 16 : Buttons\_43
- Track 17 : Licorice\_48, BigPaolini\_45, TheloniousMonk\_46
- Track 18 : Rohr\_45, Jerm2\_45, HermioneGrange\_44
- Track 19 : Arlo\_42, Hope4ever\_46, Kanely\_45, Rubeus\_45, Altman\_46
- Track 20 : Sunshine924\_45, BPBiabs31\_45, Kenmech\_48
- Track 21 : Homines\_37, Makemake\_44, ShortQueendom\_39, Wheeler\_45
- Track 22 : Michley\_44
- Track 23 : Fascinus\_41, Bigfoot\_41, Maroc7\_43
- Track 24 : Zeeculate\_43
- Track 25 : Corvo\_45, SwissCheese\_46, Forsytheast\_44, Bruns\_43, Moose\_44
- Track 26 : SpikeBT\_45
- Track 27 : Francis47\_44, PacerPaul\_45
- Track 28 : Pinto\_45, Petruchio\_45
- Track 29 : Peterson\_48
- Track 30 : Hermia\_46
- Track 31 : PascalRango\_45, Jorgensen\_45, Norz\_45, Edtherson\_45
- Track 32 : KSSJEB\_43, Target\_45

- Track 33 : Levia\_41, PhineBark\_45
- Track 34 : Espresso\_44, EnzoK\_44
- Track 35 : Abrogate\_440, Perseus\_45
- Track 36 : DrFeelGood\_43
- Track 37 : MaryBeth\_45, MetalQZJ\_44
- Track 38 : MrGordo\_44, Gyzlar\_41, Anglerfish\_45, Dulcie\_45, Crispicous1\_43
- Track 39 : Marcell\_43
- Track 40 : Rufus\_45
- Track 41 : JackSparrow\_46
- Track 42 : Barriga\_45
- Track 43 : IgnatiusPatJac\_44, BluSpix\_42
- Track 44 : Niza\_47, Ruotula\_48
- Track 45 : Pita2\_47, PSullivan\_44
- Track 46 : Agaliana\_41
- Track 47 : Bones\_45, Eyeball\_46, Rajelicia\_46
- Track 48 : Teodoridan\_43
- Track 49 : ProMouse\_45
- Track 50 : McSinger\_45, Graduation\_48
- Track 51 : Bxb1\_41
- Track 52 : Sibs6\_45, Wilkins\_44, Topgun\_44, Phlippers\_43
- Track 53 : Bigchungu\_43, Snazzy\_42
- Track 54 : Alvin\_44
- Track 55 : Ajay\_45
- Track 56 : Inyanga\_42, Iqorha\_42
- Track 57 : JC27\_45, Applejack\_40
- Track 58 : Sanya\_43, Bethlehem\_44, Switzer\_45, BeesKnees\_45, Dynamix\_45
- Track 59 : Raid\_45
- Track 60 : Trouble\_46
- Track 61 : Pari\_45
- Track 62 : Dexes\_45
- Track 63 : Pelly\_44
- Track 64 : KyMonks1A\_47, Ashballer\_46
- Track 65 : Lamina13\_45, Tasp14\_46
- Track 66 : Monet\_48
- Track 67 : Sagefire\_48
- Track 68 : Euphoria\_43, LunarLander\_49
- Track 69 : Violet\_42
- Track 70 : Atkinbua\_46
- Track 71 : Chanagan\_42, Pepe\_42
- Track 72 : Carlyle\_44
- Track 73 : Petp2012\_45
- Track 74 : QTRlifeCrisis\_45, Rhynn\_44, Lesedi\_42, ConceptII\_46
- Track 75 : Smairt\_47
- Track 76 : Dussy\_46, Froghopper\_43, Killigrew\_44, Abbyshoes\_47
- Track 77 : Nerujay\_46
- Track 78 : DreamCatcher\_47
- Track 79 : Aeneas\_47
- Track 80 : Mryolo\_42, Nhonho\_45
- Track 81 : StewieG\_44, Solon\_44, Zeuska\_44, BillKnuckles\_45
- Track 82 : Lockley\_44, DD5\_44
- Track 83 : PherrisBueller\_44, Scowl\_45
- Track 84 : Doom\_45
- Track 85 : BigMau\_45

- Track 86 : BaconJack\_48
- Track 87 : Kykar\_45
- Track 88 : Magnar\_44, Mkhusei\_44
- Track 89 : Watermelon\_46
- Track 90 : Cueylyss\_46
- Track 91 : Bob3\_42
- Track 92 : Sandaddy\_44, Sorpresa\_44
- Track 93 : Fenn\_46
- Track 94 : Zephyr\_44
- Track 95 : PhrostyMug\_44
- Track 96 : Bircsak\_44, Gompeii16\_44
- Track 97 : SkiPole\_47, Seanderson\_47
- Track 98 : Ohno789\_45
- Track 99 : Lopton\_45
- Track 100 : Acme\_47, Hami1\_39
- Track 101 : NEHalo\_43, AFIS\_43
- Track 102 : Seabiscuit\_46
- Track 103 : SarFire\_43, Thor\_43
- Track 104 : Naira\_46
- Track 105 : Gandalf20\_46
- Track 106 : Beatrix\_44, STLscum\_46
- Track 107 : PinkPlastic\_43
- Track 108 : Rutherferd\_47
- Track 109 : Papez\_47
- Track 110 : PattyP\_45
- Track 111 : Molly\_45
- Track 112 : Ichabod\_46
- Track 113 : RidgeCB\_44
- Track 114 : U2\_43
- Track 115 : McGuire\_45
- Track 116 : Squee\_44
- Track 117 : Bexan\_43, StrongArm\_44
- Track 118 : Treddle\_46
- Track 119 : BK1\_41, A6\_41
- Track 120 : KBG\_46
- Track 121 : Traft412\_45
- Track 122 : MPlant7149\_43
- Track 123 : Briton15\_46
- Track 124 : Mule\_42
- Track 125 : Marge\_45
- Track 126 : Alsfro\_48
- Track 127 : Smeagol\_46
- Track 128 : Marsha\_45
- Track 129 : GageAP\_45
- Track 130 : OKCentral2016\_43
- Track 131 : Rebeuca\_44, Kristoff\_44
- Track 132 : Goose\_44, Chupacabra\_43
- Track 133 : Twister\_42, WalterMcMickey\_42, Topanga\_42
- Track 134 : Severus\_42, Drake94\_42, PeaceMeal1\_42, KittenMittens\_41, Trike\_42
- Track 135 : DustyMartin\_48, Shapes\_48, Rowdy\_48, RhynO\_45
- Track 136 : DontArgue\_43
- Track 137 : Poompha\_43
- Track 138 : Eaglepride\_45

- Track 139 : Edison31\_43
- Track 140 : Sham4\_44, Fibonacci\_44, MaCh\_45, Bachome\_46, Petersenfast\_43, Hutc2\_44
- Track 141 : Insomnia\_45, Lucivia\_45, Snape\_44, Orange\_44, Bowtie\_45, Mulciber\_44
- Track 142 : TinyTimmy\_45, Salz\_44, Mabel\_45, Timothy\_45, Ebony\_45
- Track 143 : Aneem\_45, Munch\_45, Gilberta\_45, Flaverint\_45, Joselito\_45
- Track 144 : Jabith\_45
- Track 145 : Et2Brutus\_44
- Track 146 : Bud\_44
- Track 147 : Refuge\_44
- Track 148 : Zimmer\_42
- Track 149 : DARTHPhader\_42
- Track 150 : Pharaoh\_39
- Track 151 : Steamy\_41
- Track 152 : Phlei\_33
- Track 153 : Gail\_49
- Track 154 : SororFago\_48
- Track 155 : Sunhee\_47
- Track 156 : Jeeves\_50
- Track 157 : Luchador\_50
- Track 158 : Boohoo\_47, Epsocamisio\_46, Soups\_47, Anaysia\_47, LastResort\_46, Looper\_47, Rosalind\_46, JSwag\_46, ShayRa\_48, Battleship\_48, KatherineG\_48, Switzerland\_47, ReMo\_46, DekHockey33\_47
- Track 159 : Remus\_47, Strosahl\_47
- Track 160 : Oofda\_48, Waits\_47
- Track 161 : Nebulosus\_46
- Track 162 : Nedarya\_43
- Track 163 : MinecraftSteve\_48
- Track 164 : Anon\_42
- Track 165 : Warrior24\_49
- Track 166 : EagleEye\_46, Lucyedi\_45
- Track 167 : PainterBoy\_45
- Track 168 : 40AC\_46
- Track 169 : MyraDee\_40
- Track 170 : Kimona\_43
- Track 171 : Crucio\_44, Georgie2\_45, SnapTap\_44, FiringLine\_44, SemperFi\_45, QueenBeesly\_44
- Track 172 : Dignity\_46
- Track 173 : Updawg\_45, Piro94\_44, Equemioh13\_45, WideWale\_45, Sknot\_46, Buggy\_46, Baehexic\_43, NaSiaTalie\_44, Flare16\_44, MiculUcigas\_44, Gratitude\_44
- Track 174 : SweetiePie\_44
- Track 175 : RedRock\_46
- Track 176 : DudeLittle\_43
- Track 177 : Jsquared\_43
- Track 178 : WeiHuaDA\_48
- Track 179 : LOKK\_45
- Track 180 : Deloris\_43
- Track 181 : Che12\_47
- Track 182 : Travvers\_47, D32\_47, D29\_44, Naji\_47
- Track 183 : Iwokeuplikedis\_47
- Track 184 : 20ES\_45, First\_0044
- Track 185 : Bradman\_44, MajorMajor\_44, Quokka\_43

- Track 186 : Echild\_44, Benvolio\_41
- Track 187 : Journey13\_40
- Track 188 : EvilGenius\_47, ChipMunk\_47
- Track 189 : Tristan\_43
- Track 190 : Adzzy\_46
- Track 191 : Loser\_46
- Track 192 : Caraxes\_45, Superchunk\_44
- Track 193 : Dalmatian\_45, Retro23\_45
- Track 194 : Smeagan\_47
- Track 195 : Miko\_43
- Track 196 : Leviathan\_46
- Track 197 : QueenB2\_44
- Track 198 : Landor\_44, Bactobuster\_43
- Track 199 : BabyBack\_43
- Track 200 : Centaur\_45, Terrific\_47
- Track 201 : Herbertwm\_42
- Track 202 : Changeling\_45
- Track 203 : L5\_44
- Track 204 : Kerberos\_47, Duplo\_47, DBQu4n\_47, Pomar16\_47, Tomathan\_47
- Track 205 : LionsBait\_46
- Track 206 : Phaded\_46
- Track 207 : Pukovnik\_43
- Track 208 : CRB1\_46
- Track 209 : HarryHoudini\_45
- Track 210 : AbbyPaige\_46, Jerm\_46, Turbido\_45, Whabigail7\_45, Agape74\_46
- Track 211 : AnnaL29\_46
- Track 212 : XianYue\_44
- Track 213 : AN3\_45, VA6\_43
- Track 214 : Serenity\_45
- Track 215 : TarsusIV\_42
- Track 216 : JoshKayV\_46
- Track 217 : Acolyte\_41
- Track 218 : EZMoney23\_43
- Track 219 : Fameo\_44, Heffalump\_43
- Track 220 : C3\_43, VC3\_48, AN9\_48, ANI8\_48
- Track 221 : Malec\_45, Larenn\_44
- Track 222 : Power\_43
- Track 223 : LilTurb\_45
- Track 224 : Kalpine\_44
- Track 225 : BobSwaget\_44
- Track 226 : NothingSpecial\_43
- Track 227 : TopsytheTRex\_42
- Track 228 : ArcherNM\_42
- Track 229 : Colin\_46
- Track 230 : NicoleTera\_45
- Track 231 : Ph8s\_46
- Track 232 : MissWhite\_43
- Track 233 : StarStuff\_47
- Track 234 : LadyBird\_47
- Track 235 : SwirlSquare\_48
- Track 236 : Rachaly\_45
- Track 237 : Leogania\_44, BiancaTri92\_44
- Track 238 : GaugeLDP\_43



- Track 239 : Jaan\_45
- Track 240 : Trixie\_44
- Track 241 : BengiVuitton\_44
- Track 242 : Trooper\_45
- Track 243 : Koduck\_44
- Track 244 : IronMan\_44
- Track 245 : Anselm\_45
- Track 246 : Odin\_44
- Track 247 : KingCyrus\_47
- Track 248 : Drake55\_46
- Track 249 : Anthony\_39
- Track 250 : Kinmap\_43
- Track 251 : OlanP\_47
- Track 252 : MarQuardt\_48, Stagni\_48, Mainiac\_48, Cullens\_48, Wooldri\_50, Beauxregard13\_48, SoYo\_48, StepMih\_48, Marie\_48, JenCasNa\_49, JHC117\_48, Hercules11\_48, PotatoSplit\_50, LBerry\_49, Sabia\_48, Dieselweasel\_49, LugYA\_51, Penny1\_49, EpicPhail\_49, BreSam8\_48, Tiffany\_48, Bigflo\_48, Colbster\_48, P28Green\_49, Fernando\_48, MoneyMay\_48, Snickers\_48, Phoebe\_49, Taurus\_49, Anubis\_51, Vix\_48
- Track 253 : MadMarie\_48
- Track 254 : Microwolf\_48, Pembroke\_48, SoilDragon\_48, Jobu08\_47, AugsMagnumOpus\_51, Lilith\_49, Malinsilva\_50, Grub\_48, PGHhamlin\_50, MuchMore\_51, Lowa\_48, Watson\_48
- Track 255 : Methuselah\_45, TinyPebbles\_47, BuzzBuzz\_46, Soshari\_50, Misomonster\_49, KADY\_48, LarryKay\_48, Spike509\_48, HashRod\_49, Daishi\_47, Rummer\_47, Louie6\_47, Phoxy\_48
- Track 256 : Grif\_48, GtownJaz\_48
- Track 257 : Margo\_44, Noella\_44, Hookmount\_44, QuinnKiro\_43, Norbert\_43, Texage\_43, Pocahontas\_44, Popcicle\_44, ResDef\_44, Panamaxus\_42, Lambert1\_44, Caviar\_44, Veracruz\_43, Todacoro\_44
- Track 258 : JF2\_45, MK4\_45, JF4\_45, B1\_42
- Track 259 : Phantastic\_46
- Track 260 : Idleandcovert\_46, TNguyen7\_46, Pistachio\_47, BlueBird\_47, Bugatti\_46, Giroux\_46, SaturnRing\_46, Puppy\_47
- Track 261 : PhishRPhriends\_46, HaveUMetTed\_49, PurpleHaze\_48, Pawn\_48, Heliosoles\_47, Phranny\_49, Manu\_48, Reba\_48, Calvinny\_48, Groupthink\_49, Kalnok\_49, Kalb97\_49, ACFishhook\_47, Marius\_49, Gemma\_47
- Track 262 : Fred313\_45, HelDan\_45, Heathen\_45, Kachowdy\_45, Scout\_45
- Track 263 : Bxz2\_44, AgronaGT15\_47
- Track 264 : BabyRay\_45
- Track 265 : GingkoMaracino\_48, Ollie\_48
- Track 266 : Chiqui\_43, BabyJohn\_43
- Track 267 : Zetzy\_47
- Track 268 : Isca\_44
- Track 269 : Marchesa\_45, DropBear\_45
- Track 270 : Aglet\_49
- Track 271 : DaHudson\_48
- Track 272 : MA5\_45
- Track 273 : Sabinator\_47, Grum1\_48
- Track 274 : JeppNRM\_49
- Track 275 : Rockstar\_45
- Track 276 : Farber\_48

- Track 277 : Melvin\_47, Deano\_44, Phelipe\_46, Baby16\_45, Koreni\_44, CocoaBerry\_45, CentreCat\_45, Morrow\_46, Bruiser\_44, Iracema64\_46, Houdini22\_45, Florean\_45, Nemo27\_45, Dhanush\_45, Bombshell\_45, Holli\_44, Clarenza\_44, Eapen\_45, Caelakin\_45, Medusa\_45, Phacado\_45, Wizard007\_45, Lunsford\_46, KFPoly\_44, Albee\_45, TiroTheta9\_45, HamSlice\_44, Blackmoor\_45, JoongJeon\_44, Abdiel\_45, Nebs\_46, Lemur\_45, BubbleTrouble\_44, TinaFeyge\_45, Maxo\_46, Koan\_43, Citius\_45, Kyee\_45, Millski\_44, Skipitt\_44, Bartimeaus\_45, Burger\_43, Flux\_45, Maverick\_45, Lorenzo\_45, Relief\_44, Jaykayelowell\_43, Wander\_45, LappelDuVide\_45, Huxley\_45, Polymorphads\_46, Nyxis\_45, Iceman\_45, Kingmustik0402\_45, Avle17\_45, LeoAvram\_45, PeterPeter\_45, Ruin\_45, Rosa24\_44, BellusTerra\_46, Camperdownii\_43, Druantia\_45, Phontbonne\_45, Kamy\_45, Funston\_44, Mazhar510\_45, Chaph\_45, Mayonnaise\_45, Happiness\_44, YoSam321\_45, Shaka\_45, Ohfah\_46, NorthStar\_44, Tinybot\_44, Broseidon\_45, Gadost\_45, NotAPhaseMom\_45, Eurydice\_46, Roosevelt\_44, MeeZee\_45, Spino\_44, Pipcraft\_43, Alberto7\_46, Connomayer\_45, Romney\_45, Peaches\_45, LittleGuy\_45, Wilbur\_45, Eagle\_45, SenorClean\_43, Scamp\_45, Phighter1804\_45, TygerBlood\_45, TroyPia\_46, LittleB\_45, Sabertooth\_45, Eros\_45, Commander\_45, Taquarus\_45
- Track 278 : Cici\_44, Xena\_43, Wile\_44, Katalie136\_44, Morpher26\_44, Perplexer\_44, Achebe\_43, Badger\_43, Bumblebee11\_43, AbbysRanger\_44, Datway\_44, PetiteSangsue\_44, Backyardigan\_43
- Track 279 : Stink\_45
- Track 280 : Cindaradix\_42
- Track 281 : DirtyDunning\_44, Arturo\_44, Kratark\_45
- Track 282 : LochMonster\_46, Eris\_44, Ulysses\_44
- Track 283 : LHTSCC\_47, ChampagnePapi\_47, BangNhom\_46, SheldonCooper\_47, Obama12\_46, Cerulean\_46
- Track 284 : Miramae\_44
- Track 285 : JetBlade\_45
- Track 286 : OKaNui\_45
- Track 287 : ICleared\_45
- Track 288 : Mundrea\_44
- Track 289 : Thanksgivukkah\_44, Annyong\_45
- Track 290 : AvatarAhPeg\_44
- Track 291 : Sparxx\_46
- Track 292 : Cintron\_44
- Track 293 : Noelle\_45
- Track 294 : Pumbaa\_45
- Track 295 : Kremtemulon\_45
- Track 296 : Palestino\_44
- Track 297 : Shygu2\_44
- Track 298 : Stasia\_44
- Track 299 : George\_38
- Track 300 : MarysWell\_37
- Track 301 : Naca\_39
- Track 302 : Scorpia\_40, Chadwick\_40
- Track 303 : Prinashe11\_39
- Track 304 : LittleCherry\_39, HuhtaEnerson15\_39, Swirley\_41, Twigg\_39
- Track 305 : PetterN\_40
- Track 306 : Phlorence\_37, Tiger\_37, Discoknowium\_37, Aragog\_37
- Track 307 : ForGetIt\_38, Lev2\_38, Archetta\_38, Conspiracy\_38, PickleBack\_38, Jovo\_38
- Track 308 : Jabiru\_39

- Track 309 : Bonamassa\_39, Tarynearal\_37
- Track 310 : Ghoulboy\_40, Zolita\_39, SydNat\_40
- Track 311 : UnionJack\_39
- Track 312 : Midas2\_38, Coog\_38
- Track 313 : EITiger69\_39
- Track 314 : Micasa\_40
- Track 315 : AgentM\_37
- Track 316 : Milcery\_39
- Track 317 : Bluefalcon\_37
- Track 318 : Airmid\_39
- Track 319 : Cuco\_38
- Track 320 : Dublin\_37, Theia\_36
- Track 321 : Benedict\_39
- Track 322 : Lilbunny\_44, Tucker\_46, CloudWang3\_45, Yokurt\_45, ToneTone\_42, Artemis2UCLA\_45, Zaka\_45, BlessJoy\_46, Hexamo\_45, Roksolana\_46, Zulu\_46, Wiks\_44, WunderPhul\_45
- Track 323 : Isiphiwo\_43
- Track 324 : Jordennis\_45
- Track 325 : SuperCallie99\_45
- Track 326 : Indra\_48, Pmask\_45, Helmet\_47, BABullseye\_43, Temprado\_47, Newrala\_45, Polyphemus\_46, Garak\_47, GreedyLawyer\_45, Chartreuse\_45, Neeharika16\_45, DaVinci\_45, Cookiedough\_45, JewelBug\_47, SuperAwesome\_45
- Track 327 : Blue7\_48, Rifter\_47
- Track 328 : Candra\_45, SmellyB\_45, Hoot\_45, Kipper29\_45, EricB\_45, Dorothea\_45, McFly\_45, VohminGhazi\_45, Kazan\_46
- Track 329 : Gladiator\_45
- Track 330 : Blinn1\_48
- Track 331 : Priamo\_47
- Track 332 : Koko\_47, Hammer\_47
- Track 333 : Gruunaga\_45
- Track 334 : Jeffabunny\_45
- Track 335 : FlyCatcher\_47, Toro\_45, Sheen\_44
- Track 336 : DroogsArmy\_41
- Track 337 : Timshel\_43
- Track 338 : PP\_46
- Track 339 : HINdeR\_41
- Track 340 : Roary\_43
- Track 341 : NearlyHeadless\_43
- Track 342 : Smeadley\_43
- Track 343 : Danforth\_42
- Track 344 : Astro\_42
- Track 345 : Phillis\_44
- Track 346 : Groundhog\_41
- Track 347 : Expelliarmus\_42
- Track 348 : Saintus\_38
- Track 349 : Stephig9\_43
- Track 350 : Dixon\_43
- Track 351 : BogosyJay\_44, Maminiaina\_44
- Track 352 : Eidsmoe\_45, Myxus\_45, Phaeder\_45, Jiawan\_43, Spouty\_45, Beemo\_45, EmyBug\_44, PackMan\_44, ExplosioNervosa\_45, Halex\_44, Hanray\_43, Aliter\_45, Catalina\_46, Phonnegut\_45, Pioneer\_45, HortumSL17\_45, Tubs\_45, Priya\_45, EdogawaKiddo\_43, RyeScarlet\_46, Fayely\_45, Qobbit\_45, Onglai\_43
- Track 353 : Conquerage\_45, Sachima\_42, Scherzo\_45, Ugenie5\_42, Lilleskat\_43

- Track 354 : Alma\_45
- Track 355 : Charm\_42
- Track 356 : Keziacharles14\_44
- Track 357 : DreamTeam1\_42
- Track 358 : SheaKeira\_43
- Track 359 : Vanisoa\_44
- Track 360 : LoneWolf\_45
- Track 361 : Yecey3\_46
- Track 362 : Arissanae\_44
- Track 363 : Elephantoan\_44
- Track 364 : Darrell\_46
- Track 365 : Toaka\_44
- Track 366 : Rahalelujah\_44
- Track 367 : JacoRen57\_40
- Track 368 : FF47\_43
- Track 369 : Muddy\_44
- Track 370 : Maco6\_42
- Track 371 : NoShow\_52
- Track 372 : 8UZL\_44
- Track 373 : StAugustine\_85, Causa\_88
- Track 374 : SorJuana\_54, Amigo\_55, Anansi\_54, Thunderclap\_54, Gorgeous\_54, Jaek\_55, Yeezus\_55, Boersma\_57, Ichor\_55
- Track 375 : Amavida\_56, Heylee\_57
- Track 376 : Rings\_55
- Track 377 : Molivia\_56
- Track 378 : Jasmine\_38
- Track 379 : Brad\_36, GurgleFerb\_36, Nellie\_36, Adat\_36
- Track 380 : Casserole\_35
- Track 381 : AinMach\_42
- Track 382 : Soondubu\_37
- Track 383 : Exile\_36
- Track 384 : DrSierra\_39
- Track 385 : Community\_43
- Track 386 : Lego\_41, Cyan\_41
- Track 387 : Pixelle\_41
- Track 388 : Nitro\_40
- Track 389 : Adolin\_40
- Track 390 : Warda\_41
- Track 391 : Powerpuff\_43, YesChef\_41, Mudpuppy\_38
- Track 392 : Ascela\_41
- Track 393 : VResidence\_41
- Track 394 : ObiToo\_46
- Track 395 : Turab\_38
- Track 396 : JuneStar\_42
- Track 397 : Shaffner\_41
- Track 398 : London\_39, Subaru\_40, Elezi\_39
- Track 399 : Amyev\_40, Tian\_39
- Track 400 : Sue2\_42
- Track 401 : Crewmate\_46
- Track 402 : Tbone\_40
- Track 403 : Tutumahutu\_42
- Track 404 : AGrandiflora\_42
- Track 405 : TforTroy\_42

- Track 406 : Simpson\_43
- Track 407 : Asa16\_39, Niobe\_39, Jstan\_41, Eraser\_39
- Track 408 : Yang\_41
- Track 409 : Iter\_41
- Track 410 : MissSwiss\_41
- Track 411 : Adumb2043\_38
- Track 412 : Tallboi\_40
- Track 413 : Tuck\_44, Phives\_43
- Track 414 : Wildwest\_40
- Track 415 : Pumpkins\_40
- Track 416 : Berrie\_42
- Track 417 : IttyBittyPiggy\_41
- Track 418 : Janeemi\_43
- Track 419 : Lizalica\_39
- Track 420 : DrManhattan\_40
- Track 421 : JohnDoe\_41
- Track 422 : AEgle\_37
- Track 423 : Cassia\_40
- Track 424 : KeAlii\_40
- Track 425 : Joemato\_41
- Track 426 : Kaylissa\_42
- Track 427 : Reedo\_40
- Track 428 : Maureen\_42
- Track 429 : MaGuCo\_40
- Track 430 : Liebe\_42
- Track 431 : Tweety19\_41, Snek\_40
- Track 432 : Emotion\_46
- Track 433 : JasmineDragon\_45, ShakeltOph\_47, MiniMommy\_47
- Track 434 : VroomVroom\_45
- Track 435 : LadyAstra\_48
- Track 436 : Moss\_38, Halsey\_38
- Track 437 : Ashes\_38
- Track 438 : Stuu\_42
- Track 439 : Gumpizza\_39, Beaupre\_41, RockScotty\_40, Mysterium\_37, Giorgio\_39
- Track 440 : Sooty\_38, Donkey\_38, Kalimba\_38, Sabourin\_42, Gambol\_39, Cappuccino\_38
- Track 441 : SpecialK\_38
- Track 442 : Magic8\_61, ThreeOh3D2\_62, LasagnaCat\_62, Colbert\_59, Orfeu\_59, PhrodoBaggins\_61, Banjo\_59, Roy17\_59, DoesntMatter\_58, Bishoperium\_60, Inchworm\_62, Toni\_60, UncleHowie\_59, Lulumae\_58, CampRoach\_62, Murdoc\_59
- Track 443 : FriarPreacher\_60, EmpTee\_60, ProfessorX\_60, Doddsville\_61, Etaye\_62, Virapocalypse\_61, Boehler\_60, Scrick\_61, Chipette\_61, AngelCake\_59, JacAttac\_62, Brilliant\_63, Phareon\_59, Hartsy\_61, Mag7\_61, PhatLouie\_62, Mecca\_60, SirBeauregard\_61, Valjean\_60, Pherdinand\_62, Chaelin\_61, OSmaximus\_62, Keitherie\_62, Sigman\_61, FluffyNinja\_62, Pipsqueak\_59, SilverBell\_61, Cornbread\_62, ElvisPhasley\_66, DelRivs\_59, Coletti\_63, Kailash\_61, Chute\_62, JangoPhett\_60, Virgeve\_60, AbsoluteMadLad\_61, CheetO\_60, Iridessa\_62, Fozzie\_61, Eremos\_60, Swiphy\_64, Melc17\_60, Numberten\_60, BlackStallion\_62, Yoshand\_62, True\_59, Dati\_60, Antonia\_60, Cornobble\_60, Soile\_61, UAch1\_60, Phamished\_62, Aelin\_60, LeiMonet\_63, Hetaeria\_60, Lumine\_61, BatteryCK\_61, Weher20\_60, Suffolk\_59, Fringe\_64, Phunky\_59, Vivaldi\_62, RedMaple\_62, MichaelPhcott\_61, Dione\_58, Nicole21\_61, Manad\_60, Pops\_60, Windsor\_60, Schadenfreude\_60, Phleuron\_61, Olive\_60, Swish\_62,

Spartan300\_60, Jillium\_60, Omniscient\_61, Haleema\_59, LuckyMarjie\_58, Pacifista\_59, Kimbrough\_61, Zaider\_61, Morty\_61

- Track 444 : Prickles\_62, Frankicide\_59, Horchata\_59, Chunky\_59, OliverWalter\_59, Roscoe\_61, Basato\_61, Gyarad\_0059, Newman\_59, Tooj\_59, Adriana\_62
- Track 445 : Vista\_60, Mana\_59, Charles1\_61, Selr12\_61, Eugenia\_60, TooFast2Furius\_62, Lego3393\_59, Dice\_59, Slatt\_61, Gwilliam\_61, Andre\_62, Nyala\_59
- Track 446 : Thora\_60, Altwerkus\_58, Chah\_62, Gareth\_60, Iridoclysis\_61, Waterdiva\_60, Freya\_58, Chorkpop\_60, Badfish\_61, Squid\_60, Scoot17C\_61, Emiris\_63, FugateOSU\_61, Phipps\_60, Podrick\_59, Usavi\_60, Plmatters\_59, Matalotodo\_60, PG1\_61, Megamind20\_61, Serpentine\_0060, Giraffe\_61, PinheadLarry\_61, ABU\_61, KLucky39\_59, LemonSlice\_61, Olak\_59, Jesabah\_61, DaddyDaniels\_62, TomBombadil\_60, Buckeye\_61, ShiVal\_58, Nacho\_0062, PhatCats2014\_61, Hertubise\_60, Mesmerelda\_62, LostAndPhound\_61, Fang\_62, Tomlarah\_61, Vaticameos\_57, YouGoGlencoco\_61, Megatron\_61, Lulwa\_58, Oosterbaan\_60, Mulan\_60, Mcshane\_59, Orion\_62, KingTut\_53, Puhltonio\_60, Riggan\_61, SassyCat97\_59, Mesh1\_62
- Track 447 : Zonia\_62, Pinkman\_60, MelsMeow\_61, Caspiwai\_63, Wallhey\_61
- Track 448 : Veritas\_62, Thunderbird\_60, Kwksand96\_61, Jiraiya\_61
- Track 449 : Plata\_61, JakeO\_61, Struggle\_61, Duggie\_61
- Track 450 : Squiggle\_61
- Track 451 : Serendipity\_60, Hocus\_60, Gwennie1\_60, MRabcd\_60, Telesworld\_58, DuchessDung\_62, Zelda\_61, LeeLot\_61, QueenBeane\_60, Held\_60, CamL\_60, Solosis\_59, Timmi\_59, Daffy\_60, Legolas\_62, Morgushi\_60, Bluephacebaby\_60, Lasso\_61, TallGrassMM\_60, Samaymay\_60, DonSancho\_58, Cher\_60, Vortex\_60, MitKao\_60, Potter\_59, Mosaic\_59, Xavier\_59, Cannibal\_60
- Track 452 : Quisquilliae\_61
- Track 453 : Childish\_60, Kahve\_60, Surely\_60, HenryJackson\_60
- Track 454 : Dingo\_59, Soto\_59, KingVeVeVe\_59, SDcharge11\_60, MiniBoss\_58, BlueHusk\_62
- Track 455 : Piglet\_0060
- Track 456 : Placalicious\_61
- Track 457 : Gophee\_62
- Track 458 : Harvey\_59
- Track 459 : Craff\_63
- Track 460 : Sophia\_59
- Track 461 : Phergie\_62, Grand2040\_60, Trypo\_63, Maskar\_62, Skippy\_61, Rimu\_63, PhrankReynolds\_60, ImtiyazSitla\_62, Ashraf\_62, Durga\_63, PhenghisKhan\_61, Khan1\_61, Anderson\_61, MrPhizzler\_61
- Track 462 : HighStump\_62
- Track 463 : Maru\_60, Cosmolli16\_61
- Track 464 : Oline\_61
- Track 465 : Cobra\_62
- Track 466 : Kikipoo\_62, IsaacEli\_62
- Track 467 : GeneCoco\_61, Jiminy\_61, TyrionL\_61, CharlieGBrown\_61, Derpp\_60, Labeouficaum\_61, Schueller\_61
- Track 468 : Lopsy\_59
- Track 469 : Ricotta\_60, Orwigg\_60, KlimbOn\_60
- Track 470 : JDog\_59, Beaglebox\_60
- Track 471 : Kwadwo\_59, Simielle\_60, Longacauda\_61
- Track 472 : Sheila\_58
- Track 473 : Robyn\_60, Vaishali24\_59, Carthage\_59
- Track 474 : Burr\_60

- Track 475 : Roliet\_58, Riverton\_60
- Track 476 : Mikota\_59
- Track 477 : DirtJuice\_61
- Track 478 : HSavage\_59
- Track 479 : Haimas\_59, Hamish\_59, Katniss\_61
- Track 480 : Crownjwl\_60
- Track 481 : Inverness\_59
- Track 482 : Daka\_63
- Track 483 : Mutante\_60
- Track 484 : AltPhacts\_60
- Track 485 : Nathan\_61
- Track 486 : Apizium\_60
- Track 487 : Kloppinator\_61
- Track 488 : Imvubu\_52
- Track 489 : Indlovu\_55
- Track 490 : LilMcDreamy\_55
- Track 491 : Hashim76\_61
- Track 492 : Zenteno07\_62
- Track 493 : BirdsNest\_61
- Track 494 : FrenchFry\_57, Lephleur\_57, PrinceCharming\_57, LizLemon\_57, Allegro\_57, Kheth\_57, MasterPo\_57, Blocker23\_57
- Track 495 : Coffee\_57, Opia\_57, Ares\_57, Rhinoforte\_57
- Track 496 : Sabella\_56, Holeinone\_57
- Track 497 : Laurie\_57, Vic9\_00057
- Track 498 : TA17A\_58
- Track 499 : Phantasmagoria\_57, Faze9\_56
- Track 500 : Brownie5\_57, Tinciduntolum\_58
- Track 501 : Kolhan\_57
- Track 502 : ItsyBitsy1\_57
- Track 503 : Kaleb\_57
- Track 504 : Tres\_57, Hedgerow\_57
- Track 505 : Qyrzula\_52
- Track 506 : LilSmirk\_57, Arbiter\_56
- Track 507 : Bananafish\_57, Eaglehorse\_57
- Track 508 : Calamitous\_57
- Track 509 : West99\_57
- Track 510 : Lars\_57
- Track 511 : Godines\_58
- Track 512 : Rosebush\_56
- Track 513 : Boyle\_57
- Track 514 : Glass\_57
- Track 515 : Abinghost\_58, SlippinJimmy\_60, SynergyX\_58, Corofin\_58, Phayeta\_60, Casbah\_58
- Track 516 : Athena\_60, Heathcliff\_58, Audrey\_58, Bernardo\_59, ChaChing\_58, Marlia\_59, Kamiyu\_58, Gervas\_59
- Track 517 : SwainyDoc\_59
- Track 518 : Ben11\_58, Phlyer\_58, RagingRooster\_57, Chalmers\_57, Chentzyk\_59, RomaT\_58, Briakila\_57, MmasiCarm\_59, Devonte\_57, Compostia\_58, Philly\_57
- Track 519 : Glubnar\_58
- Track 520 : Tydolla\_56, Yahalom\_57
- Track 521 : OrangeOswald\_58, Kronus\_58, Nozo\_58, Akoma\_58, Chandler\_58
- Track 522 : Marley1013\_59, Morty007\_58
- Track 523 : TinyTerror\_59

- Track 524 : HarveySr\_57
- Track 525 : Baloo\_58, LestyG\_57
- Track 526 : Daisy\_57
- Track 527 : Halfpint\_57
- Track 528 : Mortcellus\_58, Phaedrus\_54
- Track 529 : Rita1961\_59, Obutu\_59
- Track 530 : Deenasa\_58
- Track 531 : Shenandoah\_57
- Track 532 : GlenHope\_59
- Track 533 : Jackstina\_54
- Track 534 : Olivio\_58
- Track 535 : Gadjet\_59
- Track 536 : Pipefish\_59
- Track 537 : Neos5\_58
- Track 538 : Yinz\_58
- Track 539 : Nanao\_52, Lambano\_52, Epah\_52, Hally898\_52, Ahwei\_52, GinPorsche\_52, Poster\_52, Antihero\_52
- Track 540 : Prince\_53, Heath\_52, Hydro\_53
- Track 541 : Apex\_54
- Track 542 : QueenPie\_51
- Track 543 : BobbyK\_54
- Track 544 : Lolalove\_54
- Track 545 : Xincheng\_54, JaguarMi\_55
- Track 546 : Stinger\_54
- Track 547 : Cooper\_54
- Track 548 : Mithril\_53
- Track 549 : BrownCNA\_55
- Track 550 : JAMaL\_53
- Track 551 : Nigel\_54
- Track 552 : RawrgerThat\_54
- Track 553 : AlanGrant\_57, Vincenzo\_56
- Track 554 : ChrisnMich\_53
- Track 555 : Frederick\_54
- Track 556 : Hangman\_53, Waleliano\_53
- Track 557 : VioletZ\_55
- Track 558 : Magpie\_52
- Track 559 : Mudslide\_53
- Track 560 : Austelle\_54
- Track 561 : Fortunato\_54
- Track 562 : Fanaw\_52
- Track 563 : Zemanar\_54
- Track 564 : SirJeffery\_57
- Track 565 : Mysterious\_58
- Track 566 : Reprobate\_57, Phelemich\_56
- Track 567 : EastView9101\_57
- Track 568 : Rich\_58
- Track 569 : Suigeneris\_59, Donny\_59
- Track 570 : DigitDog\_58
- Track 571 : Acadian\_58
- Track 572 : Serendipitous\_56
- Track 573 : Rita130\_57
- Track 574 : Nehemiah\_57
- Track 575 : StinkyVeggy\_58, KarasumaRum\_58



- Track 576 : Bae\_59
- Track 577 : Shenyu\_58
- Track 578 : Nangang\_58
- Track 579 : ForDig\_53
- Track 580 : Jolie1\_052
- Track 581 : 39HC\_051, 40BC\_051
- Track 582 : KayaCho\_51
- Track 583 : Hosp\_050
- Track 584 : Saguario\_58
- Track 585 : Thonko\_60
- Track 586 : PenguinLover67\_56
- Track 587 : CRB2\_57
- Track 588 : Quesadilla\_58
- Track 589 : Knocker\_59
- Track 590 : Rinkes\_56
- Track 591 : Funsized\_59
- Track 592 : Samora\_36
- Track 593 : phiBT1\_11
- Track 594 : TG1\_31
- Track 595 : Shawty\_33
- Track 596 : Euratis\_35
- Track 597 : Vash\_34
- Track 598 : Lilbooboo\_34
- Track 599 : Sebastisaurus\_36
- Track 600 : Heather\_37
- Track 601 : RemusLoopin\_36
- Track 602 : phiSASD1\_12
- Track 603 : Dubu\_35
- Track 604 : Nesbitt\_42
- Track 605 : AbbeyMikolon\_44
- Track 606 : Rowa\_41
- Track 607 : Zuko\_78
- Track 608 : KimJongPhill\_80
- Track 609 : Beleetus\_139
- Track 610 : Garnacho\_138
- Track 611 : Talos\_141
- Track 612 : Alone3\_143
- Track 613 : LuckySocke\_138
- Track 614 : GiJojo\_132
- Track 615 : BRock\_133
- Track 616 : Bimmel\_18
- Track 617 : Success\_19
- Track 618 : Spooks\_18
- Track 619 : RER2\_29, Yogi\_36, BobbyDazzler\_36, Hiro\_36, Bonanza\_36
- Track 620 : PhailMary\_35
- Track 621 : AppleCloud\_34, Krishelle\_36
- Track 622 : Natosaleda\_36, Erik\_36, Rasputin\_36, Espica\_36, Nancinator\_36, Shuman\_36, Belenaria\_36, UhSalsa\_36
- Track 623 : Jester\_36, Harlequin\_36, Bryce\_36
- Track 624 : Rhodalysa\_36, TWAMP\_36, Lillie\_36, CosmicSans\_36
- Track 625 : Partridge\_36
- Track 626 : RexFury\_36
- Track 627 : Naiad\_36, StCroix\_36, Alatin\_36

- Track 628 : Gollum\_36, Swann\_36, Phrankenstein\_36
- Track 629 : Takoda\_36
- Track 630 : Bradshaw\_36
- Track 631 : RGL3\_31
- Track 632 : Alpacados\_35
- Track 633 : Yoncess\_36
- Track 634 : Dinger\_36
- Track 635 : AngryOrchard\_34
- Track 636 : Upyo\_46
- Track 637 : Gustav\_47
- Track 638 : Trine\_42
- Track 639 : Mahdia\_44
- Track 640 : Puppets\_42
- Track 641 : Morrissey\_47
- Track 642 : Widow\_43
- Track 643 : Elinal\_48, KayGee\_46
- Track 644 : Axym\_42
- Track 645 : Cleo\_38
- Track 646 : GTE2\_35
- Track 647 : CherryonLim\_46
- Track 648 : Mayweather\_49
- Track 649 : Elliott\_43, Sopespian\_41, PsychoKiller\_42
- Track 650 : Zareef\_42, Nibbles\_39, Azira\_40
- Track 651 : HippoPololi\_40
- Track 652 : GiKK\_48
- Track 653 : Tolls\_44
- Track 654 : Hexbug\_51, Orla\_51
- Track 655 : MunkgeeRoachy\_41
- Track 656 : GoldHunter\_44
- Track 657 : Cozz\_41, Nina\_42, Agatha\_43
- Track 658 : Lauer\_41
- Track 659 : Typhonmarchy\_43
- Track 660 : Bavilard\_44
- Track 661 : Yummy\_45, SweatNTears\_44, SketchMex\_43, Horseradish\_45, Biskit\_45
- Track 662 : BigChungus\_44, Feastonyeet\_44
- Track 663 : Emalyn\_42
- Track 664 : Troje\_45
- Track 665 : Amok\_44
- Track 666 : AikoCarson\_44
- Track 667 : AndPeggy\_40
- Track 668 : Nodigi\_51
- Track 669 : Pons\_46
- Track 670 : SummitAcademy\_44, Vine\_47
- Track 671 : Yakult\_46
- Track 672 : Buttrmlkdreams\_45
- Track 673 : Yarn\_40
- Track 674 : BillDoor\_43
- Track 675 : Button\_46
- Track 676 : Survivors\_40
- Track 677 : Fribs8\_39
- Track 678 : CanesSauce\_42, ChocoMunchkin\_42
- Track 679 : MaVan\_40

- Track 680 : Gibbous\_38, Dre3\_38
- Track 681 : ChickenTender\_45
- Track 682 : MAnor\_46
- Track 683 : Blondies\_45
- Track 684 : Starburst\_43
- Track 685 : SteamedHams\_43
- Track 686 : RanchParmCat\_48
- Track 687 : Quasar\_43
- Track 688 : MScarn\_47
- Track 689 : Burnsey\_43, Socotra\_44
- Track 690 : RedBaron\_45
- Track 691 : Yucky\_48
- Track 692 : Margaret\_49
- Track 693 : Carsonalex\_46
- Track 694 : SheckWes\_48
- Track 695 : PotPie\_44
- Track 696 : Jamzy\_48
- Track 697 : GodonK\_188
- Track 698 : Phendrix\_176
- Track 699 : Fresco\_51, Axumite\_51
- Track 700 : CaiB\_54
- Track 701 : BobRoss2024\_51
- Track 702 : LittleMunchkin\_52
- Track 703 : Shatter\_51, Ligma\_51
- Track 704 : Yago84\_49, AnClar\_50, Sisko\_49
- Track 705 : BiggityBass\_49
- Track 706 : AnarQue\_54
- Track 707 : Wooper\_54
- Track 708 : AksarBAT\_53
- Track 709 : Coldpizza\_51
- Track 710 : NHagos\_52
- Track 711 : Sour\_53
- Track 712 : MossRose\_53
- Track 713 : Evaa\_50
- Track 714 : CloverMinnie\_53
- Track 715 : MakoManhole\_51
- Track 716 : CharlottesWeb\_50
- Track 717 : Mariokart\_50
- Track 718 : Yeshua\_54
- Track 719 : Mareelih\_171, Boopy\_173, Forza\_174, BlueNGold\_170
- Track 720 : GMA2\_66
- Track 721 : Sixama\_172
- Track 722 : Mercedes\_34
- Track 723 : TeddyBear\_38, Gelo\_38, Bonino\_38, Calix\_38, Ludgate\_39, Baines\_38, Nagem\_39, Erla\_38, Gershwin\_38, Raptor\_39, Etta\_38, Asta\_38, Superfresh\_39, SJay\_39, Pocket\_38, Klimt\_38
- Track 724 : Shee\_39, MillyPhilly\_39, Dothraki\_39, TinSulphur\_39, Stanktossa\_39, Kurt1\_39, Pherferi\_39, Byron23\_39, Martin\_40, PhredFlintston\_39, Inventa\_39, Phiderman\_39
- Track 725 : McGalleon\_41
- Track 726 : Antoinette\_39, Peep\_39, Dave\_39
- Track 727 : Tenda\_38, Exploradora\_39, Clancy\_38, Rog141\_38, ParleG\_39, Benjalauren\_39, JeriBeth\_39, Papafritta\_38, Espinosa\_38, Jerbirus\_39,

Robinson\_39, Riyhil\_39, StirfryIV\_38, HanSolo\_38, Figueroism\_39, Duocatuli\_38, Rappheph\_39, KannH\_38, Gubbabump\_38, HankSprout\_39, AranulaLuti\_38, HungryHenry\_38, MaeLinda\_39, RosieMae\_39, Ilzat\_38, StingRay\_38, JasperRussell\_38, Janus167\_38, Zada\_39, Symere\_39, ManRay\_38, Aubergine\_38, Sedgewig\_38, Thorongil\_39, MrWorldwide\_39

- Track 728 : Ioannes\_39
- Track 729 : FarmerDoug\_38
- Track 730 : Hamlet\_38
- Track 731 : Alyxandracam\_39
- Track 732 : TatarkaPM\_39
- Track 733 : Raccoon\_38
- Track 734 : Jenos\_42
- Track 735 : Schnapsidee\_38, Peppino\_38
- Track 736 : Phriends\_39, Delphidian\_39, SoilGremlin\_39, OldNelly\_39
- Track 737 : Velene\_39, Den3\_39, Oxtober96\_39, Lovelyunicorn\_39
- Track 738 : BonesMcCoy\_39, Convict\_39, Knox\_39
- Track 739 : Bandik\_39
- Track 740 : Oats\_38
- Track 741 : Renzie\_39
- Track 742 : CarisSwetlik\_42
- Track 743 : BigRedClifford\_39, Blage\_39
- Track 744 : Chamuel\_38, SonOfLevi\_38
- Track 745 : Redfield\_38
- Track 746 : Greys\_39
- Track 747 : ShaiHulud\_39
- Track 748 : MonChoix\_37
- Track 749 : BeautPeep30\_39, Phireproof\_39
- Track 750 : Endor\_39
- Track 751 : Chako\_38
- Track 752 : WildNOut\_39
- Track 753 : AxiPup\_39, Vispistious\_39, PuppyEggo\_39, Strathdee\_39
- Track 754 : GardenB\_38
- Track 755 : Teagan\_39
- Track 756 : Agente005\_39, Anilorac\_39
- Track 757 : Christoph\_38
- Track 758 : Balsa\_38
- Track 759 : Thompsone\_39
- Track 760 : KingJulien\_38, Stormbreaker8\_38, Etna\_38
- Track 761 : Winzigespinne\_38, AlexAdler\_39, Nattles\_38, Kale\_38
- Track 762 : NickSell\_39
- Track 763 : BeeBee8\_39
- Track 764 : Garey24\_38
- Track 765 : JasonD\_43
- Track 766 : Acosta\_40
- Track 767 : Gargoyle\_39
- Track 768 : Leafus\_38
- Track 769 : YuuY\_37
- Track 770 : Juanyo\_37
- Track 771 : Nucci\_37, Mandalorian\_37, Carostasia\_37
- Track 772 : HairyMan\_36
- Track 773 : Quartz\_38
- Track 774 : Schimmels22\_37, HerculesXL\_37
- Track 775 : Tinyman4\_37

- Track 776 : Ixel\_38
- Track 777 : Scissor2024\_37
- Track 778 : WestPM\_35
- Track 779 : Andromedas\_38, Glamour\_37, ChikPic\_38, ColaCorta\_38, PSirce\_37, Shamu\_38
- Track 780 : MCubed\_38, Finny\_38, Phanita\_37, Zenitsu\_38
- Track 781 : Saratos\_38, Eleri\_38
- Track 782 : Sansa\_37
- Track 783 : Pikmin\_35, Pajaza\_35, Casey\_35
- Track 784 : Lucky3\_37, Golden\_37, SirVictor\_37, Guetzie\_37
- Track 785 : RenegadeRaider\_39, Koji\_37
- Track 786 : Kauala\_37
- Track 787 : BouleyBill\_36
- Track 788 : Pherbot\_37, Bustleton\_37
- Track 789 : Jingles\_37
- Track 790 : PrincePhergus\_37
- Track 791 : Sinatra\_37
- Track 792 : Clock\_37, Nebulous\_37
- Track 793 : Zepp\_38
- Track 794 : Neferthena\_38
- Track 795 : Hasitha\_37, Fulton\_37
- Track 796 : Greenlvy\_37, Zayuliv\_37, BaronJohn\_38
- Track 797 : Alakazam\_38
- Track 798 : QuadZero\_37
- Track 799 : CaptainRex\_37, Librie\_37
- Track 800 : TwoBits\_36
- Track 801 : LilTerminator\_38
- Track 802 : Wardwill\_39
- Track 803 : Luna18\_40, KatChan\_40
- Track 804 : Morrigan\_40
- Track 805 : Jemerald\_40, Juicer\_40
- Track 806 : Chepli\_40
- Track 807 : WilliamStrong\_38
- Track 808 : Schubert\_36
- Track 809 : Cheeto1\_39
- Track 810 : GaeCeo\_39, ChickenKing\_38
- Track 811 : Solea\_43, Milomuff\_43
- Track 812 : ChiliPepper\_40, Dismas\_40, Sharkboy\_41, Rona\_40
- Track 813 : Cashington\_40
- Track 814 : Stromboli\_43
- Track 815 : Celaena\_40
- Track 816 : Bachaco\_40
- Track 817 : MsUbiquitous\_43, TukTuk\_43, Eula\_43, CupcakePrincess\_43, Jabb\_43
- Track 818 : Avacadoman\_41
- Track 819 : Elva\_44
- Track 820 : Teagster\_43
- Track 821 : SansAfet\_43, Bengal\_43, PhigPhack\_43, Arroyo\_43
- Track 822 : Swervy\_43, Phisb\_43
- Track 823 : Katzastrophic\_41
- Track 824 : Rollins\_40, Vitas\_40, Skylord\_40, Armstrong\_40, Bernstein\_40
- Track 825 : Doobus\_41, Johnathan\_41
- Track 826 : Kate33\_42
- Track 827 : LimaBean\_42, Abigail\_42

- Track 828 : SanaSana\_45
- Track 829 : BabyYoda\_43, Icarian\_45
- Track 830 : Franklin22\_41
- Track 831 : Nicky22\_43
- Track 832 : Quenya\_42
- Track 833 : Squircle\_39, Olliecat\_39
- Track 834 : BAjuniper\_43
- Track 835 : PastaFagioli\_43
- Track 836 : Kieran\_40
- Track 837 : Softsoap\_42
- Track 838 : Buldak\_39
- Track 839 : BubbaBear\_41
- Track 840 : Clayda5\_41
- Track 841 : Albedo\_43
- Track 842 : Coltrane\_40, Brahms\_40
- Track 843 : DickRichards\_41
- Track 844 : FlameThrower\_40
- Track 845 : Jovita\_43
- Track 846 : CroZenni\_42
- Track 847 : Finalfrontier\_43
- Track 848 : WalkingDead\_44
- Track 849 : IndyLu\_42
- Track 850 : SarBear\_42, Slay\_43
- Track 851 : DirtyBubble\_42
- Track 852 : Burritobowl\_42
- Track 853 : Lynlen\_43
- Track 854 : QMacho\_45
- Track 855 : Albright\_40
- Track 856 : AnnaLie\_43, BelmontSKP\_43
- Track 857 : SunnyD\_42
- Track 858 : AvGardian\_44
- Track 859 : Stoor\_43
- Track 860 : Gack\_40
- Track 861 : Eden\_40
- Track 862 : Didgeridoo\_45
- Track 863 : BabyDaisy\_42
- Track 864 : Lahqtemish\_42
- Track 865 : Kenzers\_43
- Track 866 : Shayna\_42
- Track 867 : CliffHanger\_44
- Track 868 : Floof\_49
- Track 869 : Cen1621\_44
- Track 870 : Percival\_49
- Track 871 : Gretchen\_48
- Track 872 : UtzChips\_47, Barnstormer\_47
- Track 873 : SuMoo\_50
- Track 874 : Zeta1847\_40
- Track 875 : GardenState\_48, IAmGroot\_48
- Track 876 : Honk\_44
- Track 877 : Caron\_50
- Track 878 : Mabodamaca\_48
- Track 879 : Patbob\_100
- Track 880 : Atuin\_93

- Track 881 : Bloom\_103, Mimi\_99, Racecar\_100
- Track 882 : SJReid\_106
- Track 883 : LeoJr\_98, ReginaGlobina\_98
- Track 884 : Panchaali\_95
- Track 885 : DunneganBoMo\_92, WaddleDee\_92
- Track 886 : Chilliams\_97
- Track 887 : KSunshine22\_93
- Track 888 : Talia1610\_99
- Track 889 : Ellewin\_90
- Track 890 : GoldenEssence\_88
- Track 891 : Phrampa\_94
- Track 892 : Rockabye\_103
- Track 893 : CallinAllBarbz\_41
- Track 894 : BaileyBlu\_41
- Track 895 : Jankie\_40
- Track 896 : AnnabelLee\_40
- Track 897 : Audell\_40
- Track 898 : TMaxx\_43
- Track 899 : Dewdrop\_95, Leaf\_95
- Track 900 : Rasputia\_89
- Track 901 : Hendrix\_88
- Track 902 : A3Wally\_117
- Track 903 : PauloDiaboli\_117
- Track 904 : Dodo\_117
- Track 905 : Big4\_105
- Track 906 : Zooman\_100
- Track 907 : Cece\_99
- Track 908 : Pumpernickel\_113
- Track 909 : Huwbert\_71
- Track 910 : Triscuit\_70
- Track 911 : Ibantik\_18
- Track 912 : Yappy\_80
- Track 913 : Phroglets\_31
- Track 914 : Shrew\_79
- Track 915 : EmiRose\_34
- Track 916 : LadyJasley\_41
- Track 917 : TPA2\_63
- Track 918 : Ponzi\_14
- Track 919 : Shocker\_43
- Track 920 : Attoomi\_34
- Track 921 : BFK20\_ORF44
- Track 922 : Samy\_65
- Track 923 : Pine5\_49

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

The start number called the most often in the published annotations is 246, it was called in 877 of the 1682 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• 20ES\_45, A3Wally\_117, A6\_41, ACFishhook\_47, AFIS\_43, AN3\_45, AN9\_48, ANI8\_48, AbbeyMikolon\_44, AbbyPaige\_46, AbbysRanger\_44, Abbysshoes\_47, Abdiel\_45, Abigail\_42, Abrogate\_440, Achebe\_43, Acme\_47, Acolyte\_41, Adahisdi\_44, Adzzy\_46, Aeneas\_47, Agaliana\_41, Agape74\_46, AgentM\_37, Aglet\_49, AgronaGT15\_47, Airmid\_39, Ajay\_45, Alatin\_36, Albedo\_43, Albee\_45, Alberto7\_46, Albright\_40, Aliter\_45, Alma\_45, Alpacados\_35, Alsfro\_48, Altman\_46, Alvin\_44, Anaysia\_47, Aneem\_45, Anglerfish\_45, AngryOrchard\_34, AnnaL29\_46, AnnaLie\_43, Annyong\_45, Anon\_42, Anselm\_45, Anthony\_39, Anubis\_51, AppleCloud\_34, Applejack\_40, Aragog\_37, Arcanine\_46, ArcherNM\_42, Archetta\_38, Arissanae\_44, Arlo\_42, Arroyo\_43, Artemis2UCLA\_45, Arturo\_44, Ashballer\_46, Astro\_42, Atkinbua\_46, Audell\_40, AugsMagnumOpus\_51, AvGardian\_44, AvatarAhPeg\_44, Avle17\_45, Avocadoman\_41, B1\_42, BABullseye\_43, BAjuniper\_43, BK1\_41, BPBiels31\_45, Baby16\_45, BabyBack\_43, BabyDaisy\_42, BabyJohn\_43, BabyRay\_45, BabyYoda\_43, Bachaco\_40, Bachome\_46, Backyardigan\_43, BaconJack\_48, Bactobuster\_43, Badger\_43, BaeHexic\_43, BangNhom\_46, Barriga\_45, BarrowTuph\_45, Bartimeaus\_45, Battleship\_48, Beatrix\_44, Beauxregard13\_48, Beemo\_45, BeesKnees\_45, Belenaria\_36, BellusTerra\_46, BelmontSKP\_43, Benedict\_39, Bengal\_43, BengiVuitton\_44, Benvolio\_41, Bethlehem\_44, Bexan\_43, BiancaTri92\_44, Big3\_43, Big4\_105, BigMau\_45, BigPaolini\_45, Bigchungi\_43, Bigflo\_48, Bigfoot\_41, BillKnuckles\_45, Bimmel\_18, Bircsak\_44, Blackmoor\_45, BlessJoy\_46, Blinn1\_48, BluSpix\_42, Blue7\_48, BlueBird\_47, Blue\_44, Bluefalcon\_37, Bob3\_42, BobSwaget\_44, BobbyDazzler\_36, BogosyJay\_44, Bombshell\_45, Bonamassa\_39, Bonanza\_36, Bones\_45, Boohoo\_47, Bowtie\_45, Bradshaw\_36, BreSam8\_48, Briton15\_46, Broseidon\_45, Bruiser\_44, Brunns\_43, Bryce\_36, BubbaBear\_41, BubbleTrouble\_44, Bud\_44, Bugatti\_46, Buggy\_46, Bumblebee11\_43, Burger\_43, Burritobowl\_42, Burton\_44, Buttons\_43, BuzzBuzz\_46, Bxb1\_41, Bxz2\_44, C3\_43, CRB1\_46, CactusRose\_42, Caelakin\_45, Calvinny\_48, Camperdownii\_43, Candra\_45, Caraxes\_45, Carlyle\_44, Cashington\_40, Catalina\_46, Caviar\_44, Cece\_99, Celaena\_40, Cen1621\_44, Centaur\_45, CentreCat\_45, Cerulean\_46, Chadwick\_40, ChampagnePapi\_47, Chanagan\_42, Changeling\_45, Chaph\_45, Chargerpower\_44, Charm\_42, Chartreuse\_45, Che12\_47, ChiliPepper\_40, ChipMunk\_47, Chiqui\_43, Chupacabra\_43, Ciao\_45, Cici\_44, Cindaradix\_42, Cintron\_44, Citius\_45, Clarenza\_44, Clayda5\_41, CliffHanger\_44, CloudWang3\_45, Cocoaberry\_45, Colbster\_48, Colin\_46, Commander\_45, ConceptII\_46, Connomayer\_45, Conquerage\_45, Conspiracy\_38, Coog\_38, Cookiedough\_45, Corvo\_45, CosmicSans\_36, Crispicous1\_43, CroZenni\_42, Crucio\_44, Cuco\_38, Cueyllyss\_46, Cullens\_48, CupcakePrincess\_43, D29\_44, D32\_47, DBQu4n\_47, DD5\_44, DaHudson\_48, DaVinci\_45, Daishi\_47, Dalmatian\_45, Danforth\_42, Darrell\_46, DarthPhader\_42, Datway\_44, Deano\_44, DekHockey33\_47, Deloris\_43, Dexes\_45, Dhanush\_45, DickRichards\_41, Didgeridoo\_45, Dieselweasel\_49, Dignity\_46, Dinger\_36, DirtyBubble\_42, DirtyDunning\_44, Discoknowium\_37, Dismas\_40, Dixon\_43, Dodo\_117, DontArgue\_43, Doobus\_41, Doom\_45, Dorothea\_45, DrFeelGood\_43, Drake55\_46, Drake94\_42, DreamCatcher\_47, DreamTeam1\_42, Dreamboat\_46, DroogsArmy\_41, DropBear\_45, Druantia\_45, Dublin\_37, Dubu\_35, DudeLittle\_43, Dulcie\_45, Duplo\_47, Dussy\_46, DustyMartin\_48, Dynamix\_45, EagleEye\_46, Eagle\_45, Eaglepride\_45, Eapen\_45, Ebony\_45, Echild\_44, Eden\_40, Edison31\_43, EdogawaKiddo\_43, Edtherson\_45, Eidsmoe\_45, Elephantoon\_44, Elva\_44, EmyBug\_44, EnzoK\_44, EpicPhail\_49, Epsocamisio\_46, Equemioh13\_45, EricB\_45, Erik\_36, Eris\_44, Eros\_45, Espica\_36, Espresso\_44, Et2Brutus\_44, Eula\_43, Euphoria\_43, Euratis\_35, Eurydice\_46, EvilGenius\_47, Expelliarmus\_42, ExplosioNervosa\_45, Eyeball\_46, Fajezeel\_47, Fameo\_44, Farber\_48, Fascinus\_41, Fayely\_45, Fenn\_46, Fernando\_48, Fibonacci\_44, Finalfrontier\_43, FiringLine\_44,



First\_0044, FlameThrower\_40, Flare16\_44, Flaverint\_45, Florean\_45, Flux\_45, FlyCatcher\_47, ForGetIt\_38, Forsytheast\_44, Francis47\_44, Franklin22\_41, Fred313\_45, Froghopper\_43, Funston\_44, Fushigi\_43, GMonster\_42, Gack\_40, Gadost\_45, GageAP\_45, Gail\_49, Gandalf20\_46, Garak\_47, GaugeLDP\_43, Gemma\_47, George\_38, Georgie2\_45, Ghoulboy\_40, Gilberta\_45, GingkoMaracino\_48, Giroux\_46, Gladiator\_45, Gollum\_36, Gompeii16\_44, Goose\_44, Graduation\_48, Gratitude\_44, GrecoEtereo\_45, GreedyLawyer\_45, Greg\_47, Grif\_48, Groundhog\_41, Groupthink\_49, Grub\_48, Grum1\_48, Gruunaga\_45, GtownJaz\_48, Gwendoluna\_47, Gyzlar\_41, HINdeR\_41, HamSlice\_44, Hami1\_39, Hammer\_47, HanShotFirst\_43, Hanray\_43, Happiness\_44, Harlequin\_36, HarryHoudini\_45, HarryOW\_43, HashRod\_49, HaveUMetTed\_49, Heathen\_45, Heather\_37, Heffalump\_43, HelDan\_45, Heliosoles\_47, Helmet\_47, Herbertwm\_42, Hercules11\_48, Hermia\_46, HermioneGrange\_44, Hexamo\_45, Hiro\_36, Horex\_44, Holli\_44, Homines\_37, Hookmount\_44, Hoot\_45, Hope4ever\_46, HortumSL17\_45, Houdini22\_45, HuhtaEnerson15\_39, Hutc2\_44, Huxley\_45, ICleared\_45, ILeeKay\_49, Ibantik\_18, Icarian\_45, Iceman\_45, Ichabod\_46, Idleandcovert\_46, IgnatiusPatJac\_44, Indra\_48, IndyLu\_42, Insomnia\_45, Inyanga\_42, Iqorha\_42, Iracema64\_46, IronMan\_44, Isca\_44, Isiphiwo\_43, Iwokeuplikedis\_47, JC27\_45, JF2\_45, JF4\_45, JHC117\_48, JSwag\_46, Jaan\_45, Jabb\_43, Jabiru\_39, Jabith\_45, JackSparrow\_46, Jasper\_46, Jaykayelowell\_43, Jeeves\_50, JenCasNa\_49, JeppNRM\_49, Jerm2\_45, Jerm\_46, Jester\_36, JetBlade\_45, JewelBug\_47, Jiawan\_43, Jobu08\_47, Johnathan\_41, JoongJeon\_44, Jordennis\_45, Jorgensen\_45, Joselito\_45, JoshKayV\_46, Journey13\_40, Jovita\_43, Jovo\_38, JuliaChild\_45, KADY\_48, KBG\_46, KFPoly\_44, KSSJEB\_43, Kachowdy\_45, Kalb97\_49, Kalnoky\_49, Kalpine\_44, Kampy\_45, Kanely\_45, Katalie136\_44, Kate33\_42, KatherineG\_48, Katzastrophic\_41, Kazan\_46, Kenmech\_48, Kenzers\_43, Kerberos\_47, Kieran\_40, Killigrew\_44, Kimona\_43, KingCyrus\_47, Kingmustik0402\_45, Kinmap\_43, Kipper29\_45, KittenMittens\_41, Koan\_43, Koko\_47, Koreni\_44, Kratark\_45, Kremtemulon\_45, Krishelle\_36, Kristoff\_44, Kugel\_46, KyMonks1A\_47, Kyee\_45, Kykar\_45, LBerry\_49, LHTSCC\_47, LadyBird\_47, Lahqtemish\_42, Lambert1\_44, Lamina13\_45, Landor\_44, LappelDuVide\_45, Larenn\_44, LarryKay\_48, LastResort\_46, Lemur\_45, LeoAvram\_45, Leogania\_44, Lesedi\_42, Lev2\_38, Levia\_41, Leviathan\_46, Licorice\_48, LilBib\_45, LilTurb\_45, Lilbooboo\_34, Lilbunny\_44, Lilith\_49, Lilleskat\_43, Lillie\_36, LimaBean\_42, LionsBait\_46, LittleB\_45, LittleCherry\_39, LittleGuy\_45, LochMonster\_46, Lockley\_44, Lokk\_45, LoneWolf\_45, Looper\_47, Lopton\_45, Lorenzo\_45, Loser\_46, Louie6\_47, Iowa\_48, Luchador\_50, Lucivia\_45, Lucyedi\_45, LugYA\_51, LunarLander\_49, Lunsford\_46, Lynlen\_43, MA5\_45, MK4\_45, MPlant7149\_43, MaCh\_45, Mabel\_45, MadMarie\_48, Magnar\_44, Magnito\_42, Mainiac\_48, Makemake\_44, Malec\_45, Malinsilva\_50, Maminiaina\_44, Manatee\_45, Manu\_48, MarQuardt\_48, Marcell\_43, Marchesa\_45, Marchy\_39, Marco3\_47, Marge\_45, Margo\_44, Marie\_48, Marius\_49, Maroc7\_43, Marsha\_45, MaryBeth\_45, MarysWell\_37, Maverick\_45, Maxo\_46, Mayonnaise\_45, Mazhar510\_45, McFly\_45, McGuire\_45, McSinger\_45, Medusa\_45, MeeZee\_45, Melvin\_47, MetalQZJ\_44, Methuselah\_45, Micasa\_40, Michley\_44, Microwolf\_48, MiculUcigas\_44, Midas2\_38, Miko\_43, Milcery\_39, Millski\_44, Milomuff\_43, MinecraftSteve\_48, Miramae\_44, Misomonster\_49, MissWhite\_43, Mkhusei\_44, Molly\_45, Monet\_48, MoneyMay\_48, Moose\_44, Morpher26\_44, Morrow\_46, MrGordo\_44, Mryolo\_42, MsUbiquitous\_43, MuchMore\_51, Mulciber\_44, Mule\_42, Munch\_45, Mundrea\_44, Museum\_45, MyraDee\_40, Myxus\_45, NEHalo\_43, NaSiaTalie\_44, Naiad\_36, Naira\_46, Naji\_47, Nancinator\_36, Natosaleda\_36, NearlyHeadless\_43, Nebs\_46, Nebulosus\_46, Nedarya\_43, Neeharika16\_45, Nemo27\_45, Nerujay\_46, Nesbitt\_42, Newrala\_45, Nhonho\_45, Nicky22\_43, NicoleTera\_45, Niza\_47, Noella\_44, Noelle\_45,

Norbert\_43, NorthStar\_44, Norz\_45, NotAPhaseMom\_45, NothingSpecial\_43, Nyxis\_45, OKCentral2016\_43, OKaNui\_45, Obama12\_46, Odin\_44, Ohfah\_46, Ohno789\_45, OlanP\_47, Ollie\_48, Onglai\_43, Oofda\_48, Oogway\_42, Orange\_44, P28Green\_49, PGHhamlin\_50, PP\_46, PSullivan\_44, PacerPaul\_45, PackMan\_44, PainterBoy\_45, Palestino\_44, Panamaxus\_42, Papez\_47, Paphu\_43, Paraselene\_43, Pari\_45, Parliament\_44, Partridge\_36, PascalRango\_45, PattyP\_45, Pawn\_48, Payneful\_44, PeaceMeal1\_42, Peaches\_45, Pelly\_44, Pembroke\_48, Penny1\_49, Pepe\_42, Perplexer\_44, Perseus\_45, PeterPeter\_45, Petersenfast\_43, Peterson\_48, PetiteSangsue\_44, Petp2012\_45, Petruchio\_45, PetterN\_40, Ph8s\_46, Phacado\_45, Phaded\_46, Phaeder\_45, PhailMary\_35, Phantastic\_46, Pharaoh\_39, Felipe\_46, PherrisBueller\_44, PhigPhack\_43, Phighter1804\_45, Phillis\_44, PhineBark\_45, Phisb\_43, PhishRPhriends\_46, Phlei\_33, Phlippers\_43, Phlorence\_37, Phoebe\_49, Phonnegut\_45, Phontbonne\_45, Phoxy\_48, Phrankenstein\_36, Phranny\_49, PhrostyMug\_44, PickleBack\_38, PinkPlastic\_43, Pinto\_45, Pioneer\_45, Pipcraft\_43, Pippin\_47, Piro94\_44, Pistachio\_47, Pita2\_47, Pmask\_45, Pocahontas\_44, Polymorphads\_46, Polyphemus\_46, Pomar16\_47, Ponzi\_14, Poompha\_43, Popcicle\_44, PotatoSplit\_50, Power\_43, Priamo\_47, Prinash11\_39, Priya\_45, ProMouse\_45, Pukovnik\_43, Pumbaa\_45, Pumpnickel\_113, Puppy\_47, PurpleHaze\_48, QMacho\_45, QTRlifeCrisis\_45, Qobbit\_45, QueenB2\_44, QueenBeesly\_44, QuinnKiro\_43, RER2\_29, RGL3\_31, Rachaly\_45, Rahalelujah\_44, Raid\_45, Rajelicia\_46, Rasputin\_36, ReMo\_46, Reba\_48, Rebeuca\_44, RedRock\_46, Refuge\_44, Relief\_44, RemusLoopin\_36, Remus\_47, ResDef\_44, Retro23\_45, RexFury\_36, Rhodalysa\_36, RhynO\_45, Rhynn\_44, RidgeCB\_44, Rifter\_47, Ringer\_46, Roary\_43, Rockstar\_45, Rohr\_45, Roksolana\_46, Romney\_45, Rona\_40, Roosevelt\_44, Rosa24\_44, Rosalind\_46, Rowa\_41, Rowdy\_48, Rubeus\_45, Rufus\_45, Ruin\_45, Rummer\_47, Ruotula\_48, Rutherferd\_47, RyeScarlet\_46, STLscum\_46, Sabertooth\_45, Sabia\_48, Sabinator\_47, Sachima\_42, Sagefire\_48, Saintus\_38, Salz\_44, Samora\_36, Samy\_65, SanaSana\_45, Sandaddy\_44, SansAfet\_43, Sanya\_43, SarBear\_42, SarFire\_43, SaturnRing\_46, Scamp\_45, Scherzo\_45, Scorpia\_40, Scout\_45, Scowl\_45, Seabiscuit\_46, Seanderson\_47, Sebastisaurus\_36, SemperFi\_45, SenorClean\_43, Serenity\_45, Severus\_42, Shaka\_45, Sham4\_44, Shapes\_48, Sharkboy\_41, Shawty\_33, ShayRa\_48, Shayna\_42, SheaKeira\_43, Sheen\_44, SheldonCooper\_47, ShortQueendom\_39, Shuman\_36, Shygu2\_44, Sibs6\_45, SkiPole\_47, Skipitt\_44, Sknot\_46, Slagathor\_47, Slay\_43, Smairt\_47, Smeadley\_43, Smeagan\_47, Smeagol\_46, SmellyB\_45, SnapTap\_44, Snape\_44, Snazzy\_42, Snickers\_48, SoYo\_48, Softsoap\_42, SoilDragon\_48, Solea\_43, Solon\_44, SororFago\_48, Sorpresa\_44, Soshari\_50, Soups\_47, Sparxx\_46, Spike509\_48, SpikeBT\_45, Spino\_44, Spooks\_18, Spouty\_45, Squee\_44, StCroix\_36, Stagni\_48, StarStuff\_47, Stasia\_44, Steamy\_41, StepMih\_48, Stephig9\_43, StewieG\_44, Stink\_45, Stoor\_43, Stromboli\_43, StrongArm\_44, Strosahl\_47, Success\_19, Sumter\_42, Sunhee\_47, SunnyD\_42, Sunshine924\_45, SuperAwesome\_45, SuperCallie99\_45, Superchunk\_44, Swann\_36, SweetiePie\_44, Swery\_43, SwirlSquare\_48, Swirley\_41, SwissCheese\_46, Switzer\_45, Switzerland\_47, Swole\_45, SydNat\_40, TG1\_31, TMaxx\_43, TNguyen7\_46, TWAMP\_36, Takoda\_36, Taquarus\_45, Target\_45, Tarynearal\_37, Tasp14\_46, Taurus\_49, Teagster\_43, Temprado\_47, Teodoridan\_43, Terrific\_47, Texage\_43, Thanksgivukkah\_44, Theia\_36, TheloniousMonk\_46, Thor\_43, Tiffany\_48, Tiger\_37, Timothy\_45, Timshel\_43, TinaFeyge\_45, TinyPebbles\_47, TinyTimmy\_45, Tinybot\_44, TipsytheTRex\_42, TiroTheta9\_45, Todacoro\_44, Tomathan\_47, ToneTone\_42, Topanga\_42, Topgun\_44, Toro\_45, Tote\_40, Traft412\_45, Travvers\_47, Treddle\_46, Trike\_42, Tripl3t\_45, Tristan\_43, Trixie\_44, Trouble\_46, TroyPia\_46, Tubs\_45, Tucker\_46, TukTuk\_43, Turbido\_45, Turj99\_42, Twigg\_39, Twister\_42, TwoPeat\_45,

TygerBlood\_45, U2\_43, Ugenie5\_42, UhSalsa\_36, Ulysses\_44, UnionJack\_39, Updawn\_45, VA6\_43, VC3\_48, Vanisoa\_44, Vash\_34, Veracruz\_43, Violet\_42, Vix\_48, VohminGhazi\_45, Waits\_47, WalterMcMickey\_42, Wander\_45, Warrior24\_49, Watermelon\_46, Watson\_48, WeiHuaDA\_48, Whabigail7\_45, Wheeler\_45, WideWale\_45, Wiks\_44, Wilbur\_45, Wile\_44, Wilkins\_44, Wizard007\_45, Wooldri\_50, WunderPhul\_45, Xena\_43, XianYue\_44, Yecey3\_46, YoSam321\_45, Yogi\_36, Yokurt\_45, Yoncess\_36, Zaka\_45, Zeeculate\_43, Zephyr\_44, Zetzy\_47, Zeuska\_44, Zimmer\_42, Zolita\_39, Zooman\_100, Zulu\_46, phiBT1\_11, phiSASD1\_12,

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

• 40AC\_46, AnnabelLee\_40, Armstrong\_40, Bernstein\_40, Brahms\_40, Coltrane\_40, EITiger69\_39, Jeffabunny\_45, Naca\_39, PauloDiaboli\_117, Phroglets\_31, Rollins\_40, Skylord\_40, Vitas\_40,

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

• 39HC\_051, 40BC\_051, 8UZL\_44, ABU\_61, AEgle\_37, AGrandiflora\_42, Abinghost\_58, AbsoluteMadLad\_61, Acadian\_58, Acosta\_40, Adat\_36, Adolin\_40, Adriana\_62, Adumb2043\_38, Aelin\_60, Agatha\_43, Agente005\_39, Ahwei\_52, AikoCarson\_44, AinMach\_42, Akoma\_58, AksarBAT\_53, Alakazam\_38, AlanGrant\_57, AlexAdler\_39, Allegro\_57, Alone3\_143, AltPhacts\_60, Altwerkus\_58, Alyxandracam\_39, Amavida\_56, Amigo\_55, Amok\_44, Amyev\_40, AnClar\_50, Anansi\_54, AnarQue\_54, AndPeggy\_40, Anderson\_61, Andre\_62, Andromedas\_38, AngelCake\_59, Anilorac\_39, Antihero\_52, Antoinette\_39, Antonia\_60, Apex\_54, Apizium\_60, AranulaLuti\_38, Arbiter\_56, Ares\_57, Asa16\_39, Ascela\_41, Ashes\_38, Ashraf\_62, Asta\_38, Athena\_60, Attoomi\_34, Atuin\_93, Aubergine\_38, Audrey\_58, Austelle\_54, AxiPup\_39, Axumite\_51, Axym\_42, Azira\_40, BFK20\_ORF44, BRock\_133, Badfish\_61, Bae\_59, BaileyBlu\_41, Baines\_38, Baloo\_58, Balsa\_38, Bananafish\_57, Bandik\_39, Banjo\_59, Barnstormer\_47, BaronJohn\_38, Basato\_61, BatteryCK\_61, Bavilard\_44, Beaglebox\_60, Beaupre\_41, BeautPeep30\_39, BeeBee8\_39, Beleetus\_139, Ben11\_58, Benjaloren\_39, Bernardo\_59, Berrie\_42, BigChungus\_44, BigRedClifford\_39, BiggityBass\_49, BillDoor\_43, BirdsNest\_61, Bishoperium\_60, Biskit\_45, BlackStallion\_62, Blage\_39, Blocker23\_57, Blondies\_45, Bloom\_103, BlueHusk\_62, BlueNGold\_170, Bluephacebaby\_60, BobRoss2024\_51, BobbyK\_54, Boehler\_60, Boersma\_57, BonesMcCoy\_39, Bonino\_38, Boopy\_173, BouleyBill\_36, Boyle\_57, Brad\_36, Bradman\_44, Briakila\_57, Brilliant\_63, BrownCNA\_55, Brownie5\_57, Buckeye\_61, Buldak\_39, Burnsey\_43, Burr\_60, Bustleton\_37, Button\_46, Buttrmldreams\_45, Byron23\_39, CRB2\_57, CaiB\_54, Calamitous\_57, Calix\_38, CallinAllBarbz\_41, CamL\_60, CampRoach\_62, CanesSauce\_42, Cannibal\_60, Cappuccino\_38, CaptainRex\_37, CarisSwetlik\_42, Caron\_50, Carostasia\_37, Carsonalex\_46, Carthage\_59, Casbah\_58, Casey\_35, Caspiboi\_63, Casserole\_35, Cassia\_40, Causa\_88, ChaChing\_58, Chaelin\_61, Chah\_62, Chako\_38, Chalmers\_57, Chamuel\_38, Chandler\_58, Charles1\_61, CharlieGBrown\_61, CharlottesWeb\_50, CheetO\_60, Cheeto1\_39, Chentzyk\_59, Chepli\_40, Cher\_60, CherryonLim\_46, ChickenKing\_38, ChickenTender\_45, ChikPic\_38, Childish\_60, Chilliams\_97, Chipette\_61, ChocoMunchkin\_42, Chorkpop\_60, ChrisnMich\_53, Christoph\_38, Chunky\_59, Chute\_62, Clancy\_38, Cleo\_38, Clock\_37, CloverMinnie\_53, Cobra\_62, Coffee\_57, ColaCorta\_38, Colbert\_59, Coldpizza\_51, Coletti\_63, Community\_43, Compostia\_58, Convict\_39, Cooper\_54, Cornbread\_62, Cornobble\_60, Corofin\_58, Cosmolli16\_61, Cozz\_41, Craff\_63, Crewmate\_46, Crownjwl\_60, Cyan\_41, DaddyDaniels\_62, Daffy\_60, Daisy\_57, Daka\_63, Dati\_60, Dave\_39, Deenasa\_58, DelRivs\_59, Delphidian\_39, Den3\_39, Derpp\_60, Devonte\_57, Dewdrop\_95, Dice\_59, DigitDog\_58, Dingo\_59,

Dione\_58, DirtJuice\_61, Doddsville\_61, DoesntMatter\_58, DonSanchon\_58, Donkey\_38, Donny\_59, Dothraki\_39, DrManhattan\_40, DrSierra\_39, Dre3\_38, DuchessDung\_62, Duggie\_61, DunneganBoMo\_92, Duocatuli\_38, Durga\_63, EZMoney23\_43, Eaglehorse\_57, EastView9101\_57, Eleri\_38, Elezi\_39, Elinal\_48, Elliott\_43, Ellewin\_90, ElvisPhasley\_66, Emalyn\_42, EmiRose\_34, Emiris\_63, Emotion\_46, EmpTee\_60, Endor\_39, Epah\_52, Eraser\_39, Eremos\_60, Erla\_38, Espinosa\_38, Etaye\_62, Etna\_38, Etta\_38, Eugenia\_60, Evaa\_50, Exile\_36, Exploradora\_39, FF47\_43, Fanaw\_52, Fang\_62, FarmerDoug\_38, Faze9\_56, Feastonyeet\_44, Figueroism\_39, Finny\_38, Floof\_49, FluffyNinja\_62, ForDig\_53, Fortunato\_54, Forza\_174, Fozzie\_61, Frankicide\_59, Frederick\_54, FrenchFry\_57, Fresco\_51, Freya\_58, FriarPreacher\_60, Fribs8\_39, Fringe\_64, FugateOSU\_61, Fulton\_37, Funsized\_59, GMA2\_66, GTE2\_35, Gadget\_59, GaeCeo\_39, Gambol\_39, GardenB\_38, GardenState\_48, Gareth\_60, Garey24\_38, Gargoyle\_39, Garnacho\_138, Gelo\_38, GeneCoco\_61, Gershwin\_38, Gervas\_59, GiJojo\_132, GiKK\_48, Gibbous\_38, GinPorsche\_52, Giorgio\_39, Giraffe\_61, Glamour\_37, Glass\_57, GlenHope\_59, Glubnar\_58, Godines\_58, GodonK\_188, GoldHunter\_44, GoldenEssence\_88, Golden\_37, Gophee\_62, Gorgeous\_54, Grand2040\_60, Greenlvy\_37, Gretchen\_48, Greys\_39, Gubbabump\_38, Guetzie\_37, Gumpizza\_39, GurgleFerb\_36, Gustav\_47, Gwennie1\_60, Gwilliam\_61, Gyarad\_0059, HSavage\_59, Haimas\_59, HairyMan\_36, Haleema\_59, Halfpint\_57, Hally898\_52, Halsey\_38, Hamish\_59, Hamlet\_38, HanSolo\_38, Hangman\_53, HankSprout\_39, Hartsy\_61, HarveySr\_57, Harvey\_59, Hashim76\_61, Hasitha\_37, Heath\_52, Heathcliff\_58, Hedgerow\_57, Held\_60, Hendrix\_88, HenryJackson\_60, HerculesXL\_37, Hertubise\_60, Hetaeria\_60, Hexbug\_51, Heylee\_57, HighStump\_62, HippoPololi\_40, Hocus\_60, Holeinone\_57, Honk\_44, Horchata\_59, Horseradish\_45, Hosp\_050, HungryHenry\_38, Huwbert\_71, Hydro\_53, IAmGroot\_48, Ichor\_55, Ilzat\_38, ImtiyazSitla\_62, Imvubu\_52, Inchworm\_62, Indlovu\_55, Inventa\_39, Inverness\_59, Ioannes\_39, Iridessa\_62, Iridoclysis\_61, IsaacEli\_62, Iter\_41, ItsyBitsy1\_57, IttyBittyPiggy\_41, Ixel\_38, JAMaL\_53, JDog\_59, JacAttac\_62, Jackstina\_54, JacoRen57\_40, Jaek\_55, JaguarMi\_55, JakeO\_61, Jamzy\_48, Janeemi\_43, JangoPhett\_60, Jankie\_40, Janus167\_38, JasmineDragon\_45, Jasmine\_38, JasonD\_43, JasperRussell\_38, Jemerald\_40, Jenos\_42, Jerbirus\_39, JeriBeth\_39, Jesabah\_61, Jillium\_60, Jiminy\_61, Jingles\_37, Jiraiya\_61, Joemato\_41, JohnDoe\_41, Jolie1\_052, Jsquared\_43, Jstan\_41, Juanyo\_37, Juicer\_40, JuneStar\_42, KLucky39\_59, KSunshine22\_93, Kahve\_60, Kailash\_61, Kale\_38, Kaleb\_57, Kalimba\_38, Kamiyu\_58, KannH\_38, KarasumaRum\_58, KatChan\_40, Katniss\_61, Kauala\_37, KayGee\_46, KayaCho\_51, Kaylissa\_42, KeAlii\_40, Keitherie\_62, Keziacharles14\_44, Khan1\_61, Kheth\_57, Kikipoo\_62, KimJongPhill\_80, Kimbrough\_61, KingJulien\_38, KingTut\_53, KingVeVeVe\_59, KlimbOn\_60, Klimt\_38, Kloppinator\_61, Knocker\_59, Knox\_39, Koduck\_44, Koji\_37, Kolhan\_57, Kronus\_58, Kurt1\_39, Kwadwo\_59, Kwksand96\_61, L5\_44, Labeouficaum\_61, LadyAstra\_48, LadyJasley\_41, Lambano\_52, Lars\_57, LasagnaCat\_62, Lasso\_61, Lauer\_41, Laurie\_57, Leaf\_95, Leafus\_38, LeeLot\_61, Lego3393\_59, Lego\_41, Legolas\_62, LeiMonet\_63, LemonSlice\_61, LeoJr\_98, Lephleur\_57, LestyG\_57, Librie\_37, Liebe\_42, Ligma\_51, LilMcDreamy\_55, LilSmirk\_57, LilTerminator\_38, LittleMunchkin\_52, LizLemon\_57, Lizalica\_39, Lolalove\_54, London\_39, Longacauda\_61, Lopsy\_59, LostAndPhound\_61, Lovelyunicorn\_39, Lucky3\_37, LuckyMarjie\_58, LuckySocke\_138, Ludgate\_39, Lulumae\_58, Lulwa\_58, Lumine\_61, Luna18\_40, MAnor\_46, MCubed\_38, MRabcd\_60, MScarn\_47, MaGuCo\_40, MaVan\_40, Mabodamaca\_48, Maco6\_42, MaeLinda\_39, Mag7\_61, Magic8\_61, Magpie\_52, Mahdia\_44, MajorMajor\_44, MakoManhole\_51, ManRay\_38, Mana\_59, Manad\_60, Mandalorian\_37, Mareelih\_171, Margaret\_49, Mariokart\_50, Marley1013\_59, Marlia\_59, Martin\_40,

Maru\_60, Maskar\_62, MasterPo\_57, Matalotodo\_60, Maureen\_42, Mayweather\_49, McGalleon\_41, Mcshane\_59, Mecca\_60, Megamind20\_61, Megatron\_61, Melc17\_60, MelsMeow\_61, Mercedes\_34, Mesh1\_62, Mesmerelda\_62, MichaelPhcott\_61, Mikota\_59, MillyPhilly\_39, Mimi\_99, MiniBoss\_58, MiniMommy\_47, MissSwiss\_41, MitKao\_60, Mithril\_53, MmasiCarm\_59, Molivia\_56, MonChoix\_37, Morgushi\_60, Morigan\_40, Morrissey\_47, Mortcellus\_58, Morty007\_58, Morty\_61, Mosaic\_59, MossRose\_53, Moss\_38, MrPhizzler\_61, MrWorldwide\_39, Muddy\_44, Mudpuppy\_38, Mudslide\_53, Mulan\_60, MunkgeeRoachy\_41, Murdoc\_59, Mutante\_60, Mysterious\_58, Mysterium\_37, NHagos\_52, Nacho\_0062, Nagem\_39, Nanao\_52, Nangang\_58, Nathan\_61, Nattles\_38, Nebulous\_37, Neferthena\_38, Nehemiah\_57, Nellie\_36, Neos5\_58, Newman\_59, Nibbles\_39, NickSell\_39, Nicole21\_61, Nigel\_54, Nina\_42, Niobe\_39, Nitro\_40, NoShow\_52, Nodigi\_51, Nozo\_58, Nucci\_37, Numberten\_60, Nyala\_59, OSmaximus\_62, Oats\_38, ObiToo\_46, Obutu\_59, Olak\_59, OldNelly\_39, Oline\_61, Olive\_60, OliverWalter\_59, Olivio\_58, Olliecat\_39, Omniscient\_61, Oosterbaan\_60, Opia\_57, OrangeOswald\_58, Orfeu\_59, Orion\_62, Orla\_51, Orwigg\_60, Oxtober96\_39, PG1\_61, PSirce\_37, Pacifista\_59, Pajaza\_35, Panchaali\_95, Papafritta\_38, ParleG\_39, PastaFagioli\_43, Patbob\_100, Peep\_39, PenguinLover67\_56, Peppino\_38, Percival\_49, Phaedrus\_54, Phamished\_62, Phanita\_37, Phantasmagoria\_57, Phareon\_59, PhatCats2014\_61, PhatLouie\_62, Phayeta\_60, Phelemich\_56, Phendrix\_176, PhenghisKhan\_61, Pherbot\_37, Pherdinand\_62, Pherferi\_39, Phergie\_62, Phiderman\_39, Philly\_57, Phipps\_60, Phireproof\_39, Phives\_43, Phleuron\_61, Phlyer\_58, Phrampa\_94, PhrankReynolds\_60, PhredFlintston\_39, Phriends\_39, PhrodoBaggins\_61, Phunky\_59, Piglet\_0060, Pikmin\_35, Pine5\_49, PinheadLarry\_61, Pinkman\_60, Pipefish\_59, Pipsqueak\_59, Pixelle\_41, Placalicious\_61, Plata\_61, Plmatters\_59, Pocket\_38, Podrick\_59, Pons\_46, Pops\_60, Poster\_52, PotPie\_44, Potter\_59, Powerpuff\_43, Prickles\_62, PrinceCharming\_57, PrincePhergus\_37, Prince\_53, ProfessorX\_60, PsychoKiller\_42, Puhltonio\_60, Pumpkins\_40, Puppies\_42, PuppyEggo\_39, QuadZero\_37, Quartz\_38, Quasar\_43, QueenBeane\_60, QueenPie\_51, Quenya\_42, Quesadilla\_58, Quisquilliae\_61, Quokka\_43, Qyrzula\_52, Raccoon\_38, Racecar\_100, RagingRooster\_57, RanchParmCat\_48, Rapheph\_39, Raptor\_39, Rasputia\_89, RawrgerThat\_54, RedBaron\_45, RedMaple\_62, Redfield\_38, Reedo\_40, ReginaGlobina\_98, RenegadeRaider\_39, Renzie\_39, Reprobate\_57, Rhinoforte\_57, Rich\_58, Ricotta\_60, Riggan\_61, Rimu\_63, Rings\_55, Rinkes\_56, Rita130\_57, Rita1961\_59, Riverton\_60, Riyhil\_39, Robinson\_39, Robyn\_60, RockScotty\_40, Rockabye\_103, Rog141\_38, Roliet\_58, RomaT\_58, Roscoe\_61, Rosebush\_56, RosieMae\_39, Roy17\_59, SDcharge11\_60, SJReid\_106, SJay\_39, Sabella\_56, Sabourin\_42, Saguaro\_58, Samaymay\_60, Sansa\_37, Saratos\_38, SassyCat97\_59, Schadenfreude\_60, Schimmels22\_37, Schnapsidee\_38, Schubert\_36, Schueller\_61, Scissor2024\_37, Scoot17C\_61, Scrick\_61, Sedgewig\_38, Selr12\_61, Serendipitous\_56, Serendipity\_60, Serpentine\_0060, Shaffner\_41, ShaiHulud\_39, ShakeltOph\_47, Shamu\_38, Shatter\_51, SheckWes\_48, Shee\_39, Sheila\_58, Shenandoah\_57, Shenyu\_58, ShiVal\_58, Shocker\_43, Shrew\_79, Sigman\_61, SilverBell\_61, Simielle\_60, Simpson\_43, Sinatra\_37, SirBeauregard\_61, SirJeffery\_57, SirVictor\_37, Sisko\_49, Sixama\_172, SketchMex\_43, Skippy\_61, Slatt\_61, SlippinJimmy\_60, Sneak\_40, Socotra\_44, SoilGremlin\_39, Soile\_61, Solosis\_59, SonOfLevi\_38, Soondubu\_37, Sooty\_38, Sopespian\_41, Sophia\_59, SorJuana\_54, Soto\_59, Sour\_53, Spartan300\_60, SpecialK\_38, Squid\_60, Squiggle\_61, Squircle\_39, StAugustine\_85, Stanktossa\_39, Starburst\_43, SteamedHams\_43, StingRay\_38, Stinger\_54, StinkyVeggy\_58, StirfryIV\_38, Stormbreaker8\_38, Strathdee\_39, Struggle\_61, Stuu\_42, SuMoo\_50, Subaru\_40, Sue2\_42, Suffolk\_59, Suigeneris\_59,

SummitAcademy\_44, Superfresh\_39, Surely\_60, Survivors\_40, SwainyDoc\_59, SweatNTears\_44, Swiphy\_64, Swish\_62, Symere\_39, SynergyX\_58, TA17A\_58, TPA2\_63, Talia1610\_99, TallGrassMM\_60, Tallboi\_40, Talos\_141, TarsusIV\_42, TatarkaPM\_39, Tbone\_40, Teagan\_39, TeddyBear\_38, Telesworld\_58, Tenda\_38, TforTroy\_42, Thompsone\_39, Thonko\_60, Thora\_60, Thorongil\_39, ThreeOh3D2\_62, Thunderbird\_60, Thunderclap\_54, Tian\_39, Timmi\_59, TinSulphur\_39, Tinciduntolum\_58, TinyTerror\_59, Tinyman4\_37, Toaka\_44, Tolls\_44, TomBombadil\_60, Tomlarah\_61, Toni\_60, TooFast2Furius\_62, Tooj\_59, Tres\_57, Trine\_42, Triscuit\_70, Troje\_45, Trooper\_45, True\_59, Trypo\_63, Tuck\_44, Turab\_38, Tutumahutu\_42, Tweety19\_41, TwoBits\_36, Tydolla\_56, Typhonomachy\_43, TyrionL\_61, UAch1\_60, UncleHowie\_59, Upyo\_46, Usavi\_60, UtzChips\_47, VResidence\_41, Vaishali24\_59, Valjean\_60, Vaticameos\_57, Velene\_39, Veritas\_62, Vic9\_00057, Vincenzo\_56, Vine\_47, VioletZ\_55, Virapocalypse\_61, Virgeve\_60, Vispistious\_39, Vista\_60, Vivaldi\_62, Vortex\_60, VroomVroom\_45, WaddleDee\_92, Waleliano\_53, WalkingDead\_44, Wallhey\_61, Warda\_41, Wardwill\_39, Waterdiva\_60, Weher20\_60, West99\_57, WestPM\_35, Widow\_43, WildNOut\_39, Wildwest\_40, WilliamStrong\_38, Windsor\_60, Winzigespinne\_38, Wooper\_54, Xavier\_59, Xincheng\_54, Yago84\_49, Yahalom\_57, Yakult\_46, Yang\_41, Yappy\_80, Yarn\_40, Yeezus\_55, YesChef\_41, Yeshua\_54, Yinz\_58, Yoshand\_62, YouGoGlencoco\_61, Yucky\_48, Yummy\_45, YuuY\_37, Zada\_39, Zaider\_61, Zareef\_42, Zayuliv\_37, Zelda\_61, Zemanar\_54, Zenitsu\_38, Zenteno07\_62, Zepp\_38, Zeta1847\_40, Zonia\_62, Zuko\_78,

### Summary by start number:

#### Start 3:

- Found in 5 of 1943 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 5 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gustav\_47 (CD), Mahdia\_44 (CD), Morrissey\_47 (CD), Puppies\_42 (CD), Widow\_43 (CD),

#### Start 14:

- Found in 2 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Zuko\_78 (BR),

#### Start 18:

- Found in 1 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Upyo\_46 (CD),

#### Start 25:

- Found in 2 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Huwbert\_71 (GG), Triscuit\_70 (GG),

#### Start 28:

- Found in 1 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shrew\_79 (singleton),

#### Start 36:

- Found in 28 of 1943 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 16 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agatha\_43 (CT), Axym\_42 (CT), BillDoor\_43 (CT), Biskit\_45 (CT), Blondies\_45 (CT), Burnsey\_43 (CT), Buttrmlkdreams\_45 (CT), Carsonalex\_46 (CT), ChickenTender\_45 (CT), Cozz\_41 (CT), Elliott\_43 (CT), GTE2\_35 (CT), GoldHunter\_44 (CT), Horseradish\_45 (CT), MScarn\_47 (CT), MunkgeeRoachy\_41 (CT), Nina\_42 (CT), PsychoKiller\_42 (CT), Quasar\_43 (CT), RedBaron\_45 (CT), SketchMex\_43 (CT), Socotra\_44 (CT), Sopespian\_41 (CT), Starburst\_43 (CT), SweatNTears\_44 (CT), Troje\_45 (CT), Typhonomachy\_43 (CT), Yummy\_45 (CT),

#### Start 37:

- Found in 2 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 50.0% of time when present
- Phage (with cluster) where this start called: KimJongPhill\_80 (BR),

#### Start 44:

- Found in 5 of 1943 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 40.0% of time when present
- Phage (with cluster) where this start called: FF47\_43 (AB), HippoPololi\_40 (CT),

#### Start 45:

- Found in 31 of 1943 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 24 of 1682
- Called 87.1% of time when present
- Phage (with cluster) where this start called: AikoCarson\_44 (CT), Amok\_44 (CT), AndPeggy\_40 (CT), Azira\_40 (CT), Button\_46 (CT), CanesSauce\_42 (CT), ChocoMunchkin\_42 (CT), Cleo\_38 (CT), Dre3\_38 (CT), Emalyn\_42 (CT), Fribs8\_39 (CT), GiKK\_48 (CT), Gibbous\_38 (CT), Hexbug\_51 (CT), Jamzy\_48 (CT), MaVan\_40 (CT), Margaret\_49 (CT), Nibbles\_39 (CT), Nodigi\_51 (CT), Orla\_51 (CT), RanchParmCat\_48 (CT), SteamedHams\_43 (CT), Survivors\_40 (CT), Tolls\_44 (CT), Yakult\_46 (CT), Yarn\_40 (CT), Zareef\_42 (CT),

#### Start 46:

- Found in 15 of 1943 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 13 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bavidard\_44 (CT), BigChungus\_44 (CT), CherryonLim\_46 (CT), Elinal\_48 (CT), Feastonyeet\_44 (CT), KayGee\_46 (CT), Lauer\_41 (CT), MAnor\_46 (CT), Mayweather\_49 (CT), Pons\_46 (CT), PotPie\_44 (CT), SheckWes\_48 (CT), SummitAcademy\_44 (CT), Vine\_47 (CT), Yucky\_48 (CT),

#### Start 53:

- Found in 3 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 33.3% of time when present

- Phage (with cluster) where this start called: NoShow\_52 (AB),

Start 59:

- Found in 23 of 1943 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 4.3% of time when present
- Phage (with cluster) where this start called: JacoRen57\_40 (AB),

Start 64:

- Found in 6 of 1943 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 33.3% of time when present
- Phage (with cluster) where this start called: 8UZL\_44 (AB), Muddy\_44 (AB),

Start 77:

- Found in 8 of 1943 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Maco6\_42 (AB),

Start 92:

- Found in 1 of 1943 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 40AC\_46 (A17),

Start 140:

- Found in 2 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 50.0% of time when present
- Phage (with cluster) where this start called: JuneStar\_42 (AZ1),

Start 148:

- Found in 7 of 1943 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Liebe\_42 (AZ2),

Start 160:

- Found in 4 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Trine\_42 (CD),

Start 176:

- Found in 9 of 1943 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 1682
- Called 22.2% of time when present
- Phage (with cluster) where this start called: JAMaL\_53 (B4), Nigel\_54 (B4),

Start 180:

- Found in 5 of 1943 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1682



- Called 20.0% of time when present
- Phage (with cluster) where this start called: Yang\_41 (AZ1),

#### Start 182:

- Found in 36 of 1943 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 4 of 1682
- Called 11.1% of time when present
- Phage (with cluster) where this start called: BrownCNA\_55 (B4), ChrisnMich\_53 (B4), Fortunato\_54 (B4), Frederick\_54 (B4),

#### Start 188:

- Found in 290 of 1943 ( 14.9% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 0.3% of time when present
- Phage (with cluster) where this start called: Piglet\_0060 (B1),

#### Start 189:

- Found in 7 of 1943 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 71.4% of time when present
- Phage (with cluster) where this start called: DigitDog\_58 (B5), KarasumaRum\_58 (B5), Nangang\_58 (B5), Shenyu\_58 (B5), StinkyVeggy\_58 (B5),

#### Start 191:

- Found in 18 of 1943 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Stinger\_54 (B4),

#### Start 192:

- Found in 1 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu\_52 (B10),

#### Start 197:

- Found in 47 of 1943 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 27 of 1682
- Called 89.4% of time when present
- Phage (with cluster) where this start called: Acadian\_58 (B5), Ahwei\_52 (B4), AlanGrant\_57 (B4), Antihero\_52 (B4), Apex\_54 (B4), Austelle\_54 (B4), Bae\_59 (B5), BobbyK\_54 (B4), Cooper\_54 (B4), Donny\_59 (B5), EastView9101\_57 (B5), EmiRose\_34 (singleton), Epah\_52 (B4), Fanaw\_52 (B4), GinPorsche\_52 (B4), Hally898\_52 (B4), Hangman\_53 (B4), Heath\_52 (B4), Hydro\_53 (B4), JaguarMi\_55 (B4), Lambano\_52 (B4), LilMcDreamy\_55 (B12), Lolalove\_54 (B4), Magpie\_52 (B4), Mithril\_53 (B4), Mudslide\_53 (B4), Mysterious\_58 (B5), Nanao\_52 (B4), Nehemiah\_57 (B5), Phelemich\_56 (B5), Poster\_52 (B4), Prince\_53 (B4), QueenPie\_51 (B4), RawrgerThat\_54 (B4), Reprobate\_57 (B5), Rich\_58 (B5), Rita130\_57 (B5), Suigeneris\_59 (B5), Vincenzo\_56 (B4), VioletZ\_55 (B4), Waleliano\_53 (B4), Xincheng\_54 (B4),

#### Start 199:

- Found in 15 of 1943 ( 0.8% ) of genes in pham

- Manual Annotations of this start: 2 of 1682
- Called 46.7% of time when present
- Phage (with cluster) where this start called: 39HC\_051 (B6), 40BC\_051 (B6), ForDig\_53 (B6), Hosp\_050 (B6), Indlovu\_55 (B11), Jolie1\_052 (B6), KayaCho\_51 (B6),

#### Start 200:

- Found in 3 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Zemanar\_54 (B4),

#### Start 205:

- Found in 334 of 1943 ( 17.2% ) of genes in pham
- Manual Annotations of this start: 304 of 1682
- Called 99.4% of time when present
- Phage (with cluster) where this start called: ABU\_61 (B1), AbsoluteMadLad\_61 (B1), Adriana\_62 (B1), Aelin\_60 (B1), Allegro\_57 (B2), AltPhacts\_60 (B1), Altwerkus\_58 (B1), Anderson\_61 (B1), Andre\_62 (B1), AngelCake\_59 (B1), Antonia\_60 (B1), Apizium\_60 (B1), Arbiter\_56 (B2), Ares\_57 (B2), Ashraf\_62 (B1), BFK20\_ORF44 (singleton), Badfish\_61 (B1), Bananafish\_57 (B2), Banjo\_59 (B1), Basato\_61 (B1), BatteryCK\_61 (B1), Beaglebox\_60 (B1), Bishoperium\_60 (B1), BlackStallion\_62 (B1), Blocker23\_57 (B2), BlueHusk\_62 (B1), Bluephacebaby\_60 (B1), Boehler\_60 (B1), Boyle\_57 (B2), Brilliant\_63 (B1), Brownie5\_57 (B2), Buckeye\_61 (B1), Burr\_60 (B1), CRB2\_57 (B9), Calamitous\_57 (B2), CamL\_60 (B1), CampRoach\_62 (B1), Cannibal\_60 (B1), Carthage\_59 (B1), Caspiroi\_63 (B1), Chaelin\_61 (B1), Chah\_62 (B1), Charles1\_61 (B1), CharlieGBrown\_61 (B1), CheetO\_60 (B1), Cher\_60 (B1), Childish\_60 (B1), Chipette\_61 (B1), Chorkpop\_60 (B1), Chunky\_59 (B1), Chute\_62 (B1), Cobra\_62 (B1), Coffee\_57 (B2), Colbert\_59 (B1), Coletti\_63 (B1), Cornbread\_62 (B1), Cornobble\_60 (B1), Cosmolli16\_61 (B1), Craff\_63 (B1), Crownjwl\_60 (B1), DaddyDaniels\_62 (B1), Daffy\_60 (B1), Daka\_63 (B1), Dati\_60 (B1), DelRivs\_59 (B1), Derpp\_60 (B1), Dice\_59 (B1), Dingo\_59 (B1), Dione\_58 (B1), DirtJuice\_61 (B1), Doddsville\_61 (B1), DoesntMatter\_58 (B1), DonSanchon\_58 (B1), DuchessDung\_62 (B1), Duggie\_61 (B1), Durga\_63 (B1), Eaglehorse\_57 (B2), ElvisPhasley\_66 (B1), Emiris\_63 (B1), EmpTee\_60 (B1), Eremos\_60 (B1), Etaye\_62 (B1), Eugenia\_60 (B1), Fang\_62 (B1), Faze9\_56 (B2), FluffyNinja\_62 (B1), Fozzie\_61 (B1), Frankicide\_59 (B1), FrenchFry\_57 (B2), Freya\_58 (B1), FriarPreacher\_60 (B1), Fringe\_64 (B1), FugateOSU\_61 (B1), Funsized\_59 (B9), Gareth\_60 (B1), GeneCoco\_61 (B1), Giraffe\_61 (B1), Glass\_57 (B2), Godines\_58 (B2), Gophee\_62 (B1), Grand2040\_60 (B1), Gwennie1\_60 (B1), Gwilliam\_61 (B1), Gyarad\_0059 (B1), HSavage\_59 (B1), Haimas\_59 (B1), Haleema\_59 (B1), Hamish\_59 (B1), Hartsy\_61 (B1), Harvey\_59 (B1), Hedgerow\_57 (B2), Held\_60 (B1), HenryJackson\_60 (B1), Hertubise\_60 (B1), Hetaeria\_60 (B1), HighStump\_62 (B1), Hocus\_60 (B1), Holeinone\_57 (B2), Horchata\_59 (B1), ImtiyazSitla\_62 (B1), Inchworm\_62 (B1), Inverness\_59 (B1), Iridessa\_62 (B1), Iridoclysis\_61 (B1), IsaacEli\_62 (B1), ItsyBitsy1\_57 (B2), JDog\_59 (B1), JacAttac\_62 (B1), JakeO\_61 (B1), JangoPhett\_60 (B1), Jesabah\_61 (B1), Jillium\_60 (B1), Jiminy\_61 (B1), Jiraiya\_61 (B1), KLucky39\_59 (B1), Kahve\_60 (B1), Kailash\_61 (B1), Kaleb\_57 (B2), Katniss\_61 (B1), Keitherie\_62 (B1), Khan1\_61 (B1), Kheth\_57 (B2), Kikipoo\_62 (B1), Kimbrough\_61 (B1), KingTut\_53 (B1), KingVeVeVe\_59 (B1), KlimbOn\_60 (B1), Kloppinator\_61 (B1), Knocker\_59 (B9), Kolhan\_57 (B2), Kwadwo\_59 (B1), Kwksand96\_61 (B1), Labeouficaum\_61 (B1), Lars\_57 (B2), LasagnaCat\_62 (B1), Lasso\_61 (B1), Laurie\_57 (B2), LeeLot\_61 (B1), Lego3393\_59 (B1), Legolas\_62 (B1), LeiMonet\_63

(B1), LemonSlice\_61 (B1), Lephleur\_57 (B2), LilSmirk\_57 (B2), LizLemon\_57 (B2), Longacauda\_61 (B1), Lopsy\_59 (B1), LostAndPhound\_61 (B1), LuckyMarjie\_58 (B1), Lulumae\_58 (B1), Lulwa\_58 (B1), Lumine\_61 (B1), MRabcd\_60 (B1), Mag7\_61 (B1), Magic8\_61 (B1), Mana\_59 (B1), Manad\_60 (B1), Maru\_60 (B1), Maskar\_62 (B1), MasterPo\_57 (B2), Matalotodo\_60 (B1), Mcshane\_59 (B1), Mecca\_60 (B1), Megamind20\_61 (B1), Megatron\_61 (B1), Melc17\_60 (B1), MelsMeow\_61 (B1), Mesh1\_62 (B1), Mesmerelda\_62 (B1), MichaelPhcott\_61 (B1), Mikota\_59 (B1), MiniBoss\_58 (B1), MitKao\_60 (B1), Morgushi\_60 (B1), Morty\_61 (B1), Mosaic\_59 (B1), MrPhizzler\_61 (B1), Mulan\_60 (B1), Murdoc\_59 (B1), Mutante\_60 (B1), Nacho\_0062 (B1), Nathan\_61 (B1), Newman\_59 (B1), Nicole21\_61 (B1), Numberten\_60 (B1), Nyala\_59 (B1), OSmaximus\_62 (B1), Olak\_59 (B1), Oline\_61 (B1), Olive\_60 (B1), OliverWalter\_59 (B1), Omniscient\_61 (B1), Oosterbaan\_60 (B1), Opia\_57 (B2), Orfeu\_59 (B1), Orion\_62 (B1), Orwigg\_60 (B1), PG1\_61 (B1), Pacifista\_59 (B1), Phamished\_62 (B1), Phantasmagoria\_57 (B2), Phareon\_59 (B1), PhatCats2014\_61 (B1), PhatLouie\_62 (B1), PhenghisKhan\_61 (B1), Pherdinand\_62 (B1), Phergie\_62 (B1), Phipps\_60 (B1), Phleuron\_61 (B1), PhrankReynolds\_60 (B1), PhrodoBaggins\_61 (B1), Phunky\_59 (B1), PinheadLarry\_61 (B1), Pinkman\_60 (B1), Pipsqueak\_59 (B1), Placalicious\_61 (B1), Plata\_61 (B1), Plmatters\_59 (B1), Podrick\_59 (B1), Pops\_60 (B1), Potter\_59 (B1), Prickles\_62 (B1), PrinceCharming\_57 (B2), ProfessorX\_60 (B1), Puhltonio\_60 (B1), QueenBeane\_60 (B1), Quesadilla\_58 (B9), Quisquilliae\_61 (B1), RedMaple\_62 (B1), Rhinoforte\_57 (B2), Ricotta\_60 (B1), Riggan\_61 (B1), Rimu\_63 (B1), Rinkes\_56 (B9), Riverton\_60 (B1), Robyn\_60 (B1), Roliet\_58 (B1), Roscoe\_61 (B1), Rosebush\_56 (B2), Roy17\_59 (B1), SDcharge11\_60 (B1), Sabella\_56 (B2), Samaymay\_60 (B1), SassyCat97\_59 (B1), Schadenfreude\_60 (B1), Schueller\_61 (B1), Scoot17C\_61 (B1), Scrick\_61 (B1), Selr12\_61 (B1), Serendipity\_60 (B1), Serpentine\_0060 (B1), Sheila\_58 (B1), ShiVal\_58 (B1), Sigman\_61 (B1), SilverBell\_61 (B1), Simielle\_60 (B1), SirBeauregard\_61 (B1), Skippy\_61 (B1), Slatt\_61 (B1), Soile\_61 (B1), Solosis\_59 (B1), Sophia\_59 (B1), Soto\_59 (B1), Spartan300\_60 (B1), Squid\_60 (B1), Squiggle\_61 (B1), Struggle\_61 (B1), Suffolk\_59 (B1), Surely\_60 (B1), Swiphy\_64 (B1), Swish\_62 (B1), TA17A\_58 (B2), TallGrassMM\_60 (B1), Telesworld\_58 (B1), Thora\_60 (B1), ThreeOh3D2\_62 (B1), Thunderbird\_60 (B1), Timmi\_59 (B1), Tinciduntolum\_58 (B2), TomBombadil\_60 (B1), Tomlarah\_61 (B1), Toni\_60 (B1), TooFast2Furius\_62 (B1), Tooj\_59 (B1), Tres\_57 (B2), True\_59 (B1), Trypo\_63 (B1), TyrionL\_61 (B1), UAch1\_60 (B1), UncleHowie\_59 (B1), Usavi\_60 (B1), Vaishali24\_59 (B1), Valjean\_60 (B1), Vaticameos\_57 (B1), Veritas\_62 (B1), Vic9\_00057 (B2), Virapocalypse\_61 (B1), Virgeve\_60 (B1), Vista\_60 (B1), Vivaldi\_62 (B1), Vortex\_60 (B1), Wallhey\_61 (B1), Waterdiva\_60 (B1), Weher20\_60 (B1), West99\_57 (B2), Windsor\_60 (B1), Xavier\_59 (B1), Yoshand\_62 (B1), YouGoGlencoco\_61 (B1), Zaider\_61 (B1), Zelda\_61 (B1), Zonia\_62 (B1),

#### Start 207:

- Found in 1 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Saguaro\_58 (B7),

#### Start 209:

- Found in 2 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67\_56 (B9), Serendipitous\_56 (B5),

Start 211:

- Found in 3 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 33.3% of time when present
- Phage (with cluster) where this start called: TatarkaPM\_39 (EA1),

Start 215:

- Found in 23 of 1943 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1682
- Called 8.7% of time when present
- Phage (with cluster) where this start called: EITiger69\_39 (A5), Naca\_39 (A5),

Start 216:

- Found in 5 of 1943 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 4 of 1682
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Dewdrop\_95 (GC), Hendrix\_88 (GC), Leaf\_95 (GC), Rasputia\_89 (GC),

Start 220:

- Found in 16 of 1943 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Jeffabunny\_45 (A6),

Start 228:

- Found in 3 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 3 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdsNest\_61 (B13), Hashim76\_61 (B13), Zenteno07\_62 (B13),

Start 230:

- Found in 12 of 1943 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Thonko\_60 (B8),

Start 232:

- Found in 18 of 1943 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 1682
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Buldak\_39 (EB), Olliecat\_39 (EB), Squirrel\_39 (EB),

Start 233:

- Found in 13 of 1943 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 13 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amavida\_56 (AQ), Amigo\_55 (AQ), Anansi\_54 (AQ), Boersma\_57 (AQ), Gorgeous\_54 (AQ), Heylee\_57 (AQ), Ichor\_55 (AQ), Jaek\_55 (AQ), Molivia\_56 (AQ), Rings\_55 (AQ), SorJuana\_54 (AQ),

Thunderclap\_54 (AQ), Yeezus\_55 (AQ),

Start 234:

- Found in 3 of 1943 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Pine5\_49 (singleton),

Start 235:

- Found in 300 of 1943 ( 15.4% ) of genes in pham
- Manual Annotations of this start: 6 of 1682
- Called 2.0% of time when present
- Phage (with cluster) where this start called: AnClar\_50 (DR), BiggityBass\_49 (DR), LittleMunchkin\_52 (DR), Sisko\_49 (DR), Yago84\_49 (DR), Yappy\_80 (singleton),

Start 236:

- Found in 4 of 1943 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: TPA2\_63 (singleton),

Start 237:

- Found in 7 of 1943 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: AnnabelLee\_40 (FR),

Start 238:

- Found in 122 of 1943 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 3 of 1682
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Chako\_38 (EA1), Chamuel\_38 (EA1), SonOfLevi\_38 (EA1),

Start 240:

- Found in 1 of 1943 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Coldpizza\_51 (DR),

Start 241:

- Found in 149 of 1943 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 13 of 1682
- Called 12.1% of time when present
- Phage (with cluster) where this start called: AksarBAT\_53 (DR), AnarQue\_54 (DR), Axumite\_51 (DR), BobRoss2024\_51 (DR), CaiB\_54 (DR), CharlottesWeb\_50 (DR), CloverMinnie\_53 (DR), Evaa\_50 (DR), Fresco\_51 (DR), Ligma\_51 (DR), MakoManhole\_51 (DR), Mariokart\_50 (DR), MossRose\_53 (DR), NHagos\_52 (DR), Shatter\_51 (DR), WalkingDead\_44 (EB), Wooper\_54 (DR), Yeshua\_54 (DR),

Start 243:

- Found in 36 of 1943 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 7 of 1682

- Called 19.4% of time when present
- Phage (with cluster) where this start called: Armstrong\_40 (EB), Bernstein\_40 (EB), Brahms\_40 (EB), Coltrane\_40 (EB), Rollins\_40 (EB), Skylord\_40 (EB), Vitas\_40 (EB),

#### Start 244:

- Found in 17 of 1943 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 11 of 1682
- Called 88.2% of time when present
- Phage (with cluster) where this start called: Causa\_88 (AI), Floop\_49 (EH), GardenState\_48 (EH), Glubnar\_58 (B3), Gretchen\_48 (EH), HarveySr\_57 (B3), Honk\_44 (EH), IAmGroot\_48 (EH), Percival\_49 (EH), StAugustine\_85 (AI), SuMoo\_50 (EH), SwainyDoc\_59 (B3), TinyTerror\_59 (B3), Yinz\_58 (B3), Zeta1847\_40 (EH),

#### Start 245:

- Found in 103 of 1943 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 74 of 1682
- Called 97.1% of time when present
- Phage (with cluster) where this start called: AEgle\_37 (AZ1), AGrandiflora\_42 (AZ1), Adolin\_40 (AZ1), Adumb2043\_38 (AZ1), AinMach\_42 (AZ), Amyev\_40 (AZ1), Asa16\_39 (AZ1), Ascela\_41 (AZ1), Ashes\_38 (AZ5), Attoomi\_34 (singleton), BaileyBlu\_41 (FP), Barnstormer\_47 (EH), Beaupre\_41 (AZ5), Berrie\_42 (AZ1), Bradman\_44 (A2), CallinAllBarbz\_41 (FP), Cappuccino\_38 (AZ5), Caron\_50 (EH), Cassia\_40 (AZ1), Community\_43 (AZ1), Crewmate\_46 (AZ1), Cyan\_41 (AZ1), Donkey\_38 (AZ5), DrManhattan\_40 (AZ1), DrSierra\_39 (AZ1), EZMoney23\_43 (A2), Elezi\_39 (AZ1), Emotion\_46 (AZ4), Eraser\_39 (AZ1), Exile\_36 (AZ), Gambol\_39 (AZ5), Giorgio\_39 (AZ5), Gumpizza\_39 (AZ5), Halsey\_38 (AZ5), Iter\_41 (AZ1), IttyBittyPiggy\_41 (AZ1), Janeemi\_43 (AZ1), Jankie\_40 (FP), JasmineDragon\_45 (AZ4), Joemato\_41 (AZ1), JohnDoe\_41 (AZ1), Jsquared\_43 (A2), Jstan\_41 (AZ1), Kalimba\_38 (AZ5), Kaylissa\_42 (AZ1), KeAlii\_40 (AZ1), Keziacharles14\_44 (A9), Koduck\_44 (A2), L5\_44 (A2), LadyAstra\_48 (AZ4), Lego\_41 (AZ1), Lizalica\_39 (AZ1), London\_39 (AZ1), MaGuCo\_40 (AZ2), Mabodamaca\_48 (EH), MajorMajor\_44 (A2), Maureen\_42 (AZ2), MiniMommy\_47 (AZ4), MissSwiss\_41 (AZ1), Moss\_38 (AZ5), Mudpuppy\_38 (AZ1), Mysterium\_37 (AZ5), Niobe\_39 (AZ1), Nitro\_40 (AZ1), ObiToo\_46 (AZ1), Phives\_43 (AZ1), Pixelle\_41 (AZ1), Powerpuff\_43 (AZ1), Pumpkins\_40 (AZ1), Quokka\_43 (A2), Reedo\_40 (AZ1), RockScotty\_40 (AZ5), Sabourin\_42 (AZ5), Shaffner\_41 (AZ1), ShakeltOph\_47 (AZ4), Simpson\_43 (AZ1), Snek\_40 (AZ3), Soondubu\_37 (AZ), Sooty\_38 (AZ5), SpecialK\_38 (AZ5), Stuu\_42 (AZ5), Subaru\_40 (AZ), Sue2\_42 (AZ1), Tallboi\_40 (AZ1), TarsusIV\_42 (A2), Tbone\_40 (AZ1), TforTroy\_42 (AZ1), Tian\_39 (AZ1), Toaka\_44 (A9), Trooper\_45 (A2), Tuck\_44 (AZ1), Turab\_38 (AZ1), Tutumahutu\_42 (AZ1), Tweety19\_41 (AZ3), UtzChips\_47 (EH), VResidence\_41 (AZ1), VroomVroom\_45 (AZ4), Warda\_41 (AZ1), Wildwest\_40 (AZ1), YesChef\_41 (AZ1),

#### Start 246:

- Found in 991 of 1943 ( 51.0% ) of genes in pham
- Manual Annotations of this start: 877 of 1682
- Called 98.6% of time when present
- Phage (with cluster) where this start called: 20ES\_45 (A2), A3Wally\_117 (GD1), A6\_41 (A1), ACFishhook\_47 (A3), AFIS\_43 (A1), AN3\_45 (A2), AN9\_48 (A2), ANI8\_48 (A2), AbbeyMikolon\_44 (BL), AbbyPaige\_46 (A2), AbbysRanger\_44 (A4), Abbyshoes\_47 (A1), Abdiel\_45 (A4), Abigail\_42 (EB), Abrogate\_440 (A1), Achebe\_43 (A4), Acme\_47 (A1), Acolyte\_41 (A2), Adahisdi\_44 (A1), Adzzy\_46 (A2), Aeneas\_47

(A1), Agaliana\_41 (A1), Agape74\_46 (A2), AgentM\_37 (A5), Aglet\_49 (A3), AgronaGT15\_47 (A3), Airmid\_39 (A5), Ajay\_45 (A1), Alatin\_36 (CA), Albedo\_43 (EB), Albee\_45 (A4), Alberto7\_46 (A4), Albright\_40 (EB), Aliter\_45 (A9), Alma\_45 (A9), Alpacados\_35 (CA), Alsfro\_48 (A1), Altman\_46 (A1), Alvin\_44 (A1), Anaysia\_47 (A15), Aneem\_45 (A11), Anglerfish\_45 (A1), AngryOrchard\_34 (CA), AnnaL29\_46 (A2), AnnaLie\_43 (EB), Annyong\_45 (A4), Anon\_42 (A15), Anselm\_45 (A2), Anthony\_39 (A20), Anubis\_51 (A3), AppleCloud\_34 (CA), Applejack\_40 (A1), Aragog\_37 (A5), Arcanine\_46 (A1), ArcherNM\_42 (A2), Archetta\_38 (A5), Arissanæ\_44 (A9), Arlo\_42 (A1), Arroyo\_43 (EB), Artemis2UCLA\_45 (A6), Arturo\_44 (A4), Ashballer\_46 (A1), Astro\_42 (A8), Atkinbua\_46 (A1), Audell\_40 (FR), AugsMagnumOpus\_51 (A3), AvGardian\_44 (EB), AvatarAhPeg\_44 (A4), Avle17\_45 (A4), Avocadoman\_41 (EB), B1\_42 (A3), BABullseye\_43 (A6), BAjuniper\_43 (EB), BK1\_41 (A1), BPBiebs31\_45 (A1), Baby16\_45 (A4), BabyBack\_43 (A2), BabyDaisy\_42 (EB), BabyJohn\_43 (A3), BabyRay\_45 (A3), BabyYoda\_43 (EB), Bachaco\_40 (EB), Bachome\_46 (A11), Backyardigan\_43 (A4), BaconJack\_48 (A1), Bactobuster\_43 (A2), Badger\_43 (A4), Baehexic\_43 (A2), BangNhom\_46 (A4), Barriga\_45 (A1), BarrowTuph\_45 (A1), Bartimeaus\_45 (A4), Battleship\_48 (A15), Beatrix\_44 (A1), Beauxregard13\_48 (A3), Beemo\_45 (A9), BeesKnees\_45 (A1), Belenaria\_36 (CA), BellusTerra\_46 (A4), BelmontSKP\_43 (EB), Benedict\_39 (A5), Bengal\_43 (EB), BengiVuitton\_44 (A2), Benvolio\_41 (A2), Bethlehem\_44 (A1), Bexan\_43 (A1), BiancaTri92\_44 (A2), Big3\_43 (A1), Big4\_105 (GD2), BigMau\_45 (A1), BigPaolini\_45 (A1), Bigchungi\_43 (A1), Bigflo\_48 (A3), Bigfoot\_41 (A1), BillKnuckles\_45 (A1), Bimmel\_18 (BT), Bircsak\_44 (A1), Blackmoor\_45 (A4), BlessJoy\_46 (A6), Blinn1\_48 (A6), BluSpix\_42 (A1), Blue7\_48 (A6), BlueBird\_47 (A3), Blue\_44 (A1), Bluefalcon\_37 (A5), Bob3\_42 (A1), BobSwaget\_44 (A2), BobbyDazzler\_36 (CA), BogosyJay\_44 (A9), Bombshell\_45 (A4), Bonamassa\_39 (A5), Bonanza\_36 (CA), Bones\_45 (A1), Boohoo\_47 (A15), Bowtie\_45 (A11), Bradshaw\_36 (CA), BreSam8\_48 (A3), Briton15\_46 (A1), Broseidon\_45 (A4), Bruiser\_44 (A4), Bruns\_43 (A1), Bryce\_36 (CA), BubbaBear\_41 (EB), BubbleTrouble\_44 (A4), Bud\_44 (A11), Bugatti\_46 (A3), Buggy\_46 (A2), Bumblebee11\_43 (A4), Burger\_43 (A4), Burritobowl\_42 (EB), Burton\_44 (A1), Buttons\_43 (A1), BuzzBuzz\_46 (A3), Bxb1\_41 (A1), Bxz2\_44 (A3), C3\_43 (A2), CRB1\_46 (A2), CactusRose\_42 (A1), Caelakin\_45 (A4), Calvinny\_48 (A3), Camperdownii\_43 (A4), Candra\_45 (A6), Caraxes\_45 (A2), Carlyle\_44 (A1), Cashington\_40 (EB), Catalina\_46 (A9), Caviar\_44 (A3), Cece\_99 (GD3), Celaena\_40 (EB), Cen1621\_44 (EH), Centaur\_45 (A2), CentreCat\_45 (A4), Cerulean\_46 (A4), Chadwick\_40 (A5), ChampagnePapi\_47 (A4), Chanagan\_42 (A1), Changeling\_45 (A2), Chaph\_45 (A4), Chargerpower\_44 (A), Charm\_42 (A9), Chartreuse\_45 (A6), Che12\_47 (A2), ChiliPepper\_40 (EB), ChipMunk\_47 (A2), Chiqui\_43 (A3), Chupacabra\_43 (A10), Ciao\_45 (A1), Cici\_44 (A4), Cindaradix\_42 (A4), Cintron\_44 (A4), Citius\_45 (A4), Clarenza\_44 (A4), Clayda5\_41 (EB), CliffHanger\_44 (EB), CloudWang3\_45 (A6), Cocoaberry\_45 (A4), Colbster\_48 (A3), Colin\_46 (A2), Commander\_45 (A4), Conceptll\_46 (A1), Connomayer\_45 (A4), Conquerage\_45 (A9), Conspiracy\_38 (A5), Coog\_38 (A5), Cookiedough\_45 (A6), Corvo\_45 (A1), CosmicSans\_36 (CA), Crispicous1\_43 (A1), CroZenni\_42 (EB), Crucio\_44 (A2), Cuco\_38 (A5), Cueyllyss\_46 (A1), Cullens\_48 (A3), CupcakePrincess\_43 (EB), D29\_44 (A2), D32\_47 (A2), DBQu4n\_47 (A2), DD5\_44 (A1), DaHudson\_48 (A3), DaVinci\_45 (A6), Daishi\_47 (A3), Dalmatian\_45 (A2), Danforth\_42 (A8), Darrell\_46 (A9), DARTHPhader\_42 (A12), Datway\_44 (A4), Deano\_44 (A4), DekHockey33\_47 (A15), Deloris\_43 (A2), Dexes\_45 (A1), Dhanush\_45 (A4), DickRichards\_41 (EB), Didgeridoo\_45 (EB), Dieselweasel\_49 (A3), Dignity\_46 (A2), Dinger\_36 (CA), DirtyBubble\_42 (EB), DirtyDunning\_44 (A4), Discoknowium\_37 (A5), Dismas\_40 (EB), Dixon\_43 (A8), Dodo\_117 (GD1), DontArgue\_43 (A10), Doobus\_41 (EB),

Doom\_45 (A1), Dorothea\_45 (A6), DrFeelGood\_43 (A1), Drake55\_46 (A2), Drake94\_42 (A10), DreamCatcher\_47 (A1), DreamTeam1\_42 (A9), Dreamboat\_46 (A1), DroogsArmy\_41 (A7), DropBear\_45 (A3), Druantia\_45 (A4), Dublin\_37 (A5), Dubu\_35 (BJ), DudeLittle\_43 (A2), Dulcie\_45 (A1), Duplo\_47 (A2), Dussy\_46 (A1), DustyMartin\_48 (A10), Dynamix\_45 (A1), EagleEye\_46 (A16), Eagle\_45 (A4), Eaglepride\_45 (A10), Eapen\_45 (A4), Ebony\_45 (A11), Echild\_44 (A2), Eden\_40 (EB), Edison31\_43 (A10), EdogawaKiddo\_43 (A9), Edtherson\_45 (A1), Eidsmoe\_45 (A9), Elephantoon\_44 (A9), Elva\_44 (EB), EmyBug\_44 (A9), EnzoK\_44 (A1), EpicPhail\_49 (A3), Epsocamisio\_46 (A15), Equemioh13\_45 (A2), EricB\_45 (A6), Erik\_36 (CA), Eris\_44 (A4), Eros\_45 (A4), Espica\_36 (CA), Espresso\_44 (A1), Et2Brutus\_44 (A11), Eula\_43 (EB), Euphoria\_43 (A1), Euratis\_35 (BB1), Eurydice\_46 (A4), EvilGenius\_47 (A2), Expelliarmus\_42 (A8), ExplosioNervosa\_45 (A9), Eyeball\_46 (A1), Fajezeel\_47 (A1), Fameo\_44 (A2), Farber\_48 (A3), Fascinus\_41 (A1), Fayely\_45 (A9), Fenn\_46 (A1), Fernando\_48 (A3), Fibonacci\_44 (A11), Finalfrontier\_43 (EB), FiringLine\_44 (A2), First\_0044 (A2), FlameThrower\_40 (EB), Flare16\_44 (A2), Flaverint\_45 (A11), Florean\_45 (A4), Flux\_45 (A4), FlyCatcher\_47 (A7), ForGetIt\_38 (A5), Forsytheast\_44 (A1), Francis47\_44 (A1), Franklin22\_41 (EB), Fred313\_45 (A3), Froghopper\_43 (A1), Funston\_44 (A4), Fushigi\_43 (A1), GMonster\_42 (A1), Gack\_40 (EB), Gadost\_45 (A4), GageAP\_45 (A1), Gail\_49 (A14), Gandalf20\_46 (A1), Garak\_47 (A6), GaugeLDP\_43 (A2), Gemma\_47 (A3), George\_38 (A5), Georgie2\_45 (A2), Ghouboy\_40 (A5), Gilberta\_45 (A11), GingkoMaracino\_48 (A3), Giroux\_46 (A3), Gladiator\_45 (A6), Gollum\_36 (CA), Gompeii16\_44 (A1), Goose\_44 (A10), Graduation\_48 (A1), Gratitude\_44 (A2), GrecoEtereo\_45 (A1), GreedyLawyer\_45 (A6), Greg\_47 (A1), Grif\_48 (A3), Groundhog\_41 (A8), Groupthink\_49 (A3), Grub\_48 (A3), Grum1\_48 (A3), Gruunaga\_45 (A6), GtownJaz\_48 (A3), Gwendoluna\_47 (A1), Gyzlar\_41 (A1), HINdeR\_41 (A7), HamSlice\_44 (A4), Hami1\_39 (A1), Hammer\_47 (A6), HanShotFirst\_43 (A1), Hanray\_43 (A9), Happiness\_44 (A4), Harlequin\_36 (CA), HarryHoudini\_45 (A2), HarryOW\_43 (A1), HashRod\_49 (A3), HaveUMetTed\_49 (A3), Heathen\_45 (A3), Heather\_37 (BB2), Heffalump\_43 (A2), HelDan\_45 (A3), Heliosoles\_47 (A3), Helmet\_47 (A6), Herbertwm\_42 (A2), Hercules11\_48 (A3), Hermia\_46 (A1), HermioneGrange\_44 (A1), Hexamo\_45 (A6), Hiro\_36 (CA), Horex\_44 (A9), Holli\_44 (A4), Homines\_37 (A1), Hookmount\_44 (A3), Hoot\_45 (A6), Hope4ever\_46 (A1), HortumSL17\_45 (A9), Houdini22\_45 (A4), HuhtaEnerson15\_39 (A5), Hutc2\_44 (A11), Huxley\_45 (A4), ICleared\_45 (A4), ILeeKay\_49 (A1), Ibantik\_18 (singleton), Icarian\_45 (EB), Iceman\_45 (A4), Ichabod\_46 (A1), Idleandcovert\_46 (A3), IgnatiusPatJac\_44 (A1), Indra\_48 (A6), IndyLu\_42 (EB), Insomnia\_45 (A11), Inyanga\_42 (A1), Iqorha\_42 (A1), Iracema64\_46 (A4), IronMan\_44 (A2), Isca\_44 (A3), Isiphiwo\_43 (A6), Iwokeuplikedis\_47 (A2), JC27\_45 (A1), JF2\_45 (A3), JF4\_45 (A3), JHC117\_48 (A3), JSwag\_46 (A15), Jaan\_45 (A2), Jabb\_43 (EB), Jabiru\_39 (A5), Jabith\_45 (A11), JackSparrow\_46 (A1), Jasper\_46 (A1), Jaykayelowell\_43 (A4), Jeeves\_50 (A14), JenCasNa\_49 (A3), JeppNRM\_49 (A3), Jerm2\_45 (A1), Jerm\_46 (A2), Jester\_36 (CA), JetBlade\_45 (A4), JewelBug\_47 (A6), Jiawan\_43 (A9), Jobu08\_47 (A3), Johnathan\_41 (EB), JoongJeon\_44 (A4), Jordennis\_45 (A6), Jorgensen\_45 (A1), Joselito\_45 (A11), JoshKayV\_46 (A2), Journey13\_40 (A2), Jovita\_43 (EB), Jovo\_38 (A5), JuliaChild\_45 (A1), KADY\_48 (A3), KBG\_46 (A1), KFPoly\_44 (A4), KSSJEB\_43 (A1), Kachowdy\_45 (A3), Kalb97\_49 (A3), Kalnoky\_49 (A3), Kalpine\_44 (A2), Kampy\_45 (A4), Kanely\_45 (A1), Katalie136\_44 (A4), Kate33\_42 (EB), KatherineG\_48 (A15), Katzastrophic\_41 (EB), Kazan\_46 (A6), Kenmech\_48 (A1), Kenzers\_43 (EB), Kerberos\_47 (A2), Kieran\_40 (EB), Killigrew\_44 (A1), Kimona\_43 (A19), KingCyrus\_47 (A2), Kingmustik0402\_45 (A4), Kinmap\_43 (A21), Kipper29\_45 (A6), KittenMittens\_41 (A10), Koan\_43 (A4), Koko\_47 (A6), Koreni\_44 (A4), Kratark\_45 (A4), Kremtemulon\_45 (A4), Krishelle\_36



(CA), Kristoff\_44 (A10), Kugel\_46 (A1), KyMonks1A\_47 (A1), Kye\_45 (A4), Kykar\_45 (A1), LBerry\_49 (A3), LHTSCC\_47 (A4), LadyBird\_47 (A2), Lahqtemish\_42 (EB), Lambert1\_44 (A3), Lamina13\_45 (A1), Landor\_44 (A2), LappelDuVide\_45 (A4), Larenn\_44 (A2), LarryKay\_48 (A3), LastResort\_46 (A15), Lemur\_45 (A4), LeoAvram\_45 (A4), Leogania\_44 (A2), Lesedi\_42 (A1), Lev2\_38 (A5), Levia\_41 (A1), Leviathan\_46 (A2), Licorice\_48 (A1), LilBib\_45 (A1), LiiTurb\_45 (A2), Lilbooboo\_34 (BB1), Lilbunny\_44 (A6), Liliith\_49 (A3), Lilleskat\_43 (A9), Lillie\_36 (CA), LimaBean\_42 (EB), LionsBait\_46 (A2), LittleB\_45 (A4), LittleCherry\_39 (A5), LittleGuy\_45 (A4), LochMonster\_46 (A4), Lockley\_44 (A1), Lokk\_45 (A2), LoneWolf\_45 (A9), Looper\_47 (A15), Lopton\_45 (A1), Lorenzo\_45 (A4), Loser\_46 (A2), Louie6\_47 (A3), Lowa\_48 (A3), Luchador\_50 (A14), Lucivia\_45 (A11), Lucyedi\_45 (A16), LugYA\_51 (A3), LunarLander\_49 (A1), Lunsford\_46 (A4), Lynlen\_43 (EB), MA5\_45 (A3), MK4\_45 (A3), MPlant7149\_43 (A1), MaCh\_45 (A11), Mabel\_45 (A11), MadMarie\_48 (A3), Magnar\_44 (A1), Magnito\_42 (A1), Mainiac\_48 (A3), Makemake\_44 (A1), Malec\_45 (A2), Malinsilva\_50 (A3), Maminaiina\_44 (A9), Manatee\_45 (A1), Manu\_48 (A3), MarQuardt\_48 (A3), Marcell\_43 (A1), Marchesa\_45 (A3), Marchy\_39 (A1), Marco3\_47 (A1), Marge\_45 (A1), Margo\_44 (A3), Marie\_48 (A3), Marius\_49 (A3), Maroc7\_43 (A1), Marsha\_45 (A1), MaryBeth\_45 (A1), MarysWell\_37 (A5), Maverick\_45 (A4), Maxo\_46 (A4), Mayonnaise\_45 (A4), Mazhar510\_45 (A4), McFly\_45 (A6), McGuire\_45 (A1), McSinger\_45 (A1), Medusa\_45 (A4), MeeZee\_45 (A4), Melvin\_47 (A4), MetalQZJ\_44 (A1), Methuselah\_45 (A3), Micasa\_40 (A5), Michley\_44 (A1), Microwolf\_48 (A3), MiculUcigas\_44 (A2), Midas2\_38 (A5), Miko\_43 (A2), Milcery\_39 (A5), Millski\_44 (A4), Milomuff\_43 (EB), MinecraftSteve\_48 (A15), Miramae\_44 (A4), Misomonster\_49 (A3), MissWhite\_43 (A2), Mkhuseleli\_44 (A1), Molly\_45 (A1), Monet\_48 (A1), MoneyMay\_48 (A3), Moose\_44 (A1), Morpher26\_44 (A4), Morrow\_46 (A4), MrGordo\_44 (A1), Mryolo\_42 (A1), MsUbiquitous\_43 (EB), MuchMore\_51 (A3), Mulciber\_44 (A11), Mule\_42 (A1), Munch\_45 (A11), Mundrea\_44 (A4), Museum\_45 (A1), MyraDee\_40 (A18), Myxus\_45 (A9), NEHalo\_43 (A1), NaSiaTalie\_44 (A2), Naiad\_36 (CA), Naira\_46 (A1), Naji\_47 (A2), Nancinator\_36 (CA), Natosaleda\_36 (CA), NearlyHeadless\_43 (A8), Nebs\_46 (A4), Nebulosus\_46 (A15), Nedarya\_43 (A15), Neeharika16\_45 (A6), Nemo27\_45 (A4), Nerujay\_46 (A1), Nesbitt\_42 (BL), Newrala\_45 (A6), Nhonho\_45 (A1), Nicky22\_43 (EB), NicoleTera\_45 (A2), Niza\_47 (A1), Noella\_44 (A3), Noelle\_45 (A4), Norbert\_43 (A3), NorthStar\_44 (A4), Norz\_45 (A1), NotAPhaseMom\_45 (A4), NothingSpecial\_43 (A2), Nyxis\_45 (A4), OKCentral2016\_43 (A10), OKaNui\_45 (A4), Obama12\_46 (A4), Odin\_44 (A2), Ohfah\_46 (A4), Ohno789\_45 (A1), OlanP\_47 (A3), Ollie\_48 (A3), Onglai\_43 (A9), Oofda\_48 (A15), Oogway\_42 (A1), Orange\_44 (A11), P28Green\_49 (A3), PGHhamlin\_50 (A3), PP\_46 (A7), PSullivan\_44 (A1), PacerPaul\_45 (A1), PackMan\_44 (A9), PainterBoy\_45 (A16), Palestino\_44 (A4), Panamaxus\_42 (A3), Papez\_47 (A1), Paphu\_43 (A1), Paraselene\_43 (A1), Pari\_45 (A1), Parliament\_44 (A1), Partridge\_36 (CA), PascalRango\_45 (A1), PattyP\_45 (A1), Pawn\_48 (A3), Payneful\_44 (A1), PeaceMeal1\_42 (A10), Peaches\_45 (A4), Pelly\_44 (A1), Pembroke\_48 (A3), Penny1\_49 (A3), Pepe\_42 (A1), Perplexer\_44 (A4), Perseus\_45 (A1), PeterPeter\_45 (A4), Petersenfast\_43 (A11), Peterson\_48 (A1), PetiteSangsue\_44 (A4), Petp2012\_45 (A1), Petruchio\_45 (A1), PetterN\_40 (A5), Ph8s\_46 (A2), Phacado\_45 (A4), Phaded\_46 (A2), Phaeder\_45 (A9), PhailMary\_35 (CA), Phantastic\_46 (A3), Pharaoh\_39 (A12), Felipe\_46 (A4), PherrisBueller\_44 (A1), PhigPhack\_43 (EB), Phighter1804\_45 (A4), Phillis\_44 (A8), PhineBark\_45 (A1), Phisb\_43 (EB), PhishRPhriends\_46 (A3), Phlei\_33 (A13), Phlippers\_43 (A1), Phlorence\_37 (A5), Phoebe\_49 (A3), Phonnegut\_45 (A9), Phontbonne\_45 (A4), Phoxy\_48 (A3), Phrankenstein\_36 (CA), Phranny\_49 (A3), PhrostyMug\_44 (A1), PickleBack\_38 (A5), PinkPlastic\_43 (A1), Pinto\_45 (A1), Pioneer\_45 (A9),

Pipcraft\_43 (A4), Pippin\_47 (A1), Piro94\_44 (A2), Pistachio\_47 (A3), Pita2\_47 (A1), Pmask\_45 (A6), Pocahontas\_44 (A3), Polymorphads\_46 (A4), Polyphemus\_46 (A6), Pomar16\_47 (A2), Ponzi\_14 (singleton), Poompha\_43 (A10), Popcicle\_44 (A3), PotatoSplit\_50 (A3), Power\_43 (A2), Priamo\_47 (A6), Prinashe11\_39 (A5), Priya\_45 (A9), ProMouse\_45 (A1), Pukovnik\_43 (A2), Pumbaa\_45 (A4), Pumpnickel\_113 (GD4), Puppy\_47 (A3), PurpleHaze\_48 (A3), QMacho\_45 (EB), QTRlifeCrisis\_45 (A1), Qobbit\_45 (A9), QueenB2\_44 (A2), QueenBeesly\_44 (A2), QuinnKiro\_43 (A3), RER2\_29 (CA), RGL3\_31 (CA), Rachaly\_45 (A2), Rahalelujah\_44 (A9), Raid\_45 (A1), Rajelicia\_46 (A1), Rasputin\_36 (CA), ReMo\_46 (A15), Reba\_48 (A3), Rebeuca\_44 (A10), RedRock\_46 (A2), Refuge\_44 (A12), Relief\_44 (A4), RemusLoopin\_36 (BB2), Remus\_47 (A15), ResDef\_44 (A3), Retro23\_45 (A2), RexFury\_36 (CA), Rhodalysa\_36 (CA), RhynO\_45 (A10), Rhynn\_44 (A1), RidgeCB\_44 (A1), Rifter\_47 (A6), Ringer\_46 (A1), Roary\_43 (A8), Rockstar\_45 (A3), Rohr\_45 (A1), Roksolana\_46 (A6), Romney\_45 (A4), Rona\_40 (EB), Roosevelt\_44 (A4), Rosa24\_44 (A4), Rosalind\_46 (A15), Rowa\_41 (BL), Rowdy\_48 (A10), Rubeus\_45 (A1), Rufus\_45 (A1), Ruin\_45 (A4), Rummer\_47 (A3), Ruotula\_48 (A1), Rutherford\_47 (A1), RyeScarlet\_46 (A9), STLscum\_46 (A1), Sabertooth\_45 (A4), Sabia\_48 (A3), Sabinator\_47 (A3), Sachima\_42 (A9), Sagefire\_48 (A1), Saintus\_38 (A8), Salz\_44 (A11), Samora\_36 (BB1), Samy\_65 (singleton), SanaSana\_45 (EB), Sandaddy\_44 (A1), SansAfet\_43 (EB), Sanya\_43 (A1), SarBear\_42 (EB), SarFire\_43 (A1), SaturnRing\_46 (A3), Scamp\_45 (A4), Scherzo\_45 (A9), Scorpia\_40 (A5), Scout\_45 (A3), Scowl\_45 (A1), Seabiscuit\_46 (A1), Seanderson\_47 (A1), Sebastisaurus\_36 (BB2), SemperFi\_45 (A2), SenorClean\_43 (A4), Serenity\_45 (A2), Severus\_42 (A10), Shaka\_45 (A4), Sham4\_44 (A11), Shapes\_48 (A10), Sharkboy\_41 (EB), Shawty\_33 (BB1), ShayRa\_48 (A15), Shayna\_42 (EB), SheaKeira\_43 (A9), Sheen\_44 (A7), SheldonCooper\_47 (A4), ShortQueendom\_39 (A1), Shuman\_36 (CA), Shygu2\_44 (A4), Sibs6\_45 (A1), SkiPole\_47 (A1), Skipitt\_44 (A4), Sknot\_46 (A2), Slagathor\_47 (A1), Slay\_43 (EB), Smairt\_47 (A1), Smeadley\_43 (A8), Smeagan\_47 (A2), Smeagol\_46 (A1), SmellyB\_45 (A6), SnapTap\_44 (A2), Snape\_44 (A11), Snazzy\_42 (A1), Snickers\_48 (A3), SoYo\_48 (A3), Softsoap\_42 (EB), SoilDragon\_48 (A3), Solea\_43 (EB), Solon\_44 (A1), SororFago\_48 (A14), Sorpresa\_44 (A1), Soshari\_50 (A3), Soups\_47 (A15), Sparxx\_46 (A4), Spike509\_48 (A3), SpikeBT\_45 (A1), Spino\_44 (A4), Spooks\_18 (BT), Spouty\_45 (A9), Squee\_44 (A1), StCroix\_36 (CA), Stagni\_48 (A3), StarStuff\_47 (A2), Stasia\_44 (A4), Steamy\_41 (A12), StepMih\_48 (A3), Stephig9\_43 (A8), StewieG\_44 (A1), Stink\_45 (A4), Stoor\_43 (EB), Stromboli\_43 (EB), StrongArm\_44 (A1), Strosahl\_47 (A15), Success\_19 (BT), Sumter\_42 (A1), Sunhee\_47 (A14), SunnyD\_42 (EB), Sunshine924\_45 (A1), SuperAwesome\_45 (A6), SuperCallie99\_45 (A6), Superchunk\_44 (A2), Swann\_36 (CA), SweetiePie\_44 (A2), Swervy\_43 (EB), SwirlSquare\_48 (A2), Swirley\_41 (A5), SwissCheese\_46 (A1), Switzer\_45 (A1), Switzerland\_47 (A15), Swole\_45 (A1), SydNat\_40 (A5), TG1\_31 (BB1), TMaxx\_43 (FR), TNguyen7\_46 (A3), TWAMP\_36 (CA), Takoda\_36 (CA), Taquarus\_45 (A4), Target\_45 (A1), Tarynearl\_37 (A5), Tasp14\_46 (A1), Taurus\_49 (A3), Teagster\_43 (EB), Temprado\_47 (A6), Teodoridan\_43 (A1), Terrific\_47 (A2), Texage\_43 (A3), Thanksgivukkah\_44 (A4), Theia\_36 (A5), TheloniousMonk\_46 (A1), Thor\_43 (A1), Tiffany\_48 (A3), Tiger\_37 (A5), Timothy\_45 (A11), Timshel\_43 (A7), TinaFeyge\_45 (A4), TinyPebbles\_47 (A3), TinyTimmy\_45 (A11), Tinybot\_44 (A4), TipsytheTRex\_42 (A2), TiroTheta9\_45 (A4), Todacoro\_44 (A3), Tomathan\_47 (A2), ToneTone\_42 (A6), Topanga\_42 (A10), Topgun\_44 (A1), Toro\_45 (A7), Tote\_40 (A1), Tragt412\_45 (A1), Travvers\_47 (A2), Treddle\_46 (A1), Trike\_42 (A10), Tripl3t\_45 (A1), Tristan\_43 (A2), Trixie\_44 (A2), Trouble\_46 (A1), TroyPia\_46 (A4), Tubs\_45 (A9), Tucker\_46 (A6), TukTuk\_43 (EB), Turbido\_45 (A2), Turj99\_42 (A1), Twigg\_39 (A5), Twister\_42 (A10), TwoPeat\_45 (A1), TygerBlood\_45 (A4), U2\_43 (A1), Ugenie5\_42 (A9), UhSalsa\_36

(CA), Ulysses\_44 (A4), UnionJack\_39 (A5), Updawg\_45 (A2), VA6\_43 (A2), VC3\_48 (A2), Vanisoa\_44 (A9), Vash\_34 (BB1), Veracruz\_43 (A3), Violet\_42 (A1), Vix\_48 (A3), VohminGhazi\_45 (A6), Waits\_47 (A15), WalterMcMickey\_42 (A10), Wander\_45 (A4), Warrior24\_49 (A15), Watermelon\_46 (A1), Watson\_48 (A3), WeiHuaDA\_48 (A2), Whabigail7\_45 (A2), Wheeler\_45 (A1), WideWale\_45 (A2), Wiks\_44 (A6), Wilbur\_45 (A4), Wile\_44 (A4), Wilkins\_44 (A1), Wizard007\_45 (A4), Wooldri\_50 (A3), WunderPhul\_45 (A6), Xena\_43 (A4), XianYue\_44 (A2), Yecey3\_46 (A9), YoSam321\_45 (A4), Yogi\_36 (CA), Yokurt\_45 (A6), Yoncess\_36 (CA), Zaka\_45 (A6), Zeeculate\_43 (A1), Zephyr\_44 (A1), Zetzy\_47 (A3), Zeuska\_44 (A1), Zimmer\_42 (A12), Zolita\_39 (A5), Zooman\_100 (GD2), Zulu\_46 (A6), phiBT1\_11 (BB1), phiSASD1\_12 (BJ),

#### Start 247:

- Found in 50 of 1943 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 43 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost\_58 (B3), Akoma\_58 (B3), Athena\_60 (B3), Audrey\_58 (B3), Baloo\_58 (B3), Ben11\_58 (B3), Bernardo\_59 (B3), Briakila\_57 (B3), Casbah\_58 (B3), ChaChing\_58 (B3), Chalmers\_57 (B3), Chandler\_58 (B3), Chentzyk\_59 (B3), Compostia\_58 (B3), Corofin\_58 (B3), Daisy\_57 (B3), Deenasa\_58 (B3), Devonte\_57 (B3), Gadget\_59 (B3), Gervas\_59 (B3), GlenHope\_59 (B3), Halfpint\_57 (B3), Heathcliff\_58 (B3), Jackstina\_54 (B3), Kamiyu\_58 (B3), Kronus\_58 (B3), LestyG\_57 (B3), Marley1013\_59 (B3), Marlia\_59 (B3), MmasiCarm\_59 (B3), Mortcellus\_58 (B3), Morty007\_58 (B3), Neos5\_58 (B3), Nozo\_58 (B3), Obutu\_59 (B3), Olivio\_58 (B3), OrangeOswald\_58 (B3), Phaedrus\_54 (B3), Phayeta\_60 (B3), Philly\_57 (B3), Phlyer\_58 (B3), Pipefish\_59 (B3), RagingRooster\_57 (B3), Rita1961\_59 (B3), RomaT\_58 (B3), Shenandoah\_57 (B3), SlippinJimmy\_60 (B3), SynergyX\_58 (B3), Tydolla\_56 (B3), Yahalom\_57 (B3),

#### Start 250:

- Found in 393 of 1943 ( 20.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1682
- Called 0.8% of time when present
- Phage (with cluster) where this start called: Qyrzula\_52 (B2), SirJeffery\_57 (B5), Sour\_53 (DR),

#### Start 252:

- Found in 4 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1682
- Called 75.0% of time when present
- Phage (with cluster) where this start called: GMA2\_66 (DS), GodonK\_188 (DK), Phendrix\_176 (DK),

#### Start 254:

- Found in 3 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1682
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Quenya\_42 (EB), Sixama\_172 (DS),

#### Start 255:

- Found in 4 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 4 of 1682
- Called 100.0% of time when present

- Phage (with cluster) where this start called: BlueNGold\_170 (DS), Boopy\_173 (DS), Forza\_174 (DS), Mareelih\_171 (DS),

#### Start 258:

- Found in 4 of 1943 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Panchaali\_95 (FC), PauloDiaboli\_117 (GD1),

#### Start 262:

- Found in 14 of 1943 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 4 of 1682
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Atuin\_93 (FC), Bloom\_103 (FC), GoldenEssence\_88 (FC), Mimi\_99 (FC), Patbob\_100 (FC), Phrampa\_94 (FC), Racecar\_100 (FC), Talia1610\_99 (FC),

#### Start 263:

- Found in 3 of 1943 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Chilliams\_97 (FC), SJReid\_106 (FC),

#### Start 272:

- Found in 29 of 1943 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 4 of 1682
- Called 24.1% of time when present
- Phage (with cluster) where this start called: Alone3\_143 (BS), BRock\_133 (BS), Beleetus\_139 (BS), Garnacho\_138 (BS), GiJojo\_132 (BS), LuckySocke\_138 (BS), Talos\_141 (BS),

#### Start 274:

- Found in 409 of 1943 ( 21.0% ) of genes in pham
- Manual Annotations of this start: 6 of 1682
- Called 1.5% of time when present
- Phage (with cluster) where this start called: Adat\_36 (AV), Brad\_36 (AV), Casserole\_35 (AV), GurgleFerb\_36 (AV), Jasmine\_38 (AV), Nellie\_36 (AV),

#### Start 284:

- Found in 1 of 1943 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shocker\_43 (singleton),

#### Start 287:

- Found in 160 of 1943 ( 8.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.6% of time when present
- Phage (with cluster) where this start called: PastaFagioli\_43 (EB),

#### Start 290:

- Found in 7 of 1943 ( 0.4% ) of genes in pham

- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: LadyJasley\_41 (singleton),

#### Start 297:

- Found in 21 of 1943 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 18 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BouleyBill\_36 (EA4), Bustleton\_37 (EA4), Cheeto1\_39 (EA9), ChickenKing\_38 (EA9), GaeCeo\_39 (EA9), Golden\_37 (EA4), Guetzie\_37 (EA4), HairyMan\_36 (EA10), HerculesXL\_37 (EA11), Jingles\_37 (EA4), Kauala\_37 (EA4), Koji\_37 (EA4), Lucky3\_37 (EA4), Pherbot\_37 (EA4), PrincePhergus\_37 (EA4), RenegadeRaider\_39 (EA4), Schimmels22\_37 (EA11), Schubert\_36 (EA8), Sinatra\_37 (EA4), SirVictor\_37 (EA4), Tinyman4\_37 (EA11),

#### Start 298:

- Found in 5 of 1943 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 4 of 1682
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Casey\_35 (EA3), Pajaza\_35 (EA3), Pikmin\_35 (EA3), Scissor2024\_37 (EA11), WestPM\_35 (EA11),

#### Start 299:

- Found in 47 of 1943 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 38 of 1682
- Called 93.6% of time when present
- Phage (with cluster) where this start called: Alakazam\_38 (EA5), Andromedas\_38 (EA2), BaronJohn\_38 (EA5), CaptainRex\_37 (EA5), Carostasia\_37 (EA10), Chepli\_40 (EA6), ChikPic\_38 (EA2), Clock\_37 (EA5), ColaCorta\_38 (EA2), Eleri\_38 (EA2), Finny\_38 (EA2), Fulton\_37 (EA5), Glamour\_37 (EA2), Greenlvy\_37 (EA5), Hasitha\_37 (EA5), Ixel\_38 (EA11), Jemerald\_40 (EA6), Juanyo\_37 (EA10), Juicer\_40 (EA6), KatChan\_40 (EA6), Librie\_37 (EA5), LilTerminator\_38 (EA5), Luna18\_40 (EA6), MCubed\_38 (EA2), Mandalorian\_37 (EA10), Mercedes\_34 (EA), Morrigan\_40 (EA6), Nebulous\_37 (EA5), Neferthena\_38 (EA5), Nucci\_37 (EA10), PSirce\_37 (EA2), Phanita\_37 (EA2), QuadZero\_37 (EA5), Quartz\_38 (EA10), Sansa\_37 (EA2), Saratos\_38 (EA2), Shamu\_38 (EA2), TwoBits\_36 (EA5), Wardwill\_39 (EA5), WilliamStrong\_38 (EA6), YuuY\_37 (EA10), Zayuliv\_37 (EA5), Zenitsu\_38 (EA2), Zepp\_38 (EA5),

#### Start 301:

- Found in 197 of 1943 ( 10.1% ) of genes in pham
- Manual Annotations of this start: 110 of 1682
- Called 63.5% of time when present
- Phage (with cluster) where this start called: Acosta\_40 (EA1), Agente005\_39 (EA1), AlexAdler\_39 (EA1), Alyxandracam\_39 (EA1), Anilorac\_39 (EA1), Antoinette\_39 (EA1), AranulaLuti\_38 (EA1), Asta\_38 (EA1), Aubergine\_38 (EA1), AxiPup\_39 (EA1), Baines\_38 (EA1), Balsa\_38 (EA1), Bandik\_39 (EA1), BeautPeep30\_39 (EA1), Benjalauen\_39 (EA1), BigRedClifford\_39 (EA1), Blage\_39 (EA1), BonesMcCoy\_39 (EA1), Bonino\_38 (EA1), Byron23\_39 (EA1), Calix\_38 (EA1), CarisSwetlik\_42 (EA1), Christoph\_38 (EA1), Clancy\_38 (EA1), Convict\_39 (EA1), Dave\_39 (EA1), Delphidian\_39 (EA1), Den3\_39 (EA1), Dothraki\_39 (EA1), DunneganBoMo\_92 (FC), Duocatuli\_38 (EA1), Ellewin\_90 (FC), Endor\_39 (EA1), Erla\_38 (EA1), Espinosa\_38 (EA1), Etna\_38 (EA1), Etta\_38 (EA1), Exploradora\_39 (UNK), FarmerDoug\_38

(EA1), Figueroism\_39 (EA1), GardenB\_38 (EA1), Gelo\_38 (EA1), Gershwin\_38 (EA1), Greys\_39 (EA1), Gubbabump\_38 (EA1), Hamlet\_38 (EA1), HanSolo\_38 (EA1), HankSprout\_39 (EA1), HungryHenry\_38 (EA1), Ilzat\_38 (EA1), Inventa\_39 (EA1), Janus167\_38 (EA1), JasonD\_43 (EA1), JasperRussell\_38 (EA1), Jenos\_42 (EA1), Jerbirus\_39 (EA1), JeriBeth\_39 (EA1), KSunshine22\_93 (FC), Kale\_38 (EA1), KannH\_38 (EA1), KingJulien\_38 (EA1), Klimt\_38 (EA1), Knox\_39 (EA1), Kurt1\_39 (EA1), Leafus\_38 (EA1), LeoJr\_98 (FC), Lovelyunicorn\_39 (EA1), Ludgate\_39 (EA1), MaeLinda\_39 (EA1), ManRay\_38 (EA1), Martin\_40 (EA1), McGalleon\_41 (EA1), MillyPhilly\_39 (EA1), MonChoix\_37 (EA1), MrWorldwide\_39 (EA1), Nagem\_39 (EA1), Nattles\_38 (EA1), NickSell\_39 (EA1), Oats\_38 (EA1), OldNelly\_39 (EA1), Oxtober96\_39 (EA1), Papafritta\_38 (EA1), ParleG\_39 (EA1), Peep\_39 (EA1), Peppino\_38 (EA1), Pherferi\_39 (EA1), Phiderman\_39 (EA1), Phireproof\_39 (EA1), PhredFlintston\_39 (EA1), Phriends\_39 (EA1), Pocket\_38 (EA1), PuppyEggo\_39 (EA1), Raccoon\_38 (EA1), Rapheph\_39 (EA1), Raptor\_39 (EA1), Redfield\_38 (EA1), ReginaGlobina\_98 (FC), Riyhil\_39 (EA1), Robinson\_39 (EA1), Rog141\_38 (EA1), RosieMae\_39 (EA1), SJay\_39 (EA1), Schnapsidee\_38 (EA1), Sedgewig\_38 (EA1), Shee\_39 (EA1), SoilGremlin\_39 (EA1), Stanktossa\_39 (EA1), StingRay\_38 (EA1), StirfryIV\_38 (EA1), Stormbreaker8\_38 (EA1), Strathdee\_39 (EA1), Superfresh\_39 (EA1), Symere\_39 (EA1), Teagan\_39 (EA1), TeddyBear\_38 (EA1), Tenda\_38 (EA1), Thompsone\_39 (EA1), Thorongil\_39 (EA1), TinSulphur\_39 (EA1), Velene\_39 (EA1), Vispistious\_39 (EA1), WaddleDee\_92 (FC), WildNOut\_39 (EA1), Winzigespinne\_38 (EA1), Zada\_39 (EA1),

#### Start 308:

- Found in 162 of 1943 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 5 of 1682
- Called 3.7% of time when present
- Phage (with cluster) where this start called: BeeBee8\_39 (EA1), Garey24\_38 (EA1), Gargoyle\_39 (EA1), Ioannes\_39 (EA1), Renzie\_39 (EA1), ShaiHulud\_39 (EA1),

#### Start 315:

- Found in 7 of 1943 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Rockabye\_103 (FC),

#### Start 355:

- Found in 2 of 1943 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Phroglets\_31 (singleton),

### Summary by clusters:

There are 82 clusters represented in this pham: FP, GD1, singleton, GD3, GD4, DK, BL, UNK, B11, GD2, BJ, BT, FC, B12, B13, BR, BS, DR, DS, A15, A14, A17, A16, A11, A10, A13, A12, FR, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, EA6, BB2, BB1, A, AB, EH, A21, AI, CA, EA, CD, AQ, EA8, B10, GC, AV, EA1, EA3, EA2, EA5, EA4, EB, CT, A20, EA9, EA11, EA10, GG, B8, AZ, B9, B4, B5, B6, B7, B1, B2, B3, AZ1, AZ2, AZ3, AZ4, AZ5,

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

- Start number 246 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 246 was manually annotated 209 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 246 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 246 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 246 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 246 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 246 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 246 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 246 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 246 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 245 was manually annotated 4 times for cluster A2.
- Start number 246 was manually annotated 98 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 246 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 246 was manually annotated 113 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 246 was manually annotated 137 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 215 was manually annotated 2 times for cluster A5.
- Start number 246 was manually annotated 36 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 220 was manually annotated 1 time for cluster A6.
- Start number 246 was manually annotated 41 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 246 was manually annotated 5 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 246 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 245 was manually annotated 2 times for cluster A9.
- Start number 246 was manually annotated 33 times for cluster A9.

Info for manual annotations of cluster AB:

- Start number 53 was manually annotated 1 time for cluster AB.
- Start number 59 was manually annotated 1 time for cluster AB.
- Start number 64 was manually annotated 1 time for cluster AB.
- Start number 77 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster AI:

- Start number 244 was manually annotated 1 time for cluster AI.

Info for manual annotations of cluster AQ:

- Start number 233 was manually annotated 13 times for cluster AQ.

Info for manual annotations of cluster AV:

- Start number 274 was manually annotated 6 times for cluster AV.

Info for manual annotations of cluster AZ:

- Start number 245 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 140 was manually annotated 1 time for cluster AZ1.
- Start number 180 was manually annotated 1 time for cluster AZ1.
- Start number 245 was manually annotated 43 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 148 was manually annotated 1 time for cluster AZ2.
- Start number 245 was manually annotated 2 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 245 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 245 was manually annotated 3 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 245 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster B1:

- Start number 188 was manually annotated 1 time for cluster B1.
- Start number 205 was manually annotated 266 times for cluster B1.

Info for manual annotations of cluster B10:

- Start number 192 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:



- Start number 199 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 197 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 228 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 205 was manually annotated 33 times for cluster B2.
- Start number 250 was manually annotated 1 time for cluster B2.

Info for manual annotations of cluster B3:

- Start number 244 was manually annotated 2 times for cluster B3.
- Start number 247 was manually annotated 43 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 176 was manually annotated 2 times for cluster B4.
- Start number 182 was manually annotated 4 times for cluster B4.
- Start number 191 was manually annotated 1 time for cluster B4.
- Start number 197 was manually annotated 17 times for cluster B4.
- Start number 200 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:

- Start number 197 was manually annotated 8 times for cluster B5.
- Start number 209 was manually annotated 1 time for cluster B5.

Info for manual annotations of cluster B6:

- Start number 199 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 207 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 230 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 205 was manually annotated 5 times for cluster B9.
- Start number 209 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster BB1:

- Start number 246 was manually annotated 6 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 246 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster BJ:

- Start number 246 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster BL:

- Start number 246 was manually annotated 3 times for cluster BL.

Info for manual annotations of cluster BR:

- Start number 14 was manually annotated 1 time for cluster BR.
- Start number 37 was manually annotated 1 time for cluster BR.

Info for manual annotations of cluster BS:

- Start number 272 was manually annotated 4 times for cluster BS.

Info for manual annotations of cluster BT:

- Start number 246 was manually annotated 1 time for cluster BT.

Info for manual annotations of cluster CA:

- Start number 246 was manually annotated 36 times for cluster CA.

Info for manual annotations of cluster CD:

- Start number 3 was manually annotated 5 times for cluster CD.
- Start number 18 was manually annotated 1 time for cluster CD.
- Start number 160 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CT:

- Start number 36 was manually annotated 16 times for cluster CT.
- Start number 44 was manually annotated 1 time for cluster CT.
- Start number 45 was manually annotated 24 times for cluster CT.
- Start number 46 was manually annotated 13 times for cluster CT.

Info for manual annotations of cluster DK:

- Start number 252 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DR:

- Start number 235 was manually annotated 5 times for cluster DR.
- Start number 241 was manually annotated 13 times for cluster DR.
- Start number 250 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DS:

- Start number 254 was manually annotated 1 time for cluster DS.
- Start number 255 was manually annotated 4 times for cluster DS.

Info for manual annotations of cluster EA:

- Start number 299 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA1:

- Start number 211 was manually annotated 1 time for cluster EA1.
- Start number 238 was manually annotated 3 times for cluster EA1.
- Start number 301 was manually annotated 110 times for cluster EA1.
- Start number 308 was manually annotated 5 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 299 was manually annotated 6 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 297 was manually annotated 3 times for cluster EA11.
- Start number 298 was manually annotated 1 time for cluster EA11.
- Start number 299 was manually annotated 1 time for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 299 was manually annotated 11 times for cluster EA2.

Info for manual annotations of cluster EA3:

- Start number 298 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 297 was manually annotated 11 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 299 was manually annotated 12 times for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 299 was manually annotated 7 times for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 297 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:

- Start number 297 was manually annotated 3 times for cluster EA9.

Info for manual annotations of cluster EB:

- Start number 232 was manually annotated 3 times for cluster EB.
- Start number 243 was manually annotated 7 times for cluster EB.
- Start number 246 was manually annotated 57 times for cluster EB.
- Start number 254 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster EH:

- Start number 244 was manually annotated 8 times for cluster EH.
- Start number 245 was manually annotated 4 times for cluster EH.
- Start number 246 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster FC:

- Start number 262 was manually annotated 4 times for cluster FC.

Info for manual annotations of cluster FP:

- Start number 245 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster GC:

- Start number 216 was manually annotated 4 times for cluster GC.

Info for manual annotations of cluster GD1:

- Start number 246 was manually annotated 1 time for cluster GD1.
- Start number 258 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 246 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 246 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 246 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster GG:

•Start number 25 was manually annotated 2 times for cluster GG.

### **Gene Information:**

Gene: 20ES\_45 Start: 31266, Stop: 29479, Start Num: 246

Candidate Starts for 20ES\_45:

(51, 31683), (Start: 246 @31266 has 877 MA's), (364, 31062), (366, 31059), (368, 31053), (375, 31038), (383, 31023), (400, 30990), (402, 30987), (416, 30960), (425, 30933), (433, 30912), (444, 30882), (479, 30780), (539, 30687), (542, 30678), (556, 30639), (560, 30630), (568, 30615), (598, 30549), (635, 30468), (659, 30420), (662, 30414), (697, 30351), (726, 30276), (743, 30195), (766, 30111), (767, 30108), (783, 30042), (793, 30003), (810, 29982), (831, 29907), (837, 29889), (843, 29877), (853, 29844), (864, 29817), (880, 29781), (888, 29763), (902, 29727), (905, 29703), (924, 29646), (930, 29625), (946, 29568), (950, 29556), (955, 29547),

Gene: 39HC\_051 Start: 52288, Stop: 50447, Start Num: 199

Candidate Starts for 39HC\_051:

(79, 52552), (85, 52537), (Start: 199 @52288 has 2 MA's), (267, 52231), (Start: 274 @52216 has 6 MA's), (366, 52042), (391, 51991), (393, 51988), (400, 51967), (421, 51916), (423, 51910), (433, 51892), (448, 51850), (453, 51847), (463, 51817), (519, 51724), (538, 51688), (542, 51676), (591, 51562), (602, 51538), (603, 51535), (704, 51304), (725, 51235), (727, 51217), (732, 51199), (744, 51142), (775, 51034), (777, 51028), (780, 51019), (795, 50956), (814, 50920), (815, 50917), (820, 50902), (847, 50824), (851, 50812), (858, 50791), (860, 50785), (875, 50752), (888, 50722), (898, 50707), (902, 50686), (905, 50662), (912, 50638), (926, 50599), (929, 50587), (930, 50584), (931, 50581), (933, 50569), (940, 50545), (972, 50473),

Gene: 40AC\_46 Start: 33055, Stop: 30977, Start Num: 92

Candidate Starts for 40AC\_46:

(92, 33055), (133, 32941), (Start: 246 @32764 has 877 MA's), (364, 32560), (368, 32551), (383, 32521), (400, 32488), (402, 32485), (416, 32458), (425, 32431), (479, 32278), (539, 32185), (542, 32176), (560, 32128), (568, 32113), (598, 32047), (659, 31918), (662, 31912), (698, 31846), (743, 31693), (755, 31642), (767, 31606), (771, 31597), (783, 31540), (793, 31501), (810, 31480), (814, 31459), (853, 31342), (903, 31222), (924, 31144), (930, 31123), (946, 31066), (950, 31054), (955, 31045),

Gene: 40BC\_051 Start: 52288, Stop: 50447, Start Num: 199

Candidate Starts for 40BC\_051:

(79, 52552), (85, 52537), (Start: 199 @52288 has 2 MA's), (267, 52231), (Start: 274 @52216 has 6 MA's), (366, 52042), (391, 51991), (393, 51988), (400, 51967), (421, 51916), (423, 51910), (433, 51892), (448, 51850), (453, 51847), (463, 51817), (519, 51724), (538, 51688), (542, 51676), (591, 51562), (602, 51538), (603, 51535), (704, 51304), (725, 51235), (727, 51217), (732, 51199), (744, 51142), (775, 51034), (777, 51028), (780, 51019), (795, 50956), (814, 50920), (815, 50917), (820, 50902), (847, 50824), (851, 50812), (858, 50791), (860, 50785), (875, 50752), (888, 50722), (898, 50707), (902, 50686), (905, 50662), (912, 50638), (926, 50599), (929, 50587), (930, 50584), (931, 50581), (933, 50569), (940, 50545), (972, 50473),

Gene: 8UZL\_44 Start: 34273, Stop: 31928, Start Num: 64

Candidate Starts for 8UZL\_44:

(Start: 44 @34339 has 1 MA's), (48, 34330), (Start: 59 @34285 has 1 MA's), (Start: 64 @34273 has 1 MA's), (Start: 77 @34234 has 1 MA's), (97, 34177), (138, 34075), (Start: 148 @34045 has 1 MA's), (179, 34015), (291, 33847), (354, 33727), (403, 33625), (435, 33544), (457, 33484), (481, 33418), (526, 33286), (541, 33238), (598, 33166), (605, 33157), (611, 33145), (660, 33076), (736, 32863), (747, 32809), (769, 32728), (776, 32695), (792, 32629), (794, 32623), (796, 32617), (797, 32611), (805, 32587), (815, 32554), (820, 32539), (822, 32530), (878, 32371), (882, 32359), (939, 32131), (947, 32104), (976, 32035),

Gene: A3Wally\_117 Start: 81842, Stop: 79962, Start Num: 246

Candidate Starts for A3Wally\_117:

(Start: 199 @81905 has 2 MA's), (237, 81851), (Start: 246 @81842 has 877 MA's), (Start: 258 @81830 has 1 MA's), (352, 81632), (366, 81605), (391, 81566), (418, 81503), (428, 81485), (435, 81458), (438, 81452), (482, 81344), (542, 81266), (549, 81245), (561, 81212), (571, 81182), (585, 81155), (613, 81095), (664, 80990), (683, 80957), (716, 80888), (719, 80879), (743, 80768), (773, 80654), (791, 80570), (795, 80555), (827, 80444), (829, 80438), (832, 80426), (840, 80411), (881, 80300), (905, 80210), (917, 80171), (922, 80159), (930, 80132), (946, 80075), (957, 80051),

Gene: A6\_41 Start: 33551, Stop: 31725, Start Num: 246

Candidate Starts for A6\_41:

(Start: 246 @33551 has 877 MA's), (368, 33338), (374, 33323), (400, 33275), (416, 33245), (422, 33224), (425, 33218), (429, 33209), (458, 33125), (461, 33116), (470, 33092), (479, 33065), (539, 32972), (544, 32957), (551, 32936), (556, 32924), (578, 32873), (580, 32870), (607, 32816), (612, 32804), (627, 32774), (639, 32744), (662, 32699), (683, 32660), (743, 32480), (753, 32432), (767, 32393), (783, 32327), (793, 32288), (810, 32267), (814, 32246), (820, 32228), (843, 32162), (902, 32012), (903, 32009), (909, 31973), (917, 31949), (921, 31940), (925, 31928), (946, 31853), (955, 31832),

Gene: ABU\_61 Start: 54532, Stop: 52673, Start Num: 205

Candidate Starts for ABU\_61:

(Start: 188 @54556 has 1 MA's), (Start: 205 @54532 has 304 MA's), (Start: 235 @54508 has 6 MA's), (Start: 250 @54502 has 2 MA's), (Start: 274 @54460 has 6 MA's), (283, 54439), (337, 54325), (342, 54319), (360, 54289), (391, 54229), (399, 54208), (421, 54154), (428, 54142), (434, 54124), (436, 54112), (476, 54007), (519, 53950), (538, 53914), (542, 53902), (552, 53875), (564, 53848), (570, 53830), (580, 53812), (598, 53773), (602, 53764), (603, 53761), (712, 53503), (738, 53401), (744, 53368), (750, 53347), (777, 53254), (780, 53245), (795, 53182), (814, 53146), (815, 53143), (820, 53128), (847, 53050), (851, 53038), (858, 53017), (875, 52978), (905, 52888), (910, 52870), (912, 52864), (917, 52849), (926, 52825), (930, 52810), (931, 52807), (933, 52795), (940, 52771), (963, 52723), (972, 52699),

Gene: ACFishhook\_47 Start: 31825, Stop: 30011, Start Num: 246

Candidate Starts for ACFishhook\_47:

(Start: 246 @31825 has 877 MA's), (275, 31786), (280, 31774), (364, 31621), (371, 31606), (400, 31549), (425, 31492), (429, 31483), (444, 31441), (461, 31390), (479, 31339), (539, 31246), (556, 31198), (568, 31174), (585, 31135), (598, 31108), (612, 31078), (654, 30985), (662, 30973), (686, 30925), (697, 30910), (743, 30754), (755, 30703), (766, 30670), (767, 30667), (783, 30601), (793, 30562), (815, 30490), (827, 30451), (834, 30427), (843, 30409), (853, 30376), (888, 30295), (905, 30235), (910, 30217), (930, 30157), (932, 30148), (946, 30100), (950, 30088), (955, 30079),

Gene: AEgle\_37 Start: 28789, Stop: 30654, Start Num: 245

Candidate Starts for AEgle\_37:

(Start: 245 @28789 has 74 MA's), (279, 28837), (364, 28993), (422, 29107), (448, 29176), (541, 29383), (544, 29392), (580, 29482), (585, 29491), (591, 29506), (598, 29518), (613, 29551), (659, 29644), (687, 29701), (717, 29782), (743, 29902), (752, 29932), (767, 29989), (781, 30046), (783,

30055), (813, 30148), (834, 30220), (840, 30229), (878, 30328), (902, 30391), (939, 30526), (946, 30550), (949, 30559), (988, 30637),

Gene: AFIS\_43 Start: 34331, Stop: 32502, Start Num: 246

Candidate Starts for AFIS\_43:

(Start: 246 @34331 has 877 MA's), (368, 34118), (400, 34055), (416, 34025), (422, 34004), (425, 33998), (429, 33989), (470, 33872), (479, 33845), (539, 33752), (544, 33737), (556, 33704), (578, 33653), (580, 33650), (607, 33596), (612, 33584), (627, 33554), (639, 33524), (662, 33479), (683, 33440), (743, 33260), (753, 33212), (771, 33164), (780, 33125), (783, 33107), (793, 33068), (810, 33047), (814, 33026), (819, 33011), (861, 32888), (876, 32855), (922, 32717), (929, 32693), (943, 32645), (946, 32633), (955, 32612), (959, 32606), (981, 32558), (986, 32543),

Gene: AGrandiflora\_42 Start: 30069, Stop: 31934, Start Num: 245

Candidate Starts for AGrandiflora\_42:

(Start: 245 @30069 has 74 MA's), (279, 30117), (325, 30207), (327, 30213), (416, 30366), (448, 30456), (541, 30663), (544, 30672), (580, 30762), (585, 30771), (591, 30786), (613, 30831), (635, 30876), (659, 30924), (687, 30981), (717, 31062), (737, 31149), (743, 31182), (752, 31212), (767, 31269), (783, 31335), (790, 31359), (813, 31428), (834, 31500), (840, 31509), (878, 31608), (902, 31671), (905, 31695), (939, 31806), (946, 31830), (949, 31839),

Gene: AN3\_45 Start: 31646, Stop: 29859, Start Num: 246

Candidate Starts for AN3\_45:

(Start: 246 @31646 has 877 MA's), (364, 31442), (366, 31439), (368, 31433), (375, 31418), (383, 31403), (400, 31370), (402, 31367), (416, 31340), (425, 31313), (433, 31292), (444, 31262), (479, 31160), (539, 31067), (542, 31058), (556, 31019), (560, 31010), (568, 30995), (598, 30929), (635, 30848), (659, 30800), (662, 30794), (726, 30656), (743, 30575), (755, 30524), (766, 30491), (767, 30488), (783, 30422), (793, 30383), (810, 30362), (831, 30287), (837, 30269), (853, 30224), (864, 30197), (880, 30161), (888, 30143), (902, 30107), (905, 30083), (924, 30026), (946, 29948), (950, 29936), (955, 29927),

Gene: AN9\_48 Start: 31569, Stop: 29770, Start Num: 246

Candidate Starts for AN9\_48:

(Start: 246 @31569 has 877 MA's), (364, 31365), (400, 31290), (402, 31287), (416, 31260), (420, 31245), (425, 31233), (444, 31182), (479, 31080), (539, 30987), (542, 30978), (556, 30939), (560, 30930), (598, 30849), (613, 30816), (627, 30789), (683, 30675), (697, 30651), (743, 30486), (753, 30438), (767, 30399), (776, 30363), (783, 30333), (793, 30294), (810, 30273), (843, 30168), (853, 30135), (880, 30072), (902, 30018), (905, 29994), (946, 29859), (950, 29847), (955, 29838),

Gene: ANI8\_48 Start: 31569, Stop: 29770, Start Num: 246

Candidate Starts for ANI8\_48:

(Start: 246 @31569 has 877 MA's), (364, 31365), (400, 31290), (402, 31287), (416, 31260), (420, 31245), (425, 31233), (444, 31182), (479, 31080), (539, 30987), (542, 30978), (556, 30939), (560, 30930), (598, 30849), (613, 30816), (627, 30789), (683, 30675), (697, 30651), (743, 30486), (753, 30438), (767, 30399), (776, 30363), (783, 30333), (793, 30294), (810, 30273), (843, 30168), (853, 30135), (880, 30072), (902, 30018), (905, 29994), (946, 29859), (950, 29847), (955, 29838),

Gene: AbbeyMikolon\_44 Start: 30256, Stop: 32121, Start Num: 246

Candidate Starts for AbbeyMikolon\_44:

(Start: 246 @30256 has 877 MA's), (279, 30304), (287, 30325), (327, 30400), (386, 30502), (414, 30559), (416, 30562), (417, 30565), (438, 30628), (444, 30640), (551, 30868), (560, 30889), (568, 30910), (585, 30949), (591, 30964), (592, 30967), (594, 30970), (615, 31015), (629, 31036), (635, 31054), (639, 31063), (659, 31102), (670, 31132), (674, 31144), (699, 31207), (731, 31324), (743, 31384), (753, 31432), (767, 31471), (774, 31501), (783, 31537), (797, 31591), (815, 31639), (834,

31702), (874, 31801), (878, 31810), (900, 31861), (912, 31921), (918, 31939), (939, 32008), (946, 32032), (959, 32059),

Gene: AbbyPaige\_46 Start: 31676, Stop: 29889, Start Num: 246

Candidate Starts for AbbyPaige\_46:

(166, 31763), (Start: 246 @31676 has 877 MA's), (366, 31469), (368, 31463), (375, 31448), (383, 31433), (402, 31397), (416, 31370), (425, 31343), (433, 31322), (479, 31190), (539, 31097), (556, 31049), (560, 31040), (568, 31025), (598, 30959), (635, 30878), (659, 30830), (662, 30824), (697, 30761), (743, 30605), (755, 30554), (766, 30521), (767, 30518), (783, 30452), (793, 30413), (810, 30392), (831, 30317), (834, 30305), (853, 30254), (880, 30191), (888, 30173), (902, 30137), (905, 30113), (930, 30035), (946, 29978), (950, 29966), (955, 29957),

Gene: AbbysRanger\_44 Start: 31536, Stop: 29707, Start Num: 246

Candidate Starts for AbbysRanger\_44:

(Start: 246 @31536 has 877 MA's), (280, 31485), (295, 31455), (383, 31293), (394, 31275), (400, 31260), (425, 31203), (429, 31194), (471, 31074), (479, 31050), (513, 31008), (539, 30957), (558, 30909), (568, 30888), (585, 30849), (607, 30804), (610, 30798), (646, 30717), (659, 30696), (683, 30651), (740, 30486), (743, 30465), (783, 30312), (793, 30273), (815, 30201), (820, 30186), (827, 30162), (832, 30144), (834, 30138), (837, 30132), (905, 29931), (946, 29796), (950, 29784), (955, 29775),

Gene: Abbysshoes\_47 Start: 34766, Stop: 32937, Start Num: 246

Candidate Starts for Abbysshoes\_47:

(Start: 246 @34766 has 877 MA's), (368, 34553), (374, 34538), (400, 34490), (416, 34460), (422, 34439), (425, 34433), (429, 34424), (470, 34307), (479, 34280), (539, 34187), (544, 34172), (578, 34088), (580, 34085), (612, 34019), (627, 33989), (639, 33959), (662, 33914), (683, 33875), (743, 33695), (753, 33647), (771, 33599), (780, 33560), (783, 33542), (793, 33503), (810, 33482), (814, 33461), (819, 33446), (861, 33323), (922, 33152), (929, 33128), (943, 33080), (946, 33068), (955, 33047), (959, 33041), (981, 32993), (986, 32978),

Gene: Abdiel\_45 Start: 31571, Stop: 29745, Start Num: 246

Candidate Starts for Abdiel\_45:

(Start: 246 @31571 has 877 MA's), (267, 31550), (280, 31520), (295, 31490), (383, 31328), (394, 31310), (425, 31238), (429, 31229), (471, 31109), (479, 31085), (539, 30992), (558, 30944), (568, 30923), (585, 30884), (646, 30752), (659, 30731), (683, 30686), (687, 30674), (740, 30521), (743, 30500), (776, 30377), (783, 30347), (793, 30308), (814, 30242), (815, 30239), (820, 30224), (827, 30200), (834, 30176), (905, 29969), (946, 29834), (950, 29822), (955, 29813),

Gene: Abigail\_42 Start: 29285, Stop: 31159, Start Num: 246

Candidate Starts for Abigail\_42:

(Start: 243 @29282 has 7 MA's), (Start: 246 @29285 has 877 MA's), (287, 29354), (Start: 301 @29375 has 110 MA's), (429, 29621), (444, 29663), (585, 29957), (696, 30191), (731, 30314), (743, 30374), (746, 30380), (755, 30425), (762, 30440), (764, 30455), (774, 30491), (783, 30527), (813, 30620), (844, 30713), (874, 30791), (902, 30863), (903, 30866), (909, 30902), (924, 30944), (929, 30962), (939, 30998), (946, 31022), (955, 31043),

Gene: Abinghost\_58 Start: 53637, Stop: 51820, Start Num: 247

Candidate Starts for Abinghost\_58:

(130, 53820), (Start: 247 @53637 has 43 MA's), (267, 53607), (368, 53427), (433, 53274), (435, 53262), (448, 53232), (454, 53226), (476, 53163), (478, 53157), (519, 53106), (538, 53070), (556, 53022), (603, 52917), (645, 52821), (674, 52770), (724, 52626), (732, 52587), (739, 52557), (744, 52530), (748, 52518), (775, 52422), (777, 52416), (780, 52407), (782, 52395), (807, 52323), (814, 52293), (820, 52275), (822, 52266), (847, 52197), (851, 52185), (858, 52164), (888, 52095), (898,

52080), (903, 52056), (905, 52035), (910, 52017), (912, 52011), (924, 51978), (926, 51972), (931, 51954), (933, 51942), (936, 51930), (940, 51918), (956, 51876), (972, 51846),

Gene: Abrogate\_440 Start: 35018, Stop: 33189, Start Num: 246

Candidate Starts for Abrogate\_440:

(Start: 246 @35018 has 877 MA's), (368, 34805), (374, 34790), (416, 34712), (422, 34691), (425, 34685), (429, 34676), (458, 34592), (470, 34559), (479, 34532), (539, 34439), (544, 34424), (551, 34403), (556, 34391), (578, 34340), (580, 34337), (612, 34271), (627, 34241), (639, 34211), (662, 34166), (683, 34127), (743, 33947), (753, 33899), (771, 33851), (780, 33812), (783, 33794), (793, 33755), (810, 33734), (814, 33713), (819, 33698), (861, 33575), (922, 33404), (929, 33380), (943, 33332), (946, 33320), (955, 33299), (959, 33293), (981, 33245), (986, 33230),

Gene: AbsoluteMadLad\_61 Start: 54486, Stop: 52627, Start Num: 205

Candidate Starts for AbsoluteMadLad\_61:

(Start: 188 @54510 has 1 MA's), (Start: 205 @54486 has 304 MA's), (Start: 235 @54462 has 6 MA's), (Start: 250 @54456 has 2 MA's), (Start: 274 @54414 has 6 MA's), (283, 54393), (337, 54279), (342, 54273), (360, 54243), (391, 54183), (399, 54162), (421, 54108), (428, 54096), (434, 54078), (436, 54066), (476, 53961), (519, 53904), (538, 53868), (542, 53856), (551, 53832), (556, 53820), (564, 53802), (570, 53784), (580, 53766), (598, 53727), (602, 53718), (603, 53715), (604, 53712), (738, 53355), (744, 53322), (750, 53301), (777, 53208), (780, 53199), (795, 53136), (814, 53100), (815, 53097), (820, 53082), (847, 53004), (851, 52992), (858, 52971), (875, 52932), (905, 52842), (910, 52824), (912, 52818), (917, 52803), (926, 52779), (930, 52764), (931, 52761), (933, 52749), (940, 52725), (963, 52677), (972, 52653),

Gene: Acadian\_58 Start: 54470, Stop: 52644, Start Num: 197

Candidate Starts for Acadian\_58:

(Start: 197 @54470 has 27 MA's), (267, 54416), (304, 54356), (367, 54245), (391, 54197), (434, 54095), (453, 54053), (466, 54017), (476, 53987), (538, 53894), (542, 53882), (551, 53858), (556, 53846), (564, 53828), (592, 53765), (603, 53741), (652, 53636), (725, 53447), (727, 53429), (732, 53411), (739, 53381), (744, 53354), (775, 53246), (777, 53240), (780, 53231), (784, 53210), (807, 53147), (815, 53114), (820, 53099), (841, 53039), (847, 53021), (851, 53009), (858, 52988), (861, 52979), (863, 52976), (905, 52859), (912, 52835), (926, 52796), (930, 52781), (931, 52778), (936, 52754), (940, 52742), (941, 52739), (965, 52691), (972, 52670),

Gene: Achebe\_43 Start: 31519, Stop: 29690, Start Num: 246

Candidate Starts for Achebe\_43:

(Start: 246 @31519 has 877 MA's), (280, 31468), (295, 31438), (383, 31276), (394, 31258), (400, 31243), (425, 31186), (429, 31177), (471, 31057), (479, 31033), (513, 30991), (539, 30940), (558, 30892), (568, 30871), (585, 30832), (607, 30787), (610, 30781), (646, 30700), (659, 30679), (683, 30634), (740, 30469), (743, 30448), (783, 30295), (793, 30256), (815, 30184), (820, 30169), (827, 30145), (832, 30127), (834, 30121), (837, 30115), (905, 29914), (946, 29779), (950, 29767), (955, 29758),

Gene: Acme\_47 Start: 34868, Stop: 33042, Start Num: 246

Candidate Starts for Acme\_47:

(Start: 246 @34868 has 877 MA's), (368, 34655), (374, 34640), (400, 34592), (416, 34562), (422, 34541), (425, 34535), (429, 34526), (470, 34409), (479, 34382), (539, 34289), (544, 34274), (556, 34241), (578, 34190), (580, 34187), (612, 34121), (627, 34091), (639, 34061), (662, 34016), (683, 33977), (743, 33797), (752, 33767), (753, 33749), (767, 33710), (783, 33644), (814, 33563), (815, 33560), (843, 33479), (902, 33329), (903, 33326), (909, 33290), (917, 33266), (921, 33257), (925, 33245), (946, 33170), (955, 33149),

Gene: Acolyte\_41 Start: 30968, Stop: 29181, Start Num: 246



Candidate Starts for Acolyte\_41:

(Start: 246 @30968 has 877 MA's), (366, 30761), (368, 30755), (375, 30740), (383, 30725), (400, 30692), (402, 30689), (416, 30662), (425, 30635), (479, 30482), (539, 30389), (542, 30380), (556, 30341), (560, 30332), (568, 30317), (598, 30251), (619, 30206), (635, 30170), (659, 30122), (743, 29897), (752, 29867), (755, 29846), (783, 29744), (810, 29684), (814, 29663), (820, 29645), (888, 29465), (902, 29429), (905, 29405), (924, 29348), (946, 29270), (950, 29258), (955, 29249),

Gene: Acosta\_40 Start: 29335, Stop: 27470, Start Num: 301

Candidate Starts for Acosta\_40:

(Start: 238 @29422 has 3 MA's), (Start: 241 @29419 has 13 MA's), (Start: 301 @29335 has 110 MA's), (Start: 308 @29326 has 5 MA's), (433, 29059), (435, 29047), (438, 29041), (537, 28759), (539, 28747), (549, 28717), (554, 28702), (556, 28696), (562, 28684), (652, 28528), (658, 28513), (676, 28468), (776, 28153), (783, 28123), (794, 28081), (822, 27994), (836, 27949), (878, 27835), (888, 27796), (903, 27736), (906, 27712), (907, 27709), (908, 27706), (919, 27673), (929, 27640), (932, 27628),

Gene: Adahisdi\_44 Start: 34346, Stop: 32520, Start Num: 246

Candidate Starts for Adahisdi\_44:

(Start: 246 @34346 has 877 MA's), (368, 34133), (374, 34118), (416, 34040), (422, 34019), (425, 34013), (429, 34004), (470, 33887), (479, 33860), (539, 33767), (544, 33752), (578, 33668), (580, 33665), (612, 33599), (627, 33569), (639, 33539), (662, 33494), (683, 33455), (743, 33275), (752, 33245), (753, 33227), (755, 33224), (767, 33188), (783, 33122), (814, 33041), (815, 33038), (843, 32957), (902, 32807), (903, 32804), (909, 32768), (917, 32744), (921, 32735), (925, 32723), (932, 32696), (946, 32648), (955, 32627),

Gene: Adat\_36 Start: 31889, Stop: 30144, Start Num: 274

Candidate Starts for Adat\_36:

(259, 31916), (Start: 274 @31889 has 6 MA's), (276, 31886), (290, 31853), (294, 31847), (339, 31754), (362, 31721), (374, 31694), (437, 31559), (509, 31430), (514, 31424), (528, 31400), (534, 31385), (542, 31358), (553, 31328), (585, 31247), (588, 31238), (616, 31178), (627, 31157), (681, 31043), (689, 31025), (794, 30647), (810, 30629), (828, 30563), (832, 30548), (909, 30329), (922, 30287), (946, 30203), (967, 30170),

Gene: Adolin\_40 Start: 27791, Stop: 29701, Start Num: 245

Candidate Starts for Adolin\_40:

(Start: 245 @27791 has 74 MA's), (279, 27839), (416, 28088), (448, 28178), (541, 28430), (544, 28439), (585, 28538), (591, 28553), (625, 28622), (659, 28691), (717, 28829), (743, 28949), (752, 28979), (760, 29012), (767, 29036), (783, 29102), (825, 29237), (834, 29267), (902, 29438), (910, 29480), (922, 29513), (946, 29597), (949, 29606), (955, 29618),

Gene: Adriana\_62 Start: 55113, Stop: 53254, Start Num: 205

Candidate Starts for Adriana\_62:

(Start: 188 @55137 has 1 MA's), (Start: 205 @55113 has 304 MA's), (Start: 235 @55089 has 6 MA's), (Start: 250 @55083 has 2 MA's), (Start: 274 @55041 has 6 MA's), (283, 55020), (337, 54906), (342, 54900), (360, 54870), (391, 54810), (399, 54789), (421, 54735), (428, 54723), (434, 54705), (436, 54693), (476, 54588), (519, 54531), (538, 54495), (542, 54483), (552, 54456), (556, 54447), (570, 54411), (598, 54354), (602, 54345), (603, 54342), (604, 54339), (738, 53982), (744, 53949), (750, 53928), (777, 53835), (780, 53826), (795, 53763), (814, 53727), (815, 53724), (820, 53709), (847, 53631), (851, 53619), (858, 53598), (875, 53559), (905, 53469), (910, 53451), (912, 53445), (917, 53430), (926, 53406), (930, 53391), (931, 53388), (933, 53376), (940, 53352), (963, 53304), (972, 53280),

Gene: Adumb2043\_38 Start: 28808, Stop: 30673, Start Num: 245

Candidate Starts for Adumb2043\_38:

(Start: 245 @28808 has 74 MA's), (279, 28856), (364, 29012), (400, 29075), (422, 29126), (448, 29195), (541, 29402), (580, 29501), (585, 29510), (591, 29525), (598, 29537), (613, 29570), (659, 29663), (687, 29720), (717, 29801), (743, 29921), (752, 29951), (767, 30008), (781, 30065), (783, 30074), (813, 30167), (834, 30239), (840, 30248), (878, 30347), (902, 30410), (939, 30545), (946, 30569), (949, 30578), (988, 30656),

Gene: Adzzy\_46 Start: 30091, Stop: 28304, Start Num: 246

Candidate Starts for Adzzy\_46:

(Start: 246 @30091 has 877 MA's), (364, 29887), (368, 29878), (400, 29815), (402, 29812), (416, 29785), (425, 29758), (433, 29737), (479, 29605), (539, 29512), (556, 29464), (598, 29374), (620, 29326), (743, 29020), (766, 28936), (767, 28933), (776, 28897), (783, 28867), (793, 28828), (810, 28807), (814, 28786), (853, 28669), (864, 28642), (880, 28606), (888, 28588), (902, 28552), (905, 28528), (946, 28393), (950, 28381), (955, 28372),

Gene: Aelin\_60 Start: 54050, Stop: 52191, Start Num: 205

Candidate Starts for Aelin\_60:

(Start: 188 @54074 has 1 MA's), (Start: 205 @54050 has 304 MA's), (Start: 235 @54026 has 6 MA's), (Start: 250 @54020 has 2 MA's), (Start: 274 @53978 has 6 MA's), (283, 53957), (337, 53843), (342, 53837), (360, 53807), (391, 53747), (399, 53726), (421, 53672), (428, 53660), (434, 53642), (436, 53630), (476, 53525), (519, 53468), (538, 53432), (542, 53420), (551, 53396), (556, 53384), (564, 53366), (570, 53348), (580, 53330), (598, 53291), (602, 53282), (603, 53279), (604, 53276), (738, 52919), (744, 52886), (750, 52865), (777, 52772), (780, 52763), (795, 52700), (814, 52664), (815, 52661), (820, 52646), (847, 52568), (851, 52556), (858, 52535), (875, 52496), (905, 52406), (910, 52388), (912, 52382), (917, 52367), (926, 52343), (930, 52328), (931, 52325), (933, 52313), (940, 52289), (963, 52241), (972, 52217),

Gene: Aeneas\_47 Start: 34971, Stop: 33184, Start Num: 246

Candidate Starts for Aeneas\_47:

(Start: 246 @34971 has 877 MA's), (368, 34758), (374, 34743), (416, 34665), (422, 34644), (425, 34638), (429, 34629), (458, 34545), (470, 34512), (479, 34485), (539, 34392), (544, 34377), (551, 34356), (556, 34344), (578, 34293), (580, 34290), (612, 34224), (627, 34194), (639, 34164), (662, 34119), (683, 34080), (743, 33900), (753, 33852), (767, 33813), (783, 33747), (812, 33675), (814, 33666), (843, 33582), (876, 33495), (917, 33369), (922, 33357), (939, 33297), (946, 33273), (948, 33267),

Gene: Agaliana\_41 Start: 31606, Stop: 29780, Start Num: 246

Candidate Starts for Agaliana\_41:

(Start: 246 @31606 has 877 MA's), (368, 31393), (374, 31378), (416, 31300), (422, 31279), (425, 31273), (429, 31264), (470, 31147), (479, 31120), (539, 31027), (544, 31012), (556, 30979), (578, 30928), (580, 30925), (612, 30859), (627, 30829), (639, 30799), (662, 30754), (683, 30715), (743, 30535), (753, 30487), (767, 30448), (783, 30382), (814, 30301), (815, 30298), (843, 30217), (899, 30082), (902, 30067), (903, 30064), (909, 30028), (917, 30004), (921, 29995), (925, 29983), (932, 29956), (946, 29908), (955, 29887),

Gene: Agape74\_46 Start: 31661, Stop: 29874, Start Num: 246

Candidate Starts for Agape74\_46:

(166, 31748), (Start: 246 @31661 has 877 MA's), (366, 31454), (368, 31448), (375, 31433), (383, 31418), (402, 31382), (416, 31355), (425, 31328), (433, 31307), (479, 31175), (539, 31082), (556, 31034), (560, 31025), (568, 31010), (598, 30944), (635, 30863), (659, 30815), (662, 30809), (697, 30746), (743, 30590), (755, 30539), (766, 30506), (767, 30503), (783, 30437), (793, 30398), (810, 30377), (831, 30302), (834, 30290), (853, 30239), (880, 30176), (888, 30158), (902, 30122), (905, 30098), (930, 30020), (946, 29963), (950, 29951), (955, 29942),

Gene: Agatha\_43 Start: 32554, Stop: 30161, Start Num: 36

Candidate Starts for Agatha\_43:

(Start: 36 @32554 has 16 MA's), (47, 32548), (Start: 59 @32500 has 1 MA's), (75, 32458), (84, 32434), (128, 32308), (138, 32284), (179, 32239), (Start: 215 @32188 has 2 MA's), (223, 32173), (Start: 241 @32152 has 13 MA's), (275, 32104), (289, 32071), (295, 32062), (329, 31987), (335, 31975), (374, 31906), (391, 31879), (394, 31873), (398, 31858), (420, 31804), (421, 31801), (430, 31783), (435, 31762), (457, 31702), (499, 31579), (500, 31573), (526, 31504), (539, 31462), (605, 31375), (615, 31351), (633, 31345), (643, 31321), (647, 31312), (654, 31297), (660, 31285), (680, 31243), (682, 31240), (683, 31237), (703, 31201), (733, 31090), (749, 31021), (750, 31015), (760, 30979), (774, 30922), (783, 30886), (792, 30850), (794, 30844), (796, 30838), (797, 30832), (815, 30775), (822, 30751), (836, 30706), (947, 30325), (968, 30280), (971, 30271), (995, 30211), (1004, 30193),

Gene: AgentM\_37 Start: 30104, Stop: 28245, Start Num: 246

Candidate Starts for AgentM\_37:

(Start: 246 @30104 has 877 MA's), (280, 30053), (318, 29993), (347, 29930), (364, 29900), (366, 29897), (395, 29840), (400, 29828), (416, 29798), (425, 29771), (461, 29669), (467, 29654), (479, 29618), (523, 29558), (539, 29522), (556, 29474), (594, 29390), (598, 29384), (633, 29312), (646, 29279), (654, 29264), (662, 29252), (712, 29153), (743, 29018), (752, 28988), (753, 28970), (762, 28952), (767, 28931), (771, 28922), (783, 28865), (793, 28826), (814, 28784), (820, 28766), (834, 28718), (853, 28667), (876, 28613), (880, 28604), (888, 28586), (905, 28526), (910, 28508), (939, 28415), (946, 28391), (950, 28379), (1007, 28262), (1008, 28259),

Gene: Agente005\_39 Start: 29167, Stop: 27299, Start Num: 301

Candidate Starts for Agente005\_39:

(Start: 182 @29332 has 4 MA's), (214, 29287), (Start: 250 @29242 has 2 MA's), (Start: 301 @29167 has 110 MA's), (Start: 308 @29158 has 5 MA's), (430, 28900), (432, 28894), (435, 28879), (438, 28873), (501, 28687), (531, 28600), (537, 28591), (539, 28579), (548, 28552), (549, 28549), (554, 28534), (556, 28528), (562, 28516), (585, 28492), (718, 28198), (776, 27985), (779, 27976), (783, 27955), (794, 27913), (822, 27823), (836, 27778), (878, 27664), (885, 27634), (903, 27565), (906, 27541), (919, 27502), (932, 27457),

Gene: Aglet\_49 Start: 31854, Stop: 30040, Start Num: 246

Candidate Starts for Aglet\_49:

(Start: 246 @31854 has 877 MA's), (275, 31815), (280, 31803), (364, 31650), (371, 31635), (400, 31578), (425, 31521), (429, 31512), (444, 31470), (461, 31419), (479, 31368), (539, 31275), (556, 31227), (560, 31218), (568, 31203), (585, 31164), (598, 31137), (612, 31107), (654, 31014), (686, 30954), (697, 30939), (743, 30783), (767, 30696), (780, 30648), (783, 30630), (793, 30591), (815, 30519), (827, 30480), (834, 30456), (843, 30438), (853, 30405), (864, 30378), (888, 30324), (905, 30264), (930, 30186), (946, 30129), (950, 30117), (955, 30108),

Gene: AgronaGT15\_47 Start: 31705, Stop: 29891, Start Num: 246

Candidate Starts for AgronaGT15\_47:

(Start: 246 @31705 has 877 MA's), (275, 31666), (280, 31654), (364, 31501), (371, 31486), (400, 31429), (425, 31372), (429, 31363), (444, 31321), (461, 31270), (479, 31219), (521, 31165), (539, 31126), (556, 31078), (568, 31054), (585, 31015), (598, 30988), (612, 30958), (654, 30865), (662, 30853), (686, 30805), (697, 30790), (743, 30634), (755, 30583), (766, 30550), (767, 30547), (783, 30481), (793, 30442), (815, 30370), (827, 30331), (834, 30307), (843, 30289), (853, 30256), (905, 30115), (932, 30028), (946, 29980), (950, 29968), (955, 29959), (957, 29956),

Gene: Ahwei\_52 Start: 52985, Stop: 51162, Start Num: 197

Candidate Starts for Ahwei\_52:

(Start: 182 @53003 has 4 MA's), (Start: 197 @52985 has 27 MA's), (Start: 250 @52961 has 2 MA's), (267, 52934), (Start: 274 @52919 has 6 MA's), (283, 52898), (329, 52811), (387, 52706), (406, 52664), (434, 52598), (445, 52568), (448, 52559), (453, 52556), (454, 52553), (463, 52526), (519, 52433), (531, 52415), (538, 52397), (542, 52385), (547, 52370), (552, 52358), (602, 52247), (603, 52244), (615, 52214), (633, 52178), (724, 51953), (725, 51950), (732, 51914), (738, 51890), (744, 51857), (775, 51749), (777, 51743), (779, 51737), (780, 51734), (814, 51635), (815, 51632), (820, 51617), (847, 51539), (851, 51527), (858, 51506), (861, 51497), (875, 51467), (886, 51443), (901, 51410), (905, 51377), (910, 51359), (912, 51353), (926, 51314), (931, 51296), (933, 51284), (940, 51260), (956, 51218), (963, 51212), (972, 51188),

Gene: AikoCarson\_44 Start: 32796, Stop: 30409, Start Num: 45

Candidate Starts for AikoCarson\_44:

(11, 32943), (13, 32901), (20, 32868), (23, 32853), (Start: 45 @32796 has 24 MA's), (48, 32787), (50, 32781), (75, 32700), (106, 32604), (117, 32580), (128, 32553), (138, 32529), (Start: 241 @32397 has 13 MA's), (265, 32370), (273, 32355), (295, 32307), (312, 32277), (329, 32232), (335, 32220), (374, 32154), (398, 32106), (420, 32052), (430, 32031), (435, 32010), (441, 31995), (457, 31950), (499, 31827), (522, 31767), (526, 31752), (539, 31710), (605, 31623), (615, 31599), (633, 31593), (643, 31569), (647, 31560), (680, 31491), (682, 31488), (683, 31485), (722, 31389), (733, 31338), (749, 31269), (750, 31263), (783, 31134), (792, 31098), (794, 31092), (796, 31086), (797, 31080), (805, 31056), (815, 31023), (822, 30999), (836, 30954), (903, 30741), (905, 30720), (910, 30702), (911, 30699), (947, 30573), (968, 30528), (971, 30519),

Gene: AinMach\_42 Start: 30094, Stop: 31947, Start Num: 245

Candidate Starts for AinMach\_42:

(Start: 245 @30094 has 74 MA's), (319, 30211), (327, 30238), (347, 30268), (416, 30391), (422, 30412), (585, 30775), (591, 30790), (659, 30928), (692, 30991), (699, 31012), (743, 31186), (752, 31216), (755, 31237), (767, 31273), (774, 31303), (783, 31339), (813, 31432), (876, 31609), (888, 31639), (902, 31675), (905, 31699), (926, 31762), (946, 31834), (959, 31861), (992, 31930),

Gene: Airmid\_39 Start: 30159, Stop: 28294, Start Num: 246

Candidate Starts for Airmid\_39:

(Start: 246 @30159 has 877 MA's), (318, 30048), (364, 29955), (366, 29952), (400, 29883), (416, 29853), (425, 29826), (429, 29817), (461, 29724), (467, 29709), (479, 29673), (523, 29613), (539, 29577), (554, 29532), (556, 29529), (568, 29505), (594, 29445), (633, 29367), (654, 29319), (662, 29307), (686, 29259), (712, 29208), (743, 29073), (752, 29043), (753, 29025), (767, 28986), (771, 28977), (777, 28947), (783, 28920), (784, 28917), (810, 28860), (814, 28839), (834, 28773), (853, 28722), (876, 28668), (880, 28659), (888, 28641), (910, 28563), (939, 28470), (946, 28446), (950, 28434), (1000, 28329),

Gene: Ajay\_45 Start: 34664, Stop: 32835, Start Num: 246

Candidate Starts for Ajay\_45:

(Start: 246 @34664 has 877 MA's), (368, 34451), (400, 34388), (416, 34358), (422, 34337), (425, 34331), (429, 34322), (470, 34205), (479, 34178), (539, 34085), (544, 34070), (556, 34037), (578, 33986), (580, 33983), (612, 33917), (627, 33887), (639, 33857), (662, 33812), (683, 33773), (743, 33593), (753, 33545), (771, 33497), (780, 33458), (783, 33440), (793, 33401), (810, 33380), (814, 33359), (819, 33344), (861, 33221), (922, 33050), (929, 33026), (943, 32978), (946, 32966), (955, 32945), (959, 32939), (981, 32891), (986, 32876),

Gene: Akoma\_58 Start: 53685, Stop: 51868, Start Num: 247

Candidate Starts for Akoma\_58:

(130, 53868), (Start: 247 @53685 has 43 MA's), (267, 53655), (368, 53475), (417, 53370), (433, 53322), (435, 53310), (448, 53280), (454, 53274), (476, 53211), (478, 53205), (519, 53154), (538, 53118), (556, 53070), (603, 52965), (645, 52869), (674, 52818), (724, 52674), (732, 52635), (739,

52605), (744, 52578), (748, 52566), (775, 52470), (777, 52464), (780, 52455), (782, 52443), (807, 52371), (814, 52341), (820, 52323), (822, 52314), (847, 52245), (851, 52233), (858, 52212), (888, 52143), (898, 52128), (903, 52104), (905, 52083), (910, 52065), (912, 52059), (924, 52026), (926, 52020), (931, 52002), (933, 51990), (936, 51978), (940, 51966), (956, 51924), (972, 51894),

Gene: AksarBAT\_53 Start: 47165, Stop: 45357, Start Num: 241

Candidate Starts for AksarBAT\_53:

(Start: 241 @47165 has 13 MA's), (Start: 250 @47156 has 2 MA's), (273, 47117), (Start: 274 @47114 has 6 MA's), (283, 47093), (287, 47084), (310, 47048), (337, 46988), (366, 46946), (384, 46904), (433, 46796), (436, 46781), (445, 46763), (454, 46748), (476, 46685), (519, 46628), (538, 46592), (542, 46580), (592, 46463), (598, 46451), (603, 46439), (611, 46421), (613, 46415), (724, 46148), (725, 46145), (739, 46079), (744, 46052), (763, 45995), (775, 45944), (777, 45938), (780, 45929), (795, 45866), (815, 45827), (820, 45812), (847, 45734), (851, 45722), (858, 45701), (861, 45692), (875, 45662), (901, 45605), (926, 45509), (931, 45491), (940, 45455), (963, 45407), (972, 45383), (979, 45362),

Gene: Alakazam\_38 Start: 28696, Stop: 26795, Start Num: 299

Candidate Starts for Alakazam\_38:

(Start: 299 @28696 has 38 MA's), (344, 28597), (348, 28591), (378, 28540), (379, 28537), (403, 28486), (406, 28483), (436, 28405), (469, 28312), (504, 28201), (512, 28180), (531, 28126), (536, 28120), (537, 28117), (539, 28105), (549, 28075), (556, 28054), (562, 28042), (574, 28039), (585, 28018), (658, 27871), (702, 27772), (720, 27715), (783, 27448), (792, 27412), (794, 27406), (798, 27391), (820, 27328), (822, 27319), (888, 27121), (906, 27037), (907, 27034), (909, 27025), (919, 26998),

Gene: AlanGrant\_57 Start: 55116, Stop: 53290, Start Num: 197

Candidate Starts for AlanGrant\_57:

(Start: 197 @55116 has 27 MA's), (Start: 230 @55098 has 1 MA's), (Start: 274 @55047 has 6 MA's), (283, 55026), (360, 54888), (387, 54834), (411, 54780), (434, 54726), (445, 54696), (453, 54684), (454, 54681), (519, 54561), (538, 54525), (542, 54513), (552, 54486), (598, 54384), (603, 54372), (619, 54336), (633, 54306), (646, 54273), (674, 54225), (739, 54012), (744, 53985), (775, 53877), (777, 53871), (780, 53862), (782, 53850), (795, 53799), (812, 53772), (814, 53763), (815, 53760), (816, 53757), (820, 53745), (847, 53667), (851, 53655), (858, 53634), (861, 53625), (865, 53616), (905, 53505), (910, 53487), (912, 53481), (926, 53442), (930, 53427), (933, 53412), (936, 53400), (940, 53388), (963, 53340), (972, 53316),

Gene: Alatin\_36 Start: 28180, Stop: 26396, Start Num: 246

Candidate Starts for Alatin\_36:

(Start: 246 @28180 has 877 MA's), (379, 27946), (395, 27916), (399, 27907), (400, 27904), (420, 27859), (425, 27847), (444, 27796), (479, 27694), (496, 27673), (539, 27601), (554, 27556), (556, 27553), (574, 27511), (577, 27505), (585, 27490), (598, 27463), (646, 27358), (652, 27349), (662, 27331), (663, 27328), (683, 27292), (743, 27112), (753, 27064), (783, 26959), (784, 26956), (810, 26899), (814, 26878), (855, 26755), (888, 26680), (902, 26644), (905, 26620), (930, 26542), (946, 26485), (950, 26473), (969, 26434), (978, 26416),

Gene: Albedo\_43 Start: 29891, Stop: 31765, Start Num: 246

Candidate Starts for Albedo\_43:

(Start: 243 @29888 has 7 MA's), (Start: 246 @29891 has 877 MA's), (287, 29960), (Start: 301 @29981 has 110 MA's), (429, 30227), (444, 30269), (550, 30482), (585, 30563), (696, 30797), (731, 30920), (743, 30980), (746, 30986), (755, 31031), (762, 31046), (764, 31061), (774, 31097), (783, 31133), (813, 31226), (844, 31319), (874, 31397), (902, 31469), (909, 31508), (924, 31550), (929, 31568), (946, 31628), (955, 31649),

Gene: Albee\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Albee\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Alberto7\_46 Start: 31907, Stop: 30081, Start Num: 246

Candidate Starts for Alberto7\_46:

(Start: 246 @31907 has 877 MA's), (267, 31886), (280, 31856), (295, 31826), (383, 31664), (394, 31646), (425, 31574), (429, 31565), (471, 31445), (479, 31421), (539, 31328), (558, 31280), (568, 31259), (585, 31220), (646, 31088), (659, 31067), (683, 31022), (687, 31010), (740, 30857), (743, 30836), (776, 30713), (783, 30683), (793, 30644), (814, 30578), (815, 30575), (820, 30560), (827, 30536), (834, 30512), (905, 30305), (946, 30170), (950, 30158), (955, 30149),

Gene: Albright\_40 Start: 28818, Stop: 30692, Start Num: 246

Candidate Starts for Albright\_40:

(Start: 243 @28815 has 7 MA's), (Start: 246 @28818 has 877 MA's), (287, 28887), (Start: 301 @28908 has 110 MA's), (429, 29154), (444, 29196), (550, 29409), (585, 29490), (696, 29724), (731, 29847), (743, 29907), (746, 29913), (755, 29958), (762, 29973), (764, 29988), (774, 30024), (783, 30060), (813, 30153), (844, 30246), (874, 30324), (902, 30396), (909, 30435), (924, 30477), (929, 30495), (946, 30555), (955, 30576),

Gene: AlexAdler\_39 Start: 28925, Stop: 27060, Start Num: 301

Candidate Starts for AlexAdler\_39:

(Start: 238 @29012 has 3 MA's), (Start: 301 @28925 has 110 MA's), (Start: 308 @28916 has 5 MA's), (354, 28811), (358, 28802), (375, 28772), (378, 28769), (433, 28649), (435, 28637), (438, 28631), (475, 28526), (484, 28499), (531, 28358), (536, 28352), (537, 28349), (539, 28337), (548, 28310), (549, 28307), (554, 28292), (556, 28286), (559, 28280), (586, 28247), (676, 28058), (776, 27743), (779, 27734), (780, 27731), (783, 27713), (794, 27671), (796, 27665), (805, 27641), (822, 27584), (878, 27425), (885, 27395), (888, 27386), (903, 27326), (906, 27302), (919, 27263), (929, 27230), (932, 27218), (947, 27158),

Gene: Aliter\_45 Start: 31411, Stop: 29618, Start Num: 246

Candidate Starts for Aliter\_45:

(Start: 246 @31411 has 877 MA's), (261, 31402), (280, 31360), (346, 31240), (347, 31237), (372, 31189), (402, 31129), (417, 31099), (420, 31087), (425, 31075), (479, 30922), (539, 30829), (598, 30691), (612, 30661), (687, 30502), (697, 30490), (714, 30463), (740, 30355), (743, 30334), (780, 30199), (783, 30181), (814, 30100), (827, 30058), (853, 29983), (886, 29908), (902, 29866), (930, 29764), (946, 29707), (950, 29695), (955, 29686),

Gene: Allegro\_57 Start: 52477, Stop: 50648, Start Num: 205

Candidate Starts for Allegro\_57:

(Start: 205 @52477 has 304 MA's), (Start: 250 @52450 has 2 MA's), (269, 52420), (Start: 274 @52408 has 6 MA's), (286, 52381), (287, 52378), (293, 52369), (318, 52351), (366, 52255), (391, 52204), (400, 52180), (411, 52156), (463, 52018), (472, 51994), (476, 51982), (519, 51925), (538, 51889), (542, 51877), (551, 51853), (588, 51769), (602, 51739), (603, 51736), (615, 51706), (680, 51562), (707, 51496), (721, 51457), (724, 51445), (727, 51424), (732, 51406), (744, 51349), (771, 51265), (777, 51235), (780, 51226), (795, 51160), (812, 51133), (814, 51124), (820, 51106), (827, 51082), (847, 51028), (851, 51016), (858, 50995), (888, 50926), (905, 50866), (910, 50848), (922, 50815), (926, 50803), (930, 50788), (931, 50785), (933, 50773), (940, 50749), (941, 50746), (963, 50698), (965, 50695), (972, 50674), (979, 50653),

Gene: Alma\_45 Start: 31495, Stop: 29702, Start Num: 246

Candidate Starts for Alma\_45:

(Start: 246 @31495 has 877 MA's), (261, 31486), (325, 31357), (347, 31321), (364, 31291), (368, 31282), (383, 31249), (400, 31216), (402, 31213), (417, 31183), (420, 31171), (425, 31159), (479, 31006), (539, 30913), (598, 30775), (612, 30745), (687, 30586), (697, 30574), (714, 30547), (740, 30439), (743, 30418), (780, 30283), (783, 30265), (814, 30184), (853, 30067), (861, 30046), (886, 29992), (902, 29950), (905, 29926), (930, 29848), (946, 29791), (950, 29779), (955, 29770),

Gene: Alone3\_143 Start: 75999, Stop: 78035, Start Num: 272

Candidate Starts for Alone3\_143:

(Start: 272 @75999 has 4 MA's), (305, 76065), (317, 76089), (330, 76140), (331, 76143), (336, 76155), (351, 76188), (388, 76257), (439, 76392), (452, 76428), (511, 76548), (533, 76602), (535, 76605), (550, 76656), (554, 76668), (585, 76737), (594, 76758), (616, 76806), (621, 76815), (745, 77193), (770, 77310), (773, 77328), (797, 77424), (811, 77460), (830, 77529), (832, 77538), (834, 77544), (884, 77682), (887, 77697), (892, 77712), (909, 77796), (910, 77799), (932, 77871), (952, 77943), (973, 77997), (976, 78003),

Gene: Alpacados\_35 Start: 28085, Stop: 26301, Start Num: 246

Candidate Starts for Alpacados\_35:

(Start: 246 @28085 has 877 MA's), (346, 27914), (379, 27851), (395, 27821), (399, 27812), (400, 27809), (420, 27764), (425, 27752), (429, 27743), (444, 27701), (479, 27599), (496, 27578), (539, 27506), (554, 27461), (556, 27458), (574, 27416), (577, 27410), (585, 27395), (598, 27368), (646, 27263), (662, 27236), (683, 27197), (743, 27017), (753, 26969), (783, 26864), (784, 26861), (810, 26804), (814, 26783), (827, 26741), (829, 26735), (855, 26660), (886, 26591), (902, 26549), (905, 26525), (930, 26447), (946, 26390), (950, 26378), (978, 26321),

Gene: Alsfro\_48 Start: 34937, Stop: 33111, Start Num: 246

Candidate Starts for Alsfro\_48:

(Start: 246 @34937 has 877 MA's), (368, 34724), (374, 34709), (416, 34631), (422, 34610), (425, 34604), (429, 34595), (470, 34478), (479, 34451), (539, 34358), (544, 34343), (556, 34310), (578, 34259), (580, 34256), (612, 34190), (639, 34130), (662, 34085), (683, 34046), (743, 33866), (753, 33818), (767, 33779), (783, 33713), (793, 33674), (810, 33653), (814, 33632), (820, 33614), (843, 33548), (902, 33398), (903, 33395), (909, 33359), (917, 33335), (921, 33326), (925, 33314), (946, 33239), (955, 33218),

Gene: AltPhacts\_60 Start: 53599, Stop: 51740, Start Num: 205

Candidate Starts for AltPhacts\_60:

(Start: 188 @53623 has 1 MA's), (Start: 205 @53599 has 304 MA's), (Start: 235 @53575 has 6 MA's), (Start: 250 @53569 has 2 MA's), (267, 53542), (Start: 274 @53527 has 6 MA's), (283, 53506), (337, 53392), (342, 53386), (360, 53356), (391, 53296), (399, 53275), (421, 53221), (428, 53209), (434, 53191), (436, 53179), (476, 53074), (519, 53017), (538, 52981), (542, 52969), (551, 52945), (556, 52933), (570, 52897), (598, 52840), (602, 52831), (603, 52828), (604, 52825), (738, 52468), (744, 52435), (750, 52414), (777, 52321), (780, 52312), (795, 52249), (814, 52213), (815, 52210), (820, 52195), (847, 52117), (851, 52105), (858, 52084), (875, 52045), (905, 51955), (910, 51937), (912, 51931), (917, 51916), (926, 51892), (930, 51877), (931, 51874), (933, 51862), (940, 51838), (963, 51790), (972, 51766),

Gene: Altman\_46 Start: 35175, Stop: 33349, Start Num: 246

Candidate Starts for Altman\_46:

(Start: 246 @35175 has 877 MA's), (368, 34962), (400, 34899), (416, 34869), (422, 34848), (425, 34842), (429, 34833), (470, 34716), (479, 34689), (539, 34596), (544, 34581), (578, 34497), (580, 34494), (612, 34428), (627, 34398), (639, 34368), (662, 34323), (683, 34284), (743, 34104), (753,

34056), (767, 34017), (783, 33951), (793, 33912), (810, 33891), (814, 33870), (820, 33852), (843, 33786), (902, 33636), (903, 33633), (909, 33597), (917, 33573), (921, 33564), (925, 33552), (946, 33477), (955, 33456),

Gene: Altwerkus\_58 Start: 53696, Stop: 51837, Start Num: 205

Candidate Starts for Altwerkus\_58:

(Start: 188 @53720 has 1 MA's), (Start: 205 @53696 has 304 MA's), (Start: 235 @53672 has 6 MA's), (Start: 250 @53666 has 2 MA's), (Start: 274 @53624 has 6 MA's), (283, 53603), (337, 53489), (342, 53483), (360, 53453), (391, 53393), (399, 53372), (421, 53318), (428, 53306), (434, 53288), (436, 53276), (476, 53171), (519, 53114), (538, 53078), (542, 53066), (552, 53039), (564, 53012), (570, 52994), (580, 52976), (598, 52937), (602, 52928), (603, 52925), (712, 52667), (738, 52565), (744, 52532), (750, 52511), (777, 52418), (780, 52409), (795, 52346), (814, 52310), (815, 52307), (820, 52292), (847, 52214), (851, 52202), (858, 52181), (875, 52142), (905, 52052), (910, 52034), (912, 52028), (917, 52013), (926, 51989), (930, 51974), (931, 51971), (933, 51959), (940, 51935), (963, 51887), (972, 51863),

Gene: Alvin\_44 Start: 35187, Stop: 33358, Start Num: 246

Candidate Starts for Alvin\_44:

(Start: 246 @35187 has 877 MA's), (346, 35016), (368, 34974), (374, 34959), (400, 34911), (416, 34881), (422, 34860), (425, 34854), (429, 34845), (470, 34728), (479, 34701), (539, 34608), (544, 34593), (578, 34509), (580, 34506), (612, 34440), (627, 34410), (639, 34380), (662, 34335), (683, 34296), (743, 34116), (753, 34068), (771, 34020), (780, 33981), (783, 33963), (793, 33924), (810, 33903), (814, 33882), (819, 33867), (861, 33744), (876, 33711), (922, 33573), (929, 33549), (943, 33501), (946, 33489), (955, 33468), (959, 33462), (981, 33414), (986, 33399),

Gene: Alyxandracam\_39 Start: 28935, Stop: 27070, Start Num: 301

Candidate Starts for Alyxandracam\_39:

(Start: 238 @29022 has 3 MA's), (Start: 241 @29019 has 13 MA's), (Start: 301 @28935 has 110 MA's), (Start: 308 @28926 has 5 MA's), (354, 28821), (358, 28812), (375, 28782), (378, 28779), (432, 28662), (435, 28647), (438, 28641), (475, 28536), (484, 28509), (531, 28368), (537, 28359), (539, 28347), (548, 28320), (549, 28317), (554, 28302), (556, 28296), (559, 28290), (586, 28257), (676, 28068), (776, 27753), (779, 27744), (780, 27741), (783, 27723), (794, 27681), (796, 27675), (805, 27651), (822, 27594), (878, 27435), (885, 27405), (888, 27396), (903, 27336), (906, 27312), (919, 27273), (929, 27240), (932, 27228), (947, 27168),

Gene: Amavida\_56 Start: 36664, Stop: 34496, Start Num: 233

Candidate Starts for Amavida\_56:

(231, 36667), (Start: 233 @36664 has 13 MA's), (Start: 272 @36610 has 4 MA's), (317, 36526), (382, 36373), (387, 36364), (405, 36319), (431, 36241), (434, 36232), (438, 36217), (446, 36202), (447, 36199), (466, 36142), (490, 36049), (493, 36007), (567, 35812), (570, 35800), (572, 35794), (581, 35770), (590, 35749), (600, 35728), (606, 35713), (609, 35707), (638, 35644), (662, 35593), (693, 35506), (714, 35446), (726, 35398), (751, 35296), (752, 35290), (757, 35263), (758, 35260), (766, 35239), (777, 35197), (779, 35191), (784, 35167), (794, 35125), (795, 35122), (802, 35095), (811, 35062), (813, 35050), (823, 35014), (831, 34990), (832, 34984), (834, 34978), (854, 34924), (875, 34876), (876, 34873), (897, 34813), (902, 34789), (907, 34759), (923, 34705), (926, 34696), (940, 34636), (944, 34624), (958, 34585),

Gene: Amigo\_55 Start: 36879, Stop: 34711, Start Num: 233

Candidate Starts for Amigo\_55:

(231, 36882), (Start: 233 @36879 has 13 MA's), (Start: 272 @36825 has 4 MA's), (317, 36741), (382, 36588), (387, 36579), (405, 36534), (431, 36456), (434, 36447), (438, 36432), (446, 36417), (447, 36414), (466, 36357), (490, 36264), (493, 36222), (567, 36027), (570, 36015), (572, 36009), (581, 35985), (590, 35964), (600, 35943), (606, 35928), (609, 35922), (638, 35859), (662, 35808), (693,



35721), (714, 35661), (726, 35613), (751, 35511), (752, 35505), (757, 35478), (758, 35475), (766, 35454), (777, 35412), (779, 35406), (784, 35382), (794, 35340), (795, 35337), (802, 35310), (811, 35277), (813, 35265), (823, 35229), (831, 35205), (832, 35199), (834, 35193), (854, 35139), (875, 35091), (876, 35088), (897, 35028), (902, 35004), (907, 34974), (923, 34920), (940, 34851), (944, 34839), (958, 34800),

Gene: Amok\_44 Start: 32820, Stop: 30433, Start Num: 45

Candidate Starts for Amok\_44:

(13, 32925), (20, 32892), (23, 32877), (Start: 45 @32820 has 24 MA's), (48, 32811), (50, 32805), (75, 32724), (106, 32628), (117, 32604), (128, 32577), (138, 32553), (Start: 241 @32421 has 13 MA's), (265, 32394), (273, 32379), (295, 32331), (312, 32301), (329, 32256), (335, 32244), (374, 32178), (398, 32130), (420, 32076), (430, 32055), (435, 32034), (441, 32019), (457, 31974), (499, 31851), (522, 31791), (526, 31776), (539, 31734), (605, 31647), (615, 31623), (633, 31617), (643, 31593), (647, 31584), (680, 31515), (682, 31512), (683, 31509), (722, 31413), (733, 31362), (749, 31293), (750, 31287), (783, 31158), (792, 31122), (794, 31116), (796, 31110), (797, 31104), (805, 31080), (815, 31047), (822, 31023), (836, 30978), (903, 30765), (905, 30744), (910, 30726), (911, 30723), (947, 30597), (968, 30552), (971, 30543),

Gene: Amyev\_40 Start: 30363, Stop: 32228, Start Num: 245

Candidate Starts for Amyev\_40:

(Start: 180 @30285 has 1 MA's), (Start: 245 @30363 has 74 MA's), (279, 30411), (347, 30537), (364, 30567), (382, 30594), (386, 30600), (416, 30660), (448, 30750), (541, 30957), (544, 30966), (585, 31065), (591, 31080), (659, 31218), (717, 31356), (737, 31443), (743, 31476), (760, 31539), (767, 31563), (781, 31620), (783, 31629), (813, 31722), (834, 31794), (878, 31902), (902, 31965), (905, 31989), (946, 32124), (949, 32133),

Gene: AnClar\_50 Start: 47971, Stop: 46157, Start Num: 235

Candidate Starts for AnClar\_50:

(171, 48061), (175, 48055), (Start: 235 @47971 has 6 MA's), (Start: 250 @47962 has 2 MA's), (Start: 274 @47920 has 6 MA's), (337, 47794), (366, 47752), (384, 47710), (417, 47641), (433, 47602), (435, 47590), (436, 47587), (469, 47512), (476, 47491), (538, 47398), (591, 47272), (598, 47257), (603, 47245), (642, 47155), (727, 46933), (744, 46858), (777, 46744), (780, 46735), (795, 46672), (815, 46633), (820, 46618), (847, 46540), (851, 46528), (852, 46522), (858, 46507), (861, 46498), (865, 46489), (901, 46411), (905, 46378), (906, 46375), (924, 46321), (926, 46315), (934, 46279), (940, 46255), (972, 46183),

Gene: Anansi\_54 Start: 36486, Stop: 34318, Start Num: 233

Candidate Starts for Anansi\_54:

(231, 36489), (Start: 233 @36486 has 13 MA's), (Start: 272 @36432 has 4 MA's), (317, 36348), (382, 36195), (387, 36186), (405, 36141), (431, 36063), (434, 36054), (438, 36039), (446, 36024), (447, 36021), (466, 35964), (490, 35871), (493, 35829), (567, 35634), (570, 35622), (572, 35616), (581, 35592), (590, 35571), (600, 35550), (606, 35535), (609, 35529), (638, 35466), (662, 35415), (693, 35328), (714, 35268), (726, 35220), (751, 35118), (752, 35112), (757, 35085), (758, 35082), (766, 35061), (777, 35019), (779, 35013), (784, 34989), (794, 34947), (795, 34944), (802, 34917), (811, 34884), (813, 34872), (823, 34836), (831, 34812), (832, 34806), (834, 34800), (854, 34746), (875, 34698), (876, 34695), (897, 34635), (902, 34611), (907, 34581), (923, 34527), (940, 34458), (944, 34446), (958, 34407),

Gene: AnarQue\_54 Start: 48016, Stop: 46199, Start Num: 241

Candidate Starts for AnarQue\_54:

(Start: 241 @48016 has 13 MA's), (Start: 250 @48007 has 2 MA's), (267, 47980), (273, 47968), (283, 47944), (287, 47935), (366, 47797), (381, 47761), (417, 47686), (445, 47611), (476, 47533), (519, 47476), (538, 47440), (542, 47428), (551, 47404), (592, 47311), (603, 47287), (611, 47269), (724,

46996), (732, 46957), (739, 46927), (744, 46900), (775, 46792), (777, 46786), (780, 46777), (812, 46687), (814, 46678), (815, 46675), (820, 46660), (847, 46582), (851, 46570), (852, 46564), (858, 46549), (879, 46501), (901, 46453), (905, 46420), (912, 46396), (926, 46357), (930, 46342), (940, 46297), (972, 46225),

Gene: Anaysia\_47 Start: 29967, Stop: 28177, Start Num: 246

Candidate Starts for Anaysia\_47:

(Start: 246 @29967 has 877 MA's), (347, 29793), (400, 29688), (402, 29685), (416, 29658), (425, 29631), (444, 29580), (479, 29478), (539, 29385), (554, 29340), (556, 29337), (560, 29328), (635, 29166), (646, 29139), (659, 29118), (662, 29112), (717, 29013), (726, 28974), (738, 28923), (743, 28893), (755, 28842), (766, 28809), (774, 28776), (776, 28770), (783, 28740), (810, 28680), (814, 28659), (827, 28617), (835, 28590), (843, 28575), (876, 28488), (902, 28425), (903, 28422), (946, 28266), (950, 28254), (957, 28242),

Gene: AndPeggy\_40 Start: 32151, Stop: 29764, Start Num: 45

Candidate Starts for AndPeggy\_40:

(20, 32223), (23, 32208), (Start: 45 @32151 has 24 MA's), (48, 32142), (50, 32136), (75, 32055), (117, 31935), (138, 31884), (Start: 241 @31752 has 13 MA's), (265, 31725), (312, 31632), (329, 31587), (367, 31527), (374, 31509), (398, 31461), (420, 31407), (421, 31404), (430, 31386), (435, 31365), (454, 31314), (457, 31305), (458, 31302), (484, 31227), (499, 31182), (522, 31122), (526, 31107), (559, 31023), (605, 30978), (615, 30954), (633, 30948), (643, 30924), (680, 30846), (682, 30843), (683, 30840), (733, 30693), (749, 30624), (774, 30525), (783, 30489), (792, 30453), (794, 30447), (796, 30441), (797, 30435), (805, 30411), (815, 30378), (822, 30354), (836, 30309), (856, 30249), (903, 30096), (905, 30075), (910, 30057), (911, 30054), (947, 29928), (968, 29883), (971, 29874),

Gene: Anderson\_61 Start: 54268, Stop: 52409, Start Num: 205

Candidate Starts for Anderson\_61:

(Start: 188 @54292 has 1 MA's), (Start: 205 @54268 has 304 MA's), (Start: 235 @54244 has 6 MA's), (Start: 250 @54238 has 2 MA's), (Start: 274 @54196 has 6 MA's), (283, 54175), (337, 54061), (342, 54055), (360, 54025), (391, 53965), (399, 53944), (421, 53890), (428, 53878), (434, 53860), (436, 53848), (476, 53743), (519, 53686), (538, 53650), (542, 53638), (551, 53614), (556, 53602), (564, 53584), (570, 53566), (580, 53548), (598, 53509), (602, 53500), (603, 53497), (604, 53494), (712, 53239), (738, 53137), (744, 53104), (750, 53083), (777, 52990), (780, 52981), (795, 52918), (814, 52882), (815, 52879), (820, 52864), (847, 52786), (851, 52774), (858, 52753), (875, 52714), (905, 52624), (910, 52606), (912, 52600), (917, 52585), (926, 52561), (930, 52546), (931, 52543), (933, 52531), (940, 52507), (946, 52486), (963, 52459), (972, 52435),

Gene: Andre\_62 Start: 54444, Stop: 52585, Start Num: 205

Candidate Starts for Andre\_62:

(Start: 188 @54468 has 1 MA's), (Start: 205 @54444 has 304 MA's), (Start: 235 @54420 has 6 MA's), (Start: 250 @54414 has 2 MA's), (Start: 274 @54372 has 6 MA's), (283, 54351), (337, 54237), (342, 54231), (360, 54201), (391, 54141), (399, 54120), (421, 54066), (428, 54054), (434, 54036), (436, 54024), (476, 53919), (519, 53862), (538, 53826), (542, 53814), (552, 53787), (564, 53760), (570, 53742), (580, 53724), (598, 53685), (602, 53676), (603, 53673), (738, 53313), (744, 53280), (750, 53259), (777, 53166), (780, 53157), (795, 53094), (814, 53058), (815, 53055), (820, 53040), (847, 52962), (851, 52950), (858, 52929), (875, 52890), (905, 52800), (910, 52782), (912, 52776), (917, 52761), (926, 52737), (930, 52722), (931, 52719), (933, 52707), (940, 52683), (963, 52635), (972, 52611),

Gene: Andromedas\_38 Start: 28731, Stop: 26866, Start Num: 299

Candidate Starts for Andromedas\_38:

(Start: 299 @28731 has 38 MA's), (320, 28686), (344, 28632), (379, 28572), (403, 28521), (435, 28443), (438, 28437), (454, 28392), (455, 28389), (456, 28386), (469, 28347), (489, 28287), (531,

28164), (537, 28155), (539, 28143), (543, 28131), (549, 28113), (556, 28092), (562, 28080), (658, 27909), (724, 27741), (771, 27576), (779, 27540), (783, 27519), (794, 27477), (822, 27390), (836, 27345), (872, 27246), (885, 27201), (888, 27192), (903, 27132), (906, 27108), (917, 27075), (947, 26964),

Gene: Aneem\_45 Start: 30776, Stop: 28989, Start Num: 246

Candidate Starts for Aneem\_45:

(Start: 246 @30776 has 877 MA's), (364, 30572), (400, 30500), (416, 30470), (425, 30443), (541, 30191), (560, 30140), (598, 30059), (619, 30014), (687, 29873), (715, 29831), (726, 29786), (743, 29705), (755, 29654), (767, 29618), (783, 29552), (810, 29492), (812, 29480), (846, 29378), (853, 29354), (860, 29336), (888, 29273), (901, 29246), (902, 29237), (905, 29213), (946, 29078), (950, 29066), (955, 29057),

Gene: AngelCake\_59 Start: 54371, Stop: 52512, Start Num: 205

Candidate Starts for AngelCake\_59:

(Start: 188 @54395 has 1 MA's), (Start: 205 @54371 has 304 MA's), (Start: 235 @54347 has 6 MA's), (Start: 250 @54341 has 2 MA's), (Start: 274 @54299 has 6 MA's), (283, 54278), (337, 54164), (342, 54158), (360, 54128), (391, 54068), (399, 54047), (421, 53993), (428, 53981), (434, 53963), (436, 53951), (476, 53846), (519, 53789), (538, 53753), (542, 53741), (551, 53717), (556, 53705), (564, 53687), (570, 53669), (580, 53651), (598, 53612), (602, 53603), (603, 53600), (604, 53597), (738, 53240), (744, 53207), (750, 53186), (777, 53093), (780, 53084), (795, 53021), (814, 52985), (815, 52982), (820, 52967), (847, 52889), (851, 52877), (858, 52856), (875, 52817), (905, 52727), (910, 52709), (912, 52703), (917, 52688), (926, 52664), (930, 52649), (931, 52646), (933, 52634), (940, 52610), (963, 52562), (972, 52538),

Gene: Anglerfish\_45 Start: 34722, Stop: 32896, Start Num: 246

Candidate Starts for Anglerfish\_45:

(Start: 246 @34722 has 877 MA's), (368, 34509), (374, 34494), (400, 34446), (416, 34416), (422, 34395), (425, 34389), (429, 34380), (470, 34263), (479, 34236), (539, 34143), (544, 34128), (556, 34095), (578, 34044), (580, 34041), (612, 33975), (627, 33945), (639, 33915), (662, 33870), (683, 33831), (743, 33651), (753, 33603), (767, 33564), (783, 33498), (793, 33459), (810, 33438), (814, 33417), (820, 33399), (843, 33333), (902, 33183), (903, 33180), (909, 33144), (917, 33120), (921, 33111), (925, 33099), (932, 33072), (946, 33024), (955, 33003),

Gene: AngryOrchard\_34 Start: 28044, Stop: 26260, Start Num: 246

Candidate Starts for AngryOrchard\_34:

(Start: 246 @28044 has 877 MA's), (346, 27873), (383, 27801), (399, 27771), (400, 27768), (420, 27723), (425, 27711), (429, 27702), (444, 27660), (479, 27558), (496, 27537), (519, 27507), (539, 27465), (556, 27417), (585, 27354), (598, 27327), (646, 27222), (652, 27213), (662, 27195), (683, 27156), (743, 26976), (753, 26928), (783, 26823), (784, 26820), (810, 26763), (814, 26742), (855, 26619), (886, 26550), (902, 26508), (903, 26505), (905, 26484), (930, 26406), (946, 26349), (950, 26337), (969, 26298), (978, 26280),

Gene: Anilorac\_39 Start: 29011, Stop: 27143, Start Num: 301

Candidate Starts for Anilorac\_39:

(Start: 182 @29176 has 4 MA's), (214, 29131), (Start: 250 @29086 has 2 MA's), (Start: 301 @29011 has 110 MA's), (Start: 308 @29002 has 5 MA's), (430, 28744), (432, 28738), (435, 28723), (438, 28717), (501, 28531), (531, 28444), (537, 28435), (539, 28423), (548, 28396), (549, 28393), (554, 28378), (556, 28372), (562, 28360), (585, 28336), (718, 28042), (776, 27829), (779, 27820), (783, 27799), (794, 27757), (822, 27667), (836, 27622), (878, 27508), (885, 27478), (903, 27409), (906, 27385), (919, 27346), (932, 27301),

Gene: AnnaL29\_46 Start: 32316, Stop: 30529, Start Num: 246

Candidate Starts for AnnaL29\_46:

(Start: 246 @32316 has 877 MA's), (364, 32112), (366, 32109), (375, 32088), (383, 32073), (400, 32040), (416, 32010), (425, 31983), (433, 31962), (444, 31932), (479, 31830), (539, 31737), (556, 31689), (560, 31680), (568, 31665), (598, 31599), (635, 31518), (659, 31470), (698, 31398), (726, 31326), (743, 31245), (755, 31194), (766, 31161), (767, 31158), (783, 31092), (793, 31053), (810, 31032), (831, 30957), (864, 30867), (880, 30831), (888, 30813), (902, 30777), (905, 30753), (924, 30696), (930, 30675), (946, 30618), (950, 30606), (955, 30597),

Gene: AnnaLie\_43 Start: 29896, Stop: 31770, Start Num: 246

Candidate Starts for AnnaLie\_43:

(Start: 243 @29893 has 7 MA's), (Start: 246 @29896 has 877 MA's), (287, 29965), (Start: 301 @29986 has 110 MA's), (429, 30232), (444, 30274), (550, 30487), (585, 30568), (696, 30802), (731, 30925), (743, 30985), (746, 30991), (755, 31036), (762, 31051), (764, 31066), (774, 31102), (783, 31138), (813, 31231), (844, 31324), (874, 31402), (902, 31474), (909, 31513), (924, 31555), (929, 31573), (939, 31609), (946, 31633), (955, 31654),

Gene: AnnabelLee\_40 Start: 28657, Stop: 26867, Start Num: 237

Candidate Starts for AnnabelLee\_40:

(194, 28717), (212, 28693), (224, 28672), (237, 28657), (Start: 246 @28648 has 877 MA's), (315, 28525), (333, 28477), (417, 28339), (418, 28333), (435, 28285), (472, 28204), (474, 28198), (482, 28174), (539, 28105), (571, 28024), (585, 27997), (591, 27982), (622, 27919), (648, 27862), (662, 27838), (664, 27832), (683, 27796), (703, 27760), (730, 27688), (740, 27646), (746, 27619), (772, 27523), (777, 27499), (783, 27472), (793, 27433), (816, 27358), (840, 27289), (855, 27241), (864, 27220), (884, 27166), (887, 27151), (906, 27085), (924, 27028), (930, 27007), (931, 27004), (934, 26986), (940, 26971),

Gene: Annyong\_45 Start: 31615, Stop: 29789, Start Num: 246

Candidate Starts for Annyong\_45:

(Start: 246 @31615 has 877 MA's), (267, 31594), (280, 31564), (295, 31534), (383, 31372), (394, 31354), (400, 31339), (425, 31282), (429, 31273), (471, 31153), (479, 31129), (539, 31036), (558, 30988), (568, 30967), (585, 30928), (646, 30796), (659, 30775), (683, 30730), (687, 30718), (740, 30565), (743, 30544), (776, 30421), (783, 30391), (793, 30352), (814, 30286), (815, 30283), (820, 30268), (827, 30244), (834, 30220), (905, 30013), (946, 29878), (950, 29866), (955, 29857),

Gene: Anon\_42 Start: 29008, Stop: 27218, Start Num: 246

Candidate Starts for Anon\_42:

(Start: 246 @29008 has 877 MA's), (400, 28729), (402, 28726), (425, 28672), (444, 28621), (479, 28519), (539, 28426), (554, 28381), (556, 28378), (560, 28369), (607, 28270), (635, 28207), (646, 28180), (683, 28114), (726, 28015), (740, 27955), (743, 27934), (755, 27883), (762, 27868), (767, 27847), (771, 27838), (780, 27799), (783, 27781), (814, 27700), (820, 27682), (888, 27502), (901, 27475), (930, 27364), (946, 27307), (950, 27295), (957, 27283),

Gene: Anselm\_45 Start: 31702, Stop: 29915, Start Num: 246

Candidate Starts for Anselm\_45:

(Start: 246 @31702 has 877 MA's), (364, 31498), (366, 31495), (375, 31474), (383, 31459), (395, 31438), (400, 31426), (402, 31423), (416, 31396), (425, 31369), (433, 31348), (479, 31216), (539, 31123), (556, 31075), (560, 31066), (568, 31051), (598, 30985), (635, 30904), (659, 30856), (697, 30787), (726, 30712), (743, 30631), (755, 30580), (767, 30544), (783, 30478), (793, 30439), (810, 30418), (831, 30343), (843, 30313), (853, 30280), (864, 30253), (880, 30217), (886, 30205), (888, 30199), (902, 30163), (905, 30139), (930, 30061), (946, 30004), (950, 29992), (955, 29983),

Gene: Anthony\_39 Start: 28917, Stop: 27130, Start Num: 246

Candidate Starts for Anthony\_39:

(Start: 246 @28917 has 877 MA's), (383, 28671), (420, 28593), (425, 28581), (429, 28572), (479, 28428), (539, 28335), (552, 28296), (554, 28290), (556, 28287), (568, 28263), (612, 28167), (624, 28143), (646, 28092), (654, 28077), (662, 28065), (728, 27915), (740, 27867), (743, 27846), (753, 27798), (766, 27762), (783, 27693), (853, 27495), (855, 27489), (876, 27441), (888, 27414), (901, 27387), (930, 27276), (946, 27219), (950, 27207), (955, 27198),

Gene: Antihero\_52 Start: 52983, Stop: 51160, Start Num: 197

Candidate Starts for Antihero\_52:

(Start: 182 @53001 has 4 MA's), (Start: 197 @52983 has 27 MA's), (Start: 250 @52959 has 2 MA's), (267, 52932), (Start: 274 @52917 has 6 MA's), (283, 52896), (329, 52809), (387, 52704), (406, 52662), (434, 52596), (445, 52566), (448, 52557), (453, 52554), (454, 52551), (463, 52524), (519, 52431), (531, 52413), (538, 52395), (542, 52383), (547, 52368), (552, 52356), (602, 52245), (603, 52242), (615, 52212), (633, 52176), (724, 51951), (725, 51948), (732, 51912), (738, 51888), (744, 51855), (775, 51747), (777, 51741), (779, 51735), (780, 51732), (814, 51633), (815, 51630), (820, 51615), (847, 51537), (851, 51525), (858, 51504), (861, 51495), (875, 51465), (886, 51441), (901, 51408), (905, 51375), (910, 51357), (912, 51351), (926, 51312), (931, 51294), (933, 51282), (940, 51258), (956, 51216), (963, 51210), (972, 51186),

Gene: Antoinette\_39 Start: 28922, Stop: 27057, Start Num: 301

Candidate Starts for Antoinette\_39:

(Start: 238 @29009 has 3 MA's), (Start: 241 @29006 has 13 MA's), (Start: 301 @28922 has 110 MA's), (Start: 308 @28913 has 5 MA's), (354, 28808), (358, 28799), (375, 28769), (378, 28766), (433, 28646), (435, 28634), (438, 28628), (475, 28523), (484, 28496), (531, 28355), (536, 28349), (537, 28346), (539, 28334), (548, 28307), (549, 28304), (554, 28289), (556, 28283), (559, 28277), (586, 28244), (652, 28115), (676, 28055), (733, 27890), (776, 27740), (779, 27731), (780, 27728), (783, 27710), (794, 27668), (796, 27662), (798, 27653), (805, 27638), (822, 27581), (878, 27422), (885, 27392), (888, 27383), (903, 27323), (906, 27299), (919, 27260), (929, 27227), (932, 27215), (947, 27155),

Gene: Antonia\_60 Start: 54050, Stop: 52191, Start Num: 205

Candidate Starts for Antonia\_60:

(Start: 188 @54074 has 1 MA's), (Start: 205 @54050 has 304 MA's), (Start: 235 @54026 has 6 MA's), (Start: 250 @54020 has 2 MA's), (Start: 274 @53978 has 6 MA's), (283, 53957), (337, 53843), (342, 53837), (360, 53807), (391, 53747), (399, 53726), (421, 53672), (428, 53660), (434, 53642), (436, 53630), (476, 53525), (519, 53468), (538, 53432), (542, 53420), (551, 53396), (556, 53384), (564, 53366), (570, 53348), (580, 53330), (598, 53291), (602, 53282), (603, 53279), (604, 53276), (738, 52919), (744, 52886), (750, 52865), (777, 52772), (780, 52763), (795, 52700), (814, 52664), (815, 52661), (820, 52646), (847, 52568), (851, 52556), (858, 52535), (875, 52496), (905, 52406), (910, 52388), (912, 52382), (917, 52367), (926, 52343), (930, 52328), (931, 52325), (933, 52313), (940, 52289), (963, 52241), (972, 52217),

Gene: Anubis\_51 Start: 31739, Stop: 29925, Start Num: 246

Candidate Starts for Anubis\_51:

(Start: 246 @31739 has 877 MA's), (275, 31700), (280, 31688), (364, 31535), (371, 31520), (400, 31463), (425, 31406), (429, 31397), (444, 31355), (461, 31304), (479, 31253), (539, 31160), (556, 31112), (560, 31103), (568, 31088), (585, 31049), (598, 31022), (612, 30992), (654, 30899), (686, 30839), (697, 30824), (743, 30668), (767, 30581), (783, 30515), (793, 30476), (815, 30404), (827, 30365), (834, 30341), (843, 30323), (853, 30290), (864, 30263), (888, 30209), (905, 30149), (930, 30071), (946, 30014), (950, 30002), (955, 29993),

Gene: Apex\_54 Start: 54199, Stop: 52376, Start Num: 197

Candidate Starts for Apex\_54:

(Start: 182 @54217 has 4 MA's), (Start: 197 @54199 has 27 MA's), (Start: 250 @54175 has 2 MA's), (267, 54148), (Start: 274 @54133 has 6 MA's), (283, 54112), (329, 54025), (387, 53920), (406, 53878), (434, 53812), (445, 53782), (448, 53773), (453, 53770), (454, 53767), (463, 53740), (519, 53647), (531, 53629), (538, 53611), (542, 53599), (547, 53584), (552, 53572), (580, 53509), (598, 53470), (602, 53461), (603, 53458), (615, 53428), (633, 53392), (724, 53167), (725, 53164), (732, 53128), (738, 53104), (744, 53071), (775, 52963), (777, 52957), (780, 52948), (814, 52849), (815, 52846), (820, 52831), (847, 52753), (851, 52741), (858, 52720), (861, 52711), (875, 52681), (901, 52624), (905, 52591), (912, 52567), (926, 52528), (931, 52510), (933, 52498), (940, 52474), (956, 52432), (963, 52426), (972, 52402),

Gene: Apizium\_60 Start: 53711, Stop: 51852, Start Num: 205

Candidate Starts for Apizium\_60:

(Start: 188 @53735 has 1 MA's), (Start: 205 @53711 has 304 MA's), (Start: 235 @53687 has 6 MA's), (Start: 250 @53681 has 2 MA's), (Start: 274 @53639 has 6 MA's), (283, 53618), (337, 53504), (342, 53498), (360, 53468), (391, 53408), (399, 53387), (421, 53333), (428, 53321), (434, 53303), (436, 53291), (476, 53186), (519, 53129), (538, 53093), (542, 53081), (552, 53054), (556, 53045), (570, 53009), (598, 52952), (602, 52943), (603, 52940), (604, 52937), (712, 52682), (738, 52580), (744, 52547), (750, 52526), (777, 52433), (780, 52424), (795, 52361), (814, 52325), (815, 52322), (820, 52307), (847, 52229), (851, 52217), (858, 52196), (875, 52157), (905, 52067), (910, 52049), (912, 52043), (917, 52028), (926, 52004), (930, 51989), (931, 51986), (933, 51974), (940, 51950), (946, 51929), (963, 51902), (972, 51878),

Gene: AppleCloud\_34 Start: 28055, Stop: 26271, Start Num: 246

Candidate Starts for AppleCloud\_34:

(Start: 246 @28055 has 877 MA's), (346, 27884), (379, 27821), (399, 27782), (400, 27779), (420, 27734), (425, 27722), (429, 27713), (442, 27674), (479, 27569), (539, 27476), (556, 27428), (585, 27365), (598, 27338), (646, 27233), (662, 27206), (683, 27167), (743, 26987), (753, 26939), (783, 26834), (784, 26831), (810, 26774), (814, 26753), (829, 26705), (855, 26630), (886, 26561), (902, 26519), (903, 26516), (905, 26495), (909, 26480), (930, 26417), (946, 26360), (950, 26348), (969, 26309), (978, 26291),

Gene: Applejack\_40 Start: 31240, Stop: 29414, Start Num: 246

Candidate Starts for Applejack\_40:

(Start: 246 @31240 has 877 MA's), (368, 31027), (416, 30934), (422, 30913), (425, 30907), (429, 30898), (470, 30781), (479, 30754), (539, 30661), (544, 30646), (556, 30613), (578, 30562), (580, 30559), (612, 30493), (627, 30463), (639, 30433), (662, 30388), (683, 30349), (743, 30169), (753, 30121), (767, 30082), (783, 30016), (793, 29977), (810, 29956), (814, 29935), (820, 29917), (843, 29851), (902, 29701), (903, 29698), (909, 29662), (917, 29638), (921, 29629), (925, 29617), (932, 29590), (946, 29542), (955, 29521),

Gene: Aragog\_37 Start: 30134, Stop: 28275, Start Num: 246

Candidate Starts for Aragog\_37:

(Start: 246 @30134 has 877 MA's), (280, 30083), (318, 30023), (347, 29960), (364, 29930), (366, 29927), (395, 29870), (400, 29858), (416, 29828), (425, 29801), (479, 29648), (539, 29552), (556, 29504), (567, 29483), (594, 29420), (598, 29414), (633, 29342), (646, 29309), (654, 29294), (662, 29282), (712, 29183), (743, 29048), (752, 29018), (753, 29000), (762, 28982), (767, 28961), (771, 28952), (783, 28895), (793, 28856), (814, 28814), (820, 28796), (834, 28748), (853, 28697), (876, 28643), (880, 28634), (888, 28616), (905, 28556), (910, 28538), (939, 28445), (946, 28421), (950, 28409), (1007, 28292), (1008, 28289),

Gene: AranulaLuti\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for AranulaLuti\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: Arbitrator\_56 Start: 52589, Stop: 50760, Start Num: 205

Candidate Starts for Arbitrator\_56:

(Start: 205 @52589 has 304 MA's), (Start: 250 @52562 has 2 MA's), (269, 52532), (Start: 274 @52520 has 6 MA's), (286, 52493), (287, 52490), (293, 52481), (318, 52463), (366, 52367), (391, 52316), (400, 52292), (463, 52130), (472, 52106), (476, 52094), (519, 52037), (538, 52001), (542, 51989), (551, 51965), (588, 51881), (602, 51851), (603, 51848), (615, 51818), (680, 51674), (707, 51608), (724, 51557), (727, 51536), (732, 51518), (744, 51461), (763, 51404), (771, 51377), (777, 51347), (780, 51338), (795, 51272), (812, 51245), (814, 51236), (820, 51218), (827, 51194), (847, 51140), (851, 51128), (858, 51107), (888, 51038), (905, 50978), (910, 50960), (922, 50927), (926, 50915), (930, 50900), (931, 50897), (933, 50885), (940, 50861), (941, 50858), (963, 50810), (965, 50807), (972, 50786), (979, 50765),

Gene: Arcanine\_46 Start: 34538, Stop: 32751, Start Num: 246

Candidate Starts for Arcanine\_46:

(Start: 246 @34538 has 877 MA's), (368, 34325), (374, 34310), (416, 34232), (422, 34211), (425, 34205), (429, 34196), (470, 34079), (479, 34052), (539, 33959), (544, 33944), (556, 33911), (578, 33860), (580, 33857), (612, 33791), (627, 33761), (639, 33731), (662, 33686), (683, 33647), (743, 33467), (753, 33419), (767, 33380), (783, 33314), (812, 33242), (814, 33233), (843, 33149), (876, 33062), (917, 32936), (922, 32924), (946, 32840), (948, 32834),

Gene: ArcherNM\_42 Start: 31769, Stop: 29982, Start Num: 246

Candidate Starts for ArcherNM\_42:

(Start: 246 @31769 has 877 MA's), (364, 31565), (366, 31562), (368, 31556), (375, 31541), (383, 31526), (400, 31493), (402, 31490), (416, 31463), (425, 31436), (433, 31415), (444, 31385), (479, 31283), (539, 31190), (556, 31142), (560, 31133), (568, 31118), (598, 31052), (635, 30971), (659, 30923), (662, 30917), (726, 30779), (743, 30698), (755, 30647), (766, 30614), (767, 30611), (783, 30545), (793, 30506), (810, 30485), (831, 30410), (853, 30347), (864, 30320), (880, 30284), (888, 30266), (902, 30230), (905, 30206), (924, 30149), (930, 30128), (946, 30071), (950, 30059), (955, 30050),

Gene: Archetta\_38 Start: 30664, Stop: 28820, Start Num: 246

Candidate Starts for Archetta\_38:

(Start: 246 @30664 has 877 MA's), (280, 30613), (318, 30553), (347, 30490), (364, 30460), (366, 30457), (395, 30400), (400, 30388), (416, 30358), (425, 30331), (461, 30229), (467, 30214), (479, 30178), (523, 30118), (539, 30082), (556, 30034), (594, 29950), (598, 29944), (633, 29872), (646, 29839), (654, 29824), (662, 29812), (712, 29713), (743, 29578), (752, 29548), (753, 29530), (755, 29527), (767, 29491), (771, 29482), (774, 29461), (777, 29452), (783, 29425), (784, 29422), (810, 29365), (814, 29344), (853, 29227), (876, 29173), (880, 29164), (888, 29146), (910, 29068), (929, 29011), (939, 28975), (946, 28951), (950, 28939),

Gene: Ares\_57 Start: 52561, Stop: 50732, Start Num: 205

Candidate Starts for Ares\_57:

(Start: 205 @52561 has 304 MA's), (Start: 250 @52534 has 2 MA's), (269, 52504), (Start: 274 @52492 has 6 MA's), (286, 52465), (287, 52462), (293, 52453), (318, 52435), (366, 52339), (391, 52288), (400, 52264), (411, 52240), (463, 52102), (472, 52078), (476, 52066), (519, 52009), (538, 51973), (542,

51961), (551, 51937), (588, 51853), (602, 51823), (603, 51820), (615, 51790), (680, 51646), (707, 51580), (721, 51541), (724, 51529), (727, 51508), (732, 51490), (744, 51433), (763, 51376), (771, 51349), (777, 51319), (780, 51310), (795, 51244), (812, 51217), (814, 51208), (820, 51190), (827, 51166), (847, 51112), (851, 51100), (858, 51079), (888, 51010), (905, 50950), (910, 50932), (922, 50899), (926, 50887), (930, 50872), (931, 50869), (933, 50857), (940, 50833), (941, 50830), (963, 50782), (965, 50779), (972, 50758), (979, 50737),

Gene: Arissanae\_44 Start: 32041, Stop: 30248, Start Num: 246

Candidate Starts for Arissanae\_44:

(Start: 246 @32041 has 877 MA's), (261, 32032), (325, 31903), (364, 31837), (372, 31819), (383, 31795), (402, 31759), (416, 31732), (420, 31717), (425, 31705), (444, 31654), (478, 31555), (479, 31552), (539, 31459), (547, 31435), (612, 31291), (655, 31195), (687, 31132), (714, 31093), (716, 31087), (743, 30964), (776, 30841), (783, 30811), (793, 30772), (812, 30739), (814, 30730), (820, 30712), (853, 30613), (880, 30550), (886, 30538), (901, 30505), (902, 30496), (930, 30394), (946, 30337), (950, 30325), (955, 30316),

Gene: Arlo\_42 Start: 34069, Stop: 32243, Start Num: 246

Candidate Starts for Arlo\_42:

(Start: 246 @34069 has 877 MA's), (368, 33856), (400, 33793), (416, 33763), (422, 33742), (425, 33736), (429, 33727), (470, 33610), (479, 33583), (539, 33490), (544, 33475), (578, 33391), (580, 33388), (612, 33322), (627, 33292), (639, 33262), (662, 33217), (683, 33178), (743, 32998), (753, 32950), (767, 32911), (783, 32845), (793, 32806), (810, 32785), (814, 32764), (820, 32746), (843, 32680), (902, 32530), (903, 32527), (909, 32491), (917, 32467), (921, 32458), (925, 32446), (946, 32371), (955, 32350),

Gene: Armstrong\_40 Start: 27439, Stop: 29307, Start Num: 243

Candidate Starts for Armstrong\_40:

(Start: 243 @27439 has 7 MA's), (Start: 246 @27442 has 877 MA's), (249, 27445), (287, 27514), (434, 27796), (444, 27823), (467, 27877), (552, 28042), (585, 28117), (594, 28138), (731, 28492), (743, 28552), (755, 28603), (774, 28669), (783, 28705), (813, 28798), (874, 28969), (902, 29041), (924, 29122), (945, 29197), (946, 29200), (955, 29221), (989, 29290),

Gene: Arroyo\_43 Start: 30004, Stop: 31878, Start Num: 246

Candidate Starts for Arroyo\_43:

(Start: 246 @30004 has 877 MA's), (287, 30073), (Start: 301 @30094 has 110 MA's), (429, 30340), (434, 30355), (444, 30382), (585, 30676), (646, 30811), (696, 30910), (731, 31033), (743, 31093), (746, 31099), (755, 31144), (762, 31159), (764, 31174), (774, 31210), (783, 31246), (813, 31339), (844, 31432), (874, 31510), (902, 31582), (909, 31621), (924, 31663), (929, 31681), (939, 31717), (946, 31741), (955, 31762),

Gene: Artemis2UCLA\_45 Start: 29324, Stop: 27483, Start Num: 246

Candidate Starts for Artemis2UCLA\_45:

(Start: 220 @29354 has 1 MA's), (Start: 246 @29324 has 877 MA's), (364, 29120), (400, 29045), (402, 29042), (416, 29015), (420, 29000), (425, 28988), (444, 28937), (475, 28847), (479, 28835), (539, 28742), (552, 28703), (560, 28685), (568, 28670), (598, 28604), (613, 28571), (614, 28568), (663, 28466), (697, 28406), (726, 28322), (743, 28241), (766, 28157), (767, 28154), (771, 28145), (776, 28118), (783, 28088), (810, 28028), (820, 27989), (902, 27773), (903, 27770), (905, 27749), (946, 27614), (950, 27602), (955, 27593), (957, 27590), (1000, 27497),

Gene: Arturo\_44 Start: 31826, Stop: 30000, Start Num: 246

Candidate Starts for Arturo\_44:

(Start: 246 @31826 has 877 MA's), (267, 31805), (280, 31775), (295, 31745), (383, 31583), (394, 31565), (425, 31493), (429, 31484), (471, 31364), (479, 31340), (539, 31247), (558, 31199), (585,



31139), (646, 31007), (659, 30986), (683, 30941), (687, 30929), (740, 30776), (743, 30755), (776, 30632), (783, 30602), (793, 30563), (814, 30497), (815, 30494), (820, 30479), (827, 30455), (834, 30431), (905, 30224), (946, 30089), (950, 30077), (955, 30068),

Gene: Asa16\_39 Start: 30354, Stop: 32219, Start Num: 245

Candidate Starts for Asa16\_39:

(Start: 245 @30354 has 74 MA's), (279, 30402), (382, 30585), (386, 30591), (416, 30651), (422, 30672), (448, 30741), (544, 30957), (580, 31047), (585, 31056), (591, 31071), (613, 31116), (659, 31209), (717, 31347), (743, 31467), (752, 31497), (767, 31554), (781, 31611), (783, 31620), (790, 31644), (813, 31713), (834, 31785), (840, 31794), (878, 31893), (902, 31956), (946, 32115), (949, 32124),

Gene: Ascela\_41 Start: 29607, Stop: 31472, Start Num: 245

Candidate Starts for Ascela\_41:

(Start: 245 @29607 has 74 MA's), (279, 29655), (368, 29820), (416, 29904), (448, 29994), (541, 30201), (544, 30210), (580, 30300), (585, 30309), (591, 30324), (659, 30462), (717, 30600), (743, 30720), (752, 30750), (767, 30807), (783, 30873), (813, 30966), (834, 31038), (946, 31368), (949, 31377),

Gene: Ashballer\_46 Start: 35324, Stop: 33498, Start Num: 246

Candidate Starts for Ashballer\_46:

(Start: 246 @35324 has 877 MA's), (368, 35111), (374, 35096), (416, 35018), (422, 34997), (425, 34991), (429, 34982), (470, 34865), (479, 34838), (539, 34745), (544, 34730), (556, 34697), (578, 34646), (580, 34643), (612, 34577), (627, 34547), (639, 34517), (662, 34472), (683, 34433), (743, 34253), (753, 34205), (767, 34166), (783, 34100), (793, 34061), (810, 34040), (814, 34019), (820, 34001), (843, 33935), (902, 33785), (903, 33782), (909, 33746), (917, 33722), (921, 33713), (925, 33701), (932, 33674), (946, 33626), (955, 33605),

Gene: Ashes\_38 Start: 27734, Stop: 29716, Start Num: 245

Candidate Starts for Ashes\_38:

(Start: 245 @27734 has 74 MA's), (347, 27908), (364, 27938), (386, 27971), (402, 28004), (433, 28079), (442, 28106), (478, 28208), (521, 28307), (585, 28481), (598, 28508), (659, 28637), (717, 28775), (737, 28862), (743, 28895), (752, 28925), (767, 28982), (783, 29048), (813, 29141), (842, 29228), (905, 29408), (912, 29432), (946, 29543), (998, 29651),

Gene: Ashraf\_62 Start: 54257, Stop: 52398, Start Num: 205

Candidate Starts for Ashraf\_62:

(Start: 188 @54281 has 1 MA's), (Start: 205 @54257 has 304 MA's), (Start: 235 @54233 has 6 MA's), (Start: 250 @54227 has 2 MA's), (Start: 274 @54185 has 6 MA's), (283, 54164), (337, 54050), (342, 54044), (360, 54014), (391, 53954), (399, 53933), (421, 53879), (428, 53867), (434, 53849), (436, 53837), (476, 53732), (519, 53675), (538, 53639), (542, 53627), (551, 53603), (556, 53591), (564, 53573), (570, 53555), (580, 53537), (598, 53498), (602, 53489), (603, 53486), (604, 53483), (712, 53228), (738, 53126), (744, 53093), (750, 53072), (777, 52979), (780, 52970), (795, 52907), (814, 52871), (815, 52868), (820, 52853), (847, 52775), (851, 52763), (858, 52742), (875, 52703), (905, 52613), (910, 52595), (912, 52589), (917, 52574), (926, 52550), (930, 52535), (931, 52532), (933, 52520), (940, 52496), (946, 52475), (963, 52448), (972, 52424),

Gene: Asta\_38 Start: 28632, Stop: 26767, Start Num: 301

Candidate Starts for Asta\_38:

(Start: 238 @28719 has 3 MA's), (Start: 301 @28632 has 110 MA's), (Start: 308 @28623 has 5 MA's), (354, 28518), (358, 28509), (375, 28479), (378, 28476), (433, 28356), (435, 28344), (438, 28338), (475, 28233), (484, 28206), (531, 28065), (536, 28059), (537, 28056), (539, 28044), (548, 28017), (549, 28014), (554, 27999), (556, 27993), (559, 27987), (586, 27954), (652, 27825), (676, 27765),

(776, 27450), (779, 27441), (780, 27438), (783, 27420), (794, 27378), (796, 27372), (805, 27348), (822, 27291), (878, 27132), (885, 27102), (888, 27093), (903, 27033), (906, 27009), (919, 26970), (929, 26937), (932, 26925), (947, 26865),

Gene: Astro\_42 Start: 30542, Stop: 28698, Start Num: 246

Candidate Starts for Astro\_42:

(139, 30707), (Start: 246 @30542 has 877 MA's), (280, 30491), (347, 30368), (364, 30338), (383, 30299), (400, 30266), (416, 30236), (422, 30215), (425, 30209), (429, 30200), (444, 30158), (461, 30107), (478, 30059), (479, 30056), (539, 29960), (548, 29933), (554, 29915), (556, 29912), (560, 29903), (585, 29849), (598, 29822), (620, 29774), (646, 29717), (662, 29690), (687, 29639), (698, 29624), (740, 29477), (743, 29456), (752, 29426), (753, 29408), (755, 29405), (762, 29390), (767, 29369), (771, 29360), (776, 29333), (780, 29321), (783, 29303), (814, 29222), (818, 29210), (834, 29156), (849, 29120), (861, 29084), (876, 29051), (886, 29030), (888, 29024), (903, 28985), (905, 28964), (910, 28946), (946, 28829), (950, 28817),

Gene: Athena\_60 Start: 54420, Stop: 52603, Start Num: 247

Candidate Starts for Athena\_60:

(130, 54603), (Start: 247 @54420 has 43 MA's), (267, 54390), (368, 54210), (433, 54057), (435, 54045), (448, 54015), (454, 54009), (476, 53946), (478, 53940), (519, 53889), (538, 53853), (556, 53805), (603, 53700), (645, 53604), (674, 53553), (724, 53409), (732, 53370), (739, 53340), (744, 53313), (748, 53301), (775, 53205), (777, 53199), (780, 53190), (782, 53178), (807, 53106), (814, 53076), (820, 53058), (822, 53049), (847, 52980), (851, 52968), (858, 52947), (888, 52878), (898, 52863), (903, 52839), (905, 52818), (912, 52794), (926, 52755), (931, 52737), (933, 52725), (936, 52713), (940, 52701), (956, 52659), (972, 52629),

Gene: Atkinbua\_46 Start: 34825, Stop: 32999, Start Num: 246

Candidate Starts for Atkinbua\_46:

(Start: 246 @34825 has 877 MA's), (368, 34612), (416, 34519), (422, 34498), (425, 34492), (429, 34483), (470, 34366), (479, 34339), (539, 34246), (544, 34231), (578, 34147), (580, 34144), (612, 34078), (627, 34048), (639, 34018), (662, 33973), (683, 33934), (743, 33754), (753, 33706), (767, 33667), (783, 33601), (793, 33562), (810, 33541), (814, 33520), (820, 33502), (843, 33436), (902, 33286), (903, 33283), (909, 33247), (921, 33214), (925, 33202), (946, 33127), (955, 33106),

Gene: Attoomi\_34 Start: 26889, Stop: 28748, Start Num: 245

Candidate Starts for Attoomi\_34:

(208, 26838), (Start: 245 @26889 has 74 MA's), (366, 27099), (374, 27120), (389, 27144), (421, 27216), (429, 27234), (433, 27246), (454, 27306), (467, 27342), (481, 27384), (541, 27474), (554, 27513), (568, 27546), (576, 27567), (585, 27585), (591, 27600), (598, 27612), (608, 27633), (629, 27672), (635, 27690), (639, 27699), (646, 27717), (648, 27720), (659, 27738), (683, 27783), (692, 27801), (694, 27807), (696, 27816), (712, 27861), (727, 27924), (728, 27927), (746, 28002), (764, 28077), (771, 28092), (773, 28107), (775, 28116), (783, 28149), (797, 28203), (834, 28314), (840, 28323), (886, 28443), (901, 28476), (906, 28512), (943, 28632), (946, 28644), (948, 28650), (997, 28740),

Gene: Atuin\_93 Start: 78349, Stop: 80142, Start Num: 262

Candidate Starts for Atuin\_93:

(Start: 262 @78349 has 4 MA's), (287, 78403), (292, 78412), (Start: 301 @78424 has 110 MA's), (418, 78643), (428, 78661), (435, 78688), (438, 78694), (482, 78799), (571, 78946), (585, 78973), (591, 78988), (617, 79042), (716, 79243), (723, 79270), (730, 79303), (740, 79342), (743, 79363), (746, 79369), (774, 79486), (792, 79570), (793, 79573), (813, 79636), (816, 79648), (827, 79684), (840, 79717), (858, 79771), (865, 79789), (902, 79894), (906, 79921), (910, 79936), (922, 79969), (924, 79975), (929, 79993), (932, 80005), (934, 80017), (935, 80020), (946, 80053), (974, 80104),

Gene: Aubergine\_38 Start: 28632, Stop: 26767, Start Num: 301

Candidate Starts for Aubergine\_38:

(Start: 238 @28719 has 3 MA's), (Start: 241 @28716 has 13 MA's), (Start: 301 @28632 has 110 MA's), (Start: 308 @28623 has 5 MA's), (354, 28518), (358, 28509), (375, 28479), (378, 28476), (433, 28356), (435, 28344), (438, 28338), (475, 28233), (484, 28206), (531, 28065), (536, 28059), (537, 28056), (539, 28044), (548, 28017), (549, 28014), (554, 27999), (556, 27993), (559, 27987), (586, 27954), (652, 27825), (676, 27765), (776, 27450), (779, 27441), (780, 27438), (783, 27420), (794, 27378), (796, 27372), (798, 27363), (805, 27348), (822, 27291), (878, 27132), (885, 27102), (888, 27093), (903, 27033), (906, 27009), (919, 26970), (929, 26937), (932, 26925), (947, 26865),

Gene: Audell\_40 Start: 31335, Stop: 29554, Start Num: 246

Candidate Starts for Audell\_40:

(214, 31377), (217, 31371), (Start: 246 @31335 has 877 MA's), (Start: 272 @31296 has 4 MA's), (289, 31254), (435, 30972), (444, 30954), (474, 30885), (482, 30861), (521, 30831), (539, 30792), (542, 30783), (571, 30711), (585, 30684), (591, 30669), (622, 30606), (648, 30549), (662, 30525), (664, 30519), (683, 30483), (687, 30471), (703, 30447), (740, 30333), (743, 30312), (746, 30306), (754, 30261), (772, 30210), (777, 30186), (783, 30159), (793, 30120), (801, 30093), (827, 30009), (840, 29976), (853, 29934), (855, 29928), (864, 29907), (884, 29853), (887, 29838), (900, 29811), (906, 29772), (915, 29742), (924, 29715), (930, 29694), (931, 29691), (934, 29673), (940, 29658), (983, 29565),

Gene: Audrey\_58 Start: 53676, Stop: 51859, Start Num: 247

Candidate Starts for Audrey\_58:

(130, 53859), (Start: 247 @53676 has 43 MA's), (267, 53646), (368, 53466), (433, 53313), (435, 53301), (448, 53271), (454, 53265), (476, 53202), (478, 53196), (519, 53145), (538, 53109), (556, 53061), (603, 52956), (645, 52860), (674, 52809), (724, 52665), (732, 52626), (739, 52596), (744, 52569), (748, 52557), (775, 52461), (777, 52455), (780, 52446), (782, 52434), (807, 52362), (814, 52332), (820, 52314), (822, 52305), (847, 52236), (851, 52224), (858, 52203), (888, 52134), (898, 52119), (903, 52095), (905, 52074), (912, 52050), (926, 52011), (931, 51993), (933, 51981), (936, 51969), (940, 51957), (956, 51915), (972, 51885),

Gene: AugsMagnumOpus\_51 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for AugsMagnumOpus\_51:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: Austelle\_54 Start: 54652, Stop: 52829, Start Num: 197

Candidate Starts for Austelle\_54:

(Start: 182 @54670 has 4 MA's), (Start: 197 @54652 has 27 MA's), (Start: 250 @54628 has 2 MA's), (267, 54601), (Start: 274 @54586 has 6 MA's), (283, 54565), (329, 54478), (387, 54373), (406, 54331), (434, 54265), (445, 54235), (448, 54226), (453, 54223), (454, 54220), (463, 54193), (519, 54100), (531, 54082), (538, 54064), (542, 54052), (547, 54037), (552, 54025), (580, 53962), (598, 53923), (602, 53914), (603, 53911), (615, 53881), (633, 53845), (724, 53620), (725, 53617), (732, 53581), (738, 53557), (744, 53524), (775, 53416), (777, 53410), (780, 53401), (814, 53302), (815, 53299), (820, 53284), (847, 53206), (851, 53194), (858, 53173), (861, 53164), (875, 53134), (888, 53104), (901, 53077), (905, 53044), (912, 53020), (926, 52981), (931, 52963), (933, 52951), (940, 52927), (956, 52885), (963, 52879), (972, 52855),

Gene: AvGardian\_44 Start: 29897, Stop: 31789, Start Num: 246

Candidate Starts for AvGardian\_44:

(Start: 246 @29897 has 877 MA's), (287, 29966), (Start: 301 @29987 has 110 MA's), (419, 30209), (429, 30233), (433, 30245), (434, 30248), (556, 30503), (585, 30569), (696, 30821), (731, 30944), (738, 30974), (743, 31004), (746, 31010), (755, 31055), (764, 31085), (774, 31121), (777, 31130), (783, 31157), (813, 31250), (844, 31343), (874, 31421), (875, 31424), (902, 31493), (905, 31517), (909, 31532), (924, 31574), (946, 31652), (955, 31673), (957, 31676), (968, 31697),

Gene: AvatarAhPeg\_44 Start: 32048, Stop: 30219, Start Num: 246

Candidate Starts for AvatarAhPeg\_44:

(Start: 246 @32048 has 877 MA's), (280, 31997), (383, 31805), (394, 31787), (425, 31715), (429, 31706), (471, 31586), (479, 31562), (539, 31469), (558, 31421), (568, 31400), (585, 31361), (607, 31316), (610, 31310), (646, 31229), (652, 31220), (659, 31208), (683, 31163), (687, 31151), (743, 30977), (771, 30881), (776, 30854), (777, 30851), (783, 30824), (793, 30785), (814, 30716), (815, 30713), (820, 30698), (827, 30674), (834, 30650), (837, 30644), (905, 30443), (946, 30308), (950, 30296), (955, 30287),

Gene: Avle17\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Avle17\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Avocadoman\_41 Start: 29025, Stop: 30899, Start Num: 246

Candidate Starts for Avocadoman\_41:

(Start: 246 @29025 has 877 MA's), (Start: 301 @29115 has 110 MA's), (429, 29361), (434, 29376), (444, 29403), (585, 29697), (646, 29832), (696, 29931), (731, 30054), (743, 30114), (746, 30120), (755, 30165), (762, 30180), (764, 30195), (774, 30231), (783, 30267), (813, 30360), (844, 30453), (874, 30531), (902, 30603), (909, 30642), (924, 30684), (929, 30702), (939, 30738), (946, 30762), (955, 30783),

Gene: AxiPup\_39 Start: 28904, Stop: 27039, Start Num: 301

Candidate Starts for AxiPup\_39:

(Start: 238 @28991 has 3 MA's), (Start: 241 @28988 has 13 MA's), (Start: 301 @28904 has 110 MA's), (Start: 308 @28895 has 5 MA's), (354, 28790), (358, 28781), (375, 28751), (378, 28748), (433, 28628), (435, 28616), (438, 28610), (475, 28505), (484, 28478), (531, 28337), (536, 28331), (537, 28328), (539, 28316), (548, 28289), (549, 28286), (554, 28271), (556, 28265), (559, 28259), (586, 28226), (652, 28097), (676, 28037), (709, 27962), (776, 27722), (779, 27713), (780, 27710), (783, 27692), (794, 27650), (796, 27644), (798, 27635), (805, 27620), (822, 27563), (878, 27404), (885, 27374), (888, 27365), (903, 27305), (906, 27281), (919, 27242), (929, 27209), (932, 27197), (947, 27137),

Gene: Axumite\_51 Start: 45981, Stop: 44164, Start Num: 241

Candidate Starts for Axumite\_51:

(72, 46302), (82, 46278), (Start: 241 @45981 has 13 MA's), (267, 45945), (Start: 274 @45930 has 6 MA's), (287, 45900), (356, 45774), (417, 45651), (421, 45636), (436, 45594), (476, 45498), (538, 45405), (592, 45276), (603, 45252), (727, 44940), (732, 44922), (744, 44865), (777, 44751), (780, 44742), (795, 44679), (815, 44640), (820, 44625), (847, 44547), (851, 44535), (858, 44514), (861, 44505), (901, 44418), (906, 44382), (909, 44370), (923, 44331), (926, 44322), (930, 44307), (940, 44262), (963, 44214), (972, 44190),

Gene: Axym\_42 Start: 32451, Stop: 30058, Start Num: 36

Candidate Starts for Axym\_42:

(Start: 36 @32451 has 16 MA's), (47, 32445), (Start: 59 @32397 has 1 MA's), (75, 32355), (84, 32331), (128, 32205), (138, 32181), (179, 32136), (Start: 215 @32085 has 2 MA's), (223, 32070), (Start: 241 @32049 has 13 MA's), (275, 32001), (295, 31959), (329, 31884), (335, 31872), (374, 31803), (391, 31776), (394, 31770), (398, 31755), (420, 31701), (421, 31698), (430, 31680), (435, 31659), (457, 31599), (499, 31476), (500, 31470), (526, 31401), (539, 31359), (605, 31272), (615, 31248), (633, 31242), (643, 31218), (647, 31209), (654, 31194), (660, 31182), (680, 31140), (682, 31137), (683, 31134), (733, 30987), (749, 30918), (750, 30912), (760, 30876), (783, 30783), (792, 30747), (794, 30741), (796, 30735), (797, 30729), (815, 30672), (822, 30648), (836, 30603), (946, 30225), (947, 30222), (968, 30177), (971, 30168), (995, 30108),

Gene: Azira\_40 Start: 32021, Stop: 29664, Start Num: 45

Candidate Starts for Azira\_40:

(41, 32030), (Start: 45 @32021 has 24 MA's), (50, 32006), (57, 31970), (108, 31835), (138, 31772), (Start: 176 @31730 has 2 MA's), (185, 31718), (264, 31616), (267, 31613), (305, 31538), (321, 31499), (329, 31478), (363, 31427), (386, 31385), (398, 31355), (420, 31301), (430, 31280), (435, 31259), (458, 31196), (502, 31061), (506, 31046), (520, 31019), (526, 31001), (559, 30917), (598, 30881), (660, 30788), (680, 30746), (682, 30743), (683, 30740), (698, 30716), (703, 30704), (707, 30692), (741, 30551), (749, 30524), (783, 30389), (792, 30353), (794, 30347), (796, 30341), (797, 30335), (805, 30311), (815, 30278), (822, 30254), (836, 30209), (839, 30203), (859, 30143), (893, 30035), (908, 29966), (911, 29954), (920, 29930), (940, 29852), (947, 29828), (976, 29759),

Gene: B1\_42 Start: 30729, Stop: 28891, Start Num: 246

Candidate Starts for B1\_42:

(Start: 191 @30801 has 1 MA's), (Start: 246 @30729 has 877 MA's), (280, 30678), (364, 30525), (383, 30486), (400, 30453), (425, 30396), (429, 30387), (433, 30375), (471, 30267), (479, 30243), (539, 30147), (558, 30099), (585, 30039), (646, 29907), (659, 29886), (697, 29817), (716, 29772), (726, 29730), (743, 29649), (767, 29562), (776, 29526), (783, 29496), (815, 29385), (827, 29346), (834, 29322), (843, 29304), (886, 29181), (888, 29175), (905, 29115), (945, 28983), (946, 28980), (950, 28968), (955, 28959),

Gene: BABullseye\_43 Start: 29170, Stop: 27329, Start Num: 246

Candidate Starts for BABullseye\_43:

(Start: 246 @29170 has 877 MA's), (364, 28966), (400, 28891), (402, 28888), (416, 28861), (420, 28846), (425, 28834), (444, 28783), (475, 28693), (479, 28681), (539, 28588), (552, 28549), (560, 28531), (568, 28516), (598, 28450), (613, 28417), (614, 28414), (663, 28312), (697, 28252), (726, 28168), (743, 28087), (766, 28003), (767, 28000), (771, 27991), (776, 27964), (783, 27934), (810, 27874), (820, 27835), (902, 27619), (903, 27616), (905, 27595), (946, 27460), (950, 27448), (955, 27439), (957, 27436), (1000, 27343),

Gene: BAjuniper\_43 Start: 30818, Stop: 32689, Start Num: 246

Candidate Starts for BAjuniper\_43:

(Start: 246 @30818 has 877 MA's), (Start: 301 @30908 has 110 MA's), (347, 30995), (364, 31025), (429, 31154), (566, 31445), (585, 31490), (591, 31505), (635, 31598), (731, 31844), (743, 31904), (755, 31955), (762, 31970), (774, 32021), (777, 32030), (783, 32057), (813, 32150), (834, 32222), (844, 32243), (874, 32321), (875, 32324), (902, 32393), (924, 32474), (926, 32480), (939, 32528), (946, 32552), (955, 32573), (968, 32597),

Gene: BFK20\_ORF44 Start: 37992, Stop: 36088, Start Num: 205

Candidate Starts for BFK20\_ORF44:

(Start: 205 @37992 has 304 MA's), (261, 37932), (Start: 274 @37905 has 6 MA's), (283, 37881), (286, 37875), (311, 37833), (322, 37800), (341, 37758), (345, 37743), (363, 37710), (366, 37704), (416, 37599), (421, 37581), (433, 37557), (436, 37542), (442, 37530), (469, 37461), (516, 37392), (529,

37374), (538, 37350), (547, 37323), (603, 37194), (604, 37191), (615, 37164), (665, 37068), (669, 37056), (671, 37050), (730, 36873), (744, 36807), (777, 36690), (816, 36576), (820, 36564), (832, 36522), (834, 36516), (843, 36498), (847, 36486), (851, 36474), (858, 36453), (876, 36411), (885, 36393), (897, 36357), (906, 36306), (926, 36246), (940, 36192), (946, 36171), (972, 36114),

Gene: BK1\_41 Start: 33551, Stop: 31725, Start Num: 246

Candidate Starts for BK1\_41:

(Start: 246 @33551 has 877 MA's), (368, 33338), (374, 33323), (400, 33275), (416, 33245), (422, 33224), (425, 33218), (429, 33209), (458, 33125), (461, 33116), (470, 33092), (479, 33065), (539, 32972), (544, 32957), (551, 32936), (556, 32924), (578, 32873), (580, 32870), (607, 32816), (612, 32804), (627, 32774), (639, 32744), (662, 32699), (683, 32660), (743, 32480), (753, 32432), (767, 32393), (783, 32327), (793, 32288), (810, 32267), (814, 32246), (820, 32228), (843, 32162), (902, 32012), (903, 32009), (909, 31973), (917, 31949), (921, 31940), (925, 31928), (946, 31853), (955, 31832),

Gene: BPBiebs31\_45 Start: 34673, Stop: 32844, Start Num: 246

Candidate Starts for BPBiebs31\_45:

(Start: 246 @34673 has 877 MA's), (368, 34460), (400, 34397), (416, 34367), (422, 34346), (425, 34340), (429, 34331), (470, 34214), (479, 34187), (539, 34094), (544, 34079), (578, 33995), (580, 33992), (612, 33926), (627, 33896), (639, 33866), (662, 33821), (683, 33782), (743, 33602), (753, 33554), (771, 33506), (780, 33467), (783, 33449), (793, 33410), (810, 33389), (814, 33368), (819, 33353), (861, 33230), (922, 33059), (929, 33035), (943, 32987), (946, 32975), (955, 32954), (959, 32948), (981, 32900), (986, 32885),

Gene: BRock\_133 Start: 70485, Stop: 72557, Start Num: 272

Candidate Starts for BRock\_133:

(239, 70437), (251, 70449), (257, 70458), (260, 70461), (Start: 272 @70485 has 4 MA's), (317, 70575), (330, 70626), (331, 70629), (336, 70641), (351, 70674), (427, 70845), (439, 70884), (452, 70920), (511, 71040), (533, 71094), (535, 71097), (585, 71229), (587, 71235), (594, 71250), (618, 71301), (745, 71685), (770, 71802), (773, 71820), (797, 71916), (800, 71928), (811, 71982), (827, 72042), (830, 72051), (832, 72060), (849, 72102), (879, 72186), (884, 72204), (887, 72219), (894, 72246), (909, 72318), (910, 72321), (952, 72465), (973, 72519),

Gene: Baby16\_45 Start: 31581, Stop: 29755, Start Num: 246

Candidate Starts for Baby16\_45:

(Start: 246 @31581 has 877 MA's), (267, 31560), (280, 31530), (295, 31500), (383, 31338), (394, 31320), (425, 31248), (429, 31239), (471, 31119), (479, 31095), (539, 31002), (558, 30954), (568, 30933), (585, 30894), (646, 30762), (659, 30741), (683, 30696), (687, 30684), (740, 30531), (743, 30510), (776, 30387), (783, 30357), (793, 30318), (814, 30252), (815, 30249), (820, 30234), (827, 30210), (834, 30186), (905, 29979), (946, 29844), (950, 29832), (955, 29823),

Gene: BabyBack\_43 Start: 31842, Stop: 30049, Start Num: 246

Candidate Starts for BabyBack\_43:

(121, 32046), (Start: 246 @31842 has 877 MA's), (400, 31563), (402, 31560), (416, 31533), (420, 31518), (425, 31506), (429, 31497), (475, 31365), (479, 31353), (539, 31260), (556, 31212), (560, 31203), (568, 31188), (598, 31122), (619, 31077), (635, 31041), (743, 30765), (766, 30681), (776, 30642), (783, 30612), (793, 30573), (812, 30540), (814, 30531), (902, 30297), (930, 30195), (946, 30138), (950, 30126), (955, 30117),

Gene: BabyDaisy\_42 Start: 29859, Stop: 31733, Start Num: 246

Candidate Starts for BabyDaisy\_42:

(Start: 243 @29856 has 7 MA's), (Start: 246 @29859 has 877 MA's), (287, 29928), (Start: 301 @29949 has 110 MA's), (429, 30195), (467, 30291), (585, 30531), (696, 30765), (730, 30885), (731, 30888),

(743, 30948), (746, 30954), (762, 31014), (764, 31029), (774, 31065), (783, 31101), (813, 31194), (874, 31365), (875, 31368), (902, 31437), (909, 31476), (924, 31518), (929, 31536), (939, 31572), (946, 31596), (955, 31617),

Gene: BabyJohn\_43 Start: 31521, Stop: 29683, Start Num: 246

Candidate Starts for BabyJohn\_43:

(Start: 191 @31593 has 1 MA's), (Start: 246 @31521 has 877 MA's), (280, 31470), (364, 31317), (383, 31278), (400, 31245), (425, 31188), (429, 31179), (433, 31167), (471, 31059), (479, 31035), (482, 31026), (539, 30939), (558, 30891), (585, 30831), (614, 30768), (659, 30678), (716, 30564), (743, 30441), (767, 30354), (776, 30318), (783, 30288), (815, 30177), (827, 30138), (834, 30114), (843, 30096), (844, 30093), (886, 29973), (888, 29967), (905, 29907), (945, 29775), (946, 29772), (950, 29760), (955, 29751),

Gene: BabyRay\_45 Start: 31465, Stop: 29627, Start Num: 246

Candidate Starts for BabyRay\_45:

(Start: 246 @31465 has 877 MA's), (280, 31414), (364, 31261), (368, 31252), (395, 31201), (400, 31189), (425, 31132), (429, 31123), (471, 31003), (475, 30991), (479, 30979), (539, 30883), (558, 30835), (585, 30775), (614, 30712), (646, 30643), (659, 30622), (697, 30553), (700, 30547), (716, 30508), (743, 30385), (767, 30298), (776, 30262), (783, 30232), (791, 30202), (815, 30121), (827, 30082), (834, 30058), (843, 30040), (888, 29911), (905, 29851), (946, 29716), (950, 29704), (955, 29695),

Gene: BabyYoda\_43 Start: 30631, Stop: 32505, Start Num: 246

Candidate Starts for BabyYoda\_43:

(Start: 246 @30631 has 877 MA's), (287, 30700), (Start: 301 @30721 has 110 MA's), (400, 30901), (429, 30967), (434, 30982), (444, 31009), (585, 31303), (696, 31537), (730, 31657), (731, 31660), (743, 31720), (746, 31726), (755, 31771), (762, 31786), (764, 31801), (774, 31837), (783, 31873), (813, 31966), (844, 32059), (874, 32137), (875, 32140), (902, 32209), (905, 32233), (909, 32248), (924, 32290), (929, 32308), (946, 32368), (955, 32389),

Gene: Bachaco\_40 Start: 30596, Stop: 32467, Start Num: 246

Candidate Starts for Bachaco\_40:

(Start: 246 @30596 has 877 MA's), (287, 30665), (352, 30779), (429, 30932), (467, 31028), (550, 31187), (566, 31223), (585, 31268), (591, 31283), (635, 31376), (683, 31466), (743, 31682), (755, 31733), (762, 31748), (774, 31799), (777, 31808), (783, 31835), (813, 31928), (834, 32000), (874, 32099), (902, 32171), (905, 32195), (924, 32252), (939, 32306), (946, 32330), (955, 32351),

Gene: Bachome\_46 Start: 30764, Stop: 28977, Start Num: 246

Candidate Starts for Bachome\_46:

(Start: 246 @30764 has 877 MA's), (364, 30560), (400, 30488), (416, 30458), (425, 30431), (541, 30179), (560, 30128), (598, 30047), (619, 30002), (620, 29999), (659, 29918), (687, 29861), (715, 29819), (726, 29774), (743, 29693), (755, 29642), (767, 29606), (783, 29540), (810, 29480), (812, 29468), (846, 29366), (853, 29342), (860, 29324), (888, 29261), (901, 29234), (902, 29225), (905, 29201), (946, 29066), (950, 29054), (955, 29045),

Gene: Backyardigan\_43 Start: 31552, Stop: 29723, Start Num: 246

Candidate Starts for Backyardigan\_43:

(Start: 246 @31552 has 877 MA's), (280, 31501), (295, 31471), (383, 31309), (394, 31291), (400, 31276), (425, 31219), (429, 31210), (471, 31090), (479, 31066), (513, 31024), (539, 30973), (558, 30925), (568, 30904), (585, 30865), (607, 30820), (610, 30814), (646, 30733), (659, 30712), (683, 30667), (740, 30502), (743, 30481), (783, 30328), (793, 30289), (815, 30217), (820, 30202), (827, 30178), (832, 30160), (834, 30154), (837, 30148), (905, 29947), (946, 29812), (950, 29800), (955, 29791),

Gene: BaconJack\_48 Start: 35612, Stop: 33786, Start Num: 246

Candidate Starts for BaconJack\_48:

(Start: 246 @35612 has 877 MA's), (368, 35399), (374, 35384), (400, 35336), (416, 35306), (422, 35285), (425, 35279), (429, 35270), (470, 35153), (479, 35126), (539, 35033), (544, 35018), (578, 34934), (580, 34931), (612, 34865), (639, 34805), (662, 34760), (683, 34721), (743, 34541), (752, 34511), (753, 34493), (755, 34490), (767, 34454), (783, 34388), (812, 34316), (814, 34307), (815, 34304), (843, 34223), (902, 34073), (903, 34070), (909, 34034), (917, 34010), (921, 34001), (925, 33989), (930, 33971), (946, 33914), (955, 33893),

Gene: Bactobuster\_43 Start: 32277, Stop: 30487, Start Num: 246

Candidate Starts for Bactobuster\_43:

(Start: 246 @32277 has 877 MA's), (364, 32073), (368, 32064), (402, 31995), (416, 31968), (425, 31941), (479, 31788), (539, 31695), (556, 31647), (560, 31638), (568, 31623), (598, 31557), (613, 31524), (652, 31440), (697, 31359), (715, 31329), (743, 31203), (752, 31173), (755, 31152), (776, 31080), (783, 31050), (793, 31011), (810, 30990), (814, 30969), (880, 30789), (886, 30777), (902, 30735), (905, 30711), (924, 30654), (930, 30633), (946, 30576), (950, 30564), (955, 30555),

Gene: Badfish\_61 Start: 54554, Stop: 52695, Start Num: 205

Candidate Starts for Badfish\_61:

(Start: 188 @54578 has 1 MA's), (Start: 205 @54554 has 304 MA's), (Start: 235 @54530 has 6 MA's), (Start: 250 @54524 has 2 MA's), (Start: 274 @54482 has 6 MA's), (283, 54461), (337, 54347), (342, 54341), (360, 54311), (391, 54251), (399, 54230), (421, 54176), (428, 54164), (434, 54146), (436, 54134), (476, 54029), (519, 53972), (538, 53936), (542, 53924), (552, 53897), (564, 53870), (570, 53852), (580, 53834), (598, 53795), (602, 53786), (603, 53783), (712, 53525), (738, 53423), (744, 53390), (750, 53369), (777, 53276), (780, 53267), (795, 53204), (814, 53168), (815, 53165), (820, 53150), (847, 53072), (851, 53060), (858, 53039), (875, 53000), (905, 52910), (910, 52892), (912, 52886), (917, 52871), (926, 52847), (930, 52832), (931, 52829), (933, 52817), (940, 52793), (963, 52745), (972, 52721),

Gene: Badger\_43 Start: 31520, Stop: 29691, Start Num: 246

Candidate Starts for Badger\_43:

(Start: 246 @31520 has 877 MA's), (280, 31469), (295, 31439), (383, 31277), (394, 31259), (400, 31244), (425, 31187), (429, 31178), (471, 31058), (479, 31034), (513, 30992), (539, 30941), (558, 30893), (568, 30872), (585, 30833), (607, 30788), (610, 30782), (646, 30701), (659, 30680), (683, 30635), (740, 30470), (743, 30449), (783, 30296), (793, 30257), (815, 30185), (820, 30170), (827, 30146), (832, 30128), (834, 30122), (837, 30116), (905, 29915), (946, 29780), (950, 29768), (955, 29759),

Gene: Bae\_59 Start: 55561, Stop: 53708, Start Num: 197

Candidate Starts for Bae\_59:

(112, 55720), (143, 55639), (Start: 197 @55561 has 27 MA's), (Start: 230 @55516 has 1 MA's), (267, 55480), (304, 55420), (434, 55159), (453, 55117), (466, 55081), (476, 55051), (538, 54958), (542, 54946), (551, 54922), (556, 54910), (564, 54892), (592, 54829), (603, 54805), (652, 54700), (725, 54511), (727, 54493), (739, 54445), (744, 54418), (750, 54397), (775, 54310), (777, 54304), (780, 54295), (784, 54274), (807, 54211), (815, 54178), (820, 54163), (841, 54103), (847, 54085), (851, 54073), (858, 54052), (861, 54043), (863, 54040), (905, 53923), (912, 53899), (926, 53860), (930, 53845), (931, 53842), (940, 53806), (941, 53803), (972, 53734),

Gene: Baehexic\_43 Start: 31482, Stop: 29695, Start Num: 246

Candidate Starts for Baehexic\_43:

(Start: 246 @31482 has 877 MA's), (364, 31278), (366, 31275), (368, 31269), (383, 31239), (400, 31206), (402, 31203), (416, 31176), (425, 31149), (444, 31098), (479, 30996), (539, 30903), (556,



30855), (560, 30846), (568, 30831), (598, 30765), (635, 30684), (659, 30636), (726, 30492), (743, 30411), (755, 30360), (766, 30327), (783, 30258), (793, 30219), (810, 30198), (814, 30177), (818, 30165), (886, 29985), (888, 29979), (902, 29943), (905, 29919), (930, 29841), (946, 29784), (950, 29772),

Gene: BaileyBlu\_41 Start: 29217, Stop: 31091, Start Num: 245

Candidate Starts for BaileyBlu\_41:

(114, 29007), (Start: 245 @29217 has 74 MA's), (253, 29223), (265, 29235), (382, 29448), (402, 29487), (541, 29811), (585, 29919), (591, 29934), (635, 30024), (659, 30072), (743, 30330), (752, 30360), (769, 30420), (774, 30447), (776, 30453), (850, 30687), (902, 30819), (905, 30843), (912, 30867), (921, 30891), (931, 30924), (946, 30978), (949, 30987), (962, 31008), (992, 31074),

Gene: Baines\_38 Start: 28622, Stop: 26757, Start Num: 301

Candidate Starts for Baines\_38:

(Start: 238 @28709 has 3 MA's), (Start: 301 @28622 has 110 MA's), (Start: 308 @28613 has 5 MA's), (354, 28508), (358, 28499), (375, 28469), (378, 28466), (433, 28346), (435, 28334), (438, 28328), (475, 28223), (484, 28196), (531, 28055), (536, 28049), (537, 28046), (539, 28034), (548, 28007), (549, 28004), (554, 27989), (556, 27983), (559, 27977), (586, 27944), (652, 27815), (676, 27755), (776, 27440), (779, 27431), (780, 27428), (783, 27410), (794, 27368), (796, 27362), (805, 27338), (822, 27281), (878, 27122), (885, 27092), (888, 27083), (903, 27023), (906, 26999), (919, 26960), (929, 26927), (932, 26915), (947, 26855),

Gene: Baloo\_58 Start: 53679, Stop: 51862, Start Num: 247

Candidate Starts for Baloo\_58:

(60, 54063), (130, 53862), (Start: 247 @53679 has 43 MA's), (267, 53649), (368, 53469), (433, 53316), (435, 53304), (448, 53274), (454, 53268), (476, 53205), (478, 53199), (519, 53148), (538, 53112), (556, 53064), (603, 52959), (645, 52863), (674, 52812), (724, 52668), (732, 52629), (739, 52599), (744, 52572), (748, 52560), (775, 52464), (777, 52458), (780, 52449), (782, 52437), (807, 52365), (814, 52335), (820, 52317), (822, 52308), (847, 52239), (851, 52227), (858, 52206), (888, 52137), (898, 52122), (903, 52098), (905, 52077), (912, 52053), (926, 52014), (931, 51996), (933, 51984), (936, 51972), (940, 51960), (956, 51918), (972, 51888),

Gene: Balsa\_38 Start: 29055, Stop: 27190, Start Num: 301

Candidate Starts for Balsa\_38:

(Start: 301 @29055 has 110 MA's), (Start: 308 @29046 has 5 MA's), (432, 28782), (435, 28767), (438, 28761), (484, 28629), (501, 28575), (531, 28488), (537, 28479), (539, 28467), (548, 28440), (549, 28437), (554, 28422), (556, 28416), (718, 28086), (776, 27873), (779, 27864), (780, 27861), (783, 27843), (794, 27801), (807, 27771), (822, 27714), (878, 27555), (885, 27525), (903, 27456), (906, 27432), (919, 27393), (929, 27360), (932, 27348),

Gene: Bananafish\_57 Start: 52489, Stop: 50660, Start Num: 205

Candidate Starts for Bananafish\_57:

(Start: 205 @52489 has 304 MA's), (Start: 250 @52462 has 2 MA's), (269, 52432), (Start: 274 @52420 has 6 MA's), (286, 52393), (287, 52390), (293, 52381), (318, 52363), (366, 52267), (391, 52216), (400, 52192), (463, 52030), (472, 52006), (476, 51994), (519, 51937), (538, 51901), (542, 51889), (551, 51865), (588, 51781), (602, 51751), (603, 51748), (615, 51718), (680, 51574), (707, 51508), (721, 51469), (724, 51457), (727, 51436), (732, 51418), (744, 51361), (771, 51277), (777, 51247), (780, 51238), (795, 51172), (812, 51145), (814, 51136), (820, 51118), (827, 51094), (847, 51040), (851, 51028), (858, 51007), (888, 50938), (905, 50878), (910, 50860), (922, 50827), (926, 50815), (930, 50800), (931, 50797), (933, 50785), (940, 50761), (941, 50758), (963, 50710), (965, 50707), (972, 50686), (979, 50665),

Gene: Bandik\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Bandik\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (718, 27961), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: BangNhom\_46 Start: 31992, Stop: 30166, Start Num: 246

Candidate Starts for BangNhom\_46:

(Start: 246 @31992 has 877 MA's), (279, 31944), (364, 31788), (400, 31716), (425, 31659), (429, 31650), (471, 31530), (479, 31506), (539, 31413), (558, 31365), (568, 31344), (585, 31305), (607, 31260), (646, 31173), (652, 31164), (659, 31152), (683, 31107), (687, 31095), (740, 30942), (743, 30921), (776, 30798), (783, 30768), (793, 30729), (814, 30663), (815, 30660), (827, 30621), (834, 30597), (905, 30390), (946, 30255), (950, 30243), (955, 30234),

Gene: Banjo\_59 Start: 54043, Stop: 52184, Start Num: 205

Candidate Starts for Banjo\_59:

(Start: 188 @54067 has 1 MA's), (Start: 205 @54043 has 304 MA's), (Start: 235 @54019 has 6 MA's), (Start: 250 @54013 has 2 MA's), (Start: 274 @53971 has 6 MA's), (283, 53950), (337, 53836), (342, 53830), (360, 53800), (391, 53740), (399, 53719), (421, 53665), (428, 53653), (434, 53635), (436, 53623), (476, 53518), (519, 53461), (538, 53425), (542, 53413), (552, 53386), (564, 53359), (570, 53341), (580, 53323), (598, 53284), (602, 53275), (603, 53272), (604, 53269), (738, 52912), (744, 52879), (750, 52858), (777, 52765), (780, 52756), (795, 52693), (814, 52657), (815, 52654), (820, 52639), (847, 52561), (851, 52549), (858, 52528), (875, 52489), (905, 52399), (910, 52381), (912, 52375), (917, 52360), (926, 52336), (930, 52321), (931, 52318), (933, 52306), (940, 52282), (963, 52234), (972, 52210),

Gene: Barnstormer\_47 Start: 31148, Stop: 33013, Start Num: 245

Candidate Starts for Barnstormer\_47:

(157, 31028), (168, 31046), (Start: 245 @31148 has 74 MA's), (317, 31256), (582, 31844), (585, 31850), (659, 32003), (692, 32066), (743, 32261), (760, 32324), (774, 32378), (776, 32384), (784, 32417), (844, 32600), (946, 32909), (982, 32987), (996, 33008),

Gene: BaronJohn\_38 Start: 27578, Stop: 25713, Start Num: 299

Candidate Starts for BaronJohn\_38:

(Start: 299 @27578 has 38 MA's), (305, 27572), (348, 27473), (354, 27464), (368, 27440), (375, 27425), (379, 27419), (403, 27368), (406, 27365), (438, 27284), (489, 27134), (493, 27131), (526, 27032), (536, 27005), (537, 27002), (539, 26990), (549, 26960), (556, 26939), (585, 26903), (658, 26756), (726, 26576), (776, 26396), (783, 26366), (797, 26312), (805, 26294), (822, 26237), (831, 26210), (845, 26168), (885, 26048), (888, 26039), (903, 25979), (906, 25955), (909, 25943), (912, 25934), (919, 25916), (929, 25883), (947, 25811),

Gene: Barriga\_45 Start: 34327, Stop: 32501, Start Num: 246

Candidate Starts for Barriga\_45:

(Start: 246 @34327 has 877 MA's), (368, 34114), (374, 34099), (400, 34051), (416, 34021), (422, 34000), (425, 33994), (429, 33985), (458, 33901), (470, 33868), (479, 33841), (539, 33748), (544, 33733), (578, 33649), (580, 33646), (612, 33580), (639, 33520), (662, 33475), (683, 33436), (743, 33256), (753, 33208), (767, 33169), (783, 33103), (793, 33064), (810, 33043), (814, 33022), (820, 33004), (843, 32938), (902, 32788), (903, 32785), (909, 32749), (917, 32725), (921, 32716), (925, 32704), (932, 32677), (946, 32629), (955, 32608),

Gene: BarrowTuph\_45 Start: 34815, Stop: 32989, Start Num: 246

Candidate Starts for BarrowTuph\_45:

(Start: 246 @34815 has 877 MA's), (368, 34602), (400, 34539), (416, 34509), (422, 34488), (425, 34482), (429, 34473), (470, 34356), (479, 34329), (539, 34236), (544, 34221), (578, 34137), (580, 34134), (612, 34068), (627, 34038), (639, 34008), (662, 33963), (683, 33924), (743, 33744), (753, 33696), (755, 33693), (767, 33657), (783, 33591), (793, 33552), (810, 33531), (814, 33510), (820, 33492), (843, 33426), (902, 33276), (903, 33273), (909, 33237), (917, 33213), (921, 33204), (925, 33192), (946, 33117), (955, 33096),

Gene: Bartimeaus\_45 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Bartimeaus\_45:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Basato\_61 Start: 54317, Stop: 52458, Start Num: 205

Candidate Starts for Basato\_61:

(Start: 188 @54341 has 1 MA's), (Start: 205 @54317 has 304 MA's), (Start: 235 @54293 has 6 MA's), (Start: 250 @54287 has 2 MA's), (Start: 274 @54245 has 6 MA's), (283, 54224), (337, 54110), (342, 54104), (360, 54074), (391, 54014), (399, 53993), (421, 53939), (428, 53927), (434, 53909), (436, 53897), (476, 53792), (519, 53735), (538, 53699), (542, 53687), (552, 53660), (556, 53651), (570, 53615), (598, 53558), (602, 53549), (603, 53546), (604, 53543), (738, 53186), (744, 53153), (750, 53132), (777, 53039), (780, 53030), (795, 52967), (814, 52931), (815, 52928), (820, 52913), (847, 52835), (851, 52823), (858, 52802), (875, 52763), (905, 52673), (910, 52655), (912, 52649), (917, 52634), (926, 52610), (930, 52595), (931, 52592), (933, 52580), (940, 52556), (963, 52508), (972, 52484),

Gene: BatteryCK\_61 Start: 54193, Stop: 52334, Start Num: 205

Candidate Starts for BatteryCK\_61:

(Start: 188 @54217 has 1 MA's), (Start: 205 @54193 has 304 MA's), (Start: 235 @54169 has 6 MA's), (Start: 250 @54163 has 2 MA's), (Start: 274 @54121 has 6 MA's), (283, 54100), (337, 53986), (342, 53980), (360, 53950), (391, 53890), (399, 53869), (421, 53815), (428, 53803), (434, 53785), (436, 53773), (476, 53668), (519, 53611), (538, 53575), (542, 53563), (551, 53539), (556, 53527), (564, 53509), (570, 53491), (580, 53473), (598, 53434), (602, 53425), (603, 53422), (604, 53419), (738, 53062), (744, 53029), (750, 53008), (777, 52915), (780, 52906), (795, 52843), (814, 52807), (815, 52804), (820, 52789), (847, 52711), (851, 52699), (858, 52678), (875, 52639), (905, 52549), (910, 52531), (912, 52525), (917, 52510), (926, 52486), (930, 52471), (931, 52468), (933, 52456), (940, 52432), (963, 52384), (972, 52360),

Gene: Battleship\_48 Start: 29936, Stop: 28146, Start Num: 246

Candidate Starts for Battleship\_48:

(Start: 246 @29936 has 877 MA's), (347, 29762), (400, 29657), (402, 29654), (416, 29627), (425, 29600), (444, 29549), (479, 29447), (539, 29354), (554, 29309), (556, 29306), (560, 29297), (635, 29135), (646, 29108), (659, 29087), (662, 29081), (717, 28982), (726, 28943), (738, 28892), (743, 28862), (755, 28811), (766, 28778), (774, 28745), (776, 28739), (783, 28709), (810, 28649), (814, 28628), (827, 28586), (835, 28559), (843, 28544), (876, 28457), (902, 28394), (903, 28391), (946, 28235), (950, 28223), (957, 28211),

Gene: Bavilard\_44 Start: 33694, Stop: 31319, Start Num: 46

Candidate Starts for Bavilard\_44:

(Start: 46 @33694 has 13 MA's), (63, 33634), (80, 33592), (93, 33553), (138, 33433), (145, 33412), (179, 33388), (Start: 232 @33310 has 3 MA's), (Start: 238 @33304 has 3 MA's), (Start: 241 @33301 has 13 MA's), (267, 33271), (275, 33253), (282, 33235), (305, 33196), (Start: 308 @33193 has 5 MA's), (329, 33136), (343, 33112), (354, 33097), (389, 33034), (398, 33010), (402, 33001), (403, 32995), (406, 32989), (420, 32956), (430, 32935), (435, 32914), (499, 32731), (500, 32725), (526, 32656), (539, 32614), (605, 32527), (633, 32503), (643, 32479), (657, 32449), (682, 32398), (683, 32395), (690, 32380), (702, 32359), (747, 32185), (749, 32176), (755, 32146), (760, 32134), (783, 32041), (792, 32005), (794, 31999), (796, 31993), (797, 31987), (815, 31930), (822, 31906), (856, 31801), (858, 31798), (889, 31705), (893, 31687), (903, 31648), (905, 31627), (911, 31606), (920, 31582), (940, 31504), (947, 31480), (1004, 31348),

Gene: Beaglebox\_60 Start: 54107, Stop: 52248, Start Num: 205

Candidate Starts for Beaglebox\_60:

(Start: 188 @54131 has 1 MA's), (Start: 205 @54107 has 304 MA's), (Start: 235 @54083 has 6 MA's), (Start: 250 @54077 has 2 MA's), (Start: 274 @54035 has 6 MA's), (283, 54014), (337, 53900), (342, 53894), (360, 53864), (391, 53804), (399, 53783), (421, 53729), (428, 53717), (434, 53699), (436, 53687), (476, 53582), (519, 53525), (538, 53489), (542, 53477), (551, 53453), (556, 53441), (564, 53423), (570, 53405), (580, 53387), (598, 53348), (602, 53339), (603, 53336), (712, 53078), (738, 52976), (744, 52943), (750, 52922), (777, 52829), (780, 52820), (795, 52757), (814, 52721), (815, 52718), (820, 52703), (847, 52625), (851, 52613), (858, 52592), (875, 52553), (905, 52463), (910, 52445), (912, 52439), (917, 52424), (926, 52400), (930, 52385), (931, 52382), (933, 52370), (940, 52346), (963, 52298), (972, 52274),

Gene: Beatrix\_44 Start: 35941, Stop: 34154, Start Num: 246

Candidate Starts for Beatrix\_44:

(Start: 246 @35941 has 877 MA's), (368, 35728), (400, 35665), (416, 35635), (422, 35614), (425, 35608), (429, 35599), (470, 35482), (479, 35455), (539, 35362), (544, 35347), (578, 35263), (580, 35260), (612, 35194), (627, 35164), (639, 35134), (662, 35089), (683, 35050), (743, 34870), (753, 34822), (767, 34783), (783, 34717), (812, 34645), (814, 34636), (843, 34552), (876, 34465), (917, 34339), (922, 34327), (939, 34267), (946, 34243), (948, 34237),

Gene: Beaupre\_41 Start: 27544, Stop: 29526, Start Num: 245

Candidate Starts for Beaupre\_41:

(Start: 245 @27544 has 74 MA's), (347, 27718), (364, 27748), (386, 27781), (402, 27814), (433, 27889), (442, 27916), (478, 28018), (521, 28117), (585, 28291), (598, 28318), (659, 28447), (717, 28585), (737, 28672), (743, 28705), (752, 28735), (767, 28792), (783, 28858), (813, 28951), (842, 29038), (905, 29218), (912, 29242), (946, 29353), (998, 29461),

Gene: BeautPeep30\_39 Start: 28936, Stop: 27071, Start Num: 301

Candidate Starts for BeautPeep30\_39:

(Start: 238 @29023 has 3 MA's), (Start: 241 @29020 has 13 MA's), (Start: 301 @28936 has 110 MA's), (Start: 308 @28927 has 5 MA's), (354, 28822), (358, 28813), (375, 28783), (378, 28780), (433, 28660), (435, 28648), (438, 28642), (475, 28537), (484, 28510), (531, 28369), (536, 28363), (537, 28360), (539, 28348), (548, 28321), (549, 28318), (554, 28303), (556, 28297), (559, 28291), (586, 28258), (676, 28069), (776, 27754), (779, 27745), (780, 27742), (783, 27724), (794, 27682), (796, 27676), (805, 27652), (822, 27595), (878, 27436), (885, 27406), (888, 27397), (903, 27337), (906, 27313), (919, 27274), (929, 27241), (932, 27229), (947, 27169),

Gene: Beauxregard13\_48 Start: 31856, Stop: 30042, Start Num: 246

Candidate Starts for Beauxregard13\_48:

(Start: 246 @31856 has 877 MA's), (275, 31817), (280, 31805), (364, 31652), (371, 31637), (400, 31580), (425, 31523), (429, 31514), (444, 31472), (461, 31421), (479, 31370), (539, 31277), (556, 31229), (560, 31220), (568, 31205), (585, 31166), (598, 31139), (612, 31109), (654, 31016), (686,

30956), (697, 30941), (743, 30785), (767, 30698), (783, 30632), (793, 30593), (815, 30521), (827, 30482), (834, 30458), (843, 30440), (853, 30407), (864, 30380), (888, 30326), (905, 30266), (930, 30188), (946, 30131), (950, 30119), (955, 30110),

Gene: BeeBee8\_39 Start: 29216, Stop: 27360, Start Num: 308

Candidate Starts for BeeBee8\_39:

(Start: 301 @29225 has 110 MA's), (Start: 308 @29216 has 5 MA's), (432, 28952), (435, 28937), (438, 28931), (484, 28799), (501, 28745), (531, 28658), (537, 28649), (539, 28637), (548, 28610), (549, 28607), (554, 28592), (556, 28586), (718, 28256), (776, 28043), (779, 28034), (780, 28031), (783, 28013), (794, 27971), (807, 27941), (822, 27884), (878, 27725), (885, 27695), (903, 27626), (906, 27602), (919, 27563), (929, 27530), (932, 27518),

Gene: Beemo\_45 Start: 31539, Stop: 29746, Start Num: 246

Candidate Starts for Beemo\_45:

(Start: 246 @31539 has 877 MA's), (261, 31530), (280, 31488), (346, 31368), (347, 31365), (372, 31317), (402, 31257), (417, 31227), (420, 31215), (425, 31203), (479, 31050), (539, 30957), (598, 30819), (612, 30789), (687, 30630), (697, 30618), (714, 30591), (740, 30483), (743, 30462), (780, 30327), (783, 30309), (814, 30228), (827, 30186), (853, 30111), (886, 30036), (902, 29994), (930, 29892), (946, 29835), (950, 29823), (955, 29814),

Gene: BeesKnees\_45 Start: 34407, Stop: 32581, Start Num: 246

Candidate Starts for BeesKnees\_45:

(Start: 246 @34407 has 877 MA's), (368, 34194), (400, 34131), (416, 34101), (422, 34080), (425, 34074), (429, 34065), (470, 33948), (479, 33921), (539, 33828), (544, 33813), (578, 33729), (580, 33726), (612, 33660), (627, 33630), (639, 33600), (662, 33555), (683, 33516), (743, 33336), (753, 33288), (767, 33249), (783, 33183), (793, 33144), (810, 33123), (814, 33102), (820, 33084), (843, 33018), (902, 32868), (903, 32865), (909, 32829), (921, 32796), (925, 32784), (932, 32757), (946, 32709), (955, 32688),

Gene: Beleetus\_139 Start: 73582, Stop: 75618, Start Num: 272

Candidate Starts for Beleetus\_139:

(Start: 272 @73582 has 4 MA's), (305, 73648), (317, 73672), (331, 73726), (336, 73738), (351, 73771), (388, 73840), (411, 73897), (439, 73975), (452, 74011), (511, 74131), (533, 74185), (535, 74188), (550, 74239), (554, 74251), (585, 74320), (594, 74341), (616, 74389), (621, 74398), (745, 74776), (770, 74893), (773, 74911), (807, 75031), (811, 75043), (830, 75112), (832, 75121), (892, 75295), (909, 75379), (932, 75454), (952, 75526), (973, 75580), (976, 75586),

Gene: Belenaria\_36 Start: 28114, Stop: 26330, Start Num: 246

Candidate Starts for Belenaria\_36:

(Start: 246 @28114 has 877 MA's), (379, 27880), (395, 27850), (399, 27841), (400, 27838), (420, 27793), (425, 27781), (444, 27730), (479, 27628), (496, 27607), (539, 27535), (554, 27490), (556, 27487), (574, 27445), (577, 27439), (585, 27424), (598, 27397), (646, 27292), (652, 27283), (662, 27265), (683, 27226), (716, 27169), (743, 27046), (753, 26998), (783, 26893), (784, 26890), (810, 26833), (814, 26812), (829, 26764), (855, 26689), (886, 26620), (902, 26578), (905, 26554), (930, 26476), (946, 26419), (950, 26407), (955, 26398), (969, 26368), (978, 26350),

Gene: BellusTerra\_46 Start: 31571, Stop: 29745, Start Num: 246

Candidate Starts for BellusTerra\_46:

(Start: 246 @31571 has 877 MA's), (267, 31550), (280, 31520), (295, 31490), (383, 31328), (394, 31310), (425, 31238), (429, 31229), (471, 31109), (479, 31085), (539, 30992), (558, 30944), (568, 30923), (585, 30884), (646, 30752), (659, 30731), (683, 30686), (687, 30674), (740, 30521), (743, 30500), (776, 30377), (783, 30347), (793, 30308), (814, 30242), (815, 30239), (820, 30224), (827, 30200), (834, 30176), (905, 29969), (946, 29834), (950, 29822), (955, 29813),

Gene: BelmontSKP\_43 Start: 29896, Stop: 31770, Start Num: 246

Candidate Starts for BelmontSKP\_43:

(Start: 243 @29893 has 7 MA's), (Start: 246 @29896 has 877 MA's), (287, 29965), (Start: 301 @29986 has 110 MA's), (429, 30232), (444, 30274), (550, 30487), (585, 30568), (696, 30802), (731, 30925), (743, 30985), (746, 30991), (755, 31036), (762, 31051), (764, 31066), (774, 31102), (783, 31138), (813, 31231), (844, 31324), (874, 31402), (902, 31474), (909, 31513), (924, 31555), (929, 31573), (939, 31609), (946, 31633), (955, 31654),

Gene: Ben11\_58 Start: 53891, Stop: 52074, Start Num: 247

Candidate Starts for Ben11\_58:

(130, 54074), (Start: 247 @53891 has 43 MA's), (267, 53861), (368, 53681), (433, 53528), (435, 53516), (448, 53486), (454, 53480), (476, 53417), (478, 53411), (519, 53360), (537, 53333), (538, 53324), (556, 53276), (603, 53171), (645, 53075), (674, 53024), (724, 52880), (732, 52841), (739, 52811), (744, 52784), (748, 52772), (775, 52676), (777, 52670), (780, 52661), (782, 52649), (807, 52577), (814, 52547), (820, 52529), (822, 52520), (847, 52451), (851, 52439), (858, 52418), (888, 52349), (898, 52334), (903, 52310), (905, 52289), (910, 52271), (912, 52265), (924, 52232), (926, 52226), (931, 52208), (933, 52196), (936, 52184), (940, 52172), (956, 52130), (972, 52100),

Gene: Benedict\_39 Start: 30154, Stop: 28289, Start Num: 246

Candidate Starts for Benedict\_39:

(Start: 215 @30187 has 2 MA's), (Start: 246 @30154 has 877 MA's), (318, 30043), (364, 29950), (366, 29947), (400, 29878), (402, 29875), (416, 29848), (425, 29821), (429, 29812), (458, 29728), (461, 29719), (467, 29704), (479, 29668), (523, 29608), (539, 29572), (554, 29527), (556, 29524), (567, 29503), (568, 29500), (594, 29440), (633, 29362), (654, 29314), (662, 29302), (686, 29254), (712, 29203), (743, 29068), (753, 29020), (762, 29002), (767, 28981), (771, 28972), (777, 28942), (783, 28915), (784, 28912), (814, 28834), (834, 28768), (853, 28717), (876, 28663), (880, 28654), (888, 28636), (910, 28558), (939, 28465), (946, 28441), (950, 28429), (1000, 28324),

Gene: Bengal\_43 Start: 29549, Stop: 31423, Start Num: 246

Candidate Starts for Bengal\_43:

(Start: 246 @29549 has 877 MA's), (287, 29618), (Start: 301 @29639 has 110 MA's), (429, 29885), (434, 29900), (444, 29927), (585, 30221), (646, 30356), (696, 30455), (731, 30578), (743, 30638), (746, 30644), (755, 30689), (762, 30704), (764, 30719), (774, 30755), (783, 30791), (813, 30884), (844, 30977), (874, 31055), (902, 31127), (909, 31166), (924, 31208), (929, 31226), (939, 31262), (946, 31286), (955, 31307),

Gene: BengiVuitton\_44 Start: 31228, Stop: 29441, Start Num: 246

Candidate Starts for BengiVuitton\_44:

(Start: 246 @31228 has 877 MA's), (364, 31024), (366, 31021), (368, 31015), (375, 31000), (383, 30985), (400, 30952), (402, 30949), (416, 30922), (425, 30895), (433, 30874), (444, 30844), (479, 30742), (539, 30649), (542, 30640), (556, 30601), (560, 30592), (568, 30577), (598, 30511), (635, 30430), (659, 30382), (662, 30376), (726, 30238), (743, 30157), (755, 30106), (766, 30073), (767, 30070), (783, 30004), (793, 29965), (810, 29944), (831, 29869), (837, 29851), (853, 29806), (864, 29779), (880, 29743), (888, 29725), (902, 29689), (905, 29665), (924, 29608), (930, 29587), (946, 29530), (950, 29518),

Gene: Benjalauren\_39 Start: 28635, Stop: 26770, Start Num: 301

Candidate Starts for Benjalauren\_39:

(Start: 238 @28722 has 3 MA's), (Start: 241 @28719 has 13 MA's), (Start: 301 @28635 has 110 MA's), (Start: 308 @28626 has 5 MA's), (354, 28521), (358, 28512), (375, 28482), (378, 28479), (433, 28359), (435, 28347), (438, 28341), (475, 28236), (484, 28209), (531, 28068), (536, 28062), (537, 28059), (539, 28047), (548, 28020), (549, 28017), (554, 28002), (556, 27996), (559, 27990), (586,

27957), (652, 27828), (676, 27768), (776, 27453), (779, 27444), (780, 27441), (783, 27423), (794, 27381), (796, 27375), (798, 27366), (805, 27351), (822, 27294), (878, 27135), (885, 27105), (888, 27096), (903, 27036), (906, 27012), (919, 26973), (929, 26940), (932, 26928), (947, 26868),

Gene: Benvolio\_41 Start: 30754, Stop: 28967, Start Num: 246

Candidate Starts for Benvolio\_41:

(Start: 246 @30754 has 877 MA's), (366, 30547), (368, 30541), (383, 30511), (400, 30478), (402, 30475), (416, 30448), (425, 30421), (433, 30400), (479, 30268), (539, 30175), (556, 30127), (560, 30118), (568, 30103), (598, 30037), (635, 29956), (659, 29908), (662, 29902), (697, 29839), (726, 29764), (743, 29683), (755, 29632), (766, 29599), (767, 29596), (783, 29530), (793, 29491), (810, 29470), (831, 29395), (837, 29377), (843, 29365), (853, 29332), (864, 29305), (880, 29269), (902, 29215), (905, 29191), (924, 29134), (930, 29113), (946, 29056), (950, 29044), (955, 29035),

Gene: Bernardo\_59 Start: 54028, Stop: 52211, Start Num: 247

Candidate Starts for Bernardo\_59:

(130, 54211), (Start: 247 @54028 has 43 MA's), (267, 53998), (368, 53818), (433, 53665), (435, 53653), (448, 53623), (454, 53617), (476, 53554), (478, 53548), (519, 53497), (538, 53461), (556, 53413), (603, 53308), (645, 53212), (674, 53161), (724, 53017), (732, 52978), (739, 52948), (744, 52921), (748, 52909), (775, 52813), (777, 52807), (780, 52798), (782, 52786), (807, 52714), (814, 52684), (820, 52666), (822, 52657), (847, 52588), (851, 52576), (858, 52555), (888, 52486), (898, 52471), (903, 52447), (905, 52426), (912, 52402), (926, 52363), (931, 52345), (933, 52333), (936, 52321), (940, 52309), (956, 52267), (972, 52237),

Gene: Bernstein\_40 Start: 27521, Stop: 29389, Start Num: 243

Candidate Starts for Bernstein\_40:

(Start: 243 @27521 has 7 MA's), (Start: 246 @27524 has 877 MA's), (249, 27527), (287, 27596), (434, 27878), (444, 27905), (467, 27959), (552, 28124), (585, 28199), (594, 28220), (731, 28574), (743, 28634), (755, 28685), (774, 28751), (783, 28787), (813, 28880), (874, 29051), (902, 29123), (924, 29204), (945, 29279), (946, 29282), (955, 29303), (989, 29372),

Gene: Berrie\_42 Start: 30512, Stop: 32377, Start Num: 245

Candidate Starts for Berrie\_42:

(Start: 245 @30512 has 74 MA's), (279, 30560), (364, 30716), (386, 30749), (422, 30830), (448, 30899), (541, 31106), (545, 31118), (580, 31205), (585, 31214), (591, 31229), (635, 31319), (659, 31367), (717, 31505), (743, 31625), (767, 31712), (783, 31778), (813, 31871), (834, 31943), (878, 32051), (902, 32114), (905, 32138), (946, 32273), (949, 32282), (988, 32360),

Gene: Bethlehem\_44 Start: 35080, Stop: 33254, Start Num: 246

Candidate Starts for Bethlehem\_44:

(Start: 246 @35080 has 877 MA's), (368, 34867), (400, 34804), (416, 34774), (422, 34753), (425, 34747), (429, 34738), (470, 34621), (479, 34594), (539, 34501), (544, 34486), (578, 34402), (580, 34399), (612, 34333), (627, 34303), (639, 34273), (662, 34228), (683, 34189), (743, 34009), (753, 33961), (767, 33922), (783, 33856), (793, 33817), (810, 33796), (814, 33775), (820, 33757), (843, 33691), (902, 33541), (903, 33538), (909, 33502), (921, 33469), (925, 33457), (932, 33430), (946, 33382), (955, 33361),

Gene: Bexan\_43 Start: 35619, Stop: 33832, Start Num: 246

Candidate Starts for Bexan\_43:

(Start: 246 @35619 has 877 MA's), (368, 35406), (400, 35343), (416, 35313), (422, 35292), (425, 35286), (429, 35277), (470, 35160), (479, 35133), (539, 35040), (544, 35025), (556, 34992), (578, 34941), (580, 34938), (612, 34872), (627, 34842), (639, 34812), (662, 34767), (683, 34728), (743, 34548), (753, 34500), (767, 34461), (783, 34395), (812, 34323), (814, 34314), (843, 34230), (876, 34143), (917, 34017), (922, 34005), (939, 33945), (946, 33921), (948, 33915),

Gene: BiancaTri92\_44 Start: 32044, Stop: 30257, Start Num: 246

Candidate Starts for BiancaTri92\_44:

(Start: 246 @32044 has 877 MA's), (366, 31837), (368, 31831), (375, 31816), (383, 31801), (416, 31738), (425, 31711), (433, 31690), (479, 31558), (539, 31465), (560, 31408), (568, 31393), (598, 31327), (635, 31246), (659, 31198), (662, 31192), (726, 31054), (743, 30973), (755, 30922), (766, 30889), (767, 30886), (771, 30877), (776, 30850), (783, 30820), (793, 30781), (810, 30760), (814, 30739), (888, 30541), (902, 30505), (905, 30481), (924, 30424), (930, 30403), (946, 30346), (950, 30334), (955, 30325),

Gene: Big3\_43 Start: 34644, Stop: 32818, Start Num: 246

Candidate Starts for Big3\_43:

(Start: 246 @34644 has 877 MA's), (368, 34431), (374, 34416), (400, 34368), (416, 34338), (422, 34317), (425, 34311), (429, 34302), (470, 34185), (479, 34158), (539, 34065), (544, 34050), (556, 34017), (578, 33966), (580, 33963), (612, 33897), (627, 33867), (639, 33837), (662, 33792), (683, 33753), (743, 33573), (753, 33525), (767, 33486), (783, 33420), (793, 33381), (810, 33360), (814, 33339), (820, 33321), (843, 33255), (902, 33105), (903, 33102), (909, 33066), (917, 33042), (921, 33033), (925, 33021), (946, 32946), (955, 32925),

Gene: Big4\_105 Start: 80746, Stop: 78878, Start Num: 246

Candidate Starts for Big4\_105:

(227, 80767), (234, 80758), (237, 80755), (Start: 246 @80746 has 877 MA's), (346, 80548), (382, 80488), (391, 80473), (435, 80365), (438, 80359), (477, 80266), (483, 80248), (542, 80173), (571, 80089), (585, 80062), (594, 80041), (613, 80002), (630, 79969), (648, 79927), (665, 79894), (683, 79864), (698, 79837), (743, 79675), (773, 79561), (791, 79477), (795, 79462), (797, 79453), (824, 79366), (827, 79357), (840, 79324), (898, 79168), (922, 79072), (930, 79045), (946, 78988), (957, 78964),

Gene: BigChungus\_44 Start: 33868, Stop: 31490, Start Num: 46

Candidate Starts for BigChungus\_44:

(Start: 46 @33868 has 13 MA's), (63, 33808), (80, 33766), (93, 33727), (123, 33637), (138, 33607), (145, 33586), (179, 33562), (Start: 232 @33484 has 3 MA's), (Start: 238 @33478 has 3 MA's), (Start: 241 @33475 has 13 MA's), (267, 33445), (275, 33427), (282, 33409), (305, 33370), (Start: 308 @33367 has 5 MA's), (329, 33310), (343, 33286), (354, 33271), (389, 33208), (398, 33184), (402, 33175), (403, 33169), (406, 33163), (420, 33130), (430, 33109), (435, 33088), (499, 32905), (526, 32830), (539, 32788), (605, 32701), (633, 32677), (643, 32653), (647, 32644), (657, 32623), (682, 32572), (683, 32569), (690, 32554), (702, 32533), (736, 32407), (747, 32359), (749, 32350), (760, 32308), (783, 32215), (792, 32179), (794, 32173), (796, 32167), (797, 32161), (815, 32104), (822, 32080), (856, 31975), (858, 31972), (889, 31879), (893, 31861), (903, 31822), (911, 31780), (920, 31756), (929, 31726), (940, 31678), (947, 31654), (958, 31630), (968, 31609), (1004, 31522), (1009, 31510),

Gene: BigMau\_45 Start: 34189, Stop: 32360, Start Num: 246

Candidate Starts for BigMau\_45:

(Start: 246 @34189 has 877 MA's), (368, 33976), (374, 33961), (400, 33913), (416, 33883), (422, 33862), (425, 33856), (429, 33847), (470, 33730), (479, 33703), (539, 33610), (544, 33595), (551, 33574), (578, 33511), (580, 33508), (607, 33454), (612, 33442), (627, 33412), (639, 33382), (662, 33337), (683, 33298), (743, 33118), (753, 33070), (771, 33022), (780, 32983), (783, 32965), (793, 32926), (810, 32905), (814, 32884), (861, 32746), (922, 32575), (929, 32551), (938, 32518), (943, 32503), (946, 32491), (955, 32470), (959, 32464), (981, 32416), (986, 32401),

Gene: BigPaolini\_45 Start: 33608, Stop: 31821, Start Num: 246

Candidate Starts for BigPaolini\_45:



(Start: 246 @33608 has 877 MA's), (368, 33395), (374, 33380), (416, 33302), (422, 33281), (425, 33275), (429, 33266), (470, 33149), (479, 33122), (539, 33029), (544, 33014), (556, 32981), (578, 32930), (580, 32927), (607, 32873), (612, 32861), (627, 32831), (639, 32801), (662, 32756), (683, 32717), (743, 32537), (753, 32489), (767, 32450), (783, 32384), (812, 32312), (814, 32303), (843, 32219), (876, 32132), (917, 32006), (922, 31994), (946, 31910), (948, 31904),

Gene: BigRedClifford\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for BigRedClifford\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (433, 28658), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (652, 28127), (676, 28067), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (798, 27665), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Bigchungj\_43 Start: 33771, Stop: 31945, Start Num: 246

Candidate Starts for Bigchungj\_43:

(Start: 246 @33771 has 877 MA's), (368, 33558), (374, 33543), (416, 33465), (422, 33444), (425, 33438), (429, 33429), (470, 33312), (479, 33285), (539, 33192), (544, 33177), (556, 33144), (578, 33093), (580, 33090), (612, 33024), (627, 32994), (639, 32964), (662, 32919), (683, 32880), (743, 32700), (752, 32670), (753, 32652), (755, 32649), (767, 32613), (783, 32547), (814, 32466), (815, 32463), (843, 32382), (902, 32232), (903, 32229), (909, 32193), (917, 32169), (921, 32160), (925, 32148), (946, 32073), (955, 32052),

Gene: Bigflo\_48 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for Bigflo\_48:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (686, 30952), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827, 30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: Bigfoot\_41 Start: 33829, Stop: 32003, Start Num: 246

Candidate Starts for Bigfoot\_41:

(Start: 246 @33829 has 877 MA's), (368, 33616), (374, 33601), (400, 33553), (416, 33523), (422, 33502), (425, 33496), (429, 33487), (470, 33370), (479, 33343), (539, 33250), (544, 33235), (556, 33202), (578, 33151), (580, 33148), (612, 33082), (639, 33022), (662, 32977), (683, 32938), (743, 32758), (753, 32710), (767, 32671), (783, 32605), (793, 32566), (810, 32545), (814, 32524), (820, 32506), (843, 32440), (902, 32290), (903, 32287), (909, 32251), (917, 32227), (921, 32218), (925, 32206), (932, 32179), (946, 32131), (955, 32110),

Gene: BiggityBass\_49 Start: 47333, Stop: 45519, Start Num: 235

Candidate Starts for BiggityBass\_49:

(171, 47423), (Start: 235 @47333 has 6 MA's), (Start: 250 @47324 has 2 MA's), (Start: 274 @47282 has 6 MA's), (366, 47114), (384, 47072), (417, 47003), (433, 46964), (436, 46949), (469, 46874), (476, 46853), (538, 46760), (591, 46634), (592, 46631), (602, 46610), (603, 46607), (642, 46517), (703, 46379), (727, 46295), (732, 46277), (744, 46220), (775, 46112), (777, 46106), (780, 46097), (795, 46034), (815, 45995), (820, 45980), (847, 45902), (851, 45890), (852, 45884), (858, 45869), (861, 45860), (901, 45773), (905, 45740), (906, 45737), (923, 45686), (926, 45677), (940, 45617), (972, 45545),

Gene: BillDoor\_43 Start: 31825, Stop: 29438, Start Num: 36

Candidate Starts for BillDoor\_43:

(Start: 36 @31825 has 16 MA's), (63, 31762), (84, 31705), (128, 31582), (138, 31558), (Start: 241 @31426 has 13 MA's), (265, 31399), (312, 31306), (329, 31261), (367, 31201), (374, 31183), (398, 31135), (420, 31081), (421, 31078), (430, 31060), (435, 31039), (454, 30988), (457, 30979), (458, 30976), (499, 30856), (522, 30796), (526, 30781), (559, 30697), (605, 30652), (615, 30628), (633, 30622), (643, 30598), (680, 30520), (682, 30517), (683, 30514), (698, 30490), (733, 30367), (749, 30298), (750, 30292), (774, 30199), (783, 30163), (792, 30127), (794, 30121), (796, 30115), (797, 30109), (805, 30085), (815, 30052), (822, 30028), (836, 29983), (856, 29923), (903, 29770), (910, 29731), (911, 29728), (947, 29602), (968, 29557), (971, 29548), (995, 29488),

Gene: BillKnuckles\_45 Start: 35369, Stop: 33540, Start Num: 246

Candidate Starts for BillKnuckles\_45:

(Start: 246 @35369 has 877 MA's), (368, 35156), (374, 35141), (400, 35093), (416, 35063), (422, 35042), (425, 35036), (429, 35027), (470, 34910), (479, 34883), (539, 34790), (544, 34775), (556, 34742), (578, 34691), (580, 34688), (612, 34622), (627, 34592), (639, 34562), (662, 34517), (683, 34478), (743, 34298), (753, 34250), (771, 34202), (780, 34163), (783, 34145), (793, 34106), (810, 34085), (814, 34064), (819, 34049), (861, 33926), (922, 33755), (929, 33731), (943, 33683), (946, 33671), (955, 33650), (959, 33644), (981, 33596), (986, 33581),

Gene: Bimmel\_18 Start: 11968, Stop: 10178, Start Num: 246

Candidate Starts for Bimmel\_18:

(Start: 246 @11968 has 877 MA's), (368, 11758), (391, 11716), (416, 11665), (425, 11638), (433, 11617), (449, 11572), (479, 11485), (536, 11407), (539, 11392), (585, 11275), (659, 11122), (692, 11077), (700, 11062), (728, 10975), (743, 10906), (759, 10843), (773, 10792), (774, 10786), (783, 10750), (814, 10669), (828, 10624), (922, 10360), (939, 10300), (946, 10276), (978, 10207), (980, 10204),

Gene: Bircsak\_44 Start: 35182, Stop: 33353, Start Num: 246

Candidate Starts for Bircsak\_44:

(Start: 246 @35182 has 877 MA's), (368, 34969), (374, 34954), (400, 34906), (416, 34876), (419, 34864), (422, 34855), (425, 34849), (429, 34840), (470, 34723), (479, 34696), (539, 34603), (544, 34588), (551, 34567), (556, 34555), (578, 34504), (580, 34501), (612, 34435), (627, 34405), (639, 34375), (662, 34330), (683, 34291), (743, 34111), (753, 34063), (771, 34015), (780, 33976), (783, 33958), (793, 33919), (810, 33898), (814, 33877), (819, 33862), (861, 33739), (922, 33568), (929, 33544), (943, 33496), (946, 33484), (955, 33463), (959, 33457), (981, 33409), (986, 33394),

Gene: BirdsNest\_61 Start: 54182, Stop: 52338, Start Num: 228

Candidate Starts for BirdsNest\_61:

(Start: 228 @54182 has 3 MA's), (Start: 274 @54125 has 6 MA's), (286, 54098), (342, 53996), (391, 53909), (414, 53855), (421, 53834), (433, 53810), (436, 53795), (476, 53690), (538, 53597), (542, 53585), (556, 53549), (603, 53444), (674, 53297), (704, 53213), (706, 53207), (724, 53147), (725, 53144), (732, 53108), (744, 53051), (775, 52943), (777, 52937), (780, 52928), (814, 52814), (820, 52796), (847, 52718), (851, 52706), (858, 52685), (888, 52616), (898, 52601), (905, 52556), (912, 52532), (926, 52493), (930, 52478), (933, 52463), (940, 52439), (956, 52394), (963, 52388), (972, 52364),

Gene: Bishoperium\_60 Start: 54582, Stop: 52723, Start Num: 205

Candidate Starts for Bishoperium\_60:

(Start: 188 @54606 has 1 MA's), (Start: 205 @54582 has 304 MA's), (Start: 235 @54558 has 6 MA's), (Start: 250 @54552 has 2 MA's), (Start: 274 @54510 has 6 MA's), (283, 54489), (337, 54375), (342, 54369), (360, 54339), (391, 54279), (399, 54258), (421, 54204), (428, 54192), (434, 54174), (436, 54162), (476, 54057), (519, 54000), (538, 53964), (542, 53952), (552, 53925), (564, 53898), (570,

53880), (580, 53862), (598, 53823), (602, 53814), (603, 53811), (604, 53808), (738, 53451), (744, 53418), (750, 53397), (777, 53304), (780, 53295), (795, 53232), (814, 53196), (815, 53193), (820, 53178), (847, 53100), (851, 53088), (858, 53067), (875, 53028), (905, 52938), (910, 52920), (912, 52914), (917, 52899), (926, 52875), (930, 52860), (931, 52857), (933, 52845), (940, 52821), (963, 52773), (972, 52749),

Gene: Biskit\_45 Start: 32515, Stop: 30125, Start Num: 36

Candidate Starts for Biskit\_45:

(Start: 36 @32515 has 16 MA's), (63, 32452), (70, 32434), (75, 32419), (93, 32365), (97, 32353), (103, 32332), (117, 32299), (128, 32272), (138, 32248), (164, 32221), (Start: 241 @32116 has 13 MA's), (275, 32068), (329, 31951), (374, 31870), (391, 31843), (398, 31822), (420, 31768), (421, 31765), (430, 31747), (435, 31726), (457, 31666), (526, 31468), (539, 31426), (605, 31339), (615, 31315), (633, 31309), (657, 31255), (660, 31249), (680, 31207), (682, 31204), (683, 31201), (733, 31054), (741, 31012), (749, 30985), (760, 30943), (783, 30850), (792, 30814), (794, 30808), (796, 30802), (797, 30796), (805, 30772), (815, 30739), (822, 30715), (836, 30670), (856, 30610), (903, 30457), (947, 30289), (968, 30244), (971, 30235), (973, 30226),

Gene: BlackStallion\_62 Start: 54311, Stop: 52452, Start Num: 205

Candidate Starts for BlackStallion\_62:

(Start: 188 @54335 has 1 MA's), (Start: 205 @54311 has 304 MA's), (Start: 235 @54287 has 6 MA's), (Start: 250 @54281 has 2 MA's), (Start: 274 @54239 has 6 MA's), (283, 54218), (337, 54104), (342, 54098), (360, 54068), (391, 54008), (399, 53987), (421, 53933), (428, 53921), (434, 53903), (436, 53891), (476, 53786), (519, 53729), (538, 53693), (542, 53681), (551, 53657), (556, 53645), (564, 53627), (570, 53609), (580, 53591), (598, 53552), (602, 53543), (603, 53540), (604, 53537), (738, 53180), (744, 53147), (750, 53126), (777, 53033), (780, 53024), (795, 52961), (814, 52925), (815, 52922), (820, 52907), (847, 52829), (851, 52817), (858, 52796), (875, 52757), (905, 52667), (910, 52649), (912, 52643), (917, 52628), (926, 52604), (930, 52589), (931, 52586), (933, 52574), (940, 52550), (963, 52502), (972, 52478),

Gene: Blackmoor\_45 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Blackmoor\_45:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Blage\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for Blage\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (433, 28658), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (652, 28127), (676, 28067), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (798, 27665), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: BlessJoy\_46 Start: 29785, Stop: 27944, Start Num: 246

Candidate Starts for BlessJoy\_46:

(Start: 220 @29815 has 1 MA's), (Start: 246 @29785 has 877 MA's), (364, 29581), (400, 29506), (402, 29503), (416, 29476), (420, 29461), (425, 29449), (444, 29398), (475, 29308), (479, 29296), (539, 29203), (552, 29164), (560, 29146), (568, 29131), (598, 29065), (613, 29032), (614, 29029), (663, 28927), (697, 28867), (726, 28783), (743, 28702), (766, 28618), (767, 28615), (771, 28606), (776,

28579), (783, 28549), (810, 28489), (820, 28450), (902, 28234), (903, 28231), (905, 28210), (946, 28075), (950, 28063), (955, 28054), (957, 28051), (1000, 27958),

Gene: Blinn1\_48 Start: 30144, Stop: 28303, Start Num: 246

Candidate Starts for Blinn1\_48:

(Start: 246 @30144 has 877 MA's), (364, 29940), (400, 29865), (402, 29862), (420, 29820), (425, 29808), (444, 29757), (479, 29655), (539, 29562), (552, 29523), (560, 29505), (568, 29490), (598, 29424), (613, 29391), (614, 29388), (663, 29286), (697, 29226), (726, 29142), (743, 29061), (766, 28977), (767, 28974), (771, 28965), (776, 28938), (780, 28926), (783, 28908), (810, 28848), (820, 28809), (827, 28785), (902, 28593), (903, 28590), (905, 28569), (946, 28434), (950, 28422), (955, 28413), (957, 28410), (1000, 28317),

Gene: Blocker23\_57 Start: 52599, Stop: 50770, Start Num: 205

Candidate Starts for Blocker23\_57:

(Start: 205 @52599 has 304 MA's), (Start: 250 @52572 has 2 MA's), (269, 52542), (Start: 274 @52530 has 6 MA's), (286, 52503), (287, 52500), (293, 52491), (318, 52473), (366, 52377), (391, 52326), (400, 52302), (411, 52278), (463, 52140), (472, 52116), (476, 52104), (519, 52047), (538, 52011), (542, 51999), (551, 51975), (588, 51891), (602, 51861), (603, 51858), (615, 51828), (680, 51684), (707, 51618), (721, 51579), (724, 51567), (727, 51546), (732, 51528), (744, 51471), (771, 51387), (777, 51357), (780, 51348), (795, 51282), (812, 51255), (814, 51246), (820, 51228), (827, 51204), (847, 51150), (851, 51138), (858, 51117), (888, 51048), (905, 50988), (910, 50970), (922, 50937), (926, 50925), (930, 50910), (931, 50907), (933, 50895), (940, 50871), (941, 50868), (963, 50820), (965, 50817), (972, 50796), (979, 50775),

Gene: Blondies\_45 Start: 32832, Stop: 30442, Start Num: 36

Candidate Starts for Blondies\_45:

(Start: 36 @32832 has 16 MA's), (63, 32769), (75, 32736), (93, 32682), (97, 32670), (103, 32649), (117, 32616), (128, 32589), (138, 32565), (164, 32538), (Start: 241 @32433 has 13 MA's), (275, 32385), (329, 32268), (374, 32187), (391, 32160), (398, 32139), (420, 32085), (421, 32082), (430, 32064), (435, 32043), (457, 31983), (526, 31785), (539, 31743), (605, 31656), (615, 31632), (633, 31626), (657, 31572), (660, 31566), (680, 31524), (682, 31521), (683, 31518), (733, 31371), (741, 31329), (749, 31302), (760, 31260), (783, 31167), (792, 31131), (794, 31125), (796, 31119), (797, 31113), (805, 31089), (815, 31056), (822, 31032), (836, 30987), (903, 30774), (947, 30606), (968, 30561), (971, 30552), (973, 30543),

Gene: Bloom\_103 Start: 78450, Stop: 80246, Start Num: 262

Candidate Starts for Bloom\_103:

(Start: 262 @78450 has 4 MA's), (318, 78546), (428, 78762), (435, 78789), (438, 78795), (470, 78864), (482, 78900), (571, 79047), (573, 79053), (585, 79074), (591, 79089), (683, 79278), (706, 79323), (719, 79356), (723, 79374), (730, 79407), (740, 79446), (743, 79467), (746, 79473), (774, 79587), (792, 79671), (794, 79677), (797, 79689), (813, 79737), (816, 79749), (827, 79785), (840, 79818), (843, 79827), (858, 79872), (865, 79890), (898, 79974), (902, 79995), (906, 80022), (910, 80037), (922, 80070), (929, 80094), (934, 80118), (946, 80154), (961, 80181),

Gene: BluSpix\_42 Start: 30791, Stop: 28962, Start Num: 246

Candidate Starts for BluSpix\_42:

(Start: 246 @30791 has 877 MA's), (368, 30578), (400, 30515), (416, 30485), (422, 30464), (425, 30458), (429, 30449), (470, 30332), (479, 30305), (539, 30212), (544, 30197), (556, 30164), (578, 30113), (580, 30110), (612, 30044), (639, 29984), (662, 29939), (683, 29900), (743, 29720), (753, 29672), (771, 29624), (780, 29585), (783, 29567), (793, 29528), (810, 29507), (814, 29486), (819, 29471), (861, 29348), (922, 29177), (929, 29153), (943, 29105), (946, 29093), (955, 29072), (959, 29066), (981, 29018), (986, 29003),

Gene: Blue\_44 Start: 34966, Stop: 33140, Start Num: 246

Candidate Starts for Blue\_44:

(Start: 246 @34966 has 877 MA's), (368, 34753), (374, 34738), (416, 34660), (422, 34639), (425, 34633), (429, 34624), (470, 34507), (479, 34480), (539, 34387), (544, 34372), (578, 34288), (580, 34285), (612, 34219), (627, 34189), (639, 34159), (662, 34114), (683, 34075), (743, 33895), (753, 33847), (755, 33844), (767, 33808), (783, 33742), (793, 33703), (810, 33682), (814, 33661), (820, 33643), (843, 33577), (902, 33427), (903, 33424), (909, 33388), (917, 33364), (925, 33343), (930, 33325), (932, 33316), (946, 33268), (955, 33247),

Gene: Blue7\_48 Start: 29980, Stop: 28181, Start Num: 246

Candidate Starts for Blue7\_48:

(Start: 246 @29980 has 877 MA's), (364, 29776), (368, 29767), (400, 29701), (402, 29698), (416, 29671), (420, 29656), (425, 29644), (444, 29593), (475, 29503), (479, 29491), (539, 29398), (556, 29350), (560, 29341), (644, 29158), (721, 29008), (743, 28903), (755, 28846), (767, 28810), (771, 28801), (776, 28774), (783, 28744), (793, 28705), (810, 28684), (818, 28651), (820, 28645), (853, 28546), (880, 28483), (902, 28429), (905, 28405), (924, 28348), (946, 28270), (950, 28258), (955, 28249), (957, 28246),

Gene: BlueBird\_47 Start: 31555, Stop: 29717, Start Num: 246

Candidate Starts for BlueBird\_47:

(Start: 246 @31555 has 877 MA's), (280, 31504), (319, 31438), (364, 31351), (395, 31291), (400, 31279), (425, 31222), (429, 31213), (471, 31093), (479, 31069), (539, 30973), (558, 30925), (585, 30865), (614, 30802), (646, 30733), (659, 30712), (698, 30640), (716, 30598), (726, 30556), (743, 30475), (753, 30427), (776, 30352), (783, 30322), (791, 30292), (815, 30211), (827, 30172), (834, 30148), (843, 30130), (888, 30001), (905, 29941), (946, 29806), (950, 29794), (955, 29785),

Gene: BlueHusk\_62 Start: 54066, Stop: 52207, Start Num: 205

Candidate Starts for BlueHusk\_62:

(Start: 188 @54090 has 1 MA's), (Start: 205 @54066 has 304 MA's), (Start: 235 @54042 has 6 MA's), (Start: 250 @54036 has 2 MA's), (267, 54009), (Start: 274 @53994 has 6 MA's), (283, 53973), (337, 53859), (342, 53853), (360, 53823), (391, 53763), (399, 53742), (421, 53688), (428, 53676), (434, 53658), (436, 53646), (476, 53541), (519, 53484), (538, 53448), (542, 53436), (552, 53409), (556, 53400), (570, 53364), (598, 53307), (602, 53298), (603, 53295), (604, 53292), (738, 52935), (744, 52902), (750, 52881), (777, 52788), (780, 52779), (795, 52716), (814, 52680), (815, 52677), (820, 52662), (847, 52584), (851, 52572), (858, 52551), (875, 52512), (905, 52422), (910, 52404), (912, 52398), (917, 52383), (926, 52359), (930, 52344), (931, 52341), (933, 52329), (940, 52305), (963, 52257), (972, 52233),

Gene: BlueNGold\_170 Start: 99709, Stop: 97928, Start Num: 255

Candidate Starts for BlueNGold\_170:

(Start: 255 @99709 has 4 MA's), (280, 99664), (292, 99637), (346, 99544), (382, 99484), (383, 99481), (389, 99472), (399, 99448), (418, 99406), (419, 99403), (435, 99358), (458, 99316), (477, 99262), (539, 99178), (571, 99094), (585, 99067), (591, 99052), (668, 98893), (683, 98869), (690, 98854), (697, 98845), (728, 98758), (735, 98731), (736, 98728), (740, 98707), (743, 98686), (754, 98635), (780, 98551), (785, 98524), (791, 98491), (803, 98449), (840, 98338), (849, 98311), (862, 98275), (866, 98266), (867, 98263), (871, 98254), (906, 98134), (912, 98113), (914, 98107), (926, 98074), (931, 98056), (932, 98050), (942, 98017), (946, 98002), (963, 97978), (965, 97975), (977, 97951),

Gene: Bluefalcon\_37 Start: 30628, Stop: 28769, Start Num: 246

Candidate Starts for Bluefalcon\_37:

(Start: 246 @30628 has 877 MA's), (280, 30577), (318, 30517), (347, 30454), (364, 30424), (366, 30421), (395, 30364), (416, 30322), (425, 30295), (479, 30142), (539, 30046), (550, 30013), (556, 29998), (594, 29914), (598, 29908), (613, 29875), (654, 29788), (662, 29776), (683, 29737), (712,

29677), (743, 29542), (752, 29512), (753, 29494), (766, 29458), (767, 29455), (783, 29389), (793, 29350), (814, 29308), (820, 29290), (834, 29242), (837, 29236), (853, 29191), (876, 29137), (880, 29128), (888, 29110), (910, 29032), (929, 28975), (939, 28939), (946, 28915), (950, 28903), (1005, 28786), (1007, 28783),

Gene: Bluephacebaby\_60 Start: 54585, Stop: 52726, Start Num: 205

Candidate Starts for Bluephacebaby\_60:

(Start: 188 @54609 has 1 MA's), (Start: 205 @54585 has 304 MA's), (Start: 235 @54561 has 6 MA's), (Start: 250 @54555 has 2 MA's), (Start: 274 @54513 has 6 MA's), (283, 54492), (337, 54378), (342, 54372), (360, 54342), (391, 54282), (399, 54261), (421, 54207), (428, 54195), (434, 54177), (436, 54165), (476, 54060), (519, 54003), (538, 53967), (542, 53955), (552, 53928), (570, 53883), (598, 53826), (602, 53817), (603, 53814), (738, 53454), (744, 53421), (750, 53400), (777, 53307), (780, 53298), (795, 53235), (814, 53199), (815, 53196), (820, 53181), (847, 53103), (851, 53091), (858, 53070), (875, 53031), (905, 52941), (910, 52923), (912, 52917), (917, 52902), (926, 52878), (930, 52863), (931, 52860), (933, 52848), (940, 52824), (963, 52776), (972, 52752),

Gene: Bob3\_42 Start: 33539, Stop: 31710, Start Num: 246

Candidate Starts for Bob3\_42:

(Start: 246 @33539 has 877 MA's), (368, 33326), (374, 33311), (400, 33263), (416, 33233), (422, 33212), (425, 33206), (429, 33197), (470, 33080), (479, 33053), (539, 32960), (544, 32945), (551, 32924), (578, 32861), (580, 32858), (612, 32792), (627, 32762), (639, 32732), (662, 32687), (683, 32648), (743, 32468), (753, 32420), (771, 32372), (780, 32333), (783, 32315), (793, 32276), (810, 32255), (814, 32234), (861, 32096), (922, 31925), (929, 31901), (938, 31868), (943, 31853), (946, 31841), (955, 31820), (959, 31814), (981, 31766), (986, 31751),

Gene: BobRoss2024\_51 Start: 46234, Stop: 44420, Start Num: 241

Candidate Starts for BobRoss2024\_51:

(Start: 241 @46234 has 13 MA's), (267, 46198), (287, 46153), (337, 46057), (360, 46024), (363, 46021), (366, 46015), (384, 45973), (435, 45853), (476, 45754), (519, 45697), (592, 45532), (603, 45508), (724, 45217), (732, 45178), (739, 45148), (744, 45121), (777, 45007), (780, 44998), (814, 44899), (815, 44896), (820, 44881), (847, 44803), (851, 44791), (858, 44770), (901, 44674), (906, 44638), (912, 44617), (926, 44578), (930, 44563), (934, 44542), (940, 44518), (963, 44470), (972, 44446), (979, 44425),

Gene: BobSwaget\_44 Start: 31390, Stop: 29603, Start Num: 246

Candidate Starts for BobSwaget\_44:

(Start: 246 @31390 has 877 MA's), (366, 31183), (368, 31177), (383, 31147), (400, 31114), (402, 31111), (420, 31069), (425, 31057), (479, 30904), (539, 30811), (556, 30763), (560, 30754), (568, 30739), (598, 30673), (659, 30544), (726, 30400), (743, 30319), (755, 30268), (766, 30235), (767, 30232), (783, 30166), (793, 30127), (810, 30106), (831, 30031), (834, 30019), (864, 29941), (880, 29905), (888, 29887), (902, 29851), (905, 29827), (930, 29749), (946, 29692), (950, 29680), (955, 29671),

Gene: BobbyDazzler\_36 Start: 28159, Stop: 26375, Start Num: 246

Candidate Starts for BobbyDazzler\_36:

(Start: 246 @28159 has 877 MA's), (379, 27925), (395, 27895), (399, 27886), (400, 27883), (420, 27838), (425, 27826), (429, 27817), (444, 27775), (479, 27673), (496, 27652), (539, 27580), (554, 27535), (556, 27532), (574, 27490), (577, 27484), (585, 27469), (598, 27442), (646, 27337), (662, 27310), (683, 27271), (743, 27091), (753, 27043), (783, 26938), (784, 26935), (810, 26878), (814, 26857), (829, 26809), (855, 26734), (886, 26665), (902, 26623), (905, 26599), (930, 26521), (946, 26464), (950, 26452), (978, 26395),

Gene: BobbyK\_54 Start: 53968, Stop: 52145, Start Num: 197

Candidate Starts for BobbyK\_54:

(Start: 182 @53986 has 4 MA's), (Start: 197 @53968 has 27 MA's), (Start: 250 @53944 has 2 MA's), (267, 53917), (Start: 274 @53902 has 6 MA's), (283, 53881), (329, 53794), (387, 53689), (406, 53647), (434, 53581), (445, 53551), (448, 53542), (453, 53539), (454, 53536), (463, 53509), (519, 53416), (531, 53398), (538, 53380), (542, 53368), (552, 53341), (580, 53278), (598, 53239), (602, 53230), (603, 53227), (615, 53197), (633, 53161), (724, 52936), (725, 52933), (732, 52897), (738, 52873), (744, 52840), (775, 52732), (777, 52726), (780, 52717), (814, 52618), (815, 52615), (820, 52600), (847, 52522), (851, 52510), (858, 52489), (861, 52480), (875, 52450), (888, 52420), (901, 52393), (905, 52360), (912, 52336), (926, 52297), (931, 52279), (933, 52267), (940, 52243), (956, 52201), (963, 52195), (972, 52171),

Gene: Boehler\_60 Start: 54229, Stop: 52370, Start Num: 205

Candidate Starts for Boehler\_60:

(Start: 188 @54253 has 1 MA's), (Start: 205 @54229 has 304 MA's), (Start: 235 @54205 has 6 MA's), (Start: 250 @54199 has 2 MA's), (Start: 274 @54157 has 6 MA's), (283, 54136), (337, 54022), (342, 54016), (360, 53986), (391, 53926), (399, 53905), (421, 53851), (428, 53839), (434, 53821), (436, 53809), (476, 53704), (519, 53647), (538, 53611), (542, 53599), (551, 53575), (556, 53563), (564, 53545), (570, 53527), (580, 53509), (598, 53470), (602, 53461), (603, 53458), (604, 53455), (738, 53098), (744, 53065), (750, 53044), (777, 52951), (780, 52942), (795, 52879), (814, 52843), (815, 52840), (820, 52825), (847, 52747), (851, 52735), (858, 52714), (875, 52675), (905, 52585), (910, 52567), (912, 52561), (917, 52546), (926, 52522), (930, 52507), (931, 52504), (933, 52492), (940, 52468), (963, 52420), (972, 52396),

Gene: Boersma\_57 Start: 36879, Stop: 34711, Start Num: 233

Candidate Starts for Boersma\_57:

(231, 36882), (Start: 233 @36879 has 13 MA's), (Start: 272 @36825 has 4 MA's), (317, 36741), (382, 36588), (387, 36579), (405, 36534), (431, 36456), (434, 36447), (438, 36432), (446, 36417), (447, 36414), (466, 36357), (490, 36264), (493, 36222), (567, 36027), (570, 36015), (572, 36009), (581, 35985), (590, 35964), (600, 35943), (606, 35928), (609, 35922), (638, 35859), (662, 35808), (693, 35721), (714, 35661), (726, 35613), (751, 35511), (752, 35505), (757, 35478), (758, 35475), (766, 35454), (777, 35412), (779, 35406), (784, 35382), (794, 35340), (795, 35337), (802, 35310), (811, 35277), (813, 35265), (823, 35229), (831, 35205), (832, 35199), (834, 35193), (854, 35139), (875, 35091), (876, 35088), (897, 35028), (902, 35004), (907, 34974), (923, 34920), (940, 34851), (944, 34839), (958, 34800),

Gene: BogosyJay\_44 Start: 31342, Stop: 29549, Start Num: 246

Candidate Starts for BogosyJay\_44:

(Start: 246 @31342 has 877 MA's), (261, 31333), (318, 31231), (346, 31171), (347, 31168), (364, 31138), (368, 31129), (383, 31096), (400, 31063), (402, 31060), (416, 31033), (420, 31018), (425, 31006), (479, 30853), (539, 30760), (598, 30622), (612, 30592), (697, 30421), (714, 30394), (716, 30388), (743, 30265), (780, 30130), (783, 30112), (814, 30031), (853, 29914), (902, 29797), (905, 29773), (930, 29695), (946, 29638), (950, 29626), (955, 29617),

Gene: Bombshell\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Bombshell\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Bonamassa\_39 Start: 30653, Stop: 28809, Start Num: 246

Candidate Starts for Bonamassa\_39:

(Start: 246 @30653 has 877 MA's), (280, 30602), (318, 30542), (347, 30479), (364, 30449), (366, 30446), (395, 30389), (400, 30377), (416, 30347), (425, 30320), (479, 30167), (539, 30071), (556, 30023), (594, 29939), (598, 29933), (633, 29861), (646, 29828), (654, 29813), (662, 29801), (712, 29702), (743, 29567), (752, 29537), (753, 29519), (755, 29516), (767, 29480), (771, 29471), (774, 29450), (777, 29441), (783, 29414), (784, 29411), (810, 29354), (814, 29333), (853, 29216), (876, 29162), (880, 29153), (888, 29135), (905, 29075), (910, 29057), (929, 29000), (939, 28964), (946, 28940), (950, 28928),

Gene: Bonanza\_36 Start: 28087, Stop: 26303, Start Num: 246

Candidate Starts for Bonanza\_36:

(Start: 246 @28087 has 877 MA's), (379, 27853), (395, 27823), (399, 27814), (400, 27811), (420, 27766), (425, 27754), (429, 27745), (444, 27703), (479, 27601), (496, 27580), (539, 27508), (554, 27463), (556, 27460), (574, 27418), (577, 27412), (585, 27397), (598, 27370), (646, 27265), (662, 27238), (683, 27199), (743, 27019), (753, 26971), (783, 26866), (784, 26863), (810, 26806), (814, 26785), (829, 26737), (855, 26662), (886, 26593), (902, 26551), (905, 26527), (930, 26449), (946, 26392), (950, 26380), (978, 26323),

Gene: Bones\_45 Start: 35104, Stop: 33317, Start Num: 246

Candidate Starts for Bones\_45:

(Start: 246 @35104 has 877 MA's), (368, 34891), (374, 34876), (416, 34798), (422, 34777), (425, 34771), (429, 34762), (470, 34645), (479, 34618), (539, 34525), (544, 34510), (578, 34426), (580, 34423), (612, 34357), (627, 34327), (639, 34297), (662, 34252), (683, 34213), (743, 34033), (753, 33985), (767, 33946), (783, 33880), (812, 33808), (814, 33799), (843, 33715), (876, 33628), (917, 33502), (922, 33490), (946, 33406), (948, 33400),

Gene: BonesMcCoy\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for BonesMcCoy\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (432, 28661), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (676, 28067), (702, 28013), (709, 27992), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Bonino\_38 Start: 28608, Stop: 26743, Start Num: 301

Candidate Starts for Bonino\_38:

(Start: 238 @28695 has 3 MA's), (Start: 301 @28608 has 110 MA's), (Start: 308 @28599 has 5 MA's), (354, 28494), (358, 28485), (375, 28455), (378, 28452), (433, 28332), (435, 28320), (438, 28314), (475, 28209), (484, 28182), (531, 28041), (536, 28035), (537, 28032), (539, 28020), (548, 27993), (549, 27990), (554, 27975), (556, 27969), (559, 27963), (586, 27930), (652, 27801), (676, 27741), (776, 27426), (779, 27417), (780, 27414), (783, 27396), (794, 27354), (796, 27348), (805, 27324), (822, 27267), (878, 27108), (885, 27078), (888, 27069), (903, 27009), (906, 26985), (919, 26946), (929, 26913), (932, 26901), (947, 26841),

Gene: Boohoo\_47 Start: 29967, Stop: 28177, Start Num: 246

Candidate Starts for Boohoo\_47:

(Start: 246 @29967 has 877 MA's), (347, 29793), (400, 29688), (402, 29685), (416, 29658), (425, 29631), (444, 29580), (479, 29478), (539, 29385), (554, 29340), (556, 29337), (560, 29328), (635, 29166), (646, 29139), (659, 29118), (662, 29112), (717, 29013), (726, 28974), (738, 28923), (743, 28893), (755, 28842), (766, 28809), (774, 28776), (776, 28770), (783, 28740), (810, 28680), (814, 28659), (827, 28617), (835, 28590), (843, 28575), (876, 28488), (902, 28425), (903, 28422), (946, 28266), (950, 28254), (957, 28242),



Gene: Boopy\_173 Start: 99720, Stop: 97939, Start Num: 255

Candidate Starts for Boopy\_173:

(Start: 255 @99720 has 4 MA's), (280, 99675), (292, 99648), (346, 99555), (382, 99495), (383, 99492), (389, 99483), (399, 99459), (418, 99417), (419, 99414), (435, 99369), (458, 99327), (477, 99273), (539, 99189), (571, 99105), (585, 99078), (591, 99063), (668, 98904), (683, 98880), (690, 98865), (697, 98856), (728, 98769), (735, 98742), (736, 98739), (740, 98718), (743, 98697), (754, 98646), (780, 98562), (785, 98535), (791, 98502), (803, 98460), (840, 98349), (849, 98322), (862, 98286), (866, 98277), (867, 98274), (871, 98265), (906, 98145), (912, 98124), (914, 98118), (926, 98085), (931, 98067), (932, 98061), (942, 98028), (946, 98013), (963, 97989), (965, 97986), (977, 97962),

Gene: BouleyBill\_36 Start: 28490, Stop: 26640, Start Num: 297

Candidate Starts for BouleyBill\_36:

(Start: 297 @28490 has 18 MA's), (358, 28367), (378, 28334), (430, 28223), (435, 28202), (438, 28196), (441, 28187), (456, 28145), (512, 27989), (531, 27935), (536, 27929), (537, 27926), (539, 27914), (549, 27884), (585, 27827), (658, 27680), (718, 27533), (776, 27323), (780, 27311), (783, 27293), (794, 27251), (798, 27236), (822, 27164), (885, 26975), (888, 26966), (903, 26906), (906, 26882), (917, 26849), (947, 26738),

Gene: Bowtie\_45 Start: 30783, Stop: 28996, Start Num: 246

Candidate Starts for Bowtie\_45:

(Start: 246 @30783 has 877 MA's), (364, 30579), (400, 30507), (416, 30477), (425, 30450), (541, 30198), (560, 30147), (598, 30066), (619, 30021), (659, 29937), (687, 29880), (715, 29838), (726, 29793), (743, 29712), (755, 29661), (767, 29625), (783, 29559), (810, 29499), (812, 29487), (846, 29385), (853, 29361), (860, 29343), (888, 29280), (901, 29253), (902, 29244), (905, 29220), (946, 29085), (950, 29073), (955, 29064),

Gene: Boyle\_57 Start: 52628, Stop: 50799, Start Num: 205

Candidate Starts for Boyle\_57:

(Start: 205 @52628 has 304 MA's), (Start: 250 @52601 has 2 MA's), (269, 52571), (Start: 274 @52559 has 6 MA's), (286, 52532), (287, 52529), (293, 52520), (318, 52502), (366, 52406), (391, 52355), (400, 52331), (411, 52307), (463, 52169), (472, 52145), (476, 52133), (519, 52076), (538, 52040), (542, 52028), (551, 52004), (588, 51920), (602, 51890), (603, 51887), (615, 51857), (680, 51713), (707, 51647), (721, 51608), (724, 51596), (727, 51575), (732, 51557), (744, 51500), (771, 51416), (777, 51386), (780, 51377), (795, 51311), (812, 51284), (814, 51275), (820, 51257), (827, 51233), (847, 51179), (851, 51167), (858, 51146), (888, 51077), (905, 51017), (910, 50999), (922, 50966), (926, 50954), (930, 50939), (931, 50936), (933, 50924), (940, 50900), (941, 50897), (963, 50849), (965, 50846), (972, 50825), (979, 50804),

Gene: Brad\_36 Start: 31887, Stop: 30142, Start Num: 274

Candidate Starts for Brad\_36:

(259, 31914), (Start: 274 @31887 has 6 MA's), (276, 31884), (290, 31851), (294, 31845), (339, 31752), (362, 31719), (374, 31692), (437, 31557), (509, 31428), (514, 31422), (528, 31398), (534, 31383), (542, 31356), (553, 31326), (585, 31245), (588, 31236), (616, 31176), (627, 31155), (681, 31041), (689, 31023), (794, 30645), (810, 30627), (828, 30561), (832, 30546), (909, 30327), (922, 30285), (946, 30201), (967, 30168),

Gene: Bradman\_44 Start: 30374, Stop: 28545, Start Num: 245

Candidate Starts for Bradman\_44:

(Start: 245 @30374 has 74 MA's), (364, 30170), (366, 30167), (368, 30161), (375, 30146), (383, 30131), (399, 30101), (400, 30098), (416, 30068), (425, 30041), (433, 30020), (444, 29990), (479, 29888), (539, 29795), (556, 29747), (560, 29738), (568, 29723), (598, 29657), (635, 29576), (659, 29528), (683, 29483), (743, 29303), (753, 29255), (755, 29252), (767, 29216), (783, 29150), (793,

29111), (810, 29090), (831, 29015), (837, 28997), (853, 28952), (864, 28925), (880, 28889), (888, 28871), (902, 28835), (905, 28811), (930, 28733), (946, 28676), (950, 28664), (955, 28655), (978, 28607), (994, 28577), (1001, 28559), (1003, 28556),

Gene: Bradshaw\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for Bradshaw\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (663, 27261), (683, 27225), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930, 26475), (946, 26418), (950, 26406), (969, 26367), (978, 26349),

Gene: Brahms\_40 Start: 27441, Stop: 29309, Start Num: 243

Candidate Starts for Brahms\_40:

(Start: 243 @27441 has 7 MA's), (Start: 246 @27444 has 877 MA's), (249, 27447), (287, 27516), (444, 27825), (467, 27879), (552, 28044), (585, 28119), (594, 28140), (731, 28494), (743, 28554), (755, 28605), (774, 28671), (783, 28707), (813, 28800), (874, 28971), (902, 29043), (924, 29124), (945, 29199), (946, 29202), (955, 29223), (989, 29292),

Gene: BreSam8\_48 Start: 31846, Stop: 30032, Start Num: 246

Candidate Starts for BreSam8\_48:

(Start: 246 @31846 has 877 MA's), (275, 31807), (280, 31795), (364, 31642), (371, 31627), (400, 31570), (425, 31513), (429, 31504), (444, 31462), (461, 31411), (479, 31360), (539, 31267), (556, 31219), (560, 31210), (568, 31195), (585, 31156), (598, 31129), (612, 31099), (654, 31006), (686, 30946), (697, 30931), (743, 30775), (767, 30688), (783, 30622), (793, 30583), (815, 30511), (827, 30472), (834, 30448), (843, 30430), (853, 30397), (864, 30370), (888, 30316), (905, 30256), (930, 30178), (946, 30121), (950, 30109), (955, 30100),

Gene: Briakila\_57 Start: 53649, Stop: 51832, Start Num: 247

Candidate Starts for Briakila\_57:

(130, 53832), (Start: 247 @53649 has 43 MA's), (267, 53619), (368, 53439), (433, 53286), (435, 53274), (448, 53244), (454, 53238), (476, 53175), (478, 53169), (519, 53118), (537, 53091), (538, 53082), (556, 53034), (603, 52929), (645, 52833), (674, 52782), (724, 52638), (732, 52599), (739, 52569), (744, 52542), (748, 52530), (775, 52434), (777, 52428), (780, 52419), (782, 52407), (807, 52335), (814, 52305), (820, 52287), (822, 52278), (847, 52209), (851, 52197), (858, 52176), (888, 52107), (898, 52092), (903, 52068), (905, 52047), (910, 52029), (912, 52023), (924, 51990), (926, 51984), (931, 51966), (933, 51954), (936, 51942), (940, 51930), (956, 51888), (972, 51858),

Gene: Brilliant\_63 Start: 54544, Stop: 52685, Start Num: 205

Candidate Starts for Brilliant\_63:

(Start: 188 @54568 has 1 MA's), (Start: 205 @54544 has 304 MA's), (Start: 235 @54520 has 6 MA's), (Start: 250 @54514 has 2 MA's), (Start: 274 @54472 has 6 MA's), (283, 54451), (337, 54337), (342, 54331), (360, 54301), (391, 54241), (399, 54220), (421, 54166), (428, 54154), (434, 54136), (436, 54124), (476, 54019), (519, 53962), (538, 53926), (542, 53914), (551, 53890), (556, 53878), (564, 53860), (570, 53842), (580, 53824), (598, 53785), (602, 53776), (603, 53773), (604, 53770), (738, 53413), (744, 53380), (750, 53359), (777, 53266), (780, 53257), (795, 53194), (814, 53158), (815, 53155), (820, 53140), (847, 53062), (851, 53050), (858, 53029), (875, 52990), (905, 52900), (910, 52882), (912, 52876), (917, 52861), (926, 52837), (930, 52822), (931, 52819), (933, 52807), (940, 52783), (963, 52735), (972, 52711),

Gene: Briton15\_46 Start: 34660, Stop: 32834, Start Num: 246

Candidate Starts for Briton15\_46:

(Start: 246 @34660 has 877 MA's), (368, 34447), (374, 34432), (400, 34384), (416, 34354), (422, 34333), (425, 34327), (429, 34318), (470, 34201), (479, 34174), (539, 34081), (544, 34066), (556, 34033), (578, 33982), (580, 33979), (612, 33913), (627, 33883), (639, 33853), (662, 33808), (683, 33769), (743, 33589), (752, 33559), (753, 33541), (767, 33502), (783, 33436), (793, 33397), (810, 33376), (814, 33355), (820, 33337), (843, 33271), (902, 33121), (903, 33118), (909, 33082), (917, 33058), (921, 33049), (925, 33037), (946, 32962), (955, 32941),

Gene: Broseidon\_45 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Broseidon\_45:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: BrownCNA\_55 Start: 54328, Stop: 52487, Start Num: 182

Candidate Starts for BrownCNA\_55:

(Start: 182 @54328 has 4 MA's), (Start: 197 @54310 has 27 MA's), (Start: 250 @54286 has 2 MA's), (267, 54259), (Start: 274 @54244 has 6 MA's), (283, 54223), (329, 54136), (387, 54031), (399, 54004), (406, 53989), (434, 53923), (445, 53893), (448, 53884), (453, 53881), (454, 53878), (463, 53851), (519, 53758), (531, 53740), (538, 53722), (542, 53710), (552, 53683), (580, 53620), (598, 53581), (602, 53572), (603, 53569), (615, 53539), (633, 53503), (724, 53278), (725, 53275), (732, 53239), (738, 53215), (744, 53182), (775, 53074), (777, 53068), (780, 53059), (814, 52960), (815, 52957), (820, 52942), (847, 52864), (851, 52852), (858, 52831), (861, 52822), (875, 52792), (901, 52735), (905, 52702), (912, 52678), (926, 52639), (931, 52621), (933, 52609), (940, 52585), (956, 52543), (963, 52537), (972, 52513),

Gene: Brownie5\_57 Start: 52641, Stop: 50812, Start Num: 205

Candidate Starts for Brownie5\_57:

(Start: 205 @52641 has 304 MA's), (Start: 250 @52614 has 2 MA's), (269, 52584), (Start: 274 @52572 has 6 MA's), (286, 52545), (287, 52542), (293, 52533), (318, 52515), (366, 52419), (391, 52368), (400, 52344), (463, 52182), (469, 52167), (472, 52158), (476, 52146), (519, 52089), (538, 52053), (542, 52041), (551, 52017), (588, 51933), (602, 51903), (603, 51900), (615, 51870), (680, 51726), (707, 51660), (721, 51621), (724, 51609), (727, 51588), (732, 51570), (744, 51513), (763, 51456), (771, 51429), (777, 51399), (780, 51390), (795, 51324), (812, 51297), (814, 51288), (820, 51270), (827, 51246), (847, 51192), (851, 51180), (858, 51159), (888, 51090), (905, 51030), (910, 51012), (922, 50979), (926, 50967), (930, 50952), (931, 50949), (933, 50937), (940, 50913), (941, 50910), (963, 50862), (965, 50859), (972, 50838), (979, 50817),

Gene: Bruiser\_44 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Bruiser\_44:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Bruns\_43 Start: 34261, Stop: 32435, Start Num: 246

Candidate Starts for Bruns\_43:

(Start: 246 @34261 has 877 MA's), (368, 34048), (374, 34033), (416, 33955), (422, 33934), (425, 33928), (429, 33919), (470, 33802), (479, 33775), (539, 33682), (544, 33667), (551, 33646), (556, 33634), (578, 33583), (580, 33580), (612, 33514), (627, 33484), (639, 33454), (662, 33409), (683, 33370), (743, 33190), (753, 33142), (767, 33103), (783, 33037), (793, 32998), (810, 32977), (814,

32956), (820, 32938), (843, 32872), (902, 32722), (903, 32719), (909, 32683), (917, 32659), (921, 32650), (925, 32638), (946, 32563), (955, 32542),

Gene: Bryce\_36 Start: 28088, Stop: 26304, Start Num: 246

Candidate Starts for Bryce\_36:

(Start: 246 @28088 has 877 MA's), (379, 27854), (395, 27824), (399, 27815), (400, 27812), (420, 27767), (425, 27755), (444, 27704), (479, 27602), (496, 27581), (539, 27509), (556, 27461), (585, 27398), (598, 27371), (646, 27266), (662, 27239), (683, 27200), (743, 27020), (753, 26972), (783, 26867), (784, 26864), (810, 26807), (814, 26786), (855, 26663), (886, 26594), (902, 26552), (905, 26528), (930, 26450), (946, 26393), (950, 26381), (978, 26324),

Gene: BubbaBear\_41 Start: 29478, Stop: 31352, Start Num: 246

Candidate Starts for BubbaBear\_41:

(Start: 246 @29478 has 877 MA's), (287, 29547), (Start: 301 @29568 has 110 MA's), (429, 29814), (434, 29829), (444, 29856), (585, 30150), (696, 30384), (731, 30507), (743, 30567), (746, 30573), (755, 30618), (762, 30633), (764, 30648), (774, 30684), (783, 30720), (813, 30813), (844, 30906), (874, 30984), (902, 31056), (909, 31095), (924, 31137), (929, 31155), (946, 31215), (955, 31236),

Gene: BubbleTrouble\_44 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for BubbleTrouble\_44:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Buckeye\_61 Start: 54843, Stop: 52984, Start Num: 205

Candidate Starts for Buckeye\_61:

(Start: 188 @54867 has 1 MA's), (Start: 205 @54843 has 304 MA's), (Start: 235 @54819 has 6 MA's), (Start: 250 @54813 has 2 MA's), (Start: 274 @54771 has 6 MA's), (283, 54750), (337, 54636), (342, 54630), (360, 54600), (391, 54540), (399, 54519), (421, 54465), (428, 54453), (434, 54435), (436, 54423), (476, 54318), (519, 54261), (538, 54225), (542, 54213), (552, 54186), (564, 54159), (570, 54141), (580, 54123), (598, 54084), (602, 54075), (603, 54072), (712, 53814), (738, 53712), (744, 53679), (750, 53658), (777, 53565), (780, 53556), (795, 53493), (814, 53457), (815, 53454), (820, 53439), (847, 53361), (851, 53349), (858, 53328), (875, 53289), (905, 53199), (910, 53181), (912, 53175), (917, 53160), (926, 53136), (930, 53121), (931, 53118), (933, 53106), (940, 53082), (963, 53034), (972, 53010),

Gene: Bud\_44 Start: 30338, Stop: 28551, Start Num: 246

Candidate Starts for Bud\_44:

(Start: 246 @30338 has 877 MA's), (364, 30134), (400, 30062), (416, 30032), (425, 30005), (541, 29753), (560, 29702), (598, 29621), (619, 29576), (659, 29492), (687, 29435), (715, 29393), (726, 29348), (743, 29267), (755, 29216), (767, 29180), (783, 29114), (810, 29054), (846, 28940), (853, 28916), (860, 28898), (888, 28835), (901, 28808), (902, 28799), (905, 28775), (946, 28640), (950, 28628), (955, 28619),

Gene: Bugatti\_46 Start: 31555, Stop: 29717, Start Num: 246

Candidate Starts for Bugatti\_46:

(Start: 246 @31555 has 877 MA's), (280, 31504), (319, 31438), (364, 31351), (395, 31291), (400, 31279), (425, 31222), (429, 31213), (471, 31093), (479, 31069), (539, 30973), (558, 30925), (585, 30865), (614, 30802), (646, 30733), (659, 30712), (698, 30640), (716, 30598), (726, 30556), (743, 30475), (753, 30427), (776, 30352), (783, 30322), (791, 30292), (815, 30211), (827, 30172), (834, 30148), (843, 30130), (888, 30001), (905, 29941), (946, 29806), (950, 29794), (955, 29785),

Gene: Buggy\_46 Start: 31852, Stop: 30065, Start Num: 246

Candidate Starts for Buggy\_46:

(Start: 246 @31852 has 877 MA's), (364, 31648), (366, 31645), (368, 31639), (383, 31609), (400, 31576), (402, 31573), (416, 31546), (425, 31519), (444, 31468), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (598, 31135), (635, 31054), (659, 31006), (726, 30862), (743, 30781), (755, 30730), (766, 30697), (783, 30628), (793, 30589), (810, 30568), (814, 30547), (818, 30535), (886, 30355), (888, 30349), (902, 30313), (905, 30289), (930, 30211), (946, 30154), (950, 30142),

Gene: Buldak\_39 Start: 28039, Stop: 29922, Start Num: 232

Candidate Starts for Buldak\_39:

(136, 27883), (Start: 232 @28039 has 3 MA's), (265, 28057), (287, 28108), (Start: 301 @28129 has 110 MA's), (319, 28159), (364, 28246), (400, 28309), (416, 28339), (422, 28360), (429, 28375), (433, 28387), (564, 28669), (585, 28720), (594, 28741), (743, 29137), (746, 29143), (767, 29224), (774, 29254), (777, 29263), (783, 29290), (813, 29383), (843, 29473), (874, 29554), (876, 29560), (898, 29605), (905, 29650), (912, 29674), (924, 29707), (926, 29713), (929, 29725), (930, 29728), (946, 29785), (953, 29800), (955, 29806), (968, 29830),

Gene: Bumblebee11\_43 Start: 31522, Stop: 29693, Start Num: 246

Candidate Starts for Bumblebee11\_43:

(Start: 246 @31522 has 877 MA's), (280, 31471), (295, 31441), (383, 31279), (394, 31261), (400, 31246), (425, 31189), (429, 31180), (471, 31060), (479, 31036), (513, 30994), (539, 30943), (558, 30895), (568, 30874), (585, 30835), (607, 30790), (610, 30784), (646, 30703), (659, 30682), (683, 30637), (740, 30472), (743, 30451), (783, 30298), (793, 30259), (815, 30187), (820, 30172), (827, 30148), (832, 30130), (834, 30124), (837, 30118), (905, 29917), (946, 29782), (950, 29770), (955, 29761),

Gene: Burger\_43 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Burger\_43:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Burnsey\_43 Start: 32545, Stop: 30152, Start Num: 36

Candidate Starts for Burnsey\_43:

(Start: 36 @32545 has 16 MA's), (47, 32539), (Start: 59 @32491 has 1 MA's), (75, 32449), (84, 32425), (128, 32299), (138, 32275), (179, 32230), (Start: 215 @32179 has 2 MA's), (223, 32164), (Start: 241 @32143 has 13 MA's), (275, 32095), (295, 32053), (329, 31978), (335, 31966), (374, 31897), (394, 31864), (398, 31849), (420, 31795), (421, 31792), (430, 31774), (435, 31753), (457, 31693), (499, 31570), (500, 31564), (526, 31495), (539, 31453), (605, 31366), (615, 31342), (633, 31336), (643, 31312), (647, 31303), (654, 31288), (660, 31276), (680, 31234), (682, 31231), (683, 31228), (733, 31081), (749, 31012), (750, 31006), (760, 30970), (783, 30877), (792, 30841), (794, 30835), (796, 30829), (797, 30823), (815, 30766), (822, 30742), (836, 30697), (947, 30316), (968, 30271), (971, 30262), (995, 30202),

Gene: Burr\_60 Start: 54018, Stop: 52159, Start Num: 205

Candidate Starts for Burr\_60:

(Start: 188 @54042 has 1 MA's), (Start: 205 @54018 has 304 MA's), (Start: 235 @53994 has 6 MA's), (Start: 250 @53988 has 2 MA's), (Start: 274 @53946 has 6 MA's), (283, 53925), (337, 53811), (342, 53805), (360, 53775), (391, 53715), (399, 53694), (421, 53640), (428, 53628), (434, 53610), (436,

53598), (476, 53493), (519, 53436), (538, 53400), (542, 53388), (552, 53361), (570, 53316), (580, 53298), (598, 53259), (602, 53250), (603, 53247), (738, 52887), (744, 52854), (750, 52833), (777, 52740), (780, 52731), (795, 52668), (814, 52632), (815, 52629), (820, 52614), (847, 52536), (851, 52524), (858, 52503), (875, 52464), (905, 52374), (910, 52356), (912, 52350), (917, 52335), (926, 52311), (930, 52296), (931, 52293), (933, 52281), (940, 52257), (963, 52209), (972, 52185),

Gene: Burritobowl\_42 Start: 29479, Stop: 31353, Start Num: 246

Candidate Starts for Burritobowl\_42:

(Start: 246 @29479 has 877 MA's), (287, 29548), (Start: 301 @29569 has 110 MA's), (429, 29815), (434, 29830), (444, 29857), (585, 30151), (646, 30286), (696, 30385), (731, 30508), (743, 30568), (746, 30574), (755, 30619), (762, 30634), (764, 30649), (774, 30685), (783, 30721), (813, 30814), (874, 30985), (902, 31057), (909, 31096), (924, 31138), (929, 31156), (939, 31192), (946, 31216), (955, 31237),

Gene: Burton\_44 Start: 34084, Stop: 32258, Start Num: 246

Candidate Starts for Burton\_44:

(Start: 246 @34084 has 877 MA's), (368, 33871), (374, 33856), (400, 33808), (416, 33778), (422, 33757), (425, 33751), (429, 33742), (470, 33625), (479, 33598), (539, 33505), (544, 33490), (556, 33457), (578, 33406), (580, 33403), (612, 33337), (627, 33307), (639, 33277), (662, 33232), (683, 33193), (743, 33013), (753, 32965), (767, 32926), (783, 32860), (793, 32821), (810, 32800), (814, 32779), (820, 32761), (843, 32695), (902, 32545), (903, 32542), (909, 32506), (917, 32482), (921, 32473), (925, 32461), (946, 32386), (955, 32365),

Gene: Bustleton\_37 Start: 28493, Stop: 26643, Start Num: 297

Candidate Starts for Bustleton\_37:

(Start: 297 @28493 has 18 MA's), (358, 28370), (378, 28337), (430, 28226), (435, 28205), (438, 28199), (456, 28148), (512, 27992), (531, 27938), (536, 27932), (537, 27929), (539, 27917), (549, 27887), (585, 27830), (658, 27683), (718, 27536), (776, 27326), (780, 27314), (783, 27296), (794, 27254), (798, 27239), (812, 27203), (822, 27167), (885, 26978), (888, 26969), (903, 26909), (906, 26885), (912, 26864), (917, 26852), (947, 26741),

Gene: Button\_46 Start: 32802, Stop: 30418, Start Num: 45

Candidate Starts for Button\_46:

(Start: 45 @32802 has 24 MA's), (84, 32688), (93, 32658), (138, 32550), (145, 32529), (265, 32391), (273, 32376), (295, 32328), (329, 32253), (332, 32247), (335, 32241), (338, 32235), (374, 32166), (389, 32142), (397, 32121), (398, 32118), (402, 32109), (430, 32043), (435, 32022), (488, 31875), (526, 31761), (541, 31713), (544, 31704), (551, 31683), (559, 31677), (643, 31584), (649, 31572), (682, 31500), (703, 31458), (707, 31446), (741, 31305), (747, 31281), (750, 31266), (760, 31230), (783, 31137), (792, 31101), (794, 31095), (796, 31089), (797, 31083), (815, 31026), (820, 31011), (822, 31002), (878, 30843), (884, 30822), (893, 30783), (903, 30744), (905, 30723), (911, 30702), (915, 30690), (922, 30672), (937, 30609), (939, 30603), (947, 30576), (958, 30552), (968, 30531), (1004, 30444),

Gene: Buttons\_43 Start: 33067, Stop: 31241, Start Num: 246

Candidate Starts for Buttons\_43:

(Start: 246 @33067 has 877 MA's), (368, 32854), (395, 32803), (416, 32761), (422, 32740), (425, 32734), (429, 32725), (470, 32608), (479, 32581), (539, 32488), (544, 32473), (578, 32389), (580, 32386), (612, 32320), (627, 32290), (639, 32260), (662, 32215), (683, 32176), (743, 31996), (753, 31948), (767, 31909), (783, 31843), (793, 31804), (810, 31783), (814, 31762), (820, 31744), (843, 31678), (902, 31528), (903, 31525), (909, 31489), (917, 31465), (921, 31456), (925, 31444), (946, 31369), (955, 31348),

Gene: Buttrmilkdreams\_45 Start: 32962, Stop: 30572, Start Num: 36

Candidate Starts for Buttrmlkdreams\_45:

(Start: 36 @32962 has 16 MA's), (63, 32899), (70, 32881), (75, 32866), (93, 32812), (97, 32800), (103, 32779), (117, 32746), (128, 32719), (138, 32695), (164, 32668), (Start: 241 @32563 has 13 MA's), (275, 32515), (329, 32398), (374, 32317), (391, 32290), (398, 32269), (421, 32212), (430, 32194), (435, 32173), (457, 32113), (499, 31990), (500, 31984), (526, 31915), (539, 31873), (605, 31786), (615, 31762), (633, 31756), (643, 31732), (647, 31723), (654, 31708), (660, 31696), (680, 31654), (682, 31651), (683, 31648), (733, 31501), (749, 31432), (750, 31426), (760, 31390), (783, 31297), (792, 31261), (794, 31255), (796, 31249), (797, 31243), (815, 31186), (822, 31162), (836, 31117), (947, 30736), (968, 30691), (971, 30682), (995, 30622),

Gene: BuzzBuzz\_46 Start: 31884, Stop: 30070, Start Num: 246

Candidate Starts for BuzzBuzz\_46:

(Start: 246 @31884 has 877 MA's), (275, 31845), (280, 31833), (364, 31680), (371, 31665), (400, 31608), (425, 31551), (429, 31542), (444, 31500), (461, 31449), (479, 31398), (521, 31344), (539, 31305), (556, 31257), (568, 31233), (585, 31194), (598, 31167), (612, 31137), (654, 31044), (662, 31032), (686, 30984), (697, 30969), (743, 30813), (755, 30762), (766, 30729), (767, 30726), (783, 30660), (793, 30621), (815, 30549), (827, 30510), (834, 30486), (843, 30468), (853, 30435), (888, 30354), (905, 30294), (932, 30207), (946, 30159), (950, 30147), (955, 30138), (957, 30135),

Gene: Bxb1\_41 Start: 34132, Stop: 32306, Start Num: 246

Candidate Starts for Bxb1\_41:

(Start: 246 @34132 has 877 MA's), (346, 33961), (368, 33919), (374, 33904), (400, 33856), (416, 33826), (422, 33805), (425, 33799), (429, 33790), (470, 33673), (479, 33646), (539, 33553), (544, 33538), (551, 33517), (556, 33505), (578, 33454), (580, 33451), (607, 33397), (612, 33385), (627, 33355), (639, 33325), (662, 33280), (683, 33241), (743, 33061), (752, 33031), (753, 33013), (767, 32974), (783, 32908), (814, 32827), (815, 32824), (843, 32743), (902, 32593), (903, 32590), (909, 32554), (917, 32530), (921, 32521), (925, 32509), (932, 32482), (946, 32434), (955, 32413),

Gene: Bxz2\_44 Start: 31891, Stop: 30077, Start Num: 246

Candidate Starts for Bxz2\_44:

(Start: 246 @31891 has 877 MA's), (275, 31852), (280, 31840), (364, 31687), (371, 31672), (400, 31615), (425, 31558), (429, 31549), (444, 31507), (461, 31456), (479, 31405), (521, 31351), (539, 31312), (556, 31264), (568, 31240), (585, 31201), (598, 31174), (612, 31144), (654, 31051), (662, 31039), (686, 30991), (697, 30976), (743, 30820), (755, 30769), (766, 30736), (767, 30733), (783, 30667), (793, 30628), (815, 30556), (827, 30517), (834, 30493), (843, 30475), (853, 30442), (905, 30301), (932, 30214), (946, 30166), (950, 30154), (955, 30145), (957, 30142),

Gene: Byron23\_39 Start: 28933, Stop: 27068, Start Num: 301

Candidate Starts for Byron23\_39:

(Start: 238 @29020 has 3 MA's), (Start: 241 @29017 has 13 MA's), (Start: 301 @28933 has 110 MA's), (Start: 308 @28924 has 5 MA's), (354, 28819), (358, 28810), (375, 28780), (378, 28777), (433, 28657), (435, 28645), (438, 28639), (475, 28534), (484, 28507), (531, 28366), (536, 28360), (537, 28357), (539, 28345), (548, 28318), (549, 28315), (554, 28300), (556, 28294), (559, 28288), (586, 28255), (676, 28066), (776, 27751), (779, 27742), (780, 27739), (783, 27721), (794, 27679), (796, 27673), (798, 27664), (805, 27649), (822, 27592), (878, 27433), (885, 27403), (888, 27394), (903, 27334), (906, 27310), (919, 27271), (929, 27238), (932, 27226), (947, 27166),

Gene: C3\_43 Start: 31569, Stop: 29770, Start Num: 246

Candidate Starts for C3\_43:

(Start: 246 @31569 has 877 MA's), (364, 31365), (400, 31290), (402, 31287), (416, 31260), (420, 31245), (425, 31233), (444, 31182), (479, 31080), (539, 30987), (542, 30978), (556, 30939), (560, 30930), (598, 30849), (613, 30816), (627, 30789), (683, 30675), (697, 30651), (743, 30486), (753, 30438), (767, 30399), (776, 30363), (783, 30333), (793, 30294), (810, 30273), (843, 30168), (853,

30135), (880, 30072), (902, 30018), (905, 29994), (946, 29859), (950, 29847), (955, 29838),

Gene: CRB1\_46 Start: 31778, Stop: 29991, Start Num: 246

Candidate Starts for CRB1\_46:

(Start: 246 @31778 has 877 MA's), (364, 31574), (366, 31571), (368, 31565), (375, 31550), (383, 31535), (400, 31502), (402, 31499), (416, 31472), (425, 31445), (433, 31424), (444, 31394), (479, 31292), (539, 31199), (556, 31151), (560, 31142), (568, 31127), (598, 31061), (613, 31028), (635, 30980), (659, 30932), (662, 30926), (697, 30863), (726, 30788), (743, 30707), (766, 30623), (767, 30620), (783, 30554), (793, 30515), (810, 30494), (831, 30419), (837, 30401), (843, 30389), (853, 30356), (880, 30293), (888, 30275), (902, 30239), (905, 30215), (924, 30158), (946, 30080), (950, 30068), (955, 30059),

Gene: CRB2\_57 Start: 55662, Stop: 53833, Start Num: 205

Candidate Starts for CRB2\_57:

(Start: 205 @55662 has 304 MA's), (Start: 250 @55635 has 2 MA's), (267, 55608), (287, 55563), (303, 55554), (318, 55536), (360, 55452), (366, 55443), (411, 55344), (428, 55305), (435, 55281), (476, 55173), (519, 55116), (538, 55080), (542, 55068), (551, 55044), (552, 55041), (556, 55032), (602, 54924), (603, 54921), (604, 54918), (611, 54903), (615, 54891), (633, 54855), (704, 54690), (724, 54624), (725, 54621), (727, 54603), (732, 54585), (738, 54561), (739, 54555), (744, 54528), (775, 54420), (777, 54414), (780, 54405), (814, 54306), (815, 54303), (820, 54288), (847, 54210), (851, 54198), (858, 54177), (865, 54159), (879, 54129), (898, 54093), (905, 54048), (910, 54030), (912, 54024), (926, 53985), (929, 53973), (930, 53970), (940, 53931), (947, 53907), (963, 53883), (972, 53859),

Gene: CactusRose\_42 Start: 33957, Stop: 32131, Start Num: 246

Candidate Starts for CactusRose\_42:

(Start: 246 @33957 has 877 MA's), (368, 33744), (374, 33729), (400, 33681), (416, 33651), (422, 33630), (425, 33624), (429, 33615), (470, 33498), (479, 33471), (539, 33378), (544, 33363), (556, 33330), (578, 33279), (580, 33276), (612, 33210), (627, 33180), (639, 33150), (662, 33105), (683, 33066), (743, 32886), (753, 32838), (767, 32799), (783, 32733), (793, 32694), (810, 32673), (814, 32652), (820, 32634), (843, 32568), (902, 32418), (903, 32415), (909, 32379), (917, 32355), (921, 32346), (925, 32334), (946, 32259), (955, 32238),

Gene: Caelakin\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Caelakin\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: CaiB\_54 Start: 48539, Stop: 46722, Start Num: 241

Candidate Starts for CaiB\_54:

(171, 48632), (187, 48611), (Start: 241 @48539 has 13 MA's), (Start: 250 @48530 has 2 MA's), (267, 48503), (Start: 274 @48488 has 6 MA's), (283, 48467), (287, 48458), (366, 48320), (381, 48284), (476, 48056), (519, 47999), (538, 47963), (542, 47951), (546, 47939), (551, 47927), (592, 47834), (598, 47822), (603, 47810), (611, 47792), (680, 47636), (724, 47519), (739, 47450), (744, 47423), (775, 47315), (777, 47309), (780, 47300), (812, 47210), (814, 47201), (815, 47198), (820, 47183), (847, 47105), (851, 47093), (852, 47087), (858, 47072), (879, 47024), (905, 46943), (912, 46919), (926, 46880), (930, 46865), (940, 46820), (972, 46748),

Gene: Calamitous\_57 Start: 52488, Stop: 50659, Start Num: 205

Candidate Starts for Calamitous\_57:



(Start: 205 @52488 has 304 MA's), (Start: 250 @52461 has 2 MA's), (269, 52431), (Start: 274 @52419 has 6 MA's), (286, 52392), (287, 52389), (293, 52380), (318, 52362), (366, 52266), (391, 52215), (400, 52191), (463, 52029), (469, 52014), (472, 52005), (476, 51993), (519, 51936), (538, 51900), (542, 51888), (551, 51864), (588, 51780), (602, 51750), (603, 51747), (615, 51717), (680, 51573), (707, 51507), (724, 51456), (727, 51435), (732, 51417), (744, 51360), (763, 51303), (771, 51276), (777, 51246), (780, 51237), (795, 51171), (812, 51144), (814, 51135), (820, 51117), (827, 51093), (847, 51039), (851, 51027), (858, 51006), (888, 50937), (905, 50877), (910, 50859), (922, 50826), (926, 50814), (930, 50799), (931, 50796), (933, 50784), (940, 50760), (941, 50757), (963, 50709), (965, 50706), (972, 50685), (979, 50664),

Gene: Calix\_38 Start: 28615, Stop: 26750, Start Num: 301

Candidate Starts for Calix\_38:

(Start: 238 @28702 has 3 MA's), (Start: 301 @28615 has 110 MA's), (Start: 308 @28606 has 5 MA's), (354, 28501), (358, 28492), (375, 28462), (378, 28459), (433, 28339), (435, 28327), (438, 28321), (475, 28216), (484, 28189), (531, 28048), (536, 28042), (537, 28039), (539, 28027), (548, 28000), (549, 27997), (554, 27982), (556, 27976), (559, 27970), (586, 27937), (652, 27808), (676, 27748), (776, 27433), (779, 27424), (780, 27421), (783, 27403), (794, 27361), (796, 27355), (805, 27331), (822, 27274), (878, 27115), (885, 27085), (888, 27076), (903, 27016), (906, 26992), (919, 26953), (929, 26920), (932, 26908), (947, 26848),

Gene: CallinAllBarbz\_41 Start: 29407, Stop: 31281, Start Num: 245

Candidate Starts for CallinAllBarbz\_41:

(Start: 245 @29407 has 74 MA's), (265, 29425), (382, 29638), (389, 29650), (402, 29677), (416, 29704), (422, 29725), (433, 29752), (541, 30001), (585, 30109), (591, 30124), (635, 30214), (659, 30262), (743, 30520), (752, 30550), (774, 30637), (776, 30643), (781, 30664), (850, 30877), (878, 30946), (880, 30952), (905, 31033), (912, 31057), (921, 31081), (931, 31114), (939, 31144), (946, 31168), (949, 31177), (962, 31198),

Gene: Calvinny\_48 Start: 31753, Stop: 29939, Start Num: 246

Candidate Starts for Calvinny\_48:

(Start: 246 @31753 has 877 MA's), (275, 31714), (280, 31702), (364, 31549), (371, 31534), (400, 31477), (425, 31420), (429, 31411), (444, 31369), (461, 31318), (479, 31267), (539, 31174), (556, 31126), (568, 31102), (585, 31063), (598, 31036), (612, 31006), (654, 30913), (662, 30901), (686, 30853), (697, 30838), (743, 30682), (755, 30631), (766, 30598), (767, 30595), (783, 30529), (793, 30490), (815, 30418), (827, 30379), (834, 30355), (843, 30337), (853, 30304), (888, 30223), (905, 30163), (910, 30145), (930, 30085), (932, 30076), (946, 30028), (950, 30016), (955, 30007),

Gene: CamL\_60 Start: 54350, Stop: 52491, Start Num: 205

Candidate Starts for CamL\_60:

(Start: 188 @54374 has 1 MA's), (Start: 205 @54350 has 304 MA's), (Start: 235 @54326 has 6 MA's), (Start: 250 @54320 has 2 MA's), (Start: 274 @54278 has 6 MA's), (283, 54257), (337, 54143), (342, 54137), (360, 54107), (391, 54047), (399, 54026), (421, 53972), (428, 53960), (434, 53942), (436, 53930), (476, 53825), (519, 53768), (538, 53732), (542, 53720), (552, 53693), (570, 53648), (598, 53591), (602, 53582), (603, 53579), (738, 53219), (744, 53186), (750, 53165), (777, 53072), (780, 53063), (795, 53000), (814, 52964), (815, 52961), (820, 52946), (847, 52868), (851, 52856), (858, 52835), (875, 52796), (905, 52706), (910, 52688), (912, 52682), (917, 52667), (926, 52643), (930, 52628), (931, 52625), (933, 52613), (940, 52589), (963, 52541), (972, 52517),

Gene: CampRoach\_62 Start: 54448, Stop: 52589, Start Num: 205

Candidate Starts for CampRoach\_62:

(Start: 188 @54472 has 1 MA's), (Start: 205 @54448 has 304 MA's), (Start: 235 @54424 has 6 MA's), (Start: 250 @54418 has 2 MA's), (Start: 274 @54376 has 6 MA's), (283, 54355), (337, 54241), (342, 54235), (360, 54205), (391, 54145), (399, 54124), (421, 54070), (428, 54058), (434, 54040), (436,

54028), (476, 53923), (519, 53866), (538, 53830), (542, 53818), (552, 53791), (564, 53764), (570, 53746), (580, 53728), (598, 53689), (602, 53680), (603, 53677), (604, 53674), (738, 53317), (744, 53284), (750, 53263), (777, 53170), (780, 53161), (795, 53098), (814, 53062), (815, 53059), (820, 53044), (847, 52966), (851, 52954), (858, 52933), (875, 52894), (905, 52804), (910, 52786), (912, 52780), (917, 52765), (926, 52741), (930, 52726), (931, 52723), (933, 52711), (940, 52687), (963, 52639), (972, 52615),

Gene: Camperdownii\_43 Start: 31243, Stop: 29417, Start Num: 246

Candidate Starts for Camperdownii\_43:

(Start: 246 @31243 has 877 MA's), (267, 31222), (280, 31192), (295, 31162), (383, 31000), (394, 30982), (425, 30910), (429, 30901), (471, 30781), (479, 30757), (539, 30664), (558, 30616), (568, 30595), (585, 30556), (646, 30424), (659, 30403), (683, 30358), (687, 30346), (740, 30193), (743, 30172), (776, 30049), (783, 30019), (793, 29980), (814, 29914), (815, 29911), (820, 29896), (827, 29872), (834, 29848), (905, 29641), (946, 29506), (950, 29494), (955, 29485),

Gene: Candra\_45 Start: 29663, Stop: 27822, Start Num: 246

Candidate Starts for Candra\_45:

(Start: 246 @29663 has 877 MA's), (364, 29459), (400, 29384), (402, 29381), (416, 29354), (420, 29339), (425, 29327), (444, 29276), (475, 29186), (479, 29174), (539, 29081), (552, 29042), (560, 29024), (568, 29009), (598, 28943), (613, 28910), (614, 28907), (663, 28805), (697, 28745), (726, 28661), (743, 28580), (766, 28496), (767, 28493), (771, 28484), (776, 28457), (783, 28427), (810, 28367), (820, 28328), (902, 28112), (903, 28109), (905, 28088), (946, 27953), (950, 27941), (955, 27932), (957, 27929), (1000, 27836),

Gene: CanesSauce\_42 Start: 32324, Stop: 29937, Start Num: 45

Candidate Starts for CanesSauce\_42:

(20, 32396), (23, 32381), (Start: 45 @32324 has 24 MA's), (48, 32315), (50, 32309), (75, 32228), (117, 32108), (138, 32057), (Start: 241 @31925 has 13 MA's), (265, 31898), (273, 31883), (295, 31835), (312, 31805), (329, 31760), (367, 31700), (374, 31682), (398, 31634), (420, 31580), (421, 31577), (430, 31559), (435, 31538), (454, 31487), (457, 31478), (458, 31475), (484, 31400), (499, 31355), (522, 31295), (526, 31280), (559, 31196), (605, 31151), (615, 31127), (633, 31121), (643, 31097), (680, 31019), (682, 31016), (683, 31013), (733, 30866), (749, 30797), (774, 30698), (783, 30662), (792, 30626), (794, 30620), (796, 30614), (797, 30608), (805, 30584), (815, 30551), (822, 30527), (836, 30482), (856, 30422), (903, 30269), (910, 30230), (911, 30227), (947, 30101), (968, 30056), (971, 30047),

Gene: Cannibal\_60 Start: 54292, Stop: 52433, Start Num: 205

Candidate Starts for Cannibal\_60:

(Start: 188 @54316 has 1 MA's), (Start: 205 @54292 has 304 MA's), (Start: 235 @54268 has 6 MA's), (Start: 250 @54262 has 2 MA's), (Start: 274 @54220 has 6 MA's), (283, 54199), (337, 54085), (342, 54079), (360, 54049), (391, 53989), (399, 53968), (421, 53914), (428, 53902), (434, 53884), (436, 53872), (476, 53767), (519, 53710), (538, 53674), (542, 53662), (552, 53635), (570, 53590), (598, 53533), (602, 53524), (603, 53521), (738, 53161), (744, 53128), (750, 53107), (777, 53014), (780, 53005), (795, 52942), (814, 52906), (815, 52903), (820, 52888), (847, 52810), (851, 52798), (858, 52777), (875, 52738), (905, 52648), (910, 52630), (912, 52624), (917, 52609), (926, 52585), (930, 52570), (931, 52567), (933, 52555), (940, 52531), (963, 52483), (972, 52459),

Gene: Cappuccino\_38 Start: 27602, Stop: 29584, Start Num: 245

Candidate Starts for Cappuccino\_38:

(Start: 245 @27602 has 74 MA's), (347, 27776), (386, 27839), (402, 27872), (433, 27947), (521, 28175), (585, 28349), (659, 28505), (717, 28643), (737, 28730), (743, 28763), (752, 28793), (767, 28850), (783, 28916), (813, 29009), (905, 29276), (912, 29300), (946, 29411), (998, 29519),

Gene: CaptainRex\_37 Start: 26990, Stop: 25125, Start Num: 299

Candidate Starts for CaptainRex\_37:

(Start: 299 @26990 has 38 MA's), (305, 26984), (348, 26885), (354, 26876), (368, 26852), (375, 26837), (379, 26831), (403, 26780), (406, 26777), (438, 26696), (489, 26546), (493, 26543), (526, 26444), (536, 26417), (537, 26414), (539, 26402), (549, 26372), (556, 26351), (585, 26315), (658, 26168), (703, 26066), (726, 25988), (776, 25808), (783, 25778), (797, 25724), (805, 25706), (822, 25649), (831, 25622), (845, 25580), (858, 25541), (885, 25460), (888, 25451), (903, 25391), (906, 25367), (909, 25355), (912, 25346), (919, 25328), (929, 25295), (947, 25223),

Gene: Caraxes\_45 Start: 30012, Stop: 28183, Start Num: 246

Candidate Starts for Caraxes\_45:

(Start: 246 @30012 has 877 MA's), (364, 29808), (368, 29799), (383, 29769), (400, 29736), (402, 29733), (416, 29706), (425, 29679), (433, 29658), (479, 29526), (539, 29433), (556, 29385), (598, 29295), (620, 29247), (659, 29166), (743, 28941), (767, 28854), (776, 28818), (783, 28788), (793, 28749), (810, 28728), (814, 28707), (820, 28689), (853, 28590), (864, 28563), (880, 28527), (888, 28509), (902, 28473), (946, 28314), (950, 28302), (955, 28293), (978, 28245), (993, 28215),

Gene: CarisSwetlik\_42 Start: 29837, Stop: 27969, Start Num: 301

Candidate Starts for CarisSwetlik\_42:

(Start: 182 @30002 has 4 MA's), (214, 29957), (Start: 238 @29924 has 3 MA's), (248, 29915), (Start: 301 @29837 has 110 MA's), (Start: 308 @29828 has 5 MA's), (375, 29684), (378, 29681), (430, 29570), (433, 29561), (435, 29549), (438, 29543), (475, 29438), (504, 29345), (531, 29270), (537, 29261), (539, 29249), (548, 29222), (549, 29219), (554, 29204), (556, 29198), (559, 29192), (652, 29030), (702, 28916), (776, 28655), (779, 28646), (780, 28643), (783, 28625), (794, 28583), (822, 28493), (831, 28466), (878, 28334), (888, 28295), (903, 28235), (906, 28211), (919, 28172), (929, 28139), (932, 28127),

Gene: Carlyle\_44 Start: 32803, Stop: 30974, Start Num: 246

Candidate Starts for Carlyle\_44:

(Start: 246 @32803 has 877 MA's), (368, 32590), (374, 32575), (416, 32497), (422, 32476), (425, 32470), (429, 32461), (461, 32368), (470, 32344), (479, 32317), (539, 32224), (544, 32209), (556, 32176), (578, 32125), (580, 32122), (612, 32056), (627, 32026), (639, 31996), (662, 31951), (683, 31912), (743, 31732), (753, 31684), (771, 31636), (780, 31597), (783, 31579), (793, 31540), (810, 31519), (814, 31498), (819, 31483), (861, 31360), (922, 31189), (929, 31165), (943, 31117), (946, 31105), (955, 31084), (959, 31078), (981, 31030), (986, 31015),

Gene: Caron\_50 Start: 32142, Stop: 34007, Start Num: 245

Candidate Starts for Caron\_50:

(Start: 245 @32142 has 74 MA's), (317, 32250), (536, 32715), (582, 32838), (585, 32844), (659, 32997), (692, 33060), (743, 33255), (760, 33318), (773, 33366), (774, 33372), (784, 33411), (844, 33594), (946, 33903), (982, 33981), (996, 34002),

Gene: Carostasia\_37 Start: 28508, Stop: 26607, Start Num: 299

Candidate Starts for Carostasia\_37:

(Start: 299 @28508 has 38 MA's), (358, 28385), (368, 28370), (375, 28355), (395, 28322), (398, 28313), (403, 28298), (420, 28262), (428, 28247), (435, 28220), (438, 28214), (456, 28163), (469, 28124), (489, 28064), (531, 27938), (537, 27929), (539, 27917), (549, 27887), (556, 27866), (585, 27830), (658, 27683), (676, 27638), (720, 27527), (764, 27332), (776, 27290), (783, 27260), (794, 27218), (805, 27188), (812, 27167), (822, 27131), (903, 26873), (906, 26849), (917, 26816), (919, 26810), (947, 26705),

Gene: Carsonalex\_46 Start: 32513, Stop: 30120, Start Num: 36

Candidate Starts for Carsonalex\_46:

(Start: 36 @32513 has 16 MA's), (47, 32507), (Start: 59 @32459 has 1 MA's), (75, 32417), (84, 32393), (128, 32267), (138, 32243), (179, 32198), (Start: 215 @32147 has 2 MA's), (223, 32132), (Start: 241 @32111 has 13 MA's), (275, 32063), (289, 32030), (295, 32021), (329, 31946), (335, 31934), (374, 31865), (391, 31838), (394, 31832), (398, 31817), (420, 31763), (421, 31760), (430, 31742), (435, 31721), (457, 31661), (499, 31538), (500, 31532), (526, 31463), (539, 31421), (605, 31334), (615, 31310), (633, 31304), (643, 31280), (647, 31271), (654, 31256), (660, 31244), (680, 31202), (682, 31199), (683, 31196), (703, 31160), (733, 31049), (749, 30980), (750, 30974), (760, 30938), (783, 30845), (792, 30809), (794, 30803), (796, 30797), (797, 30791), (815, 30734), (820, 30719), (822, 30710), (836, 30665), (870, 30572), (947, 30284), (968, 30239), (971, 30230), (995, 30170),

Gene: Carthage\_59 Start: 53529, Stop: 51670, Start Num: 205

Candidate Starts for Carthage\_59:

(42, 53925), (69, 53838), (74, 53823), (76, 53817), (83, 53802), (87, 53784), (Start: 188 @53553 has 1 MA's), (Start: 205 @53529 has 304 MA's), (Start: 235 @53505 has 6 MA's), (Start: 250 @53499 has 2 MA's), (Start: 274 @53457 has 6 MA's), (283, 53436), (337, 53322), (342, 53316), (360, 53286), (391, 53226), (399, 53205), (421, 53151), (428, 53139), (436, 53109), (476, 53004), (519, 52947), (538, 52911), (542, 52899), (552, 52872), (556, 52863), (570, 52827), (580, 52809), (598, 52770), (602, 52761), (603, 52758), (738, 52398), (744, 52365), (750, 52344), (777, 52251), (780, 52242), (795, 52179), (814, 52143), (815, 52140), (820, 52125), (847, 52047), (851, 52035), (858, 52014), (875, 51975), (905, 51885), (910, 51867), (912, 51861), (917, 51846), (926, 51822), (930, 51807), (931, 51804), (933, 51792), (940, 51768), (963, 51720), (972, 51696),

Gene: Casbah\_58 Start: 53994, Stop: 52177, Start Num: 247

Candidate Starts for Casbah\_58:

(130, 54177), (Start: 247 @53994 has 43 MA's), (267, 53964), (368, 53784), (433, 53631), (435, 53619), (448, 53589), (454, 53583), (476, 53520), (478, 53514), (519, 53463), (538, 53427), (556, 53379), (603, 53274), (645, 53178), (674, 53127), (724, 52983), (732, 52944), (739, 52914), (744, 52887), (748, 52875), (775, 52779), (777, 52773), (780, 52764), (782, 52752), (807, 52680), (814, 52650), (820, 52632), (822, 52623), (847, 52554), (851, 52542), (858, 52521), (888, 52452), (898, 52437), (903, 52413), (905, 52392), (910, 52374), (912, 52368), (924, 52335), (926, 52329), (931, 52311), (933, 52299), (936, 52287), (940, 52275), (956, 52233), (972, 52203),

Gene: Casey\_35 Start: 27722, Stop: 25905, Start Num: 298

Candidate Starts for Casey\_35:

(Start: 298 @27722 has 4 MA's), (309, 27707), (435, 27431), (438, 27425), (501, 27290), (505, 27275), (536, 27197), (537, 27194), (539, 27182), (549, 27152), (585, 27095), (658, 26948), (726, 26768), (764, 26630), (779, 26579), (780, 26576), (783, 26558), (784, 26555), (794, 26516), (822, 26429), (831, 26402), (878, 26270), (906, 26147), (917, 26114), (919, 26108), (922, 26099), (947, 26003), (949, 25997),

Gene: Cashington\_40 Start: 28858, Stop: 30732, Start Num: 246

Candidate Starts for Cashington\_40:

(Start: 243 @28855 has 7 MA's), (Start: 246 @28858 has 877 MA's), (287, 28927), (Start: 301 @28948 has 110 MA's), (364, 29065), (400, 29128), (429, 29194), (444, 29236), (585, 29530), (696, 29764), (731, 29887), (743, 29947), (746, 29953), (755, 29998), (762, 30013), (764, 30028), (774, 30064), (783, 30100), (813, 30193), (844, 30286), (874, 30364), (902, 30436), (909, 30475), (924, 30517), (929, 30535), (946, 30595), (955, 30616),

Gene: Caspiboi\_63 Start: 54270, Stop: 52411, Start Num: 205

Candidate Starts for Caspiboi\_63:

(Start: 188 @54294 has 1 MA's), (Start: 205 @54270 has 304 MA's), (Start: 235 @54246 has 6 MA's), (Start: 250 @54240 has 2 MA's), (Start: 274 @54198 has 6 MA's), (283, 54177), (337, 54063), (342, 54057), (360, 54027), (391, 53967), (399, 53946), (421, 53892), (428, 53880), (434, 53862), (436,

53850), (476, 53745), (519, 53688), (538, 53652), (542, 53640), (552, 53613), (570, 53568), (598, 53511), (602, 53502), (603, 53499), (712, 53241), (738, 53139), (744, 53106), (750, 53085), (777, 52992), (780, 52983), (795, 52920), (814, 52884), (815, 52881), (820, 52866), (847, 52788), (851, 52776), (858, 52755), (875, 52716), (905, 52626), (910, 52608), (912, 52602), (917, 52587), (926, 52563), (930, 52548), (931, 52545), (933, 52533), (940, 52509), (946, 52488), (963, 52461), (972, 52437), (977, 52422),

Gene: Casserole\_35 Start: 32865, Stop: 31120, Start Num: 274

Candidate Starts for Casserole\_35:

(259, 32892), (Start: 274 @32865 has 6 MA's), (276, 32862), (290, 32829), (294, 32823), (339, 32730), (362, 32697), (374, 32670), (437, 32535), (509, 32406), (514, 32400), (528, 32376), (534, 32361), (542, 32334), (553, 32304), (585, 32223), (588, 32214), (616, 32154), (627, 32133), (681, 32019), (689, 32001), (794, 31623), (810, 31605), (828, 31539), (832, 31524), (909, 31305), (922, 31263), (946, 31179),

Gene: Cassia\_40 Start: 29351, Stop: 31216, Start Num: 245

Candidate Starts for Cassia\_40:

(Start: 245 @29351 has 74 MA's), (279, 29399), (416, 29648), (458, 29768), (541, 29945), (544, 29954), (585, 30053), (591, 30068), (598, 30080), (659, 30206), (717, 30344), (743, 30464), (767, 30551), (783, 30617), (813, 30710), (902, 30953), (946, 31112), (949, 31121),

Gene: Catalina\_46 Start: 31484, Stop: 29691, Start Num: 246

Candidate Starts for Catalina\_46:

(Start: 246 @31484 has 877 MA's), (261, 31475), (280, 31433), (346, 31313), (347, 31310), (372, 31262), (402, 31202), (417, 31172), (420, 31160), (425, 31148), (479, 30995), (539, 30902), (598, 30764), (612, 30734), (687, 30575), (697, 30563), (714, 30536), (740, 30428), (743, 30407), (780, 30272), (783, 30254), (814, 30173), (827, 30131), (853, 30056), (886, 29981), (902, 29939), (930, 29837), (946, 29780), (950, 29768), (955, 29759),

Gene: Causa\_88 Start: 64971, Stop: 63172, Start Num: 244

Candidate Starts for Causa\_88:

(Start: 244 @64971 has 11 MA's), (267, 64938), (Start: 274 @64923 has 6 MA's), (280, 64911), (294, 64884), (307, 64866), (325, 64839), (379, 64746), (391, 64728), (398, 64710), (421, 64653), (442, 64602), (519, 64461), (537, 64434), (538, 64425), (586, 64311), (603, 64272), (615, 64242), (625, 64224), (674, 64110), (712, 64005), (717, 63990), (738, 63903), (744, 63870), (747, 63864), (775, 63762), (777, 63756), (780, 63747), (814, 63648), (815, 63645), (820, 63630), (824, 63615), (847, 63552), (851, 63540), (858, 63519), (901, 63423), (905, 63390), (926, 63327), (933, 63297), (935, 63291), (936, 63285), (940, 63273), (961, 63225), (972, 63198), (977, 63183), (979, 63177),

Gene: Caviar\_44 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for Caviar\_44:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: Cece\_99 Start: 83690, Stop: 81819, Start Num: 246

Candidate Starts for Cece\_99:

(Start: 246 @83690 has 877 MA's), (352, 83480), (391, 83414), (399, 83393), (435, 83306), (438, 83300), (477, 83207), (482, 83192), (542, 83114), (571, 83030), (585, 83003), (594, 82982), (613, 82943), (627, 82916), (630, 82910), (683, 82805), (707, 82757), (716, 82736), (719, 82727), (743,

82616), (762, 82550), (773, 82502), (791, 82418), (795, 82403), (816, 82334), (824, 82307), (827, 82298), (840, 82265), (922, 82013), (930, 81986), (946, 81929),

Gene: Celaena\_40 Start: 30338, Stop: 32209, Start Num: 246

Candidate Starts for Celaena\_40:

(Start: 246 @30338 has 877 MA's), (287, 30407), (364, 30545), (429, 30674), (467, 30770), (585, 31010), (591, 31025), (635, 31118), (683, 31208), (743, 31424), (755, 31475), (762, 31490), (774, 31541), (777, 31550), (783, 31577), (813, 31670), (834, 31742), (874, 31841), (902, 31913), (905, 31937), (924, 31994), (939, 32048), (946, 32072), (955, 32093),

Gene: Cen1621\_44 Start: 29694, Stop: 31556, Start Num: 246

Candidate Starts for Cen1621\_44:

(151, 29562), (161, 29580), (212, 29649), (217, 29658), (Start: 246 @29694 has 877 MA's), (317, 29802), (339, 29859), (364, 29898), (422, 30012), (556, 30330), (585, 30396), (586, 30399), (591, 30411), (598, 30423), (629, 30483), (659, 30549), (687, 30606), (708, 30657), (743, 30807), (783, 30960), (840, 31134), (843, 31143), (929, 31395), (943, 31443), (946, 31455),

Gene: Centaur\_45 Start: 31699, Stop: 29912, Start Num: 246

Candidate Starts for Centaur\_45:

(Start: 246 @31699 has 877 MA's), (364, 31495), (366, 31492), (368, 31486), (383, 31456), (400, 31423), (402, 31420), (416, 31393), (425, 31366), (444, 31315), (479, 31213), (539, 31120), (556, 31072), (560, 31063), (568, 31048), (598, 30982), (635, 30901), (659, 30853), (726, 30709), (743, 30628), (755, 30577), (766, 30544), (783, 30475), (793, 30436), (810, 30415), (812, 30403), (814, 30394), (818, 30382), (886, 30202), (888, 30196), (902, 30160), (905, 30136), (930, 30058), (946, 30001), (950, 29989),

Gene: CentreCat\_45 Start: 31573, Stop: 29747, Start Num: 246

Candidate Starts for CentreCat\_45:

(Start: 246 @31573 has 877 MA's), (267, 31552), (280, 31522), (295, 31492), (383, 31330), (394, 31312), (425, 31240), (429, 31231), (471, 31111), (479, 31087), (539, 30994), (558, 30946), (568, 30925), (585, 30886), (646, 30754), (659, 30733), (683, 30688), (687, 30676), (740, 30523), (743, 30502), (776, 30379), (783, 30349), (793, 30310), (814, 30244), (815, 30241), (820, 30226), (827, 30202), (834, 30178), (905, 29971), (946, 29836), (950, 29824), (955, 29815),

Gene: Cerulean\_46 Start: 31993, Stop: 30167, Start Num: 246

Candidate Starts for Cerulean\_46:

(Start: 246 @31993 has 877 MA's), (279, 31945), (364, 31789), (400, 31717), (425, 31660), (429, 31651), (471, 31531), (479, 31507), (539, 31414), (558, 31366), (568, 31345), (585, 31306), (607, 31261), (646, 31174), (652, 31165), (659, 31153), (683, 31108), (687, 31096), (740, 30943), (743, 30922), (776, 30799), (783, 30769), (793, 30730), (814, 30664), (815, 30661), (827, 30622), (834, 30598), (905, 30391), (946, 30256), (950, 30244), (955, 30235),

Gene: ChaChing\_58 Start: 53696, Stop: 51879, Start Num: 247

Candidate Starts for ChaChing\_58:

(130, 53879), (Start: 247 @53696 has 43 MA's), (267, 53666), (368, 53486), (433, 53333), (435, 53321), (448, 53291), (454, 53285), (476, 53222), (478, 53216), (519, 53165), (538, 53129), (556, 53081), (603, 52976), (645, 52880), (674, 52829), (724, 52685), (732, 52646), (739, 52616), (744, 52589), (748, 52577), (775, 52481), (777, 52475), (780, 52466), (782, 52454), (807, 52382), (814, 52352), (820, 52334), (822, 52325), (847, 52256), (851, 52244), (858, 52223), (888, 52154), (898, 52139), (903, 52115), (905, 52094), (912, 52070), (926, 52031), (931, 52013), (933, 52001), (936, 51989), (940, 51977), (956, 51935), (972, 51905),

Gene: Chadwick\_40 Start: 30056, Stop: 28191, Start Num: 246

Candidate Starts for Chadwick\_40:

(Start: 215 @30089 has 2 MA's), (Start: 246 @30056 has 877 MA's), (318, 29945), (366, 29849), (400, 29780), (402, 29777), (416, 29750), (425, 29723), (429, 29714), (458, 29630), (461, 29621), (467, 29606), (479, 29570), (523, 29510), (539, 29474), (556, 29426), (567, 29405), (568, 29402), (594, 29342), (633, 29264), (654, 29216), (662, 29204), (686, 29156), (712, 29105), (743, 28970), (753, 28922), (762, 28904), (767, 28883), (771, 28874), (777, 28844), (783, 28817), (784, 28814), (814, 28736), (820, 28718), (834, 28670), (853, 28619), (876, 28565), (880, 28556), (888, 28538), (910, 28460), (946, 28343), (950, 28331), (1000, 28226),

Gene: Chaelin\_61 Start: 54580, Stop: 52721, Start Num: 205

Candidate Starts for Chaelin\_61:

(Start: 188 @54604 has 1 MA's), (Start: 205 @54580 has 304 MA's), (Start: 235 @54556 has 6 MA's), (Start: 250 @54550 has 2 MA's), (Start: 274 @54508 has 6 MA's), (283, 54487), (337, 54373), (342, 54367), (360, 54337), (391, 54277), (399, 54256), (421, 54202), (428, 54190), (434, 54172), (436, 54160), (476, 54055), (519, 53998), (538, 53962), (542, 53950), (551, 53926), (556, 53914), (564, 53896), (570, 53878), (580, 53860), (598, 53821), (602, 53812), (603, 53809), (604, 53806), (738, 53449), (744, 53416), (750, 53395), (777, 53302), (780, 53293), (795, 53230), (814, 53194), (815, 53191), (820, 53176), (847, 53098), (851, 53086), (858, 53065), (875, 53026), (905, 52936), (910, 52918), (912, 52912), (917, 52897), (926, 52873), (930, 52858), (931, 52855), (933, 52843), (940, 52819), (963, 52771), (972, 52747),

Gene: Chah\_62 Start: 53995, Stop: 52136, Start Num: 205

Candidate Starts for Chah\_62:

(Start: 188 @54019 has 1 MA's), (Start: 205 @53995 has 304 MA's), (Start: 235 @53971 has 6 MA's), (Start: 250 @53965 has 2 MA's), (Start: 274 @53923 has 6 MA's), (283, 53902), (337, 53788), (342, 53782), (360, 53752), (391, 53692), (399, 53671), (421, 53617), (428, 53605), (434, 53587), (436, 53575), (476, 53470), (519, 53413), (538, 53377), (542, 53365), (552, 53338), (564, 53311), (570, 53293), (580, 53275), (598, 53236), (602, 53227), (603, 53224), (712, 52966), (738, 52864), (744, 52831), (750, 52810), (777, 52717), (780, 52708), (795, 52645), (814, 52609), (815, 52606), (820, 52591), (847, 52513), (851, 52501), (858, 52480), (875, 52441), (905, 52351), (910, 52333), (912, 52327), (917, 52312), (926, 52288), (930, 52273), (931, 52270), (933, 52258), (940, 52234), (963, 52186), (972, 52162),

Gene: Chako\_38 Start: 28706, Stop: 26754, Start Num: 238

Candidate Starts for Chako\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: Chalmers\_57 Start: 54135, Stop: 52318, Start Num: 247

Candidate Starts for Chalmers\_57:

(130, 54318), (Start: 247 @54135 has 43 MA's), (267, 54105), (368, 53925), (433, 53772), (435, 53760), (448, 53730), (454, 53724), (476, 53661), (478, 53655), (519, 53604), (537, 53577), (538, 53568), (556, 53520), (603, 53415), (645, 53319), (674, 53268), (724, 53124), (732, 53085), (739, 53055), (744, 53028), (748, 53016), (775, 52920), (777, 52914), (780, 52905), (782, 52893), (807, 52821), (814, 52791), (820, 52773), (822, 52764), (847, 52695), (851, 52683), (858, 52662), (888, 52593), (898, 52578), (903, 52554), (905, 52533), (910, 52515), (912, 52509), (924, 52476), (926, 52470), (931, 52452), (933, 52440), (936, 52428), (940, 52416), (956, 52374), (972, 52344),

Gene: ChampagnePapi\_47 Start: 31992, Stop: 30166, Start Num: 246

Candidate Starts for ChampagnePapi\_47:

(Start: 246 @31992 has 877 MA's), (279, 31944), (364, 31788), (400, 31716), (425, 31659), (429, 31650), (471, 31530), (479, 31506), (539, 31413), (558, 31365), (568, 31344), (585, 31305), (607, 31260), (646, 31173), (652, 31164), (659, 31152), (683, 31107), (687, 31095), (740, 30942), (743, 30921), (776, 30798), (783, 30768), (793, 30729), (814, 30663), (815, 30660), (827, 30621), (834, 30597), (905, 30390), (946, 30255), (950, 30243), (955, 30234),

Gene: Chamuel\_38 Start: 28695, Stop: 26743, Start Num: 238

Candidate Starts for Chamuel\_38:

(Start: 238 @28695 has 3 MA's), (Start: 301 @28608 has 110 MA's), (Start: 308 @28599 has 5 MA's), (354, 28494), (358, 28485), (375, 28455), (378, 28452), (433, 28332), (435, 28320), (438, 28314), (475, 28209), (484, 28182), (531, 28041), (536, 28035), (537, 28032), (539, 28020), (548, 27993), (549, 27990), (554, 27975), (556, 27969), (559, 27963), (586, 27930), (652, 27801), (676, 27741), (776, 27426), (779, 27417), (780, 27414), (783, 27396), (794, 27354), (796, 27348), (805, 27324), (822, 27267), (878, 27108), (885, 27078), (888, 27069), (903, 27009), (906, 26985), (919, 26946), (929, 26913), (932, 26901), (947, 26841),

Gene: Chanagan\_42 Start: 33624, Stop: 31837, Start Num: 246

Candidate Starts for Chanagan\_42:

(Start: 246 @33624 has 877 MA's), (368, 33411), (374, 33396), (400, 33348), (416, 33318), (422, 33297), (425, 33291), (429, 33282), (470, 33165), (479, 33138), (539, 33045), (544, 33030), (578, 32946), (580, 32943), (612, 32877), (627, 32847), (639, 32817), (662, 32772), (683, 32733), (743, 32553), (753, 32505), (767, 32466), (783, 32400), (812, 32328), (814, 32319), (843, 32235), (876, 32148), (917, 32022), (922, 32010), (939, 31950), (946, 31926), (948, 31920),

Gene: Chandler\_58 Start: 54464, Stop: 52647, Start Num: 247

Candidate Starts for Chandler\_58:

(130, 54647), (Start: 247 @54464 has 43 MA's), (267, 54434), (368, 54254), (417, 54149), (433, 54101), (435, 54089), (448, 54059), (454, 54053), (476, 53990), (478, 53984), (519, 53933), (538, 53897), (556, 53849), (603, 53744), (645, 53648), (674, 53597), (724, 53453), (732, 53414), (739, 53384), (744, 53357), (748, 53345), (775, 53249), (777, 53243), (780, 53234), (782, 53222), (807, 53150), (814, 53120), (820, 53102), (822, 53093), (847, 53024), (851, 53012), (858, 52991), (888, 52922), (898, 52907), (903, 52883), (905, 52862), (910, 52844), (912, 52838), (924, 52805), (926, 52799), (931, 52781), (933, 52769), (936, 52757), (940, 52745), (956, 52703), (972, 52673),

Gene: Changeling\_45 Start: 32303, Stop: 30516, Start Num: 246

Candidate Starts for Changeling\_45:

(Start: 246 @32303 has 877 MA's), (364, 32099), (366, 32096), (368, 32090), (375, 32075), (383, 32060), (402, 32024), (416, 31997), (425, 31970), (433, 31949), (479, 31817), (539, 31724), (556, 31676), (560, 31667), (568, 31652), (598, 31586), (635, 31505), (659, 31457), (726, 31313), (743, 31232), (755, 31181), (766, 31148), (767, 31145), (776, 31109), (783, 31079), (793, 31040), (810, 31019), (831, 30944), (834, 30932), (853, 30881), (864, 30854), (880, 30818), (888, 30800), (902, 30764), (905, 30740), (924, 30683), (930, 30662), (946, 30605), (950, 30593), (955, 30584),

Gene: Chaph\_45 Start: 31581, Stop: 29755, Start Num: 246

Candidate Starts for Chaph\_45:

(Start: 246 @31581 has 877 MA's), (267, 31560), (280, 31530), (295, 31500), (383, 31338), (394, 31320), (425, 31248), (429, 31239), (471, 31119), (479, 31095), (539, 31002), (558, 30954), (568, 30933), (585, 30894), (646, 30762), (659, 30741), (683, 30696), (687, 30684), (740, 30531), (743, 30510), (776, 30387), (783, 30357), (793, 30318), (814, 30252), (815, 30249), (820, 30234), (827, 30210), (834, 30186), (905, 29979), (946, 29844), (950, 29832), (955, 29823),



Gene: Chargerpower\_44 Start: 30403, Stop: 28610, Start Num: 246

Candidate Starts for Chargerpower\_44:

(177, 30496), (Start: 246 @30403 has 877 MA's), (261, 30394), (318, 30292), (319, 30286), (364, 30199), (372, 30181), (402, 30121), (416, 30094), (425, 30067), (462, 29962), (479, 29914), (539, 29821), (554, 29776), (612, 29653), (714, 29455), (738, 29356), (740, 29347), (743, 29326), (783, 29173), (810, 29113), (812, 29101), (814, 29092), (880, 28912), (902, 28858), (930, 28756), (932, 28747), (946, 28699), (950, 28687), (955, 28678),

Gene: Charles1\_61 Start: 54304, Stop: 52445, Start Num: 205

Candidate Starts for Charles1\_61:

(Start: 188 @54328 has 1 MA's), (Start: 205 @54304 has 304 MA's), (Start: 235 @54280 has 6 MA's), (Start: 250 @54274 has 2 MA's), (Start: 274 @54232 has 6 MA's), (283, 54211), (337, 54097), (342, 54091), (360, 54061), (391, 54001), (399, 53980), (421, 53926), (428, 53914), (434, 53896), (436, 53884), (476, 53779), (519, 53722), (538, 53686), (542, 53674), (552, 53647), (564, 53620), (570, 53602), (580, 53584), (598, 53545), (602, 53536), (603, 53533), (738, 53173), (744, 53140), (750, 53119), (777, 53026), (780, 53017), (795, 52954), (814, 52918), (815, 52915), (820, 52900), (847, 52822), (851, 52810), (858, 52789), (875, 52750), (905, 52660), (910, 52642), (912, 52636), (917, 52621), (926, 52597), (930, 52582), (931, 52579), (933, 52567), (940, 52543), (963, 52495), (972, 52471),

Gene: CharlieGBrown\_61 Start: 54143, Stop: 52284, Start Num: 205

Candidate Starts for CharlieGBrown\_61:

(Start: 188 @54167 has 1 MA's), (Start: 205 @54143 has 304 MA's), (Start: 235 @54119 has 6 MA's), (Start: 250 @54113 has 2 MA's), (Start: 274 @54071 has 6 MA's), (283, 54050), (337, 53936), (342, 53930), (360, 53900), (391, 53840), (399, 53819), (421, 53765), (428, 53753), (434, 53735), (436, 53723), (476, 53618), (519, 53561), (538, 53525), (542, 53513), (551, 53489), (556, 53477), (564, 53459), (570, 53441), (580, 53423), (598, 53384), (602, 53375), (603, 53372), (604, 53369), (712, 53114), (738, 53012), (744, 52979), (750, 52958), (777, 52865), (780, 52856), (795, 52793), (814, 52757), (815, 52754), (820, 52739), (847, 52661), (851, 52649), (858, 52628), (875, 52589), (905, 52499), (910, 52481), (912, 52475), (917, 52460), (926, 52436), (930, 52421), (931, 52418), (933, 52406), (940, 52382), (946, 52361), (963, 52334), (972, 52310), (977, 52295),

Gene: CharlottesWeb\_50 Start: 45347, Stop: 43530, Start Num: 241

Candidate Starts for CharlottesWeb\_50:

(84, 45662), (94, 45626), (95, 45620), (105, 45587), (Start: 241 @45347 has 13 MA's), (267, 45311), (273, 45299), (Start: 274 @45296 has 6 MA's), (287, 45266), (356, 45140), (381, 45092), (417, 45017), (436, 44960), (469, 44885), (476, 44864), (538, 44771), (592, 44642), (603, 44618), (724, 44327), (727, 44306), (732, 44288), (744, 44231), (777, 44117), (780, 44108), (815, 44006), (820, 43991), (847, 43913), (851, 43901), (858, 43880), (861, 43871), (886, 43817), (901, 43784), (905, 43751), (906, 43748), (917, 43712), (926, 43688), (940, 43628), (972, 43556),

Gene: Charm\_42 Start: 30834, Stop: 29041, Start Num: 246

Candidate Starts for Charm\_42:

(Start: 246 @30834 has 877 MA's), (261, 30825), (318, 30723), (346, 30663), (347, 30660), (364, 30630), (386, 30585), (402, 30552), (416, 30525), (420, 30510), (425, 30498), (429, 30489), (444, 30447), (479, 30345), (539, 30252), (547, 30228), (554, 30207), (612, 30084), (687, 29925), (690, 29922), (714, 29886), (716, 29880), (743, 29757), (762, 29691), (780, 29622), (783, 29604), (810, 29544), (814, 29523), (827, 29481), (853, 29406), (886, 29331), (902, 29289), (930, 29187), (946, 29130), (950, 29118), (955, 29109),

Gene: Chartreuse\_45 Start: 29574, Stop: 27733, Start Num: 246

Candidate Starts for Chartreuse\_45:

(Start: 246 @29574 has 877 MA's), (364, 29370), (400, 29295), (402, 29292), (416, 29265), (420, 29250), (425, 29238), (444, 29187), (475, 29097), (479, 29085), (539, 28992), (552, 28953), (560, 28935), (568, 28920), (598, 28854), (613, 28821), (614, 28818), (663, 28716), (697, 28656), (726, 28572), (743, 28491), (766, 28407), (767, 28404), (771, 28395), (776, 28368), (783, 28338), (810, 28278), (820, 28239), (902, 28023), (903, 28020), (905, 27999), (946, 27864), (950, 27852), (955, 27843), (957, 27840), (1000, 27747),

Gene: Che12\_47 Start: 30450, Stop: 28663, Start Num: 246

Candidate Starts for Che12\_47:

(Start: 246 @30450 has 877 MA's), (364, 30246), (368, 30237), (400, 30174), (402, 30171), (416, 30144), (425, 30117), (433, 30096), (442, 30069), (479, 29964), (539, 29871), (556, 29823), (607, 29715), (620, 29685), (659, 29604), (743, 29379), (766, 29295), (767, 29292), (776, 29256), (783, 29226), (793, 29187), (810, 29166), (814, 29145), (820, 29127), (853, 29028), (864, 29001), (880, 28965), (888, 28947), (902, 28911), (905, 28887), (945, 28755), (946, 28752), (950, 28740), (955, 28731),

Gene: CheetO\_60 Start: 54266, Stop: 52407, Start Num: 205

Candidate Starts for CheetO\_60:

(Start: 188 @54290 has 1 MA's), (Start: 205 @54266 has 304 MA's), (Start: 235 @54242 has 6 MA's), (Start: 250 @54236 has 2 MA's), (Start: 274 @54194 has 6 MA's), (283, 54173), (337, 54059), (342, 54053), (360, 54023), (391, 53963), (399, 53942), (421, 53888), (428, 53876), (434, 53858), (436, 53846), (476, 53741), (519, 53684), (538, 53648), (542, 53636), (551, 53612), (556, 53600), (564, 53582), (570, 53564), (580, 53546), (598, 53507), (602, 53498), (603, 53495), (604, 53492), (738, 53135), (744, 53102), (750, 53081), (777, 52988), (780, 52979), (795, 52916), (814, 52880), (815, 52877), (820, 52862), (847, 52784), (851, 52772), (858, 52751), (875, 52712), (905, 52622), (910, 52604), (912, 52598), (917, 52583), (926, 52559), (930, 52544), (931, 52541), (933, 52529), (940, 52505), (963, 52457), (972, 52433),

Gene: Cheeto1\_39 Start: 29061, Stop: 27196, Start Num: 297

Candidate Starts for Cheeto1\_39:

(Start: 297 @29061 has 18 MA's), (314, 29037), (378, 28905), (406, 28848), (430, 28794), (435, 28773), (438, 28767), (504, 28566), (537, 28482), (539, 28470), (549, 28440), (556, 28419), (562, 28407), (585, 28383), (605, 28338), (633, 28293), (652, 28251), (673, 28206), (676, 28191), (704, 28131), (718, 28089), (771, 27906), (780, 27867), (783, 27849), (794, 27807), (822, 27720), (903, 27462), (906, 27438), (917, 27405), (947, 27294),

Gene: Chentzyk\_59 Start: 54416, Stop: 52599, Start Num: 247

Candidate Starts for Chentzyk\_59:

(130, 54599), (Start: 247 @54416 has 43 MA's), (267, 54386), (368, 54206), (433, 54053), (435, 54041), (448, 54011), (454, 54005), (476, 53942), (478, 53936), (519, 53885), (537, 53858), (538, 53849), (556, 53801), (603, 53696), (645, 53600), (674, 53549), (724, 53405), (732, 53366), (739, 53336), (744, 53309), (748, 53297), (775, 53201), (777, 53195), (780, 53186), (782, 53174), (807, 53102), (814, 53072), (820, 53054), (822, 53045), (847, 52976), (851, 52964), (858, 52943), (888, 52874), (898, 52859), (903, 52835), (905, 52814), (910, 52796), (912, 52790), (924, 52757), (926, 52751), (931, 52733), (933, 52721), (936, 52709), (940, 52697), (956, 52655), (972, 52625),

Gene: Chepli\_40 Start: 28352, Stop: 26460, Start Num: 299

Candidate Starts for Chepli\_40:

(222, 28460), (Start: 235 @28442 has 6 MA's), (Start: 299 @28352 has 38 MA's), (Start: 308 @28343 has 5 MA's), (328, 28286), (344, 28256), (368, 28217), (375, 28202), (379, 28196), (391, 28178), (403, 28145), (435, 28067), (438, 28061), (456, 28010), (469, 27971), (504, 27860), (537, 27776), (539, 27764), (549, 27734), (554, 27719), (556, 27713), (559, 27707), (562, 27701), (576, 27695), (720, 27380), (764, 27185), (783, 27113), (794, 27071), (805, 27041), (812, 27020), (822, 26984), (846,

26912), (885, 26795), (888, 26786), (903, 26726), (906, 26702), (909, 26690), (922, 26654), (947, 26558),

Gene: Cher\_60 Start: 54560, Stop: 52701, Start Num: 205

Candidate Starts for Cher\_60:

(Start: 188 @54584 has 1 MA's), (Start: 205 @54560 has 304 MA's), (Start: 235 @54536 has 6 MA's), (Start: 250 @54530 has 2 MA's), (Start: 274 @54488 has 6 MA's), (283, 54467), (337, 54353), (342, 54347), (360, 54317), (391, 54257), (399, 54236), (421, 54182), (428, 54170), (434, 54152), (436, 54140), (476, 54035), (519, 53978), (538, 53942), (542, 53930), (552, 53903), (570, 53858), (598, 53801), (602, 53792), (603, 53789), (738, 53429), (744, 53396), (750, 53375), (777, 53282), (780, 53273), (795, 53210), (814, 53174), (815, 53171), (820, 53156), (847, 53078), (851, 53066), (858, 53045), (875, 53006), (905, 52916), (910, 52898), (912, 52892), (917, 52877), (926, 52853), (930, 52838), (931, 52835), (933, 52823), (940, 52799), (963, 52751), (972, 52727),

Gene: CherryonLim\_46 Start: 35452, Stop: 33086, Start Num: 46

Candidate Starts for CherryonLim\_46:

(Start: 46 @35452 has 13 MA's), (63, 35392), (75, 35365), (80, 35350), (93, 35311), (138, 35206), (179, 35161), (Start: 232 @35083 has 3 MA's), (Start: 238 @35077 has 3 MA's), (Start: 241 @35074 has 13 MA's), (265, 35047), (267, 35044), (282, 35008), (283, 35005), (287, 34996), (305, 34969), (Start: 308 @34966 has 5 MA's), (329, 34909), (354, 34870), (389, 34807), (398, 34783), (406, 34762), (420, 34729), (421, 34726), (430, 34708), (435, 34687), (457, 34627), (499, 34504), (526, 34429), (531, 34408), (539, 34387), (605, 34300), (643, 34252), (657, 34222), (660, 34216), (682, 34171), (683, 34168), (690, 34153), (702, 34132), (707, 34117), (722, 34069), (726, 34048), (747, 33958), (749, 33949), (752, 33934), (755, 33919), (760, 33907), (783, 33814), (792, 33778), (794, 33772), (796, 33766), (797, 33760), (815, 33703), (822, 33679), (856, 33574), (858, 33571), (889, 33478), (893, 33460), (911, 33379), (920, 33355), (929, 33325), (940, 33277), (943, 33268), (947, 33253), (958, 33229), (968, 33208), (993, 33142), (1004, 33121), (1006, 33115), (1009, 33109),

Gene: ChickenKing\_38 Start: 28974, Stop: 27109, Start Num: 297

Candidate Starts for ChickenKing\_38:

(Start: 297 @28974 has 18 MA's), (314, 28950), (378, 28818), (406, 28761), (430, 28707), (435, 28686), (438, 28680), (504, 28479), (537, 28395), (539, 28383), (549, 28353), (556, 28332), (562, 28320), (585, 28296), (605, 28251), (652, 28164), (673, 28119), (676, 28104), (718, 28002), (771, 27819), (780, 27780), (783, 27762), (794, 27720), (798, 27705), (822, 27633), (903, 27375), (906, 27351), (917, 27318), (947, 27207),

Gene: ChickenTender\_45 Start: 32093, Stop: 29700, Start Num: 36

Candidate Starts for ChickenTender\_45:

(31, 32120), (Start: 36 @32093 has 16 MA's), (Start: 59 @32039 has 1 MA's), (84, 31973), (138, 31823), (179, 31778), (223, 31712), (Start: 241 @31691 has 13 MA's), (273, 31649), (295, 31601), (329, 31526), (335, 31514), (374, 31445), (394, 31412), (398, 31397), (420, 31343), (421, 31340), (430, 31322), (435, 31301), (457, 31241), (458, 31238), (499, 31118), (520, 31061), (522, 31058), (526, 31043), (551, 30965), (605, 30914), (615, 30890), (633, 30884), (643, 30860), (647, 30851), (660, 30824), (680, 30782), (682, 30779), (683, 30776), (733, 30629), (749, 30560), (750, 30554), (760, 30518), (783, 30425), (792, 30389), (794, 30383), (796, 30377), (797, 30371), (805, 30347), (815, 30314), (822, 30290), (836, 30245), (947, 29864), (968, 29819), (971, 29810), (995, 29750),

Gene: ChikPic\_38 Start: 28741, Stop: 26876, Start Num: 299

Candidate Starts for ChikPic\_38:

(Start: 299 @28741 has 38 MA's), (320, 28696), (344, 28642), (379, 28582), (403, 28531), (435, 28453), (438, 28447), (454, 28402), (455, 28399), (456, 28396), (469, 28357), (489, 28297), (531, 28174), (537, 28165), (539, 28153), (543, 28141), (549, 28123), (556, 28102), (562, 28090), (658, 27919), (724, 27751), (771, 27586), (779, 27550), (783, 27529), (794, 27487), (822, 27400), (836,

27355), (872, 27256), (885, 27211), (888, 27202), (903, 27142), (906, 27118), (917, 27085), (947, 26974),

Gene: Childish\_60 Start: 54571, Stop: 52712, Start Num: 205

Candidate Starts for Childish\_60:

(Start: 188 @54595 has 1 MA's), (Start: 205 @54571 has 304 MA's), (Start: 235 @54547 has 6 MA's), (Start: 250 @54541 has 2 MA's), (Start: 274 @54499 has 6 MA's), (283, 54478), (337, 54364), (342, 54358), (360, 54328), (391, 54268), (399, 54247), (421, 54193), (428, 54181), (434, 54163), (436, 54151), (476, 54046), (519, 53989), (538, 53953), (542, 53941), (552, 53914), (564, 53887), (570, 53869), (580, 53851), (598, 53812), (602, 53803), (603, 53800), (712, 53542), (738, 53440), (744, 53407), (750, 53386), (777, 53293), (780, 53284), (795, 53221), (814, 53185), (815, 53182), (820, 53167), (847, 53089), (851, 53077), (858, 53056), (875, 53017), (905, 52927), (910, 52909), (912, 52903), (917, 52888), (926, 52864), (930, 52849), (931, 52846), (933, 52834), (940, 52810), (946, 52789), (963, 52762), (972, 52738),

Gene: ChiliPepper\_40 Start: 29968, Stop: 31839, Start Num: 246

Candidate Starts for ChiliPepper\_40:

(Start: 246 @29968 has 877 MA's), (352, 30151), (371, 30190), (386, 30208), (419, 30280), (429, 30304), (433, 30316), (434, 30319), (467, 30400), (565, 30592), (585, 30640), (629, 30730), (696, 30871), (731, 30994), (743, 31054), (762, 31120), (764, 31135), (774, 31171), (777, 31180), (783, 31207), (813, 31300), (844, 31393), (874, 31471), (902, 31543), (909, 31582), (924, 31624), (939, 31678), (946, 31702), (955, 31723), (968, 31747),

Gene: Chilliams\_97 Start: 71240, Stop: 73045, Start Num: 263

Candidate Starts for Chilliams\_97:

(223, 71195), (263, 71240), (292, 71303), (317, 71342), (319, 71351), (357, 71426), (391, 71480), (428, 71561), (435, 71588), (438, 71594), (482, 71699), (539, 71768), (547, 71792), (571, 71846), (573, 71852), (585, 71873), (591, 71888), (617, 71942), (683, 72077), (690, 72092), (723, 72173), (730, 72206), (736, 72224), (738, 72236), (740, 72245), (743, 72266), (774, 72389), (813, 72539), (816, 72551), (827, 72587), (840, 72620), (858, 72674), (869, 72701), (906, 72824), (908, 72830), (922, 72872), (924, 72878), (929, 72896), (946, 72956), (974, 73007),

Gene: ChipMunk\_47 Start: 33204, Stop: 31417, Start Num: 246

Candidate Starts for ChipMunk\_47:

(Start: 246 @33204 has 877 MA's), (366, 32997), (368, 32991), (375, 32976), (383, 32961), (402, 32925), (416, 32898), (425, 32871), (433, 32850), (461, 32769), (479, 32718), (539, 32625), (556, 32577), (560, 32568), (568, 32553), (598, 32487), (659, 32358), (662, 32352), (743, 32133), (755, 32082), (766, 32049), (767, 32046), (783, 31980), (793, 31941), (810, 31920), (831, 31845), (834, 31833), (853, 31782), (880, 31719), (888, 31701), (902, 31665), (905, 31641), (930, 31563), (946, 31506), (950, 31494), (955, 31485),

Gene: Chipette\_61 Start: 54255, Stop: 52396, Start Num: 205

Candidate Starts for Chipette\_61:

(Start: 188 @54279 has 1 MA's), (Start: 205 @54255 has 304 MA's), (Start: 235 @54231 has 6 MA's), (Start: 250 @54225 has 2 MA's), (Start: 274 @54183 has 6 MA's), (283, 54162), (337, 54048), (342, 54042), (360, 54012), (391, 53952), (399, 53931), (421, 53877), (428, 53865), (434, 53847), (436, 53835), (476, 53730), (519, 53673), (538, 53637), (542, 53625), (551, 53601), (556, 53589), (564, 53571), (570, 53553), (580, 53535), (598, 53496), (602, 53487), (603, 53484), (604, 53481), (738, 53124), (744, 53091), (750, 53070), (777, 52977), (780, 52968), (795, 52905), (814, 52869), (815, 52866), (820, 52851), (847, 52773), (851, 52761), (858, 52740), (875, 52701), (905, 52611), (910, 52593), (912, 52587), (917, 52572), (926, 52548), (930, 52533), (931, 52530), (933, 52518), (940, 52494), (963, 52446), (972, 52422),

Gene: Chiqui\_43 Start: 31530, Stop: 29692, Start Num: 246

Candidate Starts for Chiqui\_43:

(Start: 191 @31602 has 1 MA's), (Start: 246 @31530 has 877 MA's), (280, 31479), (364, 31326), (383, 31287), (400, 31254), (425, 31197), (429, 31188), (433, 31176), (471, 31068), (479, 31044), (482, 31035), (539, 30948), (558, 30900), (585, 30840), (614, 30777), (659, 30687), (716, 30573), (743, 30450), (767, 30363), (776, 30327), (783, 30297), (815, 30186), (827, 30147), (834, 30123), (843, 30105), (844, 30102), (886, 29982), (888, 29976), (905, 29916), (945, 29784), (946, 29781), (950, 29769), (955, 29760),

Gene: ChocoMunchkin\_42 Start: 32324, Stop: 29937, Start Num: 45

Candidate Starts for ChocoMunchkin\_42:

(20, 32396), (23, 32381), (Start: 45 @32324 has 24 MA's), (48, 32315), (50, 32309), (75, 32228), (117, 32108), (138, 32057), (Start: 241 @31925 has 13 MA's), (265, 31898), (273, 31883), (295, 31835), (312, 31805), (329, 31760), (367, 31700), (374, 31682), (398, 31634), (420, 31580), (421, 31577), (430, 31559), (435, 31538), (454, 31487), (457, 31478), (458, 31475), (484, 31400), (499, 31355), (522, 31295), (526, 31280), (559, 31196), (605, 31151), (615, 31127), (633, 31121), (643, 31097), (680, 31019), (682, 31016), (683, 31013), (733, 30866), (749, 30797), (774, 30698), (783, 30662), (792, 30626), (794, 30620), (796, 30614), (797, 30608), (805, 30584), (815, 30551), (822, 30527), (836, 30482), (856, 30422), (903, 30269), (910, 30230), (911, 30227), (947, 30101), (968, 30056), (971, 30047),

Gene: Chorkpop\_60 Start: 54047, Stop: 52188, Start Num: 205

Candidate Starts for Chorkpop\_60:

(Start: 188 @54071 has 1 MA's), (Start: 205 @54047 has 304 MA's), (Start: 235 @54023 has 6 MA's), (Start: 250 @54017 has 2 MA's), (Start: 274 @53975 has 6 MA's), (283, 53954), (337, 53840), (342, 53834), (360, 53804), (391, 53744), (399, 53723), (421, 53669), (428, 53657), (434, 53639), (436, 53627), (476, 53522), (519, 53465), (538, 53429), (542, 53417), (552, 53390), (564, 53363), (570, 53345), (580, 53327), (598, 53288), (602, 53279), (603, 53276), (712, 53018), (738, 52916), (744, 52883), (750, 52862), (777, 52769), (780, 52760), (795, 52697), (814, 52661), (815, 52658), (820, 52643), (847, 52565), (851, 52553), (858, 52532), (875, 52493), (905, 52403), (910, 52385), (912, 52379), (917, 52364), (926, 52340), (930, 52325), (931, 52322), (933, 52310), (940, 52286), (963, 52238), (972, 52214),

Gene: ChrisnMich\_53 Start: 52982, Stop: 51141, Start Num: 182

Candidate Starts for ChrisnMich\_53:

(Start: 182 @52982 has 4 MA's), (Start: 197 @52964 has 27 MA's), (Start: 250 @52940 has 2 MA's), (267, 52913), (Start: 274 @52898 has 6 MA's), (283, 52877), (329, 52790), (387, 52685), (406, 52643), (434, 52577), (445, 52547), (448, 52538), (453, 52535), (454, 52532), (519, 52412), (531, 52394), (538, 52376), (542, 52364), (547, 52349), (552, 52337), (602, 52226), (603, 52223), (615, 52193), (633, 52157), (724, 51932), (725, 51929), (732, 51893), (738, 51869), (744, 51836), (775, 51728), (777, 51722), (780, 51713), (814, 51614), (815, 51611), (820, 51596), (847, 51518), (851, 51506), (858, 51485), (861, 51476), (875, 51446), (901, 51389), (905, 51356), (910, 51338), (912, 51332), (926, 51293), (931, 51275), (933, 51263), (940, 51239), (956, 51197), (963, 51191), (972, 51167),

Gene: Christoph\_38 Start: 28630, Stop: 26765, Start Num: 301

Candidate Starts for Christoph\_38:

(Start: 301 @28630 has 110 MA's), (Start: 308 @28621 has 5 MA's), (354, 28516), (358, 28507), (375, 28477), (378, 28474), (433, 28354), (435, 28342), (438, 28336), (475, 28231), (484, 28204), (531, 28063), (536, 28057), (537, 28054), (539, 28042), (548, 28015), (549, 28012), (554, 27997), (556, 27991), (559, 27985), (586, 27952), (652, 27823), (676, 27763), (776, 27448), (779, 27439), (780, 27436), (783, 27418), (794, 27376), (796, 27370), (798, 27361), (805, 27346), (822, 27289), (878, 27130), (885, 27100), (888, 27091), (903, 27031), (906, 27007), (919, 26968), (929, 26935), (932, 26923), (947, 26863),

Gene: Chunky\_59 Start: 53596, Stop: 51737, Start Num: 205

Candidate Starts for Chunky\_59:

(Start: 188 @53620 has 1 MA's), (Start: 205 @53596 has 304 MA's), (Start: 235 @53572 has 6 MA's), (Start: 250 @53566 has 2 MA's), (Start: 274 @53524 has 6 MA's), (283, 53503), (337, 53389), (342, 53383), (360, 53353), (391, 53293), (399, 53272), (421, 53218), (428, 53206), (434, 53188), (436, 53176), (476, 53071), (519, 53014), (538, 52978), (542, 52966), (552, 52939), (556, 52930), (570, 52894), (598, 52837), (602, 52828), (603, 52825), (604, 52822), (738, 52465), (744, 52432), (750, 52411), (777, 52318), (780, 52309), (795, 52246), (814, 52210), (815, 52207), (820, 52192), (847, 52114), (851, 52102), (858, 52081), (875, 52042), (905, 51952), (910, 51934), (912, 51928), (917, 51913), (926, 51889), (930, 51874), (931, 51871), (933, 51859), (940, 51835), (963, 51787), (972, 51763),

Gene: Chupacabra\_43 Start: 31120, Stop: 29285, Start Num: 246

Candidate Starts for Chupacabra\_43:

(Start: 246 @31120 has 877 MA's), (280, 31069), (364, 30916), (374, 30892), (395, 30856), (400, 30844), (422, 30793), (425, 30787), (429, 30778), (458, 30694), (471, 30658), (475, 30646), (478, 30637), (479, 30634), (539, 30541), (558, 30493), (585, 30433), (598, 30406), (610, 30382), (645, 30304), (646, 30301), (659, 30280), (662, 30274), (698, 30208), (716, 30166), (743, 30043), (753, 29995), (776, 29920), (783, 29890), (793, 29851), (815, 29779), (827, 29740), (834, 29716), (837, 29710), (843, 29698), (883, 29590), (905, 29509), (912, 29485), (932, 29422), (946, 29374), (950, 29362), (955, 29353),

Gene: Chute\_62 Start: 54608, Stop: 52749, Start Num: 205

Candidate Starts for Chute\_62:

(Start: 188 @54632 has 1 MA's), (Start: 205 @54608 has 304 MA's), (Start: 235 @54584 has 6 MA's), (Start: 250 @54578 has 2 MA's), (Start: 274 @54536 has 6 MA's), (283, 54515), (337, 54401), (342, 54395), (360, 54365), (391, 54305), (399, 54284), (421, 54230), (428, 54218), (434, 54200), (436, 54188), (476, 54083), (519, 54026), (538, 53990), (542, 53978), (551, 53954), (556, 53942), (564, 53924), (570, 53906), (580, 53888), (598, 53849), (602, 53840), (603, 53837), (604, 53834), (738, 53477), (744, 53444), (750, 53423), (777, 53330), (780, 53321), (795, 53258), (814, 53222), (815, 53219), (820, 53204), (847, 53126), (851, 53114), (858, 53093), (875, 53054), (905, 52964), (910, 52946), (912, 52940), (917, 52925), (926, 52901), (930, 52886), (931, 52883), (933, 52871), (940, 52847), (963, 52799), (972, 52775),

Gene: Ciao\_45 Start: 34751, Stop: 32964, Start Num: 246

Candidate Starts for Ciao\_45:

(Start: 246 @34751 has 877 MA's), (368, 34538), (374, 34523), (400, 34475), (416, 34445), (422, 34424), (425, 34418), (429, 34409), (470, 34292), (479, 34265), (539, 34172), (544, 34157), (556, 34124), (578, 34073), (580, 34070), (612, 34004), (627, 33974), (639, 33944), (662, 33899), (683, 33860), (743, 33680), (753, 33632), (767, 33593), (783, 33527), (812, 33455), (814, 33446), (843, 33362), (876, 33275), (917, 33149), (922, 33137), (946, 33053), (948, 33047),

Gene: Cici\_44 Start: 31537, Stop: 29708, Start Num: 246

Candidate Starts for Cici\_44:

(Start: 246 @31537 has 877 MA's), (280, 31486), (295, 31456), (383, 31294), (394, 31276), (400, 31261), (425, 31204), (429, 31195), (471, 31075), (479, 31051), (513, 31009), (539, 30958), (558, 30910), (568, 30889), (585, 30850), (607, 30805), (610, 30799), (646, 30718), (659, 30697), (683, 30652), (740, 30487), (743, 30466), (783, 30313), (793, 30274), (815, 30202), (820, 30187), (827, 30163), (832, 30145), (834, 30139), (837, 30133), (905, 29932), (946, 29797), (950, 29785), (955, 29776),

Gene: Cindaradix\_42 Start: 31162, Stop: 29333, Start Num: 246

Candidate Starts for Cindaradix\_42:

(Start: 246 @31162 has 877 MA's), (279, 31114), (364, 30958), (400, 30886), (425, 30829), (429, 30820), (471, 30700), (479, 30676), (539, 30583), (558, 30535), (568, 30514), (585, 30475), (607, 30430), (646, 30343), (652, 30334), (659, 30322), (683, 30277), (687, 30265), (743, 30091), (771, 29995), (776, 29968), (777, 29965), (783, 29938), (793, 29899), (814, 29830), (815, 29827), (820, 29812), (827, 29788), (834, 29764), (837, 29758), (905, 29557), (946, 29422), (950, 29410), (955, 29401),

Gene: Cintron\_44 Start: 31550, Stop: 29724, Start Num: 246

Candidate Starts for Cintron\_44:

(Start: 246 @31550 has 877 MA's), (279, 31502), (364, 31346), (400, 31274), (425, 31217), (429, 31208), (471, 31088), (479, 31064), (521, 31010), (539, 30971), (558, 30923), (568, 30902), (585, 30863), (607, 30818), (646, 30731), (652, 30722), (659, 30710), (683, 30665), (687, 30653), (740, 30500), (743, 30479), (776, 30356), (783, 30326), (793, 30287), (814, 30221), (815, 30218), (820, 30203), (827, 30179), (834, 30155), (905, 29948), (946, 29813), (950, 29801), (955, 29792),

Gene: Citius\_45 Start: 31591, Stop: 29765, Start Num: 246

Candidate Starts for Citius\_45:

(Start: 246 @31591 has 877 MA's), (267, 31570), (280, 31540), (295, 31510), (383, 31348), (394, 31330), (425, 31258), (429, 31249), (471, 31129), (479, 31105), (539, 31012), (558, 30964), (568, 30943), (585, 30904), (646, 30772), (659, 30751), (683, 30706), (687, 30694), (740, 30541), (743, 30520), (776, 30397), (783, 30367), (793, 30328), (814, 30262), (815, 30259), (820, 30244), (827, 30220), (834, 30196), (905, 29989), (946, 29854), (950, 29842), (955, 29833),

Gene: Clancy\_38 Start: 28664, Stop: 26799, Start Num: 301

Candidate Starts for Clancy\_38:

(Start: 238 @28751 has 3 MA's), (Start: 241 @28748 has 13 MA's), (Start: 301 @28664 has 110 MA's), (Start: 308 @28655 has 5 MA's), (354, 28550), (358, 28541), (375, 28511), (378, 28508), (433, 28388), (435, 28376), (438, 28370), (475, 28265), (484, 28238), (531, 28097), (536, 28091), (537, 28088), (539, 28076), (548, 28049), (549, 28046), (554, 28031), (556, 28025), (559, 28019), (586, 27986), (652, 27857), (676, 27797), (776, 27482), (779, 27473), (780, 27470), (783, 27452), (794, 27410), (796, 27404), (798, 27395), (805, 27380), (822, 27323), (878, 27164), (885, 27134), (888, 27125), (903, 27065), (906, 27041), (919, 27002), (929, 26969), (932, 26957), (947, 26897),

Gene: Clarenza\_44 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Clarenza\_44:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Clayda5\_41 Start: 27431, Stop: 29296, Start Num: 246

Candidate Starts for Clayda5\_41:

(Start: 243 @27428 has 7 MA's), (Start: 246 @27431 has 877 MA's), (249, 27434), (287, 27503), (434, 27785), (444, 27812), (467, 27866), (552, 28031), (585, 28106), (594, 28127), (731, 28481), (743, 28541), (755, 28592), (774, 28658), (783, 28694), (813, 28787), (874, 28958), (902, 29030), (924, 29111), (945, 29186), (946, 29189), (955, 29210), (989, 29279),

Gene: Cleo\_38 Start: 31604, Stop: 29244, Start Num: 45

Candidate Starts for Cleo\_38:

(35, 31628), (Start: 45 @31604 has 24 MA's), (50, 31589), (57, 31553), (108, 31421), (128, 31382), (138, 31358), (Start: 176 @31316 has 2 MA's), (295, 31139), (Start: 308 @31121 has 5 MA's), (329,

31064), (354, 31025), (398, 30938), (420, 30884), (430, 30863), (435, 30842), (502, 30644), (520, 30602), (526, 30584), (559, 30500), (598, 30464), (660, 30371), (682, 30326), (698, 30299), (703, 30287), (707, 30275), (741, 30134), (760, 30065), (773, 30014), (780, 29990), (783, 29972), (792, 29936), (794, 29930), (796, 29924), (797, 29918), (805, 29894), (815, 29861), (822, 29837), (836, 29792), (838, 29789), (859, 29726), (870, 29699), (893, 29618), (908, 29549), (911, 29537), (920, 29513), (939, 29438), (940, 29435), (947, 29411), (958, 29387), (968, 29366), (976, 29342), (995, 29297), (1004, 29279),

Gene: CliffHanger\_44 Start: 28741, Stop: 30612, Start Num: 246

Candidate Starts for CliffHanger\_44:

(Start: 246 @28741 has 877 MA's), (287, 28810), (Start: 301 @28831 has 110 MA's), (339, 28909), (364, 28948), (422, 29062), (429, 29077), (434, 29092), (467, 29173), (470, 29182), (547, 29323), (554, 29344), (563, 29359), (568, 29374), (585, 29413), (594, 29434), (743, 29830), (746, 29836), (764, 29911), (783, 29983), (813, 30076), (831, 30136), (844, 30169), (874, 30247), (902, 30319), (924, 30400), (926, 30406), (929, 30418), (939, 30454), (946, 30478), (968, 30523),

Gene: Clock\_37 Start: 29844, Stop: 27952, Start Num: 299

Candidate Starts for Clock\_37:

(Start: 299 @29844 has 38 MA's), (320, 29799), (344, 29745), (348, 29739), (358, 29721), (378, 29688), (379, 29685), (403, 29634), (406, 29631), (436, 29553), (438, 29550), (455, 29502), (469, 29460), (504, 29358), (517, 29325), (531, 29283), (536, 29277), (537, 29274), (539, 29262), (549, 29232), (562, 29199), (574, 29196), (585, 29175), (658, 29028), (720, 28872), (783, 28605), (792, 28569), (794, 28563), (798, 28548), (820, 28485), (822, 28476), (906, 28194), (907, 28191), (919, 28155), (947, 28050),

Gene: CloudWang3\_45 Start: 29424, Stop: 27583, Start Num: 246

Candidate Starts for CloudWang3\_45:

(Start: 220 @29454 has 1 MA's), (Start: 246 @29424 has 877 MA's), (364, 29220), (400, 29145), (402, 29142), (416, 29115), (420, 29100), (425, 29088), (444, 29037), (475, 28947), (479, 28935), (539, 28842), (552, 28803), (560, 28785), (568, 28770), (598, 28704), (613, 28671), (614, 28668), (663, 28566), (697, 28506), (726, 28422), (743, 28341), (766, 28257), (767, 28254), (771, 28245), (776, 28218), (783, 28188), (810, 28128), (820, 28089), (902, 27873), (903, 27870), (905, 27849), (946, 27714), (950, 27702), (955, 27693), (957, 27690), (1000, 27597),

Gene: CloverMinnie\_53 Start: 47593, Stop: 45776, Start Num: 241

Candidate Starts for CloverMinnie\_53:

(Start: 241 @47593 has 13 MA's), (Start: 250 @47584 has 2 MA's), (267, 47557), (273, 47545), (283, 47521), (287, 47512), (337, 47416), (366, 47374), (381, 47338), (417, 47263), (445, 47188), (476, 47110), (519, 47053), (538, 47017), (542, 47005), (551, 46981), (592, 46888), (603, 46864), (611, 46846), (724, 46573), (732, 46534), (739, 46504), (744, 46477), (775, 46369), (777, 46363), (780, 46354), (812, 46264), (814, 46255), (815, 46252), (820, 46237), (847, 46159), (851, 46147), (852, 46141), (858, 46126), (879, 46078), (901, 46030), (905, 45997), (912, 45973), (926, 45934), (930, 45919), (940, 45874), (972, 45802),

Gene: Cobra\_62 Start: 54586, Stop: 52727, Start Num: 205

Candidate Starts for Cobra\_62:

(Start: 188 @54610 has 1 MA's), (Start: 205 @54586 has 304 MA's), (Start: 235 @54562 has 6 MA's), (Start: 250 @54556 has 2 MA's), (Start: 274 @54514 has 6 MA's), (283, 54493), (337, 54379), (342, 54373), (360, 54343), (391, 54283), (399, 54262), (421, 54208), (428, 54196), (434, 54178), (436, 54166), (476, 54061), (519, 54004), (538, 53968), (551, 53932), (556, 53920), (564, 53902), (570, 53884), (580, 53866), (598, 53827), (602, 53818), (603, 53815), (604, 53812), (712, 53557), (738, 53455), (744, 53422), (750, 53401), (777, 53308), (780, 53299), (795, 53236), (814, 53200), (815, 53197), (820, 53182), (847, 53104), (851, 53092), (858, 53071), (875, 53032), (905, 52942), (910,



52924), (912, 52918), (917, 52903), (926, 52879), (930, 52864), (931, 52861), (933, 52849), (940, 52825), (963, 52777), (972, 52753),

Gene: Cocoaberry\_45 Start: 31574, Stop: 29748, Start Num: 246

Candidate Starts for Cocoaberry\_45:

(Start: 246 @31574 has 877 MA's), (267, 31553), (280, 31523), (295, 31493), (383, 31331), (394, 31313), (425, 31241), (429, 31232), (471, 31112), (479, 31088), (539, 30995), (558, 30947), (568, 30926), (585, 30887), (646, 30755), (659, 30734), (683, 30689), (687, 30677), (740, 30524), (743, 30503), (776, 30380), (783, 30350), (793, 30311), (814, 30245), (815, 30242), (820, 30227), (827, 30203), (834, 30179), (905, 29972), (946, 29837), (950, 29825), (955, 29816),

Gene: Coffee\_57 Start: 52600, Stop: 50771, Start Num: 205

Candidate Starts for Coffee\_57:

(Start: 205 @52600 has 304 MA's), (Start: 250 @52573 has 2 MA's), (269, 52543), (Start: 274 @52531 has 6 MA's), (286, 52504), (287, 52501), (293, 52492), (318, 52474), (366, 52378), (391, 52327), (400, 52303), (411, 52279), (463, 52141), (472, 52117), (476, 52105), (519, 52048), (538, 52012), (542, 52000), (551, 51976), (588, 51892), (602, 51862), (603, 51859), (615, 51829), (680, 51685), (707, 51619), (721, 51580), (724, 51568), (727, 51547), (732, 51529), (744, 51472), (763, 51415), (771, 51388), (777, 51358), (780, 51349), (795, 51283), (812, 51256), (814, 51247), (820, 51229), (827, 51205), (847, 51151), (851, 51139), (858, 51118), (888, 51049), (905, 50989), (910, 50971), (922, 50938), (926, 50926), (930, 50911), (931, 50908), (933, 50896), (940, 50872), (941, 50869), (963, 50821), (965, 50818), (972, 50797), (979, 50776),

Gene: ColaCorta\_38 Start: 28731, Stop: 26866, Start Num: 299

Candidate Starts for ColaCorta\_38:

(Start: 299 @28731 has 38 MA's), (320, 28686), (344, 28632), (379, 28572), (403, 28521), (435, 28443), (438, 28437), (454, 28392), (455, 28389), (456, 28386), (469, 28347), (489, 28287), (531, 28164), (537, 28155), (539, 28143), (543, 28131), (549, 28113), (556, 28092), (562, 28080), (658, 27909), (724, 27741), (771, 27576), (779, 27540), (783, 27519), (794, 27477), (822, 27390), (836, 27345), (872, 27246), (885, 27201), (888, 27192), (903, 27132), (906, 27108), (917, 27075), (947, 26964),

Gene: Colbert\_59 Start: 53606, Stop: 51747, Start Num: 205

Candidate Starts for Colbert\_59:

(Start: 188 @53630 has 1 MA's), (Start: 205 @53606 has 304 MA's), (Start: 235 @53582 has 6 MA's), (Start: 250 @53576 has 2 MA's), (Start: 274 @53534 has 6 MA's), (283, 53513), (337, 53399), (342, 53393), (360, 53363), (391, 53303), (399, 53282), (421, 53228), (428, 53216), (434, 53198), (436, 53186), (476, 53081), (519, 53024), (538, 52988), (542, 52976), (552, 52949), (564, 52922), (570, 52904), (580, 52886), (598, 52847), (602, 52838), (603, 52835), (604, 52832), (738, 52475), (744, 52442), (750, 52421), (777, 52328), (780, 52319), (795, 52256), (814, 52220), (815, 52217), (820, 52202), (847, 52124), (851, 52112), (858, 52091), (875, 52052), (905, 51962), (910, 51944), (912, 51938), (917, 51923), (926, 51899), (930, 51884), (931, 51881), (933, 51869), (940, 51845), (963, 51797), (972, 51773),

Gene: Colbster\_48 Start: 31856, Stop: 30042, Start Num: 246

Candidate Starts for Colbster\_48:

(Start: 246 @31856 has 877 MA's), (275, 31817), (280, 31805), (364, 31652), (371, 31637), (400, 31580), (425, 31523), (429, 31514), (444, 31472), (461, 31421), (479, 31370), (539, 31277), (556, 31229), (560, 31220), (568, 31205), (585, 31166), (598, 31139), (612, 31109), (654, 31016), (686, 30956), (697, 30941), (743, 30785), (767, 30698), (783, 30632), (793, 30593), (815, 30521), (827, 30482), (834, 30458), (843, 30440), (853, 30407), (864, 30380), (888, 30326), (905, 30266), (930, 30188), (946, 30131), (950, 30119), (955, 30110),

Gene: Coldpizza\_51 Start: 48550, Stop: 46769, Start Num: 240

Candidate Starts for Coldpizza\_51:

(172, 48637), (240, 48550), (273, 48505), (342, 48388), (391, 48304), (414, 48250), (453, 48160), (476, 48094), (519, 48037), (538, 48001), (542, 47989), (559, 47947), (603, 47848), (724, 47557), (744, 47461), (767, 47389), (775, 47356), (777, 47350), (780, 47341), (795, 47278), (815, 47239), (820, 47224), (824, 47209), (847, 47146), (851, 47134), (858, 47113), (861, 47104), (875, 47074), (898, 47029), (903, 47005), (905, 46984), (912, 46960), (926, 46921), (940, 46867), (972, 46795),

Gene: Coletti\_63 Start: 55108, Stop: 53249, Start Num: 205

Candidate Starts for Coletti\_63:

(Start: 188 @55132 has 1 MA's), (Start: 205 @55108 has 304 MA's), (Start: 235 @55084 has 6 MA's), (Start: 250 @55078 has 2 MA's), (Start: 274 @55036 has 6 MA's), (283, 55015), (337, 54901), (342, 54895), (360, 54865), (391, 54805), (399, 54784), (421, 54730), (428, 54718), (434, 54700), (436, 54688), (476, 54583), (519, 54526), (538, 54490), (542, 54478), (551, 54454), (556, 54442), (564, 54424), (570, 54406), (580, 54388), (598, 54349), (602, 54340), (603, 54337), (604, 54334), (738, 53977), (744, 53944), (750, 53923), (777, 53830), (780, 53821), (795, 53758), (814, 53722), (815, 53719), (820, 53704), (847, 53626), (851, 53614), (858, 53593), (875, 53554), (905, 53464), (910, 53446), (912, 53440), (917, 53425), (926, 53401), (930, 53386), (931, 53383), (933, 53371), (940, 53347), (963, 53299), (972, 53275),

Gene: Colin\_46 Start: 32075, Stop: 30288, Start Num: 246

Candidate Starts for Colin\_46:

(Start: 246 @32075 has 877 MA's), (366, 31868), (368, 31862), (383, 31832), (402, 31796), (416, 31769), (425, 31742), (433, 31721), (479, 31589), (539, 31496), (556, 31448), (560, 31439), (568, 31424), (598, 31358), (635, 31277), (659, 31229), (743, 31004), (755, 30953), (766, 30920), (767, 30917), (783, 30851), (793, 30812), (810, 30791), (831, 30716), (834, 30704), (880, 30590), (901, 30545), (902, 30536), (905, 30512), (924, 30455), (930, 30434), (946, 30377), (950, 30365),

Gene: Coltrane\_40 Start: 27441, Stop: 29309, Start Num: 243

Candidate Starts for Coltrane\_40:

(Start: 243 @27441 has 7 MA's), (Start: 246 @27444 has 877 MA's), (249, 27447), (287, 27516), (444, 27825), (467, 27879), (552, 28044), (585, 28119), (594, 28140), (731, 28494), (743, 28554), (755, 28605), (774, 28671), (783, 28707), (813, 28800), (874, 28971), (902, 29043), (924, 29124), (945, 29199), (946, 29202), (955, 29223), (989, 29292),

Gene: Commander\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for Commander\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: Community\_43 Start: 31334, Stop: 33199, Start Num: 245

Candidate Starts for Community\_43:

(Start: 245 @31334 has 74 MA's), (279, 31382), (386, 31571), (416, 31631), (448, 31721), (541, 31928), (580, 32027), (585, 32036), (591, 32051), (598, 32063), (635, 32141), (659, 32189), (687, 32246), (717, 32327), (743, 32447), (752, 32477), (767, 32534), (783, 32600), (813, 32693), (834, 32765), (878, 32873), (902, 32936), (946, 33095), (949, 33104), (988, 33182),

Gene: Compostia\_58 Start: 54083, Stop: 52266, Start Num: 247

Candidate Starts for Compostia\_58:

(130, 54266), (Start: 247 @54083 has 43 MA's), (267, 54053), (368, 53873), (433, 53720), (435, 53708), (448, 53678), (454, 53672), (476, 53609), (478, 53603), (519, 53552), (537, 53525), (538, 53516), (556, 53468), (603, 53363), (645, 53267), (674, 53216), (724, 53072), (732, 53033), (739, 53003), (744, 52976), (748, 52964), (775, 52868), (777, 52862), (780, 52853), (782, 52841), (807, 52769), (814, 52739), (820, 52721), (822, 52712), (847, 52643), (851, 52631), (858, 52610), (888, 52541), (898, 52526), (903, 52502), (905, 52481), (910, 52463), (912, 52457), (924, 52424), (926, 52418), (931, 52400), (933, 52388), (936, 52376), (940, 52364), (956, 52322), (972, 52292),

Gene: Conceptll\_46 Start: 35338, Stop: 33512, Start Num: 246

Candidate Starts for Conceptll\_46:

(Start: 246 @35338 has 877 MA's), (368, 35125), (400, 35062), (416, 35032), (422, 35011), (425, 35005), (429, 34996), (470, 34879), (479, 34852), (539, 34759), (544, 34744), (556, 34711), (578, 34660), (580, 34657), (612, 34591), (627, 34561), (639, 34531), (662, 34486), (683, 34447), (743, 34267), (753, 34219), (767, 34180), (783, 34114), (793, 34075), (810, 34054), (814, 34033), (820, 34015), (843, 33949), (902, 33799), (903, 33796), (909, 33760), (917, 33736), (921, 33727), (925, 33715), (946, 33640), (955, 33619),

Gene: Connomayer\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Connomayer\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Conquerage\_45 Start: 31513, Stop: 29720, Start Num: 246

Candidate Starts for Conquerage\_45:

(Start: 246 @31513 has 877 MA's), (261, 31504), (280, 31462), (346, 31342), (347, 31339), (372, 31291), (402, 31231), (417, 31201), (420, 31189), (425, 31177), (479, 31024), (539, 30931), (598, 30793), (612, 30763), (687, 30604), (697, 30592), (714, 30565), (740, 30457), (743, 30436), (780, 30301), (783, 30283), (814, 30202), (827, 30160), (853, 30085), (861, 30064), (886, 30010), (902, 29968), (930, 29866), (946, 29809), (950, 29797), (955, 29788),

Gene: Conspiracy\_38 Start: 30346, Stop: 28502, Start Num: 246

Candidate Starts for Conspiracy\_38:

(Start: 246 @30346 has 877 MA's), (280, 30295), (318, 30235), (347, 30172), (364, 30142), (366, 30139), (395, 30082), (400, 30070), (416, 30040), (425, 30013), (461, 29911), (467, 29896), (479, 29860), (523, 29800), (539, 29764), (556, 29716), (594, 29632), (598, 29626), (633, 29554), (646, 29521), (654, 29506), (662, 29494), (712, 29395), (743, 29260), (752, 29230), (753, 29212), (755, 29209), (767, 29173), (771, 29164), (774, 29143), (777, 29134), (783, 29107), (784, 29104), (810, 29047), (814, 29026), (853, 28909), (876, 28855), (880, 28846), (888, 28828), (910, 28750), (929, 28693), (939, 28657), (946, 28633), (950, 28621),

Gene: Convict\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for Convict\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (432, 28661), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (676, 28067), (702, 28013), (709, 27992), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Coog\_38 Start: 30444, Stop: 28579, Start Num: 246

Candidate Starts for Coog\_38:

(Start: 246 @30444 has 877 MA's), (280, 30393), (318, 30333), (347, 30270), (364, 30240), (366, 30237), (395, 30180), (400, 30168), (416, 30138), (425, 30111), (479, 29958), (539, 29862), (556, 29814), (594, 29730), (598, 29724), (613, 29691), (633, 29652), (646, 29619), (654, 29604), (662, 29592), (712, 29493), (743, 29358), (752, 29328), (753, 29310), (755, 29307), (767, 29271), (771, 29262), (776, 29235), (783, 29205), (793, 29166), (814, 29124), (820, 29106), (834, 29058), (853, 29007), (876, 28953), (880, 28944), (888, 28926), (905, 28866), (910, 28848), (939, 28755), (946, 28731), (950, 28719), (1000, 28614),

Gene: Cookiedough\_45 Start: 29639, Stop: 27798, Start Num: 246

Candidate Starts for Cookiedough\_45:

(Start: 246 @29639 has 877 MA's), (364, 29435), (400, 29360), (402, 29357), (416, 29330), (420, 29315), (425, 29303), (444, 29252), (475, 29162), (479, 29150), (539, 29057), (552, 29018), (560, 29000), (568, 28985), (598, 28919), (613, 28886), (614, 28883), (663, 28781), (697, 28721), (726, 28637), (743, 28556), (766, 28472), (767, 28469), (771, 28460), (776, 28433), (783, 28403), (810, 28343), (820, 28304), (902, 28088), (903, 28085), (905, 28064), (946, 27929), (950, 27917), (955, 27908), (957, 27905), (1000, 27812),

Gene: Cooper\_54 Start: 53229, Stop: 51376, Start Num: 197

Candidate Starts for Cooper\_54:

(55, 53559), (96, 53439), (Start: 182 @53247 has 4 MA's), (Start: 197 @53229 has 27 MA's), (Start: 230 @53184 has 1 MA's), (Start: 250 @53175 has 2 MA's), (267, 53148), (Start: 274 @53133 has 6 MA's), (283, 53112), (329, 53025), (337, 53007), (387, 52920), (399, 52893), (406, 52878), (434, 52812), (445, 52782), (448, 52773), (453, 52770), (454, 52767), (463, 52740), (519, 52647), (531, 52629), (538, 52611), (542, 52599), (552, 52572), (598, 52470), (602, 52461), (603, 52458), (615, 52428), (724, 52167), (725, 52164), (732, 52128), (738, 52104), (744, 52071), (775, 51963), (777, 51957), (780, 51948), (814, 51849), (820, 51831), (847, 51753), (851, 51741), (858, 51720), (861, 51711), (888, 51651), (901, 51624), (905, 51591), (910, 51573), (912, 51567), (926, 51528), (930, 51513), (931, 51510), (933, 51498), (940, 51474), (956, 51432), (963, 51426), (972, 51402), (979, 51381),

Gene: Cornbread\_62 Start: 54072, Stop: 52213, Start Num: 205

Candidate Starts for Cornbread\_62:

(Start: 188 @54096 has 1 MA's), (Start: 205 @54072 has 304 MA's), (Start: 235 @54048 has 6 MA's), (Start: 250 @54042 has 2 MA's), (Start: 274 @54000 has 6 MA's), (283, 53979), (337, 53865), (342, 53859), (360, 53829), (391, 53769), (399, 53748), (421, 53694), (428, 53682), (434, 53664), (436, 53652), (476, 53547), (519, 53490), (538, 53454), (542, 53442), (551, 53418), (556, 53406), (564, 53388), (570, 53370), (580, 53352), (598, 53313), (602, 53304), (603, 53301), (604, 53298), (738, 52941), (744, 52908), (750, 52887), (777, 52794), (780, 52785), (795, 52722), (814, 52686), (815, 52683), (820, 52668), (847, 52590), (851, 52578), (858, 52557), (875, 52518), (905, 52428), (910, 52410), (912, 52404), (917, 52389), (926, 52365), (930, 52350), (931, 52347), (933, 52335), (940, 52311), (963, 52263), (972, 52239),

Gene: Cornobble\_60 Start: 54040, Stop: 52181, Start Num: 205

Candidate Starts for Cornobble\_60:

(Start: 188 @54064 has 1 MA's), (Start: 205 @54040 has 304 MA's), (Start: 235 @54016 has 6 MA's), (Start: 250 @54010 has 2 MA's), (Start: 274 @53968 has 6 MA's), (283, 53947), (337, 53833), (342, 53827), (360, 53797), (391, 53737), (399, 53716), (421, 53662), (428, 53650), (434, 53632), (436, 53620), (476, 53515), (519, 53458), (538, 53422), (542, 53410), (551, 53386), (556, 53374), (564, 53356), (570, 53338), (580, 53320), (598, 53281), (602, 53272), (603, 53269), (604, 53266), (738, 52909), (744, 52876), (750, 52855), (777, 52762), (780, 52753), (795, 52690), (814, 52654), (815, 52651), (820, 52636), (847, 52558), (851, 52546), (858, 52525), (875, 52486), (905, 52396), (910,

52378), (912, 52372), (917, 52357), (926, 52333), (930, 52318), (931, 52315), (933, 52303), (940, 52279), (963, 52231), (972, 52207),

Gene: Corofin\_58 Start: 53707, Stop: 51890, Start Num: 247

Candidate Starts for Corofin\_58:

(130, 53890), (Start: 247 @53707 has 43 MA's), (267, 53677), (368, 53497), (433, 53344), (435, 53332), (448, 53302), (454, 53296), (476, 53233), (478, 53227), (519, 53176), (538, 53140), (556, 53092), (603, 52987), (645, 52891), (674, 52840), (724, 52696), (732, 52657), (739, 52627), (744, 52600), (748, 52588), (775, 52492), (777, 52486), (780, 52477), (782, 52465), (807, 52393), (814, 52363), (820, 52345), (822, 52336), (847, 52267), (851, 52255), (858, 52234), (888, 52165), (898, 52150), (903, 52126), (905, 52105), (910, 52087), (912, 52081), (924, 52048), (926, 52042), (931, 52024), (933, 52012), (936, 52000), (940, 51988), (956, 51946), (972, 51916),

Gene: Corvo\_45 Start: 35201, Stop: 33375, Start Num: 246

Candidate Starts for Corvo\_45:

(Start: 246 @35201 has 877 MA's), (368, 34988), (374, 34973), (416, 34895), (422, 34874), (425, 34868), (429, 34859), (470, 34742), (479, 34715), (539, 34622), (544, 34607), (551, 34586), (556, 34574), (578, 34523), (580, 34520), (612, 34454), (627, 34424), (639, 34394), (662, 34349), (683, 34310), (743, 34130), (753, 34082), (767, 34043), (783, 33977), (793, 33938), (810, 33917), (814, 33896), (820, 33878), (843, 33812), (902, 33662), (903, 33659), (909, 33623), (917, 33599), (921, 33590), (925, 33578), (946, 33503), (955, 33482),

Gene: CosmicSans\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for CosmicSans\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (663, 27261), (683, 27225), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930, 26475), (946, 26418), (950, 26406), (955, 26397), (969, 26367), (978, 26349),

Gene: Cosmolli16\_61 Start: 54750, Stop: 52891, Start Num: 205

Candidate Starts for Cosmolli16\_61:

(Start: 188 @54774 has 1 MA's), (Start: 205 @54750 has 304 MA's), (Start: 235 @54726 has 6 MA's), (Start: 250 @54720 has 2 MA's), (Start: 274 @54678 has 6 MA's), (283, 54657), (337, 54543), (342, 54537), (360, 54507), (391, 54447), (399, 54426), (421, 54372), (428, 54360), (434, 54342), (436, 54330), (476, 54225), (519, 54168), (538, 54132), (542, 54120), (552, 54093), (570, 54048), (580, 54030), (598, 53991), (602, 53982), (603, 53979), (604, 53976), (738, 53619), (744, 53586), (750, 53565), (777, 53472), (780, 53463), (795, 53400), (814, 53364), (815, 53361), (820, 53346), (847, 53268), (851, 53256), (858, 53235), (875, 53196), (905, 53106), (910, 53088), (912, 53082), (917, 53067), (926, 53043), (930, 53028), (931, 53025), (933, 53013), (940, 52989), (963, 52941), (972, 52917),

Gene: Cozz\_41 Start: 32142, Stop: 29749, Start Num: 36

Candidate Starts for Cozz\_41:

(Start: 36 @32142 has 16 MA's), (47, 32136), (Start: 59 @32088 has 1 MA's), (75, 32046), (84, 32022), (128, 31896), (138, 31872), (179, 31827), (Start: 215 @31776 has 2 MA's), (223, 31761), (Start: 241 @31740 has 13 MA's), (275, 31692), (289, 31659), (295, 31650), (329, 31575), (335, 31563), (374, 31494), (391, 31467), (394, 31461), (398, 31446), (420, 31392), (421, 31389), (430, 31371), (435, 31350), (457, 31290), (499, 31167), (500, 31161), (526, 31092), (539, 31050), (605, 30963), (615, 30939), (633, 30933), (643, 30909), (647, 30900), (654, 30885), (660, 30873), (680, 30831), (682, 30828), (683, 30825), (703, 30789), (733, 30678), (749, 30609), (750, 30603), (760, 30567), (774, 30510), (783, 30474), (792, 30438), (794, 30432), (796, 30426), (797, 30420), (815, 30363), (822,

30339), (836, 30294), (947, 29913), (968, 29868), (971, 29859), (995, 29799), (1004, 29781),

Gene: Craff\_63 Start: 54995, Stop: 53136, Start Num: 205

Candidate Starts for Craff\_63:

(Start: 188 @55019 has 1 MA's), (Start: 205 @54995 has 304 MA's), (Start: 235 @54971 has 6 MA's), (Start: 250 @54965 has 2 MA's), (Start: 274 @54923 has 6 MA's), (283, 54902), (337, 54788), (342, 54782), (360, 54752), (391, 54692), (399, 54671), (421, 54617), (428, 54605), (434, 54587), (436, 54575), (476, 54470), (519, 54413), (538, 54377), (542, 54365), (552, 54338), (564, 54311), (570, 54293), (580, 54275), (598, 54236), (602, 54227), (603, 54224), (738, 53864), (744, 53831), (750, 53810), (777, 53717), (780, 53708), (795, 53645), (815, 53606), (820, 53591), (847, 53513), (851, 53501), (858, 53480), (875, 53441), (903, 53372), (905, 53351), (910, 53333), (912, 53327), (917, 53312), (926, 53288), (930, 53273), (931, 53270), (933, 53258), (940, 53234), (963, 53186), (972, 53162),

Gene: Crewmate\_46 Start: 30025, Stop: 31890, Start Num: 245

Candidate Starts for Crewmate\_46:

(Start: 245 @30025 has 74 MA's), (279, 30073), (368, 30238), (382, 30256), (416, 30322), (422, 30343), (544, 30628), (585, 30727), (591, 30742), (598, 30754), (635, 30832), (659, 30880), (687, 30937), (717, 31018), (743, 31138), (767, 31225), (781, 31282), (783, 31291), (878, 31564), (946, 31786),

Gene: Crispicous1\_43 Start: 33950, Stop: 32124, Start Num: 246

Candidate Starts for Crispicous1\_43:

(Start: 246 @33950 has 877 MA's), (368, 33737), (374, 33722), (400, 33674), (416, 33644), (422, 33623), (425, 33617), (429, 33608), (470, 33491), (479, 33464), (539, 33371), (544, 33356), (556, 33323), (578, 33272), (580, 33269), (612, 33203), (627, 33173), (639, 33143), (662, 33098), (683, 33059), (743, 32879), (753, 32831), (767, 32792), (783, 32726), (793, 32687), (810, 32666), (814, 32645), (820, 32627), (843, 32561), (902, 32411), (903, 32408), (909, 32372), (917, 32348), (921, 32339), (925, 32327), (932, 32300), (946, 32252), (955, 32231),

Gene: CroZenni\_42 Start: 29399, Stop: 31273, Start Num: 246

Candidate Starts for CroZenni\_42:

(Start: 246 @29399 has 877 MA's), (287, 29468), (Start: 301 @29489 has 110 MA's), (371, 29621), (429, 29735), (434, 29750), (444, 29777), (585, 30071), (696, 30305), (731, 30428), (743, 30488), (746, 30494), (755, 30539), (762, 30554), (764, 30569), (774, 30605), (783, 30641), (813, 30734), (844, 30827), (874, 30905), (902, 30977), (909, 31016), (924, 31058), (929, 31076), (939, 31112), (946, 31136), (955, 31157),

Gene: Crownjwl\_60 Start: 54069, Stop: 52210, Start Num: 205

Candidate Starts for Crownjwl\_60:

(Start: 188 @54093 has 1 MA's), (Start: 205 @54069 has 304 MA's), (Start: 235 @54045 has 6 MA's), (Start: 250 @54039 has 2 MA's), (Start: 274 @53997 has 6 MA's), (283, 53976), (337, 53862), (342, 53856), (360, 53826), (391, 53766), (399, 53745), (421, 53691), (428, 53679), (434, 53661), (436, 53649), (476, 53544), (519, 53487), (538, 53451), (542, 53439), (551, 53415), (556, 53403), (564, 53385), (570, 53367), (598, 53310), (602, 53301), (603, 53298), (604, 53295), (712, 53040), (738, 52938), (744, 52905), (750, 52884), (777, 52791), (780, 52782), (795, 52719), (814, 52683), (815, 52680), (820, 52665), (847, 52587), (851, 52575), (858, 52554), (875, 52515), (905, 52425), (910, 52407), (912, 52401), (917, 52386), (926, 52362), (930, 52347), (931, 52344), (933, 52332), (940, 52308), (963, 52260), (972, 52236),

Gene: Crucio\_44 Start: 31285, Stop: 29498, Start Num: 246

Candidate Starts for Crucio\_44:

(102, 31540), (Start: 246 @31285 has 877 MA's), (364, 31081), (366, 31078), (368, 31072), (375, 31057), (383, 31042), (400, 31009), (402, 31006), (416, 30979), (425, 30952), (433, 30931), (444, 30901), (479, 30799), (539, 30706), (556, 30658), (560, 30649), (568, 30634), (598, 30568), (635, 30487), (659, 30439), (662, 30433), (697, 30370), (726, 30295), (743, 30214), (755, 30163), (766, 30130), (767, 30127), (783, 30061), (793, 30022), (810, 30001), (831, 29926), (837, 29908), (853, 29863), (864, 29836), (880, 29800), (886, 29788), (888, 29782), (902, 29746), (905, 29722), (930, 29644), (946, 29587), (950, 29575), (955, 29566),

Gene: Cuco\_38 Start: 30397, Stop: 28532, Start Num: 246

Candidate Starts for Cuco\_38:

(Start: 246 @30397 has 877 MA's), (280, 30346), (318, 30286), (347, 30223), (364, 30193), (366, 30190), (395, 30133), (400, 30121), (416, 30091), (425, 30064), (479, 29911), (539, 29815), (556, 29767), (594, 29683), (598, 29677), (613, 29644), (633, 29605), (654, 29557), (662, 29545), (712, 29446), (743, 29311), (752, 29281), (753, 29263), (762, 29245), (767, 29224), (771, 29215), (776, 29188), (783, 29158), (793, 29119), (814, 29077), (820, 29059), (834, 29011), (853, 28960), (876, 28906), (880, 28897), (888, 28879), (905, 28819), (910, 28801), (939, 28708), (946, 28684), (950, 28672), (1000, 28567),

Gene: Cueyllyss\_46 Start: 36237, Stop: 34411, Start Num: 246

Candidate Starts for Cueyllyss\_46:

(Start: 246 @36237 has 877 MA's), (368, 36024), (374, 36009), (416, 35931), (422, 35910), (425, 35904), (429, 35895), (470, 35778), (479, 35751), (539, 35658), (544, 35643), (578, 35559), (580, 35556), (612, 35490), (627, 35460), (639, 35430), (662, 35385), (683, 35346), (743, 35166), (752, 35136), (753, 35118), (755, 35115), (767, 35079), (783, 35013), (814, 34932), (815, 34929), (843, 34848), (902, 34698), (903, 34695), (909, 34659), (917, 34635), (921, 34626), (925, 34614), (930, 34596), (932, 34587), (946, 34539), (955, 34518),

Gene: Cullens\_48 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for Cullens\_48:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (686, 30952), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827, 30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: CupcakePrincess\_43 Start: 29585, Stop: 31459, Start Num: 246

Candidate Starts for CupcakePrincess\_43:

(Start: 243 @29582 has 7 MA's), (Start: 246 @29585 has 877 MA's), (287, 29654), (Start: 301 @29675 has 110 MA's), (400, 29855), (429, 29921), (444, 29963), (585, 30257), (646, 30392), (696, 30491), (731, 30614), (743, 30674), (746, 30680), (755, 30725), (764, 30755), (774, 30791), (783, 30827), (813, 30920), (844, 31013), (874, 31091), (902, 31163), (909, 31202), (924, 31244), (929, 31262), (946, 31322), (955, 31343),

Gene: Cyan\_41 Start: 29677, Stop: 31542, Start Num: 245

Candidate Starts for Cyan\_41:

(Start: 245 @29677 has 74 MA's), (279, 29725), (416, 29974), (448, 30064), (541, 30271), (544, 30280), (580, 30370), (585, 30379), (591, 30394), (613, 30439), (635, 30484), (659, 30532), (687, 30589), (717, 30670), (737, 30757), (743, 30790), (752, 30820), (767, 30877), (783, 30943), (813, 31036), (834, 31108), (878, 31216), (902, 31279), (905, 31303), (939, 31414), (946, 31438), (949, 31447),

Gene: D29\_44 Start: 31153, Stop: 29330, Start Num: 246

Candidate Starts for D29\_44:

(Start: 246 @31153 has 877 MA's), (364, 30949), (374, 30925), (383, 30907), (394, 30889), (400, 30874), (402, 30871), (416, 30844), (425, 30817), (444, 30766), (479, 30664), (539, 30571), (556, 30523), (560, 30514), (567, 30502), (568, 30499), (598, 30433), (627, 30373), (683, 30259), (697, 30235), (715, 30196), (743, 30070), (755, 30019), (767, 29983), (783, 29917), (793, 29878), (815, 29809), (827, 29770), (844, 29725), (853, 29695), (880, 29632), (888, 29614), (905, 29554), (946, 29419), (950, 29407), (955, 29398),

Gene: D32\_47 Start: 31153, Stop: 29330, Start Num: 246

Candidate Starts for D32\_47:

(Start: 246 @31153 has 877 MA's), (364, 30949), (374, 30925), (383, 30907), (394, 30889), (400, 30874), (402, 30871), (416, 30844), (425, 30817), (444, 30766), (479, 30664), (539, 30571), (556, 30523), (560, 30514), (567, 30502), (568, 30499), (598, 30433), (627, 30373), (683, 30259), (697, 30235), (715, 30196), (743, 30070), (755, 30019), (767, 29983), (783, 29917), (793, 29878), (815, 29809), (827, 29770), (844, 29725), (853, 29695), (880, 29632), (888, 29614), (905, 29554), (946, 29419), (950, 29407), (955, 29398),

Gene: DBQu4n\_47 Start: 31153, Stop: 29330, Start Num: 246

Candidate Starts for DBQu4n\_47:

(Start: 246 @31153 has 877 MA's), (364, 30949), (374, 30925), (383, 30907), (394, 30889), (400, 30874), (402, 30871), (416, 30844), (425, 30817), (444, 30766), (479, 30664), (539, 30571), (556, 30523), (560, 30514), (567, 30502), (568, 30499), (598, 30433), (627, 30373), (683, 30259), (697, 30235), (715, 30196), (743, 30070), (755, 30019), (767, 29983), (783, 29917), (793, 29878), (815, 29809), (827, 29770), (844, 29725), (853, 29695), (880, 29632), (886, 29620), (888, 29614), (905, 29554), (946, 29419), (950, 29407), (955, 29398),

Gene: DD5\_44 Start: 35207, Stop: 33381, Start Num: 246

Candidate Starts for DD5\_44:

(Start: 246 @35207 has 877 MA's), (368, 34994), (400, 34931), (416, 34901), (425, 34874), (429, 34865), (470, 34748), (479, 34721), (539, 34628), (544, 34613), (578, 34529), (580, 34526), (612, 34460), (627, 34430), (639, 34400), (662, 34355), (683, 34316), (743, 34136), (753, 34088), (767, 34049), (783, 33983), (793, 33944), (810, 33923), (814, 33902), (820, 33884), (843, 33818), (902, 33668), (903, 33665), (909, 33629), (921, 33596), (925, 33584), (946, 33509), (955, 33488),

Gene: DaHudson\_48 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for DaHudson\_48:

(154, 31971), (Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: DaVinci\_45 Start: 29628, Stop: 27787, Start Num: 246

Candidate Starts for DaVinci\_45:

(Start: 246 @29628 has 877 MA's), (364, 29424), (400, 29349), (402, 29346), (416, 29319), (420, 29304), (425, 29292), (444, 29241), (475, 29151), (479, 29139), (539, 29046), (552, 29007), (560, 28989), (568, 28974), (598, 28908), (613, 28875), (614, 28872), (663, 28770), (697, 28710), (726, 28626), (743, 28545), (766, 28461), (767, 28458), (771, 28449), (776, 28422), (783, 28392), (810, 28332), (820, 28293), (902, 28077), (903, 28074), (905, 28053), (946, 27918), (950, 27906), (955, 27897), (957, 27894), (1000, 27801),

Gene: DaddyDaniels\_62 Start: 54528, Stop: 52669, Start Num: 205



Candidate Starts for DaddyDaniels\_62:

(Start: 188 @54552 has 1 MA's), (Start: 205 @54528 has 304 MA's), (Start: 235 @54504 has 6 MA's), (Start: 250 @54498 has 2 MA's), (Start: 274 @54456 has 6 MA's), (283, 54435), (337, 54321), (342, 54315), (360, 54285), (391, 54225), (399, 54204), (421, 54150), (428, 54138), (434, 54120), (436, 54108), (476, 54003), (519, 53946), (538, 53910), (542, 53898), (552, 53871), (564, 53844), (570, 53826), (580, 53808), (598, 53769), (602, 53760), (603, 53757), (712, 53499), (738, 53397), (744, 53364), (750, 53343), (777, 53250), (780, 53241), (795, 53178), (814, 53142), (815, 53139), (820, 53124), (847, 53046), (851, 53034), (858, 53013), (875, 52974), (905, 52884), (910, 52866), (912, 52860), (917, 52845), (926, 52821), (930, 52806), (931, 52803), (933, 52791), (940, 52767), (963, 52719), (972, 52695),

Gene: Daffy\_60 Start: 54033, Stop: 52174, Start Num: 205

Candidate Starts for Daffy\_60:

(Start: 188 @54057 has 1 MA's), (Start: 205 @54033 has 304 MA's), (Start: 235 @54009 has 6 MA's), (Start: 250 @54003 has 2 MA's), (Start: 274 @53961 has 6 MA's), (283, 53940), (337, 53826), (342, 53820), (360, 53790), (391, 53730), (399, 53709), (421, 53655), (428, 53643), (434, 53625), (436, 53613), (476, 53508), (519, 53451), (538, 53415), (542, 53403), (552, 53376), (570, 53331), (598, 53274), (602, 53265), (603, 53262), (738, 52902), (744, 52869), (750, 52848), (777, 52755), (780, 52746), (795, 52683), (814, 52647), (815, 52644), (820, 52629), (847, 52551), (851, 52539), (858, 52518), (875, 52479), (905, 52389), (910, 52371), (912, 52365), (917, 52350), (926, 52326), (930, 52311), (931, 52308), (933, 52296), (940, 52272), (963, 52224), (972, 52200),

Gene: Daishi\_47 Start: 30725, Stop: 28911, Start Num: 246

Candidate Starts for Daishi\_47:

(Start: 246 @30725 has 877 MA's), (275, 30686), (280, 30674), (364, 30521), (371, 30506), (400, 30449), (425, 30392), (429, 30383), (444, 30341), (461, 30290), (479, 30239), (521, 30185), (539, 30146), (556, 30098), (568, 30074), (585, 30035), (598, 30008), (612, 29978), (654, 29885), (662, 29873), (686, 29825), (697, 29810), (743, 29654), (755, 29603), (766, 29570), (767, 29567), (783, 29501), (793, 29462), (815, 29390), (827, 29351), (834, 29327), (843, 29309), (853, 29276), (888, 29195), (905, 29135), (932, 29048), (946, 29000), (950, 28988), (955, 28979), (957, 28976),

Gene: Daisy\_57 Start: 53240, Stop: 51423, Start Num: 247

Candidate Starts for Daisy\_57:

(130, 53423), (Start: 247 @53240 has 43 MA's), (267, 53210), (368, 53030), (433, 52877), (435, 52865), (448, 52835), (454, 52829), (476, 52766), (478, 52760), (519, 52709), (537, 52682), (538, 52673), (556, 52625), (603, 52520), (645, 52424), (674, 52373), (724, 52229), (732, 52190), (739, 52160), (744, 52133), (748, 52121), (775, 52025), (777, 52019), (780, 52010), (782, 51998), (807, 51926), (814, 51896), (820, 51878), (822, 51869), (847, 51800), (851, 51788), (858, 51767), (888, 51698), (898, 51683), (903, 51659), (905, 51638), (912, 51614), (924, 51581), (926, 51575), (931, 51557), (933, 51545), (936, 51533), (940, 51521), (956, 51479), (972, 51449),

Gene: Daka\_63 Start: 54549, Stop: 52690, Start Num: 205

Candidate Starts for Daka\_63:

(Start: 188 @54573 has 1 MA's), (Start: 205 @54549 has 304 MA's), (Start: 235 @54525 has 6 MA's), (Start: 250 @54519 has 2 MA's), (Start: 274 @54477 has 6 MA's), (283, 54456), (337, 54342), (342, 54336), (360, 54306), (391, 54246), (399, 54225), (421, 54171), (428, 54159), (434, 54141), (436, 54129), (476, 54024), (519, 53967), (538, 53931), (542, 53919), (552, 53892), (570, 53847), (598, 53790), (602, 53781), (603, 53778), (604, 53775), (738, 53418), (744, 53385), (750, 53364), (777, 53271), (780, 53262), (795, 53199), (814, 53163), (815, 53160), (820, 53145), (847, 53067), (851, 53055), (858, 53034), (875, 52995), (905, 52905), (910, 52887), (912, 52881), (917, 52866), (926, 52842), (930, 52827), (931, 52824), (933, 52812), (940, 52788), (946, 52767), (963, 52740), (972, 52716), (977, 52701),

Gene: Dalmatian\_45 Start: 31678, Stop: 29891, Start Num: 246

Candidate Starts for Dalmatian\_45:

(Start: 246 @31678 has 877 MA's), (364, 31474), (366, 31471), (368, 31465), (375, 31450), (383, 31435), (400, 31402), (402, 31399), (416, 31372), (425, 31345), (433, 31324), (479, 31192), (539, 31099), (551, 31063), (556, 31051), (560, 31042), (568, 31027), (598, 30961), (635, 30880), (659, 30832), (662, 30826), (697, 30763), (743, 30607), (755, 30556), (766, 30523), (767, 30520), (783, 30454), (793, 30415), (810, 30394), (831, 30319), (834, 30307), (880, 30193), (888, 30175), (902, 30139), (905, 30115), (930, 30037), (946, 29980), (950, 29968), (955, 29959),

Gene: Danforth\_42 Start: 30571, Stop: 28727, Start Num: 246

Candidate Starts for Danforth\_42:

(139, 30736), (Start: 246 @30571 has 877 MA's), (280, 30520), (347, 30397), (364, 30367), (383, 30328), (400, 30295), (416, 30265), (422, 30244), (425, 30238), (429, 30229), (461, 30136), (471, 30109), (479, 30085), (539, 29989), (543, 29977), (548, 29962), (556, 29941), (560, 29932), (585, 29878), (598, 29851), (620, 29803), (646, 29746), (662, 29719), (687, 29668), (698, 29653), (740, 29506), (743, 29485), (752, 29455), (753, 29437), (755, 29434), (762, 29419), (767, 29398), (771, 29389), (776, 29362), (780, 29350), (783, 29332), (814, 29251), (818, 29239), (834, 29185), (849, 29149), (876, 29080), (886, 29059), (888, 29053), (903, 29014), (905, 28993), (910, 28975), (946, 28858), (950, 28846),

Gene: Darrell\_46 Start: 31850, Stop: 30057, Start Num: 246

Candidate Starts for Darrell\_46:

(Start: 246 @31850 has 877 MA's), (261, 31841), (280, 31799), (318, 31739), (325, 31712), (346, 31679), (347, 31676), (364, 31646), (368, 31637), (373, 31628), (402, 31568), (417, 31538), (420, 31526), (425, 31514), (444, 31463), (479, 31361), (539, 31268), (594, 31136), (612, 31100), (697, 30929), (714, 30902), (716, 30896), (743, 30773), (771, 30677), (776, 30650), (783, 30620), (793, 30581), (812, 30548), (814, 30539), (827, 30497), (853, 30422), (861, 30401), (902, 30305), (924, 30224), (946, 30146), (950, 30134), (955, 30125),

Gene: DARTHPhader\_42 Start: 32266, Stop: 30422, Start Num: 246

Candidate Starts for DARTHPhader\_42:

(143, 32410), (158, 32383), (Start: 246 @32266 has 877 MA's), (318, 32155), (347, 32092), (364, 32062), (368, 32053), (383, 32020), (400, 31987), (416, 31957), (425, 31930), (433, 31909), (479, 31777), (539, 31684), (560, 31627), (568, 31612), (598, 31546), (620, 31498), (652, 31429), (697, 31348), (715, 31306), (726, 31261), (730, 31243), (743, 31180), (755, 31129), (767, 31093), (783, 31027), (793, 30988), (810, 30967), (814, 30946), (880, 30766), (902, 30712), (903, 30709), (905, 30688), (924, 30631), (930, 30610), (946, 30553), (950, 30541), (978, 30484),

Gene: Dati\_60 Start: 54564, Stop: 52705, Start Num: 205

Candidate Starts for Dati\_60:

(Start: 188 @54588 has 1 MA's), (Start: 205 @54564 has 304 MA's), (Start: 235 @54540 has 6 MA's), (Start: 250 @54534 has 2 MA's), (Start: 274 @54492 has 6 MA's), (283, 54471), (337, 54357), (342, 54351), (360, 54321), (391, 54261), (399, 54240), (421, 54186), (428, 54174), (434, 54156), (436, 54144), (476, 54039), (519, 53982), (538, 53946), (542, 53934), (551, 53910), (556, 53898), (564, 53880), (570, 53862), (580, 53844), (598, 53805), (602, 53796), (603, 53793), (604, 53790), (738, 53433), (744, 53400), (750, 53379), (777, 53286), (780, 53277), (795, 53214), (814, 53178), (815, 53175), (820, 53160), (847, 53082), (851, 53070), (858, 53049), (875, 53010), (905, 52920), (910, 52902), (912, 52896), (917, 52881), (926, 52857), (930, 52842), (931, 52839), (933, 52827), (940, 52803), (963, 52755), (972, 52731),

Gene: Datway\_44 Start: 31508, Stop: 29679, Start Num: 246

Candidate Starts for Datway\_44:

(Start: 246 @31508 has 877 MA's), (280, 31457), (295, 31427), (383, 31265), (394, 31247), (400, 31232), (425, 31175), (429, 31166), (471, 31046), (479, 31022), (513, 30980), (539, 30929), (558, 30881), (568, 30860), (585, 30821), (607, 30776), (610, 30770), (646, 30689), (659, 30668), (683, 30623), (740, 30458), (743, 30437), (783, 30284), (793, 30245), (815, 30173), (820, 30158), (827, 30134), (832, 30116), (834, 30110), (837, 30104), (905, 29903), (946, 29768), (950, 29756), (955, 29747),

Gene: Dave\_39 Start: 28922, Stop: 27057, Start Num: 301

Candidate Starts for Dave\_39:

(Start: 238 @29009 has 3 MA's), (Start: 241 @29006 has 13 MA's), (Start: 301 @28922 has 110 MA's), (Start: 308 @28913 has 5 MA's), (354, 28808), (358, 28799), (375, 28769), (378, 28766), (433, 28646), (435, 28634), (438, 28628), (475, 28523), (484, 28496), (531, 28355), (536, 28349), (537, 28346), (539, 28334), (548, 28307), (549, 28304), (554, 28289), (556, 28283), (559, 28277), (586, 28244), (652, 28115), (676, 28055), (733, 27890), (776, 27740), (779, 27731), (780, 27728), (783, 27710), (794, 27668), (796, 27662), (798, 27653), (805, 27638), (822, 27581), (878, 27422), (885, 27392), (888, 27383), (903, 27323), (906, 27299), (919, 27260), (929, 27227), (932, 27215), (947, 27155),

Gene: Deano\_44 Start: 31578, Stop: 29752, Start Num: 246

Candidate Starts for Deano\_44:

(Start: 246 @31578 has 877 MA's), (267, 31557), (280, 31527), (295, 31497), (383, 31335), (394, 31317), (425, 31245), (429, 31236), (471, 31116), (479, 31092), (539, 30999), (558, 30951), (568, 30930), (585, 30891), (646, 30759), (659, 30738), (683, 30693), (687, 30681), (740, 30528), (743, 30507), (776, 30384), (783, 30354), (793, 30315), (814, 30249), (815, 30246), (820, 30231), (827, 30207), (834, 30183), (905, 29976), (946, 29841), (950, 29829), (955, 29820),

Gene: Deenasa\_58 Start: 54545, Stop: 52728, Start Num: 247

Candidate Starts for Deenasa\_58:

(130, 54728), (Start: 247 @54545 has 43 MA's), (267, 54515), (368, 54335), (433, 54182), (435, 54170), (448, 54140), (454, 54134), (476, 54071), (478, 54065), (519, 54014), (537, 53987), (538, 53978), (556, 53930), (603, 53825), (645, 53729), (674, 53678), (724, 53534), (732, 53495), (739, 53465), (744, 53438), (748, 53426), (775, 53330), (777, 53324), (780, 53315), (782, 53303), (807, 53231), (814, 53201), (820, 53183), (822, 53174), (847, 53105), (851, 53093), (858, 53072), (888, 53003), (898, 52988), (903, 52964), (910, 52925), (912, 52919), (926, 52880), (931, 52862), (933, 52850), (940, 52826), (972, 52754),

Gene: DekHockey33\_47 Start: 30182, Stop: 28392, Start Num: 246

Candidate Starts for DekHockey33\_47:

(Start: 246 @30182 has 877 MA's), (347, 30008), (400, 29903), (402, 29900), (416, 29873), (425, 29846), (444, 29795), (479, 29693), (539, 29600), (554, 29555), (556, 29552), (560, 29543), (635, 29381), (646, 29354), (659, 29333), (662, 29327), (717, 29228), (726, 29189), (738, 29138), (743, 29108), (755, 29057), (766, 29024), (774, 28991), (776, 28985), (783, 28955), (810, 28895), (814, 28874), (827, 28832), (835, 28805), (843, 28790), (876, 28703), (902, 28640), (903, 28637), (946, 28481), (950, 28469), (957, 28457),

Gene: DelRivs\_59 Start: 54011, Stop: 52152, Start Num: 205

Candidate Starts for DelRivs\_59:

(Start: 188 @54035 has 1 MA's), (Start: 205 @54011 has 304 MA's), (Start: 235 @53987 has 6 MA's), (Start: 250 @53981 has 2 MA's), (Start: 274 @53939 has 6 MA's), (283, 53918), (337, 53804), (342, 53798), (360, 53768), (391, 53708), (399, 53687), (421, 53633), (428, 53621), (434, 53603), (436, 53591), (476, 53486), (519, 53429), (538, 53393), (542, 53381), (551, 53357), (556, 53345), (564, 53327), (570, 53309), (580, 53291), (598, 53252), (602, 53243), (603, 53240), (604, 53237), (738, 52880), (744, 52847), (750, 52826), (777, 52733), (780, 52724), (795, 52661), (814, 52625), (815,

52622), (820, 52607), (847, 52529), (851, 52517), (858, 52496), (875, 52457), (905, 52367), (910, 52349), (912, 52343), (917, 52328), (926, 52304), (930, 52289), (931, 52286), (933, 52274), (940, 52250), (963, 52202), (972, 52178),

Gene: Deloris\_43 Start: 30897, Stop: 29110, Start Num: 246

Candidate Starts for Deloris\_43:

(Start: 246 @30897 has 877 MA's), (364, 30693), (366, 30690), (368, 30684), (375, 30669), (383, 30654), (400, 30621), (402, 30618), (416, 30591), (425, 30564), (433, 30543), (444, 30513), (479, 30411), (539, 30318), (542, 30309), (556, 30270), (560, 30261), (568, 30246), (598, 30180), (635, 30099), (659, 30051), (662, 30045), (726, 29907), (743, 29826), (755, 29775), (766, 29742), (767, 29739), (783, 29673), (793, 29634), (810, 29613), (831, 29538), (837, 29520), (853, 29475), (864, 29448), (880, 29412), (888, 29394), (902, 29358), (905, 29334), (924, 29277), (946, 29199), (950, 29187),

Gene: Delphidian\_39 Start: 28933, Stop: 27068, Start Num: 301

Candidate Starts for Delphidian\_39:

(Start: 238 @29020 has 3 MA's), (Start: 301 @28933 has 110 MA's), (Start: 308 @28924 has 5 MA's), (354, 28819), (358, 28810), (375, 28780), (378, 28777), (433, 28657), (435, 28645), (438, 28639), (475, 28534), (484, 28507), (531, 28366), (536, 28360), (537, 28357), (539, 28345), (548, 28318), (549, 28315), (554, 28300), (556, 28294), (559, 28288), (586, 28255), (652, 28126), (676, 28066), (776, 27751), (779, 27742), (780, 27739), (783, 27721), (794, 27679), (796, 27673), (798, 27664), (805, 27649), (822, 27592), (878, 27433), (885, 27403), (888, 27394), (903, 27334), (906, 27310), (919, 27271), (929, 27238), (932, 27226), (947, 27166),

Gene: Den3\_39 Start: 28939, Stop: 27074, Start Num: 301

Candidate Starts for Den3\_39:

(Start: 238 @29026 has 3 MA's), (Start: 241 @29023 has 13 MA's), (288, 28954), (Start: 301 @28939 has 110 MA's), (Start: 308 @28930 has 5 MA's), (354, 28825), (358, 28816), (375, 28786), (378, 28783), (433, 28663), (435, 28651), (438, 28645), (475, 28540), (484, 28513), (531, 28372), (537, 28363), (539, 28351), (548, 28324), (549, 28321), (554, 28306), (556, 28300), (559, 28294), (586, 28261), (676, 28072), (776, 27757), (779, 27748), (780, 27745), (783, 27727), (794, 27685), (796, 27679), (805, 27655), (822, 27598), (878, 27439), (885, 27409), (888, 27400), (903, 27340), (906, 27316), (919, 27277), (929, 27244), (932, 27232), (947, 27172),

Gene: Derpp\_60 Start: 54131, Stop: 52272, Start Num: 205

Candidate Starts for Derpp\_60:

(Start: 188 @54155 has 1 MA's), (Start: 205 @54131 has 304 MA's), (Start: 235 @54107 has 6 MA's), (Start: 250 @54101 has 2 MA's), (Start: 274 @54059 has 6 MA's), (283, 54038), (337, 53924), (342, 53918), (360, 53888), (391, 53828), (399, 53807), (421, 53753), (428, 53741), (434, 53723), (436, 53711), (476, 53606), (519, 53549), (538, 53513), (542, 53501), (551, 53477), (556, 53465), (564, 53447), (570, 53429), (580, 53411), (598, 53372), (602, 53363), (603, 53360), (604, 53357), (712, 53102), (738, 53000), (744, 52967), (750, 52946), (777, 52853), (780, 52844), (795, 52781), (814, 52745), (815, 52742), (820, 52727), (847, 52649), (851, 52637), (858, 52616), (875, 52577), (905, 52487), (910, 52469), (912, 52463), (917, 52448), (926, 52424), (930, 52409), (931, 52406), (933, 52394), (940, 52370), (946, 52349), (963, 52322), (972, 52298), (977, 52283),

Gene: Devonte\_57 Start: 53319, Stop: 51502, Start Num: 247

Candidate Starts for Devonte\_57:

(130, 53502), (Start: 247 @53319 has 43 MA's), (267, 53289), (368, 53109), (433, 52956), (435, 52944), (448, 52914), (454, 52908), (476, 52845), (478, 52839), (519, 52788), (537, 52761), (538, 52752), (556, 52704), (603, 52599), (645, 52503), (674, 52452), (724, 52308), (732, 52269), (739, 52239), (744, 52212), (748, 52200), (775, 52104), (777, 52098), (780, 52089), (782, 52077), (807, 52005), (814, 51975), (820, 51957), (822, 51948), (847, 51879), (851, 51867), (858, 51846), (888,

51777), (898, 51762), (903, 51738), (905, 51717), (910, 51699), (912, 51693), (924, 51660), (926, 51654), (931, 51636), (933, 51624), (936, 51612), (940, 51600), (956, 51558), (972, 51528),

Gene: Dewdrop\_95 Start: 58518, Stop: 60557, Start Num: 216

Candidate Starts for Dewdrop\_95:

(Start: 216 @58518 has 4 MA's), (287, 58629), (289, 58632), (Start: 308 @58659 has 5 MA's), (325, 58716), (343, 58752), (361, 58791), (391, 58845), (396, 58857), (398, 58866), (412, 58902), (433, 58962), (436, 58977), (441, 58989), (457, 59034), (467, 59064), (504, 59178), (539, 59271), (540, 59274), (543, 59283), (549, 59301), (619, 59409), (641, 59463), (646, 59475), (672, 59541), (701, 59610), (752, 59763), (776, 59847), (783, 59877), (821, 60009), (822, 60012), (833, 60048), (845, 60081), (858, 60120), (903, 60270), (906, 60294), (908, 60300), (912, 60315), (921, 60345), (941, 60423), (947, 60444), (960, 60474), (976, 60516), (990, 60552),

Gene: Dexes\_45 Start: 35367, Stop: 33580, Start Num: 246

Candidate Starts for Dexes\_45:

(Start: 246 @35367 has 877 MA's), (368, 35154), (374, 35139), (400, 35091), (416, 35061), (422, 35040), (425, 35034), (429, 35025), (470, 34908), (479, 34881), (539, 34788), (544, 34773), (556, 34740), (578, 34689), (580, 34686), (612, 34620), (627, 34590), (639, 34560), (662, 34515), (683, 34476), (743, 34296), (753, 34248), (755, 34245), (767, 34209), (783, 34143), (812, 34071), (814, 34062), (843, 33978), (876, 33891), (917, 33765), (922, 33753), (946, 33669), (948, 33663),

Gene: Dhanush\_45 Start: 31573, Stop: 29747, Start Num: 246

Candidate Starts for Dhanush\_45:

(Start: 246 @31573 has 877 MA's), (267, 31552), (280, 31522), (295, 31492), (383, 31330), (394, 31312), (425, 31240), (429, 31231), (471, 31111), (479, 31087), (539, 30994), (558, 30946), (568, 30925), (585, 30886), (646, 30754), (659, 30733), (683, 30688), (687, 30676), (740, 30523), (743, 30502), (776, 30379), (783, 30349), (793, 30310), (814, 30244), (815, 30241), (820, 30226), (827, 30202), (834, 30178), (905, 29971), (946, 29836), (950, 29824), (955, 29815),

Gene: Dice\_59 Start: 54016, Stop: 52157, Start Num: 205

Candidate Starts for Dice\_59:

(Start: 188 @54040 has 1 MA's), (Start: 205 @54016 has 304 MA's), (Start: 235 @53992 has 6 MA's), (Start: 250 @53986 has 2 MA's), (Start: 274 @53944 has 6 MA's), (283, 53923), (337, 53809), (342, 53803), (360, 53773), (391, 53713), (399, 53692), (421, 53638), (428, 53626), (434, 53608), (436, 53596), (476, 53491), (519, 53434), (538, 53398), (542, 53386), (552, 53359), (564, 53332), (570, 53314), (580, 53296), (598, 53257), (602, 53248), (603, 53245), (738, 52885), (744, 52852), (750, 52831), (777, 52738), (780, 52729), (795, 52666), (814, 52630), (815, 52627), (820, 52612), (847, 52534), (851, 52522), (858, 52501), (875, 52462), (905, 52372), (910, 52354), (912, 52348), (917, 52333), (926, 52309), (930, 52294), (931, 52291), (933, 52279), (940, 52255), (963, 52207), (972, 52183),

Gene: DickRichards\_41 Start: 29838, Stop: 31712, Start Num: 246

Candidate Starts for DickRichards\_41:

(Start: 246 @29838 has 877 MA's), (287, 29907), (Start: 301 @29928 has 110 MA's), (429, 30174), (434, 30189), (444, 30216), (585, 30510), (646, 30645), (696, 30744), (731, 30867), (743, 30927), (746, 30933), (755, 30978), (762, 30993), (764, 31008), (774, 31044), (783, 31080), (813, 31173), (844, 31266), (874, 31344), (902, 31416), (909, 31455), (924, 31497), (929, 31515), (939, 31551), (946, 31575), (955, 31596),

Gene: Didgeridoo\_45 Start: 30205, Stop: 32079, Start Num: 246

Candidate Starts for Didgeridoo\_45:

(Start: 246 @30205 has 877 MA's), (287, 30274), (Start: 301 @30295 has 110 MA's), (429, 30541), (434, 30556), (467, 30637), (585, 30877), (696, 31111), (730, 31231), (731, 31234), (743, 31294),

(762, 31360), (764, 31375), (774, 31411), (783, 31447), (813, 31540), (874, 31711), (875, 31714), (902, 31783), (909, 31822), (924, 31864), (929, 31882), (939, 31918), (946, 31942), (955, 31963),

Gene: Dieselweasel\_49 Start: 31855, Stop: 30041, Start Num: 246

Candidate Starts for Dieselweasel\_49:

(Start: 246 @31855 has 877 MA's), (275, 31816), (280, 31804), (364, 31651), (371, 31636), (400, 31579), (425, 31522), (429, 31513), (444, 31471), (461, 31420), (479, 31369), (539, 31276), (556, 31228), (560, 31219), (568, 31204), (585, 31165), (598, 31138), (612, 31108), (654, 31015), (686, 30955), (697, 30940), (743, 30784), (767, 30697), (783, 30631), (793, 30592), (815, 30520), (827, 30481), (834, 30457), (843, 30439), (853, 30406), (864, 30379), (888, 30325), (905, 30265), (930, 30187), (946, 30130), (950, 30118), (955, 30109),

Gene: DigitDog\_58 Start: 54425, Stop: 52578, Start Num: 189

Candidate Starts for DigitDog\_58:

(15, 54914), (17, 54908), (27, 54857), (33, 54839), (69, 54701), (143, 54491), (189, 54425), (248, 54377), (267, 54350), (292, 54299), (367, 54179), (391, 54131), (434, 54029), (453, 53987), (466, 53951), (476, 53921), (538, 53828), (551, 53792), (556, 53780), (564, 53762), (603, 53675), (652, 53570), (703, 53447), (725, 53381), (727, 53363), (739, 53315), (744, 53288), (775, 53180), (777, 53174), (780, 53165), (784, 53144), (807, 53081), (815, 53048), (820, 53033), (841, 52973), (847, 52955), (851, 52943), (858, 52922), (861, 52913), (863, 52910), (868, 52898), (905, 52793), (910, 52775), (912, 52769), (926, 52730), (930, 52715), (931, 52712), (936, 52688), (940, 52676), (941, 52673), (972, 52604),

Gene: Dignity\_46 Start: 31741, Stop: 29954, Start Num: 246

Candidate Starts for Dignity\_46:

(Start: 246 @31741 has 877 MA's), (366, 31534), (368, 31528), (375, 31513), (383, 31498), (402, 31462), (416, 31435), (425, 31408), (433, 31387), (479, 31255), (539, 31162), (556, 31114), (560, 31105), (568, 31090), (598, 31024), (635, 30943), (659, 30895), (662, 30889), (743, 30670), (755, 30619), (766, 30586), (767, 30583), (783, 30517), (793, 30478), (810, 30457), (831, 30382), (834, 30370), (853, 30319), (880, 30256), (888, 30238), (902, 30202), (905, 30178), (930, 30100), (946, 30043), (950, 30031), (955, 30022),

Gene: Dinger\_36 Start: 28097, Stop: 26313, Start Num: 246

Candidate Starts for Dinger\_36:

(Start: 246 @28097 has 877 MA's), (346, 27926), (379, 27863), (399, 27824), (400, 27821), (420, 27776), (425, 27764), (429, 27755), (479, 27611), (539, 27518), (585, 27407), (598, 27380), (646, 27275), (662, 27248), (683, 27209), (743, 27029), (753, 26981), (783, 26876), (784, 26873), (810, 26816), (814, 26795), (829, 26747), (855, 26672), (886, 26603), (902, 26561), (903, 26558), (905, 26537), (909, 26522), (930, 26459), (946, 26402), (950, 26390), (969, 26351), (978, 26333),

Gene: Dingo\_59 Start: 53575, Stop: 51716, Start Num: 205

Candidate Starts for Dingo\_59:

(Start: 188 @53599 has 1 MA's), (Start: 205 @53575 has 304 MA's), (Start: 235 @53551 has 6 MA's), (Start: 250 @53545 has 2 MA's), (267, 53518), (Start: 274 @53503 has 6 MA's), (283, 53482), (337, 53368), (342, 53362), (360, 53332), (391, 53272), (399, 53251), (421, 53197), (428, 53185), (434, 53167), (436, 53155), (476, 53050), (519, 52993), (538, 52957), (542, 52945), (552, 52918), (556, 52909), (570, 52873), (598, 52816), (602, 52807), (603, 52804), (604, 52801), (738, 52444), (744, 52411), (750, 52390), (777, 52297), (780, 52288), (795, 52225), (814, 52189), (815, 52186), (820, 52171), (847, 52093), (851, 52081), (858, 52060), (875, 52021), (905, 51931), (910, 51913), (912, 51907), (917, 51892), (926, 51868), (930, 51853), (931, 51850), (933, 51838), (940, 51814), (963, 51766), (972, 51742),

Gene: Dione\_58 Start: 53747, Stop: 51888, Start Num: 205

Candidate Starts for Dione\_58:

(Start: 188 @53771 has 1 MA's), (Start: 205 @53747 has 304 MA's), (Start: 235 @53723 has 6 MA's), (Start: 250 @53717 has 2 MA's), (Start: 274 @53675 has 6 MA's), (283, 53654), (337, 53540), (342, 53534), (360, 53504), (391, 53444), (399, 53423), (421, 53369), (428, 53357), (434, 53339), (436, 53327), (476, 53222), (519, 53165), (538, 53129), (542, 53117), (551, 53093), (556, 53081), (564, 53063), (570, 53045), (580, 53027), (598, 52988), (602, 52979), (603, 52976), (604, 52973), (738, 52616), (744, 52583), (750, 52562), (777, 52469), (780, 52460), (795, 52397), (814, 52361), (815, 52358), (820, 52343), (847, 52265), (851, 52253), (858, 52232), (875, 52193), (905, 52103), (910, 52085), (912, 52079), (917, 52064), (926, 52040), (930, 52025), (931, 52022), (933, 52010), (940, 51986), (963, 51938), (972, 51914),

Gene: DirtJuice\_61 Start: 54337, Stop: 52478, Start Num: 205

Candidate Starts for DirtJuice\_61:

(Start: 188 @54361 has 1 MA's), (Start: 205 @54337 has 304 MA's), (Start: 235 @54313 has 6 MA's), (Start: 250 @54307 has 2 MA's), (Start: 274 @54265 has 6 MA's), (283, 54244), (337, 54130), (342, 54124), (360, 54094), (391, 54034), (399, 54013), (421, 53959), (428, 53947), (434, 53929), (436, 53917), (476, 53812), (519, 53755), (538, 53719), (542, 53707), (551, 53683), (556, 53671), (564, 53653), (570, 53635), (580, 53617), (598, 53578), (602, 53569), (603, 53566), (604, 53563), (712, 53308), (738, 53206), (744, 53173), (750, 53152), (777, 53059), (780, 53050), (795, 52987), (815, 52948), (820, 52933), (847, 52855), (851, 52843), (858, 52822), (875, 52783), (905, 52693), (910, 52675), (912, 52669), (917, 52654), (926, 52630), (930, 52615), (931, 52612), (933, 52600), (940, 52576), (963, 52528), (972, 52504),

Gene: DirtyBubble\_42 Start: 30299, Stop: 32173, Start Num: 246

Candidate Starts for DirtyBubble\_42:

(Start: 246 @30299 has 877 MA's), (287, 30368), (Start: 301 @30389 has 110 MA's), (429, 30635), (434, 30650), (444, 30677), (550, 30890), (556, 30905), (585, 30971), (696, 31205), (730, 31325), (731, 31328), (743, 31388), (746, 31394), (755, 31439), (764, 31469), (774, 31505), (783, 31541), (813, 31634), (844, 31727), (874, 31805), (875, 31808), (902, 31877), (905, 31901), (909, 31916), (924, 31958), (929, 31976), (946, 32036), (955, 32057),

Gene: DirtyDunning\_44 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for DirtyDunning\_44:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Discoknowium\_37 Start: 30143, Stop: 28284, Start Num: 246

Candidate Starts for Discoknowium\_37:

(Start: 246 @30143 has 877 MA's), (280, 30092), (318, 30032), (347, 29969), (364, 29939), (366, 29936), (395, 29879), (400, 29867), (416, 29837), (425, 29810), (479, 29657), (539, 29561), (556, 29513), (567, 29492), (594, 29429), (598, 29423), (633, 29351), (646, 29318), (654, 29303), (662, 29291), (712, 29192), (743, 29057), (752, 29027), (753, 29009), (762, 28991), (767, 28970), (771, 28961), (783, 28904), (793, 28865), (814, 28823), (820, 28805), (834, 28757), (853, 28706), (876, 28652), (880, 28643), (888, 28625), (905, 28565), (910, 28547), (939, 28454), (946, 28430), (950, 28418), (1007, 28301), (1008, 28298),

Gene: Dismas\_40 Start: 29921, Stop: 31792, Start Num: 246

Candidate Starts for Dismas\_40:

(Start: 246 @29921 has 877 MA's), (352, 30104), (371, 30143), (386, 30161), (419, 30233), (429, 30257), (433, 30269), (434, 30272), (467, 30353), (565, 30545), (585, 30593), (629, 30683), (696,

30824), (731, 30947), (743, 31007), (762, 31073), (764, 31088), (774, 31124), (777, 31133), (783, 31160), (813, 31253), (844, 31346), (874, 31424), (902, 31496), (909, 31535), (924, 31577), (939, 31631), (946, 31655), (955, 31676), (968, 31700),

Gene: Dixon\_43 Start: 30751, Stop: 28907, Start Num: 246

Candidate Starts for Dixon\_43:

(Start: 246 @30751 has 877 MA's), (280, 30700), (364, 30547), (383, 30508), (400, 30475), (416, 30445), (422, 30424), (425, 30418), (429, 30409), (461, 30316), (479, 30265), (539, 30169), (548, 30142), (554, 30124), (556, 30121), (560, 30112), (585, 30058), (598, 30031), (620, 29983), (646, 29926), (662, 29899), (687, 29848), (698, 29833), (740, 29686), (743, 29665), (752, 29635), (753, 29617), (755, 29614), (762, 29599), (767, 29578), (771, 29569), (776, 29542), (780, 29530), (783, 29512), (814, 29431), (818, 29419), (834, 29365), (849, 29329), (876, 29260), (886, 29239), (888, 29233), (903, 29194), (905, 29173), (910, 29155), (946, 29038), (950, 29026),

Gene: Doddsville\_61 Start: 54283, Stop: 52424, Start Num: 205

Candidate Starts for Doddsville\_61:

(Start: 188 @54307 has 1 MA's), (Start: 205 @54283 has 304 MA's), (Start: 235 @54259 has 6 MA's), (Start: 250 @54253 has 2 MA's), (Start: 274 @54211 has 6 MA's), (283, 54190), (337, 54076), (342, 54070), (360, 54040), (391, 53980), (399, 53959), (421, 53905), (428, 53893), (434, 53875), (436, 53863), (476, 53758), (519, 53701), (538, 53665), (542, 53653), (551, 53629), (556, 53617), (564, 53599), (570, 53581), (580, 53563), (598, 53524), (602, 53515), (603, 53512), (604, 53509), (738, 53152), (744, 53119), (750, 53098), (777, 53005), (780, 52996), (795, 52933), (814, 52897), (815, 52894), (820, 52879), (847, 52801), (851, 52789), (858, 52768), (875, 52729), (905, 52639), (910, 52621), (912, 52615), (917, 52600), (926, 52576), (930, 52561), (931, 52558), (933, 52546), (940, 52522), (963, 52474), (972, 52450),

Gene: Dodo\_117 Start: 82152, Stop: 80272, Start Num: 246

Candidate Starts for Dodo\_117:

(Start: 199 @82215 has 2 MA's), (204, 82209), (237, 82161), (Start: 246 @82152 has 877 MA's), (Start: 258 @82140 has 1 MA's), (352, 81942), (366, 81915), (391, 81876), (418, 81813), (428, 81795), (435, 81768), (438, 81762), (482, 81654), (542, 81576), (549, 81555), (561, 81522), (571, 81492), (585, 81465), (613, 81405), (664, 81300), (683, 81267), (716, 81198), (719, 81189), (743, 81078), (773, 80964), (791, 80880), (795, 80865), (816, 80790), (827, 80754), (829, 80748), (832, 80736), (840, 80721), (877, 80619), (881, 80610), (905, 80520), (917, 80481), (922, 80469), (930, 80442), (946, 80385), (957, 80361),

Gene: DoesntMatter\_58 Start: 54040, Stop: 52181, Start Num: 205

Candidate Starts for DoesntMatter\_58:

(Start: 188 @54064 has 1 MA's), (Start: 205 @54040 has 304 MA's), (Start: 235 @54016 has 6 MA's), (Start: 250 @54010 has 2 MA's), (Start: 274 @53968 has 6 MA's), (283, 53947), (337, 53833), (342, 53827), (360, 53797), (391, 53737), (399, 53716), (421, 53662), (428, 53650), (434, 53632), (436, 53620), (476, 53515), (519, 53458), (538, 53422), (542, 53410), (552, 53383), (564, 53356), (570, 53338), (580, 53320), (598, 53281), (602, 53272), (603, 53269), (604, 53266), (738, 52909), (744, 52876), (750, 52855), (777, 52762), (780, 52753), (795, 52690), (814, 52654), (815, 52651), (820, 52636), (847, 52558), (851, 52546), (858, 52525), (875, 52486), (905, 52396), (910, 52378), (912, 52372), (917, 52357), (926, 52333), (930, 52318), (931, 52315), (933, 52303), (940, 52279), (963, 52231), (972, 52207),

Gene: DonSanchon\_58 Start: 53730, Stop: 51871, Start Num: 205

Candidate Starts for DonSanchon\_58:

(Start: 188 @53754 has 1 MA's), (Start: 205 @53730 has 304 MA's), (Start: 235 @53706 has 6 MA's), (Start: 250 @53700 has 2 MA's), (Start: 274 @53658 has 6 MA's), (283, 53637), (337, 53523), (342, 53517), (360, 53487), (391, 53427), (399, 53406), (421, 53352), (428, 53340), (434, 53322), (436,



53310), (476, 53205), (519, 53148), (538, 53112), (542, 53100), (552, 53073), (570, 53028), (598, 52971), (602, 52962), (603, 52959), (738, 52599), (744, 52566), (750, 52545), (777, 52452), (780, 52443), (795, 52380), (814, 52344), (815, 52341), (820, 52326), (847, 52248), (851, 52236), (858, 52215), (875, 52176), (905, 52086), (910, 52068), (912, 52062), (917, 52047), (926, 52023), (930, 52008), (931, 52005), (933, 51993), (940, 51969), (963, 51921), (972, 51897),

Gene: Donkey\_38 Start: 27592, Stop: 29574, Start Num: 245

Candidate Starts for Donkey\_38:

(Start: 245 @27592 has 74 MA's), (347, 27766), (386, 27829), (402, 27862), (433, 27937), (521, 28165), (585, 28339), (659, 28495), (717, 28633), (737, 28720), (743, 28753), (752, 28783), (767, 28840), (783, 28906), (813, 28999), (905, 29266), (912, 29290), (946, 29401), (998, 29509),

Gene: Donny\_59 Start: 54516, Stop: 52690, Start Num: 197

Candidate Starts for Donny\_59:

(Start: 197 @54516 has 27 MA's), (267, 54462), (304, 54402), (367, 54291), (391, 54243), (434, 54141), (445, 54111), (453, 54099), (466, 54063), (476, 54033), (538, 53940), (542, 53928), (551, 53904), (556, 53892), (564, 53874), (592, 53811), (603, 53787), (604, 53784), (652, 53682), (725, 53493), (727, 53475), (732, 53457), (739, 53427), (744, 53400), (775, 53292), (777, 53286), (780, 53277), (784, 53256), (807, 53193), (815, 53160), (820, 53145), (841, 53085), (847, 53067), (851, 53055), (858, 53034), (861, 53025), (863, 53022), (905, 52905), (912, 52881), (926, 52842), (930, 52827), (931, 52824), (936, 52800), (940, 52788), (941, 52785), (946, 52767), (965, 52737), (972, 52716), (979, 52695),

Gene: DontArgue\_43 Start: 30359, Stop: 28536, Start Num: 246

Candidate Starts for DontArgue\_43:

(Start: 246 @30359 has 877 MA's), (280, 30308), (395, 30095), (425, 30026), (429, 30017), (454, 29945), (461, 29924), (471, 29897), (479, 29873), (539, 29780), (552, 29741), (585, 29672), (598, 29645), (653, 29528), (683, 29474), (716, 29417), (743, 29294), (762, 29228), (776, 29171), (783, 29141), (793, 29102), (815, 29030), (820, 29015), (827, 28991), (835, 28964), (843, 28949), (853, 28916), (905, 28760), (912, 28736), (946, 28625), (950, 28613), (955, 28604),

Gene: Doobus\_41 Start: 29222, Stop: 31096, Start Num: 246

Candidate Starts for Doobus\_41:

(Start: 243 @29219 has 7 MA's), (Start: 246 @29222 has 877 MA's), (287, 29291), (Start: 301 @29312 has 110 MA's), (429, 29558), (444, 29600), (550, 29813), (585, 29894), (696, 30128), (731, 30251), (743, 30311), (746, 30317), (755, 30362), (762, 30377), (764, 30392), (774, 30428), (783, 30464), (813, 30557), (844, 30650), (874, 30728), (902, 30800), (909, 30839), (924, 30881), (929, 30899), (939, 30935), (946, 30959), (955, 30980),

Gene: Doom\_45 Start: 35111, Stop: 33285, Start Num: 246

Candidate Starts for Doom\_45:

(Start: 246 @35111 has 877 MA's), (368, 34898), (416, 34805), (422, 34784), (425, 34778), (429, 34769), (470, 34652), (479, 34625), (539, 34532), (544, 34517), (578, 34433), (580, 34430), (612, 34364), (627, 34334), (639, 34304), (662, 34259), (683, 34220), (743, 34040), (752, 34010), (753, 33992), (755, 33989), (767, 33953), (783, 33887), (814, 33806), (815, 33803), (843, 33722), (902, 33572), (903, 33569), (909, 33533), (917, 33509), (921, 33500), (925, 33488), (932, 33461), (946, 33413), (955, 33392),

Gene: Dorothea\_45 Start: 29646, Stop: 27805, Start Num: 246

Candidate Starts for Dorothea\_45:

(Start: 246 @29646 has 877 MA's), (364, 29442), (400, 29367), (402, 29364), (416, 29337), (420, 29322), (425, 29310), (444, 29259), (475, 29169), (479, 29157), (539, 29064), (552, 29025), (560, 29007), (568, 28992), (598, 28926), (613, 28893), (614, 28890), (663, 28788), (697, 28728), (726,

28644), (743, 28563), (766, 28479), (767, 28476), (771, 28467), (776, 28440), (783, 28410), (810, 28350), (820, 28311), (902, 28095), (903, 28092), (905, 28071), (946, 27936), (950, 27924), (955, 27915), (957, 27912), (1000, 27819),

Gene: Dothraki\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Dothraki\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: DrFeelGood\_43 Start: 34795, Stop: 32969, Start Num: 246

Candidate Starts for DrFeelGood\_43:

(Start: 246 @34795 has 877 MA's), (368, 34582), (374, 34567), (416, 34489), (422, 34468), (425, 34462), (429, 34453), (470, 34336), (479, 34309), (482, 34300), (539, 34216), (544, 34201), (556, 34168), (578, 34117), (580, 34114), (612, 34048), (627, 34018), (639, 33988), (662, 33943), (683, 33904), (743, 33724), (752, 33694), (753, 33676), (755, 33673), (767, 33637), (783, 33571), (814, 33490), (815, 33487), (843, 33406), (902, 33256), (903, 33253), (909, 33217), (917, 33193), (921, 33184), (925, 33172), (932, 33145), (946, 33097), (955, 33076),

Gene: DrManhattan\_40 Start: 27782, Stop: 29692, Start Num: 245

Candidate Starts for DrManhattan\_40:

(142, 27644), (Start: 245 @27782 has 74 MA's), (279, 27830), (416, 28079), (448, 28169), (541, 28421), (544, 28430), (585, 28529), (591, 28544), (625, 28613), (659, 28682), (717, 28820), (743, 28940), (752, 28970), (760, 29003), (767, 29027), (783, 29093), (825, 29228), (834, 29258), (902, 29429), (910, 29471), (922, 29504), (946, 29588), (949, 29597), (955, 29609),

Gene: DrSierra\_39 Start: 27819, Stop: 29663, Start Num: 245

Candidate Starts for DrSierra\_39:

(Start: 245 @27819 has 74 MA's), (364, 28023), (382, 28050), (416, 28116), (448, 28206), (541, 28392), (544, 28401), (554, 28431), (585, 28500), (591, 28515), (659, 28653), (717, 28791), (743, 28911), (752, 28941), (767, 28998), (783, 29064), (834, 29229), (902, 29400), (946, 29559), (949, 29568), (988, 29646),

Gene: Drake55\_46 Start: 31661, Stop: 29874, Start Num: 246

Candidate Starts for Drake55\_46:

(Start: 246 @31661 has 877 MA's), (364, 31457), (366, 31454), (368, 31448), (383, 31418), (400, 31385), (402, 31382), (416, 31355), (425, 31328), (444, 31277), (479, 31175), (539, 31082), (556, 31034), (560, 31025), (568, 31010), (598, 30944), (635, 30863), (659, 30815), (726, 30671), (743, 30590), (755, 30539), (766, 30506), (783, 30437), (793, 30398), (810, 30377), (814, 30356), (818, 30344), (886, 30164), (888, 30158), (902, 30122), (905, 30098), (930, 30020), (946, 29963), (950, 29951),

Gene: Drake94\_42 Start: 30378, Stop: 28546, Start Num: 246

Candidate Starts for Drake94\_42:

(Start: 246 @30378 has 877 MA's), (280, 30327), (319, 30261), (364, 30174), (368, 30165), (395, 30114), (400, 30102), (425, 30045), (454, 29964), (458, 29952), (461, 29943), (471, 29916), (479, 29892), (539, 29799), (552, 29760), (585, 29691), (598, 29664), (662, 29532), (743, 29304), (762, 29238), (776, 29181), (783, 29151), (793, 29112), (815, 29040), (820, 29025), (827, 29001), (843, 28959), (853, 28926), (905, 28770), (912, 28746), (932, 28683), (946, 28635), (950, 28623), (955,

28614),

Gene: Dre3\_38 Start: 31347, Stop: 28987, Start Num: 45

Candidate Starts for Dre3\_38:

(35, 31371), (Start: 45 @31347 has 24 MA's), (50, 31332), (57, 31296), (128, 31125), (138, 31101), (Start: 308 @30864 has 5 MA's), (329, 30807), (354, 30768), (367, 30747), (398, 30681), (420, 30627), (430, 30606), (435, 30585), (502, 30387), (520, 30345), (526, 30327), (530, 30309), (546, 30264), (558, 30246), (559, 30243), (598, 30207), (660, 30114), (682, 30069), (698, 30042), (703, 30030), (707, 30018), (741, 29877), (760, 29808), (773, 29757), (780, 29733), (783, 29715), (785, 29706), (792, 29679), (794, 29673), (796, 29667), (797, 29661), (815, 29604), (822, 29580), (836, 29535), (838, 29532), (859, 29469), (893, 29361), (908, 29292), (911, 29280), (920, 29256), (939, 29181), (940, 29178), (947, 29154), (958, 29130), (968, 29109), (976, 29085), (995, 29040), (1004, 29022),

Gene: DreamCatcher\_47 Start: 35708, Stop: 33882, Start Num: 246

Candidate Starts for DreamCatcher\_47:

(Start: 246 @35708 has 877 MA's), (368, 35495), (374, 35480), (400, 35432), (416, 35402), (422, 35381), (425, 35375), (429, 35366), (444, 35324), (470, 35249), (479, 35222), (539, 35129), (544, 35114), (556, 35081), (578, 35030), (580, 35027), (612, 34961), (627, 34931), (639, 34901), (662, 34856), (683, 34817), (743, 34637), (752, 34607), (753, 34589), (767, 34550), (783, 34484), (793, 34445), (810, 34424), (814, 34403), (820, 34385), (843, 34319), (902, 34169), (903, 34166), (909, 34130), (917, 34106), (921, 34097), (925, 34085), (946, 34010), (955, 33989),

Gene: DreamTeam1\_42 Start: 30708, Stop: 28915, Start Num: 246

Candidate Starts for DreamTeam1\_42:

(Start: 246 @30708 has 877 MA's), (261, 30699), (346, 30537), (347, 30534), (364, 30504), (386, 30459), (402, 30426), (416, 30399), (420, 30384), (425, 30372), (429, 30363), (444, 30321), (471, 30243), (479, 30219), (539, 30126), (547, 30102), (554, 30081), (612, 29958), (687, 29799), (690, 29796), (714, 29760), (716, 29754), (743, 29631), (762, 29565), (780, 29496), (783, 29478), (810, 29418), (814, 29397), (853, 29280), (886, 29205), (902, 29163), (930, 29061), (946, 29004), (950, 28992), (955, 28983),

Gene: Dreamboat\_46 Start: 34398, Stop: 32569, Start Num: 246

Candidate Starts for Dreamboat\_46:

(Start: 246 @34398 has 877 MA's), (368, 34185), (374, 34170), (400, 34122), (416, 34092), (422, 34071), (425, 34065), (429, 34056), (470, 33939), (479, 33912), (539, 33819), (544, 33804), (551, 33783), (556, 33771), (578, 33720), (580, 33717), (612, 33651), (627, 33621), (639, 33591), (662, 33546), (683, 33507), (743, 33327), (753, 33279), (771, 33231), (780, 33192), (783, 33174), (793, 33135), (810, 33114), (814, 33093), (819, 33078), (861, 32955), (922, 32784), (929, 32760), (943, 32712), (946, 32700), (955, 32679), (959, 32673), (981, 32625), (986, 32610),

Gene: DroogsArmy\_41 Start: 33073, Stop: 31238, Start Num: 246

Candidate Starts for DroogsArmy\_41:

(Start: 246 @33073 has 877 MA's), (318, 32962), (368, 32860), (399, 32800), (422, 32746), (425, 32740), (433, 32719), (461, 32638), (479, 32587), (536, 32506), (539, 32491), (548, 32464), (554, 32446), (558, 32443), (568, 32422), (585, 32383), (614, 32320), (645, 32254), (646, 32251), (659, 32230), (706, 32140), (716, 32119), (726, 32077), (743, 31996), (753, 31948), (771, 31900), (776, 31873), (783, 31843), (793, 31804), (814, 31735), (815, 31732), (820, 31717), (827, 31693), (843, 31651), (888, 31522), (901, 31495), (905, 31462), (910, 31444), (922, 31411), (946, 31327), (950, 31315), (955, 31306),

Gene: DropBear\_45 Start: 31442, Stop: 29604, Start Num: 246

Candidate Starts for DropBear\_45:

(Start: 191 @31514 has 1 MA's), (Start: 246 @31442 has 877 MA's), (280, 31391), (364, 31238), (395, 31178), (400, 31166), (425, 31109), (429, 31100), (433, 31088), (471, 30980), (479, 30956), (539, 30860), (558, 30812), (585, 30752), (614, 30689), (646, 30620), (659, 30599), (697, 30530), (700, 30524), (716, 30485), (743, 30362), (767, 30275), (776, 30239), (783, 30209), (791, 30179), (815, 30098), (827, 30059), (834, 30035), (843, 30017), (888, 29888), (905, 29828), (946, 29693), (950, 29681), (955, 29672),

Gene: Druantia\_45 Start: 31573, Stop: 29747, Start Num: 246

Candidate Starts for Druantia\_45:

(Start: 246 @31573 has 877 MA's), (267, 31552), (280, 31522), (295, 31492), (383, 31330), (394, 31312), (425, 31240), (429, 31231), (471, 31111), (479, 31087), (539, 30994), (558, 30946), (568, 30925), (585, 30886), (646, 30754), (659, 30733), (683, 30688), (687, 30676), (740, 30523), (743, 30502), (776, 30379), (783, 30349), (793, 30310), (814, 30244), (815, 30241), (820, 30226), (827, 30202), (834, 30178), (905, 29971), (946, 29836), (950, 29824), (955, 29815),

Gene: Dublin\_37 Start: 30165, Stop: 28306, Start Num: 246

Candidate Starts for Dublin\_37:

(Start: 246 @30165 has 877 MA's), (280, 30114), (318, 30054), (347, 29991), (364, 29961), (366, 29958), (395, 29901), (416, 29859), (425, 29832), (479, 29679), (539, 29583), (556, 29535), (594, 29451), (598, 29445), (633, 29373), (646, 29340), (654, 29325), (662, 29313), (712, 29214), (743, 29079), (752, 29049), (753, 29031), (755, 29028), (767, 28992), (771, 28983), (774, 28962), (777, 28953), (783, 28926), (784, 28923), (810, 28866), (814, 28845), (853, 28728), (876, 28674), (880, 28665), (888, 28647), (910, 28569), (939, 28476), (946, 28452), (950, 28440), (1007, 28323), (1008, 28320),

Gene: Dubu\_35 Start: 27275, Stop: 29131, Start Num: 246

Candidate Starts for Dubu\_35:

(Start: 246 @27275 has 877 MA's), (279, 27323), (318, 27395), (416, 27596), (450, 27692), (478, 27773), (527, 27833), (574, 27962), (585, 27983), (591, 27998), (635, 28088), (639, 28097), (659, 28136), (683, 28181), (692, 28199), (740, 28373), (743, 28394), (746, 28400), (753, 28442), (767, 28481), (769, 28484), (773, 28505), (781, 28538), (783, 28547), (797, 28601), (827, 28688), (844, 28733), (850, 28751), (853, 28763), (874, 28811), (875, 28814), (912, 28931), (932, 28994), (946, 29042), (953, 29057), (968, 29087),

Gene: DuchessDung\_62 Start: 53800, Stop: 51941, Start Num: 205

Candidate Starts for DuchessDung\_62:

(Start: 188 @53824 has 1 MA's), (Start: 205 @53800 has 304 MA's), (Start: 235 @53776 has 6 MA's), (Start: 250 @53770 has 2 MA's), (Start: 274 @53728 has 6 MA's), (283, 53707), (337, 53593), (342, 53587), (360, 53557), (391, 53497), (399, 53476), (421, 53422), (428, 53410), (434, 53392), (436, 53380), (476, 53275), (519, 53218), (538, 53182), (542, 53170), (552, 53143), (570, 53098), (598, 53041), (602, 53032), (603, 53029), (738, 52669), (744, 52636), (750, 52615), (777, 52522), (780, 52513), (795, 52450), (814, 52414), (815, 52411), (820, 52396), (847, 52318), (851, 52306), (858, 52285), (875, 52246), (905, 52156), (910, 52138), (912, 52132), (917, 52117), (926, 52093), (930, 52078), (931, 52075), (933, 52063), (940, 52039), (963, 51991), (972, 51967),

Gene: DudeLittle\_43 Start: 31344, Stop: 29557, Start Num: 246

Candidate Starts for DudeLittle\_43:

(Start: 246 @31344 has 877 MA's), (364, 31140), (366, 31137), (375, 31116), (383, 31101), (400, 31068), (402, 31065), (416, 31038), (425, 31011), (433, 30990), (479, 30858), (539, 30765), (551, 30729), (556, 30717), (560, 30708), (568, 30693), (598, 30627), (635, 30546), (659, 30498), (662, 30492), (697, 30429), (743, 30273), (755, 30222), (766, 30189), (767, 30186), (783, 30120), (793, 30081), (810, 30060), (831, 29985), (834, 29973), (880, 29859), (888, 29841), (902, 29805), (905, 29781), (930, 29703), (946, 29646), (950, 29634), (955, 29625),

Gene: Duggie\_61 Start: 54284, Stop: 52425, Start Num: 205

Candidate Starts for Duggie\_61:

(Start: 188 @54308 has 1 MA's), (Start: 205 @54284 has 304 MA's), (Start: 235 @54260 has 6 MA's), (Start: 250 @54254 has 2 MA's), (Start: 274 @54212 has 6 MA's), (283, 54191), (337, 54077), (342, 54071), (360, 54041), (391, 53981), (399, 53960), (421, 53906), (428, 53894), (434, 53876), (436, 53864), (476, 53759), (519, 53702), (538, 53666), (542, 53654), (551, 53630), (556, 53618), (564, 53600), (570, 53582), (580, 53564), (598, 53525), (602, 53516), (603, 53513), (604, 53510), (738, 53153), (744, 53120), (750, 53099), (777, 53006), (780, 52997), (795, 52934), (814, 52898), (815, 52895), (820, 52880), (847, 52802), (851, 52790), (858, 52769), (875, 52730), (905, 52640), (910, 52622), (912, 52616), (917, 52601), (926, 52577), (930, 52562), (931, 52559), (933, 52547), (940, 52523), (946, 52502), (963, 52475), (972, 52451), (977, 52436),

Gene: Dulcie\_45 Start: 34631, Stop: 32805, Start Num: 246

Candidate Starts for Dulcie\_45:

(Start: 246 @34631 has 877 MA's), (368, 34418), (374, 34403), (400, 34355), (416, 34325), (422, 34304), (425, 34298), (429, 34289), (470, 34172), (479, 34145), (539, 34052), (544, 34037), (556, 34004), (578, 33953), (580, 33950), (612, 33884), (627, 33854), (639, 33824), (662, 33779), (683, 33740), (743, 33560), (753, 33512), (767, 33473), (783, 33407), (793, 33368), (810, 33347), (814, 33326), (820, 33308), (843, 33242), (902, 33092), (903, 33089), (909, 33053), (917, 33029), (921, 33020), (925, 33008), (932, 32981), (946, 32933), (955, 32912),

Gene: DunneganBoMo\_92 Start: 74359, Stop: 76077, Start Num: 301

Candidate Starts for DunneganBoMo\_92:

(Start: 262 @74284 has 4 MA's), (279, 74317), (287, 74338), (292, 74347), (Start: 301 @74359 has 110 MA's), (428, 74596), (435, 74623), (438, 74629), (521, 74764), (571, 74881), (585, 74908), (587, 74914), (591, 74923), (617, 74977), (683, 75109), (693, 75130), (707, 75157), (723, 75205), (730, 75238), (740, 75277), (743, 75298), (746, 75304), (774, 75421), (792, 75505), (793, 75508), (813, 75571), (816, 75583), (827, 75619), (840, 75652), (858, 75706), (865, 75724), (898, 75808), (902, 75829), (906, 75856), (922, 75904), (924, 75910), (929, 75928), (932, 75940), (934, 75952), (935, 75955), (946, 75988), (961, 76015), (974, 76039),

Gene: Duocatuli\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for Duocatuli\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: Duplo\_47 Start: 31191, Stop: 29368, Start Num: 246

Candidate Starts for Duplo\_47:

(Start: 246 @31191 has 877 MA's), (364, 30987), (374, 30963), (383, 30945), (394, 30927), (400, 30912), (402, 30909), (416, 30882), (425, 30855), (444, 30804), (479, 30702), (539, 30609), (556, 30561), (560, 30552), (567, 30540), (568, 30537), (598, 30471), (627, 30411), (683, 30297), (697, 30273), (715, 30234), (743, 30108), (755, 30057), (767, 30021), (783, 29955), (793, 29916), (815, 29847), (827, 29808), (844, 29763), (853, 29733), (880, 29670), (886, 29658), (888, 29652), (905, 29592), (946, 29457), (950, 29445), (955, 29436),

Gene: Durga\_63 Start: 54780, Stop: 52921, Start Num: 205

Candidate Starts for Durga\_63:

(Start: 188 @54804 has 1 MA's), (Start: 205 @54780 has 304 MA's), (Start: 235 @54756 has 6 MA's), (Start: 250 @54750 has 2 MA's), (Start: 274 @54708 has 6 MA's), (283, 54687), (337, 54573), (342, 54567), (360, 54537), (391, 54477), (399, 54456), (421, 54402), (428, 54390), (434, 54372), (436, 54360), (476, 54255), (519, 54198), (538, 54162), (542, 54150), (551, 54126), (556, 54114), (564, 54096), (570, 54078), (580, 54060), (598, 54021), (602, 54012), (603, 54009), (604, 54006), (712, 53751), (738, 53649), (744, 53616), (750, 53595), (777, 53502), (780, 53493), (795, 53430), (814, 53394), (815, 53391), (820, 53376), (847, 53298), (851, 53286), (858, 53265), (875, 53226), (905, 53136), (910, 53118), (912, 53112), (917, 53097), (926, 53073), (930, 53058), (931, 53055), (933, 53043), (940, 53019), (946, 52998), (963, 52971), (972, 52947),

Gene: Dussy\_46 Start: 34786, Stop: 32957, Start Num: 246

Candidate Starts for Dussy\_46:

(Start: 246 @34786 has 877 MA's), (368, 34573), (374, 34558), (400, 34510), (416, 34480), (422, 34459), (425, 34453), (429, 34444), (470, 34327), (479, 34300), (539, 34207), (544, 34192), (578, 34108), (580, 34105), (612, 34039), (627, 34009), (639, 33979), (662, 33934), (683, 33895), (743, 33715), (753, 33667), (771, 33619), (780, 33580), (783, 33562), (793, 33523), (810, 33502), (814, 33481), (819, 33466), (861, 33343), (922, 33172), (929, 33148), (943, 33100), (946, 33088), (955, 33067), (959, 33061), (981, 33013), (986, 32998),

Gene: DustyMartin\_48 Start: 31200, Stop: 29365, Start Num: 246

Candidate Starts for DustyMartin\_48:

(Start: 246 @31200 has 877 MA's), (280, 31149), (319, 31083), (364, 30996), (374, 30972), (395, 30936), (400, 30924), (425, 30867), (429, 30858), (458, 30774), (471, 30738), (475, 30726), (479, 30714), (539, 30621), (558, 30573), (585, 30513), (645, 30384), (646, 30381), (659, 30360), (662, 30354), (716, 30246), (743, 30123), (753, 30075), (776, 30000), (783, 29970), (793, 29931), (814, 29862), (815, 29859), (827, 29820), (834, 29796), (837, 29790), (843, 29778), (883, 29670), (905, 29589), (912, 29565), (932, 29502), (946, 29454), (950, 29442), (955, 29433),

Gene: Dynamix\_45 Start: 34393, Stop: 32567, Start Num: 246

Candidate Starts for Dynamix\_45:

(Start: 246 @34393 has 877 MA's), (368, 34180), (400, 34117), (416, 34087), (422, 34066), (425, 34060), (429, 34051), (470, 33934), (479, 33907), (539, 33814), (544, 33799), (578, 33715), (580, 33712), (612, 33646), (627, 33616), (639, 33586), (662, 33541), (683, 33502), (743, 33322), (753, 33274), (767, 33235), (783, 33169), (793, 33130), (810, 33109), (814, 33088), (820, 33070), (843, 33004), (902, 32854), (903, 32851), (909, 32815), (921, 32782), (925, 32770), (932, 32743), (946, 32695), (955, 32674),

Gene: EZMoney23\_43 Start: 31302, Stop: 29515, Start Num: 245

Candidate Starts for EZMoney23\_43:

(Start: 245 @31302 has 74 MA's), (364, 31098), (366, 31095), (368, 31089), (375, 31074), (383, 31059), (400, 31026), (402, 31023), (416, 30996), (425, 30969), (433, 30948), (444, 30918), (479, 30816), (539, 30723), (556, 30675), (560, 30666), (568, 30651), (598, 30585), (635, 30504), (659, 30456), (662, 30450), (726, 30312), (743, 30231), (755, 30180), (766, 30147), (767, 30144), (783, 30078), (793, 30039), (810, 30018), (831, 29943), (853, 29880), (864, 29853), (880, 29817), (888, 29799), (902, 29763), (905, 29739), (924, 29682), (930, 29661), (946, 29604), (950, 29592), (955, 29583),

Gene: Eagle\_45 Start: 31595, Stop: 29769, Start Num: 246

Candidate Starts for Eagle\_45:

(Start: 246 @31595 has 877 MA's), (267, 31574), (280, 31544), (295, 31514), (383, 31352), (394, 31334), (425, 31262), (429, 31253), (471, 31133), (479, 31109), (539, 31016), (558, 30968), (568, 30947), (585, 30908), (646, 30776), (659, 30755), (683, 30710), (687, 30698), (740, 30545), (743, 30524), (776, 30401), (783, 30371), (793, 30332), (814, 30266), (815, 30263), (820, 30248), (827,

30224), (834, 30200), (905, 29993), (946, 29858), (950, 29846), (955, 29837),

Gene: EagleEye\_46 Start: 30777, Stop: 28945, Start Num: 246

Candidate Starts for EagleEye\_46:

(Start: 246 @30777 has 877 MA's), (364, 30573), (366, 30570), (400, 30501), (402, 30498), (416, 30471), (422, 30450), (425, 30444), (429, 30435), (444, 30393), (471, 30315), (479, 30291), (539, 30198), (612, 30030), (714, 29832), (743, 29703), (771, 29607), (780, 29568), (783, 29550), (812, 29478), (814, 29469), (861, 29331), (901, 29244), (902, 29235), (930, 29133), (946, 29076), (950, 29064), (1000, 28959),

Gene: Eaglehorse\_57 Start: 52538, Stop: 50709, Start Num: 205

Candidate Starts for Eaglehorse\_57:

(Start: 205 @52538 has 304 MA's), (Start: 250 @52511 has 2 MA's), (269, 52481), (Start: 274 @52469 has 6 MA's), (286, 52442), (287, 52439), (293, 52430), (318, 52412), (366, 52316), (391, 52265), (400, 52241), (463, 52079), (472, 52055), (476, 52043), (519, 51986), (538, 51950), (542, 51938), (551, 51914), (588, 51830), (602, 51800), (603, 51797), (615, 51767), (680, 51623), (707, 51557), (721, 51518), (724, 51506), (727, 51485), (732, 51467), (744, 51410), (771, 51326), (777, 51296), (780, 51287), (795, 51221), (812, 51194), (814, 51185), (820, 51167), (827, 51143), (847, 51089), (851, 51077), (858, 51056), (888, 50987), (905, 50927), (910, 50909), (922, 50876), (926, 50864), (930, 50849), (931, 50846), (933, 50834), (940, 50810), (941, 50807), (963, 50759), (965, 50756), (972, 50735), (979, 50714),

Gene: Eaglepride\_45 Start: 31205, Stop: 29382, Start Num: 246

Candidate Starts for Eaglepride\_45:

(Start: 246 @31205 has 877 MA's), (280, 31154), (295, 31124), (383, 30962), (394, 30944), (400, 30929), (425, 30872), (429, 30863), (454, 30791), (461, 30770), (471, 30743), (479, 30719), (539, 30626), (552, 30587), (558, 30578), (585, 30518), (598, 30491), (639, 30404), (662, 30359), (683, 30320), (716, 30263), (726, 30221), (743, 30140), (762, 30074), (776, 30017), (780, 30005), (783, 29987), (793, 29948), (815, 29876), (820, 29861), (827, 29837), (843, 29795), (888, 29666), (905, 29606), (909, 29591), (912, 29582), (946, 29471), (950, 29459), (955, 29450),

Gene: Eapen\_45 Start: 31565, Stop: 29739, Start Num: 246

Candidate Starts for Eapen\_45:

(Start: 246 @31565 has 877 MA's), (267, 31544), (280, 31514), (295, 31484), (383, 31322), (394, 31304), (425, 31232), (429, 31223), (471, 31103), (479, 31079), (539, 30986), (558, 30938), (568, 30917), (585, 30878), (646, 30746), (659, 30725), (683, 30680), (687, 30668), (740, 30515), (743, 30494), (776, 30371), (783, 30341), (793, 30302), (814, 30236), (815, 30233), (820, 30218), (827, 30194), (834, 30170), (905, 29963), (946, 29828), (950, 29816), (955, 29807),

Gene: EastView9101\_57 Start: 54337, Stop: 52511, Start Num: 197

Candidate Starts for EastView9101\_57:

(112, 54496), (143, 54415), (Start: 197 @54337 has 27 MA's), (267, 54283), (304, 54223), (367, 54112), (391, 54064), (434, 53962), (453, 53920), (466, 53884), (476, 53854), (538, 53761), (542, 53749), (551, 53725), (556, 53713), (564, 53695), (592, 53632), (603, 53608), (652, 53503), (725, 53314), (727, 53296), (739, 53248), (744, 53221), (775, 53113), (777, 53107), (780, 53098), (784, 53077), (807, 53014), (815, 52981), (820, 52966), (841, 52906), (847, 52888), (851, 52876), (858, 52855), (861, 52846), (863, 52843), (905, 52726), (912, 52702), (926, 52663), (930, 52648), (931, 52645), (936, 52621), (940, 52609), (941, 52606), (965, 52558), (972, 52537), (979, 52516),

Gene: Ebony\_45 Start: 30738, Stop: 28951, Start Num: 246

Candidate Starts for Ebony\_45:

(Start: 246 @30738 has 877 MA's), (364, 30534), (400, 30462), (416, 30432), (425, 30405), (541, 30153), (560, 30102), (598, 30021), (619, 29976), (659, 29892), (687, 29835), (715, 29793), (726,

29748), (743, 29667), (755, 29616), (767, 29580), (783, 29514), (810, 29454), (812, 29442), (846, 29340), (853, 29316), (860, 29298), (888, 29235), (901, 29208), (902, 29199), (905, 29175), (946, 29040), (950, 29028), (955, 29019),

Gene: Echild\_44 Start: 30778, Stop: 28991, Start Num: 246

Candidate Starts for Echild\_44:

(Start: 246 @30778 has 877 MA's), (366, 30571), (368, 30565), (383, 30535), (400, 30502), (402, 30499), (416, 30472), (425, 30445), (433, 30424), (479, 30292), (539, 30199), (556, 30151), (560, 30142), (568, 30127), (598, 30061), (635, 29980), (659, 29932), (662, 29926), (697, 29863), (726, 29788), (743, 29707), (755, 29656), (766, 29623), (767, 29620), (783, 29554), (793, 29515), (810, 29494), (831, 29419), (837, 29401), (843, 29389), (853, 29356), (864, 29329), (880, 29293), (902, 29239), (905, 29215), (924, 29158), (930, 29137), (946, 29080), (950, 29068), (955, 29059),

Gene: Eden\_40 Start: 28150, Stop: 30027, Start Num: 246

Candidate Starts for Eden\_40:

(Start: 246 @28150 has 877 MA's), (287, 28219), (364, 28357), (419, 28462), (433, 28498), (434, 28501), (470, 28591), (541, 28714), (585, 28822), (591, 28837), (607, 28867), (711, 29131), (716, 29146), (731, 29209), (743, 29269), (762, 29335), (777, 29398), (783, 29425), (813, 29518), (834, 29590), (874, 29689), (875, 29692), (876, 29695), (905, 29785), (924, 29842), (946, 29920), (955, 29941), (989, 30010),

Gene: Edison31\_43 Start: 31140, Stop: 29305, Start Num: 246

Candidate Starts for Edison31\_43:

(Start: 246 @31140 has 877 MA's), (280, 31089), (319, 31023), (364, 30936), (374, 30912), (383, 30897), (395, 30876), (400, 30864), (425, 30807), (429, 30798), (458, 30714), (471, 30678), (475, 30666), (479, 30654), (539, 30561), (558, 30513), (585, 30453), (598, 30426), (645, 30324), (646, 30321), (659, 30300), (662, 30294), (716, 30186), (743, 30063), (753, 30015), (776, 29940), (783, 29910), (793, 29871), (814, 29802), (815, 29799), (827, 29760), (834, 29736), (837, 29730), (843, 29718), (905, 29529), (912, 29505), (932, 29442), (946, 29394), (950, 29382), (955, 29373),

Gene: EdogawaKiddo\_43 Start: 31490, Stop: 29697, Start Num: 246

Candidate Starts for EdogawaKiddo\_43:

(Start: 246 @31490 has 877 MA's), (261, 31481), (280, 31439), (346, 31319), (347, 31316), (372, 31268), (402, 31208), (417, 31178), (420, 31166), (425, 31154), (479, 31001), (539, 30908), (598, 30770), (612, 30740), (687, 30581), (697, 30569), (714, 30542), (740, 30434), (743, 30413), (780, 30278), (783, 30260), (814, 30179), (827, 30137), (853, 30062), (886, 29987), (902, 29945), (930, 29843), (946, 29786), (950, 29774), (955, 29765),

Gene: Edtherson\_45 Start: 35275, Stop: 33449, Start Num: 246

Candidate Starts for Edtherson\_45:

(Start: 246 @35275 has 877 MA's), (368, 35062), (374, 35047), (400, 34999), (416, 34969), (422, 34948), (425, 34942), (429, 34933), (470, 34816), (479, 34789), (539, 34696), (544, 34681), (578, 34597), (580, 34594), (612, 34528), (627, 34498), (639, 34468), (662, 34423), (683, 34384), (743, 34204), (752, 34174), (753, 34156), (767, 34117), (783, 34051), (814, 33970), (815, 33967), (843, 33886), (902, 33736), (903, 33733), (909, 33697), (917, 33673), (921, 33664), (925, 33652), (946, 33577), (955, 33556),

Gene: Eidsmoe\_45 Start: 31547, Stop: 29754, Start Num: 246

Candidate Starts for Eidsmoe\_45:

(Start: 246 @31547 has 877 MA's), (261, 31538), (280, 31496), (346, 31376), (347, 31373), (372, 31325), (402, 31265), (417, 31235), (420, 31223), (425, 31211), (479, 31058), (539, 30965), (598, 30827), (612, 30797), (687, 30638), (697, 30626), (714, 30599), (740, 30491), (743, 30470), (780, 30335), (783, 30317), (814, 30236), (827, 30194), (853, 30119), (886, 30044), (902, 30002), (930,



29900), (946, 29843), (950, 29831), (955, 29822),

Gene: EITiger69\_39 Start: 30184, Stop: 28286, Start Num: 215

Candidate Starts for EITiger69\_39:

(Start: 215 @30184 has 2 MA's), (Start: 246 @30151 has 877 MA's), (318, 30040), (364, 29947), (366, 29944), (400, 29875), (402, 29872), (416, 29845), (425, 29818), (429, 29809), (458, 29725), (467, 29701), (479, 29665), (523, 29605), (539, 29569), (554, 29524), (556, 29521), (567, 29500), (568, 29497), (594, 29437), (633, 29359), (654, 29311), (662, 29299), (686, 29251), (712, 29200), (743, 29065), (753, 29017), (762, 28999), (767, 28978), (771, 28969), (777, 28939), (783, 28912), (784, 28909), (814, 28831), (820, 28813), (834, 28765), (853, 28714), (876, 28660), (880, 28651), (888, 28633), (910, 28555), (912, 28549), (939, 28462), (946, 28438), (950, 28426), (1000, 28321),

Gene: Elephantoon\_44 Start: 30830, Stop: 29037, Start Num: 246

Candidate Starts for Elephantoon\_44:

(Start: 246 @30830 has 877 MA's), (261, 30821), (280, 30779), (325, 30692), (346, 30659), (347, 30656), (364, 30626), (372, 30608), (402, 30548), (416, 30521), (420, 30506), (425, 30494), (478, 30344), (479, 30341), (482, 30332), (536, 30263), (539, 30248), (612, 30080), (687, 29921), (697, 29909), (714, 29882), (740, 29774), (743, 29753), (776, 29630), (783, 29600), (793, 29561), (812, 29528), (814, 29519), (853, 29402), (861, 29381), (886, 29327), (902, 29285), (905, 29261), (930, 29183), (946, 29126), (950, 29114), (955, 29105),

Gene: Eleri\_38 Start: 28732, Stop: 26867, Start Num: 299

Candidate Starts for Eleri\_38:

(Start: 299 @28732 has 38 MA's), (320, 28687), (344, 28633), (379, 28573), (403, 28522), (435, 28444), (438, 28438), (454, 28393), (455, 28390), (456, 28387), (469, 28348), (489, 28288), (531, 28165), (537, 28156), (539, 28144), (543, 28132), (549, 28114), (556, 28093), (562, 28081), (585, 28057), (658, 27910), (724, 27742), (771, 27577), (779, 27541), (783, 27520), (794, 27478), (822, 27391), (836, 27346), (872, 27247), (885, 27202), (888, 27193), (903, 27133), (906, 27109), (917, 27076), (947, 26965),

Gene: Elezi\_39 Start: 30351, Stop: 32216, Start Num: 245

Candidate Starts for Elezi\_39:

(Start: 245 @30351 has 74 MA's), (279, 30399), (382, 30582), (386, 30588), (416, 30648), (422, 30669), (448, 30738), (544, 30954), (580, 31044), (585, 31053), (591, 31068), (613, 31113), (659, 31206), (717, 31344), (743, 31464), (752, 31494), (767, 31551), (781, 31608), (783, 31617), (790, 31641), (813, 31710), (834, 31782), (840, 31791), (878, 31890), (902, 31953), (946, 32112), (949, 32121),

Gene: Elinal\_48 Start: 34208, Stop: 31833, Start Num: 46

Candidate Starts for Elinal\_48:

(Start: 46 @34208 has 13 MA's), (63, 34148), (80, 34106), (93, 34067), (138, 33947), (145, 33926), (179, 33902), (Start: 232 @33824 has 3 MA's), (Start: 238 @33818 has 3 MA's), (Start: 241 @33815 has 13 MA's), (267, 33785), (275, 33767), (282, 33749), (305, 33710), (Start: 308 @33707 has 5 MA's), (329, 33650), (343, 33626), (354, 33611), (389, 33548), (398, 33524), (402, 33515), (403, 33509), (406, 33503), (420, 33470), (430, 33449), (435, 33428), (499, 33245), (526, 33170), (539, 33128), (633, 33017), (643, 32993), (657, 32963), (682, 32912), (683, 32909), (690, 32894), (702, 32873), (747, 32699), (749, 32690), (755, 32660), (783, 32555), (792, 32519), (794, 32513), (796, 32507), (797, 32501), (815, 32444), (822, 32420), (856, 32315), (858, 32312), (889, 32219), (893, 32201), (903, 32162), (911, 32120), (920, 32096), (929, 32066), (940, 32018), (947, 31994), (968, 31949), (1004, 31862),

Gene: Elliott\_43 Start: 32440, Stop: 30047, Start Num: 36

Candidate Starts for Elliott\_43:

(Start: 36 @32440 has 16 MA's), (47, 32434), (Start: 59 @32386 has 1 MA's), (75, 32344), (84, 32320), (128, 32194), (138, 32170), (179, 32125), (Start: 215 @32074 has 2 MA's), (223, 32059), (Start: 241 @32038 has 13 MA's), (275, 31990), (289, 31957), (295, 31948), (329, 31873), (335, 31861), (374, 31792), (391, 31765), (394, 31759), (398, 31744), (420, 31690), (421, 31687), (430, 31669), (435, 31648), (457, 31588), (499, 31465), (500, 31459), (526, 31390), (539, 31348), (605, 31261), (615, 31237), (633, 31231), (643, 31207), (647, 31198), (654, 31183), (660, 31171), (680, 31129), (682, 31126), (683, 31123), (733, 30976), (741, 30934), (749, 30907), (750, 30901), (783, 30772), (792, 30736), (794, 30730), (796, 30724), (797, 30718), (815, 30661), (822, 30637), (836, 30592), (946, 30214), (947, 30211), (968, 30166), (971, 30157), (995, 30097),

Gene: Ellewin\_90 Start: 73770, Stop: 75488, Start Num: 301

Candidate Starts for Ellewin\_90:

(Start: 262 @73695 has 4 MA's), (287, 73749), (292, 73758), (Start: 301 @73770 has 110 MA's), (428, 74007), (438, 74040), (521, 74175), (571, 74292), (585, 74319), (587, 74325), (591, 74334), (617, 74388), (683, 74520), (693, 74541), (707, 74568), (723, 74616), (730, 74649), (740, 74688), (743, 74709), (746, 74715), (774, 74832), (792, 74916), (793, 74919), (813, 74982), (816, 74994), (827, 75030), (840, 75063), (858, 75117), (865, 75135), (898, 75219), (902, 75240), (906, 75267), (922, 75315), (924, 75321), (929, 75339), (932, 75351), (934, 75363), (935, 75366), (946, 75399), (961, 75426), (974, 75450),

Gene: Elva\_44 Start: 30530, Stop: 32404, Start Num: 246

Candidate Starts for Elva\_44:

(Start: 243 @30527 has 7 MA's), (Start: 246 @30530 has 877 MA's), (287, 30599), (Start: 301 @30620 has 110 MA's), (400, 30800), (429, 30866), (444, 30908), (549, 31118), (556, 31136), (585, 31202), (627, 31289), (696, 31436), (730, 31556), (731, 31559), (743, 31619), (746, 31625), (755, 31670), (762, 31685), (764, 31700), (774, 31736), (783, 31772), (813, 31865), (844, 31958), (874, 32036), (875, 32039), (886, 32066), (902, 32108), (909, 32147), (911, 32153), (924, 32189), (929, 32207), (939, 32243), (946, 32267), (955, 32288),

Gene: ElvisPhasley\_66 Start: 54776, Stop: 52917, Start Num: 205

Candidate Starts for ElvisPhasley\_66:

(Start: 188 @54800 has 1 MA's), (Start: 205 @54776 has 304 MA's), (Start: 235 @54752 has 6 MA's), (Start: 250 @54746 has 2 MA's), (Start: 274 @54704 has 6 MA's), (283, 54683), (337, 54569), (342, 54563), (360, 54533), (391, 54473), (399, 54452), (421, 54398), (428, 54386), (434, 54368), (436, 54356), (476, 54251), (519, 54194), (538, 54158), (542, 54146), (551, 54122), (556, 54110), (564, 54092), (570, 54074), (580, 54056), (598, 54017), (602, 54008), (603, 54005), (604, 54002), (738, 53645), (744, 53612), (750, 53591), (777, 53498), (780, 53489), (795, 53426), (814, 53390), (815, 53387), (820, 53372), (847, 53294), (851, 53282), (858, 53261), (875, 53222), (905, 53132), (910, 53114), (912, 53108), (917, 53093), (926, 53069), (930, 53054), (931, 53051), (933, 53039), (940, 53015), (963, 52967), (972, 52943),

Gene: Emalyn\_42 Start: 31612, Stop: 29225, Start Num: 45

Candidate Starts for Emalyn\_42:

(11, 31759), (13, 31717), (20, 31684), (23, 31669), (Start: 45 @31612 has 24 MA's), (48, 31603), (50, 31597), (75, 31516), (106, 31420), (117, 31396), (128, 31369), (138, 31345), (Start: 241 @31213 has 13 MA's), (265, 31186), (273, 31171), (295, 31123), (312, 31093), (329, 31048), (335, 31036), (374, 30970), (398, 30922), (420, 30868), (430, 30847), (435, 30826), (441, 30811), (457, 30766), (499, 30643), (522, 30583), (526, 30568), (539, 30526), (605, 30439), (615, 30415), (633, 30409), (643, 30385), (647, 30376), (680, 30307), (682, 30304), (683, 30301), (722, 30205), (733, 30154), (749, 30085), (750, 30079), (783, 29950), (792, 29914), (794, 29908), (796, 29902), (797, 29896), (815, 29839), (822, 29815), (836, 29770), (856, 29710), (903, 29557), (910, 29518), (911, 29515), (947, 29389), (968, 29344), (971, 29335),

Gene: EmiRose\_34 Start: 30392, Stop: 28503, Start Num: 197

Candidate Starts for EmiRose\_34:

(Start: 197 @30392 has 27 MA's), (283, 30284), (285, 30281), (286, 30278), (319, 30221), (367, 30110), (417, 30005), (429, 29975), (438, 29948), (442, 29939), (469, 29870), (476, 29849), (519, 29792), (538, 29756), (542, 29744), (551, 29720), (563, 29693), (570, 29669), (603, 29612), (667, 29477), (680, 29435), (688, 29417), (704, 29378), (722, 29324), (736, 29264), (744, 29219), (747, 29213), (762, 29162), (795, 29027), (815, 28988), (816, 28985), (820, 28973), (847, 28895), (851, 28883), (876, 28820), (905, 28718), (926, 28655), (936, 28613), (940, 28601), (951, 28571), (965, 28550), (979, 28508),

Gene: Emiris\_63 Start: 54747, Stop: 52888, Start Num: 205

Candidate Starts for Emiris\_63:

(Start: 188 @54771 has 1 MA's), (Start: 205 @54747 has 304 MA's), (Start: 235 @54723 has 6 MA's), (Start: 250 @54717 has 2 MA's), (Start: 274 @54675 has 6 MA's), (283, 54654), (337, 54540), (342, 54534), (360, 54504), (391, 54444), (399, 54423), (421, 54369), (428, 54357), (434, 54339), (436, 54327), (476, 54222), (519, 54165), (538, 54129), (542, 54117), (552, 54090), (564, 54063), (570, 54045), (580, 54027), (598, 53988), (602, 53979), (603, 53976), (712, 53718), (738, 53616), (744, 53583), (750, 53562), (777, 53469), (780, 53460), (795, 53397), (814, 53361), (815, 53358), (820, 53343), (847, 53265), (851, 53253), (858, 53232), (875, 53193), (905, 53103), (910, 53085), (912, 53079), (917, 53064), (926, 53040), (930, 53025), (931, 53022), (933, 53010), (940, 52986), (963, 52938), (972, 52914),

Gene: Emotion\_46 Start: 31321, Stop: 33183, Start Num: 245

Candidate Starts for Emotion\_46:

(183, 31249), (Start: 245 @31321 has 74 MA's), (402, 31591), (585, 32020), (654, 32167), (659, 32173), (717, 32311), (743, 32431), (755, 32482), (774, 32548), (813, 32677), (815, 32686), (820, 32701), (850, 32788), (876, 32854), (878, 32857), (930, 33022), (946, 33079),

Gene: EmpTee\_60 Start: 54256, Stop: 52397, Start Num: 205

Candidate Starts for EmpTee\_60:

(Start: 188 @54280 has 1 MA's), (Start: 205 @54256 has 304 MA's), (Start: 235 @54232 has 6 MA's), (Start: 250 @54226 has 2 MA's), (Start: 274 @54184 has 6 MA's), (283, 54163), (337, 54049), (342, 54043), (360, 54013), (391, 53953), (399, 53932), (421, 53878), (428, 53866), (434, 53848), (436, 53836), (476, 53731), (519, 53674), (538, 53638), (542, 53626), (551, 53602), (556, 53590), (564, 53572), (570, 53554), (580, 53536), (598, 53497), (602, 53488), (603, 53485), (604, 53482), (738, 53125), (744, 53092), (750, 53071), (777, 52978), (780, 52969), (795, 52906), (814, 52870), (815, 52867), (820, 52852), (847, 52774), (851, 52762), (858, 52741), (875, 52702), (905, 52612), (910, 52594), (912, 52588), (917, 52573), (926, 52549), (930, 52534), (931, 52531), (933, 52519), (940, 52495), (963, 52447), (972, 52423),

Gene: EmyBug\_44 Start: 31549, Stop: 29756, Start Num: 246

Candidate Starts for EmyBug\_44:

(Start: 246 @31549 has 877 MA's), (261, 31540), (280, 31498), (346, 31378), (347, 31375), (372, 31327), (402, 31267), (417, 31237), (420, 31225), (425, 31213), (479, 31060), (539, 30967), (598, 30829), (612, 30799), (687, 30640), (697, 30628), (714, 30601), (740, 30493), (743, 30472), (780, 30337), (783, 30319), (814, 30238), (827, 30196), (853, 30121), (886, 30046), (902, 30004), (930, 29902), (946, 29845), (950, 29833), (955, 29824),

Gene: Endor\_39 Start: 29287, Stop: 27419, Start Num: 301

Candidate Starts for Endor\_39:

(236, 29374), (Start: 301 @29287 has 110 MA's), (Start: 308 @29278 has 5 MA's), (432, 29014), (433, 29011), (435, 28999), (438, 28993), (501, 28807), (531, 28720), (537, 28711), (539, 28699), (548, 28672), (549, 28669), (554, 28654), (556, 28648), (562, 28636), (718, 28318), (776, 28105), (779,

28096), (783, 28075), (794, 28033), (822, 27943), (878, 27784), (885, 27754), (903, 27685), (906, 27661), (919, 27622), (929, 27589), (932, 27577),

Gene: EnzoK\_44 Start: 32376, Stop: 30550, Start Num: 246

Candidate Starts for EnzoK\_44:

(Start: 246 @32376 has 877 MA's), (368, 32163), (400, 32100), (416, 32070), (422, 32049), (425, 32043), (429, 32034), (470, 31917), (479, 31890), (539, 31797), (544, 31782), (578, 31698), (580, 31695), (612, 31629), (627, 31599), (639, 31569), (662, 31524), (683, 31485), (743, 31305), (752, 31275), (753, 31257), (755, 31254), (767, 31218), (783, 31152), (814, 31071), (815, 31068), (843, 30987), (902, 30837), (903, 30834), (909, 30798), (917, 30774), (921, 30765), (925, 30753), (946, 30678), (955, 30657),

Gene: Epah\_52 Start: 52983, Stop: 51160, Start Num: 197

Candidate Starts for Epah\_52:

(Start: 182 @53001 has 4 MA's), (Start: 197 @52983 has 27 MA's), (Start: 250 @52959 has 2 MA's), (267, 52932), (Start: 274 @52917 has 6 MA's), (283, 52896), (329, 52809), (387, 52704), (406, 52662), (434, 52596), (445, 52566), (448, 52557), (453, 52554), (454, 52551), (463, 52524), (519, 52431), (531, 52413), (538, 52395), (542, 52383), (547, 52368), (552, 52356), (602, 52245), (603, 52242), (615, 52212), (633, 52176), (724, 51951), (725, 51948), (732, 51912), (738, 51888), (744, 51855), (775, 51747), (777, 51741), (779, 51735), (780, 51732), (814, 51633), (815, 51630), (820, 51615), (847, 51537), (851, 51525), (858, 51504), (861, 51495), (875, 51465), (886, 51441), (901, 51408), (905, 51375), (910, 51357), (912, 51351), (926, 51312), (931, 51294), (933, 51282), (940, 51258), (956, 51216), (963, 51210), (972, 51186),

Gene: EpicPhail\_49 Start: 31856, Stop: 30042, Start Num: 246

Candidate Starts for EpicPhail\_49:

(Start: 246 @31856 has 877 MA's), (275, 31817), (280, 31805), (364, 31652), (371, 31637), (400, 31580), (425, 31523), (429, 31514), (444, 31472), (461, 31421), (479, 31370), (539, 31277), (556, 31229), (560, 31220), (568, 31205), (585, 31166), (598, 31139), (612, 31109), (654, 31016), (686, 30956), (697, 30941), (743, 30785), (767, 30698), (783, 30632), (793, 30593), (815, 30521), (827, 30482), (834, 30458), (843, 30440), (853, 30407), (864, 30380), (888, 30326), (905, 30266), (930, 30188), (946, 30131), (950, 30119), (955, 30110),

Gene: Epsocamisio\_46 Start: 29741, Stop: 27951, Start Num: 246

Candidate Starts for Epsocamisio\_46:

(Start: 246 @29741 has 877 MA's), (347, 29567), (400, 29462), (402, 29459), (416, 29432), (425, 29405), (444, 29354), (479, 29252), (539, 29159), (554, 29114), (556, 29111), (560, 29102), (635, 28940), (646, 28913), (659, 28892), (662, 28886), (717, 28787), (726, 28748), (738, 28697), (743, 28667), (755, 28616), (766, 28583), (774, 28550), (776, 28544), (783, 28514), (810, 28454), (814, 28433), (827, 28391), (835, 28364), (843, 28349), (876, 28262), (902, 28199), (903, 28196), (946, 28040), (950, 28028), (957, 28016),

Gene: Equemioh13\_45 Start: 31601, Stop: 29814, Start Num: 246

Candidate Starts for Equemioh13\_45:

(Start: 246 @31601 has 877 MA's), (364, 31397), (366, 31394), (368, 31388), (383, 31358), (400, 31325), (402, 31322), (416, 31295), (425, 31268), (444, 31217), (479, 31115), (539, 31022), (556, 30974), (560, 30965), (568, 30950), (598, 30884), (635, 30803), (659, 30755), (726, 30611), (743, 30530), (755, 30479), (766, 30446), (783, 30377), (793, 30338), (810, 30317), (814, 30296), (818, 30284), (886, 30104), (888, 30098), (902, 30062), (905, 30038), (930, 29960), (946, 29903), (950, 29891),

Gene: Eraser\_39 Start: 30361, Stop: 32226, Start Num: 245

Candidate Starts for Eraser\_39:

(Start: 245 @30361 has 74 MA's), (279, 30409), (382, 30592), (386, 30598), (416, 30658), (422, 30679), (448, 30748), (544, 30964), (580, 31054), (585, 31063), (591, 31078), (613, 31123), (659, 31216), (717, 31354), (743, 31474), (752, 31504), (767, 31561), (781, 31618), (783, 31627), (790, 31651), (813, 31720), (834, 31792), (840, 31801), (878, 31900), (902, 31963), (946, 32122), (949, 32131),

Gene: Eremos\_60 Start: 54246, Stop: 52387, Start Num: 205

Candidate Starts for Eremos\_60:

(Start: 188 @54270 has 1 MA's), (Start: 205 @54246 has 304 MA's), (Start: 235 @54222 has 6 MA's), (Start: 250 @54216 has 2 MA's), (Start: 274 @54174 has 6 MA's), (283, 54153), (337, 54039), (342, 54033), (360, 54003), (391, 53943), (399, 53922), (421, 53868), (428, 53856), (434, 53838), (436, 53826), (476, 53721), (519, 53664), (538, 53628), (542, 53616), (551, 53592), (556, 53580), (564, 53562), (570, 53544), (580, 53526), (598, 53487), (602, 53478), (603, 53475), (604, 53472), (738, 53115), (744, 53082), (750, 53061), (777, 52968), (780, 52959), (795, 52896), (814, 52860), (815, 52857), (820, 52842), (847, 52764), (851, 52752), (858, 52731), (875, 52692), (905, 52602), (910, 52584), (912, 52578), (917, 52563), (926, 52539), (930, 52524), (931, 52521), (933, 52509), (940, 52485), (963, 52437), (972, 52413),

Gene: EricB\_45 Start: 29620, Stop: 27779, Start Num: 246

Candidate Starts for EricB\_45:

(Start: 246 @29620 has 877 MA's), (364, 29416), (400, 29341), (402, 29338), (416, 29311), (420, 29296), (425, 29284), (444, 29233), (475, 29143), (479, 29131), (539, 29038), (552, 28999), (560, 28981), (568, 28966), (598, 28900), (613, 28867), (614, 28864), (663, 28762), (697, 28702), (726, 28618), (743, 28537), (766, 28453), (767, 28450), (771, 28441), (776, 28414), (783, 28384), (810, 28324), (820, 28285), (902, 28069), (903, 28066), (905, 28045), (946, 27910), (950, 27898), (955, 27889), (957, 27886), (1000, 27793),

Gene: Erik\_36 Start: 28111, Stop: 26327, Start Num: 246

Candidate Starts for Erik\_36:

(Start: 246 @28111 has 877 MA's), (379, 27877), (395, 27847), (399, 27838), (400, 27835), (420, 27790), (425, 27778), (444, 27727), (479, 27625), (496, 27604), (539, 27532), (554, 27487), (556, 27484), (574, 27442), (577, 27436), (585, 27421), (598, 27394), (646, 27289), (652, 27280), (662, 27262), (683, 27223), (716, 27166), (743, 27043), (753, 26995), (783, 26890), (784, 26887), (810, 26830), (814, 26809), (829, 26761), (855, 26686), (886, 26617), (902, 26575), (905, 26551), (930, 26473), (946, 26416), (950, 26404), (955, 26395), (969, 26365), (978, 26347),

Gene: Eris\_44 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Eris\_44:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (607, 30838), (610, 30832), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Erla\_38 Start: 28612, Stop: 26747, Start Num: 301

Candidate Starts for Erla\_38:

(Start: 238 @28699 has 3 MA's), (Start: 301 @28612 has 110 MA's), (Start: 308 @28603 has 5 MA's), (354, 28498), (358, 28489), (375, 28459), (378, 28456), (433, 28336), (435, 28324), (438, 28318), (475, 28213), (484, 28186), (531, 28045), (536, 28039), (537, 28036), (539, 28024), (548, 27997), (549, 27994), (554, 27979), (556, 27973), (559, 27967), (586, 27934), (652, 27805), (676, 27745), (776, 27430), (779, 27421), (780, 27418), (783, 27400), (794, 27358), (796, 27352), (805, 27328), (822, 27271), (878, 27112), (885, 27082), (888, 27073), (903, 27013), (906, 26989), (919, 26950),

(929, 26917), (932, 26905), (947, 26845),

Gene: Eros\_45 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Eros\_45:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Espica\_36 Start: 28114, Stop: 26330, Start Num: 246

Candidate Starts for Espica\_36:

(Start: 246 @28114 has 877 MA's), (379, 27880), (395, 27850), (399, 27841), (400, 27838), (420, 27793), (425, 27781), (444, 27730), (479, 27628), (496, 27607), (539, 27535), (554, 27490), (556, 27487), (574, 27445), (577, 27439), (585, 27424), (598, 27397), (646, 27292), (652, 27283), (662, 27265), (683, 27226), (716, 27169), (743, 27046), (753, 26998), (783, 26893), (784, 26890), (810, 26833), (814, 26812), (829, 26764), (855, 26689), (886, 26620), (902, 26578), (905, 26554), (930, 26476), (946, 26419), (950, 26407), (955, 26398), (969, 26368), (978, 26350),

Gene: Espinosa\_38 Start: 28630, Stop: 26765, Start Num: 301

Candidate Starts for Espinosa\_38:

(Start: 238 @28717 has 3 MA's), (Start: 241 @28714 has 13 MA's), (Start: 301 @28630 has 110 MA's), (Start: 308 @28621 has 5 MA's), (354, 28516), (358, 28507), (375, 28477), (378, 28474), (433, 28354), (435, 28342), (438, 28336), (475, 28231), (484, 28204), (531, 28063), (536, 28057), (537, 28054), (539, 28042), (548, 28015), (549, 28012), (554, 27997), (556, 27991), (559, 27985), (586, 27952), (652, 27823), (676, 27763), (776, 27448), (779, 27439), (780, 27436), (783, 27418), (794, 27376), (796, 27370), (798, 27361), (805, 27346), (822, 27289), (878, 27130), (885, 27100), (888, 27091), (903, 27031), (906, 27007), (919, 26968), (929, 26935), (932, 26923), (947, 26863),

Gene: Espresso\_44 Start: 34640, Stop: 32814, Start Num: 246

Candidate Starts for Espresso\_44:

(Start: 246 @34640 has 877 MA's), (368, 34427), (400, 34364), (416, 34334), (422, 34313), (425, 34307), (429, 34298), (470, 34181), (479, 34154), (539, 34061), (544, 34046), (578, 33962), (580, 33959), (612, 33893), (627, 33863), (639, 33833), (662, 33788), (683, 33749), (743, 33569), (752, 33539), (753, 33521), (755, 33518), (767, 33482), (783, 33416), (814, 33335), (815, 33332), (843, 33251), (902, 33101), (903, 33098), (909, 33062), (917, 33038), (921, 33029), (925, 33017), (946, 32942), (955, 32921),

Gene: Et2Brutus\_44 Start: 30698, Stop: 28911, Start Num: 246

Candidate Starts for Et2Brutus\_44:

(Start: 246 @30698 has 877 MA's), (364, 30494), (400, 30422), (416, 30392), (425, 30365), (541, 30113), (560, 30062), (598, 29981), (619, 29936), (620, 29933), (659, 29852), (687, 29795), (715, 29753), (726, 29708), (743, 29627), (755, 29576), (767, 29540), (783, 29474), (810, 29414), (812, 29402), (846, 29300), (853, 29276), (860, 29258), (888, 29195), (901, 29168), (902, 29159), (905, 29135), (946, 29000), (950, 28988), (955, 28979),

Gene: Etaye\_62 Start: 55077, Stop: 53218, Start Num: 205

Candidate Starts for Etaye\_62:

(Start: 188 @55101 has 1 MA's), (Start: 205 @55077 has 304 MA's), (Start: 235 @55053 has 6 MA's), (Start: 250 @55047 has 2 MA's), (Start: 274 @55005 has 6 MA's), (283, 54984), (337, 54870), (342, 54864), (360, 54834), (391, 54774), (399, 54753), (421, 54699), (428, 54687), (434, 54669), (436, 54657), (476, 54552), (519, 54495), (538, 54459), (542, 54447), (551, 54423), (556, 54411), (564, 54393), (570, 54375), (580, 54357), (598, 54318), (602, 54309), (603, 54306), (604, 54303), (738,

53946), (744, 53913), (750, 53892), (777, 53799), (780, 53790), (795, 53727), (814, 53691), (815, 53688), (820, 53673), (847, 53595), (851, 53583), (858, 53562), (875, 53523), (905, 53433), (910, 53415), (912, 53409), (917, 53394), (926, 53370), (930, 53355), (931, 53352), (933, 53340), (940, 53316), (963, 53268), (972, 53244),

Gene: Etna\_38 Start: 29066, Stop: 27201, Start Num: 301

Candidate Starts for Etna\_38:

(Start: 301 @29066 has 110 MA's), (Start: 308 @29057 has 5 MA's), (432, 28793), (435, 28778), (438, 28772), (484, 28640), (501, 28586), (504, 28574), (531, 28499), (537, 28490), (539, 28478), (548, 28451), (549, 28448), (554, 28433), (556, 28427), (562, 28415), (605, 28346), (718, 28097), (776, 27884), (779, 27875), (780, 27872), (783, 27854), (794, 27812), (822, 27725), (878, 27566), (885, 27536), (903, 27467), (906, 27443), (919, 27404), (929, 27371), (932, 27359),

Gene: Etta\_38 Start: 28616, Stop: 26751, Start Num: 301

Candidate Starts for Etta\_38:

(Start: 238 @28703 has 3 MA's), (Start: 301 @28616 has 110 MA's), (Start: 308 @28607 has 5 MA's), (354, 28502), (358, 28493), (375, 28463), (378, 28460), (433, 28340), (435, 28328), (438, 28322), (475, 28217), (484, 28190), (531, 28049), (536, 28043), (537, 28040), (539, 28028), (548, 28001), (549, 27998), (554, 27983), (556, 27977), (559, 27971), (586, 27938), (652, 27809), (676, 27749), (776, 27434), (779, 27425), (780, 27422), (783, 27404), (794, 27362), (796, 27356), (805, 27332), (822, 27275), (878, 27116), (885, 27086), (888, 27077), (903, 27017), (906, 26993), (919, 26954), (929, 26921), (932, 26909), (947, 26849),

Gene: Eugenia\_60 Start: 54399, Stop: 52540, Start Num: 205

Candidate Starts for Eugenia\_60:

(Start: 188 @54423 has 1 MA's), (Start: 205 @54399 has 304 MA's), (Start: 235 @54375 has 6 MA's), (Start: 250 @54369 has 2 MA's), (Start: 274 @54327 has 6 MA's), (283, 54306), (337, 54192), (342, 54186), (360, 54156), (391, 54096), (399, 54075), (421, 54021), (428, 54009), (434, 53991), (436, 53979), (476, 53874), (519, 53817), (538, 53781), (542, 53769), (552, 53742), (564, 53715), (570, 53697), (580, 53679), (598, 53640), (602, 53631), (603, 53628), (738, 53268), (744, 53235), (750, 53214), (777, 53121), (780, 53112), (795, 53049), (814, 53013), (815, 53010), (820, 52995), (847, 52917), (851, 52905), (858, 52884), (875, 52845), (905, 52755), (910, 52737), (912, 52731), (917, 52716), (926, 52692), (930, 52677), (931, 52674), (933, 52662), (940, 52638), (963, 52590), (972, 52566),

Gene: Eula\_43 Start: 29571, Stop: 31445, Start Num: 246

Candidate Starts for Eula\_43:

(Start: 243 @29568 has 7 MA's), (Start: 246 @29571 has 877 MA's), (287, 29640), (Start: 301 @29661 has 110 MA's), (400, 29841), (429, 29907), (444, 29949), (585, 30243), (646, 30378), (696, 30477), (731, 30600), (743, 30660), (746, 30666), (755, 30711), (764, 30741), (774, 30777), (783, 30813), (813, 30906), (844, 30999), (874, 31077), (902, 31149), (909, 31188), (924, 31230), (929, 31248), (946, 31308), (955, 31329),

Gene: Euphoria\_43 Start: 34128, Stop: 32302, Start Num: 246

Candidate Starts for Euphoria\_43:

(Start: 246 @34128 has 877 MA's), (368, 33915), (374, 33900), (400, 33852), (416, 33822), (422, 33801), (425, 33795), (429, 33786), (470, 33669), (479, 33642), (539, 33549), (544, 33534), (556, 33501), (578, 33450), (580, 33447), (612, 33381), (627, 33351), (639, 33321), (662, 33276), (683, 33237), (743, 33057), (752, 33027), (753, 33009), (755, 33006), (767, 32970), (783, 32904), (814, 32823), (815, 32820), (843, 32739), (902, 32589), (903, 32586), (909, 32550), (917, 32526), (921, 32517), (925, 32505), (930, 32487), (932, 32478), (946, 32430), (955, 32409),

Gene: Euratis\_35 Start: 26897, Stop: 28750, Start Num: 246

Candidate Starts for Euratis\_35:

(Start: 246 @26897 has 877 MA's), (267, 26918), (295, 26978), (319, 27011), (364, 27098), (389, 27146), (416, 27200), (417, 27203), (422, 27221), (425, 27227), (442, 27275), (467, 27344), (478, 27377), (541, 27476), (563, 27533), (568, 27548), (578, 27575), (585, 27587), (592, 27605), (611, 27641), (632, 27683), (635, 27692), (654, 27734), (659, 27740), (690, 27800), (694, 27809), (731, 27938), (743, 27998), (753, 28049), (760, 28064), (774, 28121), (776, 28127), (777, 28130), (780, 28139), (783, 28157), (786, 28172), (792, 28202), (812, 28256), (844, 28352), (878, 28439), (898, 28481), (905, 28526), (909, 28541), (912, 28550), (922, 28577), (930, 28604), (946, 28661), (948, 28667), (955, 28682), (962, 28691),

Gene: Eurydice\_46 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Eurydice\_46:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Evaa\_50 Start: 46072, Stop: 44267, Start Num: 241

Candidate Starts for Evaa\_50:

(Start: 211 @46111 has 1 MA's), (Start: 241 @46072 has 13 MA's), (267, 46036), (314, 45955), (318, 45949), (337, 45895), (366, 45853), (453, 45658), (462, 45631), (476, 45592), (519, 45535), (538, 45499), (551, 45463), (603, 45346), (724, 45055), (732, 45016), (738, 44992), (739, 44986), (744, 44959), (748, 44947), (775, 44854), (777, 44848), (780, 44839), (795, 44776), (814, 44740), (820, 44722), (847, 44644), (851, 44632), (858, 44611), (875, 44572), (898, 44527), (903, 44503), (912, 44458), (926, 44419), (930, 44404), (940, 44365), (972, 44293),

Gene: EvilGenius\_47 Start: 33208, Stop: 31421, Start Num: 246

Candidate Starts for EvilGenius\_47:

(Start: 246 @33208 has 877 MA's), (366, 33001), (368, 32995), (375, 32980), (383, 32965), (402, 32929), (416, 32902), (425, 32875), (433, 32854), (461, 32773), (479, 32722), (539, 32629), (556, 32581), (560, 32572), (568, 32557), (598, 32491), (659, 32362), (662, 32356), (743, 32137), (755, 32086), (766, 32053), (767, 32050), (783, 31984), (793, 31945), (810, 31924), (831, 31849), (834, 31837), (853, 31786), (880, 31723), (888, 31705), (902, 31669), (905, 31645), (930, 31567), (946, 31510), (950, 31498), (955, 31489),

Gene: Exile\_36 Start: 30877, Stop: 32721, Start Num: 245

Candidate Starts for Exile\_36:

(Start: 245 @30877 has 74 MA's), (391, 31123), (567, 31516), (585, 31558), (591, 31573), (598, 31585), (635, 31663), (646, 31690), (653, 31702), (659, 31711), (717, 31849), (743, 31969), (752, 31999), (783, 32122), (791, 32152), (813, 32215), (815, 32224), (905, 32482), (922, 32533), (924, 32539), (929, 32557), (946, 32617),

Gene: Expelliarmus\_42 Start: 30600, Stop: 28756, Start Num: 246

Candidate Starts for Expelliarmus\_42:

(139, 30765), (Start: 246 @30600 has 877 MA's), (280, 30549), (347, 30426), (364, 30396), (383, 30357), (400, 30324), (416, 30294), (422, 30273), (425, 30267), (429, 30258), (461, 30165), (479, 30114), (539, 30018), (548, 29991), (554, 29973), (556, 29970), (560, 29961), (585, 29907), (598, 29880), (620, 29832), (646, 29775), (662, 29748), (687, 29697), (698, 29682), (740, 29535), (743, 29514), (752, 29484), (753, 29466), (755, 29463), (762, 29448), (767, 29427), (771, 29418), (776, 29391), (780, 29379), (783, 29361), (814, 29280), (818, 29268), (834, 29214), (849, 29178), (861, 29142), (876, 29109), (886, 29088), (888, 29082), (903, 29043), (905, 29022), (910, 29004), (946, 28887), (950, 28875),



Gene: Exploradora\_39 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for Exploradora\_39:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: ExplosioNervosa\_45 Start: 31573, Stop: 29780, Start Num: 246

Candidate Starts for ExplosioNervosa\_45:

(Start: 246 @31573 has 877 MA's), (261, 31564), (280, 31522), (346, 31402), (347, 31399), (372, 31351), (402, 31291), (417, 31261), (420, 31249), (425, 31237), (479, 31084), (539, 30991), (598, 30853), (612, 30823), (687, 30664), (697, 30652), (714, 30625), (740, 30517), (743, 30496), (780, 30361), (783, 30343), (814, 30262), (827, 30220), (853, 30145), (886, 30070), (902, 30028), (930, 29926), (946, 29869), (950, 29857), (955, 29848),

Gene: Eyeball\_46 Start: 35014, Stop: 33227, Start Num: 246

Candidate Starts for Eyeball\_46:

(Start: 246 @35014 has 877 MA's), (368, 34801), (374, 34786), (416, 34708), (422, 34687), (425, 34681), (429, 34672), (470, 34555), (479, 34528), (539, 34435), (544, 34420), (578, 34336), (580, 34333), (612, 34267), (627, 34237), (639, 34207), (662, 34162), (683, 34123), (743, 33943), (753, 33895), (767, 33856), (783, 33790), (812, 33718), (814, 33709), (843, 33625), (876, 33538), (917, 33412), (922, 33400), (946, 33316), (948, 33310),

Gene: FF47\_43 Start: 34250, Stop: 31839, Start Num: 44

Candidate Starts for FF47\_43:

(Start: 44 @34250 has 1 MA's), (48, 34241), (Start: 59 @34196 has 1 MA's), (Start: 64 @34184 has 1 MA's), (Start: 77 @34145 has 1 MA's), (138, 33986), (Start: 148 @33956 has 1 MA's), (179, 33926), (291, 33758), (354, 33638), (403, 33536), (435, 33455), (457, 33395), (481, 33329), (526, 33197), (541, 33149), (598, 33077), (605, 33068), (611, 33056), (660, 32987), (736, 32774), (747, 32720), (769, 32639), (776, 32606), (792, 32540), (794, 32534), (796, 32528), (797, 32522), (805, 32498), (815, 32465), (820, 32450), (822, 32441), (878, 32282), (882, 32270), (939, 32042), (947, 32015), (976, 31946),

Gene: Fajezeel\_47 Start: 35124, Stop: 33337, Start Num: 246

Candidate Starts for Fajezeel\_47:

(Start: 246 @35124 has 877 MA's), (368, 34911), (374, 34896), (400, 34848), (416, 34818), (422, 34797), (425, 34791), (429, 34782), (470, 34665), (479, 34638), (539, 34545), (544, 34530), (556, 34497), (578, 34446), (580, 34443), (612, 34377), (627, 34347), (639, 34317), (662, 34272), (683, 34233), (743, 34053), (753, 34005), (767, 33966), (783, 33900), (812, 33828), (814, 33819), (843, 33735), (876, 33648), (917, 33522), (922, 33510), (946, 33426), (948, 33420),

Gene: Fameo\_44 Start: 31472, Stop: 29685, Start Num: 246

Candidate Starts for Fameo\_44:

(54, 31850), (119, 31661), (135, 31622), (Start: 246 @31472 has 877 MA's), (364, 31268), (366, 31265), (368, 31259), (375, 31244), (383, 31229), (400, 31196), (402, 31193), (416, 31166), (425, 31139), (433, 31118), (479, 30986), (539, 30893), (551, 30857), (556, 30845), (560, 30836), (568, 30821), (598, 30755), (635, 30674), (659, 30626), (662, 30620), (697, 30557), (743, 30401), (755, 30350), (766, 30317), (767, 30314), (783, 30248), (793, 30209), (810, 30188), (831, 30113), (834, 30101), (880, 29987), (888, 29969), (901, 29942), (902, 29933), (905, 29909), (930, 29831), (946,

29774), (950, 29762), (955, 29753),

Gene: Fanaw\_52 Start: 53739, Stop: 51916, Start Num: 197

Candidate Starts for Fanaw\_52:

(Start: 182 @53757 has 4 MA's), (Start: 197 @53739 has 27 MA's), (Start: 250 @53715 has 2 MA's), (Start: 274 @53673 has 6 MA's), (283, 53652), (329, 53565), (387, 53460), (399, 53433), (406, 53418), (434, 53352), (445, 53322), (448, 53313), (453, 53310), (454, 53307), (519, 53187), (531, 53169), (538, 53151), (542, 53139), (552, 53112), (580, 53049), (598, 53010), (602, 53001), (603, 52998), (615, 52968), (633, 52932), (724, 52707), (725, 52704), (732, 52668), (738, 52644), (744, 52611), (775, 52503), (777, 52497), (780, 52488), (814, 52389), (815, 52386), (820, 52371), (827, 52347), (847, 52293), (851, 52281), (858, 52260), (861, 52251), (875, 52221), (888, 52191), (901, 52164), (905, 52131), (912, 52107), (926, 52068), (931, 52050), (933, 52038), (940, 52014), (956, 51972), (963, 51966), (972, 51942),

Gene: Fang\_62 Start: 54292, Stop: 52433, Start Num: 205

Candidate Starts for Fang\_62:

(Start: 188 @54316 has 1 MA's), (Start: 205 @54292 has 304 MA's), (Start: 235 @54268 has 6 MA's), (Start: 250 @54262 has 2 MA's), (Start: 274 @54220 has 6 MA's), (283, 54199), (337, 54085), (342, 54079), (360, 54049), (391, 53989), (399, 53968), (421, 53914), (428, 53902), (434, 53884), (436, 53872), (476, 53767), (519, 53710), (538, 53674), (542, 53662), (552, 53635), (564, 53608), (570, 53590), (580, 53572), (598, 53533), (602, 53524), (603, 53521), (712, 53263), (738, 53161), (744, 53128), (750, 53107), (777, 53014), (780, 53005), (795, 52942), (814, 52906), (815, 52903), (820, 52888), (847, 52810), (851, 52798), (858, 52777), (875, 52738), (905, 52648), (910, 52630), (912, 52624), (917, 52609), (926, 52585), (930, 52570), (931, 52567), (933, 52555), (940, 52531), (963, 52483), (972, 52459),

Gene: Farber\_48 Start: 31846, Stop: 30032, Start Num: 246

Candidate Starts for Farber\_48:

(Start: 246 @31846 has 877 MA's), (275, 31807), (280, 31795), (364, 31642), (371, 31627), (400, 31570), (425, 31513), (429, 31504), (444, 31462), (461, 31411), (479, 31360), (521, 31306), (539, 31267), (556, 31219), (568, 31195), (585, 31156), (598, 31129), (612, 31099), (654, 31006), (662, 30994), (686, 30946), (697, 30931), (743, 30775), (755, 30724), (766, 30691), (767, 30688), (783, 30622), (793, 30583), (815, 30511), (827, 30472), (834, 30448), (843, 30430), (853, 30397), (864, 30370), (888, 30316), (905, 30256), (930, 30178), (946, 30121), (950, 30109), (955, 30100),

Gene: FarmerDoug\_38 Start: 28918, Stop: 27050, Start Num: 301

Candidate Starts for FarmerDoug\_38:

(Start: 182 @29086 has 4 MA's), (214, 29041), (Start: 250 @28996 has 2 MA's), (Start: 301 @28918 has 110 MA's), (Start: 308 @28909 has 5 MA's), (430, 28651), (432, 28645), (435, 28630), (438, 28624), (484, 28492), (501, 28438), (504, 28426), (531, 28351), (537, 28342), (539, 28330), (548, 28303), (549, 28300), (554, 28285), (556, 28279), (562, 28267), (585, 28243), (776, 27736), (779, 27727), (780, 27724), (783, 27706), (794, 27664), (822, 27574), (878, 27415), (885, 27385), (903, 27316), (906, 27292), (908, 27286), (919, 27253), (929, 27220), (932, 27208),

Gene: Fascinus\_41 Start: 33978, Stop: 32152, Start Num: 246

Candidate Starts for Fascinus\_41:

(Start: 246 @33978 has 877 MA's), (368, 33765), (374, 33750), (400, 33702), (416, 33672), (422, 33651), (425, 33645), (429, 33636), (470, 33519), (479, 33492), (539, 33399), (544, 33384), (556, 33351), (578, 33300), (580, 33297), (612, 33231), (639, 33171), (662, 33126), (683, 33087), (743, 32907), (753, 32859), (767, 32820), (783, 32754), (793, 32715), (810, 32694), (814, 32673), (820, 32655), (843, 32589), (902, 32439), (903, 32436), (909, 32400), (917, 32376), (921, 32367), (925, 32355), (932, 32328), (946, 32280), (955, 32259),

Gene: Fayely\_45 Start: 31516, Stop: 29723, Start Num: 246

Candidate Starts for Fayely\_45:

(Start: 246 @31516 has 877 MA's), (261, 31507), (280, 31465), (346, 31345), (347, 31342), (372, 31294), (402, 31234), (417, 31204), (420, 31192), (425, 31180), (479, 31027), (539, 30934), (598, 30796), (612, 30766), (687, 30607), (697, 30595), (714, 30568), (740, 30460), (743, 30439), (780, 30304), (783, 30286), (814, 30205), (827, 30163), (853, 30088), (886, 30013), (902, 29971), (930, 29869), (946, 29812), (950, 29800), (955, 29791),

Gene: Faze9\_56 Start: 52623, Stop: 50794, Start Num: 205

Candidate Starts for Faze9\_56:

(Start: 205 @52623 has 304 MA's), (Start: 250 @52596 has 2 MA's), (269, 52566), (Start: 274 @52554 has 6 MA's), (286, 52527), (287, 52524), (293, 52515), (318, 52497), (366, 52401), (391, 52350), (400, 52326), (411, 52302), (463, 52164), (469, 52149), (472, 52140), (476, 52128), (519, 52071), (538, 52035), (542, 52023), (551, 51999), (588, 51915), (602, 51885), (603, 51882), (615, 51852), (680, 51708), (707, 51642), (724, 51591), (727, 51570), (732, 51552), (744, 51495), (763, 51438), (771, 51411), (777, 51381), (780, 51372), (795, 51306), (812, 51279), (814, 51270), (820, 51252), (827, 51228), (847, 51174), (851, 51162), (858, 51141), (888, 51072), (905, 51012), (910, 50994), (922, 50961), (926, 50949), (930, 50934), (931, 50931), (933, 50919), (940, 50895), (941, 50892), (963, 50844), (965, 50841), (972, 50820), (979, 50799),

Gene: Feastonyeet\_44 Start: 33868, Stop: 31490, Start Num: 46

Candidate Starts for Feastonyeet\_44:

(Start: 46 @33868 has 13 MA's), (63, 33808), (80, 33766), (93, 33727), (123, 33637), (138, 33607), (145, 33586), (179, 33562), (Start: 232 @33484 has 3 MA's), (Start: 238 @33478 has 3 MA's), (Start: 241 @33475 has 13 MA's), (267, 33445), (275, 33427), (282, 33409), (305, 33370), (Start: 308 @33367 has 5 MA's), (329, 33310), (343, 33286), (354, 33271), (389, 33208), (398, 33184), (402, 33175), (403, 33169), (406, 33163), (420, 33130), (430, 33109), (435, 33088), (499, 32905), (526, 32830), (539, 32788), (605, 32701), (633, 32677), (643, 32653), (647, 32644), (657, 32623), (682, 32572), (683, 32569), (690, 32554), (702, 32533), (736, 32407), (747, 32359), (749, 32350), (760, 32308), (783, 32215), (792, 32179), (794, 32173), (796, 32167), (797, 32161), (815, 32104), (822, 32080), (856, 31975), (858, 31972), (889, 31879), (893, 31861), (903, 31822), (911, 31780), (920, 31756), (929, 31726), (940, 31678), (947, 31654), (958, 31630), (968, 31609), (1004, 31522), (1009, 31510),

Gene: Fenn\_46 Start: 36445, Stop: 34658, Start Num: 246

Candidate Starts for Fenn\_46:

(Start: 246 @36445 has 877 MA's), (368, 36232), (374, 36217), (400, 36169), (416, 36139), (425, 36112), (429, 36103), (470, 35986), (479, 35959), (539, 35866), (544, 35851), (556, 35818), (578, 35767), (580, 35764), (612, 35698), (639, 35638), (662, 35593), (683, 35554), (743, 35374), (753, 35326), (767, 35287), (783, 35221), (812, 35149), (814, 35140), (843, 35056), (876, 34969), (917, 34843), (922, 34831), (946, 34747), (948, 34741),

Gene: Fernando\_48 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for Fernando\_48:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (686, 30952), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827, 30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: Fibonacci\_44 Start: 30330, Stop: 28543, Start Num: 246

Candidate Starts for Fibonacci\_44:

(Start: 246 @30330 has 877 MA's), (364, 30126), (400, 30054), (416, 30024), (425, 29997), (541, 29745), (560, 29694), (598, 29613), (619, 29568), (620, 29565), (659, 29484), (687, 29427), (715, 29385), (726, 29340), (743, 29259), (755, 29208), (767, 29172), (783, 29106), (810, 29046), (812, 29034), (846, 28932), (853, 28908), (860, 28890), (888, 28827), (901, 28800), (902, 28791), (905, 28767), (946, 28632), (950, 28620), (955, 28611),

Gene: Figueroism\_39 Start: 28924, Stop: 27059, Start Num: 301

Candidate Starts for Figueroism\_39:

(Start: 238 @29011 has 3 MA's), (Start: 241 @29008 has 13 MA's), (Start: 301 @28924 has 110 MA's), (Start: 308 @28915 has 5 MA's), (354, 28810), (358, 28801), (375, 28771), (378, 28768), (433, 28648), (435, 28636), (438, 28630), (475, 28525), (484, 28498), (531, 28357), (536, 28351), (537, 28348), (539, 28336), (548, 28309), (549, 28306), (554, 28291), (556, 28285), (559, 28279), (586, 28246), (652, 28117), (676, 28057), (776, 27742), (779, 27733), (780, 27730), (783, 27712), (794, 27670), (796, 27664), (798, 27655), (805, 27640), (822, 27583), (878, 27424), (885, 27394), (888, 27385), (903, 27325), (906, 27301), (919, 27262), (929, 27229), (932, 27217), (947, 27157),

Gene: Finalfrontier\_43 Start: 30430, Stop: 32304, Start Num: 246

Candidate Starts for Finalfrontier\_43:

(Start: 243 @30427 has 7 MA's), (Start: 246 @30430 has 877 MA's), (287, 30499), (Start: 301 @30520 has 110 MA's), (400, 30700), (429, 30766), (444, 30808), (585, 31102), (646, 31237), (696, 31336), (731, 31459), (743, 31519), (746, 31525), (755, 31570), (762, 31585), (764, 31600), (774, 31636), (783, 31672), (813, 31765), (844, 31858), (874, 31936), (902, 32008), (909, 32047), (924, 32089), (929, 32107), (946, 32167), (955, 32188),

Gene: Finny\_38 Start: 28772, Stop: 26907, Start Num: 299

Candidate Starts for Finny\_38:

(Start: 299 @28772 has 38 MA's), (344, 28673), (379, 28613), (403, 28562), (435, 28484), (438, 28478), (454, 28433), (455, 28430), (456, 28427), (469, 28388), (489, 28328), (531, 28205), (537, 28196), (539, 28184), (543, 28172), (549, 28154), (556, 28133), (562, 28121), (658, 27950), (724, 27782), (771, 27617), (779, 27581), (783, 27560), (794, 27518), (822, 27431), (836, 27386), (872, 27287), (885, 27242), (903, 27173), (906, 27149), (917, 27116), (947, 27005),

Gene: FiringLine\_44 Start: 31266, Stop: 29479, Start Num: 246

Candidate Starts for FiringLine\_44:

(102, 31521), (Start: 246 @31266 has 877 MA's), (364, 31062), (366, 31059), (368, 31053), (375, 31038), (383, 31023), (400, 30990), (402, 30987), (416, 30960), (425, 30933), (433, 30912), (444, 30882), (479, 30780), (539, 30687), (556, 30639), (560, 30630), (568, 30615), (598, 30549), (635, 30468), (659, 30420), (662, 30414), (697, 30351), (726, 30276), (743, 30195), (755, 30144), (766, 30111), (767, 30108), (783, 30042), (793, 30003), (810, 29982), (831, 29907), (837, 29889), (853, 29844), (864, 29817), (880, 29781), (886, 29769), (888, 29763), (902, 29727), (905, 29703), (930, 29625), (946, 29568), (950, 29556), (955, 29547),

Gene: First\_0044 Start: 31142, Stop: 29355, Start Num: 246

Candidate Starts for First\_0044:

(51, 31559), (Start: 246 @31142 has 877 MA's), (364, 30938), (366, 30935), (368, 30929), (375, 30914), (383, 30899), (400, 30866), (402, 30863), (416, 30836), (425, 30809), (433, 30788), (444, 30758), (479, 30656), (539, 30563), (542, 30554), (556, 30515), (560, 30506), (568, 30491), (598, 30425), (635, 30344), (659, 30296), (662, 30290), (697, 30227), (726, 30152), (743, 30071), (766, 29987), (767, 29984), (783, 29918), (793, 29879), (810, 29858), (831, 29783), (837, 29765), (843, 29753), (853, 29720), (864, 29693), (880, 29657), (888, 29639), (902, 29603), (905, 29579), (924, 29522), (930, 29501), (946, 29444), (950, 29432), (955, 29423),

Gene: FlameThrower\_40 Start: 29788, Stop: 31659, Start Num: 246

Candidate Starts for FlameThrower\_40:

(Start: 246 @29788 has 877 MA's), (287, 29857), (346, 29962), (352, 29971), (429, 30124), (467, 30220), (470, 30229), (497, 30274), (550, 30379), (566, 30415), (585, 30460), (591, 30475), (635, 30568), (743, 30874), (755, 30925), (762, 30940), (774, 30991), (783, 31027), (813, 31120), (834, 31192), (874, 31291), (902, 31363), (905, 31387), (924, 31444), (939, 31498), (946, 31522), (955, 31543),

Gene: Flare16\_44 Start: 31360, Stop: 29573, Start Num: 246

Candidate Starts for Flare16\_44:

(Start: 246 @31360 has 877 MA's), (364, 31156), (366, 31153), (368, 31147), (383, 31117), (400, 31084), (402, 31081), (416, 31054), (425, 31027), (444, 30976), (479, 30874), (539, 30781), (556, 30733), (560, 30724), (568, 30709), (598, 30643), (635, 30562), (659, 30514), (726, 30370), (743, 30289), (755, 30238), (766, 30205), (783, 30136), (793, 30097), (810, 30076), (814, 30055), (818, 30043), (886, 29863), (888, 29857), (902, 29821), (905, 29797), (930, 29719), (946, 29662), (950, 29650),

Gene: Flaverint\_45 Start: 30777, Stop: 28990, Start Num: 246

Candidate Starts for Flaverint\_45:

(Start: 246 @30777 has 877 MA's), (364, 30573), (400, 30501), (416, 30471), (425, 30444), (541, 30192), (560, 30141), (598, 30060), (619, 30015), (687, 29874), (715, 29832), (726, 29787), (743, 29706), (755, 29655), (767, 29619), (783, 29553), (810, 29493), (812, 29481), (846, 29379), (853, 29355), (860, 29337), (888, 29274), (901, 29247), (902, 29238), (905, 29214), (946, 29079), (950, 29067), (955, 29058),

Gene: Floop\_49 Start: 32023, Stop: 33888, Start Num: 244

Candidate Starts for Floop\_49:

(Start: 244 @32023 has 11 MA's), (416, 32320), (467, 32464), (541, 32617), (562, 32668), (585, 32725), (654, 32872), (659, 32878), (687, 32935), (692, 32941), (726, 33055), (743, 33136), (760, 33199), (773, 33247), (774, 33253), (784, 33292), (829, 33436), (832, 33448), (840, 33463), (844, 33475), (876, 33559), (910, 33667), (926, 33712), (946, 33784), (996, 33883),

Gene: Florean\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for Florean\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: FluffyNinja\_62 Start: 54312, Stop: 52453, Start Num: 205

Candidate Starts for FluffyNinja\_62:

(Start: 188 @54336 has 1 MA's), (Start: 205 @54312 has 304 MA's), (Start: 235 @54288 has 6 MA's), (Start: 250 @54282 has 2 MA's), (Start: 274 @54240 has 6 MA's), (283, 54219), (337, 54105), (342, 54099), (360, 54069), (391, 54009), (399, 53988), (421, 53934), (428, 53922), (434, 53904), (436, 53892), (476, 53787), (519, 53730), (538, 53694), (542, 53682), (551, 53658), (556, 53646), (564, 53628), (570, 53610), (580, 53592), (598, 53553), (602, 53544), (603, 53541), (604, 53538), (738, 53181), (744, 53148), (750, 53127), (777, 53034), (780, 53025), (795, 52962), (814, 52926), (815, 52923), (820, 52908), (847, 52830), (851, 52818), (858, 52797), (875, 52758), (905, 52668), (910, 52650), (912, 52644), (917, 52629), (926, 52605), (930, 52590), (931, 52587), (933, 52575), (940, 52551), (963, 52503), (972, 52479),

Gene: Flux\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for Flux\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: FlyCatcher\_47 Start: 33412, Stop: 31577, Start Num: 246

Candidate Starts for FlyCatcher\_47:

(Start: 246 @33412 has 877 MA's), (267, 33391), (318, 33301), (387, 33163), (422, 33085), (425, 33079), (479, 32926), (537, 32842), (539, 32830), (554, 32785), (558, 32782), (585, 32722), (610, 32671), (614, 32659), (659, 32569), (683, 32524), (716, 32455), (726, 32413), (740, 32353), (743, 32332), (753, 32284), (771, 32236), (776, 32209), (777, 32206), (783, 32179), (793, 32140), (815, 32071), (827, 32032), (843, 31990), (844, 31987), (853, 31957), (888, 31861), (901, 31834), (909, 31786), (910, 31783), (946, 31666), (950, 31654), (955, 31645),

Gene: ForDig\_53 Start: 52484, Stop: 50643, Start Num: 199

Candidate Starts for ForDig\_53:

(Start: 199 @52484 has 2 MA's), (267, 52427), (Start: 274 @52412 has 6 MA's), (314, 52346), (366, 52238), (391, 52187), (393, 52184), (400, 52163), (421, 52112), (423, 52106), (433, 52088), (448, 52046), (453, 52043), (463, 52013), (519, 51920), (538, 51884), (542, 51872), (564, 51818), (591, 51758), (602, 51734), (603, 51731), (633, 51665), (725, 51431), (727, 51413), (732, 51395), (744, 51338), (775, 51230), (777, 51224), (780, 51215), (795, 51152), (814, 51116), (815, 51113), (820, 51098), (847, 51020), (851, 51008), (858, 50987), (860, 50981), (875, 50948), (888, 50918), (898, 50903), (902, 50882), (905, 50858), (912, 50834), (926, 50795), (929, 50783), (930, 50780), (931, 50777), (933, 50765), (940, 50741), (972, 50669), (979, 50648),

Gene: ForGetIt\_38 Start: 30371, Stop: 28527, Start Num: 246

Candidate Starts for ForGetIt\_38:

(Start: 246 @30371 has 877 MA's), (280, 30320), (318, 30260), (347, 30197), (364, 30167), (366, 30164), (395, 30107), (400, 30095), (416, 30065), (425, 30038), (461, 29936), (467, 29921), (479, 29885), (523, 29825), (539, 29789), (556, 29741), (594, 29657), (598, 29651), (633, 29579), (646, 29546), (654, 29531), (662, 29519), (712, 29420), (743, 29285), (752, 29255), (753, 29237), (755, 29234), (767, 29198), (771, 29189), (774, 29168), (777, 29159), (783, 29132), (784, 29129), (810, 29072), (814, 29051), (853, 28934), (876, 28880), (880, 28871), (888, 28853), (910, 28775), (929, 28718), (939, 28682), (946, 28658), (950, 28646),

Gene: Forsytheast\_44 Start: 34479, Stop: 32653, Start Num: 246

Candidate Starts for Forsytheast\_44:

(Start: 246 @34479 has 877 MA's), (368, 34266), (374, 34251), (416, 34173), (422, 34152), (425, 34146), (429, 34137), (470, 34020), (479, 33993), (539, 33900), (544, 33885), (551, 33864), (556, 33852), (578, 33801), (580, 33798), (612, 33732), (627, 33702), (639, 33672), (662, 33627), (683, 33588), (743, 33408), (753, 33360), (767, 33321), (783, 33255), (793, 33216), (810, 33195), (814, 33174), (820, 33156), (843, 33090), (902, 32940), (903, 32937), (909, 32901), (917, 32877), (921, 32868), (925, 32856), (946, 32781), (955, 32760),

Gene: Fortunato\_54 Start: 54011, Stop: 52170, Start Num: 182

Candidate Starts for Fortunato\_54:

(Start: 182 @54011 has 4 MA's), (Start: 197 @53993 has 27 MA's), (Start: 250 @53969 has 2 MA's), (267, 53942), (Start: 274 @53927 has 6 MA's), (283, 53906), (329, 53819), (387, 53714), (399, 53687), (406, 53672), (434, 53606), (445, 53576), (448, 53567), (453, 53564), (454, 53561), (519, 53441), (531, 53423), (538, 53405), (542, 53393), (552, 53366), (580, 53303), (598, 53264), (602, 53255), (603, 53252), (615, 53222), (633, 53186), (724, 52961), (725, 52958), (732, 52922), (744, 52865), (775, 52757), (777, 52751), (780, 52742), (814, 52643), (815, 52640), (820, 52625), (847, 52547),

(851, 52535), (858, 52514), (861, 52505), (875, 52475), (888, 52445), (901, 52418), (905, 52385), (912, 52361), (926, 52322), (931, 52304), (933, 52292), (940, 52268), (956, 52226), (963, 52220), (972, 52196),

Gene: Forza\_174 Start: 99637, Stop: 97856, Start Num: 255

Candidate Starts for Forza\_174:

(Start: 255 @99637 has 4 MA's), (280, 99592), (292, 99565), (346, 99472), (382, 99412), (383, 99409), (389, 99400), (399, 99376), (418, 99334), (419, 99331), (435, 99286), (458, 99244), (477, 99190), (539, 99106), (571, 99022), (585, 98995), (591, 98980), (668, 98821), (683, 98797), (690, 98782), (697, 98773), (728, 98686), (735, 98659), (736, 98656), (740, 98635), (743, 98614), (754, 98563), (780, 98479), (785, 98452), (791, 98419), (803, 98377), (840, 98266), (849, 98239), (862, 98203), (866, 98194), (867, 98191), (871, 98182), (906, 98062), (912, 98041), (914, 98035), (926, 98002), (931, 97984), (932, 97978), (942, 97945), (946, 97930), (963, 97906), (965, 97903), (977, 97879),

Gene: Fozzie\_61 Start: 54537, Stop: 52678, Start Num: 205

Candidate Starts for Fozzie\_61:

(Start: 188 @54561 has 1 MA's), (Start: 205 @54537 has 304 MA's), (Start: 235 @54513 has 6 MA's), (Start: 250 @54507 has 2 MA's), (Start: 274 @54465 has 6 MA's), (283, 54444), (337, 54330), (342, 54324), (360, 54294), (391, 54234), (399, 54213), (421, 54159), (428, 54147), (434, 54129), (436, 54117), (476, 54012), (519, 53955), (538, 53919), (542, 53907), (551, 53883), (556, 53871), (564, 53853), (570, 53835), (580, 53817), (598, 53778), (602, 53769), (603, 53766), (604, 53763), (738, 53406), (744, 53373), (750, 53352), (777, 53259), (780, 53250), (795, 53187), (814, 53151), (815, 53148), (820, 53133), (847, 53055), (851, 53043), (858, 53022), (875, 52983), (905, 52893), (910, 52875), (912, 52869), (917, 52854), (926, 52830), (930, 52815), (931, 52812), (933, 52800), (940, 52776), (963, 52728), (972, 52704),

Gene: Francis47\_44 Start: 35450, Stop: 33624, Start Num: 246

Candidate Starts for Francis47\_44:

(Start: 246 @35450 has 877 MA's), (368, 35237), (374, 35222), (416, 35144), (422, 35123), (425, 35117), (429, 35108), (470, 34991), (479, 34964), (539, 34871), (544, 34856), (556, 34823), (578, 34772), (580, 34769), (612, 34703), (627, 34673), (639, 34643), (662, 34598), (683, 34559), (743, 34379), (752, 34349), (753, 34331), (755, 34328), (767, 34292), (783, 34226), (814, 34145), (815, 34142), (843, 34061), (899, 33926), (902, 33911), (903, 33908), (909, 33872), (917, 33848), (921, 33839), (925, 33827), (932, 33800), (946, 33752), (955, 33731),

Gene: Frankicide\_59 Start: 54077, Stop: 52218, Start Num: 205

Candidate Starts for Frankicide\_59:

(Start: 188 @54101 has 1 MA's), (Start: 205 @54077 has 304 MA's), (Start: 235 @54053 has 6 MA's), (Start: 250 @54047 has 2 MA's), (Start: 274 @54005 has 6 MA's), (283, 53984), (337, 53870), (342, 53864), (360, 53834), (391, 53774), (399, 53753), (421, 53699), (428, 53687), (434, 53669), (436, 53657), (476, 53552), (519, 53495), (538, 53459), (542, 53447), (552, 53420), (556, 53411), (570, 53375), (598, 53318), (602, 53309), (603, 53306), (604, 53303), (738, 52946), (744, 52913), (750, 52892), (777, 52799), (780, 52790), (795, 52727), (814, 52691), (815, 52688), (820, 52673), (847, 52595), (851, 52583), (858, 52562), (875, 52523), (905, 52433), (910, 52415), (912, 52409), (917, 52394), (926, 52370), (930, 52355), (931, 52352), (933, 52340), (940, 52316), (963, 52268), (972, 52244),

Gene: Franklin22\_41 Start: 28031, Stop: 29905, Start Num: 246

Candidate Starts for Franklin22\_41:

(Start: 243 @28028 has 7 MA's), (Start: 246 @28031 has 877 MA's), (287, 28100), (364, 28238), (429, 28367), (434, 28382), (467, 28463), (585, 28703), (591, 28718), (607, 28748), (646, 28838), (711, 29012), (731, 29090), (743, 29150), (777, 29276), (783, 29303), (813, 29396), (834, 29468), (874, 29567), (875, 29570), (876, 29573), (924, 29720), (929, 29738), (946, 29798), (955, 29819), (968,

29843), (989, 29888),

Gene: Fred313\_45 Start: 31127, Stop: 29289, Start Num: 246

Candidate Starts for Fred313\_45:

(Start: 191 @31199 has 1 MA's), (Start: 246 @31127 has 877 MA's), (280, 31076), (364, 30923), (395, 30863), (400, 30851), (425, 30794), (429, 30785), (433, 30773), (471, 30665), (479, 30641), (539, 30545), (558, 30497), (585, 30437), (614, 30374), (646, 30305), (659, 30284), (697, 30215), (700, 30209), (716, 30170), (743, 30047), (767, 29960), (776, 29924), (783, 29894), (791, 29864), (815, 29783), (827, 29744), (834, 29720), (843, 29702), (888, 29573), (905, 29513), (946, 29378), (950, 29366), (955, 29357),

Gene: Frederick\_54 Start: 53929, Stop: 52085, Start Num: 182

Candidate Starts for Frederick\_54:

(Start: 182 @53929 has 4 MA's), (Start: 197 @53911 has 27 MA's), (Start: 250 @53884 has 2 MA's), (267, 53857), (Start: 274 @53842 has 6 MA's), (283, 53821), (329, 53734), (387, 53629), (399, 53602), (406, 53587), (434, 53521), (445, 53491), (448, 53482), (453, 53479), (454, 53476), (463, 53449), (476, 53413), (519, 53356), (531, 53338), (538, 53320), (542, 53308), (552, 53281), (580, 53218), (598, 53179), (602, 53170), (603, 53167), (615, 53137), (633, 53101), (724, 52876), (725, 52873), (732, 52837), (744, 52780), (775, 52672), (777, 52666), (780, 52657), (814, 52558), (815, 52555), (820, 52540), (847, 52462), (851, 52450), (858, 52429), (861, 52420), (875, 52390), (888, 52360), (901, 52333), (905, 52300), (912, 52276), (926, 52237), (931, 52219), (933, 52207), (940, 52183), (956, 52141), (963, 52135), (972, 52111),

Gene: FrenchFry\_57 Start: 52599, Stop: 50770, Start Num: 205

Candidate Starts for FrenchFry\_57:

(Start: 205 @52599 has 304 MA's), (Start: 250 @52572 has 2 MA's), (269, 52542), (Start: 274 @52530 has 6 MA's), (286, 52503), (287, 52500), (293, 52491), (318, 52473), (366, 52377), (391, 52326), (400, 52302), (411, 52278), (463, 52140), (472, 52116), (476, 52104), (519, 52047), (538, 52011), (542, 51999), (551, 51975), (588, 51891), (602, 51861), (603, 51858), (615, 51828), (680, 51684), (707, 51618), (721, 51579), (724, 51567), (727, 51546), (732, 51528), (744, 51471), (771, 51387), (777, 51357), (780, 51348), (795, 51282), (812, 51255), (814, 51246), (820, 51228), (827, 51204), (847, 51150), (851, 51138), (858, 51117), (888, 51048), (905, 50988), (910, 50970), (922, 50937), (926, 50925), (930, 50910), (931, 50907), (933, 50895), (940, 50871), (941, 50868), (963, 50820), (965, 50817), (972, 50796), (979, 50775),

Gene: Fresco\_51 Start: 45981, Stop: 44164, Start Num: 241

Candidate Starts for Fresco\_51:

(72, 46302), (82, 46278), (Start: 241 @45981 has 13 MA's), (267, 45945), (Start: 274 @45930 has 6 MA's), (287, 45900), (356, 45774), (417, 45651), (421, 45636), (436, 45594), (476, 45498), (538, 45405), (592, 45276), (603, 45252), (727, 44940), (732, 44922), (744, 44865), (777, 44751), (780, 44742), (795, 44679), (815, 44640), (820, 44625), (847, 44547), (851, 44535), (858, 44514), (861, 44505), (901, 44418), (906, 44382), (909, 44370), (923, 44331), (926, 44322), (930, 44307), (940, 44262), (963, 44214), (972, 44190),

Gene: Freya\_58 Start: 53738, Stop: 51879, Start Num: 205

Candidate Starts for Freya\_58:

(Start: 188 @53762 has 1 MA's), (Start: 205 @53738 has 304 MA's), (Start: 235 @53714 has 6 MA's), (Start: 250 @53708 has 2 MA's), (Start: 274 @53666 has 6 MA's), (283, 53645), (337, 53531), (342, 53525), (360, 53495), (391, 53435), (399, 53414), (421, 53360), (428, 53348), (434, 53330), (436, 53318), (476, 53213), (519, 53156), (538, 53120), (542, 53108), (552, 53081), (564, 53054), (570, 53036), (580, 53018), (598, 52979), (602, 52970), (603, 52967), (712, 52709), (738, 52607), (744, 52574), (750, 52553), (777, 52460), (780, 52451), (795, 52388), (814, 52352), (815, 52349), (820, 52334), (847, 52256), (851, 52244), (858, 52223), (875, 52184), (905, 52094), (910, 52076), (912,



52070), (917, 52055), (926, 52031), (930, 52016), (931, 52013), (933, 52001), (940, 51977), (963, 51929), (972, 51905),

Gene: FriarPreacher\_60 Start: 54124, Stop: 52265, Start Num: 205

Candidate Starts for FriarPreacher\_60:

(Start: 188 @54148 has 1 MA's), (Start: 205 @54124 has 304 MA's), (Start: 235 @54100 has 6 MA's), (Start: 250 @54094 has 2 MA's), (Start: 274 @54052 has 6 MA's), (283, 54031), (337, 53917), (342, 53911), (360, 53881), (391, 53821), (399, 53800), (421, 53746), (428, 53734), (434, 53716), (436, 53704), (476, 53599), (519, 53542), (538, 53506), (542, 53494), (551, 53470), (556, 53458), (564, 53440), (570, 53422), (580, 53404), (598, 53365), (602, 53356), (603, 53353), (604, 53350), (738, 52993), (744, 52960), (750, 52939), (777, 52846), (780, 52837), (795, 52774), (814, 52738), (815, 52735), (820, 52720), (847, 52642), (851, 52630), (858, 52609), (875, 52570), (905, 52480), (910, 52462), (912, 52456), (917, 52441), (926, 52417), (930, 52402), (931, 52399), (933, 52387), (940, 52363), (963, 52315), (972, 52291),

Gene: Fribs8\_39 Start: 31749, Stop: 29392, Start Num: 45

Candidate Starts for Fribs8\_39:

(Start: 45 @31749 has 24 MA's), (50, 31734), (57, 31698), (108, 31563), (138, 31500), (Start: 176 @31458 has 2 MA's), (185, 31446), (264, 31344), (305, 31266), (329, 31206), (386, 31113), (398, 31083), (420, 31029), (435, 30987), (458, 30924), (502, 30789), (526, 30729), (530, 30711), (559, 30645), (598, 30609), (660, 30516), (682, 30471), (698, 30444), (703, 30432), (707, 30420), (741, 30279), (773, 30159), (780, 30135), (783, 30117), (785, 30108), (792, 30081), (794, 30075), (796, 30069), (797, 30063), (805, 30039), (815, 30006), (822, 29982), (836, 29937), (859, 29871), (893, 29763), (908, 29694), (920, 29658), (939, 29583), (940, 29580), (947, 29556), (976, 29487), (1004, 29424),

Gene: Fringe\_64 Start: 54914, Stop: 53055, Start Num: 205

Candidate Starts for Fringe\_64:

(Start: 188 @54938 has 1 MA's), (Start: 205 @54914 has 304 MA's), (Start: 235 @54890 has 6 MA's), (Start: 250 @54884 has 2 MA's), (Start: 274 @54842 has 6 MA's), (283, 54821), (337, 54707), (342, 54701), (360, 54671), (391, 54611), (399, 54590), (421, 54536), (428, 54524), (434, 54506), (436, 54494), (476, 54389), (519, 54332), (538, 54296), (542, 54284), (551, 54260), (556, 54248), (564, 54230), (570, 54212), (580, 54194), (598, 54155), (602, 54146), (603, 54143), (604, 54140), (738, 53783), (744, 53750), (750, 53729), (777, 53636), (780, 53627), (795, 53564), (814, 53528), (815, 53525), (820, 53510), (847, 53432), (851, 53420), (858, 53399), (875, 53360), (905, 53270), (910, 53252), (912, 53246), (917, 53231), (926, 53207), (930, 53192), (931, 53189), (933, 53177), (940, 53153), (963, 53105), (972, 53081),

Gene: FrogHopper\_43 Start: 34120, Stop: 32291, Start Num: 246

Candidate Starts for FrogHopper\_43:

(Start: 246 @34120 has 877 MA's), (368, 33907), (374, 33892), (400, 33844), (416, 33814), (422, 33793), (425, 33787), (429, 33778), (470, 33661), (479, 33634), (539, 33541), (544, 33526), (578, 33442), (580, 33439), (612, 33373), (627, 33343), (639, 33313), (662, 33268), (683, 33229), (743, 33049), (753, 33001), (771, 32953), (780, 32914), (783, 32896), (793, 32857), (810, 32836), (814, 32815), (819, 32800), (861, 32677), (922, 32506), (929, 32482), (943, 32434), (946, 32422), (955, 32401), (959, 32395), (981, 32347), (986, 32332),

Gene: FugateOSU\_61 Start: 55083, Stop: 53224, Start Num: 205

Candidate Starts for FugateOSU\_61:

(Start: 188 @55107 has 1 MA's), (Start: 205 @55083 has 304 MA's), (Start: 235 @55059 has 6 MA's), (Start: 250 @55053 has 2 MA's), (Start: 274 @55011 has 6 MA's), (283, 54990), (337, 54876), (342, 54870), (360, 54840), (391, 54780), (399, 54759), (421, 54705), (428, 54693), (434, 54675), (436, 54663), (476, 54558), (519, 54501), (538, 54465), (542, 54453), (552, 54426), (564, 54399), (570,

54381), (580, 54363), (598, 54324), (602, 54315), (603, 54312), (712, 54054), (738, 53952), (744, 53919), (750, 53898), (777, 53805), (780, 53796), (795, 53733), (814, 53697), (815, 53694), (820, 53679), (847, 53601), (851, 53589), (858, 53568), (875, 53529), (905, 53439), (910, 53421), (912, 53415), (917, 53400), (926, 53376), (930, 53361), (931, 53358), (933, 53346), (940, 53322), (963, 53274), (972, 53250),

Gene: Fulton\_37 Start: 26991, Stop: 25126, Start Num: 299

Candidate Starts for Fulton\_37:

(Start: 299 @26991 has 38 MA's), (305, 26985), (348, 26886), (354, 26877), (368, 26853), (375, 26838), (379, 26832), (403, 26781), (406, 26778), (438, 26697), (459, 26637), (489, 26547), (493, 26544), (526, 26445), (536, 26418), (537, 26415), (539, 26403), (549, 26373), (556, 26352), (585, 26316), (658, 26169), (703, 26067), (726, 25989), (776, 25809), (783, 25779), (797, 25725), (805, 25707), (822, 25650), (831, 25623), (845, 25581), (858, 25542), (885, 25461), (888, 25452), (903, 25392), (906, 25368), (909, 25356), (912, 25347), (919, 25329), (929, 25296), (947, 25224),

Gene: Funsized\_59 Start: 56200, Stop: 54350, Start Num: 205

Candidate Starts for Funsized\_59:

(21, 56692), (39, 56611), (58, 56536), (73, 56497), (74, 56494), (190, 56221), (Start: 205 @56200 has 304 MA's), (223, 56191), (267, 56143), (273, 56131), (366, 55960), (400, 55885), (411, 55861), (434, 55807), (435, 55798), (436, 55795), (442, 55783), (445, 55777), (476, 55690), (519, 55633), (529, 55621), (538, 55597), (542, 55585), (545, 55576), (551, 55561), (552, 55558), (556, 55549), (592, 55462), (598, 55450), (603, 55438), (613, 55414), (615, 55408), (659, 55324), (695, 55228), (724, 55141), (725, 55138), (732, 55102), (739, 55072), (744, 55045), (750, 55024), (759, 54994), (775, 54937), (777, 54931), (780, 54922), (795, 54859), (814, 54823), (815, 54820), (820, 54805), (843, 54739), (847, 54727), (851, 54715), (858, 54694), (861, 54685), (865, 54676), (888, 54625), (905, 54565), (912, 54541), (917, 54526), (926, 54502), (929, 54490), (930, 54487), (931, 54484), (933, 54472), (940, 54448), (947, 54424), (948, 54421), (956, 54406), (963, 54400), (972, 54376),

Gene: Funston\_44 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Funston\_44:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Fushigi\_43 Start: 32768, Stop: 30939, Start Num: 246

Candidate Starts for Fushigi\_43:

(Start: 246 @32768 has 877 MA's), (368, 32555), (374, 32540), (416, 32462), (422, 32441), (425, 32435), (429, 32426), (470, 32309), (479, 32282), (539, 32189), (544, 32174), (556, 32141), (578, 32090), (580, 32087), (607, 32033), (612, 32021), (627, 31991), (639, 31961), (662, 31916), (683, 31877), (743, 31697), (753, 31649), (771, 31601), (780, 31562), (783, 31544), (793, 31505), (810, 31484), (814, 31463), (819, 31448), (861, 31325), (922, 31154), (929, 31130), (943, 31082), (946, 31070), (955, 31049), (959, 31043), (981, 30995), (986, 30980),

Gene: GMA2\_66 Start: 70128, Stop: 68344, Start Num: 252

Candidate Starts for GMA2\_66:

(Start: 252 @70128 has 2 MA's), (270, 70104), (319, 70014), (364, 69927), (383, 69897), (391, 69885), (418, 69822), (419, 69819), (435, 69774), (436, 69771), (438, 69768), (477, 69678), (482, 69663), (521, 69633), (539, 69594), (552, 69558), (571, 69510), (585, 69483), (591, 69468), (636, 69375), (668, 69309), (683, 69285), (740, 69126), (743, 69105), (782, 68958), (785, 68943), (790, 68913), (803, 68865), (804, 68862), (815, 68826), (829, 68781), (832, 68769), (840, 68754), (853, 68712), (867, 68679), (888, 68613), (902, 68577), (914, 68523), (917, 68514), (926, 68490), (946, 68418),

(965, 68391), (977, 68367),

Gene: GMonster\_42 Start: 33424, Stop: 31598, Start Num: 246

Candidate Starts for GMonster\_42:

(Start: 246 @33424 has 877 MA's), (368, 33211), (374, 33196), (400, 33148), (416, 33118), (422, 33097), (425, 33091), (429, 33082), (470, 32965), (479, 32938), (539, 32845), (544, 32830), (556, 32797), (578, 32746), (580, 32743), (612, 32677), (627, 32647), (639, 32617), (662, 32572), (683, 32533), (743, 32353), (753, 32305), (767, 32266), (783, 32200), (793, 32161), (810, 32140), (814, 32119), (820, 32101), (843, 32035), (902, 31885), (903, 31882), (909, 31846), (917, 31822), (921, 31813), (925, 31801), (946, 31726), (955, 31705),

Gene: GTE2\_35 Start: 32210, Stop: 29823, Start Num: 36

Candidate Starts for GTE2\_35:

(Start: 36 @32210 has 16 MA's), (63, 32147), (84, 32090), (128, 31967), (138, 31943), (Start: 241 @31811 has 13 MA's), (265, 31784), (329, 31646), (374, 31568), (398, 31520), (420, 31466), (421, 31463), (430, 31445), (435, 31424), (441, 31409), (454, 31373), (457, 31364), (458, 31361), (499, 31241), (522, 31181), (526, 31166), (559, 31082), (605, 31037), (615, 31013), (633, 31007), (643, 30983), (647, 30974), (680, 30905), (682, 30902), (683, 30899), (733, 30752), (749, 30683), (750, 30677), (760, 30641), (783, 30548), (785, 30539), (792, 30512), (794, 30506), (796, 30500), (797, 30494), (805, 30470), (815, 30437), (820, 30422), (822, 30413), (836, 30368), (856, 30308), (870, 30275), (903, 30155), (910, 30116), (911, 30113), (947, 29987), (968, 29942), (971, 29933), (995, 29873),

Gene: Gack\_40 Start: 28093, Stop: 29955, Start Num: 246

Candidate Starts for Gack\_40:

(202, 28039), (Start: 246 @28093 has 877 MA's), (267, 28114), (287, 28162), (429, 28429), (434, 28444), (467, 28525), (585, 28765), (696, 29017), (731, 29140), (743, 29200), (755, 29251), (777, 29326), (783, 29353), (813, 29446), (874, 29617), (875, 29620), (876, 29623), (903, 29692), (924, 29770), (946, 29848), (955, 29869), (968, 29893), (989, 29938),

Gene: Gadjet\_59 Start: 54012, Stop: 52195, Start Num: 247

Candidate Starts for Gadjet\_59:

(130, 54195), (Start: 247 @54012 has 43 MA's), (267, 53982), (368, 53802), (417, 53697), (433, 53649), (435, 53637), (448, 53607), (454, 53601), (476, 53538), (519, 53481), (538, 53445), (556, 53397), (603, 53292), (645, 53196), (674, 53145), (724, 53001), (732, 52962), (739, 52932), (744, 52905), (748, 52893), (775, 52797), (777, 52791), (780, 52782), (782, 52770), (807, 52698), (814, 52668), (820, 52650), (822, 52641), (847, 52572), (851, 52560), (858, 52539), (888, 52470), (898, 52455), (903, 52431), (905, 52410), (912, 52386), (926, 52347), (931, 52329), (933, 52317), (936, 52305), (940, 52293), (972, 52221),

Gene: Gadost\_45 Start: 31574, Stop: 29748, Start Num: 246

Candidate Starts for Gadost\_45:

(Start: 246 @31574 has 877 MA's), (267, 31553), (280, 31523), (295, 31493), (383, 31331), (394, 31313), (425, 31241), (429, 31232), (471, 31112), (479, 31088), (539, 30995), (558, 30947), (568, 30926), (585, 30887), (646, 30755), (659, 30734), (683, 30689), (687, 30677), (740, 30524), (743, 30503), (776, 30380), (783, 30350), (793, 30311), (814, 30245), (815, 30242), (820, 30227), (827, 30203), (834, 30179), (905, 29972), (946, 29837), (950, 29825), (955, 29816),

Gene: GaeCeo\_39 Start: 29207, Stop: 27342, Start Num: 297

Candidate Starts for GaeCeo\_39:

(Start: 297 @29207 has 18 MA's), (314, 29183), (378, 29051), (406, 28994), (430, 28940), (435, 28919), (438, 28913), (504, 28712), (537, 28628), (539, 28616), (549, 28586), (556, 28565), (562, 28553), (585, 28529), (605, 28484), (652, 28397), (673, 28352), (676, 28337), (718, 28235), (771,

28052), (780, 28013), (783, 27995), (794, 27953), (798, 27938), (822, 27866), (903, 27608), (906, 27584), (917, 27551), (947, 27440),

Gene: GageAP\_45 Start: 34414, Stop: 32588, Start Num: 246

Candidate Starts for GageAP\_45:

(Start: 246 @34414 has 877 MA's), (279, 34366), (368, 34201), (374, 34186), (416, 34108), (422, 34087), (425, 34081), (429, 34072), (470, 33955), (479, 33928), (539, 33835), (544, 33820), (578, 33736), (580, 33733), (612, 33667), (627, 33637), (639, 33607), (662, 33562), (683, 33523), (743, 33343), (752, 33313), (753, 33295), (755, 33292), (767, 33256), (783, 33190), (814, 33109), (815, 33106), (843, 33025), (902, 32875), (903, 32872), (909, 32836), (917, 32812), (921, 32803), (925, 32791), (946, 32716), (955, 32695),

Gene: Gail\_49 Start: 33012, Stop: 31219, Start Num: 246

Candidate Starts for Gail\_49:

(163, 33114), (Start: 246 @33012 has 877 MA's), (261, 33003), (277, 32970), (318, 32901), (364, 32808), (400, 32733), (402, 32730), (416, 32703), (425, 32676), (444, 32625), (471, 32547), (479, 32523), (539, 32430), (554, 32385), (598, 32292), (612, 32262), (683, 32115), (714, 32064), (726, 32016), (743, 31935), (762, 31869), (776, 31812), (783, 31782), (814, 31701), (853, 31584), (864, 31557), (902, 31467), (924, 31386), (930, 31365), (932, 31356), (946, 31308), (950, 31296), (955, 31287), (957, 31284),

Gene: Gambol\_39 Start: 27611, Stop: 29593, Start Num: 245

Candidate Starts for Gambol\_39:

(Start: 245 @27611 has 74 MA's), (347, 27785), (386, 27848), (402, 27881), (433, 27956), (521, 28184), (585, 28358), (659, 28514), (717, 28652), (737, 28739), (743, 28772), (752, 28802), (767, 28859), (783, 28925), (813, 29018), (905, 29285), (912, 29309), (946, 29420), (998, 29528),

Gene: Gandalf20\_46 Start: 35478, Stop: 33652, Start Num: 246

Candidate Starts for Gandalf20\_46:

(Start: 246 @35478 has 877 MA's), (368, 35265), (400, 35202), (416, 35172), (422, 35151), (425, 35145), (429, 35136), (470, 35019), (479, 34992), (539, 34899), (544, 34884), (551, 34863), (556, 34851), (578, 34800), (580, 34797), (612, 34731), (627, 34701), (639, 34671), (662, 34626), (683, 34587), (743, 34407), (753, 34359), (767, 34320), (783, 34254), (793, 34215), (810, 34194), (814, 34173), (820, 34155), (843, 34089), (902, 33939), (903, 33936), (909, 33900), (917, 33876), (921, 33867), (925, 33855), (932, 33828), (946, 33780), (955, 33759),

Gene: Garak\_47 Start: 29791, Stop: 27950, Start Num: 246

Candidate Starts for Garak\_47:

(Start: 246 @29791 has 877 MA's), (364, 29587), (400, 29512), (402, 29509), (416, 29482), (420, 29467), (425, 29455), (444, 29404), (475, 29314), (479, 29302), (539, 29209), (552, 29170), (560, 29152), (568, 29137), (598, 29071), (613, 29038), (614, 29035), (663, 28933), (697, 28873), (726, 28789), (743, 28708), (766, 28624), (767, 28621), (771, 28612), (776, 28585), (783, 28555), (810, 28495), (820, 28456), (902, 28240), (903, 28237), (905, 28216), (946, 28081), (950, 28069), (955, 28060), (957, 28057), (1000, 27964),

Gene: GardenB\_38 Start: 29033, Stop: 27168, Start Num: 301

Candidate Starts for GardenB\_38:

(Start: 301 @29033 has 110 MA's), (Start: 308 @29024 has 5 MA's), (379, 28874), (432, 28760), (435, 28745), (438, 28739), (501, 28553), (504, 28541), (531, 28466), (537, 28457), (539, 28445), (548, 28418), (549, 28415), (554, 28400), (556, 28394), (559, 28388), (585, 28358), (605, 28313), (676, 28166), (718, 28064), (724, 28043), (776, 27851), (779, 27842), (780, 27839), (783, 27821), (794, 27779), (798, 27764), (822, 27692), (878, 27533), (885, 27503), (903, 27434), (906, 27410), (919, 27371), (929, 27338), (932, 27326),

Gene: GardenState\_48 Start: 31425, Stop: 33290, Start Num: 244

Candidate Starts for GardenState\_48:

(Start: 244 @31425 has 11 MA's), (416, 31722), (448, 31812), (585, 32127), (635, 32232), (639, 32241), (659, 32280), (692, 32343), (743, 32538), (760, 32601), (774, 32655), (776, 32661), (784, 32694), (812, 32781), (832, 32850), (844, 32877), (946, 33186),

Gene: Gareth\_60 Start: 54536, Stop: 52677, Start Num: 205

Candidate Starts for Gareth\_60:

(Start: 188 @54560 has 1 MA's), (Start: 205 @54536 has 304 MA's), (Start: 235 @54512 has 6 MA's), (Start: 250 @54506 has 2 MA's), (Start: 274 @54464 has 6 MA's), (283, 54443), (337, 54329), (342, 54323), (360, 54293), (391, 54233), (399, 54212), (421, 54158), (428, 54146), (434, 54128), (436, 54116), (476, 54011), (519, 53954), (538, 53918), (542, 53906), (552, 53879), (564, 53852), (570, 53834), (580, 53816), (598, 53777), (602, 53768), (603, 53765), (712, 53507), (738, 53405), (744, 53372), (750, 53351), (777, 53258), (780, 53249), (795, 53186), (814, 53150), (815, 53147), (820, 53132), (847, 53054), (851, 53042), (858, 53021), (875, 52982), (905, 52892), (910, 52874), (912, 52868), (917, 52853), (926, 52829), (930, 52814), (931, 52811), (933, 52799), (940, 52775), (963, 52727), (972, 52703),

Gene: Garey24\_38 Start: 28589, Stop: 26733, Start Num: 308

Candidate Starts for Garey24\_38:

(Start: 238 @28685 has 3 MA's), (Start: 301 @28598 has 110 MA's), (Start: 308 @28589 has 5 MA's), (354, 28484), (358, 28475), (375, 28445), (378, 28442), (433, 28322), (435, 28310), (438, 28304), (475, 28199), (484, 28172), (531, 28031), (536, 28025), (537, 28022), (539, 28010), (548, 27983), (549, 27980), (554, 27965), (556, 27959), (559, 27953), (586, 27920), (652, 27791), (676, 27731), (776, 27416), (779, 27407), (780, 27404), (783, 27386), (794, 27344), (796, 27338), (798, 27329), (805, 27314), (822, 27257), (878, 27098), (885, 27068), (888, 27059), (903, 26999), (906, 26975), (919, 26936), (929, 26903), (932, 26891), (947, 26831),

Gene: Gargoyle\_39 Start: 28930, Stop: 27074, Start Num: 308

Candidate Starts for Gargoyle\_39:

(Start: 238 @29026 has 3 MA's), (Start: 241 @29023 has 13 MA's), (Start: 301 @28939 has 110 MA's), (Start: 308 @28930 has 5 MA's), (354, 28825), (358, 28816), (375, 28786), (378, 28783), (432, 28666), (435, 28651), (438, 28645), (475, 28540), (484, 28513), (531, 28372), (537, 28363), (539, 28351), (548, 28324), (549, 28321), (554, 28306), (556, 28300), (559, 28294), (586, 28261), (676, 28072), (702, 28018), (709, 27997), (776, 27757), (779, 27748), (780, 27745), (783, 27727), (794, 27685), (796, 27679), (805, 27655), (822, 27598), (878, 27439), (885, 27409), (888, 27400), (903, 27340), (906, 27316), (919, 27277), (929, 27244), (932, 27232), (947, 27172),

Gene: Garnacho\_138 Start: 73578, Stop: 75614, Start Num: 272

Candidate Starts for Garnacho\_138:

(Start: 272 @73578 has 4 MA's), (317, 73668), (330, 73719), (331, 73722), (336, 73734), (351, 73767), (388, 73836), (404, 73878), (427, 73932), (452, 74007), (461, 74034), (511, 74127), (533, 74181), (535, 74184), (550, 74235), (554, 74247), (585, 74316), (594, 74337), (616, 74385), (745, 74772), (770, 74889), (773, 74907), (807, 75027), (811, 75039), (827, 75099), (830, 75108), (832, 75117), (834, 75123), (879, 75243), (887, 75276), (892, 75291), (894, 75303), (909, 75375), (910, 75378), (952, 75522), (973, 75576), (976, 75582),

Gene: GaugeLDP\_43 Start: 31738, Stop: 29948, Start Num: 246

Candidate Starts for GaugeLDP\_43:

(Start: 246 @31738 has 877 MA's), (364, 31534), (400, 31459), (402, 31456), (416, 31429), (420, 31414), (425, 31402), (475, 31261), (479, 31249), (539, 31156), (541, 31150), (556, 31108), (560, 31099), (568, 31084), (598, 31018), (635, 30937), (646, 30910), (659, 30889), (683, 30844), (716,

30787), (743, 30664), (766, 30580), (776, 30541), (783, 30511), (793, 30472), (814, 30430), (902, 30196), (930, 30094), (946, 30037), (950, 30025), (955, 30016),

Gene: Gelo\_38 Start: 28622, Stop: 26757, Start Num: 301

Candidate Starts for Gelo\_38:

(Start: 238 @28709 has 3 MA's), (Start: 301 @28622 has 110 MA's), (Start: 308 @28613 has 5 MA's), (354, 28508), (358, 28499), (375, 28469), (378, 28466), (433, 28346), (435, 28334), (438, 28328), (475, 28223), (484, 28196), (531, 28055), (536, 28049), (537, 28046), (539, 28034), (548, 28007), (549, 28004), (554, 27989), (556, 27983), (559, 27977), (586, 27944), (652, 27815), (676, 27755), (776, 27440), (779, 27431), (780, 27428), (783, 27410), (794, 27368), (796, 27362), (805, 27338), (822, 27281), (878, 27122), (885, 27092), (888, 27083), (903, 27023), (906, 26999), (919, 26960), (929, 26927), (932, 26915), (947, 26855),

Gene: Gemma\_47 Start: 31749, Stop: 29935, Start Num: 246

Candidate Starts for Gemma\_47:

(Start: 246 @31749 has 877 MA's), (275, 31710), (280, 31698), (364, 31545), (371, 31530), (400, 31473), (425, 31416), (429, 31407), (444, 31365), (461, 31314), (479, 31263), (539, 31170), (556, 31122), (568, 31098), (585, 31059), (598, 31032), (612, 31002), (654, 30909), (662, 30897), (686, 30849), (697, 30834), (743, 30678), (755, 30627), (766, 30594), (767, 30591), (783, 30525), (793, 30486), (815, 30414), (827, 30375), (834, 30351), (843, 30333), (853, 30300), (888, 30219), (905, 30159), (910, 30141), (930, 30081), (932, 30072), (946, 30024), (950, 30012), (955, 30003),

Gene: GeneCoco\_61 Start: 54579, Stop: 52720, Start Num: 205

Candidate Starts for GeneCoco\_61:

(Start: 188 @54603 has 1 MA's), (Start: 205 @54579 has 304 MA's), (Start: 235 @54555 has 6 MA's), (Start: 250 @54549 has 2 MA's), (Start: 274 @54507 has 6 MA's), (283, 54486), (337, 54372), (342, 54366), (360, 54336), (391, 54276), (399, 54255), (421, 54201), (428, 54189), (434, 54171), (436, 54159), (476, 54054), (519, 53997), (538, 53961), (542, 53949), (551, 53925), (556, 53913), (564, 53895), (570, 53877), (580, 53859), (598, 53820), (602, 53811), (603, 53808), (604, 53805), (712, 53550), (738, 53448), (744, 53415), (750, 53394), (777, 53301), (780, 53292), (795, 53229), (814, 53193), (815, 53190), (820, 53175), (847, 53097), (851, 53085), (858, 53064), (875, 53025), (905, 52935), (910, 52917), (912, 52911), (917, 52896), (926, 52872), (930, 52857), (931, 52854), (933, 52842), (940, 52818), (946, 52797), (963, 52770), (972, 52746), (977, 52731),

Gene: George\_38 Start: 30595, Stop: 28730, Start Num: 246

Candidate Starts for George\_38:

(Start: 246 @30595 has 877 MA's), (280, 30544), (318, 30484), (347, 30421), (364, 30391), (366, 30388), (395, 30331), (400, 30319), (416, 30289), (425, 30262), (479, 30109), (539, 30013), (556, 29965), (594, 29881), (598, 29875), (633, 29803), (646, 29770), (654, 29755), (662, 29743), (712, 29644), (743, 29509), (752, 29479), (753, 29461), (762, 29443), (767, 29422), (771, 29413), (783, 29356), (793, 29317), (810, 29296), (814, 29275), (834, 29209), (853, 29158), (876, 29104), (880, 29095), (888, 29077), (905, 29017), (910, 28999), (939, 28906), (946, 28882), (950, 28870), (1000, 28765),

Gene: Georgie2\_45 Start: 31311, Stop: 29524, Start Num: 246

Candidate Starts for Georgie2\_45:

(102, 31566), (Start: 246 @31311 has 877 MA's), (364, 31107), (366, 31104), (368, 31098), (375, 31083), (383, 31068), (400, 31035), (402, 31032), (416, 31005), (425, 30978), (433, 30957), (444, 30927), (479, 30825), (539, 30732), (556, 30684), (560, 30675), (568, 30660), (598, 30594), (635, 30513), (659, 30465), (662, 30459), (697, 30396), (726, 30321), (743, 30240), (755, 30189), (766, 30156), (767, 30153), (783, 30087), (793, 30048), (810, 30027), (831, 29952), (837, 29934), (853, 29889), (864, 29862), (880, 29826), (886, 29814), (888, 29808), (902, 29772), (905, 29748), (930, 29670), (946, 29613), (950, 29601), (955, 29592),

Gene: Gershwin\_38 Start: 28632, Stop: 26767, Start Num: 301

Candidate Starts for Gershwin\_38:

(Start: 238 @28719 has 3 MA's), (Start: 301 @28632 has 110 MA's), (Start: 308 @28623 has 5 MA's), (354, 28518), (358, 28509), (375, 28479), (378, 28476), (433, 28356), (435, 28344), (438, 28338), (475, 28233), (484, 28206), (531, 28065), (536, 28059), (537, 28056), (539, 28044), (548, 28017), (549, 28014), (554, 27999), (556, 27993), (559, 27987), (586, 27954), (652, 27825), (676, 27765), (776, 27450), (779, 27441), (780, 27438), (783, 27420), (794, 27378), (796, 27372), (805, 27348), (822, 27291), (878, 27132), (885, 27102), (888, 27093), (903, 27033), (906, 27009), (919, 26970), (929, 26937), (932, 26925), (947, 26865),

Gene: Gervas\_59 Start: 54101, Stop: 52284, Start Num: 247

Candidate Starts for Gervas\_59:

(130, 54284), (Start: 247 @54101 has 43 MA's), (267, 54071), (368, 53891), (433, 53738), (435, 53726), (448, 53696), (454, 53690), (476, 53627), (478, 53621), (519, 53570), (538, 53534), (556, 53486), (603, 53381), (645, 53285), (674, 53234), (724, 53090), (732, 53051), (739, 53021), (744, 52994), (748, 52982), (775, 52886), (777, 52880), (780, 52871), (782, 52859), (807, 52787), (814, 52757), (820, 52739), (822, 52730), (847, 52661), (851, 52649), (858, 52628), (888, 52559), (898, 52544), (903, 52520), (905, 52499), (912, 52475), (926, 52436), (931, 52418), (933, 52406), (936, 52394), (940, 52382), (956, 52340), (972, 52310),

Gene: Ghoulboy\_40 Start: 31108, Stop: 29243, Start Num: 246

Candidate Starts for Ghoulboy\_40:

(Start: 246 @31108 has 877 MA's), (280, 31057), (318, 30997), (347, 30934), (364, 30904), (366, 30901), (395, 30844), (416, 30802), (425, 30775), (479, 30622), (539, 30526), (550, 30493), (556, 30478), (594, 30394), (598, 30388), (613, 30355), (654, 30268), (662, 30256), (683, 30217), (712, 30157), (743, 30022), (752, 29992), (753, 29974), (766, 29938), (767, 29935), (783, 29869), (793, 29830), (814, 29788), (820, 29770), (834, 29722), (837, 29716), (853, 29671), (876, 29617), (880, 29608), (888, 29590), (910, 29512), (929, 29455), (939, 29419), (946, 29395), (950, 29383), (1010, 29251),

Gene: GiJojo\_132 Start: 75350, Stop: 77386, Start Num: 272

Candidate Starts for GiJojo\_132:

(154, 75179), (Start: 272 @75350 has 4 MA's), (305, 75416), (317, 75440), (331, 75494), (336, 75506), (351, 75539), (388, 75608), (449, 75770), (452, 75779), (511, 75899), (533, 75953), (535, 75956), (550, 76007), (554, 76019), (574, 76067), (585, 76088), (594, 76109), (616, 76157), (626, 76175), (734, 76481), (745, 76544), (770, 76661), (773, 76679), (807, 76799), (811, 76811), (827, 76871), (830, 76880), (832, 76889), (884, 77033), (887, 77048), (892, 77063), (909, 77147), (910, 77150), (915, 77168), (952, 77294), (976, 77354),

Gene: GiKK\_48 Start: 33132, Stop: 30748, Start Num: 45

Candidate Starts for GiKK\_48:

(Start: 45 @33132 has 24 MA's), (84, 33018), (93, 32988), (128, 32904), (138, 32880), (185, 32826), (265, 32721), (273, 32706), (295, 32658), (329, 32583), (332, 32577), (335, 32571), (338, 32565), (374, 32496), (389, 32472), (398, 32448), (421, 32391), (430, 32373), (435, 32352), (488, 32205), (526, 32091), (544, 32034), (551, 32013), (559, 32007), (643, 31914), (649, 31902), (682, 31830), (703, 31788), (707, 31776), (741, 31635), (747, 31611), (760, 31560), (783, 31467), (792, 31431), (794, 31425), (796, 31419), (797, 31413), (815, 31356), (820, 31341), (822, 31332), (878, 31173), (884, 31152), (893, 31113), (903, 31074), (905, 31053), (911, 31032), (915, 31020), (922, 31002), (937, 30939), (939, 30933), (947, 30906), (958, 30882), (968, 30861), (1004, 30774),

Gene: Gibbous\_38 Start: 31347, Stop: 28987, Start Num: 45

Candidate Starts for Gibbous\_38:

(35, 31371), (Start: 45 @31347 has 24 MA's), (50, 31332), (57, 31296), (128, 31125), (138, 31101), (Start: 308 @30864 has 5 MA's), (329, 30807), (354, 30768), (367, 30747), (398, 30681), (420, 30627), (430, 30606), (435, 30585), (502, 30387), (520, 30345), (526, 30327), (530, 30309), (546, 30264), (558, 30246), (559, 30243), (598, 30207), (660, 30114), (682, 30069), (698, 30042), (703, 30030), (707, 30018), (741, 29877), (760, 29808), (773, 29757), (780, 29733), (783, 29715), (785, 29706), (792, 29679), (794, 29673), (796, 29667), (797, 29661), (815, 29604), (822, 29580), (836, 29535), (838, 29532), (859, 29469), (893, 29361), (908, 29292), (911, 29280), (920, 29256), (939, 29181), (940, 29178), (947, 29154), (958, 29130), (968, 29109), (976, 29085), (995, 29040), (1004, 29022),

Gene: Gilberta\_45 Start: 30767, Stop: 28980, Start Num: 246

Candidate Starts for Gilberta\_45:

(Start: 246 @30767 has 877 MA's), (364, 30563), (400, 30491), (416, 30461), (425, 30434), (541, 30182), (560, 30131), (598, 30050), (619, 30005), (687, 29864), (715, 29822), (726, 29777), (743, 29696), (755, 29645), (767, 29609), (783, 29543), (810, 29483), (812, 29471), (846, 29369), (853, 29345), (860, 29327), (888, 29264), (901, 29237), (902, 29228), (905, 29204), (946, 29069), (950, 29057), (955, 29048),

Gene: GinPorsche\_52 Start: 52983, Stop: 51160, Start Num: 197

Candidate Starts for GinPorsche\_52:

(Start: 182 @53001 has 4 MA's), (Start: 197 @52983 has 27 MA's), (Start: 250 @52959 has 2 MA's), (267, 52932), (Start: 274 @52917 has 6 MA's), (283, 52896), (329, 52809), (387, 52704), (406, 52662), (434, 52596), (445, 52566), (448, 52557), (453, 52554), (454, 52551), (463, 52524), (519, 52431), (531, 52413), (538, 52395), (542, 52383), (547, 52368), (552, 52356), (602, 52245), (603, 52242), (615, 52212), (633, 52176), (724, 51951), (725, 51948), (732, 51912), (738, 51888), (744, 51855), (775, 51747), (777, 51741), (779, 51735), (780, 51732), (814, 51633), (815, 51630), (820, 51615), (847, 51537), (851, 51525), (858, 51504), (861, 51495), (875, 51465), (886, 51441), (901, 51408), (905, 51375), (910, 51357), (912, 51351), (926, 51312), (931, 51294), (933, 51282), (940, 51258), (956, 51216), (963, 51210), (972, 51186),

Gene: GingkoMaracino\_48 Start: 31739, Stop: 29925, Start Num: 246

Candidate Starts for GingkoMaracino\_48:

(Start: 246 @31739 has 877 MA's), (275, 31700), (280, 31688), (364, 31535), (371, 31520), (400, 31463), (425, 31406), (429, 31397), (444, 31355), (461, 31304), (479, 31253), (539, 31160), (556, 31112), (560, 31103), (568, 31088), (585, 31049), (598, 31022), (612, 30992), (654, 30899), (662, 30887), (686, 30839), (697, 30824), (743, 30668), (753, 30620), (767, 30581), (783, 30515), (793, 30476), (815, 30404), (827, 30365), (834, 30341), (843, 30323), (853, 30290), (864, 30263), (888, 30209), (905, 30149), (930, 30071), (946, 30014), (950, 30002), (955, 29993),

Gene: Giorgio\_39 Start: 27527, Stop: 29509, Start Num: 245

Candidate Starts for Giorgio\_39:

(Start: 245 @27527 has 74 MA's), (347, 27701), (364, 27731), (386, 27764), (402, 27797), (433, 27872), (442, 27899), (478, 28001), (521, 28100), (585, 28274), (598, 28301), (659, 28430), (717, 28568), (737, 28655), (743, 28688), (752, 28718), (767, 28775), (783, 28841), (813, 28934), (842, 29021), (905, 29201), (912, 29225), (946, 29336), (998, 29444),

Gene: Giraffe\_61 Start: 54531, Stop: 52672, Start Num: 205

Candidate Starts for Giraffe\_61:

(Start: 188 @54555 has 1 MA's), (Start: 205 @54531 has 304 MA's), (Start: 235 @54507 has 6 MA's), (Start: 250 @54501 has 2 MA's), (Start: 274 @54459 has 6 MA's), (283, 54438), (337, 54324), (342, 54318), (360, 54288), (391, 54228), (399, 54207), (421, 54153), (428, 54141), (434, 54123), (436, 54111), (476, 54006), (519, 53949), (538, 53913), (542, 53901), (552, 53874), (564, 53847), (570, 53829), (580, 53811), (598, 53772), (602, 53763), (603, 53760), (712, 53502), (738, 53400), (744, 53367), (750, 53346), (777, 53253), (780, 53244), (795, 53181), (814, 53145), (815, 53142), (820,



53127), (847, 53049), (851, 53037), (858, 53016), (875, 52977), (905, 52887), (910, 52869), (912, 52863), (917, 52848), (926, 52824), (930, 52809), (931, 52806), (933, 52794), (940, 52770), (963, 52722), (972, 52698),

Gene: Giroux\_46 Start: 31554, Stop: 29716, Start Num: 246

Candidate Starts for Giroux\_46:

(Start: 246 @31554 has 877 MA's), (280, 31503), (319, 31437), (364, 31350), (395, 31290), (400, 31278), (425, 31221), (429, 31212), (471, 31092), (479, 31068), (539, 30972), (558, 30924), (585, 30864), (614, 30801), (646, 30732), (659, 30711), (698, 30639), (716, 30597), (726, 30555), (743, 30474), (753, 30426), (776, 30351), (783, 30321), (791, 30291), (815, 30210), (827, 30171), (834, 30147), (843, 30129), (888, 30000), (905, 29940), (946, 29805), (950, 29793), (955, 29784),

Gene: Gladiator\_45 Start: 29628, Stop: 27787, Start Num: 246

Candidate Starts for Gladiator\_45:

(Start: 246 @29628 has 877 MA's), (364, 29424), (400, 29349), (402, 29346), (416, 29319), (420, 29304), (425, 29292), (444, 29241), (475, 29151), (479, 29139), (539, 29046), (552, 29007), (560, 28989), (568, 28974), (598, 28908), (613, 28875), (614, 28872), (663, 28770), (697, 28710), (726, 28626), (743, 28545), (766, 28461), (767, 28458), (771, 28449), (776, 28422), (780, 28410), (783, 28392), (810, 28332), (820, 28293), (902, 28077), (903, 28074), (905, 28053), (946, 27918), (950, 27906), (955, 27897), (957, 27894), (1000, 27801),

Gene: Glamour\_37 Start: 28723, Stop: 26858, Start Num: 299

Candidate Starts for Glamour\_37:

(Start: 299 @28723 has 38 MA's), (320, 28678), (344, 28624), (379, 28564), (403, 28513), (435, 28435), (438, 28429), (454, 28384), (455, 28381), (456, 28378), (469, 28339), (489, 28279), (531, 28156), (537, 28147), (539, 28135), (543, 28123), (549, 28105), (556, 28084), (562, 28072), (658, 27901), (724, 27733), (771, 27568), (779, 27532), (783, 27511), (794, 27469), (822, 27382), (836, 27337), (872, 27238), (885, 27193), (888, 27184), (903, 27124), (906, 27100), (917, 27067), (947, 26956),

Gene: Glass\_57 Start: 52601, Stop: 50772, Start Num: 205

Candidate Starts for Glass\_57:

(Start: 205 @52601 has 304 MA's), (Start: 250 @52574 has 2 MA's), (269, 52544), (Start: 274 @52532 has 6 MA's), (286, 52505), (287, 52502), (293, 52493), (318, 52475), (366, 52379), (391, 52328), (400, 52304), (463, 52142), (472, 52118), (476, 52106), (519, 52049), (538, 52013), (542, 52001), (551, 51977), (588, 51893), (602, 51863), (603, 51860), (615, 51830), (680, 51686), (707, 51620), (721, 51581), (724, 51569), (727, 51548), (732, 51530), (744, 51473), (763, 51416), (771, 51389), (777, 51359), (780, 51350), (795, 51284), (812, 51257), (814, 51248), (820, 51230), (827, 51206), (847, 51152), (851, 51140), (858, 51119), (888, 51050), (905, 50990), (910, 50972), (922, 50939), (926, 50927), (930, 50912), (931, 50909), (933, 50897), (940, 50873), (941, 50870), (963, 50822), (965, 50819), (972, 50798), (979, 50777),

Gene: GlenHope\_59 Start: 53675, Stop: 51858, Start Num: 247

Candidate Starts for GlenHope\_59:

(Start: 247 @53675 has 43 MA's), (267, 53645), (368, 53465), (433, 53312), (435, 53300), (448, 53270), (454, 53264), (476, 53201), (478, 53195), (519, 53144), (537, 53117), (538, 53108), (556, 53060), (603, 52955), (645, 52859), (674, 52808), (724, 52664), (732, 52625), (739, 52595), (744, 52568), (748, 52556), (775, 52460), (777, 52454), (780, 52445), (782, 52433), (807, 52361), (814, 52331), (820, 52313), (822, 52304), (847, 52235), (851, 52223), (858, 52202), (888, 52133), (898, 52118), (903, 52094), (905, 52073), (910, 52055), (912, 52049), (924, 52016), (926, 52010), (931, 51992), (933, 51980), (936, 51968), (940, 51956), (956, 51914), (972, 51884),

Gene: Glubnar\_58 Start: 53584, Stop: 51764, Start Num: 244

Candidate Starts for Glubnar\_58:

(130, 53764), (Start: 244 @53584 has 11 MA's), (267, 53551), (368, 53371), (433, 53218), (435, 53206), (448, 53176), (454, 53170), (476, 53107), (478, 53101), (519, 53050), (538, 53014), (556, 52966), (603, 52861), (645, 52765), (674, 52714), (724, 52570), (732, 52531), (739, 52501), (744, 52474), (748, 52462), (775, 52366), (777, 52360), (780, 52351), (782, 52339), (807, 52267), (814, 52237), (820, 52219), (822, 52210), (847, 52141), (851, 52129), (858, 52108), (888, 52039), (898, 52024), (903, 52000), (905, 51979), (910, 51961), (912, 51955), (924, 51922), (926, 51916), (931, 51898), (933, 51886), (936, 51874), (940, 51862), (956, 51820), (972, 51790),

Gene: Godines\_58 Start: 52884, Stop: 51055, Start Num: 205

Candidate Starts for Godines\_58:

(Start: 205 @52884 has 304 MA's), (Start: 250 @52857 has 2 MA's), (Start: 274 @52815 has 6 MA's), (286, 52788), (287, 52785), (293, 52776), (318, 52758), (366, 52662), (391, 52611), (400, 52587), (411, 52563), (463, 52425), (472, 52401), (476, 52389), (519, 52332), (538, 52296), (542, 52284), (551, 52260), (588, 52176), (602, 52146), (603, 52143), (615, 52113), (680, 51969), (707, 51903), (721, 51864), (724, 51852), (727, 51831), (732, 51813), (744, 51756), (763, 51699), (771, 51672), (777, 51642), (780, 51633), (795, 51567), (812, 51540), (814, 51531), (820, 51513), (827, 51489), (847, 51435), (851, 51423), (858, 51402), (888, 51333), (905, 51273), (910, 51255), (922, 51222), (926, 51210), (930, 51195), (931, 51192), (933, 51180), (940, 51156), (941, 51153), (963, 51105), (965, 51102), (972, 51081), (979, 51060),

Gene: GodonK\_188 Start: 97693, Stop: 95903, Start Num: 252

Candidate Starts for GodonK\_188:

(Start: 252 @97693 has 2 MA's), (295, 97615), (313, 97588), (315, 97585), (356, 97507), (383, 97462), (389, 97453), (417, 97393), (418, 97387), (420, 97381), (435, 97339), (461, 97288), (477, 97243), (523, 97192), (541, 97153), (552, 97123), (557, 97114), (571, 97075), (585, 97048), (591, 97033), (623, 96967), (683, 96850), (717, 96790), (724, 96763), (726, 96751), (736, 96709), (743, 96667), (752, 96637), (766, 96580), (767, 96577), (803, 96427), (804, 96424), (813, 96397), (840, 96316), (862, 96253), (867, 96241), (871, 96232), (906, 96112), (914, 96085), (922, 96064), (926, 96052), (946, 95977), (961, 95956), (977, 95926),

Gene: GoldHunter\_44 Start: 32554, Stop: 30161, Start Num: 36

Candidate Starts for GoldHunter\_44:

(Start: 36 @32554 has 16 MA's), (47, 32548), (Start: 59 @32500 has 1 MA's), (75, 32458), (84, 32434), (128, 32308), (138, 32284), (179, 32239), (Start: 215 @32188 has 2 MA's), (223, 32173), (Start: 241 @32152 has 13 MA's), (275, 32104), (289, 32071), (295, 32062), (329, 31987), (335, 31975), (374, 31906), (394, 31873), (398, 31858), (420, 31804), (421, 31801), (430, 31783), (435, 31762), (457, 31702), (499, 31579), (500, 31573), (526, 31504), (539, 31462), (605, 31375), (615, 31351), (633, 31345), (643, 31321), (647, 31312), (654, 31297), (660, 31285), (680, 31243), (682, 31240), (683, 31237), (733, 31090), (749, 31021), (750, 31015), (760, 30979), (783, 30886), (792, 30850), (794, 30844), (796, 30838), (797, 30832), (815, 30775), (822, 30751), (836, 30706), (947, 30325), (968, 30280), (995, 30211),

Gene: Golden\_37 Start: 28582, Stop: 26732, Start Num: 297

Candidate Starts for Golden\_37:

(202, 28723), (Start: 272 @28633 has 4 MA's), (Start: 297 @28582 has 18 MA's), (344, 28483), (358, 28459), (378, 28426), (430, 28315), (435, 28294), (438, 28288), (454, 28243), (456, 28237), (512, 28081), (537, 28018), (539, 28006), (549, 27976), (585, 27919), (718, 27625), (776, 27415), (779, 27406), (780, 27403), (783, 27385), (794, 27343), (822, 27256), (903, 26998), (906, 26974), (907, 26971), (917, 26941), (947, 26830),

Gene: GoldenEssence\_88 Start: 72236, Stop: 74038, Start Num: 262

Candidate Starts for GoldenEssence\_88:

(Start: 262 @72236 has 4 MA's), (292, 72299), (Start: 301 @72311 has 110 MA's), (357, 72422), (391, 72476), (428, 72557), (435, 72584), (438, 72590), (470, 72659), (482, 72695), (539, 72764), (571, 72842), (585, 72869), (591, 72884), (683, 73073), (706, 73118), (716, 73142), (719, 73151), (723, 73169), (730, 73202), (740, 73241), (743, 73262), (746, 73268), (774, 73382), (792, 73466), (794, 73472), (797, 73484), (813, 73532), (816, 73544), (827, 73580), (840, 73613), (843, 73622), (858, 73667), (865, 73685), (898, 73769), (902, 73790), (906, 73817), (929, 73889), (934, 73913), (946, 73949), (961, 73976),

Gene: Gollum\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for Gollum\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (663, 27261), (683, 27225), (716, 27168), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930, 26475), (946, 26418), (950, 26406), (955, 26397), (969, 26367), (978, 26349),

Gene: Gompeii16\_44 Start: 35183, Stop: 33354, Start Num: 246

Candidate Starts for Gompeii16\_44:

(Start: 246 @35183 has 877 MA's), (368, 34970), (374, 34955), (400, 34907), (416, 34877), (419, 34865), (422, 34856), (425, 34850), (429, 34841), (470, 34724), (479, 34697), (539, 34604), (544, 34589), (551, 34568), (556, 34556), (578, 34505), (580, 34502), (612, 34436), (627, 34406), (639, 34376), (662, 34331), (683, 34292), (743, 34112), (753, 34064), (771, 34016), (780, 33977), (783, 33959), (793, 33920), (810, 33899), (814, 33878), (819, 33863), (861, 33740), (922, 33569), (929, 33545), (943, 33497), (946, 33485), (955, 33464), (959, 33458), (981, 33410), (986, 33395),

Gene: Goose\_44 Start: 30924, Stop: 29089, Start Num: 246

Candidate Starts for Goose\_44:

(Start: 246 @30924 has 877 MA's), (280, 30873), (364, 30720), (374, 30696), (395, 30660), (400, 30648), (422, 30597), (425, 30591), (429, 30582), (458, 30498), (471, 30462), (475, 30450), (478, 30441), (479, 30438), (539, 30345), (558, 30297), (585, 30237), (598, 30210), (610, 30186), (645, 30108), (646, 30105), (659, 30084), (662, 30078), (698, 30012), (716, 29970), (743, 29847), (753, 29799), (776, 29724), (783, 29694), (793, 29655), (815, 29583), (827, 29544), (834, 29520), (837, 29514), (843, 29502), (883, 29394), (905, 29313), (912, 29289), (932, 29226), (946, 29178), (950, 29166), (955, 29157),

Gene: Gophee\_62 Start: 54522, Stop: 52663, Start Num: 205

Candidate Starts for Gophee\_62:

(Start: 188 @54546 has 1 MA's), (Start: 205 @54522 has 304 MA's), (Start: 235 @54498 has 6 MA's), (Start: 250 @54492 has 2 MA's), (Start: 274 @54450 has 6 MA's), (283, 54429), (337, 54315), (342, 54309), (360, 54279), (391, 54219), (399, 54198), (421, 54144), (428, 54132), (434, 54114), (436, 54102), (476, 53997), (519, 53940), (538, 53904), (542, 53892), (551, 53868), (556, 53856), (564, 53838), (570, 53820), (580, 53802), (598, 53763), (602, 53754), (603, 53751), (604, 53748), (738, 53391), (744, 53358), (750, 53337), (777, 53244), (780, 53235), (795, 53172), (814, 53136), (815, 53133), (820, 53118), (847, 53040), (851, 53028), (858, 53007), (875, 52968), (905, 52878), (910, 52860), (912, 52854), (917, 52839), (926, 52815), (930, 52800), (931, 52797), (933, 52785), (940, 52761), (946, 52740), (963, 52713), (972, 52689),

Gene: Gorgeous\_54 Start: 36486, Stop: 34318, Start Num: 233

Candidate Starts for Gorgeous\_54:

(231, 36489), (Start: 233 @36486 has 13 MA's), (Start: 272 @36432 has 4 MA's), (317, 36348), (382, 36195), (387, 36186), (405, 36141), (431, 36063), (434, 36054), (438, 36039), (446, 36024), (447, 36021), (466, 35964), (490, 35871), (493, 35829), (567, 35634), (570, 35622), (572, 35616), (581,

35592), (590, 35571), (600, 35550), (606, 35535), (609, 35529), (638, 35466), (662, 35415), (693, 35328), (714, 35268), (726, 35220), (751, 35118), (752, 35112), (757, 35085), (758, 35082), (766, 35061), (777, 35019), (779, 35013), (784, 34989), (794, 34947), (795, 34944), (802, 34917), (811, 34884), (813, 34872), (823, 34836), (831, 34812), (832, 34806), (834, 34800), (854, 34746), (875, 34698), (876, 34695), (897, 34635), (902, 34611), (907, 34581), (923, 34527), (940, 34458), (944, 34446), (958, 34407),

Gene: Graduation\_48 Start: 36333, Stop: 34516, Start Num: 246

Candidate Starts for Graduation\_48:

(Start: 246 @36333 has 877 MA's), (368, 36120), (374, 36105), (416, 36027), (422, 36006), (425, 36000), (429, 35991), (470, 35874), (479, 35847), (539, 35754), (544, 35739), (556, 35706), (578, 35655), (580, 35652), (612, 35586), (627, 35556), (639, 35526), (662, 35481), (683, 35442), (743, 35262), (753, 35214), (767, 35175), (783, 35109), (793, 35070), (810, 35049), (814, 35028), (820, 35010), (843, 34944), (902, 34794), (903, 34791), (909, 34755), (917, 34731), (921, 34722), (925, 34710), (946, 34635), (955, 34614),

Gene: Grand2040\_60 Start: 54525, Stop: 52666, Start Num: 205

Candidate Starts for Grand2040\_60:

(Start: 188 @54549 has 1 MA's), (Start: 205 @54525 has 304 MA's), (Start: 235 @54501 has 6 MA's), (Start: 250 @54495 has 2 MA's), (Start: 274 @54453 has 6 MA's), (283, 54432), (337, 54318), (342, 54312), (360, 54282), (391, 54222), (399, 54201), (421, 54147), (428, 54135), (434, 54117), (436, 54105), (476, 54000), (519, 53943), (538, 53907), (542, 53895), (551, 53871), (556, 53859), (564, 53841), (570, 53823), (580, 53805), (598, 53766), (602, 53757), (603, 53754), (604, 53751), (712, 53496), (738, 53394), (744, 53361), (750, 53340), (777, 53247), (780, 53238), (795, 53175), (814, 53139), (815, 53136), (820, 53121), (847, 53043), (851, 53031), (858, 53010), (875, 52971), (905, 52881), (910, 52863), (912, 52857), (917, 52842), (926, 52818), (930, 52803), (931, 52800), (933, 52788), (940, 52764), (946, 52743), (963, 52716), (972, 52692),

Gene: Gratitude\_44 Start: 31601, Stop: 29814, Start Num: 246

Candidate Starts for Gratitude\_44:

(Start: 246 @31601 has 877 MA's), (364, 31397), (366, 31394), (368, 31388), (383, 31358), (400, 31325), (402, 31322), (416, 31295), (425, 31268), (444, 31217), (479, 31115), (539, 31022), (556, 30974), (560, 30965), (568, 30950), (598, 30884), (635, 30803), (659, 30755), (726, 30611), (743, 30530), (755, 30479), (766, 30446), (783, 30377), (793, 30338), (810, 30317), (814, 30296), (818, 30284), (886, 30104), (888, 30098), (902, 30062), (905, 30038), (930, 29960), (946, 29903), (950, 29891),

Gene: GrecoEtereo\_45 Start: 34806, Stop: 32980, Start Num: 246

Candidate Starts for GrecoEtereo\_45:

(Start: 246 @34806 has 877 MA's), (368, 34593), (374, 34578), (400, 34530), (416, 34500), (422, 34479), (425, 34473), (429, 34464), (470, 34347), (479, 34320), (539, 34227), (544, 34212), (556, 34179), (578, 34128), (580, 34125), (612, 34059), (627, 34029), (639, 33999), (662, 33954), (683, 33915), (743, 33735), (753, 33687), (767, 33648), (783, 33582), (793, 33543), (810, 33522), (814, 33501), (820, 33483), (843, 33417), (902, 33267), (903, 33264), (909, 33228), (917, 33204), (921, 33195), (925, 33183), (946, 33108), (955, 33087),

Gene: GreedyLawyer\_45 Start: 29627, Stop: 27786, Start Num: 246

Candidate Starts for GreedyLawyer\_45:

(Start: 246 @29627 has 877 MA's), (364, 29423), (400, 29348), (402, 29345), (416, 29318), (420, 29303), (425, 29291), (444, 29240), (475, 29150), (479, 29138), (539, 29045), (552, 29006), (560, 28988), (568, 28973), (598, 28907), (613, 28874), (614, 28871), (663, 28769), (697, 28709), (726, 28625), (743, 28544), (766, 28460), (767, 28457), (771, 28448), (776, 28421), (783, 28391), (810, 28331), (820, 28292), (902, 28076), (903, 28073), (905, 28052), (946, 27917), (950, 27905), (955,

27896), (957, 27893), (1000, 27800),

Gene: Greenlvy\_37 Start: 27580, Stop: 25715, Start Num: 299

Candidate Starts for Greenlvy\_37:

(Start: 299 @27580 has 38 MA's), (305, 27574), (348, 27475), (354, 27466), (368, 27442), (375, 27427), (379, 27421), (403, 27370), (406, 27367), (438, 27286), (489, 27136), (493, 27133), (526, 27034), (536, 27007), (537, 27004), (539, 26992), (549, 26962), (556, 26941), (585, 26905), (658, 26758), (726, 26578), (776, 26398), (783, 26368), (797, 26314), (805, 26296), (822, 26239), (831, 26212), (845, 26170), (885, 26050), (888, 26041), (903, 25981), (906, 25957), (909, 25945), (912, 25936), (919, 25918), (929, 25885), (947, 25813),

Gene: Greg\_47 Start: 35124, Stop: 33337, Start Num: 246

Candidate Starts for Greg\_47:

(Start: 246 @35124 has 877 MA's), (368, 34911), (374, 34896), (400, 34848), (416, 34818), (422, 34797), (425, 34791), (429, 34782), (470, 34665), (479, 34638), (539, 34545), (544, 34530), (556, 34497), (578, 34446), (580, 34443), (612, 34377), (627, 34347), (639, 34317), (662, 34272), (683, 34233), (743, 34053), (753, 34005), (767, 33966), (783, 33900), (812, 33828), (814, 33819), (843, 33735), (876, 33648), (917, 33522), (922, 33510), (946, 33426), (948, 33420),

Gene: Gretchen\_48 Start: 32640, Stop: 34505, Start Num: 244

Candidate Starts for Gretchen\_48:

(153, 32514), (Start: 200 @32583 has 1 MA's), (Start: 244 @32640 has 11 MA's), (416, 32937), (467, 33081), (541, 33234), (585, 33342), (598, 33369), (629, 33429), (654, 33489), (659, 33495), (687, 33552), (692, 33558), (726, 33672), (743, 33753), (760, 33816), (774, 33870), (776, 33876), (829, 34053), (834, 34071), (840, 34080), (844, 34092), (876, 34176), (910, 34284), (926, 34329), (946, 34401), (982, 34479), (996, 34500),

Gene: Greys\_39 Start: 28932, Stop: 27067, Start Num: 301

Candidate Starts for Greys\_39:

(Start: 238 @29019 has 3 MA's), (Start: 241 @29016 has 13 MA's), (Start: 301 @28932 has 110 MA's), (Start: 308 @28923 has 5 MA's), (354, 28818), (358, 28809), (375, 28779), (378, 28776), (433, 28656), (435, 28644), (438, 28638), (475, 28533), (484, 28506), (531, 28365), (537, 28356), (539, 28344), (548, 28317), (549, 28314), (554, 28299), (556, 28293), (559, 28287), (586, 28254), (676, 28065), (776, 27750), (779, 27741), (780, 27738), (783, 27720), (794, 27678), (796, 27672), (805, 27648), (822, 27591), (878, 27432), (885, 27402), (888, 27393), (903, 27333), (906, 27309), (919, 27270), (929, 27237), (932, 27225), (947, 27165),

Gene: Grif\_48 Start: 31927, Stop: 30113, Start Num: 246

Candidate Starts for Grif\_48:

(Start: 246 @31927 has 877 MA's), (275, 31888), (280, 31876), (364, 31723), (371, 31708), (400, 31651), (425, 31594), (429, 31585), (444, 31543), (461, 31492), (479, 31441), (539, 31348), (556, 31300), (560, 31291), (568, 31276), (585, 31237), (598, 31210), (612, 31180), (654, 31087), (662, 31075), (686, 31027), (697, 31012), (743, 30856), (767, 30769), (780, 30721), (783, 30703), (793, 30664), (815, 30592), (827, 30553), (834, 30529), (843, 30511), (853, 30478), (864, 30451), (888, 30397), (905, 30337), (930, 30259), (946, 30202), (950, 30190), (955, 30181),

Gene: Groundhog\_41 Start: 30507, Stop: 28663, Start Num: 246

Candidate Starts for Groundhog\_41:

(139, 30672), (Start: 246 @30507 has 877 MA's), (280, 30456), (347, 30333), (364, 30303), (383, 30264), (400, 30231), (416, 30201), (422, 30180), (425, 30174), (429, 30165), (444, 30123), (461, 30072), (478, 30024), (479, 30021), (539, 29925), (548, 29898), (554, 29880), (556, 29877), (560, 29868), (585, 29814), (598, 29787), (620, 29739), (646, 29682), (662, 29655), (687, 29604), (698, 29589), (740, 29442), (743, 29421), (752, 29391), (753, 29373), (755, 29370), (762, 29355), (767,

29334), (771, 29325), (776, 29298), (780, 29286), (783, 29268), (814, 29187), (818, 29175), (834, 29121), (849, 29085), (876, 29016), (886, 28995), (888, 28989), (903, 28950), (905, 28929), (910, 28911), (946, 28794), (950, 28782),

Gene: Groupthink\_49 Start: 31753, Stop: 29939, Start Num: 246

Candidate Starts for Groupthink\_49:

(Start: 246 @31753 has 877 MA's), (275, 31714), (280, 31702), (364, 31549), (371, 31534), (400, 31477), (425, 31420), (429, 31411), (444, 31369), (461, 31318), (479, 31267), (539, 31174), (556, 31126), (568, 31102), (585, 31063), (598, 31036), (612, 31006), (654, 30913), (662, 30901), (686, 30853), (697, 30838), (743, 30682), (755, 30631), (766, 30598), (767, 30595), (783, 30529), (793, 30490), (815, 30418), (827, 30379), (834, 30355), (843, 30337), (853, 30304), (888, 30223), (905, 30163), (910, 30145), (930, 30085), (932, 30076), (946, 30028), (950, 30016), (955, 30007),

Gene: Grub\_48 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for Grub\_48:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: Grum1\_48 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for Grum1\_48:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827, 30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: Gruunaga\_45 Start: 29627, Stop: 27786, Start Num: 246

Candidate Starts for Gruunaga\_45:

(Start: 220 @29657 has 1 MA's), (Start: 246 @29627 has 877 MA's), (364, 29423), (400, 29348), (402, 29345), (416, 29318), (420, 29303), (425, 29291), (444, 29240), (475, 29150), (479, 29138), (539, 29045), (552, 29006), (560, 28988), (568, 28973), (598, 28907), (613, 28874), (614, 28871), (663, 28769), (697, 28709), (726, 28625), (743, 28544), (766, 28460), (767, 28457), (771, 28448), (776, 28421), (780, 28409), (783, 28391), (810, 28331), (820, 28292), (902, 28076), (903, 28073), (905, 28052), (946, 27917), (950, 27905), (955, 27896), (957, 27893), (1000, 27800),

Gene: GtownJaz\_48 Start: 31854, Stop: 30040, Start Num: 246

Candidate Starts for GtownJaz\_48:

(Start: 246 @31854 has 877 MA's), (275, 31815), (280, 31803), (364, 31650), (371, 31635), (400, 31578), (425, 31521), (429, 31512), (444, 31470), (461, 31419), (479, 31368), (539, 31275), (556, 31227), (560, 31218), (568, 31203), (585, 31164), (598, 31137), (612, 31107), (654, 31014), (662, 31002), (686, 30954), (697, 30939), (743, 30783), (767, 30696), (780, 30648), (783, 30630), (793, 30591), (815, 30519), (827, 30480), (834, 30456), (843, 30438), (853, 30405), (864, 30378), (888, 30324), (905, 30264), (930, 30186), (946, 30129), (950, 30117), (955, 30108),

Gene: Gubbabump\_38 Start: 28612, Stop: 26747, Start Num: 301

Candidate Starts for Gubbabump\_38:

(Start: 238 @28699 has 3 MA's), (Start: 241 @28696 has 13 MA's), (Start: 301 @28612 has 110 MA's), (Start: 308 @28603 has 5 MA's), (354, 28498), (358, 28489), (375, 28459), (378, 28456), (433,

28336), (435, 28324), (438, 28318), (475, 28213), (484, 28186), (531, 28045), (536, 28039), (537, 28036), (539, 28024), (548, 27997), (549, 27994), (554, 27979), (556, 27973), (559, 27967), (586, 27934), (652, 27805), (676, 27745), (776, 27430), (779, 27421), (780, 27418), (783, 27400), (794, 27358), (796, 27352), (798, 27343), (805, 27328), (822, 27271), (878, 27112), (885, 27082), (888, 27073), (903, 27013), (906, 26989), (919, 26950), (929, 26917), (932, 26905), (947, 26845),

Gene: Guetzie\_37 Start: 28567, Stop: 26717, Start Num: 297

Candidate Starts for Guetzie\_37:

(202, 28708), (Start: 272 @28618 has 4 MA's), (Start: 297 @28567 has 18 MA's), (344, 28468), (358, 28444), (378, 28411), (430, 28300), (435, 28279), (438, 28273), (454, 28228), (456, 28222), (512, 28066), (537, 28003), (539, 27991), (549, 27961), (585, 27904), (718, 27610), (776, 27400), (779, 27391), (780, 27388), (783, 27370), (794, 27328), (822, 27241), (903, 26983), (906, 26959), (907, 26956), (917, 26926), (947, 26815),

Gene: Gumpizza\_39 Start: 27483, Stop: 29465, Start Num: 245

Candidate Starts for Gumpizza\_39:

(Start: 245 @27483 has 74 MA's), (347, 27657), (364, 27687), (386, 27720), (402, 27753), (433, 27828), (442, 27855), (478, 27957), (521, 28056), (585, 28230), (598, 28257), (659, 28386), (717, 28524), (737, 28611), (743, 28644), (752, 28674), (767, 28731), (783, 28797), (813, 28890), (842, 28977), (905, 29157), (912, 29181), (946, 29292), (998, 29400),

Gene: GurgleFerb\_36 Start: 31888, Stop: 30143, Start Num: 274

Candidate Starts for GurgleFerb\_36:

(259, 31915), (Start: 274 @31888 has 6 MA's), (276, 31885), (290, 31852), (294, 31846), (339, 31753), (362, 31720), (374, 31693), (437, 31558), (509, 31429), (514, 31423), (528, 31399), (534, 31384), (542, 31357), (553, 31327), (585, 31246), (588, 31237), (616, 31177), (627, 31156), (681, 31042), (689, 31024), (794, 30646), (810, 30628), (828, 30562), (832, 30547), (909, 30328), (922, 30286), (946, 30202), (967, 30169),

Gene: Gustav\_47 Start: 36228, Stop: 33886, Start Num: 3

Candidate Starts for Gustav\_47:

(1, 36366), (Start: 3 @36228 has 5 MA's), (22, 36123), (26, 36099), (40, 36045), (49, 36018), (52, 36006), (61, 35973), (71, 35946), (86, 35904), (91, 35886), (99, 35862), (110, 35823), (118, 35808), (126, 35784), (170, 35772), (287, 35610), (319, 35577), (322, 35562), (411, 35388), (421, 35361), (423, 35355), (442, 35310), (454, 35289), (474, 35232), (476, 35226), (479, 35217), (498, 35199), (508, 35193), (538, 35136), (586, 35022), (588, 35016), (589, 35013), (603, 34983), (615, 34953), (674, 34833), (719, 34707), (724, 34689), (730, 34659), (732, 34650), (744, 34593), (763, 34536), (771, 34512), (775, 34488), (777, 34482), (795, 34410), (812, 34383), (814, 34374), (815, 34371), (820, 34356), (827, 34332), (834, 34308), (847, 34278), (851, 34266), (858, 34245), (885, 34185), (897, 34152), (901, 34137), (912, 34080), (930, 34026), (931, 34023), (936, 33999), (940, 33987), (963, 33936), (972, 33912),

Gene: Gwendoluna\_47 Start: 36544, Stop: 34718, Start Num: 246

Candidate Starts for Gwendoluna\_47:

(Start: 246 @36544 has 877 MA's), (368, 36331), (374, 36316), (400, 36268), (416, 36238), (422, 36217), (425, 36211), (429, 36202), (470, 36085), (479, 36058), (539, 35965), (544, 35950), (556, 35917), (578, 35866), (580, 35863), (612, 35797), (627, 35767), (639, 35737), (662, 35692), (683, 35653), (743, 35473), (753, 35425), (767, 35386), (783, 35320), (793, 35281), (810, 35260), (814, 35239), (820, 35221), (843, 35155), (902, 35005), (903, 35002), (909, 34966), (917, 34942), (921, 34933), (925, 34921), (946, 34846), (955, 34825),

Gene: Gwennie1\_60 Start: 54324, Stop: 52465, Start Num: 205

Candidate Starts for Gwennie1\_60:

(Start: 188 @54348 has 1 MA's), (Start: 205 @54324 has 304 MA's), (Start: 235 @54300 has 6 MA's), (Start: 250 @54294 has 2 MA's), (Start: 274 @54252 has 6 MA's), (283, 54231), (337, 54117), (342, 54111), (360, 54081), (391, 54021), (399, 54000), (421, 53946), (428, 53934), (434, 53916), (436, 53904), (476, 53799), (519, 53742), (538, 53706), (542, 53694), (552, 53667), (570, 53622), (598, 53565), (602, 53556), (603, 53553), (738, 53193), (744, 53160), (750, 53139), (777, 53046), (780, 53037), (795, 52974), (814, 52938), (815, 52935), (820, 52920), (847, 52842), (851, 52830), (858, 52809), (875, 52770), (905, 52680), (910, 52662), (912, 52656), (917, 52641), (926, 52617), (930, 52602), (931, 52599), (933, 52587), (940, 52563), (963, 52515), (972, 52491),

Gene: Gwilliam\_61 Start: 54930, Stop: 53071, Start Num: 205

Candidate Starts for Gwilliam\_61:

(Start: 188 @54954 has 1 MA's), (Start: 205 @54930 has 304 MA's), (Start: 235 @54906 has 6 MA's), (Start: 250 @54900 has 2 MA's), (Start: 274 @54858 has 6 MA's), (283, 54837), (337, 54723), (342, 54717), (360, 54687), (391, 54627), (399, 54606), (421, 54552), (428, 54540), (434, 54522), (436, 54510), (476, 54405), (519, 54348), (538, 54312), (542, 54300), (552, 54273), (564, 54246), (570, 54228), (580, 54210), (598, 54171), (602, 54162), (603, 54159), (738, 53799), (744, 53766), (750, 53745), (777, 53652), (780, 53643), (795, 53580), (814, 53544), (815, 53541), (820, 53526), (847, 53448), (851, 53436), (858, 53415), (875, 53376), (905, 53286), (910, 53268), (912, 53262), (917, 53247), (926, 53223), (930, 53208), (931, 53205), (933, 53193), (940, 53169), (963, 53121), (972, 53097),

Gene: Gyarad\_0059 Start: 53612, Stop: 51753, Start Num: 205

Candidate Starts for Gyarad\_0059:

(Start: 188 @53636 has 1 MA's), (Start: 205 @53612 has 304 MA's), (Start: 235 @53588 has 6 MA's), (Start: 250 @53582 has 2 MA's), (Start: 274 @53540 has 6 MA's), (283, 53519), (337, 53405), (342, 53399), (360, 53369), (391, 53309), (399, 53288), (421, 53234), (428, 53222), (434, 53204), (436, 53192), (476, 53087), (519, 53030), (538, 52994), (542, 52982), (552, 52955), (556, 52946), (570, 52910), (598, 52853), (602, 52844), (603, 52841), (604, 52838), (738, 52481), (744, 52448), (750, 52427), (777, 52334), (780, 52325), (795, 52262), (814, 52226), (815, 52223), (820, 52208), (847, 52130), (851, 52118), (858, 52097), (875, 52058), (905, 51968), (910, 51950), (912, 51944), (917, 51929), (926, 51905), (930, 51890), (931, 51887), (933, 51875), (940, 51851), (963, 51803), (972, 51779),

Gene: Gyzlar\_41 Start: 32798, Stop: 30972, Start Num: 246

Candidate Starts for Gyzlar\_41:

(Start: 246 @32798 has 877 MA's), (368, 32585), (374, 32570), (400, 32522), (416, 32492), (422, 32471), (425, 32465), (429, 32456), (470, 32339), (479, 32312), (539, 32219), (544, 32204), (556, 32171), (578, 32120), (580, 32117), (612, 32051), (627, 32021), (639, 31991), (662, 31946), (683, 31907), (743, 31727), (753, 31679), (767, 31640), (783, 31574), (793, 31535), (810, 31514), (814, 31493), (820, 31475), (843, 31409), (902, 31259), (903, 31256), (909, 31220), (917, 31196), (921, 31187), (925, 31175), (932, 31148), (946, 31100), (955, 31079),

Gene: HINdeR\_41 Start: 32902, Stop: 31064, Start Num: 246

Candidate Starts for HINdeR\_41:

(Start: 246 @32902 has 877 MA's), (267, 32881), (318, 32791), (347, 32728), (368, 32689), (387, 32653), (425, 32569), (433, 32548), (461, 32467), (475, 32428), (479, 32416), (537, 32332), (539, 32320), (548, 32293), (554, 32275), (558, 32272), (568, 32251), (585, 32212), (631, 32119), (645, 32083), (646, 32080), (659, 32059), (698, 31987), (707, 31966), (743, 31822), (753, 31774), (762, 31756), (771, 31726), (780, 31687), (783, 31669), (793, 31630), (814, 31561), (815, 31558), (827, 31519), (843, 31477), (844, 31474), (853, 31444), (886, 31354), (888, 31348), (905, 31288), (910, 31270), (922, 31237), (930, 31210), (946, 31153), (950, 31141), (955, 31132),

Gene: HSavage\_59 Start: 54056, Stop: 52197, Start Num: 205



Candidate Starts for HSavage\_59:

(Start: 188 @54080 has 1 MA's), (Start: 205 @54056 has 304 MA's), (Start: 235 @54032 has 6 MA's), (Start: 250 @54026 has 2 MA's), (Start: 274 @53984 has 6 MA's), (283, 53963), (337, 53849), (342, 53843), (360, 53813), (391, 53753), (399, 53732), (421, 53678), (428, 53666), (434, 53648), (436, 53636), (476, 53531), (519, 53474), (538, 53438), (542, 53426), (552, 53399), (570, 53354), (598, 53297), (602, 53288), (603, 53285), (604, 53282), (712, 53027), (738, 52925), (744, 52892), (750, 52871), (777, 52778), (780, 52769), (795, 52706), (814, 52670), (815, 52667), (820, 52652), (847, 52574), (851, 52562), (858, 52541), (875, 52502), (905, 52412), (910, 52394), (912, 52388), (917, 52373), (926, 52349), (930, 52334), (931, 52331), (933, 52319), (940, 52295), (963, 52247), (972, 52223),

Gene: Haimas\_59 Start: 53973, Stop: 52114, Start Num: 205

Candidate Starts for Haimas\_59:

(Start: 188 @53997 has 1 MA's), (Start: 205 @53973 has 304 MA's), (Start: 235 @53949 has 6 MA's), (Start: 250 @53943 has 2 MA's), (Start: 274 @53901 has 6 MA's), (283, 53880), (337, 53766), (342, 53760), (360, 53730), (391, 53670), (399, 53649), (421, 53595), (428, 53583), (434, 53565), (436, 53553), (476, 53448), (519, 53391), (538, 53355), (542, 53343), (552, 53316), (564, 53289), (570, 53271), (580, 53253), (598, 53214), (602, 53205), (603, 53202), (604, 53199), (712, 52944), (738, 52842), (744, 52809), (750, 52788), (777, 52695), (780, 52686), (795, 52623), (814, 52587), (815, 52584), (820, 52569), (847, 52491), (851, 52479), (858, 52458), (875, 52419), (905, 52329), (910, 52311), (912, 52305), (917, 52290), (926, 52266), (930, 52251), (931, 52248), (933, 52236), (940, 52212), (963, 52164), (972, 52140),

Gene: HairyMan\_36 Start: 28016, Stop: 26154, Start Num: 297

Candidate Starts for HairyMan\_36:

(Start: 297 @28016 has 18 MA's), (406, 27803), (435, 27728), (438, 27722), (469, 27632), (480, 27602), (500, 27539), (510, 27503), (531, 27446), (537, 27437), (539, 27425), (549, 27395), (556, 27374), (605, 27293), (652, 27212), (658, 27197), (673, 27167), (704, 27092), (717, 27053), (720, 27041), (780, 26825), (783, 26807), (794, 26765), (822, 26678), (878, 26519), (906, 26396), (909, 26384), (917, 26363), (919, 26357), (922, 26348), (929, 26324), (947, 26252),

Gene: Haleema\_59 Start: 54071, Stop: 52212, Start Num: 205

Candidate Starts for Haleema\_59:

(Start: 188 @54095 has 1 MA's), (Start: 205 @54071 has 304 MA's), (Start: 235 @54047 has 6 MA's), (Start: 250 @54041 has 2 MA's), (Start: 274 @53999 has 6 MA's), (283, 53978), (337, 53864), (342, 53858), (360, 53828), (391, 53768), (399, 53747), (421, 53693), (428, 53681), (434, 53663), (436, 53651), (476, 53546), (519, 53489), (538, 53453), (542, 53441), (551, 53417), (556, 53405), (564, 53387), (570, 53369), (580, 53351), (598, 53312), (602, 53303), (603, 53300), (604, 53297), (738, 52940), (744, 52907), (750, 52886), (777, 52793), (780, 52784), (795, 52721), (814, 52685), (815, 52682), (820, 52667), (847, 52589), (851, 52577), (858, 52556), (875, 52517), (905, 52427), (910, 52409), (912, 52403), (917, 52388), (926, 52364), (930, 52349), (931, 52346), (933, 52334), (940, 52310), (963, 52262), (972, 52238),

Gene: Halfpint\_57 Start: 53415, Stop: 51598, Start Num: 247

Candidate Starts for Halfpint\_57:

(130, 53598), (Start: 247 @53415 has 43 MA's), (267, 53385), (368, 53205), (433, 53052), (435, 53040), (448, 53010), (454, 53004), (476, 52941), (478, 52935), (519, 52884), (538, 52848), (556, 52800), (603, 52695), (645, 52599), (674, 52548), (724, 52404), (732, 52365), (739, 52335), (744, 52308), (748, 52296), (775, 52200), (777, 52194), (780, 52185), (782, 52173), (807, 52101), (814, 52071), (820, 52053), (822, 52044), (847, 51975), (851, 51963), (858, 51942), (888, 51873), (898, 51858), (903, 51834), (905, 51813), (910, 51795), (912, 51789), (926, 51750), (931, 51732), (933, 51720), (940, 51696), (956, 51654), (972, 51624),

Gene: Hally898\_52 Start: 52998, Stop: 51175, Start Num: 197

Candidate Starts for Hally898\_52:

(Start: 182 @53016 has 4 MA's), (Start: 197 @52998 has 27 MA's), (Start: 250 @52974 has 2 MA's), (267, 52947), (Start: 274 @52932 has 6 MA's), (283, 52911), (329, 52824), (387, 52719), (406, 52677), (434, 52611), (445, 52581), (448, 52572), (453, 52569), (454, 52566), (463, 52539), (519, 52446), (531, 52428), (538, 52410), (542, 52398), (547, 52383), (552, 52371), (602, 52260), (603, 52257), (615, 52227), (633, 52191), (724, 51966), (725, 51963), (732, 51927), (738, 51903), (744, 51870), (775, 51762), (777, 51756), (779, 51750), (780, 51747), (814, 51648), (815, 51645), (820, 51630), (847, 51552), (851, 51540), (858, 51519), (861, 51510), (875, 51480), (886, 51456), (901, 51423), (905, 51390), (910, 51372), (912, 51366), (926, 51327), (931, 51309), (933, 51297), (940, 51273), (956, 51231), (963, 51225), (972, 51201),

Gene: Halsey\_38 Start: 27738, Stop: 29720, Start Num: 245

Candidate Starts for Halsey\_38:

(Start: 245 @27738 has 74 MA's), (347, 27912), (364, 27942), (386, 27975), (402, 28008), (433, 28083), (442, 28110), (521, 28311), (585, 28485), (659, 28641), (717, 28779), (737, 28866), (743, 28899), (752, 28929), (767, 28986), (783, 29052), (813, 29145), (905, 29412), (912, 29436), (946, 29547),

Gene: HamSlice\_44 Start: 31568, Stop: 29742, Start Num: 246

Candidate Starts for HamSlice\_44:

(Start: 246 @31568 has 877 MA's), (267, 31547), (280, 31517), (295, 31487), (383, 31325), (394, 31307), (425, 31235), (429, 31226), (471, 31106), (479, 31082), (539, 30989), (558, 30941), (568, 30920), (585, 30881), (646, 30749), (659, 30728), (683, 30683), (687, 30671), (740, 30518), (743, 30497), (776, 30374), (783, 30344), (793, 30305), (814, 30239), (815, 30236), (820, 30221), (827, 30197), (834, 30173), (905, 29966), (946, 29831), (950, 29819), (955, 29810),

Gene: Hami1\_39 Start: 29239, Stop: 27413, Start Num: 246

Candidate Starts for Hami1\_39:

(Start: 246 @29239 has 877 MA's), (368, 29026), (374, 29011), (400, 28963), (416, 28933), (422, 28912), (425, 28906), (429, 28897), (470, 28780), (479, 28753), (539, 28660), (544, 28645), (556, 28612), (578, 28561), (580, 28558), (612, 28492), (627, 28462), (639, 28432), (662, 28387), (683, 28348), (743, 28168), (752, 28138), (753, 28120), (767, 28081), (783, 28015), (814, 27934), (815, 27931), (843, 27850), (902, 27700), (903, 27697), (909, 27661), (917, 27637), (921, 27628), (925, 27616), (946, 27541), (955, 27520),

Gene: Hamish\_59 Start: 53967, Stop: 52108, Start Num: 205

Candidate Starts for Hamish\_59:

(Start: 188 @53991 has 1 MA's), (Start: 205 @53967 has 304 MA's), (Start: 235 @53943 has 6 MA's), (Start: 250 @53937 has 2 MA's), (Start: 274 @53895 has 6 MA's), (283, 53874), (337, 53760), (342, 53754), (360, 53724), (391, 53664), (399, 53643), (421, 53589), (428, 53577), (434, 53559), (436, 53547), (476, 53442), (519, 53385), (538, 53349), (542, 53337), (552, 53310), (564, 53283), (570, 53265), (580, 53247), (598, 53208), (602, 53199), (603, 53196), (604, 53193), (712, 52938), (738, 52836), (744, 52803), (750, 52782), (777, 52689), (780, 52680), (795, 52617), (814, 52581), (815, 52578), (820, 52563), (847, 52485), (851, 52473), (858, 52452), (875, 52413), (905, 52323), (910, 52305), (912, 52299), (917, 52284), (926, 52260), (930, 52245), (931, 52242), (933, 52230), (940, 52206), (963, 52158), (972, 52134),

Gene: Hamlet\_38 Start: 29064, Stop: 27199, Start Num: 301

Candidate Starts for Hamlet\_38:

(Start: 301 @29064 has 110 MA's), (Start: 308 @29055 has 5 MA's), (432, 28791), (435, 28776), (438, 28770), (484, 28638), (501, 28584), (531, 28497), (537, 28488), (539, 28476), (548, 28449), (549, 28446), (554, 28431), (556, 28425), (585, 28389), (605, 28344), (676, 28197), (718, 28095), (776,

27882), (780, 27870), (783, 27852), (794, 27810), (807, 27780), (822, 27723), (878, 27564), (885, 27534), (903, 27465), (906, 27441), (919, 27402), (932, 27357),

Gene: Hammer\_47 Start: 29790, Stop: 27991, Start Num: 246

Candidate Starts for Hammer\_47:

(Start: 246 @29790 has 877 MA's), (364, 29586), (368, 29577), (400, 29511), (402, 29508), (416, 29481), (420, 29466), (425, 29454), (444, 29403), (475, 29313), (479, 29301), (539, 29208), (556, 29160), (560, 29151), (644, 28968), (721, 28818), (743, 28713), (755, 28656), (767, 28620), (771, 28611), (776, 28584), (783, 28554), (793, 28515), (810, 28494), (818, 28461), (820, 28455), (853, 28356), (880, 28293), (902, 28239), (905, 28215), (924, 28158), (946, 28080), (950, 28068), (955, 28059), (957, 28056),

Gene: HanShotFirst\_43 Start: 33831, Stop: 32005, Start Num: 246

Candidate Starts for HanShotFirst\_43:

(Start: 246 @33831 has 877 MA's), (368, 33618), (374, 33603), (400, 33555), (416, 33525), (422, 33504), (425, 33498), (429, 33489), (470, 33372), (479, 33345), (539, 33252), (544, 33237), (556, 33204), (578, 33153), (580, 33150), (612, 33084), (627, 33054), (639, 33024), (662, 32979), (683, 32940), (743, 32760), (753, 32712), (767, 32673), (783, 32607), (793, 32568), (810, 32547), (814, 32526), (820, 32508), (843, 32442), (902, 32292), (903, 32289), (909, 32253), (917, 32229), (921, 32220), (925, 32208), (946, 32133), (955, 32112),

Gene: HanSolo\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for HanSolo\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: Hangman\_53 Start: 54053, Stop: 52230, Start Num: 197

Candidate Starts for Hangman\_53:

(Start: 182 @54071 has 4 MA's), (Start: 197 @54053 has 27 MA's), (Start: 250 @54029 has 2 MA's), (267, 54002), (Start: 274 @53987 has 6 MA's), (283, 53966), (329, 53879), (387, 53774), (399, 53747), (406, 53732), (434, 53666), (445, 53636), (448, 53627), (453, 53624), (454, 53621), (463, 53594), (519, 53501), (531, 53483), (538, 53465), (542, 53453), (552, 53426), (580, 53363), (598, 53324), (602, 53315), (603, 53312), (615, 53282), (633, 53246), (724, 53021), (725, 53018), (732, 52982), (738, 52958), (744, 52925), (775, 52817), (777, 52811), (780, 52802), (814, 52703), (815, 52700), (820, 52685), (847, 52607), (851, 52595), (858, 52574), (861, 52565), (875, 52535), (901, 52478), (905, 52445), (912, 52421), (926, 52382), (931, 52364), (933, 52352), (940, 52328), (956, 52286), (963, 52280), (972, 52256),

Gene: HankSprout\_39 Start: 28499, Stop: 26634, Start Num: 301

Candidate Starts for HankSprout\_39:

(Start: 238 @28586 has 3 MA's), (Start: 241 @28583 has 13 MA's), (Start: 301 @28499 has 110 MA's), (Start: 308 @28490 has 5 MA's), (354, 28385), (358, 28376), (375, 28346), (378, 28343), (433, 28223), (435, 28211), (438, 28205), (475, 28100), (484, 28073), (531, 27932), (536, 27926), (537, 27923), (539, 27911), (548, 27884), (549, 27881), (554, 27866), (556, 27860), (559, 27854), (586, 27821), (652, 27692), (676, 27632), (776, 27317), (779, 27308), (780, 27305), (783, 27287), (794, 27245), (796, 27239), (798, 27230), (805, 27215), (822, 27158), (878, 26999), (885, 26969), (888, 26960), (903, 26900), (906, 26876), (919, 26837), (929, 26804), (932, 26792), (947, 26732),

Gene: Hanray\_43 Start: 31494, Stop: 29701, Start Num: 246

Candidate Starts for Hanray\_43:

(Start: 246 @31494 has 877 MA's), (261, 31485), (280, 31443), (346, 31323), (347, 31320), (372, 31272), (402, 31212), (417, 31182), (420, 31170), (425, 31158), (479, 31005), (539, 30912), (598, 30774), (612, 30744), (687, 30585), (697, 30573), (714, 30546), (740, 30438), (743, 30417), (780, 30282), (783, 30264), (814, 30183), (827, 30141), (853, 30066), (886, 29991), (902, 29949), (930, 29847), (946, 29790), (950, 29778), (955, 29769),

Gene: Happiness\_44 Start: 31575, Stop: 29749, Start Num: 246

Candidate Starts for Happiness\_44:

(Start: 246 @31575 has 877 MA's), (267, 31554), (280, 31524), (295, 31494), (383, 31332), (394, 31314), (425, 31242), (429, 31233), (471, 31113), (479, 31089), (539, 30996), (558, 30948), (568, 30927), (585, 30888), (646, 30756), (659, 30735), (683, 30690), (687, 30678), (740, 30525), (743, 30504), (776, 30381), (783, 30351), (793, 30312), (814, 30246), (815, 30243), (820, 30228), (827, 30204), (834, 30180), (905, 29973), (946, 29838), (950, 29826), (955, 29817),

Gene: Harlequin\_36 Start: 28118, Stop: 26334, Start Num: 246

Candidate Starts for Harlequin\_36:

(Start: 246 @28118 has 877 MA's), (379, 27884), (395, 27854), (399, 27845), (400, 27842), (420, 27797), (425, 27785), (444, 27734), (479, 27632), (496, 27611), (539, 27539), (556, 27491), (585, 27428), (598, 27401), (646, 27296), (662, 27269), (683, 27230), (743, 27050), (753, 27002), (783, 26897), (784, 26894), (810, 26837), (814, 26816), (855, 26693), (886, 26624), (902, 26582), (905, 26558), (930, 26480), (946, 26423), (950, 26411), (978, 26354),

Gene: HarryHoudini\_45 Start: 31805, Stop: 30018, Start Num: 246

Candidate Starts for HarryHoudini\_45:

(Start: 246 @31805 has 877 MA's), (364, 31601), (366, 31598), (368, 31592), (383, 31562), (400, 31529), (402, 31526), (416, 31499), (425, 31472), (433, 31451), (444, 31421), (479, 31319), (539, 31226), (556, 31178), (560, 31169), (568, 31154), (598, 31088), (635, 31007), (659, 30959), (726, 30815), (743, 30734), (755, 30683), (766, 30650), (783, 30581), (793, 30542), (810, 30521), (814, 30500), (818, 30488), (886, 30308), (888, 30302), (902, 30266), (905, 30242), (930, 30164), (946, 30107), (950, 30095),

Gene: HarryOW\_43 Start: 33978, Stop: 32152, Start Num: 246

Candidate Starts for HarryOW\_43:

(Start: 246 @33978 has 877 MA's), (368, 33765), (374, 33750), (400, 33702), (416, 33672), (422, 33651), (425, 33645), (429, 33636), (470, 33519), (479, 33492), (539, 33399), (544, 33384), (556, 33351), (578, 33300), (580, 33297), (612, 33231), (627, 33201), (639, 33171), (662, 33126), (683, 33087), (743, 32907), (753, 32859), (767, 32820), (783, 32754), (793, 32715), (810, 32694), (814, 32673), (820, 32655), (843, 32589), (902, 32439), (903, 32436), (909, 32400), (917, 32376), (921, 32367), (925, 32355), (946, 32280), (955, 32259),

Gene: Hartsy\_61 Start: 54405, Stop: 52546, Start Num: 205

Candidate Starts for Hartsy\_61:

(Start: 188 @54429 has 1 MA's), (Start: 205 @54405 has 304 MA's), (Start: 235 @54381 has 6 MA's), (Start: 250 @54375 has 2 MA's), (Start: 274 @54333 has 6 MA's), (283, 54312), (337, 54198), (342, 54192), (360, 54162), (391, 54102), (399, 54081), (421, 54027), (428, 54015), (434, 53997), (436, 53985), (476, 53880), (519, 53823), (538, 53787), (542, 53775), (551, 53751), (556, 53739), (564, 53721), (570, 53703), (580, 53685), (598, 53646), (602, 53637), (603, 53634), (604, 53631), (738, 53274), (744, 53241), (750, 53220), (777, 53127), (780, 53118), (795, 53055), (814, 53019), (815, 53016), (820, 53001), (847, 52923), (851, 52911), (858, 52890), (875, 52851), (905, 52761), (910, 52743), (912, 52737), (917, 52722), (926, 52698), (930, 52683), (931, 52680), (933, 52668), (940, 52644), (963, 52596), (972, 52572),

Gene: Harvey\_59 Start: 54060, Stop: 52201, Start Num: 205

Candidate Starts for Harvey\_59:

(Start: 188 @54084 has 1 MA's), (Start: 205 @54060 has 304 MA's), (Start: 235 @54036 has 6 MA's), (Start: 250 @54030 has 2 MA's), (Start: 274 @53988 has 6 MA's), (283, 53967), (337, 53853), (342, 53847), (360, 53817), (391, 53757), (399, 53736), (421, 53682), (428, 53670), (434, 53652), (436, 53640), (476, 53535), (519, 53478), (538, 53442), (542, 53430), (552, 53403), (564, 53376), (570, 53358), (580, 53340), (598, 53301), (602, 53292), (603, 53289), (712, 53031), (738, 52929), (744, 52896), (750, 52875), (777, 52782), (780, 52773), (795, 52710), (815, 52671), (820, 52656), (847, 52578), (851, 52566), (858, 52545), (875, 52506), (905, 52416), (910, 52398), (912, 52392), (917, 52377), (926, 52353), (930, 52338), (931, 52335), (933, 52323), (940, 52299), (963, 52251), (972, 52227),

Gene: HarveySr\_57 Start: 53268, Stop: 51448, Start Num: 244

Candidate Starts for HarveySr\_57:

(130, 53448), (Start: 244 @53268 has 11 MA's), (267, 53235), (368, 53055), (417, 52950), (433, 52902), (435, 52890), (448, 52860), (454, 52854), (476, 52791), (478, 52785), (519, 52734), (537, 52707), (538, 52698), (556, 52650), (603, 52545), (645, 52449), (674, 52398), (724, 52254), (732, 52215), (739, 52185), (744, 52158), (748, 52146), (775, 52050), (777, 52044), (780, 52035), (782, 52023), (807, 51951), (814, 51921), (820, 51903), (822, 51894), (847, 51825), (851, 51813), (858, 51792), (888, 51723), (898, 51708), (903, 51684), (910, 51645), (912, 51639), (924, 51606), (926, 51600), (931, 51582), (933, 51570), (936, 51558), (940, 51546), (972, 51474),

Gene: HashRod\_49 Start: 31884, Stop: 30070, Start Num: 246

Candidate Starts for HashRod\_49:

(Start: 246 @31884 has 877 MA's), (275, 31845), (280, 31833), (364, 31680), (371, 31665), (400, 31608), (425, 31551), (429, 31542), (444, 31500), (461, 31449), (479, 31398), (521, 31344), (539, 31305), (556, 31257), (568, 31233), (585, 31194), (598, 31167), (612, 31137), (654, 31044), (662, 31032), (686, 30984), (697, 30969), (743, 30813), (755, 30762), (766, 30729), (767, 30726), (783, 30660), (793, 30621), (815, 30549), (827, 30510), (834, 30486), (843, 30468), (853, 30435), (888, 30354), (905, 30294), (932, 30207), (946, 30159), (950, 30147), (955, 30138), (957, 30135),

Gene: Hashim76\_61 Start: 54527, Stop: 52683, Start Num: 228

Candidate Starts for Hashim76\_61:

(Start: 228 @54527 has 3 MA's), (Start: 274 @54470 has 6 MA's), (286, 54443), (342, 54341), (391, 54254), (400, 54230), (414, 54200), (421, 54179), (433, 54155), (436, 54140), (445, 54122), (476, 54035), (538, 53942), (542, 53930), (556, 53894), (603, 53789), (674, 53642), (704, 53558), (706, 53552), (724, 53492), (725, 53489), (732, 53453), (738, 53429), (744, 53396), (775, 53288), (777, 53282), (780, 53273), (814, 53159), (820, 53141), (847, 53063), (851, 53051), (858, 53030), (888, 52961), (898, 52946), (905, 52901), (912, 52877), (926, 52838), (930, 52823), (933, 52808), (940, 52784), (956, 52739), (972, 52709),

Gene: Hasitha\_37 Start: 27003, Stop: 25138, Start Num: 299

Candidate Starts for Hasitha\_37:

(Start: 299 @27003 has 38 MA's), (305, 26997), (348, 26898), (354, 26889), (368, 26865), (375, 26850), (379, 26844), (403, 26793), (406, 26790), (438, 26709), (459, 26649), (489, 26559), (493, 26556), (526, 26457), (536, 26430), (537, 26427), (539, 26415), (549, 26385), (556, 26364), (585, 26328), (658, 26181), (703, 26079), (726, 26001), (776, 25821), (783, 25791), (797, 25737), (805, 25719), (822, 25662), (831, 25635), (845, 25593), (858, 25554), (885, 25473), (888, 25464), (903, 25404), (906, 25380), (909, 25368), (912, 25359), (919, 25341), (929, 25308), (947, 25236),

Gene: HaveUMetTed\_49 Start: 31735, Stop: 29921, Start Num: 246

Candidate Starts for HaveUMetTed\_49:

(Start: 246 @31735 has 877 MA's), (275, 31696), (280, 31684), (364, 31531), (371, 31516), (400, 31459), (425, 31402), (429, 31393), (444, 31351), (461, 31300), (479, 31249), (539, 31156), (556, 31108), (568, 31084), (585, 31045), (598, 31018), (612, 30988), (654, 30895), (662, 30883), (686, 30835), (697, 30820), (743, 30664), (755, 30613), (766, 30580), (767, 30577), (783, 30511), (793, 30472), (815, 30400), (827, 30361), (834, 30337), (843, 30319), (853, 30286), (888, 30205), (905, 30145), (910, 30127), (930, 30067), (932, 30058), (946, 30010), (950, 29998), (955, 29989),

Gene: Heath\_52 Start: 53664, Stop: 51841, Start Num: 197

Candidate Starts for Heath\_52:

(Start: 182 @53682 has 4 MA's), (Start: 197 @53664 has 27 MA's), (Start: 250 @53640 has 2 MA's), (267, 53613), (Start: 274 @53598 has 6 MA's), (283, 53577), (329, 53490), (387, 53385), (406, 53343), (434, 53277), (445, 53247), (448, 53238), (453, 53235), (454, 53232), (519, 53112), (531, 53094), (538, 53076), (542, 53064), (547, 53049), (552, 53037), (602, 52926), (603, 52923), (615, 52893), (633, 52857), (724, 52632), (725, 52629), (732, 52593), (738, 52569), (744, 52536), (775, 52428), (777, 52422), (780, 52413), (814, 52314), (815, 52311), (820, 52296), (847, 52218), (851, 52206), (858, 52185), (861, 52176), (875, 52146), (901, 52089), (905, 52056), (910, 52038), (912, 52032), (926, 51993), (931, 51975), (933, 51963), (940, 51939), (956, 51897), (963, 51891), (972, 51867),

Gene: Heathcliff\_58 Start: 53642, Stop: 51825, Start Num: 247

Candidate Starts for Heathcliff\_58:

(130, 53825), (Start: 247 @53642 has 43 MA's), (267, 53612), (368, 53432), (433, 53279), (435, 53267), (448, 53237), (454, 53231), (476, 53168), (478, 53162), (519, 53111), (538, 53075), (556, 53027), (603, 52922), (645, 52826), (674, 52775), (724, 52631), (732, 52592), (739, 52562), (744, 52535), (748, 52523), (775, 52427), (777, 52421), (780, 52412), (782, 52400), (807, 52328), (814, 52298), (820, 52280), (822, 52271), (847, 52202), (851, 52190), (858, 52169), (888, 52100), (898, 52085), (903, 52061), (905, 52040), (912, 52016), (926, 51977), (931, 51959), (933, 51947), (936, 51935), (940, 51923), (956, 51881), (972, 51851),

Gene: Heathen\_45 Start: 31183, Stop: 29345, Start Num: 246

Candidate Starts for Heathen\_45:

(Start: 191 @31255 has 1 MA's), (Start: 246 @31183 has 877 MA's), (280, 31132), (364, 30979), (395, 30919), (400, 30907), (425, 30850), (429, 30841), (433, 30829), (471, 30721), (479, 30697), (539, 30601), (558, 30553), (585, 30493), (614, 30430), (646, 30361), (659, 30340), (697, 30271), (700, 30265), (716, 30226), (743, 30103), (767, 30016), (776, 29980), (783, 29950), (791, 29920), (815, 29839), (827, 29800), (834, 29776), (843, 29758), (888, 29629), (905, 29569), (946, 29434), (950, 29422), (955, 29413),

Gene: Heather\_37 Start: 27927, Stop: 29858, Start Num: 246

Candidate Starts for Heather\_37:

(Start: 246 @27927 has 877 MA's), (267, 27948), (295, 28008), (364, 28137), (389, 28185), (394, 28194), (416, 28239), (527, 28476), (537, 28497), (541, 28515), (563, 28572), (568, 28587), (578, 28614), (585, 28626), (586, 28629), (592, 28644), (659, 28779), (683, 28824), (731, 28977), (743, 29037), (753, 29085), (760, 29100), (767, 29124), (774, 29154), (781, 29181), (783, 29190), (791, 29220), (797, 29244), (840, 29364), (878, 29463), (901, 29517), (905, 29550), (906, 29553), (909, 29565), (910, 29568), (912, 29574), (922, 29601), (946, 29685), (950, 29697), (981, 29760),

Gene: Hedgerow\_57 Start: 52616, Stop: 50787, Start Num: 205

Candidate Starts for Hedgerow\_57:

(Start: 205 @52616 has 304 MA's), (Start: 250 @52589 has 2 MA's), (269, 52559), (Start: 274 @52547 has 6 MA's), (286, 52520), (287, 52517), (293, 52508), (318, 52490), (366, 52394), (391, 52343), (400, 52319), (463, 52157), (472, 52133), (476, 52121), (519, 52064), (538, 52028), (542, 52016), (551, 51992), (588, 51908), (602, 51878), (603, 51875), (615, 51845), (680, 51701), (707, 51635), (721, 51596), (724, 51584), (727, 51563), (732, 51545), (744, 51488), (763, 51431), (771, 51404), (777,

51374), (780, 51365), (795, 51299), (812, 51272), (814, 51263), (820, 51245), (827, 51221), (847, 51167), (851, 51155), (858, 51134), (888, 51065), (905, 51005), (910, 50987), (922, 50954), (926, 50942), (930, 50927), (931, 50924), (933, 50912), (940, 50888), (941, 50885), (963, 50837), (965, 50834), (972, 50813), (979, 50792),

Gene: Heffalump\_43 Start: 31940, Stop: 30153, Start Num: 246

Candidate Starts for Heffalump\_43:

(54, 32318), (119, 32129), (135, 32090), (Start: 246 @31940 has 877 MA's), (364, 31736), (366, 31733), (368, 31727), (375, 31712), (383, 31697), (400, 31664), (402, 31661), (416, 31634), (425, 31607), (433, 31586), (479, 31454), (539, 31361), (551, 31325), (556, 31313), (560, 31304), (568, 31289), (598, 31223), (635, 31142), (659, 31094), (662, 31088), (697, 31025), (743, 30869), (755, 30818), (766, 30785), (767, 30782), (783, 30716), (793, 30677), (810, 30656), (831, 30581), (834, 30569), (880, 30455), (888, 30437), (901, 30410), (902, 30401), (905, 30377), (930, 30299), (946, 30242), (950, 30230), (955, 30221),

Gene: HelDan\_45 Start: 31435, Stop: 29597, Start Num: 246

Candidate Starts for HelDan\_45:

(Start: 191 @31507 has 1 MA's), (Start: 246 @31435 has 877 MA's), (280, 31384), (364, 31231), (395, 31171), (400, 31159), (425, 31102), (429, 31093), (433, 31081), (471, 30973), (479, 30949), (539, 30853), (558, 30805), (585, 30745), (614, 30682), (646, 30613), (659, 30592), (697, 30523), (700, 30517), (716, 30478), (743, 30355), (767, 30268), (776, 30232), (783, 30202), (791, 30172), (815, 30091), (827, 30052), (834, 30028), (843, 30010), (888, 29881), (905, 29821), (946, 29686), (950, 29674), (955, 29665),

Gene: Held\_60 Start: 54034, Stop: 52175, Start Num: 205

Candidate Starts for Held\_60:

(Start: 188 @54058 has 1 MA's), (Start: 205 @54034 has 304 MA's), (Start: 235 @54010 has 6 MA's), (Start: 250 @54004 has 2 MA's), (Start: 274 @53962 has 6 MA's), (283, 53941), (337, 53827), (342, 53821), (360, 53791), (391, 53731), (399, 53710), (421, 53656), (428, 53644), (434, 53626), (436, 53614), (476, 53509), (519, 53452), (538, 53416), (542, 53404), (552, 53377), (570, 53332), (598, 53275), (602, 53266), (603, 53263), (738, 52903), (744, 52870), (750, 52849), (777, 52756), (780, 52747), (795, 52684), (814, 52648), (815, 52645), (820, 52630), (847, 52552), (851, 52540), (858, 52519), (875, 52480), (905, 52390), (910, 52372), (912, 52366), (917, 52351), (926, 52327), (930, 52312), (931, 52309), (933, 52297), (940, 52273), (963, 52225), (972, 52201),

Gene: Heliosoles\_47 Start: 31756, Stop: 29942, Start Num: 246

Candidate Starts for Heliosoles\_47:

(Start: 246 @31756 has 877 MA's), (275, 31717), (280, 31705), (364, 31552), (371, 31537), (400, 31480), (425, 31423), (429, 31414), (444, 31372), (461, 31321), (479, 31270), (539, 31177), (556, 31129), (568, 31105), (585, 31066), (598, 31039), (612, 31009), (654, 30916), (662, 30904), (686, 30856), (697, 30841), (743, 30685), (755, 30634), (766, 30601), (767, 30598), (783, 30532), (793, 30493), (815, 30421), (827, 30382), (834, 30358), (843, 30340), (853, 30307), (888, 30226), (905, 30166), (910, 30148), (930, 30088), (932, 30079), (946, 30031), (950, 30019), (955, 30010),

Gene: Helmet\_47 Start: 29791, Stop: 27950, Start Num: 246

Candidate Starts for Helmet\_47:

(Start: 246 @29791 has 877 MA's), (364, 29587), (400, 29512), (402, 29509), (416, 29482), (420, 29467), (425, 29455), (444, 29404), (475, 29314), (479, 29302), (539, 29209), (552, 29170), (560, 29152), (568, 29137), (598, 29071), (613, 29038), (614, 29035), (663, 28933), (697, 28873), (726, 28789), (743, 28708), (766, 28624), (767, 28621), (771, 28612), (776, 28585), (783, 28555), (810, 28495), (820, 28456), (902, 28240), (903, 28237), (905, 28216), (946, 28081), (950, 28069), (955, 28060), (957, 28057), (1000, 27964),

Gene: Hendrix\_88 Start: 57216, Stop: 59255, Start Num: 216

Candidate Starts for Hendrix\_88:

(Start: 216 @57216 has 4 MA's), (264, 57273), (289, 57330), (Start: 308 @57357 has 5 MA's), (323, 57408), (382, 57528), (398, 57564), (408, 57594), (467, 57762), (504, 57876), (520, 57915), (540, 57972), (543, 57981), (549, 57999), (619, 58107), (624, 58122), (628, 58128), (641, 58161), (656, 58194), (672, 58239), (702, 58311), (732, 58416), (733, 58419), (761, 58488), (776, 58545), (783, 58575), (822, 58710), (845, 58779), (858, 58818), (878, 58869), (884, 58890), (901, 58956), (903, 58968), (905, 58989), (906, 58992), (908, 58998), (913, 59016), (921, 59043), (929, 59070), (933, 59088), (947, 59142), (960, 59172), (976, 59214), (990, 59250),

Gene: HenryJackson\_60 Start: 54560, Stop: 52701, Start Num: 205

Candidate Starts for HenryJackson\_60:

(Start: 188 @54584 has 1 MA's), (Start: 205 @54560 has 304 MA's), (Start: 235 @54536 has 6 MA's), (Start: 250 @54530 has 2 MA's), (Start: 274 @54488 has 6 MA's), (283, 54467), (337, 54353), (342, 54347), (360, 54317), (391, 54257), (399, 54236), (421, 54182), (428, 54170), (434, 54152), (436, 54140), (476, 54035), (519, 53978), (538, 53942), (542, 53930), (552, 53903), (564, 53876), (570, 53858), (580, 53840), (598, 53801), (602, 53792), (603, 53789), (712, 53531), (738, 53429), (744, 53396), (750, 53375), (777, 53282), (780, 53273), (795, 53210), (814, 53174), (815, 53171), (820, 53156), (847, 53078), (851, 53066), (858, 53045), (875, 53006), (905, 52916), (910, 52898), (912, 52892), (917, 52877), (926, 52853), (930, 52838), (931, 52835), (933, 52823), (940, 52799), (946, 52778), (963, 52751), (972, 52727),

Gene: Herbertwm\_42 Start: 30692, Stop: 28857, Start Num: 246

Candidate Starts for Herbertwm\_42:

(Start: 246 @30692 has 877 MA's), (364, 30488), (366, 30485), (402, 30410), (416, 30383), (420, 30368), (425, 30356), (433, 30335), (479, 30203), (539, 30110), (560, 30053), (640, 29882), (726, 29693), (743, 29612), (755, 29561), (767, 29525), (776, 29489), (783, 29459), (793, 29420), (810, 29399), (814, 29378), (853, 29261), (864, 29234), (880, 29198), (888, 29180), (902, 29144), (903, 29141), (905, 29120), (930, 29042), (946, 28985), (955, 28964), (1002, 28865),

Gene: Hercules11\_48 Start: 31861, Stop: 30047, Start Num: 246

Candidate Starts for Hercules11\_48:

(Start: 246 @31861 has 877 MA's), (275, 31822), (280, 31810), (364, 31657), (371, 31642), (400, 31585), (425, 31528), (429, 31519), (444, 31477), (461, 31426), (479, 31375), (539, 31282), (556, 31234), (560, 31225), (568, 31210), (585, 31171), (598, 31144), (612, 31114), (654, 31021), (686, 30961), (697, 30946), (743, 30790), (767, 30703), (783, 30637), (793, 30598), (815, 30526), (827, 30487), (834, 30463), (843, 30445), (853, 30412), (864, 30385), (888, 30331), (905, 30271), (930, 30193), (946, 30136), (950, 30124), (955, 30115),

Gene: HerculesXL\_37 Start: 27313, Stop: 25415, Start Num: 297

Candidate Starts for HerculesXL\_37:

(8, 28051), (9, 28045), (56, 27790), (Start: 272 @27364 has 4 MA's), (Start: 297 @27313 has 18 MA's), (324, 27250), (354, 27199), (375, 27160), (403, 27103), (430, 27046), (433, 27037), (435, 27025), (438, 27019), (456, 26968), (469, 26929), (493, 26866), (504, 26821), (531, 26746), (537, 26737), (539, 26725), (549, 26695), (556, 26674), (562, 26662), (585, 26638), (660, 26488), (742, 26227), (771, 26125), (774, 26104), (783, 26068), (792, 26032), (794, 26026), (822, 25939), (831, 25912), (878, 25780), (888, 25741), (893, 25720), (903, 25681), (906, 25657), (908, 25651), (917, 25624), (947, 25513),

Gene: Hermia\_46 Start: 35549, Stop: 33723, Start Num: 246

Candidate Starts for Hermia\_46:

(Start: 246 @35549 has 877 MA's), (368, 35336), (374, 35321), (416, 35243), (422, 35222), (425, 35216), (429, 35207), (470, 35090), (479, 35063), (539, 34970), (544, 34955), (578, 34871), (580,



34868), (612, 34802), (639, 34742), (662, 34697), (683, 34658), (743, 34478), (753, 34430), (767, 34391), (783, 34325), (793, 34286), (810, 34265), (814, 34244), (820, 34226), (843, 34160), (901, 34019), (902, 34010), (903, 34007), (909, 33971), (917, 33947), (921, 33938), (925, 33926), (946, 33851), (955, 33830),

Gene: HermioneGrange\_44 Start: 34683, Stop: 32854, Start Num: 246

Candidate Starts for HermioneGrange\_44:

(Start: 246 @34683 has 877 MA's), (368, 34470), (374, 34455), (400, 34407), (416, 34377), (422, 34356), (425, 34350), (429, 34341), (470, 34224), (479, 34197), (539, 34104), (544, 34089), (578, 34005), (580, 34002), (612, 33936), (627, 33906), (639, 33876), (662, 33831), (683, 33792), (743, 33612), (753, 33564), (771, 33516), (780, 33477), (783, 33459), (793, 33420), (810, 33399), (814, 33378), (861, 33240), (922, 33069), (929, 33045), (938, 33012), (943, 32997), (946, 32985), (955, 32964), (959, 32958), (981, 32910), (986, 32895),

Gene: Hertubise\_60 Start: 54326, Stop: 52467, Start Num: 205

Candidate Starts for Hertubise\_60:

(Start: 188 @54350 has 1 MA's), (Start: 205 @54326 has 304 MA's), (Start: 235 @54302 has 6 MA's), (Start: 250 @54296 has 2 MA's), (Start: 274 @54254 has 6 MA's), (283, 54233), (337, 54119), (342, 54113), (360, 54083), (391, 54023), (399, 54002), (421, 53948), (428, 53936), (434, 53918), (436, 53906), (476, 53801), (519, 53744), (538, 53708), (542, 53696), (552, 53669), (564, 53642), (570, 53624), (580, 53606), (598, 53567), (602, 53558), (603, 53555), (712, 53297), (738, 53195), (744, 53162), (750, 53141), (777, 53048), (780, 53039), (795, 52976), (814, 52940), (815, 52937), (820, 52922), (847, 52844), (851, 52832), (858, 52811), (875, 52772), (905, 52682), (910, 52664), (912, 52658), (917, 52643), (926, 52619), (930, 52604), (931, 52601), (933, 52589), (940, 52565), (963, 52517), (972, 52493),

Gene: Hetaeria\_60 Start: 54265, Stop: 52406, Start Num: 205

Candidate Starts for Hetaeria\_60:

(Start: 188 @54289 has 1 MA's), (Start: 205 @54265 has 304 MA's), (Start: 235 @54241 has 6 MA's), (Start: 250 @54235 has 2 MA's), (Start: 274 @54193 has 6 MA's), (283, 54172), (337, 54058), (342, 54052), (360, 54022), (391, 53962), (399, 53941), (421, 53887), (428, 53875), (434, 53857), (436, 53845), (476, 53740), (519, 53683), (538, 53647), (542, 53635), (551, 53611), (556, 53599), (564, 53581), (570, 53563), (580, 53545), (598, 53506), (602, 53497), (603, 53494), (604, 53491), (738, 53134), (744, 53101), (750, 53080), (777, 52987), (780, 52978), (795, 52915), (814, 52879), (815, 52876), (820, 52861), (847, 52783), (851, 52771), (858, 52750), (875, 52711), (905, 52621), (910, 52603), (912, 52597), (917, 52582), (926, 52558), (930, 52543), (931, 52540), (933, 52528), (940, 52504), (963, 52456), (972, 52432),

Gene: Hexamo\_45 Start: 29412, Stop: 27571, Start Num: 246

Candidate Starts for Hexamo\_45:

(Start: 220 @29442 has 1 MA's), (Start: 246 @29412 has 877 MA's), (364, 29208), (400, 29133), (402, 29130), (416, 29103), (420, 29088), (425, 29076), (444, 29025), (475, 28935), (479, 28923), (539, 28830), (552, 28791), (560, 28773), (568, 28758), (598, 28692), (613, 28659), (614, 28656), (663, 28554), (697, 28494), (726, 28410), (743, 28329), (766, 28245), (767, 28242), (771, 28233), (776, 28206), (783, 28176), (810, 28116), (820, 28077), (902, 27861), (903, 27858), (905, 27837), (946, 27702), (950, 27690), (955, 27681), (957, 27678), (1000, 27585),

Gene: Hexbug\_51 Start: 35224, Stop: 32828, Start Num: 45

Candidate Starts for Hexbug\_51:

(16, 35353), (19, 35344), (Start: 45 @35224 has 24 MA's), (89, 35092), (93, 35080), (107, 35035), (138, 34972), (145, 34951), (185, 34918), (223, 34861), (265, 34813), (273, 34798), (295, 34750), (329, 34675), (332, 34669), (335, 34663), (338, 34657), (374, 34588), (389, 34564), (398, 34540), (430, 34465), (435, 34444), (453, 34396), (457, 34384), (473, 34339), (524, 34183), (526, 34177),

(605, 34048), (643, 34000), (649, 33988), (682, 33916), (703, 33874), (733, 33763), (741, 33721), (747, 33697), (749, 33688), (760, 33646), (783, 33553), (792, 33517), (794, 33511), (796, 33505), (797, 33499), (815, 33442), (822, 33418), (828, 33400), (859, 33307), (884, 33238), (893, 33199), (903, 33160), (905, 33139), (915, 33106), (922, 33088), (947, 32992), (958, 32968), (973, 32929), (1004, 32860),

Gene: Heylee\_57 Start: 36664, Stop: 34496, Start Num: 233

Candidate Starts for Heylee\_57:

(231, 36667), (Start: 233 @36664 has 13 MA's), (Start: 272 @36610 has 4 MA's), (317, 36526), (382, 36373), (387, 36364), (405, 36319), (431, 36241), (434, 36232), (438, 36217), (446, 36202), (447, 36199), (466, 36142), (490, 36049), (493, 36007), (567, 35812), (570, 35800), (572, 35794), (581, 35770), (590, 35749), (600, 35728), (606, 35713), (609, 35707), (638, 35644), (662, 35593), (693, 35506), (714, 35446), (726, 35398), (751, 35296), (752, 35290), (757, 35263), (758, 35260), (766, 35239), (777, 35197), (779, 35191), (784, 35167), (794, 35125), (795, 35122), (802, 35095), (811, 35062), (813, 35050), (823, 35014), (831, 34990), (832, 34984), (834, 34978), (854, 34924), (875, 34876), (876, 34873), (897, 34813), (902, 34789), (907, 34759), (923, 34705), (926, 34696), (940, 34636), (944, 34624), (958, 34585),

Gene: HighStump\_62 Start: 54537, Stop: 52678, Start Num: 205

Candidate Starts for HighStump\_62:

(Start: 188 @54561 has 1 MA's), (Start: 205 @54537 has 304 MA's), (Start: 235 @54513 has 6 MA's), (Start: 250 @54507 has 2 MA's), (Start: 274 @54465 has 6 MA's), (283, 54444), (337, 54330), (342, 54324), (360, 54294), (391, 54234), (399, 54213), (421, 54159), (428, 54147), (434, 54129), (476, 54012), (519, 53955), (538, 53919), (542, 53907), (552, 53880), (564, 53853), (570, 53835), (580, 53817), (598, 53778), (602, 53769), (603, 53766), (738, 53406), (744, 53373), (750, 53352), (777, 53259), (780, 53250), (795, 53187), (815, 53148), (820, 53133), (847, 53055), (851, 53043), (858, 53022), (875, 52983), (903, 52914), (905, 52893), (910, 52875), (912, 52869), (917, 52854), (926, 52830), (930, 52815), (931, 52812), (933, 52800), (940, 52776), (963, 52728), (972, 52704),

Gene: HippoPololi\_40 Start: 31759, Stop: 29405, Start Num: 44

Candidate Starts for HippoPololi\_40:

(34, 31786), (Start: 44 @31759 has 1 MA's), (50, 31744), (57, 31708), (138, 31513), (287, 31306), (Start: 308 @31276 has 5 MA's), (329, 31219), (354, 31183), (363, 31168), (386, 31126), (389, 31120), (398, 31096), (420, 31042), (435, 31000), (502, 30802), (520, 30760), (526, 30742), (598, 30622), (660, 30529), (664, 30520), (682, 30484), (703, 30445), (707, 30433), (741, 30292), (752, 30250), (783, 30130), (792, 30094), (794, 30088), (796, 30082), (797, 30076), (805, 30052), (815, 30019), (822, 29995), (836, 29950), (859, 29884), (893, 29776), (908, 29707), (911, 29695), (920, 29671), (940, 29593), (944, 29581), (947, 29569), (958, 29545), (968, 29524), (976, 29500), (995, 29455), (1004, 29437),

Gene: Hiro\_36 Start: 28373, Stop: 26589, Start Num: 246

Candidate Starts for Hiro\_36:

(Start: 246 @28373 has 877 MA's), (379, 28139), (395, 28109), (399, 28100), (400, 28097), (420, 28052), (425, 28040), (429, 28031), (444, 27989), (479, 27887), (496, 27866), (539, 27794), (554, 27749), (556, 27746), (574, 27704), (577, 27698), (585, 27683), (598, 27656), (646, 27551), (662, 27524), (683, 27485), (743, 27305), (753, 27257), (783, 27152), (784, 27149), (810, 27092), (814, 27071), (829, 27023), (855, 26948), (886, 26879), (902, 26837), (905, 26813), (930, 26735), (946, 26678), (950, 26666), (978, 26609),

Gene: Hocus\_60 Start: 54021, Stop: 52162, Start Num: 205

Candidate Starts for Hocus\_60:

(Start: 188 @54045 has 1 MA's), (Start: 205 @54021 has 304 MA's), (Start: 235 @53997 has 6 MA's), (Start: 250 @53991 has 2 MA's), (Start: 274 @53949 has 6 MA's), (283, 53928), (337, 53814), (342,

53808), (360, 53778), (391, 53718), (399, 53697), (421, 53643), (428, 53631), (434, 53613), (436, 53601), (476, 53496), (519, 53439), (538, 53403), (542, 53391), (552, 53364), (570, 53319), (598, 53262), (602, 53253), (603, 53250), (738, 52890), (744, 52857), (750, 52836), (777, 52743), (780, 52734), (795, 52671), (814, 52635), (815, 52632), (820, 52617), (847, 52539), (851, 52527), (858, 52506), (875, 52467), (905, 52377), (910, 52359), (912, 52353), (917, 52338), (926, 52314), (930, 52299), (931, 52296), (933, 52284), (940, 52260), (963, 52212), (972, 52188),

Gene: Holeinone\_57 Start: 52455, Stop: 50626, Start Num: 205

Candidate Starts for Holeinone\_57:

(Start: 205 @52455 has 304 MA's), (Start: 250 @52428 has 2 MA's), (269, 52398), (Start: 274 @52386 has 6 MA's), (286, 52359), (287, 52356), (293, 52347), (318, 52329), (366, 52233), (391, 52182), (400, 52158), (463, 51996), (469, 51981), (472, 51972), (476, 51960), (519, 51903), (538, 51867), (542, 51855), (551, 51831), (588, 51747), (602, 51717), (603, 51714), (615, 51684), (680, 51540), (707, 51474), (724, 51423), (727, 51402), (732, 51384), (744, 51327), (771, 51243), (777, 51213), (780, 51204), (795, 51138), (812, 51111), (814, 51102), (820, 51084), (827, 51060), (847, 51006), (851, 50994), (858, 50973), (888, 50904), (905, 50844), (910, 50826), (922, 50793), (926, 50781), (930, 50766), (931, 50763), (933, 50751), (940, 50727), (941, 50724), (963, 50676), (965, 50673), (972, 50652), (979, 50631),

Gene: Horex\_44 Start: 31507, Stop: 29714, Start Num: 246

Candidate Starts for Horex\_44:

(Start: 246 @31507 has 877 MA's), (261, 31498), (280, 31456), (346, 31336), (347, 31333), (372, 31285), (402, 31225), (417, 31195), (420, 31183), (425, 31171), (479, 31018), (539, 30925), (598, 30787), (612, 30757), (687, 30598), (697, 30586), (714, 30559), (740, 30451), (743, 30430), (780, 30295), (783, 30277), (814, 30196), (827, 30154), (853, 30079), (886, 30004), (902, 29962), (930, 29860), (946, 29803), (950, 29791), (955, 29782),

Gene: Holli\_44 Start: 31360, Stop: 29534, Start Num: 246

Candidate Starts for Holli\_44:

(Start: 246 @31360 has 877 MA's), (267, 31339), (280, 31309), (295, 31279), (383, 31117), (394, 31099), (425, 31027), (429, 31018), (471, 30898), (479, 30874), (539, 30781), (558, 30733), (568, 30712), (585, 30673), (646, 30541), (659, 30520), (683, 30475), (687, 30463), (740, 30310), (743, 30289), (776, 30166), (783, 30136), (793, 30097), (814, 30031), (815, 30028), (820, 30013), (827, 29989), (834, 29965), (905, 29758), (946, 29623), (950, 29611), (955, 29602),

Gene: Homines\_37 Start: 30760, Stop: 28934, Start Num: 246

Candidate Starts for Homines\_37:

(Start: 246 @30760 has 877 MA's), (368, 30547), (374, 30532), (400, 30484), (416, 30454), (422, 30433), (425, 30427), (429, 30418), (470, 30301), (479, 30274), (539, 30181), (544, 30166), (556, 30133), (578, 30082), (580, 30079), (612, 30013), (627, 29983), (639, 29953), (662, 29908), (683, 29869), (743, 29689), (752, 29659), (753, 29641), (755, 29638), (767, 29602), (783, 29536), (814, 29455), (815, 29452), (843, 29371), (902, 29221), (903, 29218), (909, 29182), (917, 29158), (921, 29149), (925, 29137), (946, 29062), (955, 29041),

Gene: Honk\_44 Start: 28246, Stop: 30111, Start Num: 244

Candidate Starts for Honk\_44:

(Start: 244 @28246 has 11 MA's), (279, 28294), (317, 28354), (364, 28450), (422, 28567), (541, 28840), (556, 28882), (585, 28948), (639, 29062), (659, 29101), (692, 29164), (725, 29269), (726, 29278), (743, 29359), (755, 29410), (774, 29476), (776, 29482), (784, 29515), (832, 29671), (844, 29698), (878, 29785), (917, 29911), (921, 29920), (926, 29935), (946, 30007), (953, 30022), (962, 30037),

Gene: Hookmount\_44 Start: 31598, Stop: 29760, Start Num: 246

Candidate Starts for Hookmount\_44:

(Start: 246 @31598 has 877 MA's), (280, 31547), (364, 31394), (400, 31322), (416, 31292), (425, 31265), (429, 31256), (479, 31112), (539, 31016), (558, 30968), (585, 30908), (629, 30821), (646, 30776), (659, 30755), (698, 30683), (716, 30641), (726, 30599), (743, 30518), (753, 30470), (767, 30431), (776, 30395), (783, 30365), (791, 30335), (815, 30254), (827, 30215), (834, 30191), (843, 30173), (844, 30170), (888, 30044), (905, 29984), (932, 29897), (946, 29849), (950, 29837), (955, 29828),

Gene: Hoot\_45 Start: 29605, Stop: 27764, Start Num: 246

Candidate Starts for Hoot\_45:

(Start: 246 @29605 has 877 MA's), (364, 29401), (400, 29326), (402, 29323), (416, 29296), (420, 29281), (425, 29269), (444, 29218), (475, 29128), (479, 29116), (539, 29023), (552, 28984), (560, 28966), (568, 28951), (598, 28885), (613, 28852), (614, 28849), (663, 28747), (697, 28687), (726, 28603), (743, 28522), (766, 28438), (767, 28435), (771, 28426), (776, 28399), (783, 28369), (810, 28309), (820, 28270), (902, 28054), (903, 28051), (905, 28030), (946, 27895), (950, 27883), (955, 27874), (957, 27871), (1000, 27778),

Gene: Hope4ever\_46 Start: 35139, Stop: 33313, Start Num: 246

Candidate Starts for Hope4ever\_46:

(Start: 246 @35139 has 877 MA's), (368, 34926), (400, 34863), (416, 34833), (422, 34812), (425, 34806), (429, 34797), (470, 34680), (479, 34653), (539, 34560), (544, 34545), (578, 34461), (580, 34458), (612, 34392), (627, 34362), (639, 34332), (662, 34287), (683, 34248), (743, 34068), (753, 34020), (767, 33981), (783, 33915), (793, 33876), (810, 33855), (814, 33834), (820, 33816), (843, 33750), (902, 33600), (903, 33597), (909, 33561), (917, 33537), (921, 33528), (925, 33516), (946, 33441), (955, 33420),

Gene: Horchata\_59 Start: 54056, Stop: 52197, Start Num: 205

Candidate Starts for Horchata\_59:

(Start: 188 @54080 has 1 MA's), (Start: 205 @54056 has 304 MA's), (Start: 235 @54032 has 6 MA's), (Start: 250 @54026 has 2 MA's), (Start: 274 @53984 has 6 MA's), (283, 53963), (337, 53849), (342, 53843), (360, 53813), (391, 53753), (399, 53732), (421, 53678), (428, 53666), (434, 53648), (436, 53636), (476, 53531), (519, 53474), (538, 53438), (542, 53426), (552, 53399), (556, 53390), (570, 53354), (598, 53297), (602, 53288), (603, 53285), (604, 53282), (738, 52925), (744, 52892), (750, 52871), (777, 52778), (780, 52769), (795, 52706), (814, 52670), (815, 52667), (820, 52652), (847, 52574), (851, 52562), (858, 52541), (875, 52502), (905, 52412), (910, 52394), (912, 52388), (917, 52373), (926, 52349), (930, 52334), (931, 52331), (933, 52319), (940, 52295), (963, 52247), (972, 52223),

Gene: Horseradish\_45 Start: 32448, Stop: 30058, Start Num: 36

Candidate Starts for Horseradish\_45:

(Start: 36 @32448 has 16 MA's), (63, 32385), (70, 32367), (75, 32352), (93, 32298), (97, 32286), (103, 32265), (117, 32232), (128, 32205), (138, 32181), (164, 32154), (Start: 241 @32049 has 13 MA's), (275, 32001), (329, 31884), (374, 31803), (391, 31776), (398, 31755), (420, 31701), (421, 31698), (430, 31680), (435, 31659), (457, 31599), (526, 31401), (539, 31359), (605, 31272), (615, 31248), (633, 31242), (657, 31188), (660, 31182), (680, 31140), (682, 31137), (683, 31134), (733, 30987), (741, 30945), (749, 30918), (760, 30876), (783, 30783), (792, 30747), (794, 30741), (796, 30735), (797, 30729), (805, 30705), (815, 30672), (822, 30648), (836, 30603), (856, 30543), (903, 30390), (947, 30222), (968, 30177), (971, 30168), (973, 30159),

Gene: HortumSL17\_45 Start: 31483, Stop: 29690, Start Num: 246

Candidate Starts for HortumSL17\_45:

(Start: 246 @31483 has 877 MA's), (261, 31474), (280, 31432), (346, 31312), (347, 31309), (372, 31261), (402, 31201), (417, 31171), (420, 31159), (425, 31147), (479, 30994), (539, 30901), (598,

30763), (612, 30733), (687, 30574), (697, 30562), (714, 30535), (740, 30427), (743, 30406), (780, 30271), (783, 30253), (814, 30172), (827, 30130), (853, 30055), (886, 29980), (902, 29938), (930, 29836), (946, 29779), (950, 29767), (955, 29758),

Gene: Hosp\_050 Start: 50681, Stop: 48840, Start Num: 199

Candidate Starts for Hosp\_050:

(79, 50945), (85, 50930), (Start: 199 @50681 has 2 MA's), (267, 50624), (Start: 274 @50609 has 6 MA's), (366, 50435), (391, 50384), (393, 50381), (400, 50360), (421, 50309), (423, 50303), (433, 50285), (448, 50243), (453, 50240), (463, 50210), (519, 50117), (538, 50081), (542, 50069), (591, 49955), (602, 49931), (603, 49928), (704, 49697), (725, 49628), (727, 49610), (732, 49592), (744, 49535), (775, 49427), (777, 49421), (780, 49412), (795, 49349), (814, 49313), (815, 49310), (820, 49295), (847, 49217), (851, 49205), (858, 49184), (860, 49178), (875, 49145), (888, 49115), (898, 49100), (902, 49079), (905, 49055), (912, 49031), (926, 48992), (929, 48980), (930, 48977), (931, 48974), (933, 48962), (940, 48938), (972, 48866), (979, 48845),

Gene: Houdini22\_45 Start: 31574, Stop: 29748, Start Num: 246

Candidate Starts for Houdini22\_45:

(Start: 246 @31574 has 877 MA's), (267, 31553), (280, 31523), (295, 31493), (383, 31331), (394, 31313), (425, 31241), (429, 31232), (471, 31112), (479, 31088), (539, 30995), (558, 30947), (568, 30926), (585, 30887), (646, 30755), (659, 30734), (683, 30689), (687, 30677), (740, 30524), (743, 30503), (776, 30380), (783, 30350), (793, 30311), (814, 30245), (815, 30242), (820, 30227), (827, 30203), (834, 30179), (905, 29972), (946, 29837), (950, 29825), (955, 29816),

Gene: HuhtaEnerson15\_39 Start: 30586, Stop: 28721, Start Num: 246

Candidate Starts for HuhtaEnerson15\_39:

(Start: 246 @30586 has 877 MA's), (280, 30535), (318, 30475), (347, 30412), (364, 30382), (366, 30379), (395, 30322), (400, 30310), (416, 30280), (425, 30253), (479, 30100), (539, 30004), (556, 29956), (594, 29872), (598, 29866), (633, 29794), (646, 29761), (654, 29746), (662, 29734), (712, 29635), (743, 29500), (752, 29470), (753, 29452), (762, 29434), (767, 29413), (771, 29404), (783, 29347), (793, 29308), (814, 29266), (820, 29248), (834, 29200), (853, 29149), (876, 29095), (880, 29086), (888, 29068), (905, 29008), (910, 28990), (939, 28897), (946, 28873), (950, 28861), (1000, 28756),

Gene: HungryHenry\_38 Start: 28624, Stop: 26759, Start Num: 301

Candidate Starts for HungryHenry\_38:

(Start: 238 @28711 has 3 MA's), (Start: 241 @28708 has 13 MA's), (Start: 301 @28624 has 110 MA's), (Start: 308 @28615 has 5 MA's), (354, 28510), (358, 28501), (375, 28471), (378, 28468), (433, 28348), (435, 28336), (438, 28330), (475, 28225), (484, 28198), (531, 28057), (536, 28051), (537, 28048), (539, 28036), (548, 28009), (549, 28006), (554, 27991), (556, 27985), (559, 27979), (586, 27946), (652, 27817), (676, 27757), (776, 27442), (779, 27433), (780, 27430), (783, 27412), (794, 27370), (796, 27364), (798, 27355), (805, 27340), (822, 27283), (878, 27124), (885, 27094), (888, 27085), (903, 27025), (906, 27001), (919, 26962), (929, 26929), (932, 26917), (947, 26857),

Gene: Hutc2\_44 Start: 30330, Stop: 28543, Start Num: 246

Candidate Starts for Hutc2\_44:

(Start: 246 @30330 has 877 MA's), (364, 30126), (400, 30054), (416, 30024), (425, 29997), (541, 29745), (560, 29694), (598, 29613), (619, 29568), (620, 29565), (659, 29484), (687, 29427), (715, 29385), (726, 29340), (743, 29259), (755, 29208), (767, 29172), (783, 29106), (810, 29046), (812, 29034), (846, 28932), (853, 28908), (860, 28890), (888, 28827), (901, 28800), (902, 28791), (905, 28767), (946, 28632), (950, 28620), (955, 28611),

Gene: Huwbert\_71 Start: 43958, Stop: 46630, Start Num: 25

Candidate Starts for Huwbert\_71:

(Start: 25 @43958 has 2 MA's), (48, 44048), (49, 44051), (50, 44054), (68, 44114), (107, 44231), (179, 44360), (Start: 299 @44537 has 38 MA's), (Start: 308 @44549 has 5 MA's), (322, 44594), (328, 44609), (343, 44636), (394, 44735), (403, 44765), (420, 44804), (435, 44846), (456, 44903), (461, 44918), (487, 44972), (526, 45083), (574, 45224), (629, 45353), (647, 45398), (649, 45401), (657, 45419), (677, 45476), (703, 45536), (722, 45596), (769, 45791), (783, 45854), (799, 45917), (822, 45992), (849, 46073), (859, 46103), (885, 46181), (893, 46211), (903, 46250), (907, 46277), (909, 46286), (929, 46352), (947, 46424), (950, 46433), (966, 46463), (1011, 46589), (1013, 46607),

Gene: Huxley\_45 Start: 31631, Stop: 29805, Start Num: 246

Candidate Starts for Huxley\_45:

(Start: 246 @31631 has 877 MA's), (267, 31610), (280, 31580), (295, 31550), (383, 31388), (394, 31370), (425, 31298), (429, 31289), (471, 31169), (479, 31145), (539, 31052), (558, 31004), (568, 30983), (585, 30944), (646, 30812), (659, 30791), (683, 30746), (687, 30734), (740, 30581), (743, 30560), (776, 30437), (783, 30407), (793, 30368), (814, 30302), (815, 30299), (820, 30284), (827, 30260), (834, 30236), (905, 30029), (946, 29894), (950, 29882), (955, 29873),

Gene: Hydro\_53 Start: 54045, Stop: 52222, Start Num: 197

Candidate Starts for Hydro\_53:

(Start: 182 @54063 has 4 MA's), (Start: 197 @54045 has 27 MA's), (Start: 250 @54021 has 2 MA's), (267, 53994), (Start: 274 @53979 has 6 MA's), (283, 53958), (329, 53871), (387, 53766), (406, 53724), (434, 53658), (445, 53628), (448, 53619), (453, 53616), (454, 53613), (519, 53493), (531, 53475), (538, 53457), (542, 53445), (547, 53430), (552, 53418), (602, 53307), (603, 53304), (615, 53274), (633, 53238), (724, 53013), (725, 53010), (732, 52974), (738, 52950), (744, 52917), (775, 52809), (777, 52803), (780, 52794), (814, 52695), (815, 52692), (820, 52677), (847, 52599), (851, 52587), (858, 52566), (861, 52557), (875, 52527), (901, 52470), (905, 52437), (910, 52419), (912, 52413), (926, 52374), (931, 52356), (933, 52344), (940, 52320), (956, 52278), (963, 52272), (972, 52248),

Gene: IAmGroot\_48 Start: 31892, Stop: 33757, Start Num: 244

Candidate Starts for IAmGroot\_48:

(Start: 244 @31892 has 11 MA's), (416, 32189), (448, 32279), (585, 32594), (635, 32699), (639, 32708), (659, 32747), (692, 32810), (743, 33005), (760, 33068), (774, 33122), (776, 33128), (784, 33161), (812, 33248), (832, 33317), (844, 33344), (946, 33653),

Gene: ICleared\_45 Start: 31599, Stop: 29773, Start Num: 246

Candidate Starts for ICleared\_45:

(Start: 246 @31599 has 877 MA's), (267, 31578), (280, 31548), (295, 31518), (383, 31356), (394, 31338), (425, 31266), (429, 31257), (471, 31137), (479, 31113), (539, 31020), (558, 30972), (568, 30951), (585, 30912), (646, 30780), (659, 30759), (683, 30714), (687, 30702), (740, 30549), (743, 30528), (776, 30405), (783, 30375), (793, 30336), (814, 30270), (815, 30267), (827, 30228), (834, 30204), (905, 29997), (946, 29862), (950, 29850), (955, 29841),

Gene: ILeeKay\_49 Start: 35713, Stop: 33884, Start Num: 246

Candidate Starts for ILeeKay\_49:

(Start: 246 @35713 has 877 MA's), (368, 35500), (374, 35485), (416, 35407), (422, 35386), (425, 35380), (429, 35371), (470, 35254), (479, 35227), (539, 35134), (544, 35119), (556, 35086), (578, 35035), (580, 35032), (607, 34978), (612, 34966), (627, 34936), (639, 34906), (662, 34861), (683, 34822), (743, 34642), (753, 34594), (771, 34546), (780, 34507), (783, 34489), (793, 34450), (810, 34429), (814, 34408), (819, 34393), (861, 34270), (922, 34099), (929, 34075), (943, 34027), (946, 34015), (955, 33994), (959, 33988), (981, 33940), (986, 33925),

Gene: Ibantik\_18 Start: 8692, Stop: 6680, Start Num: 246

Candidate Starts for Ibantik\_18:

(Start: 246 @8692 has 877 MA's), (368, 8473), (383, 8443), (462, 8248), (467, 8236), (479, 8200), (486, 8179), (492, 8122), (539, 7954), (578, 7849), (585, 7837), (604, 7795), (712, 7585), (743, 7450), (773, 7336), (775, 7327), (783, 7294), (801, 7228), (834, 7105), (901, 6946), (922, 6862), (924, 6856), (926, 6850), (931, 6832), (939, 6802), (946, 6778),

Gene: Icarian\_45 Start: 30940, Stop: 32814, Start Num: 246

Candidate Starts for Icarian\_45:

(Start: 246 @30940 has 877 MA's), (287, 31009), (Start: 301 @31030 has 110 MA's), (400, 31210), (429, 31276), (434, 31291), (444, 31318), (585, 31612), (696, 31846), (730, 31966), (731, 31969), (743, 32029), (746, 32035), (755, 32080), (762, 32095), (764, 32110), (774, 32146), (783, 32182), (813, 32275), (844, 32368), (874, 32446), (875, 32449), (902, 32518), (905, 32542), (909, 32557), (924, 32599), (929, 32617), (946, 32677), (955, 32698),

Gene: Iceman\_45 Start: 31856, Stop: 30030, Start Num: 246

Candidate Starts for Iceman\_45:

(Start: 246 @31856 has 877 MA's), (267, 31835), (280, 31805), (295, 31775), (383, 31613), (394, 31595), (425, 31523), (429, 31514), (471, 31394), (479, 31370), (539, 31277), (558, 31229), (568, 31208), (585, 31169), (646, 31037), (659, 31016), (683, 30971), (687, 30959), (740, 30806), (743, 30785), (776, 30662), (783, 30632), (793, 30593), (814, 30527), (815, 30524), (820, 30509), (827, 30485), (834, 30461), (905, 30254), (946, 30119), (950, 30107), (955, 30098),

Gene: Ichabod\_46 Start: 34837, Stop: 33011, Start Num: 246

Candidate Starts for Ichabod\_46:

(Start: 246 @34837 has 877 MA's), (368, 34624), (400, 34561), (416, 34531), (422, 34510), (425, 34504), (429, 34495), (470, 34378), (479, 34351), (539, 34258), (544, 34243), (556, 34210), (578, 34159), (580, 34156), (612, 34090), (627, 34060), (639, 34030), (662, 33985), (683, 33946), (743, 33766), (753, 33718), (767, 33679), (783, 33613), (793, 33574), (810, 33553), (814, 33532), (820, 33514), (843, 33448), (902, 33298), (903, 33295), (917, 33235), (921, 33226), (925, 33214), (946, 33139), (955, 33118),

Gene: Ichor\_55 Start: 36879, Stop: 34711, Start Num: 233

Candidate Starts for Ichor\_55:

(231, 36882), (Start: 233 @36879 has 13 MA's), (Start: 272 @36825 has 4 MA's), (317, 36741), (382, 36588), (387, 36579), (405, 36534), (431, 36456), (434, 36447), (438, 36432), (446, 36417), (447, 36414), (466, 36357), (490, 36264), (493, 36222), (567, 36027), (570, 36015), (572, 36009), (581, 35985), (590, 35964), (600, 35943), (606, 35928), (609, 35922), (638, 35859), (662, 35808), (693, 35721), (714, 35661), (726, 35613), (751, 35511), (752, 35505), (757, 35478), (758, 35475), (766, 35454), (777, 35412), (779, 35406), (784, 35382), (794, 35340), (795, 35337), (802, 35310), (811, 35277), (813, 35265), (823, 35229), (831, 35205), (832, 35199), (834, 35193), (854, 35139), (875, 35091), (876, 35088), (897, 35028), (902, 35004), (907, 34974), (923, 34920), (940, 34851), (944, 34839), (958, 34800),

Gene: Idleandcovert\_46 Start: 31555, Stop: 29717, Start Num: 246

Candidate Starts for Idleandcovert\_46:

(Start: 246 @31555 has 877 MA's), (280, 31504), (319, 31438), (364, 31351), (395, 31291), (400, 31279), (425, 31222), (429, 31213), (471, 31093), (479, 31069), (539, 30973), (558, 30925), (585, 30865), (614, 30802), (646, 30733), (659, 30712), (698, 30640), (716, 30598), (726, 30556), (743, 30475), (753, 30427), (776, 30352), (783, 30322), (791, 30292), (815, 30211), (827, 30172), (834, 30148), (843, 30130), (888, 30001), (905, 29941), (946, 29806), (950, 29794), (955, 29785),

Gene: IgnatiusPatJac\_44 Start: 34736, Stop: 32907, Start Num: 246

Candidate Starts for IgnatiusPatJac\_44:

(Start: 246 @34736 has 877 MA's), (368, 34523), (400, 34460), (416, 34430), (422, 34409), (425, 34403), (429, 34394), (470, 34277), (479, 34250), (539, 34157), (544, 34142), (556, 34109), (578, 34058), (580, 34055), (612, 33989), (639, 33929), (662, 33884), (683, 33845), (743, 33665), (753, 33617), (771, 33569), (780, 33530), (783, 33512), (793, 33473), (810, 33452), (814, 33431), (819, 33416), (861, 33293), (922, 33122), (929, 33098), (943, 33050), (946, 33038), (955, 33017), (959, 33011), (981, 32963), (986, 32948),

Gene: Ilzat\_38 Start: 28635, Stop: 26770, Start Num: 301

Candidate Starts for Ilzat\_38:

(Start: 238 @28722 has 3 MA's), (Start: 241 @28719 has 13 MA's), (Start: 301 @28635 has 110 MA's), (Start: 308 @28626 has 5 MA's), (354, 28521), (358, 28512), (375, 28482), (378, 28479), (433, 28359), (435, 28347), (438, 28341), (475, 28236), (484, 28209), (531, 28068), (536, 28062), (537, 28059), (539, 28047), (548, 28020), (549, 28017), (554, 28002), (556, 27996), (559, 27990), (586, 27957), (652, 27828), (676, 27768), (776, 27453), (779, 27444), (780, 27441), (783, 27423), (794, 27381), (796, 27375), (798, 27366), (805, 27351), (822, 27294), (878, 27135), (885, 27105), (888, 27096), (903, 27036), (906, 27012), (919, 26973), (929, 26940), (932, 26928), (947, 26868),

Gene: ImtiyazSitla\_62 Start: 54257, Stop: 52398, Start Num: 205

Candidate Starts for ImtiyazSitla\_62:

(Start: 188 @54281 has 1 MA's), (Start: 205 @54257 has 304 MA's), (Start: 235 @54233 has 6 MA's), (Start: 250 @54227 has 2 MA's), (Start: 274 @54185 has 6 MA's), (283, 54164), (337, 54050), (342, 54044), (360, 54014), (391, 53954), (399, 53933), (421, 53879), (428, 53867), (434, 53849), (436, 53837), (476, 53732), (519, 53675), (538, 53639), (542, 53627), (551, 53603), (556, 53591), (564, 53573), (570, 53555), (580, 53537), (598, 53498), (602, 53489), (603, 53486), (604, 53483), (712, 53228), (738, 53126), (744, 53093), (750, 53072), (777, 52979), (780, 52970), (795, 52907), (814, 52871), (815, 52868), (820, 52853), (847, 52775), (851, 52763), (858, 52742), (875, 52703), (905, 52613), (910, 52595), (912, 52589), (917, 52574), (926, 52550), (930, 52535), (931, 52532), (933, 52520), (940, 52496), (946, 52475), (963, 52448), (972, 52424),

Gene: Imvubu\_52 Start: 51848, Stop: 49983, Start Num: 192

Candidate Starts for Imvubu\_52:

(104, 52028), (179, 51866), (181, 51863), (Start: 192 @51848 has 1 MA's), (Start: 250 @51803 has 2 MA's), (267, 51776), (287, 51731), (400, 51518), (435, 51431), (476, 51323), (519, 51266), (538, 51230), (542, 51218), (551, 51194), (552, 51191), (556, 51182), (559, 51176), (603, 51071), (615, 51041), (633, 51005), (635, 50999), (725, 50771), (744, 50678), (777, 50564), (780, 50555), (795, 50492), (814, 50456), (815, 50453), (820, 50438), (847, 50360), (851, 50348), (858, 50327), (861, 50318), (869, 50300), (888, 50258), (898, 50243), (905, 50198), (912, 50174), (917, 50159), (926, 50135), (929, 50123), (930, 50120), (931, 50117), (933, 50105), (936, 50093), (940, 50081), (947, 50057), (972, 50009),

Gene: Inchworm\_62 Start: 54408, Stop: 52549, Start Num: 205

Candidate Starts for Inchworm\_62:

(Start: 188 @54432 has 1 MA's), (Start: 205 @54408 has 304 MA's), (Start: 235 @54384 has 6 MA's), (Start: 250 @54378 has 2 MA's), (Start: 274 @54336 has 6 MA's), (283, 54315), (337, 54201), (342, 54195), (360, 54165), (391, 54105), (399, 54084), (421, 54030), (428, 54018), (434, 54000), (436, 53988), (476, 53883), (519, 53826), (538, 53790), (542, 53778), (552, 53751), (564, 53724), (570, 53706), (580, 53688), (598, 53649), (602, 53640), (603, 53637), (604, 53634), (738, 53277), (744, 53244), (750, 53223), (777, 53130), (780, 53121), (795, 53058), (814, 53022), (815, 53019), (820, 53004), (847, 52926), (851, 52914), (858, 52893), (875, 52854), (905, 52764), (910, 52746), (912, 52740), (917, 52725), (926, 52701), (930, 52686), (931, 52683), (933, 52671), (940, 52647), (963, 52599), (972, 52575),

Gene: Indlovu\_55 Start: 54200, Stop: 52356, Start Num: 199



Candidate Starts for Indlovu\_55:

(Start: 199 @54200 has 2 MA's), (283, 54098), (360, 53960), (400, 53876), (448, 53759), (453, 53756), (476, 53690), (519, 53633), (538, 53597), (542, 53585), (551, 53561), (602, 53447), (603, 53444), (604, 53441), (633, 53378), (704, 53213), (707, 53204), (732, 53108), (744, 53051), (759, 53000), (777, 52937), (780, 52928), (795, 52865), (820, 52811), (827, 52787), (847, 52733), (851, 52721), (858, 52700), (861, 52691), (865, 52682), (886, 52637), (888, 52631), (898, 52616), (905, 52571), (910, 52553), (912, 52547), (926, 52508), (929, 52496), (930, 52493), (931, 52490), (936, 52466), (940, 52454), (972, 52382),

Gene: Indra\_48 Start: 29792, Stop: 27951, Start Num: 246

Candidate Starts for Indra\_48:

(Start: 246 @29792 has 877 MA's), (364, 29588), (400, 29513), (402, 29510), (416, 29483), (420, 29468), (425, 29456), (444, 29405), (475, 29315), (479, 29303), (539, 29210), (552, 29171), (560, 29153), (568, 29138), (598, 29072), (613, 29039), (614, 29036), (663, 28934), (697, 28874), (726, 28790), (743, 28709), (766, 28625), (767, 28622), (771, 28613), (776, 28586), (783, 28556), (810, 28496), (820, 28457), (902, 28241), (903, 28238), (905, 28217), (946, 28082), (950, 28070), (955, 28061), (957, 28058), (1000, 27965),

Gene: IndyLu\_42 Start: 29805, Stop: 31679, Start Num: 246

Candidate Starts for IndyLu\_42:

(Start: 246 @29805 has 877 MA's), (287, 29874), (Start: 301 @29895 has 110 MA's), (429, 30141), (434, 30156), (467, 30237), (585, 30477), (696, 30711), (730, 30831), (731, 30834), (743, 30894), (762, 30960), (764, 30975), (774, 31011), (783, 31047), (813, 31140), (874, 31311), (875, 31314), (902, 31383), (909, 31422), (924, 31464), (929, 31482), (946, 31542), (955, 31563),

Gene: Insomnia\_45 Start: 30835, Stop: 29048, Start Num: 246

Candidate Starts for Insomnia\_45:

(Start: 246 @30835 has 877 MA's), (364, 30631), (400, 30559), (416, 30529), (425, 30502), (541, 30250), (560, 30199), (598, 30118), (619, 30073), (659, 29989), (687, 29932), (715, 29890), (726, 29845), (743, 29764), (755, 29713), (767, 29677), (783, 29611), (810, 29551), (812, 29539), (846, 29437), (853, 29413), (860, 29395), (888, 29332), (901, 29305), (902, 29296), (905, 29272), (946, 29137), (950, 29125), (955, 29116),

Gene: Inventa\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Inventa\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: Inverness\_59 Start: 54064, Stop: 52205, Start Num: 205

Candidate Starts for Inverness\_59:

(Start: 188 @54088 has 1 MA's), (Start: 205 @54064 has 304 MA's), (Start: 235 @54040 has 6 MA's), (Start: 250 @54034 has 2 MA's), (Start: 274 @53992 has 6 MA's), (283, 53971), (337, 53857), (342, 53851), (360, 53821), (391, 53761), (399, 53740), (421, 53686), (428, 53674), (434, 53656), (436, 53644), (476, 53539), (519, 53482), (538, 53446), (542, 53434), (551, 53410), (556, 53398), (564, 53380), (570, 53362), (580, 53344), (598, 53305), (602, 53296), (603, 53293), (604, 53290), (738, 52933), (744, 52900), (750, 52879), (777, 52786), (780, 52777), (795, 52714), (815, 52675), (820, 52660), (847, 52582), (851, 52570), (858, 52549), (875, 52510), (905, 52420), (910, 52402), (912, 52396), (917, 52381), (926, 52357), (930, 52342), (931, 52339), (933, 52327), (940, 52303), (963,

52255), (972, 52231),

Gene: Inyanga\_42 Start: 33573, Stop: 31747, Start Num: 246

Candidate Starts for Inyanga\_42:

(Start: 246 @33573 has 877 MA's), (368, 33360), (374, 33345), (400, 33297), (416, 33267), (422, 33246), (425, 33240), (429, 33231), (470, 33114), (479, 33087), (539, 32994), (544, 32979), (578, 32895), (580, 32892), (612, 32826), (627, 32796), (639, 32766), (662, 32721), (683, 32682), (743, 32502), (752, 32472), (753, 32454), (767, 32415), (783, 32349), (814, 32268), (815, 32265), (843, 32184), (902, 32034), (903, 32031), (909, 31995), (917, 31971), (925, 31950), (946, 31875), (955, 31854),

Gene: Ioannes\_39 Start: 28925, Stop: 27069, Start Num: 308

Candidate Starts for Ioannes\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (433, 28658), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (536, 28361), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (652, 28127), (676, 28067), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (798, 27665), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Iqorha\_42 Start: 33572, Stop: 31746, Start Num: 246

Candidate Starts for Iqorha\_42:

(Start: 246 @33572 has 877 MA's), (368, 33359), (374, 33344), (400, 33296), (416, 33266), (422, 33245), (425, 33239), (429, 33230), (470, 33113), (479, 33086), (539, 32993), (544, 32978), (578, 32894), (580, 32891), (612, 32825), (627, 32795), (639, 32765), (662, 32720), (683, 32681), (743, 32501), (752, 32471), (753, 32453), (767, 32414), (783, 32348), (814, 32267), (815, 32264), (843, 32183), (902, 32033), (903, 32030), (909, 31994), (917, 31970), (925, 31949), (946, 31874), (955, 31853),

Gene: Iracema64\_46 Start: 31834, Stop: 30008, Start Num: 246

Candidate Starts for Iracema64\_46:

(Start: 246 @31834 has 877 MA's), (267, 31813), (280, 31783), (295, 31753), (383, 31591), (394, 31573), (425, 31501), (429, 31492), (471, 31372), (479, 31348), (539, 31255), (558, 31207), (568, 31186), (585, 31147), (646, 31015), (659, 30994), (683, 30949), (687, 30937), (740, 30784), (743, 30763), (776, 30640), (783, 30610), (793, 30571), (814, 30505), (815, 30502), (820, 30487), (827, 30463), (834, 30439), (905, 30232), (946, 30097), (950, 30085), (955, 30076),

Gene: Iridessa\_62 Start: 53981, Stop: 52122, Start Num: 205

Candidate Starts for Iridessa\_62:

(Start: 188 @54005 has 1 MA's), (Start: 205 @53981 has 304 MA's), (Start: 235 @53957 has 6 MA's), (Start: 250 @53951 has 2 MA's), (Start: 274 @53909 has 6 MA's), (283, 53888), (337, 53774), (342, 53768), (360, 53738), (391, 53678), (399, 53657), (421, 53603), (428, 53591), (434, 53573), (436, 53561), (476, 53456), (519, 53399), (538, 53363), (542, 53351), (551, 53327), (556, 53315), (564, 53297), (570, 53279), (580, 53261), (598, 53222), (602, 53213), (603, 53210), (604, 53207), (738, 52850), (744, 52817), (750, 52796), (777, 52703), (780, 52694), (795, 52631), (814, 52595), (815, 52592), (820, 52577), (847, 52499), (851, 52487), (858, 52466), (875, 52427), (905, 52337), (910, 52319), (912, 52313), (917, 52298), (926, 52274), (930, 52259), (931, 52256), (933, 52244), (940, 52220), (963, 52172), (972, 52148),

Gene: Iridoclysis\_61 Start: 54348, Stop: 52489, Start Num: 205

Candidate Starts for Iridoclysis\_61:

(Start: 188 @54372 has 1 MA's), (Start: 205 @54348 has 304 MA's), (Start: 235 @54324 has 6 MA's), (Start: 250 @54318 has 2 MA's), (Start: 274 @54276 has 6 MA's), (283, 54255), (337, 54141), (342, 54135), (360, 54105), (391, 54045), (399, 54024), (421, 53970), (428, 53958), (434, 53940), (436, 53928), (476, 53823), (519, 53766), (538, 53730), (542, 53718), (552, 53691), (564, 53664), (570, 53646), (580, 53628), (598, 53589), (602, 53580), (603, 53577), (712, 53319), (738, 53217), (744, 53184), (750, 53163), (777, 53070), (780, 53061), (795, 52998), (814, 52962), (815, 52959), (820, 52944), (847, 52866), (851, 52854), (858, 52833), (875, 52794), (905, 52704), (910, 52686), (912, 52680), (917, 52665), (926, 52641), (930, 52626), (931, 52623), (933, 52611), (940, 52587), (963, 52539), (972, 52515),

Gene: IronMan\_44 Start: 32460, Stop: 30670, Start Num: 246

Candidate Starts for IronMan\_44:

(Start: 246 @32460 has 877 MA's), (364, 32256), (368, 32247), (402, 32178), (416, 32151), (425, 32124), (479, 31971), (539, 31878), (556, 31830), (560, 31821), (568, 31806), (598, 31740), (613, 31707), (652, 31623), (697, 31542), (715, 31512), (743, 31386), (752, 31356), (755, 31335), (776, 31263), (780, 31251), (783, 31233), (793, 31194), (810, 31173), (814, 31152), (818, 31140), (880, 30972), (902, 30918), (905, 30894), (924, 30837), (930, 30816), (946, 30759), (950, 30747), (955, 30738),

Gene: IsaacEli\_62 Start: 54547, Stop: 52688, Start Num: 205

Candidate Starts for IsaacEli\_62:

(Start: 188 @54571 has 1 MA's), (Start: 205 @54547 has 304 MA's), (Start: 235 @54523 has 6 MA's), (Start: 250 @54517 has 2 MA's), (Start: 274 @54475 has 6 MA's), (283, 54454), (337, 54340), (342, 54334), (360, 54304), (391, 54244), (399, 54223), (421, 54169), (428, 54157), (434, 54139), (436, 54127), (476, 54022), (519, 53965), (538, 53929), (542, 53917), (545, 53908), (552, 53890), (564, 53863), (570, 53845), (580, 53827), (598, 53788), (602, 53779), (603, 53776), (604, 53773), (712, 53518), (738, 53416), (744, 53383), (750, 53362), (777, 53269), (780, 53260), (795, 53197), (814, 53161), (815, 53158), (820, 53143), (847, 53065), (851, 53053), (858, 53032), (875, 52993), (905, 52903), (910, 52885), (912, 52879), (917, 52864), (926, 52840), (930, 52825), (931, 52822), (933, 52810), (940, 52786), (963, 52738), (972, 52714),

Gene: Isca\_44 Start: 30978, Stop: 29140, Start Num: 246

Candidate Starts for Isca\_44:

(Start: 191 @31050 has 1 MA's), (Start: 246 @30978 has 877 MA's), (280, 30927), (364, 30774), (383, 30735), (400, 30702), (425, 30645), (429, 30636), (433, 30624), (471, 30516), (479, 30492), (539, 30396), (558, 30348), (585, 30288), (646, 30156), (659, 30135), (700, 30060), (716, 30021), (726, 29979), (743, 29898), (767, 29811), (776, 29775), (783, 29745), (815, 29634), (827, 29595), (834, 29571), (843, 29553), (844, 29550), (886, 29430), (888, 29424), (905, 29364), (946, 29229), (950, 29217), (955, 29208),

Gene: Isiphiwo\_43 Start: 29164, Stop: 27323, Start Num: 246

Candidate Starts for Isiphiwo\_43:

(Start: 246 @29164 has 877 MA's), (364, 28960), (400, 28885), (402, 28882), (416, 28855), (420, 28840), (425, 28828), (444, 28777), (475, 28687), (479, 28675), (539, 28582), (552, 28543), (560, 28525), (568, 28510), (598, 28444), (613, 28411), (614, 28408), (663, 28306), (697, 28246), (726, 28162), (743, 28081), (766, 27997), (767, 27994), (771, 27985), (776, 27958), (783, 27928), (810, 27868), (820, 27829), (827, 27805), (902, 27613), (903, 27610), (905, 27589), (946, 27454), (950, 27442), (955, 27433), (957, 27430), (1000, 27337),

Gene: Iter\_41 Start: 29603, Stop: 31468, Start Num: 245

Candidate Starts for Iter\_41:

(Start: 245 @29603 has 74 MA's), (279, 29651), (368, 29816), (416, 29900), (448, 29990), (541, 30197), (544, 30206), (580, 30296), (585, 30305), (591, 30320), (659, 30458), (717, 30596), (743,

30716), (752, 30746), (767, 30803), (783, 30869), (813, 30962), (834, 31034), (946, 31364), (949, 31373),

Gene: ItsyBitsy1\_57 Start: 52478, Stop: 50649, Start Num: 205

Candidate Starts for ItsyBitsy1\_57:

(Start: 205 @52478 has 304 MA's), (Start: 250 @52451 has 2 MA's), (269, 52421), (Start: 274 @52409 has 6 MA's), (286, 52382), (287, 52379), (293, 52370), (318, 52352), (366, 52256), (391, 52205), (400, 52181), (411, 52157), (463, 52019), (472, 51995), (476, 51983), (519, 51926), (538, 51890), (542, 51878), (551, 51854), (588, 51770), (602, 51740), (603, 51737), (615, 51707), (680, 51563), (707, 51497), (724, 51446), (727, 51425), (732, 51407), (744, 51350), (771, 51266), (780, 51227), (795, 51161), (812, 51134), (814, 51125), (820, 51107), (827, 51083), (847, 51029), (851, 51017), (858, 50996), (888, 50927), (905, 50867), (910, 50849), (922, 50816), (926, 50804), (930, 50789), (931, 50786), (933, 50774), (940, 50750), (941, 50747), (963, 50699), (965, 50696), (972, 50675), (979, 50654),

Gene: IttyBittyPiggy\_41 Start: 29144, Stop: 31009, Start Num: 245

Candidate Starts for IttyBittyPiggy\_41:

(Start: 245 @29144 has 74 MA's), (279, 29192), (458, 29561), (541, 29738), (585, 29846), (591, 29861), (659, 29999), (717, 30137), (743, 30257), (767, 30344), (783, 30410), (813, 30503), (946, 30905), (949, 30914),

Gene: Iwokeuplikedis\_47 Start: 31404, Stop: 29578, Start Num: 246

Candidate Starts for Iwokeuplikedis\_47:

(Start: 246 @31404 has 877 MA's), (364, 31200), (368, 31191), (375, 31176), (383, 31161), (402, 31125), (416, 31098), (425, 31071), (433, 31050), (479, 30918), (539, 30825), (560, 30768), (568, 30753), (598, 30687), (635, 30606), (659, 30558), (662, 30552), (698, 30486), (726, 30414), (743, 30333), (755, 30282), (766, 30249), (767, 30246), (783, 30180), (793, 30141), (810, 30120), (831, 30045), (837, 30027), (853, 29982), (864, 29955), (880, 29919), (902, 29865), (905, 29841), (924, 29784), (930, 29763), (946, 29706), (950, 29694), (957, 29682), (1001, 29589),

Gene: Ixel\_38 Start: 27481, Stop: 25580, Start Num: 299

Candidate Starts for Ixel\_38:

(Start: 299 @27481 has 38 MA's), (375, 27328), (378, 27325), (379, 27322), (403, 27271), (430, 27214), (433, 27205), (435, 27193), (438, 27187), (451, 27151), (469, 27097), (531, 26911), (537, 26902), (539, 26890), (549, 26860), (556, 26839), (562, 26827), (585, 26803), (660, 26653), (702, 26557), (742, 26392), (771, 26290), (783, 26233), (792, 26197), (794, 26191), (822, 26104), (836, 26059), (878, 25945), (893, 25885), (903, 25846), (906, 25822), (908, 25816), (917, 25789), (947, 25678),

Gene: JAMaL\_53 Start: 54192, Stop: 52339, Start Num: 176

Candidate Starts for JAMaL\_53:

(162, 54210), (Start: 176 @54192 has 2 MA's), (Start: 250 @54138 has 2 MA's), (267, 54111), (Start: 274 @54096 has 6 MA's), (318, 54024), (319, 54018), (349, 53955), (360, 53937), (366, 53928), (384, 53886), (390, 53877), (392, 53874), (400, 53853), (429, 53787), (445, 53745), (448, 53736), (453, 53733), (463, 53703), (519, 53610), (531, 53592), (538, 53574), (542, 53562), (551, 53538), (552, 53535), (602, 53424), (603, 53421), (604, 53418), (615, 53391), (633, 53355), (724, 53130), (725, 53127), (732, 53091), (739, 53061), (740, 53058), (744, 53034), (775, 52926), (777, 52920), (780, 52911), (814, 52812), (815, 52809), (820, 52794), (847, 52716), (851, 52704), (858, 52683), (861, 52674), (875, 52644), (888, 52614), (901, 52587), (905, 52554), (912, 52530), (926, 52491), (930, 52476), (931, 52473), (933, 52461), (940, 52437), (956, 52395), (963, 52389), (972, 52365),

Gene: JC27\_45 Start: 34894, Stop: 33068, Start Num: 246

Candidate Starts for JC27\_45:

(Start: 246 @34894 has 877 MA's), (368, 34681), (416, 34588), (422, 34567), (425, 34561), (429, 34552), (470, 34435), (479, 34408), (539, 34315), (544, 34300), (556, 34267), (578, 34216), (580, 34213), (612, 34147), (627, 34117), (639, 34087), (662, 34042), (683, 34003), (743, 33823), (753, 33775), (767, 33736), (783, 33670), (793, 33631), (810, 33610), (814, 33589), (820, 33571), (843, 33505), (902, 33355), (903, 33352), (909, 33316), (917, 33292), (921, 33283), (925, 33271), (932, 33244), (946, 33196), (955, 33175),

Gene: JDog\_59 Start: 54563, Stop: 52704, Start Num: 205

Candidate Starts for JDog\_59:

(Start: 188 @54587 has 1 MA's), (Start: 205 @54563 has 304 MA's), (Start: 235 @54539 has 6 MA's), (Start: 250 @54533 has 2 MA's), (Start: 274 @54491 has 6 MA's), (283, 54470), (337, 54356), (342, 54350), (360, 54320), (391, 54260), (399, 54239), (421, 54185), (428, 54173), (434, 54155), (436, 54143), (476, 54038), (519, 53981), (538, 53945), (542, 53933), (551, 53909), (556, 53897), (564, 53879), (570, 53861), (580, 53843), (598, 53804), (602, 53795), (603, 53792), (712, 53534), (738, 53432), (744, 53399), (750, 53378), (777, 53285), (780, 53276), (795, 53213), (814, 53177), (815, 53174), (820, 53159), (847, 53081), (851, 53069), (858, 53048), (875, 53009), (905, 52919), (910, 52901), (912, 52895), (917, 52880), (926, 52856), (930, 52841), (931, 52838), (933, 52826), (940, 52802), (963, 52754), (972, 52730),

Gene: JF2\_45 Start: 30729, Stop: 28891, Start Num: 246

Candidate Starts for JF2\_45:

(Start: 191 @30801 has 1 MA's), (Start: 246 @30729 has 877 MA's), (280, 30678), (364, 30525), (383, 30486), (400, 30453), (425, 30396), (429, 30387), (433, 30375), (471, 30267), (479, 30243), (539, 30147), (558, 30099), (585, 30039), (646, 29907), (659, 29886), (697, 29817), (716, 29772), (726, 29730), (743, 29649), (767, 29562), (776, 29526), (783, 29496), (815, 29385), (827, 29346), (834, 29322), (843, 29304), (886, 29181), (888, 29175), (905, 29115), (945, 28983), (946, 28980), (950, 28968), (955, 28959),

Gene: JF4\_45 Start: 30729, Stop: 28891, Start Num: 246

Candidate Starts for JF4\_45:

(Start: 191 @30801 has 1 MA's), (Start: 246 @30729 has 877 MA's), (280, 30678), (364, 30525), (383, 30486), (400, 30453), (425, 30396), (429, 30387), (433, 30375), (471, 30267), (479, 30243), (539, 30147), (558, 30099), (585, 30039), (646, 29907), (659, 29886), (697, 29817), (716, 29772), (726, 29730), (743, 29649), (767, 29562), (776, 29526), (783, 29496), (815, 29385), (827, 29346), (834, 29322), (843, 29304), (886, 29181), (888, 29175), (905, 29115), (945, 28983), (946, 28980), (950, 28968), (955, 28959),

Gene: JHC117\_48 Start: 31851, Stop: 30037, Start Num: 246

Candidate Starts for JHC117\_48:

(Start: 246 @31851 has 877 MA's), (275, 31812), (280, 31800), (364, 31647), (371, 31632), (400, 31575), (425, 31518), (429, 31509), (444, 31467), (461, 31416), (479, 31365), (539, 31272), (556, 31224), (560, 31215), (568, 31200), (585, 31161), (598, 31134), (612, 31104), (654, 31011), (686, 30951), (697, 30936), (743, 30780), (767, 30693), (783, 30627), (793, 30588), (815, 30516), (827, 30477), (834, 30453), (843, 30435), (853, 30402), (864, 30375), (888, 30321), (905, 30261), (930, 30183), (946, 30126), (950, 30114), (955, 30105),

Gene: JSwag\_46 Start: 29679, Stop: 27889, Start Num: 246

Candidate Starts for JSwag\_46:

(Start: 246 @29679 has 877 MA's), (347, 29505), (400, 29400), (402, 29397), (416, 29370), (425, 29343), (444, 29292), (479, 29190), (539, 29097), (554, 29052), (556, 29049), (560, 29040), (635, 28878), (646, 28851), (659, 28830), (662, 28824), (717, 28725), (726, 28686), (738, 28635), (743, 28605), (755, 28554), (766, 28521), (774, 28488), (776, 28482), (783, 28452), (810, 28392), (814, 28371), (827, 28329), (835, 28302), (843, 28287), (876, 28200), (902, 28137), (903, 28134), (946,

27978), (950, 27966), (957, 27954),

Gene: Jaan\_45 Start: 32749, Stop: 30959, Start Num: 246

Candidate Starts for Jaan\_45:

(Start: 246 @32749 has 877 MA's), (364, 32545), (368, 32536), (402, 32467), (416, 32440), (425, 32413), (479, 32260), (539, 32167), (556, 32119), (560, 32110), (568, 32095), (598, 32029), (613, 31996), (652, 31912), (697, 31831), (715, 31801), (743, 31675), (755, 31624), (776, 31552), (783, 31522), (793, 31483), (810, 31462), (814, 31441), (818, 31429), (880, 31261), (902, 31207), (905, 31183), (924, 31126), (930, 31105), (946, 31048), (950, 31036), (955, 31027),

Gene: Jabb\_43 Start: 29585, Stop: 31459, Start Num: 246

Candidate Starts for Jabb\_43:

(Start: 243 @29582 has 7 MA's), (Start: 246 @29585 has 877 MA's), (287, 29654), (Start: 301 @29675 has 110 MA's), (400, 29855), (429, 29921), (444, 29963), (585, 30257), (646, 30392), (696, 30491), (731, 30614), (743, 30674), (746, 30680), (755, 30725), (764, 30755), (774, 30791), (783, 30827), (813, 30920), (844, 31013), (874, 31091), (902, 31163), (909, 31202), (924, 31244), (929, 31262), (946, 31322), (955, 31343),

Gene: Jabiru\_39 Start: 30201, Stop: 28336, Start Num: 246

Candidate Starts for Jabiru\_39:

(Start: 246 @30201 has 877 MA's), (318, 30090), (364, 29997), (366, 29994), (400, 29925), (416, 29895), (425, 29868), (429, 29859), (461, 29766), (467, 29751), (479, 29715), (523, 29655), (539, 29619), (556, 29571), (567, 29550), (568, 29547), (594, 29487), (633, 29409), (654, 29361), (662, 29349), (686, 29301), (712, 29250), (743, 29115), (753, 29067), (762, 29049), (767, 29028), (771, 29019), (777, 28989), (783, 28962), (784, 28959), (814, 28881), (820, 28863), (834, 28815), (853, 28764), (876, 28710), (880, 28701), (888, 28683), (910, 28605), (946, 28488), (950, 28476), (1000, 28371),

Gene: Jabith\_45 Start: 30836, Stop: 29049, Start Num: 246

Candidate Starts for Jabith\_45:

(Start: 246 @30836 has 877 MA's), (364, 30632), (400, 30560), (416, 30530), (425, 30503), (541, 30251), (560, 30200), (598, 30119), (619, 30074), (620, 30071), (659, 29990), (687, 29933), (715, 29891), (726, 29846), (743, 29765), (755, 29714), (767, 29678), (783, 29612), (810, 29552), (846, 29438), (853, 29414), (860, 29396), (888, 29333), (901, 29306), (902, 29297), (905, 29273), (946, 29138), (950, 29126), (955, 29117),

Gene: JacAttac\_62 Start: 54010, Stop: 52151, Start Num: 205

Candidate Starts for JacAttac\_62:

(Start: 188 @54034 has 1 MA's), (Start: 205 @54010 has 304 MA's), (Start: 235 @53986 has 6 MA's), (Start: 250 @53980 has 2 MA's), (Start: 274 @53938 has 6 MA's), (283, 53917), (337, 53803), (342, 53797), (360, 53767), (391, 53707), (399, 53686), (421, 53632), (428, 53620), (434, 53602), (436, 53590), (476, 53485), (519, 53428), (538, 53392), (542, 53380), (551, 53356), (556, 53344), (564, 53326), (570, 53308), (580, 53290), (598, 53251), (602, 53242), (603, 53239), (604, 53236), (738, 52879), (744, 52846), (750, 52825), (777, 52732), (780, 52723), (795, 52660), (814, 52624), (815, 52621), (820, 52606), (847, 52528), (851, 52516), (858, 52495), (875, 52456), (905, 52366), (910, 52348), (912, 52342), (917, 52327), (926, 52303), (930, 52288), (931, 52285), (933, 52273), (940, 52249), (963, 52201), (972, 52177),

Gene: JackSparrow\_46 Start: 35167, Stop: 33338, Start Num: 246

Candidate Starts for JackSparrow\_46:

(Start: 246 @35167 has 877 MA's), (368, 34954), (416, 34861), (422, 34840), (425, 34834), (429, 34825), (470, 34708), (479, 34681), (539, 34588), (544, 34573), (556, 34540), (578, 34489), (580, 34486), (612, 34420), (627, 34390), (639, 34360), (662, 34315), (683, 34276), (743, 34096), (753,

34048), (771, 34000), (780, 33961), (783, 33943), (793, 33904), (810, 33883), (814, 33862), (819, 33847), (861, 33724), (922, 33553), (929, 33529), (943, 33481), (946, 33469), (955, 33448), (959, 33442), (981, 33394), (986, 33379),

Gene: Jackstina\_54 Start: 53566, Stop: 51749, Start Num: 247

Candidate Starts for Jackstina\_54:

(Start: 247 @53566 has 43 MA's), (267, 53536), (368, 53356), (433, 53203), (435, 53191), (448, 53161), (454, 53155), (476, 53092), (478, 53086), (519, 53035), (538, 52999), (556, 52951), (603, 52846), (645, 52750), (674, 52699), (724, 52555), (732, 52516), (739, 52486), (744, 52459), (748, 52447), (775, 52351), (777, 52345), (780, 52336), (782, 52324), (807, 52252), (814, 52222), (820, 52204), (822, 52195), (847, 52126), (851, 52114), (858, 52093), (888, 52024), (898, 52009), (903, 51985), (905, 51964), (912, 51940), (926, 51901), (931, 51883), (933, 51871), (936, 51859), (940, 51847), (956, 51805), (972, 51775),

Gene: JacoRen57\_40 Start: 35060, Stop: 32673, Start Num: 59

Candidate Starts for JacoRen57\_40:

(38, 35138), (Start: 45 @35114 has 24 MA's), (Start: 53 @35084 has 1 MA's), (Start: 59 @35060 has 1 MA's), (Start: 77 @35009 has 1 MA's), (81, 35003), (120, 34895), (123, 34880), (138, 34850), (Start: 148 @34823 has 1 MA's), (179, 34793), (Start: 216 @34739 has 4 MA's), (223, 34727), (Start: 230 @34718 has 1 MA's), (321, 34562), (402, 34406), (451, 34277), (457, 34259), (494, 34154), (499, 34136), (502, 34121), (526, 34061), (589, 33944), (605, 33932), (611, 33920), (664, 33842), (698, 33773), (736, 33638), (769, 33503), (774, 33476), (776, 33470), (785, 33431), (792, 33404), (794, 33398), (796, 33392), (797, 33386), (815, 33329), (822, 33305), (894, 33083), (937, 32912), (947, 32879), (968, 32834), (976, 32810), (1014, 32684),

Gene: Jaek\_55 Start: 36879, Stop: 34711, Start Num: 233

Candidate Starts for Jaek\_55:

(231, 36882), (Start: 233 @36879 has 13 MA's), (Start: 272 @36825 has 4 MA's), (317, 36741), (382, 36588), (387, 36579), (405, 36534), (431, 36456), (434, 36447), (438, 36432), (446, 36417), (447, 36414), (466, 36357), (490, 36264), (493, 36222), (567, 36027), (570, 36015), (572, 36009), (581, 35985), (590, 35964), (600, 35943), (606, 35928), (609, 35922), (638, 35859), (662, 35808), (693, 35721), (714, 35661), (726, 35613), (751, 35511), (752, 35505), (757, 35478), (758, 35475), (766, 35454), (777, 35412), (779, 35406), (784, 35382), (794, 35340), (795, 35337), (802, 35310), (811, 35277), (813, 35265), (823, 35229), (831, 35205), (832, 35199), (834, 35193), (854, 35139), (875, 35091), (876, 35088), (897, 35028), (902, 35004), (907, 34974), (923, 34920), (940, 34851), (944, 34839), (958, 34800),

Gene: JaguarMi\_55 Start: 55103, Stop: 53277, Start Num: 197

Candidate Starts for JaguarMi\_55:

(Start: 182 @55121 has 4 MA's), (Start: 197 @55103 has 27 MA's), (Start: 250 @55076 has 2 MA's), (267, 55049), (Start: 274 @55034 has 6 MA's), (283, 55013), (329, 54926), (337, 54908), (387, 54821), (399, 54794), (406, 54779), (434, 54713), (445, 54683), (448, 54674), (453, 54671), (454, 54668), (463, 54641), (519, 54548), (531, 54530), (538, 54512), (542, 54500), (552, 54473), (580, 54410), (598, 54371), (602, 54362), (603, 54359), (615, 54329), (633, 54293), (724, 54068), (725, 54065), (732, 54029), (738, 54005), (744, 53972), (775, 53864), (777, 53858), (780, 53849), (814, 53750), (815, 53747), (820, 53732), (847, 53654), (851, 53642), (858, 53621), (861, 53612), (875, 53582), (888, 53552), (901, 53525), (905, 53492), (910, 53474), (912, 53468), (926, 53429), (931, 53411), (933, 53399), (940, 53375), (956, 53333), (963, 53327), (972, 53303),

Gene: JakeO\_61 Start: 54286, Stop: 52427, Start Num: 205

Candidate Starts for JakeO\_61:

(Start: 188 @54310 has 1 MA's), (Start: 205 @54286 has 304 MA's), (Start: 235 @54262 has 6 MA's), (Start: 250 @54256 has 2 MA's), (Start: 274 @54214 has 6 MA's), (283, 54193), (337, 54079), (342,

54073), (360, 54043), (391, 53983), (399, 53962), (421, 53908), (428, 53896), (434, 53878), (436, 53866), (476, 53761), (519, 53704), (538, 53668), (542, 53656), (551, 53632), (556, 53620), (564, 53602), (570, 53584), (580, 53566), (598, 53527), (602, 53518), (603, 53515), (604, 53512), (738, 53155), (744, 53122), (750, 53101), (777, 53008), (780, 52999), (795, 52936), (814, 52900), (815, 52897), (820, 52882), (847, 52804), (851, 52792), (858, 52771), (875, 52732), (905, 52642), (910, 52624), (912, 52618), (917, 52603), (926, 52579), (930, 52564), (931, 52561), (933, 52549), (940, 52525), (946, 52504), (963, 52477), (972, 52453), (977, 52438),

Gene: Jamzy\_48 Start: 33115, Stop: 30731, Start Num: 45

Candidate Starts for Jamzy\_48:

(Start: 45 @33115 has 24 MA's), (84, 33001), (93, 32971), (128, 32887), (138, 32863), (185, 32809), (265, 32704), (273, 32689), (295, 32641), (329, 32566), (332, 32560), (335, 32554), (338, 32548), (374, 32479), (389, 32455), (398, 32431), (421, 32374), (430, 32356), (435, 32335), (488, 32188), (526, 32074), (544, 32017), (551, 31996), (559, 31990), (643, 31897), (649, 31885), (682, 31813), (707, 31759), (741, 31618), (747, 31594), (760, 31543), (783, 31450), (792, 31414), (794, 31408), (796, 31402), (797, 31396), (815, 31339), (822, 31315), (878, 31156), (884, 31135), (893, 31096), (903, 31057), (905, 31036), (911, 31015), (915, 31003), (922, 30985), (937, 30922), (939, 30916), (947, 30889), (958, 30865), (968, 30844), (1004, 30757),

Gene: Janeemi\_43 Start: 31325, Stop: 33190, Start Num: 245

Candidate Starts for Janeemi\_43:

(Start: 245 @31325 has 74 MA's), (279, 31373), (364, 31529), (416, 31622), (422, 31643), (448, 31712), (544, 31928), (580, 32018), (585, 32027), (591, 32042), (598, 32054), (635, 32132), (659, 32180), (687, 32237), (717, 32318), (743, 32438), (767, 32525), (783, 32591), (813, 32684), (834, 32756), (878, 32864), (898, 32906), (905, 32951), (943, 33074), (946, 33086), (949, 33095), (988, 33173),

Gene: JangoPhett\_60 Start: 54351, Stop: 52492, Start Num: 205

Candidate Starts for JangoPhett\_60:

(Start: 188 @54375 has 1 MA's), (Start: 205 @54351 has 304 MA's), (Start: 235 @54327 has 6 MA's), (Start: 250 @54321 has 2 MA's), (Start: 274 @54279 has 6 MA's), (283, 54258), (337, 54144), (342, 54138), (360, 54108), (391, 54048), (399, 54027), (421, 53973), (428, 53961), (434, 53943), (436, 53931), (476, 53826), (519, 53769), (538, 53733), (542, 53721), (551, 53697), (556, 53685), (564, 53667), (570, 53649), (580, 53631), (598, 53592), (602, 53583), (603, 53580), (604, 53577), (738, 53220), (744, 53187), (750, 53166), (777, 53073), (780, 53064), (795, 53001), (814, 52965), (815, 52962), (820, 52947), (847, 52869), (851, 52857), (858, 52836), (875, 52797), (905, 52707), (910, 52689), (912, 52683), (917, 52668), (926, 52644), (930, 52629), (931, 52626), (933, 52614), (940, 52590), (963, 52542), (972, 52518),

Gene: Jankie\_40 Start: 28206, Stop: 30071, Start Num: 245

Candidate Starts for Jankie\_40:

(Start: 245 @28206 has 74 MA's), (400, 28473), (416, 28503), (541, 28800), (580, 28899), (591, 28923), (635, 29013), (659, 29061), (743, 29319), (781, 29463), (783, 29472), (832, 29631), (840, 29646), (878, 29745), (905, 29832), (910, 29850), (946, 29967),

Gene: Janus167\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for Janus167\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888,



27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: Jasmine\_38 Start: 33398, Stop: 31653, Start Num: 274

Candidate Starts for Jasmine\_38:

(259, 33425), (Start: 274 @33398 has 6 MA's), (276, 33395), (290, 33362), (294, 33356), (339, 33263), (362, 33230), (374, 33203), (437, 33068), (509, 32939), (514, 32933), (528, 32909), (534, 32894), (542, 32867), (553, 32837), (585, 32756), (616, 32687), (627, 32666), (681, 32552), (689, 32534), (776, 32231), (794, 32156), (810, 32138), (828, 32072), (909, 31838), (922, 31796), (946, 31712), (967, 31679),

Gene: JasmineDragon\_45 Start: 30557, Stop: 32419, Start Num: 245

Candidate Starts for JasmineDragon\_45:

(163, 30458), (178, 30476), (Start: 245 @30557 has 74 MA's), (279, 30605), (366, 30764), (368, 30770), (422, 30875), (438, 30920), (536, 31127), (585, 31256), (635, 31361), (659, 31409), (699, 31493), (743, 31667), (766, 31751), (774, 31784), (777, 31793), (790, 31844), (813, 31913), (850, 32024), (878, 32093), (880, 32099), (912, 32204), (946, 32315),

Gene: JasonD\_43 Start: 29488, Stop: 27620, Start Num: 301

Candidate Starts for JasonD\_43:

(Start: 238 @29575 has 3 MA's), (Start: 241 @29572 has 13 MA's), (Start: 301 @29488 has 110 MA's), (Start: 308 @29479 has 5 MA's), (378, 29332), (433, 29212), (435, 29200), (438, 29194), (531, 28921), (537, 28912), (539, 28900), (549, 28870), (554, 28855), (556, 28849), (559, 28843), (605, 28768), (717, 28522), (776, 28306), (779, 28297), (780, 28294), (783, 28276), (794, 28234), (822, 28144), (836, 28099), (878, 27985), (888, 27946), (903, 27886), (906, 27862), (908, 27856), (919, 27823), (929, 27790), (932, 27778),

Gene: Jasper\_46 Start: 34284, Stop: 32455, Start Num: 246

Candidate Starts for Jasper\_46:

(Start: 246 @34284 has 877 MA's), (368, 34071), (374, 34056), (400, 34008), (416, 33978), (422, 33957), (425, 33951), (429, 33942), (470, 33825), (479, 33798), (539, 33705), (544, 33690), (551, 33669), (556, 33657), (578, 33606), (580, 33603), (612, 33537), (627, 33507), (639, 33477), (662, 33432), (683, 33393), (743, 33213), (753, 33165), (771, 33117), (780, 33078), (783, 33060), (793, 33021), (810, 33000), (814, 32979), (819, 32964), (861, 32841), (922, 32670), (929, 32646), (943, 32598), (946, 32586), (955, 32565), (959, 32559), (981, 32511), (986, 32496),

Gene: JasperRussell\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for JasperRussell\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: Jaykayelowell\_43 Start: 31563, Stop: 29737, Start Num: 246

Candidate Starts for Jaykayelowell\_43:

(Start: 246 @31563 has 877 MA's), (267, 31542), (280, 31512), (295, 31482), (383, 31320), (394, 31302), (425, 31230), (429, 31221), (471, 31101), (479, 31077), (539, 30984), (558, 30936), (568, 30915), (585, 30876), (646, 30744), (659, 30723), (683, 30678), (687, 30666), (740, 30513), (743, 30492), (776, 30369), (783, 30339), (793, 30300), (814, 30234), (815, 30231), (820, 30216), (827, 30192), (834, 30168), (905, 29961), (946, 29826), (950, 29814), (955, 29805),

Gene: Jeeves\_50 Start: 31954, Stop: 30161, Start Num: 246

Candidate Starts for Jeeves\_50:

(Start: 246 @31954 has 877 MA's), (261, 31945), (318, 31843), (364, 31750), (400, 31675), (402, 31672), (425, 31618), (471, 31489), (479, 31465), (539, 31372), (554, 31327), (598, 31234), (612, 31204), (683, 31057), (714, 31006), (726, 30958), (743, 30877), (762, 30811), (776, 30754), (783, 30724), (810, 30664), (814, 30643), (853, 30526), (864, 30499), (901, 30418), (902, 30409), (924, 30328), (930, 30307), (932, 30298), (946, 30250), (950, 30238), (955, 30229), (957, 30226),

Gene: Jeffabunny\_45 Start: 29478, Stop: 27607, Start Num: 220

Candidate Starts for Jeffabunny\_45:

(Start: 220 @29478 has 1 MA's), (Start: 246 @29448 has 877 MA's), (364, 29244), (400, 29169), (402, 29166), (416, 29139), (420, 29124), (425, 29112), (444, 29061), (475, 28971), (479, 28959), (539, 28866), (552, 28827), (560, 28809), (568, 28794), (598, 28728), (613, 28695), (614, 28692), (663, 28590), (697, 28530), (726, 28446), (743, 28365), (766, 28281), (767, 28278), (771, 28269), (776, 28242), (783, 28212), (810, 28152), (820, 28113), (902, 27897), (903, 27894), (905, 27873), (946, 27738), (950, 27726), (955, 27717), (957, 27714), (1000, 27621),

Gene: Jemerald\_40 Start: 29369, Stop: 27471, Start Num: 299

Candidate Starts for Jemerald\_40:

(Start: 299 @29369 has 38 MA's), (368, 29231), (375, 29216), (379, 29210), (403, 29159), (430, 29102), (435, 29081), (438, 29075), (455, 29027), (456, 29024), (489, 28925), (504, 28877), (531, 28802), (537, 28793), (539, 28781), (549, 28751), (556, 28730), (574, 28715), (605, 28649), (676, 28502), (704, 28442), (709, 28427), (718, 28400), (774, 28160), (783, 28124), (794, 28082), (805, 28052), (822, 27995), (872, 27851), (878, 27836), (888, 27797), (893, 27776), (906, 27713), (917, 27680), (932, 27629), (933, 27623), (947, 27569),

Gene: JenCasNa\_49 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for JenCasNa\_49:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (686, 30952), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827, 30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: Jenos\_42 Start: 30134, Stop: 28266, Start Num: 301

Candidate Starts for Jenos\_42:

(288, 30149), (Start: 301 @30134 has 110 MA's), (Start: 308 @30125 has 5 MA's), (375, 29981), (378, 29978), (430, 29867), (433, 29858), (435, 29846), (438, 29840), (475, 29735), (504, 29642), (531, 29567), (537, 29558), (539, 29546), (548, 29519), (549, 29516), (554, 29501), (556, 29495), (559, 29489), (652, 29327), (776, 28952), (779, 28943), (780, 28940), (783, 28922), (794, 28880), (822, 28790), (831, 28763), (878, 28631), (888, 28592), (903, 28532), (906, 28508), (919, 28469), (929, 28436), (932, 28424),

Gene: JeppNRM\_49 Start: 31754, Stop: 29940, Start Num: 246

Candidate Starts for JeppNRM\_49:

(Start: 246 @31754 has 877 MA's), (275, 31715), (280, 31703), (364, 31550), (371, 31535), (400, 31478), (425, 31421), (429, 31412), (444, 31370), (461, 31319), (479, 31268), (539, 31175), (556, 31127), (568, 31103), (585, 31064), (598, 31037), (612, 31007), (653, 30917), (654, 30914), (662, 30902), (686, 30854), (697, 30839), (743, 30683), (755, 30632), (766, 30599), (767, 30596), (783, 30530), (793, 30491), (815, 30419), (827, 30380), (834, 30356), (843, 30338), (853, 30305), (888, 30224), (905, 30164), (910, 30146), (930, 30086), (932, 30077), (946, 30029), (950, 30017), (955, 30008),

Gene: Jerbirus\_39 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for Jerbirus\_39:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: JeriBeth\_39 Start: 28482, Stop: 26617, Start Num: 301

Candidate Starts for JeriBeth\_39:

(Start: 238 @28569 has 3 MA's), (Start: 241 @28566 has 13 MA's), (Start: 301 @28482 has 110 MA's), (Start: 308 @28473 has 5 MA's), (354, 28368), (358, 28359), (375, 28329), (378, 28326), (433, 28206), (435, 28194), (438, 28188), (475, 28083), (484, 28056), (531, 27915), (536, 27909), (537, 27906), (539, 27894), (548, 27867), (549, 27864), (554, 27849), (556, 27843), (559, 27837), (586, 27804), (652, 27675), (676, 27615), (776, 27300), (779, 27291), (780, 27288), (783, 27270), (794, 27228), (796, 27222), (798, 27213), (805, 27198), (822, 27141), (878, 26982), (885, 26952), (888, 26943), (903, 26883), (906, 26859), (919, 26820), (929, 26787), (932, 26775), (947, 26715),

Gene: Jerm\_46 Start: 31734, Stop: 29947, Start Num: 246

Candidate Starts for Jerm\_46:

(166, 31821), (Start: 246 @31734 has 877 MA's), (366, 31527), (368, 31521), (375, 31506), (383, 31491), (402, 31455), (416, 31428), (425, 31401), (433, 31380), (479, 31248), (539, 31155), (556, 31107), (560, 31098), (568, 31083), (598, 31017), (635, 30936), (659, 30888), (662, 30882), (697, 30819), (743, 30663), (755, 30612), (766, 30579), (767, 30576), (783, 30510), (793, 30471), (810, 30450), (831, 30375), (834, 30363), (853, 30312), (880, 30249), (888, 30231), (902, 30195), (905, 30171), (930, 30093), (946, 30036), (950, 30024), (955, 30015),

Gene: Jerm2\_45 Start: 34938, Stop: 33109, Start Num: 246

Candidate Starts for Jerm2\_45:

(Start: 246 @34938 has 877 MA's), (368, 34725), (374, 34710), (400, 34662), (416, 34632), (422, 34611), (425, 34605), (429, 34596), (470, 34479), (479, 34452), (539, 34359), (544, 34344), (578, 34260), (580, 34257), (612, 34191), (627, 34161), (639, 34131), (662, 34086), (683, 34047), (743, 33867), (753, 33819), (771, 33771), (780, 33732), (783, 33714), (793, 33675), (810, 33654), (814, 33633), (861, 33495), (922, 33324), (929, 33300), (938, 33267), (943, 33252), (946, 33240), (955, 33219), (959, 33213), (981, 33165), (986, 33150),

Gene: Jesabah\_61 Start: 55148, Stop: 53289, Start Num: 205

Candidate Starts for Jesabah\_61:

(Start: 188 @55172 has 1 MA's), (Start: 205 @55148 has 304 MA's), (Start: 235 @55124 has 6 MA's), (Start: 250 @55118 has 2 MA's), (Start: 274 @55076 has 6 MA's), (283, 55055), (337, 54941), (342, 54935), (360, 54905), (391, 54845), (399, 54824), (421, 54770), (428, 54758), (434, 54740), (436, 54728), (476, 54623), (519, 54566), (538, 54530), (542, 54518), (552, 54491), (564, 54464), (570, 54446), (580, 54428), (598, 54389), (602, 54380), (603, 54377), (712, 54119), (738, 54017), (744, 53984), (750, 53963), (777, 53870), (780, 53861), (795, 53798), (814, 53762), (815, 53759), (820, 53744), (847, 53666), (851, 53654), (858, 53633), (875, 53594), (905, 53504), (910, 53486), (912, 53480), (917, 53465), (926, 53441), (930, 53426), (931, 53423), (933, 53411), (940, 53387), (963, 53339), (972, 53315),

Gene: Jester\_36 Start: 28049, Stop: 26265, Start Num: 246

Candidate Starts for Jester\_36:

(Start: 246 @28049 has 877 MA's), (379, 27815), (395, 27785), (399, 27776), (400, 27773), (420, 27728), (425, 27716), (444, 27665), (479, 27563), (496, 27542), (539, 27470), (556, 27422), (585, 27359), (598, 27332), (646, 27227), (662, 27200), (683, 27161), (743, 26981), (753, 26933), (783, 26828), (784, 26825), (810, 26768), (814, 26747), (855, 26624), (886, 26555), (902, 26513), (905, 26489), (930, 26411), (946, 26354), (950, 26342), (978, 26285),

Gene: JetBlade\_45 Start: 31564, Stop: 29738, Start Num: 246

Candidate Starts for JetBlade\_45:

(Start: 246 @31564 has 877 MA's), (267, 31543), (280, 31513), (295, 31483), (383, 31321), (394, 31303), (425, 31231), (429, 31222), (471, 31102), (479, 31078), (539, 30985), (558, 30937), (568, 30916), (585, 30877), (646, 30745), (659, 30724), (683, 30679), (687, 30667), (740, 30514), (743, 30493), (776, 30370), (783, 30340), (793, 30301), (814, 30235), (815, 30232), (820, 30217), (827, 30193), (834, 30169), (905, 29962), (910, 29944), (946, 29827), (950, 29815), (955, 29806),

Gene: JewelBug\_47 Start: 29796, Stop: 27955, Start Num: 246

Candidate Starts for JewelBug\_47:

(Start: 246 @29796 has 877 MA's), (364, 29592), (400, 29517), (402, 29514), (416, 29487), (420, 29472), (425, 29460), (444, 29409), (475, 29319), (479, 29307), (539, 29214), (552, 29175), (560, 29157), (568, 29142), (598, 29076), (613, 29043), (614, 29040), (663, 28938), (697, 28878), (726, 28794), (743, 28713), (766, 28629), (767, 28626), (771, 28617), (776, 28590), (783, 28560), (810, 28500), (820, 28461), (902, 28245), (903, 28242), (905, 28221), (946, 28086), (950, 28074), (955, 28065), (957, 28062), (1000, 27969),

Gene: Jiawan\_43 Start: 31526, Stop: 29733, Start Num: 246

Candidate Starts for Jiawan\_43:

(Start: 246 @31526 has 877 MA's), (261, 31517), (280, 31475), (346, 31355), (347, 31352), (372, 31304), (402, 31244), (417, 31214), (420, 31202), (425, 31190), (479, 31037), (539, 30944), (598, 30806), (612, 30776), (687, 30617), (697, 30605), (714, 30578), (740, 30470), (743, 30449), (780, 30314), (783, 30296), (814, 30215), (827, 30173), (853, 30098), (886, 30023), (902, 29981), (930, 29879), (946, 29822), (950, 29810), (955, 29801),

Gene: Jillium\_60 Start: 54555, Stop: 52696, Start Num: 205

Candidate Starts for Jillium\_60:

(Start: 188 @54579 has 1 MA's), (Start: 205 @54555 has 304 MA's), (Start: 235 @54531 has 6 MA's), (Start: 250 @54525 has 2 MA's), (Start: 274 @54483 has 6 MA's), (283, 54462), (337, 54348), (342, 54342), (360, 54312), (391, 54252), (399, 54231), (421, 54177), (428, 54165), (434, 54147), (436, 54135), (476, 54030), (519, 53973), (538, 53937), (542, 53925), (551, 53901), (556, 53889), (564, 53871), (570, 53853), (580, 53835), (598, 53796), (602, 53787), (603, 53784), (604, 53781), (738, 53424), (744, 53391), (750, 53370), (777, 53277), (780, 53268), (795, 53205), (814, 53169), (815, 53166), (820, 53151), (847, 53073), (851, 53061), (858, 53040), (875, 53001), (905, 52911), (910, 52893), (912, 52887), (917, 52872), (926, 52848), (930, 52833), (931, 52830), (933, 52818), (940, 52794), (963, 52746), (972, 52722),

Gene: Jiminy\_61 Start: 54122, Stop: 52263, Start Num: 205

Candidate Starts for Jiminy\_61:

(Start: 188 @54146 has 1 MA's), (Start: 205 @54122 has 304 MA's), (Start: 235 @54098 has 6 MA's), (Start: 250 @54092 has 2 MA's), (Start: 274 @54050 has 6 MA's), (283, 54029), (337, 53915), (342, 53909), (360, 53879), (391, 53819), (399, 53798), (421, 53744), (428, 53732), (434, 53714), (436, 53702), (476, 53597), (519, 53540), (538, 53504), (542, 53492), (551, 53468), (556, 53456), (564, 53438), (570, 53420), (580, 53402), (598, 53363), (602, 53354), (603, 53351), (604, 53348), (712, 53093), (738, 52991), (744, 52958), (750, 52937), (777, 52844), (780, 52835), (795, 52772), (814, 52736), (815, 52733), (820, 52718), (847, 52640), (851, 52628), (858, 52607), (875, 52568), (905, 52478), (910, 52460), (912, 52454), (917, 52439), (926, 52415), (930, 52400), (931, 52397), (933,

52385), (940, 52361), (946, 52340), (963, 52313), (972, 52289), (977, 52274),

Gene: Jingles\_37 Start: 28487, Stop: 26637, Start Num: 297

Candidate Starts for Jingles\_37:

(Start: 297 @28487 has 18 MA's), (358, 28364), (378, 28331), (430, 28220), (435, 28199), (438, 28193), (441, 28184), (456, 28142), (512, 27986), (531, 27932), (536, 27926), (537, 27923), (539, 27911), (549, 27881), (585, 27824), (658, 27677), (718, 27530), (776, 27320), (780, 27308), (783, 27290), (794, 27248), (798, 27233), (822, 27161), (885, 26972), (888, 26963), (903, 26903), (906, 26879), (912, 26858), (917, 26846), (947, 26735),

Gene: Jiraiya\_61 Start: 54320, Stop: 52461, Start Num: 205

Candidate Starts for Jiraiya\_61:

(Start: 188 @54344 has 1 MA's), (Start: 205 @54320 has 304 MA's), (Start: 235 @54296 has 6 MA's), (Start: 250 @54290 has 2 MA's), (Start: 274 @54248 has 6 MA's), (283, 54227), (337, 54113), (342, 54107), (360, 54077), (391, 54017), (399, 53996), (421, 53942), (428, 53930), (434, 53912), (436, 53900), (476, 53795), (519, 53738), (538, 53702), (542, 53690), (552, 53663), (570, 53618), (598, 53561), (602, 53552), (603, 53549), (738, 53189), (744, 53156), (750, 53135), (777, 53042), (780, 53033), (795, 52970), (814, 52934), (815, 52931), (820, 52916), (847, 52838), (851, 52826), (858, 52805), (875, 52766), (905, 52676), (910, 52658), (912, 52652), (917, 52637), (926, 52613), (930, 52598), (931, 52595), (933, 52583), (940, 52559), (963, 52511), (972, 52487), (977, 52472),

Gene: Jobu08\_47 Start: 31685, Stop: 29871, Start Num: 246

Candidate Starts for Jobu08\_47:

(Start: 246 @31685 has 877 MA's), (275, 31646), (280, 31634), (364, 31481), (371, 31466), (400, 31409), (425, 31352), (429, 31343), (444, 31301), (461, 31250), (479, 31199), (539, 31106), (556, 31058), (560, 31049), (568, 31034), (585, 30995), (598, 30968), (612, 30938), (654, 30845), (662, 30833), (686, 30785), (697, 30770), (743, 30614), (767, 30527), (783, 30461), (793, 30422), (815, 30350), (827, 30311), (834, 30287), (843, 30269), (853, 30236), (864, 30209), (888, 30155), (905, 30095), (930, 30017), (946, 29960), (950, 29948), (955, 29939),

Gene: Joemato\_41 Start: 29704, Stop: 31569, Start Num: 245

Candidate Starts for Joemato\_41:

(Start: 140 @29560 has 1 MA's), (149, 29587), (152, 29590), (169, 29617), (Start: 245 @29704 has 74 MA's), (279, 29752), (416, 30001), (433, 30049), (448, 30091), (541, 30298), (544, 30307), (580, 30397), (585, 30406), (591, 30421), (613, 30466), (635, 30511), (659, 30559), (687, 30616), (717, 30697), (737, 30784), (743, 30817), (752, 30847), (767, 30904), (783, 30970), (813, 31063), (834, 31135), (878, 31243), (902, 31306), (905, 31330), (939, 31441), (946, 31465), (949, 31474),

Gene: JohnDoe\_41 Start: 29700, Stop: 31565, Start Num: 245

Candidate Starts for JohnDoe\_41:

(Start: 245 @29700 has 74 MA's), (279, 29748), (416, 29997), (433, 30045), (448, 30087), (541, 30294), (544, 30303), (580, 30393), (585, 30402), (591, 30417), (613, 30462), (635, 30507), (659, 30555), (687, 30612), (717, 30693), (737, 30780), (743, 30813), (752, 30843), (767, 30900), (783, 30966), (790, 30990), (813, 31059), (834, 31131), (878, 31239), (902, 31302), (905, 31326), (939, 31437), (945, 31458), (946, 31461), (949, 31470), (968, 31506),

Gene: Johnathan\_41 Start: 28861, Stop: 30735, Start Num: 246

Candidate Starts for Johnathan\_41:

(Start: 243 @28858 has 7 MA's), (Start: 246 @28861 has 877 MA's), (287, 28930), (Start: 301 @28951 has 110 MA's), (429, 29197), (444, 29239), (550, 29452), (585, 29533), (696, 29767), (731, 29890), (743, 29950), (746, 29956), (755, 30001), (762, 30016), (764, 30031), (774, 30067), (783, 30103), (813, 30196), (844, 30289), (874, 30367), (902, 30439), (909, 30478), (924, 30520), (929, 30538), (939, 30574), (946, 30598), (955, 30619),

Gene: Jolie1\_052 Start: 52581, Stop: 50743, Start Num: 199

Candidate Starts for Jolie1\_052:

(65, 52887), (79, 52845), (85, 52830), (Start: 199 @52581 has 2 MA's), (267, 52524), (Start: 274 @52509 has 6 MA's), (314, 52443), (317, 52440), (391, 52287), (393, 52284), (400, 52263), (421, 52212), (423, 52206), (433, 52188), (448, 52146), (453, 52143), (463, 52113), (519, 52020), (538, 51984), (542, 51972), (564, 51918), (591, 51858), (602, 51834), (603, 51831), (633, 51765), (725, 51531), (727, 51513), (732, 51495), (744, 51438), (775, 51330), (777, 51324), (780, 51315), (795, 51252), (814, 51216), (815, 51213), (820, 51198), (847, 51120), (851, 51108), (858, 51087), (860, 51081), (875, 51048), (888, 51018), (898, 51003), (902, 50982), (905, 50958), (912, 50934), (926, 50895), (929, 50883), (930, 50880), (931, 50877), (933, 50865), (940, 50841), (972, 50769), (979, 50748),

Gene: JoongJeon\_44 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for JoongJeon\_44:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Jordennis\_45 Start: 29635, Stop: 27794, Start Num: 246

Candidate Starts for Jordennis\_45:

(Start: 246 @29635 has 877 MA's), (364, 29431), (400, 29356), (402, 29353), (416, 29326), (420, 29311), (425, 29299), (444, 29248), (475, 29158), (479, 29146), (539, 29053), (552, 29014), (560, 28996), (568, 28981), (598, 28915), (613, 28882), (614, 28879), (663, 28777), (697, 28717), (726, 28633), (743, 28552), (766, 28468), (767, 28465), (771, 28456), (776, 28429), (780, 28417), (783, 28399), (810, 28339), (820, 28300), (902, 28084), (903, 28081), (905, 28060), (946, 27925), (950, 27913), (955, 27904), (957, 27901), (1000, 27808),

Gene: Jorgensen\_45 Start: 34588, Stop: 32762, Start Num: 246

Candidate Starts for Jorgensen\_45:

(Start: 246 @34588 has 877 MA's), (368, 34375), (374, 34360), (400, 34312), (416, 34282), (422, 34261), (425, 34255), (429, 34246), (470, 34129), (479, 34102), (539, 34009), (544, 33994), (578, 33910), (580, 33907), (612, 33841), (627, 33811), (639, 33781), (662, 33736), (683, 33697), (743, 33517), (752, 33487), (753, 33469), (767, 33430), (783, 33364), (814, 33283), (815, 33280), (843, 33199), (902, 33049), (903, 33046), (909, 33010), (917, 32986), (921, 32977), (925, 32965), (946, 32890), (955, 32869),

Gene: Joselito\_45 Start: 30776, Stop: 28989, Start Num: 246

Candidate Starts for Joselito\_45:

(Start: 246 @30776 has 877 MA's), (364, 30572), (400, 30500), (416, 30470), (425, 30443), (541, 30191), (560, 30140), (598, 30059), (619, 30014), (687, 29873), (715, 29831), (726, 29786), (743, 29705), (755, 29654), (767, 29618), (783, 29552), (810, 29492), (812, 29480), (846, 29378), (853, 29354), (860, 29336), (888, 29273), (901, 29246), (902, 29237), (905, 29213), (946, 29078), (950, 29066), (955, 29057),

Gene: JoshKayV\_46 Start: 31792, Stop: 30005, Start Num: 246

Candidate Starts for JoshKayV\_46:

(Start: 246 @31792 has 877 MA's), (366, 31585), (368, 31579), (375, 31564), (383, 31549), (402, 31513), (416, 31486), (425, 31459), (433, 31438), (479, 31306), (539, 31213), (556, 31165), (560, 31156), (568, 31141), (598, 31075), (635, 30994), (659, 30946), (662, 30940), (697, 30877), (743, 30721), (766, 30637), (767, 30634), (783, 30568), (793, 30529), (810, 30508), (831, 30433), (834,

30421), (864, 30343), (880, 30307), (888, 30289), (902, 30253), (905, 30229), (930, 30151), (946, 30094), (950, 30082), (955, 30073),

Gene: Journey13\_40 Start: 30167, Stop: 28380, Start Num: 246

Candidate Starts for Journey13\_40:

(Start: 246 @30167 has 877 MA's), (364, 29963), (366, 29960), (368, 29954), (383, 29924), (395, 29903), (399, 29894), (400, 29891), (416, 29861), (425, 29834), (433, 29813), (477, 29687), (479, 29681), (539, 29588), (542, 29579), (556, 29540), (568, 29516), (598, 29450), (646, 29342), (659, 29321), (743, 29096), (755, 29045), (771, 29000), (776, 28973), (783, 28943), (793, 28904), (810, 28883), (831, 28808), (837, 28790), (853, 28745), (864, 28718), (880, 28682), (888, 28664), (902, 28628), (905, 28604), (946, 28469), (950, 28457), (955, 28448),

Gene: Jovita\_43 Start: 29600, Stop: 31474, Start Num: 246

Candidate Starts for Jovita\_43:

(Start: 243 @29597 has 7 MA's), (Start: 246 @29600 has 877 MA's), (287, 29669), (Start: 301 @29690 has 110 MA's), (400, 29870), (444, 29978), (585, 30272), (646, 30407), (696, 30506), (731, 30629), (743, 30689), (746, 30695), (755, 30740), (762, 30755), (764, 30770), (774, 30806), (783, 30842), (813, 30935), (844, 31028), (874, 31106), (875, 31109), (902, 31178), (903, 31181), (909, 31217), (924, 31259), (929, 31277), (946, 31337), (955, 31358),

Gene: Jovo\_38 Start: 30627, Stop: 28783, Start Num: 246

Candidate Starts for Jovo\_38:

(Start: 246 @30627 has 877 MA's), (280, 30576), (318, 30516), (347, 30453), (364, 30423), (366, 30420), (395, 30363), (400, 30351), (416, 30321), (425, 30294), (461, 30192), (467, 30177), (479, 30141), (523, 30081), (539, 30045), (556, 29997), (594, 29913), (598, 29907), (633, 29835), (646, 29802), (654, 29787), (662, 29775), (712, 29676), (743, 29541), (752, 29511), (753, 29493), (755, 29490), (767, 29454), (771, 29445), (774, 29424), (777, 29415), (783, 29388), (784, 29385), (810, 29328), (814, 29307), (853, 29190), (876, 29136), (880, 29127), (888, 29109), (910, 29031), (929, 28974), (939, 28938), (946, 28914), (950, 28902),

Gene: Jsquared\_43 Start: 30314, Stop: 28527, Start Num: 245

Candidate Starts for Jsquared\_43:

(144, 30455), (Start: 245 @30314 has 74 MA's), (364, 30110), (366, 30107), (368, 30101), (375, 30086), (383, 30071), (399, 30041), (400, 30038), (416, 30008), (425, 29981), (433, 29960), (444, 29930), (479, 29828), (539, 29735), (556, 29687), (560, 29678), (568, 29663), (598, 29597), (635, 29516), (659, 29468), (683, 29423), (743, 29243), (753, 29195), (755, 29192), (767, 29156), (783, 29090), (793, 29051), (810, 29030), (831, 28955), (837, 28937), (853, 28892), (864, 28865), (880, 28829), (888, 28811), (902, 28775), (905, 28751), (946, 28616), (950, 28604), (955, 28595), (957, 28592),

Gene: Jstan\_41 Start: 30355, Stop: 32220, Start Num: 245

Candidate Starts for Jstan\_41:

(Start: 245 @30355 has 74 MA's), (279, 30403), (382, 30586), (386, 30592), (416, 30652), (422, 30673), (448, 30742), (544, 30958), (580, 31048), (585, 31057), (591, 31072), (613, 31117), (659, 31210), (717, 31348), (743, 31468), (752, 31498), (767, 31555), (781, 31612), (783, 31621), (790, 31645), (813, 31714), (834, 31786), (840, 31795), (878, 31894), (902, 31957), (946, 32116), (949, 32125),

Gene: Juanyo\_37 Start: 28491, Stop: 26590, Start Num: 299

Candidate Starts for Juanyo\_37:

(Start: 299 @28491 has 38 MA's), (344, 28392), (358, 28368), (368, 28353), (375, 28338), (379, 28332), (395, 28305), (403, 28281), (428, 28230), (435, 28203), (438, 28197), (456, 28146), (469, 28107), (489, 28047), (512, 27978), (531, 27921), (537, 27912), (539, 27900), (549, 27870), (585,

27813), (658, 27666), (720, 27510), (783, 27243), (794, 27201), (805, 27171), (812, 27150), (822, 27114), (885, 26925), (888, 26916), (903, 26856), (906, 26832), (909, 26820), (917, 26799), (919, 26793), (947, 26688),

Gene: Juicer\_40 Start: 29369, Stop: 27471, Start Num: 299

Candidate Starts for Juicer\_40:

(Start: 299 @29369 has 38 MA's), (368, 29231), (375, 29216), (379, 29210), (403, 29159), (430, 29102), (435, 29081), (438, 29075), (455, 29027), (456, 29024), (489, 28925), (504, 28877), (531, 28802), (537, 28793), (539, 28781), (549, 28751), (556, 28730), (574, 28715), (605, 28649), (676, 28502), (704, 28442), (709, 28427), (718, 28400), (774, 28160), (783, 28124), (794, 28082), (805, 28052), (822, 27995), (872, 27851), (878, 27836), (888, 27797), (893, 27776), (906, 27713), (917, 27680), (932, 27629), (933, 27623), (947, 27569),

Gene: JuliaChild\_45 Start: 34674, Stop: 32845, Start Num: 246

Candidate Starts for JuliaChild\_45:

(Start: 246 @34674 has 877 MA's), (368, 34461), (374, 34446), (400, 34398), (416, 34368), (422, 34347), (425, 34341), (429, 34332), (470, 34215), (479, 34188), (539, 34095), (544, 34080), (551, 34059), (578, 33996), (580, 33993), (612, 33927), (627, 33897), (639, 33867), (662, 33822), (683, 33783), (743, 33603), (753, 33555), (771, 33507), (780, 33468), (783, 33450), (793, 33411), (810, 33390), (814, 33369), (819, 33354), (861, 33231), (922, 33060), (929, 33036), (943, 32988), (946, 32976), (955, 32955), (959, 32949), (981, 32901), (986, 32886),

Gene: JuneStar\_42 Start: 31105, Stop: 33111, Start Num: 140

Candidate Starts for JuneStar\_42:

(125, 31072), (Start: 140 @31105 has 1 MA's), (149, 31132), (152, 31135), (169, 31162), (Start: 245 @31246 has 74 MA's), (279, 31294), (416, 31543), (448, 31633), (458, 31663), (541, 31840), (544, 31849), (585, 31948), (591, 31963), (598, 31975), (659, 32101), (717, 32239), (743, 32359), (767, 32446), (783, 32512), (813, 32605), (905, 32872), (922, 32923), (946, 33007),

Gene: KADY\_48 Start: 31884, Stop: 30070, Start Num: 246

Candidate Starts for KADY\_48:

(Start: 246 @31884 has 877 MA's), (275, 31845), (280, 31833), (364, 31680), (371, 31665), (400, 31608), (425, 31551), (429, 31542), (444, 31500), (461, 31449), (479, 31398), (521, 31344), (539, 31305), (556, 31257), (568, 31233), (585, 31194), (598, 31167), (612, 31137), (654, 31044), (662, 31032), (686, 30984), (697, 30969), (743, 30813), (755, 30762), (766, 30729), (767, 30726), (783, 30660), (793, 30621), (815, 30549), (827, 30510), (834, 30486), (843, 30468), (853, 30435), (888, 30354), (905, 30294), (932, 30207), (946, 30159), (950, 30147), (955, 30138), (957, 30135),

Gene: KBG\_46 Start: 35895, Stop: 34069, Start Num: 246

Candidate Starts for KBG\_46:

(Start: 246 @35895 has 877 MA's), (368, 35682), (374, 35667), (400, 35619), (416, 35589), (419, 35577), (422, 35568), (425, 35562), (429, 35553), (470, 35436), (479, 35409), (539, 35316), (544, 35301), (556, 35268), (578, 35217), (580, 35214), (612, 35148), (627, 35118), (639, 35088), (662, 35043), (683, 35004), (743, 34824), (752, 34794), (753, 34776), (755, 34773), (767, 34737), (783, 34671), (814, 34590), (815, 34587), (843, 34506), (902, 34356), (903, 34353), (909, 34317), (917, 34293), (921, 34284), (925, 34272), (932, 34245), (946, 34197), (955, 34176),

Gene: KFPoly\_44 Start: 31564, Stop: 29738, Start Num: 246

Candidate Starts for KFPoly\_44:

(Start: 246 @31564 has 877 MA's), (267, 31543), (280, 31513), (295, 31483), (383, 31321), (394, 31303), (425, 31231), (429, 31222), (471, 31102), (479, 31078), (539, 30985), (558, 30937), (568, 30916), (585, 30877), (646, 30745), (659, 30724), (683, 30679), (687, 30667), (740, 30514), (743, 30493), (776, 30370), (783, 30340), (793, 30301), (814, 30235), (815, 30232), (820, 30217), (827,



30193), (834, 30169), (905, 29962), (946, 29827), (950, 29815), (955, 29806),

Gene: KLucky39\_59 Start: 53611, Stop: 51752, Start Num: 205

Candidate Starts for KLucky39\_59:

(Start: 188 @53635 has 1 MA's), (Start: 205 @53611 has 304 MA's), (Start: 235 @53587 has 6 MA's), (Start: 250 @53581 has 2 MA's), (Start: 274 @53539 has 6 MA's), (283, 53518), (337, 53404), (342, 53398), (360, 53368), (391, 53308), (399, 53287), (421, 53233), (428, 53221), (434, 53203), (436, 53191), (476, 53086), (519, 53029), (538, 52993), (542, 52981), (552, 52954), (564, 52927), (570, 52909), (580, 52891), (598, 52852), (602, 52843), (603, 52840), (712, 52582), (738, 52480), (744, 52447), (750, 52426), (777, 52333), (780, 52324), (795, 52261), (814, 52225), (815, 52222), (820, 52207), (847, 52129), (851, 52117), (858, 52096), (875, 52057), (905, 51967), (910, 51949), (912, 51943), (917, 51928), (926, 51904), (930, 51889), (931, 51886), (933, 51874), (940, 51850), (963, 51802), (972, 51778),

Gene: KSSJEB\_43 Start: 34167, Stop: 32338, Start Num: 246

Candidate Starts for KSSJEB\_43:

(Start: 246 @34167 has 877 MA's), (368, 33954), (374, 33939), (400, 33891), (416, 33861), (422, 33840), (425, 33834), (429, 33825), (470, 33708), (479, 33681), (539, 33588), (544, 33573), (556, 33540), (578, 33489), (580, 33486), (612, 33420), (639, 33360), (662, 33315), (683, 33276), (743, 33096), (753, 33048), (771, 33000), (780, 32961), (783, 32943), (793, 32904), (810, 32883), (814, 32862), (819, 32847), (861, 32724), (922, 32553), (929, 32529), (943, 32481), (946, 32469), (955, 32448), (959, 32442), (981, 32394), (986, 32379),

Gene: KSunshine22\_93 Start: 75419, Stop: 77137, Start Num: 301

Candidate Starts for KSunshine22\_93:

(Start: 262 @75344 has 4 MA's), (279, 75377), (287, 75398), (292, 75407), (Start: 301 @75419 has 110 MA's), (428, 75656), (435, 75683), (438, 75689), (478, 75782), (521, 75824), (571, 75941), (585, 75968), (587, 75974), (591, 75983), (617, 76037), (630, 76061), (683, 76169), (693, 76190), (707, 76217), (723, 76265), (730, 76298), (740, 76337), (743, 76358), (746, 76364), (774, 76481), (793, 76568), (813, 76631), (816, 76643), (827, 76679), (840, 76712), (858, 76766), (865, 76784), (898, 76868), (902, 76889), (906, 76916), (922, 76964), (924, 76970), (929, 76988), (932, 77000), (934, 77012), (935, 77015), (946, 77048), (961, 77075), (974, 77099),

Gene: Kachowdy\_45 Start: 31435, Stop: 29597, Start Num: 246

Candidate Starts for Kachowdy\_45:

(Start: 191 @31507 has 1 MA's), (Start: 246 @31435 has 877 MA's), (280, 31384), (364, 31231), (395, 31171), (400, 31159), (425, 31102), (429, 31093), (433, 31081), (471, 30973), (479, 30949), (539, 30853), (558, 30805), (585, 30745), (614, 30682), (646, 30613), (659, 30592), (697, 30523), (700, 30517), (716, 30478), (743, 30355), (767, 30268), (776, 30232), (783, 30202), (791, 30172), (815, 30091), (827, 30052), (834, 30028), (843, 30010), (888, 29881), (905, 29821), (946, 29686), (950, 29674), (955, 29665),

Gene: Kahve\_60 Start: 54557, Stop: 52698, Start Num: 205

Candidate Starts for Kahve\_60:

(Start: 188 @54581 has 1 MA's), (Start: 205 @54557 has 304 MA's), (Start: 235 @54533 has 6 MA's), (Start: 250 @54527 has 2 MA's), (Start: 274 @54485 has 6 MA's), (283, 54464), (337, 54350), (342, 54344), (360, 54314), (391, 54254), (399, 54233), (421, 54179), (428, 54167), (434, 54149), (436, 54137), (476, 54032), (519, 53975), (538, 53939), (542, 53927), (552, 53900), (564, 53873), (570, 53855), (580, 53837), (598, 53798), (602, 53789), (603, 53786), (712, 53528), (738, 53426), (744, 53393), (750, 53372), (777, 53279), (780, 53270), (795, 53207), (814, 53171), (815, 53168), (820, 53153), (847, 53075), (851, 53063), (858, 53042), (875, 53003), (905, 52913), (910, 52895), (912, 52889), (917, 52874), (926, 52850), (930, 52835), (931, 52832), (933, 52820), (940, 52796), (946, 52775), (963, 52748), (972, 52724),

Gene: Kailash\_61 Start: 54637, Stop: 52778, Start Num: 205

Candidate Starts for Kailash\_61:

(Start: 188 @54661 has 1 MA's), (Start: 205 @54637 has 304 MA's), (Start: 235 @54613 has 6 MA's), (Start: 250 @54607 has 2 MA's), (Start: 274 @54565 has 6 MA's), (283, 54544), (337, 54430), (342, 54424), (360, 54394), (391, 54334), (399, 54313), (421, 54259), (428, 54247), (434, 54229), (436, 54217), (476, 54112), (519, 54055), (538, 54019), (542, 54007), (551, 53983), (556, 53971), (564, 53953), (570, 53935), (580, 53917), (598, 53878), (602, 53869), (603, 53866), (604, 53863), (738, 53506), (744, 53473), (750, 53452), (777, 53359), (780, 53350), (795, 53287), (814, 53251), (815, 53248), (820, 53233), (847, 53155), (851, 53143), (858, 53122), (875, 53083), (905, 52993), (910, 52975), (912, 52969), (917, 52954), (926, 52930), (930, 52915), (931, 52912), (933, 52900), (940, 52876), (963, 52828), (972, 52804),

Gene: Kalb97\_49 Start: 31752, Stop: 29938, Start Num: 246

Candidate Starts for Kalb97\_49:

(Start: 246 @31752 has 877 MA's), (275, 31713), (280, 31701), (364, 31548), (371, 31533), (400, 31476), (425, 31419), (429, 31410), (444, 31368), (461, 31317), (479, 31266), (539, 31173), (556, 31125), (568, 31101), (585, 31062), (598, 31035), (612, 31005), (654, 30912), (662, 30900), (686, 30852), (697, 30837), (743, 30681), (755, 30630), (766, 30597), (767, 30594), (783, 30528), (793, 30489), (815, 30417), (827, 30378), (834, 30354), (843, 30336), (853, 30303), (888, 30222), (905, 30162), (910, 30144), (930, 30084), (932, 30075), (946, 30027), (950, 30015), (955, 30006),

Gene: Kale\_38 Start: 28634, Stop: 26769, Start Num: 301

Candidate Starts for Kale\_38:

(Start: 238 @28721 has 3 MA's), (Start: 301 @28634 has 110 MA's), (Start: 308 @28625 has 5 MA's), (354, 28520), (358, 28511), (375, 28481), (378, 28478), (433, 28358), (435, 28346), (438, 28340), (475, 28235), (484, 28208), (531, 28067), (536, 28061), (537, 28058), (539, 28046), (548, 28019), (549, 28016), (554, 28001), (556, 27995), (559, 27989), (586, 27956), (676, 27767), (776, 27452), (779, 27443), (780, 27440), (783, 27422), (794, 27380), (796, 27374), (805, 27350), (822, 27293), (878, 27134), (885, 27104), (888, 27095), (903, 27035), (906, 27011), (919, 26972), (929, 26939), (932, 26927), (947, 26867),

Gene: Kaleb\_57 Start: 52637, Stop: 50808, Start Num: 205

Candidate Starts for Kaleb\_57:

(Start: 205 @52637 has 304 MA's), (Start: 250 @52610 has 2 MA's), (269, 52580), (Start: 274 @52568 has 6 MA's), (286, 52541), (287, 52538), (293, 52529), (318, 52511), (366, 52415), (391, 52364), (400, 52340), (463, 52178), (472, 52154), (476, 52142), (519, 52085), (538, 52049), (542, 52037), (551, 52013), (588, 51929), (602, 51899), (603, 51896), (615, 51866), (680, 51722), (707, 51656), (724, 51605), (727, 51584), (732, 51566), (744, 51509), (771, 51425), (777, 51395), (780, 51386), (795, 51320), (812, 51293), (814, 51284), (817, 51275), (820, 51266), (827, 51242), (847, 51188), (851, 51176), (858, 51155), (888, 51086), (905, 51026), (910, 51008), (922, 50975), (926, 50963), (930, 50948), (931, 50945), (933, 50933), (940, 50909), (941, 50906), (963, 50858), (965, 50855), (972, 50834), (979, 50813),

Gene: Kalimba\_38 Start: 27589, Stop: 29571, Start Num: 245

Candidate Starts for Kalimba\_38:

(Start: 245 @27589 has 74 MA's), (347, 27763), (386, 27826), (402, 27859), (433, 27934), (521, 28162), (585, 28336), (659, 28492), (717, 28630), (737, 28717), (743, 28750), (752, 28780), (767, 28837), (783, 28903), (813, 28996), (905, 29263), (912, 29287), (946, 29398), (998, 29506),

Gene: Kalnoky\_49 Start: 31750, Stop: 29936, Start Num: 246

Candidate Starts for Kalnoky\_49:

(Start: 246 @31750 has 877 MA's), (275, 31711), (280, 31699), (364, 31546), (371, 31531), (400, 31474), (425, 31417), (429, 31408), (444, 31366), (461, 31315), (479, 31264), (539, 31171), (556, 31123), (568, 31099), (585, 31060), (598, 31033), (612, 31003), (654, 30910), (662, 30898), (686, 30850), (697, 30835), (743, 30679), (755, 30628), (766, 30595), (767, 30592), (783, 30526), (793, 30487), (815, 30415), (827, 30376), (834, 30352), (843, 30334), (853, 30301), (888, 30220), (905, 30160), (910, 30142), (930, 30082), (932, 30073), (946, 30025), (950, 30013), (955, 30004),

Gene: Kalpine\_44 Start: 31973, Stop: 30186, Start Num: 246

Candidate Starts for Kalpine\_44:

(Start: 246 @31973 has 877 MA's), (366, 31766), (368, 31760), (383, 31730), (399, 31700), (402, 31694), (416, 31667), (425, 31640), (433, 31619), (444, 31589), (479, 31487), (539, 31394), (556, 31346), (560, 31337), (568, 31322), (598, 31256), (635, 31175), (659, 31127), (728, 30971), (743, 30902), (755, 30851), (766, 30818), (767, 30815), (783, 30749), (793, 30710), (810, 30689), (831, 30614), (834, 30602), (837, 30596), (880, 30488), (902, 30434), (905, 30410), (924, 30353), (930, 30332), (946, 30275), (950, 30263),

Gene: Kamiyu\_58 Start: 53644, Stop: 51827, Start Num: 247

Candidate Starts for Kamiyu\_58:

(130, 53827), (Start: 247 @53644 has 43 MA's), (267, 53614), (368, 53434), (433, 53281), (435, 53269), (448, 53239), (454, 53233), (476, 53170), (478, 53164), (519, 53113), (538, 53077), (556, 53029), (603, 52924), (645, 52828), (674, 52777), (724, 52633), (732, 52594), (739, 52564), (744, 52537), (748, 52525), (775, 52429), (777, 52423), (780, 52414), (782, 52402), (807, 52330), (814, 52300), (820, 52282), (822, 52273), (847, 52204), (851, 52192), (858, 52171), (888, 52102), (898, 52087), (903, 52063), (905, 52042), (912, 52018), (926, 51979), (931, 51961), (933, 51949), (936, 51937), (940, 51925), (956, 51883), (972, 51853),

Gene: Kampy\_45 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Kampy\_45:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Kanely\_45 Start: 34951, Stop: 33125, Start Num: 246

Candidate Starts for Kanely\_45:

(Start: 246 @34951 has 877 MA's), (368, 34738), (400, 34675), (416, 34645), (422, 34624), (425, 34618), (429, 34609), (470, 34492), (479, 34465), (539, 34372), (544, 34357), (578, 34273), (580, 34270), (612, 34204), (627, 34174), (639, 34144), (662, 34099), (683, 34060), (743, 33880), (753, 33832), (767, 33793), (783, 33727), (793, 33688), (810, 33667), (814, 33646), (820, 33628), (843, 33562), (902, 33412), (903, 33409), (909, 33373), (917, 33349), (921, 33340), (925, 33328), (946, 33253), (955, 33232),

Gene: KannH\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for KannH\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: KarasumaRum\_58 Start: 54598, Stop: 52751, Start Num: 189

Candidate Starts for KarasumaRum\_58:

(15, 55093), (17, 55087), (27, 55036), (33, 55018), (43, 54961), (90, 54817), (143, 54664), (189, 54598), (248, 54550), (267, 54523), (292, 54472), (318, 54451), (337, 54397), (367, 54352), (393, 54301), (434, 54202), (453, 54160), (466, 54124), (476, 54094), (538, 54001), (542, 53989), (551, 53965), (556, 53953), (564, 53935), (592, 53872), (603, 53848), (652, 53743), (703, 53620), (725, 53554), (727, 53536), (739, 53488), (744, 53461), (775, 53353), (777, 53347), (780, 53338), (784, 53317), (807, 53254), (815, 53221), (820, 53206), (841, 53146), (847, 53128), (851, 53116), (858, 53095), (861, 53086), (863, 53083), (868, 53071), (905, 52966), (910, 52948), (912, 52942), (926, 52903), (930, 52888), (931, 52885), (936, 52861), (940, 52849), (941, 52846), (965, 52798), (972, 52777),

Gene: KatChan\_40 Start: 28364, Stop: 26472, Start Num: 299

Candidate Starts for KatChan\_40:

(Start: 235 @28454 has 6 MA's), (Start: 299 @28364 has 38 MA's), (Start: 308 @28355 has 5 MA's), (328, 28298), (344, 28268), (368, 28229), (375, 28214), (379, 28208), (391, 28190), (403, 28157), (435, 28079), (438, 28073), (456, 28022), (469, 27983), (504, 27872), (537, 27788), (539, 27776), (549, 27746), (554, 27731), (556, 27725), (559, 27719), (562, 27713), (576, 27707), (720, 27392), (764, 27197), (783, 27125), (794, 27083), (805, 27053), (812, 27032), (822, 26996), (846, 26924), (885, 26807), (888, 26798), (903, 26738), (906, 26714), (909, 26702), (922, 26666), (947, 26570),

Gene: Katalie136\_44 Start: 31522, Stop: 29693, Start Num: 246

Candidate Starts for Katalie136\_44:

(Start: 246 @31522 has 877 MA's), (280, 31471), (295, 31441), (383, 31279), (394, 31261), (400, 31246), (425, 31189), (429, 31180), (471, 31060), (479, 31036), (513, 30994), (539, 30943), (558, 30895), (568, 30874), (585, 30835), (607, 30790), (610, 30784), (646, 30703), (659, 30682), (683, 30637), (740, 30472), (743, 30451), (783, 30298), (793, 30259), (815, 30187), (820, 30172), (827, 30148), (832, 30130), (834, 30124), (837, 30118), (905, 29917), (946, 29782), (950, 29770), (955, 29761),

Gene: Kate33\_42 Start: 29550, Stop: 31424, Start Num: 246

Candidate Starts for Kate33\_42:

(Start: 243 @29547 has 7 MA's), (Start: 246 @29550 has 877 MA's), (287, 29619), (Start: 301 @29640 has 110 MA's), (429, 29886), (467, 29982), (539, 30108), (585, 30222), (696, 30456), (730, 30576), (731, 30579), (743, 30639), (746, 30645), (755, 30690), (762, 30705), (764, 30720), (774, 30756), (783, 30792), (813, 30885), (874, 31056), (875, 31059), (902, 31128), (909, 31167), (924, 31209), (929, 31227), (939, 31263), (946, 31287), (955, 31308),

Gene: KatherineG\_48 Start: 30182, Stop: 28392, Start Num: 246

Candidate Starts for KatherineG\_48:

(Start: 246 @30182 has 877 MA's), (347, 30008), (400, 29903), (402, 29900), (416, 29873), (425, 29846), (444, 29795), (479, 29693), (539, 29600), (554, 29555), (556, 29552), (560, 29543), (635, 29381), (646, 29354), (659, 29333), (662, 29327), (717, 29228), (726, 29189), (738, 29138), (743, 29108), (755, 29057), (766, 29024), (774, 28991), (776, 28985), (783, 28955), (810, 28895), (814, 28874), (827, 28832), (835, 28805), (843, 28790), (876, 28703), (902, 28640), (903, 28637), (946, 28481), (950, 28469), (957, 28457),

Gene: Katniss\_61 Start: 53995, Stop: 52136, Start Num: 205

Candidate Starts for Katniss\_61:

(Start: 188 @54019 has 1 MA's), (Start: 205 @53995 has 304 MA's), (Start: 235 @53971 has 6 MA's), (Start: 250 @53965 has 2 MA's), (Start: 274 @53923 has 6 MA's), (283, 53902), (337, 53788), (342, 53782), (360, 53752), (391, 53692), (399, 53671), (421, 53617), (428, 53605), (434, 53587), (436, 53575), (476, 53470), (519, 53413), (538, 53377), (542, 53365), (552, 53338), (564, 53311), (570,

53293), (580, 53275), (598, 53236), (602, 53227), (603, 53224), (604, 53221), (712, 52966), (738, 52864), (744, 52831), (750, 52810), (777, 52717), (780, 52708), (795, 52645), (814, 52609), (815, 52606), (820, 52591), (847, 52513), (851, 52501), (858, 52480), (875, 52441), (905, 52351), (910, 52333), (912, 52327), (917, 52312), (926, 52288), (930, 52273), (931, 52270), (933, 52258), (940, 52234), (963, 52186), (972, 52162),

Gene: Katzastrophic\_41 Start: 29917, Stop: 31788, Start Num: 246

Candidate Starts for Katzastrophic\_41:

(Start: 246 @29917 has 877 MA's), (287, 29986), (346, 30091), (352, 30100), (429, 30253), (467, 30349), (470, 30358), (585, 30589), (591, 30604), (635, 30697), (683, 30787), (743, 31003), (755, 31054), (762, 31069), (774, 31120), (783, 31156), (813, 31249), (834, 31321), (874, 31420), (902, 31492), (905, 31516), (924, 31573), (939, 31627), (946, 31651), (955, 31672),

Gene: Kauala\_37 Start: 28473, Stop: 26623, Start Num: 297

Candidate Starts for Kauala\_37:

(Start: 297 @28473 has 18 MA's), (343, 28377), (358, 28350), (378, 28317), (430, 28206), (435, 28185), (438, 28179), (441, 28170), (454, 28134), (456, 28128), (512, 27972), (531, 27918), (537, 27909), (539, 27897), (549, 27867), (585, 27810), (658, 27663), (718, 27516), (776, 27306), (780, 27294), (783, 27276), (794, 27234), (798, 27219), (822, 27147), (885, 26958), (888, 26949), (903, 26889), (906, 26865), (912, 26844), (917, 26832), (947, 26721),

Gene: KayGee\_46 Start: 34208, Stop: 31833, Start Num: 46

Candidate Starts for KayGee\_46:

(Start: 46 @34208 has 13 MA's), (63, 34148), (80, 34106), (93, 34067), (138, 33947), (145, 33926), (179, 33902), (Start: 232 @33824 has 3 MA's), (Start: 238 @33818 has 3 MA's), (Start: 241 @33815 has 13 MA's), (267, 33785), (275, 33767), (282, 33749), (305, 33710), (Start: 308 @33707 has 5 MA's), (329, 33650), (343, 33626), (354, 33611), (389, 33548), (398, 33524), (402, 33515), (403, 33509), (406, 33503), (420, 33470), (430, 33449), (435, 33428), (499, 33245), (526, 33170), (539, 33128), (633, 33017), (643, 32993), (657, 32963), (682, 32912), (683, 32909), (690, 32894), (702, 32873), (747, 32699), (749, 32690), (755, 32660), (783, 32555), (792, 32519), (794, 32513), (796, 32507), (797, 32501), (815, 32444), (822, 32420), (856, 32315), (858, 32312), (889, 32219), (893, 32201), (903, 32162), (911, 32120), (920, 32096), (929, 32066), (940, 32018), (947, 31994), (968, 31949), (1004, 31862),

Gene: KayaCho\_51 Start: 52386, Stop: 50545, Start Num: 199

Candidate Starts for KayaCho\_51:

(127, 52506), (Start: 199 @52386 has 2 MA's), (267, 52329), (Start: 274 @52314 has 6 MA's), (366, 52140), (384, 52098), (391, 52089), (393, 52086), (400, 52065), (421, 52014), (423, 52008), (433, 51990), (445, 51957), (448, 51948), (453, 51945), (454, 51942), (463, 51915), (519, 51822), (538, 51786), (542, 51774), (602, 51636), (603, 51633), (642, 51543), (704, 51402), (721, 51348), (725, 51333), (727, 51315), (732, 51297), (738, 51273), (744, 51240), (775, 51132), (777, 51126), (780, 51117), (795, 51054), (808, 51039), (812, 51027), (814, 51018), (820, 51000), (824, 50985), (847, 50922), (851, 50910), (858, 50889), (860, 50883), (875, 50850), (888, 50820), (898, 50805), (905, 50760), (910, 50742), (912, 50736), (926, 50697), (929, 50685), (930, 50682), (931, 50679), (933, 50667), (940, 50643), (972, 50571),

Gene: Kaylissa\_42 Start: 30090, Stop: 31955, Start Num: 245

Candidate Starts for Kaylissa\_42:

(Start: 245 @30090 has 74 MA's), (279, 30138), (325, 30228), (327, 30234), (416, 30387), (433, 30435), (448, 30477), (541, 30684), (544, 30693), (580, 30783), (585, 30792), (591, 30807), (613, 30852), (635, 30897), (659, 30945), (687, 31002), (717, 31083), (737, 31170), (743, 31203), (752, 31233), (767, 31290), (783, 31356), (790, 31380), (813, 31449), (834, 31521), (878, 31629), (902, 31692), (905, 31716), (939, 31827), (946, 31851), (949, 31860),

Gene: Kazan\_46 Start: 29633, Stop: 27792, Start Num: 246

Candidate Starts for Kazan\_46:

(Start: 246 @29633 has 877 MA's), (364, 29429), (400, 29354), (402, 29351), (416, 29324), (420, 29309), (425, 29297), (444, 29246), (475, 29156), (479, 29144), (539, 29051), (552, 29012), (560, 28994), (568, 28979), (598, 28913), (613, 28880), (614, 28877), (663, 28775), (697, 28715), (726, 28631), (743, 28550), (766, 28466), (767, 28463), (771, 28454), (776, 28427), (783, 28397), (810, 28337), (820, 28298), (902, 28082), (903, 28079), (905, 28058), (946, 27923), (950, 27911), (955, 27902), (957, 27899), (1000, 27806),

Gene: KeAlii\_40 Start: 29667, Stop: 31577, Start Num: 245

Candidate Starts for KeAlii\_40:

(101, 29409), (172, 29580), (Start: 245 @29667 has 74 MA's), (279, 29715), (382, 29898), (416, 29964), (448, 30054), (507, 30213), (541, 30306), (544, 30315), (585, 30414), (591, 30429), (613, 30474), (635, 30519), (659, 30567), (717, 30705), (729, 30759), (743, 30825), (760, 30888), (781, 30969), (783, 30978), (813, 31071), (878, 31251), (905, 31338), (946, 31473), (949, 31482), (955, 31494),

Gene: Keitherie\_62 Start: 54618, Stop: 52759, Start Num: 205

Candidate Starts for Keitherie\_62:

(Start: 188 @54642 has 1 MA's), (Start: 205 @54618 has 304 MA's), (Start: 235 @54594 has 6 MA's), (Start: 250 @54588 has 2 MA's), (Start: 274 @54546 has 6 MA's), (283, 54525), (337, 54411), (342, 54405), (360, 54375), (391, 54315), (399, 54294), (421, 54240), (428, 54228), (434, 54210), (436, 54198), (476, 54093), (519, 54036), (538, 54000), (542, 53988), (551, 53964), (556, 53952), (564, 53934), (570, 53916), (580, 53898), (598, 53859), (602, 53850), (603, 53847), (604, 53844), (738, 53487), (744, 53454), (750, 53433), (777, 53340), (780, 53331), (795, 53268), (814, 53232), (815, 53229), (820, 53214), (847, 53136), (851, 53124), (858, 53103), (875, 53064), (905, 52974), (910, 52956), (912, 52950), (917, 52935), (926, 52911), (930, 52896), (931, 52893), (933, 52881), (940, 52857), (963, 52809), (972, 52785),

Gene: Kenmech\_48 Start: 35912, Stop: 34083, Start Num: 246

Candidate Starts for Kenmech\_48:

(Start: 246 @35912 has 877 MA's), (368, 35699), (400, 35636), (416, 35606), (422, 35585), (425, 35579), (429, 35570), (470, 35453), (479, 35426), (539, 35333), (544, 35318), (578, 35234), (580, 35231), (612, 35165), (627, 35135), (639, 35105), (662, 35060), (683, 35021), (743, 34841), (753, 34793), (771, 34745), (780, 34706), (783, 34688), (793, 34649), (810, 34628), (814, 34607), (819, 34592), (861, 34469), (922, 34298), (929, 34274), (943, 34226), (946, 34214), (955, 34193), (959, 34187), (981, 34139), (986, 34124),

Gene: Kenzers\_43 Start: 29644, Stop: 31518, Start Num: 246

Candidate Starts for Kenzers\_43:

(Start: 243 @29641 has 7 MA's), (Start: 246 @29644 has 877 MA's), (287, 29713), (Start: 301 @29734 has 110 MA's), (364, 29851), (400, 29914), (429, 29980), (444, 30022), (585, 30316), (696, 30550), (731, 30673), (743, 30733), (746, 30739), (755, 30784), (764, 30814), (774, 30850), (783, 30886), (813, 30979), (844, 31072), (874, 31150), (902, 31222), (909, 31261), (924, 31303), (929, 31321), (946, 31381), (955, 31402),

Gene: Kerberos\_47 Start: 31153, Stop: 29330, Start Num: 246

Candidate Starts for Kerberos\_47:

(Start: 246 @31153 has 877 MA's), (364, 30949), (374, 30925), (383, 30907), (394, 30889), (400, 30874), (402, 30871), (416, 30844), (425, 30817), (444, 30766), (479, 30664), (539, 30571), (556, 30523), (560, 30514), (567, 30502), (568, 30499), (598, 30433), (627, 30373), (683, 30259), (697, 30235), (715, 30196), (743, 30070), (755, 30019), (767, 29983), (783, 29917), (793, 29878), (815,

29809), (827, 29770), (844, 29725), (853, 29695), (880, 29632), (886, 29620), (888, 29614), (905, 29554), (946, 29419), (950, 29407), (955, 29398),

Gene: Keziacharles14\_44 Start: 32157, Stop: 30364, Start Num: 245

Candidate Starts for Keziacharles14\_44:

(167, 32262), (Start: 245 @32157 has 74 MA's), (261, 32148), (325, 32019), (346, 31986), (364, 31953), (383, 31911), (400, 31878), (402, 31875), (420, 31833), (425, 31821), (444, 31770), (479, 31668), (480, 31665), (539, 31575), (551, 31539), (612, 31407), (687, 31248), (714, 31209), (716, 31203), (743, 31080), (771, 30984), (774, 30963), (783, 30927), (814, 30846), (853, 30729), (861, 30708), (880, 30666), (902, 30612), (930, 30510), (946, 30453), (950, 30441), (955, 30432),

Gene: Khan1\_61 Start: 54513, Stop: 52654, Start Num: 205

Candidate Starts for Khan1\_61:

(Start: 188 @54537 has 1 MA's), (Start: 205 @54513 has 304 MA's), (Start: 235 @54489 has 6 MA's), (Start: 250 @54483 has 2 MA's), (Start: 274 @54441 has 6 MA's), (283, 54420), (337, 54306), (342, 54300), (360, 54270), (391, 54210), (399, 54189), (421, 54135), (428, 54123), (434, 54105), (436, 54093), (476, 53988), (519, 53931), (538, 53895), (542, 53883), (551, 53859), (556, 53847), (564, 53829), (570, 53811), (580, 53793), (598, 53754), (602, 53745), (603, 53742), (604, 53739), (712, 53484), (738, 53382), (744, 53349), (750, 53328), (777, 53235), (780, 53226), (795, 53163), (814, 53127), (815, 53124), (820, 53109), (847, 53031), (851, 53019), (858, 52998), (875, 52959), (905, 52869), (910, 52851), (912, 52845), (917, 52830), (926, 52806), (930, 52791), (931, 52788), (933, 52776), (940, 52752), (946, 52731), (963, 52704), (972, 52680),

Gene: Kheth\_57 Start: 52520, Stop: 50691, Start Num: 205

Candidate Starts for Kheth\_57:

(Start: 205 @52520 has 304 MA's), (Start: 250 @52493 has 2 MA's), (269, 52463), (Start: 274 @52451 has 6 MA's), (286, 52424), (287, 52421), (293, 52412), (318, 52394), (366, 52298), (391, 52247), (400, 52223), (411, 52199), (463, 52061), (472, 52037), (476, 52025), (519, 51968), (538, 51932), (542, 51920), (551, 51896), (588, 51812), (602, 51782), (603, 51779), (615, 51749), (680, 51605), (707, 51539), (721, 51500), (724, 51488), (727, 51467), (732, 51449), (744, 51392), (771, 51308), (777, 51278), (780, 51269), (795, 51203), (812, 51176), (814, 51167), (820, 51149), (827, 51125), (847, 51071), (851, 51059), (858, 51038), (888, 50969), (905, 50909), (910, 50891), (922, 50858), (926, 50846), (930, 50831), (931, 50828), (933, 50816), (940, 50792), (941, 50789), (963, 50741), (965, 50738), (972, 50717), (979, 50696),

Gene: Kieran\_40 Start: 29929, Stop: 31800, Start Num: 246

Candidate Starts for Kieran\_40:

(Start: 246 @29929 has 877 MA's), (352, 30112), (371, 30151), (386, 30169), (429, 30265), (433, 30277), (434, 30280), (467, 30361), (565, 30553), (585, 30601), (629, 30691), (696, 30832), (731, 30955), (743, 31015), (762, 31081), (764, 31096), (774, 31132), (777, 31141), (783, 31168), (813, 31261), (874, 31432), (902, 31504), (909, 31543), (924, 31585), (939, 31639), (946, 31663), (955, 31684), (968, 31708),

Gene: Kikipoo\_62 Start: 54547, Stop: 52688, Start Num: 205

Candidate Starts for Kikipoo\_62:

(Start: 188 @54571 has 1 MA's), (Start: 205 @54547 has 304 MA's), (Start: 235 @54523 has 6 MA's), (Start: 250 @54517 has 2 MA's), (Start: 274 @54475 has 6 MA's), (283, 54454), (337, 54340), (342, 54334), (360, 54304), (391, 54244), (399, 54223), (421, 54169), (428, 54157), (434, 54139), (436, 54127), (476, 54022), (519, 53965), (538, 53929), (542, 53917), (545, 53908), (552, 53890), (564, 53863), (570, 53845), (580, 53827), (598, 53788), (602, 53779), (603, 53776), (604, 53773), (712, 53518), (738, 53416), (744, 53383), (750, 53362), (777, 53269), (780, 53260), (795, 53197), (814, 53161), (815, 53158), (820, 53143), (847, 53065), (851, 53053), (858, 53032), (875, 52993), (905, 52903), (910, 52885), (912, 52879), (917, 52864), (926, 52840), (930, 52825), (931, 52822), (933,

52810), (940, 52786), (963, 52738), (972, 52714),

Gene: Killigrew\_44 Start: 34598, Stop: 32769, Start Num: 246

Candidate Starts for Killigrew\_44:

(Start: 246 @34598 has 877 MA's), (368, 34385), (374, 34370), (400, 34322), (416, 34292), (422, 34271), (425, 34265), (429, 34256), (470, 34139), (479, 34112), (539, 34019), (544, 34004), (578, 33920), (580, 33917), (612, 33851), (627, 33821), (639, 33791), (662, 33746), (683, 33707), (743, 33527), (753, 33479), (771, 33431), (780, 33392), (783, 33374), (793, 33335), (810, 33314), (814, 33293), (819, 33278), (861, 33155), (922, 32984), (929, 32960), (943, 32912), (946, 32900), (955, 32879), (959, 32873), (981, 32825), (986, 32810),

Gene: KimJongPhill\_80 Start: 57331, Stop: 59844, Start Num: 37

Candidate Starts for KimJongPhill\_80:

(Start: 14 @57226 has 1 MA's), (24, 57268), (32, 57298), (Start: 37 @57331 has 1 MA's), (76, 57460), (Start: 77 @57466 has 1 MA's), (83, 57475), (111, 57571), (120, 57589), (195, 57733), (218, 57766), (Start: 241 @57796 has 13 MA's), (295, 57892), (Start: 308 @57910 has 5 MA's), (329, 57979), (420, 58159), (428, 58174), (435, 58201), (461, 58273), (486, 58321), (526, 58438), (605, 58567), (682, 58753), (683, 58756), (698, 58780), (707, 58804), (730, 58891), (769, 59047), (773, 59068), (783, 59110), (792, 59146), (794, 59152), (796, 59158), (797, 59164), (822, 59245), (870, 59383), (878, 59404), (905, 59524), (910, 59542), (920, 59569), (937, 59638), (939, 59644), (943, 59656), (947, 59671), (964, 59704), (987, 59770),

Gene: Kimbrough\_61 Start: 54598, Stop: 52739, Start Num: 205

Candidate Starts for Kimbrough\_61:

(Start: 188 @54622 has 1 MA's), (Start: 205 @54598 has 304 MA's), (Start: 235 @54574 has 6 MA's), (Start: 250 @54568 has 2 MA's), (Start: 274 @54526 has 6 MA's), (283, 54505), (337, 54391), (342, 54385), (360, 54355), (391, 54295), (399, 54274), (421, 54220), (428, 54208), (434, 54190), (436, 54178), (476, 54073), (519, 54016), (538, 53980), (542, 53968), (551, 53944), (556, 53932), (564, 53914), (570, 53896), (580, 53878), (598, 53839), (602, 53830), (603, 53827), (604, 53824), (738, 53467), (744, 53434), (750, 53413), (777, 53320), (780, 53311), (795, 53248), (814, 53212), (815, 53209), (820, 53194), (847, 53116), (851, 53104), (858, 53083), (875, 53044), (905, 52954), (910, 52936), (912, 52930), (917, 52915), (926, 52891), (930, 52876), (931, 52873), (933, 52861), (940, 52837), (963, 52789), (972, 52765),

Gene: Kimona\_43 Start: 29598, Stop: 27742, Start Num: 246

Candidate Starts for Kimona\_43:

(Start: 246 @29598 has 877 MA's), (364, 29394), (416, 29292), (422, 29271), (425, 29265), (429, 29256), (475, 29124), (479, 29112), (539, 29016), (585, 28905), (598, 28878), (646, 28773), (659, 28752), (683, 28707), (711, 28638), (726, 28581), (743, 28500), (783, 28347), (793, 28308), (815, 28236), (820, 28221), (827, 28197), (843, 28155), (853, 28122), (946, 27831), (950, 27819), (955, 27810),

Gene: KingCyrus\_47 Start: 33203, Stop: 31416, Start Num: 246

Candidate Starts for KingCyrus\_47:

(Start: 199 @33239 has 2 MA's), (Start: 246 @33203 has 877 MA's), (366, 32996), (368, 32990), (375, 32975), (383, 32960), (402, 32924), (416, 32897), (425, 32870), (433, 32849), (479, 32717), (539, 32624), (556, 32576), (560, 32567), (568, 32552), (598, 32486), (635, 32405), (659, 32357), (683, 32312), (697, 32288), (743, 32132), (755, 32081), (766, 32048), (767, 32045), (783, 31979), (793, 31940), (810, 31919), (831, 31844), (834, 31832), (853, 31781), (880, 31718), (888, 31700), (902, 31664), (930, 31562), (946, 31505), (950, 31493), (955, 31484),

Gene: KingJulien\_38 Start: 29054, Stop: 27189, Start Num: 301

Candidate Starts for KingJulien\_38:



(Start: 301 @29054 has 110 MA's), (Start: 308 @29045 has 5 MA's), (432, 28781), (435, 28766), (438, 28760), (484, 28628), (501, 28574), (504, 28562), (531, 28487), (537, 28478), (539, 28466), (548, 28439), (549, 28436), (554, 28421), (556, 28415), (562, 28403), (605, 28334), (718, 28085), (776, 27872), (779, 27863), (780, 27860), (783, 27842), (794, 27800), (822, 27713), (878, 27554), (885, 27524), (903, 27455), (906, 27431), (919, 27392), (929, 27359), (932, 27347),

Gene: KingTut\_53 Start: 50762, Stop: 48903, Start Num: 205

Candidate Starts for KingTut\_53:

(Start: 188 @50786 has 1 MA's), (Start: 205 @50762 has 304 MA's), (Start: 235 @50738 has 6 MA's), (Start: 250 @50732 has 2 MA's), (Start: 274 @50690 has 6 MA's), (283, 50669), (337, 50555), (342, 50549), (360, 50519), (391, 50459), (399, 50438), (421, 50384), (428, 50372), (434, 50354), (436, 50342), (476, 50237), (519, 50180), (538, 50144), (542, 50132), (552, 50105), (564, 50078), (570, 50060), (580, 50042), (598, 50003), (602, 49994), (603, 49991), (712, 49733), (738, 49631), (744, 49598), (750, 49577), (777, 49484), (780, 49475), (795, 49412), (814, 49376), (815, 49373), (820, 49358), (847, 49280), (851, 49268), (858, 49247), (875, 49208), (905, 49118), (910, 49100), (912, 49094), (917, 49079), (926, 49055), (930, 49040), (931, 49037), (933, 49025), (940, 49001), (963, 48953), (972, 48929),

Gene: KingVeVeVe\_59 Start: 53565, Stop: 51706, Start Num: 205

Candidate Starts for KingVeVeVe\_59:

(Start: 188 @53589 has 1 MA's), (Start: 205 @53565 has 304 MA's), (Start: 235 @53541 has 6 MA's), (Start: 250 @53535 has 2 MA's), (267, 53508), (Start: 274 @53493 has 6 MA's), (283, 53472), (337, 53358), (342, 53352), (360, 53322), (391, 53262), (399, 53241), (421, 53187), (428, 53175), (434, 53157), (436, 53145), (476, 53040), (519, 52983), (538, 52947), (542, 52935), (552, 52908), (556, 52899), (570, 52863), (598, 52806), (602, 52797), (603, 52794), (604, 52791), (738, 52434), (744, 52401), (750, 52380), (777, 52287), (780, 52278), (795, 52215), (814, 52179), (815, 52176), (820, 52161), (847, 52083), (851, 52071), (858, 52050), (875, 52011), (905, 51921), (910, 51903), (912, 51897), (917, 51882), (926, 51858), (930, 51843), (931, 51840), (933, 51828), (940, 51804), (963, 51756), (972, 51732),

Gene: Kingmustik0402\_45 Start: 31559, Stop: 29733, Start Num: 246

Candidate Starts for Kingmustik0402\_45:

(Start: 246 @31559 has 877 MA's), (267, 31538), (280, 31508), (295, 31478), (383, 31316), (394, 31298), (425, 31226), (429, 31217), (471, 31097), (479, 31073), (539, 30980), (558, 30932), (568, 30911), (585, 30872), (646, 30740), (659, 30719), (683, 30674), (687, 30662), (740, 30509), (743, 30488), (776, 30365), (783, 30335), (793, 30296), (814, 30230), (815, 30227), (820, 30212), (827, 30188), (834, 30164), (905, 29957), (946, 29822), (950, 29810), (955, 29801),

Gene: Kinmap\_43 Start: 30677, Stop: 28872, Start Num: 246

Candidate Starts for Kinmap\_43:

(Start: 246 @30677 has 877 MA's), (383, 30431), (400, 30398), (402, 30395), (416, 30368), (425, 30341), (429, 30332), (479, 30188), (539, 30095), (556, 30047), (721, 29699), (728, 29663), (743, 29594), (755, 29537), (776, 29465), (783, 29435), (814, 29354), (853, 29237), (902, 29120), (946, 28961), (950, 28949), (955, 28940),

Gene: Kipper29\_45 Start: 29646, Stop: 27805, Start Num: 246

Candidate Starts for Kipper29\_45:

(Start: 246 @29646 has 877 MA's), (364, 29442), (400, 29367), (402, 29364), (416, 29337), (420, 29322), (425, 29310), (444, 29259), (475, 29169), (479, 29157), (539, 29064), (552, 29025), (560, 29007), (568, 28992), (598, 28926), (613, 28893), (614, 28890), (663, 28788), (697, 28728), (726, 28644), (743, 28563), (766, 28479), (767, 28476), (771, 28467), (776, 28440), (783, 28410), (810, 28350), (820, 28311), (902, 28095), (903, 28092), (905, 28071), (946, 27936), (950, 27924), (955, 27915), (957, 27912), (1000, 27819),

Gene: KittenMittens\_41 Start: 30386, Stop: 28554, Start Num: 246

Candidate Starts for KittenMittens\_41:

(Start: 246 @30386 has 877 MA's), (280, 30335), (319, 30269), (364, 30182), (368, 30173), (395, 30122), (400, 30110), (425, 30053), (454, 29972), (458, 29960), (461, 29951), (471, 29924), (479, 29900), (539, 29807), (552, 29768), (585, 29699), (598, 29672), (662, 29540), (743, 29312), (762, 29246), (776, 29189), (783, 29159), (793, 29120), (815, 29048), (820, 29033), (827, 29009), (843, 28967), (853, 28934), (905, 28778), (912, 28754), (932, 28691), (946, 28643), (950, 28631), (955, 28622),

Gene: KlimbOn\_60 Start: 54056, Stop: 52197, Start Num: 205

Candidate Starts for KlimbOn\_60:

(Start: 188 @54080 has 1 MA's), (Start: 205 @54056 has 304 MA's), (Start: 235 @54032 has 6 MA's), (Start: 250 @54026 has 2 MA's), (Start: 274 @53984 has 6 MA's), (283, 53963), (337, 53849), (342, 53843), (360, 53813), (391, 53753), (399, 53732), (421, 53678), (428, 53666), (434, 53648), (436, 53636), (476, 53531), (519, 53474), (538, 53438), (542, 53426), (551, 53402), (556, 53390), (564, 53372), (570, 53354), (580, 53336), (598, 53297), (602, 53288), (603, 53285), (604, 53282), (712, 53027), (738, 52925), (744, 52892), (750, 52871), (777, 52778), (780, 52769), (795, 52706), (814, 52670), (815, 52667), (820, 52652), (847, 52574), (851, 52562), (858, 52541), (875, 52502), (905, 52412), (910, 52394), (912, 52388), (917, 52373), (926, 52349), (930, 52334), (931, 52331), (933, 52319), (940, 52295), (963, 52247), (972, 52223),

Gene: Klimt\_38 Start: 28614, Stop: 26749, Start Num: 301

Candidate Starts for Klimt\_38:

(Start: 238 @28701 has 3 MA's), (Start: 301 @28614 has 110 MA's), (Start: 308 @28605 has 5 MA's), (354, 28500), (358, 28491), (375, 28461), (378, 28458), (433, 28338), (435, 28326), (438, 28320), (475, 28215), (484, 28188), (531, 28047), (536, 28041), (537, 28038), (539, 28026), (548, 27999), (549, 27996), (554, 27981), (556, 27975), (559, 27969), (586, 27936), (652, 27807), (676, 27747), (776, 27432), (779, 27423), (780, 27420), (783, 27402), (794, 27360), (796, 27354), (805, 27330), (822, 27273), (878, 27114), (885, 27084), (888, 27075), (903, 27015), (906, 26991), (919, 26952), (929, 26919), (932, 26907), (947, 26847),

Gene: Kloppinator\_61 Start: 54207, Stop: 52348, Start Num: 205

Candidate Starts for Kloppinator\_61:

(Start: 188 @54231 has 1 MA's), (Start: 205 @54207 has 304 MA's), (Start: 235 @54183 has 6 MA's), (Start: 250 @54177 has 2 MA's), (Start: 274 @54135 has 6 MA's), (283, 54114), (337, 54000), (342, 53994), (360, 53964), (391, 53904), (399, 53883), (421, 53829), (428, 53817), (434, 53799), (435, 53790), (436, 53787), (476, 53682), (519, 53625), (538, 53589), (542, 53577), (551, 53553), (556, 53541), (564, 53523), (570, 53505), (580, 53487), (598, 53448), (602, 53439), (603, 53436), (604, 53433), (738, 53076), (744, 53043), (750, 53022), (777, 52929), (780, 52920), (795, 52857), (814, 52821), (815, 52818), (820, 52803), (847, 52725), (851, 52713), (858, 52692), (875, 52653), (905, 52563), (910, 52545), (912, 52539), (917, 52524), (926, 52500), (930, 52485), (931, 52482), (933, 52470), (940, 52446), (963, 52398), (972, 52374),

Gene: Knocker\_59 Start: 55993, Stop: 54140, Start Num: 205

Candidate Starts for Knocker\_59:

(Start: 205 @55993 has 304 MA's), (267, 55936), (287, 55891), (295, 55879), (296, 55876), (314, 55855), (366, 55750), (435, 55588), (436, 55585), (445, 55567), (476, 55480), (519, 55423), (529, 55411), (538, 55387), (542, 55375), (556, 55339), (559, 55333), (592, 55252), (602, 55231), (603, 55228), (613, 55204), (615, 55198), (659, 55114), (671, 55084), (695, 55018), (712, 54970), (719, 54949), (725, 54928), (732, 54892), (739, 54862), (744, 54835), (750, 54814), (775, 54727), (777, 54721), (780, 54712), (795, 54649), (814, 54613), (815, 54610), (816, 54607), (820, 54595), (827, 54571), (847, 54517), (851, 54505), (858, 54484), (861, 54475), (888, 54415), (903, 54376), (910,

54337), (912, 54331), (926, 54292), (929, 54280), (930, 54277), (931, 54274), (936, 54250), (940, 54238), (947, 54214), (963, 54190), (965, 54187), (972, 54166), (979, 54145),

Gene: Knox\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for Knox\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (432, 28661), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (676, 28067), (702, 28013), (709, 27992), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Koan\_43 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Koan\_43:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Koduck\_44 Start: 30337, Stop: 28550, Start Num: 245

Candidate Starts for Koduck\_44:

(Start: 245 @30337 has 74 MA's), (366, 30130), (368, 30124), (375, 30109), (383, 30094), (399, 30064), (400, 30061), (416, 30031), (425, 30004), (433, 29983), (444, 29953), (479, 29851), (539, 29758), (554, 29713), (556, 29710), (560, 29701), (568, 29686), (598, 29620), (613, 29587), (635, 29539), (659, 29491), (743, 29266), (755, 29215), (766, 29182), (767, 29179), (783, 29113), (793, 29074), (810, 29053), (831, 28978), (837, 28960), (853, 28915), (864, 28888), (880, 28852), (888, 28834), (902, 28798), (905, 28774), (924, 28717), (946, 28639), (950, 28627), (955, 28618),

Gene: Koji\_37 Start: 28666, Stop: 26816, Start Num: 297

Candidate Starts for Koji\_37:

(Start: 297 @28666 has 18 MA's), (358, 28543), (378, 28510), (430, 28399), (435, 28378), (438, 28372), (441, 28363), (456, 28321), (512, 28165), (531, 28111), (536, 28105), (537, 28102), (539, 28090), (549, 28060), (585, 28003), (685, 27787), (718, 27709), (776, 27499), (780, 27487), (783, 27469), (794, 27427), (822, 27340), (885, 27151), (888, 27142), (903, 27082), (906, 27058), (912, 27037), (917, 27025), (947, 26914),

Gene: Koko\_47 Start: 30329, Stop: 28530, Start Num: 246

Candidate Starts for Koko\_47:

(Start: 246 @30329 has 877 MA's), (364, 30125), (368, 30116), (400, 30050), (402, 30047), (416, 30020), (420, 30005), (425, 29993), (444, 29942), (475, 29852), (479, 29840), (539, 29747), (556, 29699), (560, 29690), (644, 29507), (721, 29357), (743, 29252), (755, 29195), (767, 29159), (771, 29150), (776, 29123), (783, 29093), (793, 29054), (810, 29033), (818, 29000), (820, 28994), (853, 28895), (880, 28832), (902, 28778), (905, 28754), (924, 28697), (946, 28619), (950, 28607), (955, 28598), (957, 28595),

Gene: Kolhan\_57 Start: 52487, Stop: 50658, Start Num: 205

Candidate Starts for Kolhan\_57:

(Start: 205 @52487 has 304 MA's), (Start: 250 @52460 has 2 MA's), (269, 52430), (Start: 274 @52418 has 6 MA's), (286, 52391), (287, 52388), (293, 52379), (318, 52361), (366, 52265), (391, 52214), (400, 52190), (411, 52166), (463, 52028), (472, 52004), (476, 51992), (519, 51935), (538, 51899), (542, 51887), (551, 51863), (588, 51779), (602, 51749), (603, 51746), (615, 51716), (680, 51572), (707,

51506), (724, 51455), (727, 51434), (732, 51416), (744, 51359), (771, 51275), (777, 51245), (780, 51236), (795, 51170), (812, 51143), (814, 51134), (820, 51116), (827, 51092), (847, 51038), (851, 51026), (858, 51005), (888, 50936), (905, 50876), (910, 50858), (922, 50825), (926, 50813), (930, 50798), (931, 50795), (933, 50783), (940, 50759), (941, 50756), (963, 50708), (965, 50705), (972, 50684), (979, 50663),

Gene: Koreni\_44 Start: 31251, Stop: 29425, Start Num: 246

Candidate Starts for Koreni\_44:

(Start: 246 @31251 has 877 MA's), (267, 31230), (280, 31200), (295, 31170), (383, 31008), (394, 30990), (425, 30918), (429, 30909), (471, 30789), (479, 30765), (539, 30672), (558, 30624), (568, 30603), (585, 30564), (646, 30432), (659, 30411), (683, 30366), (687, 30354), (740, 30201), (743, 30180), (776, 30057), (783, 30027), (793, 29988), (814, 29922), (815, 29919), (820, 29904), (827, 29880), (834, 29856), (905, 29649), (946, 29514), (950, 29502), (955, 29493),

Gene: Kratak\_45 Start: 31709, Stop: 29883, Start Num: 246

Candidate Starts for Kratak\_45:

(Start: 246 @31709 has 877 MA's), (267, 31688), (280, 31658), (295, 31628), (383, 31466), (394, 31448), (425, 31376), (429, 31367), (471, 31247), (479, 31223), (539, 31130), (558, 31082), (585, 31022), (646, 30890), (659, 30869), (683, 30824), (687, 30812), (740, 30659), (743, 30638), (776, 30515), (783, 30485), (793, 30446), (814, 30380), (815, 30377), (820, 30362), (827, 30338), (834, 30314), (905, 30107), (946, 29972), (950, 29960), (955, 29951),

Gene: Kremtemulon\_45 Start: 31521, Stop: 29695, Start Num: 246

Candidate Starts for Kremtemulon\_45:

(Start: 246 @31521 has 877 MA's), (279, 31473), (364, 31317), (400, 31245), (425, 31188), (429, 31179), (471, 31059), (479, 31035), (521, 30981), (539, 30942), (558, 30894), (568, 30873), (585, 30834), (646, 30702), (652, 30693), (659, 30681), (683, 30636), (687, 30624), (740, 30471), (743, 30450), (776, 30327), (783, 30297), (793, 30258), (814, 30192), (815, 30189), (820, 30174), (827, 30150), (834, 30126), (905, 29919), (946, 29784), (950, 29772), (955, 29763),

Gene: Krishelle\_36 Start: 28397, Stop: 26613, Start Num: 246

Candidate Starts for Krishelle\_36:

(Start: 246 @28397 has 877 MA's), (346, 28226), (379, 28163), (399, 28124), (400, 28121), (420, 28076), (425, 28064), (429, 28055), (442, 28016), (479, 27911), (539, 27818), (556, 27770), (585, 27707), (598, 27680), (646, 27575), (662, 27548), (683, 27509), (743, 27329), (753, 27281), (783, 27176), (784, 27173), (810, 27116), (814, 27095), (829, 27047), (855, 26972), (886, 26903), (902, 26861), (903, 26858), (905, 26837), (909, 26822), (930, 26759), (946, 26702), (950, 26690), (969, 26651), (978, 26633),

Gene: Kristoff\_44 Start: 31492, Stop: 29657, Start Num: 246

Candidate Starts for Kristoff\_44:

(Start: 246 @31492 has 877 MA's), (280, 31441), (319, 31375), (364, 31288), (374, 31264), (395, 31228), (400, 31216), (425, 31159), (429, 31150), (479, 31006), (513, 30964), (539, 30913), (558, 30865), (585, 30805), (645, 30676), (646, 30673), (659, 30652), (662, 30646), (716, 30538), (743, 30415), (753, 30367), (776, 30292), (783, 30262), (793, 30223), (814, 30154), (815, 30151), (827, 30112), (834, 30088), (837, 30082), (843, 30070), (905, 29881), (912, 29857), (932, 29794), (946, 29746), (950, 29734), (955, 29725),

Gene: Kronus\_58 Start: 54729, Stop: 52912, Start Num: 247

Candidate Starts for Kronus\_58:

(130, 54912), (Start: 247 @54729 has 43 MA's), (267, 54699), (368, 54519), (417, 54414), (433, 54366), (435, 54354), (448, 54324), (454, 54318), (476, 54255), (478, 54249), (519, 54198), (538, 54162), (556, 54114), (603, 54009), (645, 53913), (674, 53862), (724, 53718), (732, 53679), (739,

53649), (744, 53622), (748, 53610), (775, 53514), (777, 53508), (780, 53499), (782, 53487), (807, 53415), (814, 53385), (820, 53367), (822, 53358), (847, 53289), (851, 53277), (858, 53256), (888, 53187), (898, 53172), (903, 53148), (905, 53127), (910, 53109), (912, 53103), (924, 53070), (926, 53064), (931, 53046), (933, 53034), (936, 53022), (940, 53010), (956, 52968), (972, 52938),

Gene: Kugel\_46 Start: 35094, Stop: 33268, Start Num: 246

Candidate Starts for Kugel\_46:

(Start: 246 @35094 has 877 MA's), (368, 34881), (374, 34866), (400, 34818), (416, 34788), (422, 34767), (425, 34761), (429, 34752), (470, 34635), (479, 34608), (539, 34515), (544, 34500), (556, 34467), (578, 34416), (580, 34413), (612, 34347), (639, 34287), (662, 34242), (683, 34203), (743, 34023), (753, 33975), (767, 33936), (783, 33870), (793, 33831), (810, 33810), (814, 33789), (820, 33771), (843, 33705), (902, 33555), (903, 33552), (909, 33516), (917, 33492), (921, 33483), (925, 33471), (946, 33396), (955, 33375),

Gene: Kurt1\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Kurt1\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: Kwadwo\_59 Start: 54008, Stop: 52149, Start Num: 205

Candidate Starts for Kwadwo\_59:

(Start: 188 @54032 has 1 MA's), (Start: 205 @54008 has 304 MA's), (Start: 235 @53984 has 6 MA's), (Start: 250 @53978 has 2 MA's), (Start: 274 @53936 has 6 MA's), (283, 53915), (337, 53801), (342, 53795), (360, 53765), (391, 53705), (399, 53684), (421, 53630), (428, 53618), (434, 53600), (436, 53588), (476, 53483), (519, 53426), (538, 53390), (542, 53378), (552, 53351), (570, 53306), (598, 53249), (602, 53240), (603, 53237), (712, 52979), (738, 52877), (744, 52844), (750, 52823), (777, 52730), (780, 52721), (795, 52658), (814, 52622), (815, 52619), (820, 52604), (847, 52526), (851, 52514), (858, 52493), (875, 52454), (905, 52364), (910, 52346), (912, 52340), (917, 52325), (926, 52301), (930, 52286), (931, 52283), (933, 52271), (940, 52247), (963, 52199), (972, 52175),

Gene: Kwksand96\_61 Start: 54137, Stop: 52278, Start Num: 205

Candidate Starts for Kwksand96\_61:

(Start: 188 @54161 has 1 MA's), (Start: 205 @54137 has 304 MA's), (Start: 235 @54113 has 6 MA's), (Start: 250 @54107 has 2 MA's), (Start: 274 @54065 has 6 MA's), (283, 54044), (337, 53930), (342, 53924), (360, 53894), (391, 53834), (399, 53813), (421, 53759), (428, 53747), (434, 53729), (436, 53717), (476, 53612), (519, 53555), (538, 53519), (542, 53507), (552, 53480), (570, 53435), (598, 53378), (602, 53369), (603, 53366), (738, 53006), (744, 52973), (750, 52952), (777, 52859), (780, 52850), (795, 52787), (814, 52751), (815, 52748), (820, 52733), (847, 52655), (851, 52643), (858, 52622), (875, 52583), (905, 52493), (910, 52475), (912, 52469), (917, 52454), (926, 52430), (930, 52415), (931, 52412), (933, 52400), (940, 52376), (963, 52328), (972, 52304), (977, 52289),

Gene: KyMonks1A\_47 Start: 34990, Stop: 33164, Start Num: 246

Candidate Starts for KyMonks1A\_47:

(Start: 246 @34990 has 877 MA's), (368, 34777), (374, 34762), (416, 34684), (422, 34663), (425, 34657), (429, 34648), (470, 34531), (479, 34504), (539, 34411), (544, 34396), (556, 34363), (578, 34312), (580, 34309), (612, 34243), (627, 34213), (639, 34183), (662, 34138), (683, 34099), (743, 33919), (753, 33871), (767, 33832), (783, 33766), (793, 33727), (810, 33706), (814, 33685), (820, 33667), (843, 33601), (902, 33451), (903, 33448), (909, 33412), (917, 33388), (921, 33379), (925,

33367), (932, 33340), (946, 33292), (955, 33271),

Gene: Kyee\_45 Start: 31568, Stop: 29742, Start Num: 246

Candidate Starts for Kyee\_45:

(Start: 246 @31568 has 877 MA's), (267, 31547), (280, 31517), (295, 31487), (383, 31325), (394, 31307), (425, 31235), (429, 31226), (471, 31106), (479, 31082), (539, 30989), (558, 30941), (568, 30920), (585, 30881), (646, 30749), (659, 30728), (683, 30683), (687, 30671), (740, 30518), (743, 30497), (776, 30374), (783, 30344), (793, 30305), (814, 30239), (815, 30236), (820, 30221), (827, 30197), (834, 30173), (905, 29966), (946, 29831), (950, 29819), (955, 29810),

Gene: Kykar\_45 Start: 34788, Stop: 32959, Start Num: 246

Candidate Starts for Kykar\_45:

(Start: 246 @34788 has 877 MA's), (368, 34575), (374, 34560), (416, 34482), (422, 34461), (425, 34455), (429, 34446), (479, 34302), (539, 34209), (544, 34194), (578, 34110), (580, 34107), (612, 34041), (627, 34011), (639, 33981), (662, 33936), (683, 33897), (743, 33717), (753, 33669), (771, 33621), (780, 33582), (783, 33564), (793, 33525), (810, 33504), (814, 33483), (819, 33468), (861, 33345), (922, 33174), (929, 33150), (943, 33102), (946, 33090), (955, 33069), (959, 33063), (981, 33015), (986, 33000),

Gene: L5\_44 Start: 30476, Stop: 28689, Start Num: 245

Candidate Starts for L5\_44:

(Start: 245 @30476 has 74 MA's), (364, 30272), (366, 30269), (368, 30263), (375, 30248), (383, 30233), (399, 30203), (400, 30200), (416, 30170), (425, 30143), (433, 30122), (444, 30092), (479, 29990), (539, 29897), (554, 29852), (556, 29849), (560, 29840), (568, 29825), (598, 29759), (613, 29726), (635, 29678), (659, 29630), (743, 29405), (755, 29354), (766, 29321), (767, 29318), (783, 29252), (793, 29213), (810, 29192), (831, 29117), (837, 29099), (853, 29054), (864, 29027), (880, 28991), (888, 28973), (902, 28937), (905, 28913), (924, 28856), (946, 28778), (950, 28766), (955, 28757),

Gene: LBerry\_49 Start: 31856, Stop: 30042, Start Num: 246

Candidate Starts for LBerry\_49:

(Start: 246 @31856 has 877 MA's), (275, 31817), (280, 31805), (364, 31652), (371, 31637), (400, 31580), (425, 31523), (429, 31514), (444, 31472), (461, 31421), (479, 31370), (539, 31277), (556, 31229), (560, 31220), (568, 31205), (585, 31166), (598, 31139), (612, 31109), (654, 31016), (686, 30956), (697, 30941), (743, 30785), (767, 30698), (783, 30632), (793, 30593), (815, 30521), (827, 30482), (834, 30458), (843, 30440), (853, 30407), (864, 30380), (888, 30326), (905, 30266), (930, 30188), (946, 30131), (950, 30119), (955, 30110),

Gene: LHTSCC\_47 Start: 31992, Stop: 30166, Start Num: 246

Candidate Starts for LHTSCC\_47:

(Start: 246 @31992 has 877 MA's), (279, 31944), (364, 31788), (400, 31716), (425, 31659), (429, 31650), (471, 31530), (479, 31506), (539, 31413), (558, 31365), (568, 31344), (585, 31305), (607, 31260), (646, 31173), (652, 31164), (659, 31152), (683, 31107), (687, 31095), (740, 30942), (743, 30921), (776, 30798), (783, 30768), (793, 30729), (814, 30663), (815, 30660), (827, 30621), (834, 30597), (905, 30390), (946, 30255), (950, 30243), (955, 30234),

Gene: Labeouficaum\_61 Start: 54131, Stop: 52272, Start Num: 205

Candidate Starts for Labeouficaum\_61:

(Start: 188 @54155 has 1 MA's), (Start: 205 @54131 has 304 MA's), (Start: 235 @54107 has 6 MA's), (Start: 250 @54101 has 2 MA's), (Start: 274 @54059 has 6 MA's), (283, 54038), (337, 53924), (342, 53918), (360, 53888), (391, 53828), (399, 53807), (421, 53753), (428, 53741), (434, 53723), (436, 53711), (476, 53606), (519, 53549), (538, 53513), (542, 53501), (551, 53477), (556, 53465), (564, 53447), (570, 53429), (580, 53411), (598, 53372), (602, 53363), (603, 53360), (604, 53357), (712,

53102), (738, 53000), (744, 52967), (750, 52946), (777, 52853), (780, 52844), (795, 52781), (814, 52745), (815, 52742), (820, 52727), (847, 52649), (851, 52637), (858, 52616), (875, 52577), (905, 52487), (910, 52469), (912, 52463), (917, 52448), (926, 52424), (930, 52409), (931, 52406), (933, 52394), (940, 52370), (946, 52349), (963, 52322), (972, 52298), (977, 52283),

Gene: LadyAstra\_48 Start: 30680, Stop: 32542, Start Num: 245

Candidate Starts for LadyAstra\_48:

(Start: 245 @30680 has 74 MA's), (279, 30728), (368, 30893), (416, 30977), (438, 31043), (547, 31289), (585, 31379), (654, 31526), (659, 31532), (699, 31616), (743, 31790), (766, 31874), (774, 31907), (813, 32036), (815, 32045), (850, 32147), (905, 32303), (912, 32327), (922, 32354), (926, 32366), (946, 32438),

Gene: LadyBird\_47 Start: 31737, Stop: 29950, Start Num: 246

Candidate Starts for LadyBird\_47:

(Start: 246 @31737 has 877 MA's), (364, 31533), (366, 31530), (368, 31524), (375, 31509), (383, 31494), (400, 31461), (402, 31458), (416, 31431), (425, 31404), (433, 31383), (444, 31353), (479, 31251), (539, 31158), (542, 31149), (556, 31110), (560, 31101), (568, 31086), (598, 31020), (635, 30939), (659, 30891), (662, 30885), (726, 30747), (743, 30666), (755, 30615), (766, 30582), (767, 30579), (783, 30513), (793, 30474), (810, 30453), (831, 30378), (837, 30360), (853, 30315), (864, 30288), (880, 30252), (888, 30234), (902, 30198), (905, 30174), (924, 30117), (946, 30039), (950, 30027), (955, 30018),

Gene: LadyJasley\_41 Start: 33315, Stop: 31501, Start Num: 290

Candidate Starts for LadyJasley\_41:

(221, 33429), (224, 33423), (Start: 252 @33393 has 2 MA's), (277, 33345), (290, 33315), (339, 33216), (353, 33201), (411, 33078), (416, 33069), (452, 32997), (458, 32979), (465, 32964), (509, 32889), (528, 32862), (534, 32847), (551, 32793), (552, 32790), (585, 32703), (642, 32583), (650, 32568), (689, 32481), (713, 32424), (794, 32079), (828, 31995), (843, 31956), (861, 31902), (875, 31872), (906, 31773), (909, 31761), (912, 31752), (922, 31719), (944, 31644), (946, 31635), (960, 31608), (999, 31515), (1003, 31506),

Gene: Lahqtemish\_42 Start: 29831, Stop: 31705, Start Num: 246

Candidate Starts for Lahqtemish\_42:

(Start: 246 @29831 has 877 MA's), (287, 29900), (Start: 301 @29921 has 110 MA's), (400, 30101), (434, 30182), (585, 30503), (696, 30737), (730, 30857), (731, 30860), (743, 30920), (746, 30926), (762, 30986), (764, 31001), (774, 31037), (777, 31046), (783, 31073), (813, 31166), (818, 31184), (827, 31214), (874, 31337), (875, 31340), (902, 31409), (909, 31448), (912, 31457), (924, 31490), (926, 31496), (929, 31508), (939, 31544), (946, 31568), (950, 31580), (955, 31589), (968, 31613),

Gene: Lambano\_52 Start: 52998, Stop: 51175, Start Num: 197

Candidate Starts for Lambano\_52:

(Start: 182 @53016 has 4 MA's), (Start: 197 @52998 has 27 MA's), (Start: 250 @52974 has 2 MA's), (267, 52947), (Start: 274 @52932 has 6 MA's), (283, 52911), (329, 52824), (387, 52719), (406, 52677), (434, 52611), (445, 52581), (448, 52572), (453, 52569), (454, 52566), (463, 52539), (519, 52446), (531, 52428), (538, 52410), (542, 52398), (547, 52383), (552, 52371), (602, 52260), (603, 52257), (615, 52227), (633, 52191), (724, 51966), (725, 51963), (732, 51927), (738, 51903), (744, 51870), (775, 51762), (777, 51756), (779, 51750), (780, 51747), (814, 51648), (815, 51645), (820, 51630), (847, 51552), (851, 51540), (858, 51519), (861, 51510), (875, 51480), (886, 51456), (901, 51423), (905, 51390), (910, 51372), (912, 51366), (926, 51327), (931, 51309), (933, 51297), (940, 51273), (956, 51231), (963, 51225), (972, 51201),

Gene: Lambert1\_44 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for Lambert1\_44:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: Lamina13\_45 Start: 34387, Stop: 32561, Start Num: 246

Candidate Starts for Lamina13\_45:

(Start: 246 @34387 has 877 MA's), (368, 34174), (374, 34159), (416, 34081), (422, 34060), (425, 34054), (429, 34045), (470, 33928), (479, 33901), (539, 33808), (544, 33793), (578, 33709), (580, 33706), (612, 33640), (627, 33610), (639, 33580), (662, 33535), (683, 33496), (743, 33316), (753, 33268), (767, 33229), (783, 33163), (793, 33124), (810, 33103), (814, 33082), (820, 33064), (843, 32998), (902, 32848), (903, 32845), (909, 32809), (917, 32785), (921, 32776), (925, 32764), (946, 32689), (955, 32668),

Gene: Landor\_44 Start: 32538, Stop: 30748, Start Num: 246

Candidate Starts for Landor\_44:

(Start: 246 @32538 has 877 MA's), (364, 32334), (368, 32325), (402, 32256), (416, 32229), (425, 32202), (479, 32049), (539, 31956), (556, 31908), (560, 31899), (568, 31884), (598, 31818), (613, 31785), (652, 31701), (697, 31620), (715, 31590), (743, 31464), (752, 31434), (755, 31413), (776, 31341), (783, 31311), (793, 31272), (810, 31251), (814, 31230), (880, 31050), (886, 31038), (902, 30996), (905, 30972), (924, 30915), (930, 30894), (946, 30837), (950, 30825), (955, 30816),

Gene: LappelDuVide\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for LappelDuVide\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: Larenn\_44 Start: 31600, Stop: 29807, Start Num: 246

Candidate Starts for Larenn\_44:

(Start: 246 @31600 has 877 MA's), (364, 31396), (366, 31393), (368, 31387), (383, 31357), (400, 31324), (402, 31321), (416, 31294), (425, 31267), (444, 31216), (479, 31114), (539, 31021), (556, 30973), (560, 30964), (568, 30949), (598, 30883), (635, 30802), (659, 30754), (662, 30748), (726, 30610), (743, 30529), (755, 30472), (766, 30439), (776, 30400), (783, 30370), (793, 30331), (810, 30310), (814, 30289), (886, 30097), (888, 30091), (902, 30055), (905, 30031), (924, 29974), (930, 29953), (946, 29896), (950, 29884), (955, 29875),

Gene: LarryKay\_48 Start: 31886, Stop: 30072, Start Num: 246

Candidate Starts for LarryKay\_48:

(Start: 246 @31886 has 877 MA's), (275, 31847), (280, 31835), (364, 31682), (371, 31667), (400, 31610), (425, 31553), (429, 31544), (444, 31502), (461, 31451), (479, 31400), (521, 31346), (539, 31307), (556, 31259), (568, 31235), (585, 31196), (598, 31169), (612, 31139), (654, 31046), (662, 31034), (686, 30986), (697, 30971), (743, 30815), (755, 30764), (766, 30731), (767, 30728), (783, 30662), (793, 30623), (815, 30551), (827, 30512), (834, 30488), (843, 30470), (853, 30437), (888, 30356), (905, 30296), (932, 30209), (946, 30161), (950, 30149), (955, 30140), (957, 30137),

Gene: Lars\_57 Start: 52585, Stop: 50756, Start Num: 205

Candidate Starts for Lars\_57:



(Start: 205 @52585 has 304 MA's), (Start: 250 @52558 has 2 MA's), (269, 52528), (Start: 274 @52516 has 6 MA's), (286, 52489), (287, 52486), (293, 52477), (318, 52459), (366, 52363), (391, 52312), (400, 52288), (411, 52264), (463, 52126), (472, 52102), (476, 52090), (519, 52033), (538, 51997), (542, 51985), (551, 51961), (586, 51883), (588, 51877), (592, 51868), (602, 51847), (603, 51844), (615, 51814), (680, 51670), (707, 51604), (724, 51553), (727, 51532), (732, 51514), (744, 51457), (771, 51373), (777, 51343), (780, 51334), (795, 51268), (812, 51241), (814, 51232), (820, 51214), (827, 51190), (847, 51136), (851, 51124), (858, 51103), (888, 51034), (905, 50974), (910, 50956), (922, 50923), (926, 50911), (930, 50896), (931, 50893), (933, 50881), (940, 50857), (941, 50854), (963, 50806), (965, 50803), (972, 50782), (979, 50761),

Gene: LasagnaCat\_62 Start: 54420, Stop: 52561, Start Num: 205

Candidate Starts for LasagnaCat\_62:

(Start: 188 @54444 has 1 MA's), (Start: 205 @54420 has 304 MA's), (Start: 235 @54396 has 6 MA's), (Start: 250 @54390 has 2 MA's), (Start: 274 @54348 has 6 MA's), (283, 54327), (337, 54213), (342, 54207), (360, 54177), (391, 54117), (399, 54096), (421, 54042), (428, 54030), (434, 54012), (436, 54000), (476, 53895), (519, 53838), (538, 53802), (542, 53790), (552, 53763), (564, 53736), (570, 53718), (580, 53700), (598, 53661), (602, 53652), (603, 53649), (604, 53646), (738, 53289), (744, 53256), (750, 53235), (777, 53142), (780, 53133), (795, 53070), (814, 53034), (815, 53031), (820, 53016), (847, 52938), (851, 52926), (858, 52905), (875, 52866), (905, 52776), (910, 52758), (912, 52752), (917, 52737), (926, 52713), (930, 52698), (931, 52695), (933, 52683), (940, 52659), (963, 52611), (972, 52587),

Gene: Lasso\_61 Start: 54283, Stop: 52424, Start Num: 205

Candidate Starts for Lasso\_61:

(Start: 188 @54307 has 1 MA's), (Start: 205 @54283 has 304 MA's), (Start: 235 @54259 has 6 MA's), (Start: 250 @54253 has 2 MA's), (Start: 274 @54211 has 6 MA's), (283, 54190), (337, 54076), (342, 54070), (360, 54040), (391, 53980), (399, 53959), (421, 53905), (428, 53893), (434, 53875), (436, 53863), (476, 53758), (519, 53701), (538, 53665), (542, 53653), (552, 53626), (570, 53581), (598, 53524), (602, 53515), (603, 53512), (738, 53152), (744, 53119), (750, 53098), (777, 53005), (780, 52996), (795, 52933), (814, 52897), (815, 52894), (820, 52879), (847, 52801), (851, 52789), (858, 52768), (875, 52729), (905, 52639), (910, 52621), (912, 52615), (917, 52600), (926, 52576), (930, 52561), (931, 52558), (933, 52546), (940, 52522), (963, 52474), (972, 52450),

Gene: LastResort\_46 Start: 29743, Stop: 27953, Start Num: 246

Candidate Starts for LastResort\_46:

(Start: 246 @29743 has 877 MA's), (347, 29569), (400, 29464), (402, 29461), (416, 29434), (425, 29407), (444, 29356), (479, 29254), (539, 29161), (554, 29116), (556, 29113), (560, 29104), (635, 28942), (646, 28915), (659, 28894), (662, 28888), (717, 28789), (726, 28750), (738, 28699), (743, 28669), (755, 28618), (766, 28585), (774, 28552), (776, 28546), (783, 28516), (810, 28456), (814, 28435), (827, 28393), (835, 28366), (843, 28351), (876, 28264), (902, 28201), (903, 28198), (946, 28042), (950, 28030), (957, 28018),

Gene: Lauer\_41 Start: 35269, Stop: 32888, Start Num: 46

Candidate Starts for Lauer\_41:

(Start: 46 @35269 has 13 MA's), (63, 35209), (80, 35167), (93, 35128), (123, 35038), (138, 35008), (145, 34987), (179, 34963), (Start: 232 @34885 has 3 MA's), (Start: 238 @34879 has 3 MA's), (Start: 241 @34876 has 13 MA's), (267, 34846), (287, 34798), (305, 34771), (Start: 308 @34768 has 5 MA's), (329, 34711), (343, 34687), (354, 34672), (367, 34651), (389, 34609), (398, 34585), (402, 34576), (403, 34570), (406, 34564), (420, 34531), (430, 34510), (435, 34489), (499, 34306), (526, 34231), (539, 34189), (605, 34102), (657, 34024), (660, 34018), (682, 33973), (683, 33970), (690, 33955), (702, 33934), (736, 33808), (747, 33760), (749, 33751), (755, 33721), (760, 33709), (783, 33616), (792, 33580), (794, 33574), (796, 33568), (797, 33562), (815, 33505), (822, 33481), (856, 33376), (858, 33373), (889, 33280), (893, 33262), (903, 33223), (911, 33181), (920, 33157), (929, 33127),

(940, 33079), (943, 33070), (947, 33055), (968, 33010), (993, 32944), (1004, 32923), (1006, 32917), (1009, 32911),

Gene: Laurie\_57 Start: 52312, Stop: 50483, Start Num: 205

Candidate Starts for Laurie\_57:

(Start: 205 @52312 has 304 MA's), (Start: 250 @52285 has 2 MA's), (269, 52255), (Start: 274 @52243 has 6 MA's), (286, 52216), (287, 52213), (293, 52204), (318, 52186), (366, 52090), (391, 52039), (400, 52015), (463, 51853), (469, 51838), (472, 51829), (476, 51817), (519, 51760), (538, 51724), (542, 51712), (551, 51688), (586, 51610), (588, 51604), (592, 51595), (602, 51574), (603, 51571), (615, 51541), (680, 51397), (707, 51331), (724, 51280), (727, 51259), (732, 51241), (744, 51184), (763, 51127), (771, 51100), (777, 51070), (780, 51061), (795, 50995), (812, 50968), (814, 50959), (820, 50941), (827, 50917), (847, 50863), (851, 50851), (858, 50830), (888, 50761), (905, 50701), (910, 50683), (922, 50650), (926, 50638), (930, 50623), (931, 50620), (933, 50608), (940, 50584), (941, 50581), (963, 50533), (965, 50530), (972, 50509), (979, 50488),

Gene: Leaf\_95 Start: 58518, Stop: 60557, Start Num: 216

Candidate Starts for Leaf\_95:

(Start: 216 @58518 has 4 MA's), (287, 58629), (289, 58632), (Start: 308 @58659 has 5 MA's), (325, 58716), (343, 58752), (361, 58791), (391, 58845), (396, 58857), (398, 58866), (412, 58902), (433, 58962), (436, 58977), (441, 58989), (457, 59034), (467, 59064), (504, 59178), (539, 59271), (540, 59274), (543, 59283), (549, 59301), (619, 59409), (641, 59463), (646, 59475), (672, 59541), (701, 59610), (752, 59763), (776, 59847), (783, 59877), (821, 60009), (822, 60012), (833, 60048), (845, 60081), (858, 60120), (903, 60270), (906, 60294), (908, 60300), (912, 60315), (921, 60345), (941, 60423), (947, 60444), (960, 60474), (976, 60516), (990, 60552),

Gene: Leafus\_38 Start: 29199, Stop: 27334, Start Num: 301

Candidate Starts for Leafus\_38:

(Start: 301 @29199 has 110 MA's), (Start: 308 @29190 has 5 MA's), (432, 28926), (435, 28911), (438, 28905), (484, 28773), (501, 28719), (531, 28632), (537, 28623), (539, 28611), (548, 28584), (549, 28581), (554, 28566), (556, 28560), (605, 28479), (676, 28332), (718, 28230), (776, 28017), (779, 28008), (780, 28005), (783, 27987), (794, 27945), (807, 27915), (822, 27858), (878, 27699), (885, 27669), (903, 27600), (906, 27576), (919, 27537), (932, 27492),

Gene: LeeLot\_61 Start: 54638, Stop: 52779, Start Num: 205

Candidate Starts for LeeLot\_61:

(Start: 188 @54662 has 1 MA's), (Start: 205 @54638 has 304 MA's), (Start: 235 @54614 has 6 MA's), (Start: 250 @54608 has 2 MA's), (Start: 274 @54566 has 6 MA's), (283, 54545), (337, 54431), (342, 54425), (360, 54395), (391, 54335), (399, 54314), (421, 54260), (428, 54248), (434, 54230), (436, 54218), (476, 54113), (519, 54056), (538, 54020), (542, 54008), (552, 53981), (570, 53936), (598, 53879), (602, 53870), (603, 53867), (738, 53507), (744, 53474), (750, 53453), (777, 53360), (780, 53351), (795, 53288), (814, 53252), (815, 53249), (820, 53234), (847, 53156), (851, 53144), (858, 53123), (875, 53084), (905, 52994), (910, 52976), (912, 52970), (917, 52955), (926, 52931), (930, 52916), (931, 52913), (933, 52901), (940, 52877), (963, 52829), (972, 52805),

Gene: Lego\_41 Start: 29589, Stop: 31454, Start Num: 245

Candidate Starts for Lego\_41:

(Start: 245 @29589 has 74 MA's), (279, 29637), (416, 29886), (448, 29976), (541, 30183), (544, 30192), (580, 30282), (585, 30291), (591, 30306), (613, 30351), (635, 30396), (659, 30444), (687, 30501), (717, 30582), (737, 30669), (743, 30702), (752, 30732), (767, 30789), (783, 30855), (813, 30948), (834, 31020), (878, 31128), (902, 31191), (905, 31215), (939, 31326), (946, 31350), (949, 31359),

Gene: Lego3393\_59 Start: 54589, Stop: 52730, Start Num: 205

Candidate Starts for Lego3393\_59:

(Start: 188 @54613 has 1 MA's), (Start: 205 @54589 has 304 MA's), (Start: 235 @54565 has 6 MA's), (Start: 250 @54559 has 2 MA's), (Start: 274 @54517 has 6 MA's), (283, 54496), (337, 54382), (342, 54376), (360, 54346), (391, 54286), (399, 54265), (421, 54211), (428, 54199), (434, 54181), (436, 54169), (476, 54064), (519, 54007), (538, 53971), (542, 53959), (552, 53932), (564, 53905), (570, 53887), (580, 53869), (598, 53830), (602, 53821), (603, 53818), (738, 53458), (744, 53425), (750, 53404), (777, 53311), (780, 53302), (795, 53239), (814, 53203), (815, 53200), (820, 53185), (847, 53107), (851, 53095), (858, 53074), (875, 53035), (905, 52945), (910, 52927), (912, 52921), (917, 52906), (926, 52882), (930, 52867), (931, 52864), (933, 52852), (940, 52828), (963, 52780), (972, 52756),

Gene: Legolas\_62 Start: 54377, Stop: 52518, Start Num: 205

Candidate Starts for Legolas\_62:

(Start: 188 @54401 has 1 MA's), (Start: 205 @54377 has 304 MA's), (Start: 235 @54353 has 6 MA's), (Start: 250 @54347 has 2 MA's), (Start: 274 @54305 has 6 MA's), (283, 54284), (337, 54170), (342, 54164), (360, 54134), (391, 54074), (399, 54053), (421, 53999), (428, 53987), (434, 53969), (436, 53957), (476, 53852), (519, 53795), (538, 53759), (542, 53747), (552, 53720), (570, 53675), (598, 53618), (602, 53609), (603, 53606), (738, 53246), (744, 53213), (750, 53192), (777, 53099), (780, 53090), (795, 53027), (814, 52991), (815, 52988), (820, 52973), (847, 52895), (851, 52883), (858, 52862), (875, 52823), (905, 52733), (910, 52715), (912, 52709), (917, 52694), (926, 52670), (930, 52655), (931, 52652), (933, 52640), (940, 52616), (963, 52568), (972, 52544),

Gene: LeiMonet\_63 Start: 54494, Stop: 52635, Start Num: 205

Candidate Starts for LeiMonet\_63:

(Start: 188 @54518 has 1 MA's), (Start: 205 @54494 has 304 MA's), (Start: 235 @54470 has 6 MA's), (Start: 250 @54464 has 2 MA's), (Start: 274 @54422 has 6 MA's), (283, 54401), (337, 54287), (342, 54281), (360, 54251), (391, 54191), (399, 54170), (421, 54116), (428, 54104), (434, 54086), (436, 54074), (476, 53969), (519, 53912), (538, 53876), (542, 53864), (551, 53840), (556, 53828), (564, 53810), (570, 53792), (580, 53774), (598, 53735), (602, 53726), (603, 53723), (604, 53720), (738, 53363), (744, 53330), (750, 53309), (777, 53216), (780, 53207), (795, 53144), (814, 53108), (815, 53105), (820, 53090), (847, 53012), (851, 53000), (858, 52979), (875, 52940), (905, 52850), (910, 52832), (912, 52826), (917, 52811), (926, 52787), (930, 52772), (931, 52769), (933, 52757), (940, 52733), (963, 52685), (972, 52661),

Gene: LemonSlice\_61 Start: 53968, Stop: 52109, Start Num: 205

Candidate Starts for LemonSlice\_61:

(Start: 188 @53992 has 1 MA's), (Start: 205 @53968 has 304 MA's), (Start: 235 @53944 has 6 MA's), (Start: 250 @53938 has 2 MA's), (Start: 274 @53896 has 6 MA's), (283, 53875), (337, 53761), (342, 53755), (360, 53725), (391, 53665), (399, 53644), (421, 53590), (428, 53578), (434, 53560), (436, 53548), (476, 53443), (519, 53386), (538, 53350), (542, 53338), (552, 53311), (564, 53284), (570, 53266), (580, 53248), (598, 53209), (602, 53200), (603, 53197), (712, 52939), (738, 52837), (744, 52804), (750, 52783), (777, 52690), (780, 52681), (795, 52618), (814, 52582), (815, 52579), (820, 52564), (847, 52486), (851, 52474), (858, 52453), (875, 52414), (905, 52324), (910, 52306), (912, 52300), (917, 52285), (926, 52261), (930, 52246), (931, 52243), (933, 52231), (940, 52207), (963, 52159), (972, 52135),

Gene: Lemur\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Lemur\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: LeoAvram\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for LeoAvram\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: LeoJr\_98 Start: 78660, Stop: 80378, Start Num: 301

Candidate Starts for LeoJr\_98:

(Start: 262 @78585 has 4 MA's), (287, 78639), (292, 78648), (Start: 301 @78660 has 110 MA's), (418, 78879), (428, 78897), (435, 78924), (438, 78930), (482, 79035), (571, 79182), (585, 79209), (591, 79224), (617, 79278), (716, 79479), (723, 79506), (730, 79539), (740, 79578), (743, 79599), (746, 79605), (774, 79722), (792, 79806), (793, 79809), (813, 79872), (816, 79884), (827, 79920), (840, 79953), (858, 80007), (865, 80025), (902, 80130), (906, 80157), (910, 80172), (922, 80205), (924, 80211), (929, 80229), (932, 80241), (934, 80253), (935, 80256), (946, 80289), (974, 80340),

Gene: Leogania\_44 Start: 32411, Stop: 30624, Start Num: 246

Candidate Starts for Leogania\_44:

(Start: 246 @32411 has 877 MA's), (366, 32204), (368, 32198), (375, 32183), (383, 32168), (416, 32105), (425, 32078), (433, 32057), (479, 31925), (539, 31832), (560, 31775), (568, 31760), (598, 31694), (635, 31613), (659, 31565), (662, 31559), (726, 31421), (743, 31340), (755, 31289), (766, 31256), (767, 31253), (771, 31244), (776, 31217), (783, 31187), (793, 31148), (810, 31127), (814, 31106), (888, 30908), (902, 30872), (905, 30848), (924, 30791), (930, 30770), (946, 30713), (950, 30701), (955, 30692),

Gene: Lephleur\_57 Start: 52497, Stop: 50668, Start Num: 205

Candidate Starts for Lephleur\_57:

(Start: 205 @52497 has 304 MA's), (Start: 250 @52470 has 2 MA's), (269, 52440), (Start: 274 @52428 has 6 MA's), (286, 52401), (287, 52398), (293, 52389), (318, 52371), (366, 52275), (391, 52224), (400, 52200), (411, 52176), (463, 52038), (472, 52014), (476, 52002), (519, 51945), (538, 51909), (542, 51897), (551, 51873), (588, 51789), (602, 51759), (603, 51756), (615, 51726), (680, 51582), (707, 51516), (721, 51477), (724, 51465), (727, 51444), (732, 51426), (744, 51369), (771, 51285), (777, 51255), (780, 51246), (795, 51180), (812, 51153), (814, 51144), (820, 51126), (827, 51102), (847, 51048), (851, 51036), (858, 51015), (888, 50946), (905, 50886), (910, 50868), (922, 50835), (926, 50823), (930, 50808), (931, 50805), (933, 50793), (940, 50769), (941, 50766), (963, 50718), (965, 50715), (972, 50694), (979, 50673),

Gene: Lesedi\_42 Start: 33941, Stop: 32115, Start Num: 246

Candidate Starts for Lesedi\_42:

(Start: 246 @33941 has 877 MA's), (368, 33728), (400, 33665), (416, 33635), (422, 33614), (425, 33608), (429, 33599), (470, 33482), (479, 33455), (539, 33362), (544, 33347), (556, 33314), (578, 33263), (580, 33260), (612, 33194), (627, 33164), (639, 33134), (662, 33089), (683, 33050), (743, 32870), (753, 32822), (767, 32783), (783, 32717), (793, 32678), (810, 32657), (814, 32636), (820, 32618), (843, 32552), (902, 32402), (903, 32399), (909, 32363), (917, 32339), (921, 32330), (925, 32318), (946, 32243), (955, 32222),

Gene: LestyG\_57 Start: 53332, Stop: 51515, Start Num: 247

Candidate Starts for LestyG\_57:

(60, 53716), (130, 53515), (Start: 247 @53332 has 43 MA's), (267, 53302), (368, 53122), (433, 52969), (435, 52957), (448, 52927), (454, 52921), (476, 52858), (478, 52852), (519, 52801), (538, 52765), (556, 52717), (603, 52612), (645, 52516), (674, 52465), (724, 52321), (732, 52282), (739, 52252),

(744, 52225), (748, 52213), (775, 52117), (777, 52111), (780, 52102), (782, 52090), (807, 52018), (814, 51988), (820, 51970), (822, 51961), (847, 51892), (851, 51880), (858, 51859), (888, 51790), (898, 51775), (903, 51751), (905, 51730), (912, 51706), (926, 51667), (931, 51649), (933, 51637), (936, 51625), (940, 51613), (956, 51571), (972, 51541),

Gene: Lev2\_38 Start: 30259, Stop: 28415, Start Num: 246

Candidate Starts for Lev2\_38:

(Start: 246 @30259 has 877 MA's), (280, 30208), (318, 30148), (347, 30085), (364, 30055), (366, 30052), (395, 29995), (400, 29983), (416, 29953), (425, 29926), (461, 29824), (467, 29809), (479, 29773), (523, 29713), (539, 29677), (556, 29629), (594, 29545), (598, 29539), (633, 29467), (646, 29434), (654, 29419), (662, 29407), (712, 29308), (743, 29173), (752, 29143), (753, 29125), (755, 29122), (767, 29086), (771, 29077), (774, 29056), (777, 29047), (783, 29020), (784, 29017), (810, 28960), (814, 28939), (853, 28822), (876, 28768), (880, 28759), (888, 28741), (910, 28663), (929, 28606), (939, 28570), (946, 28546), (950, 28534),

Gene: Levia\_41 Start: 34436, Stop: 32610, Start Num: 246

Candidate Starts for Levia\_41:

(Start: 246 @34436 has 877 MA's), (368, 34223), (374, 34208), (400, 34160), (416, 34130), (422, 34109), (425, 34103), (429, 34094), (470, 33977), (479, 33950), (539, 33857), (544, 33842), (551, 33821), (578, 33758), (580, 33755), (612, 33689), (627, 33659), (639, 33629), (662, 33584), (683, 33545), (743, 33365), (752, 33335), (753, 33317), (767, 33278), (783, 33212), (814, 33131), (815, 33128), (843, 33047), (902, 32897), (903, 32894), (909, 32858), (917, 32834), (921, 32825), (925, 32813), (946, 32738), (955, 32717),

Gene: Leviathan\_46 Start: 31790, Stop: 30003, Start Num: 246

Candidate Starts for Leviathan\_46:

(166, 31877), (Start: 246 @31790 has 877 MA's), (366, 31583), (368, 31577), (375, 31562), (383, 31547), (402, 31511), (416, 31484), (425, 31457), (433, 31436), (479, 31304), (539, 31211), (556, 31163), (560, 31154), (568, 31139), (598, 31073), (635, 30992), (659, 30944), (662, 30938), (743, 30719), (755, 30668), (766, 30635), (767, 30632), (783, 30566), (793, 30527), (810, 30506), (831, 30431), (834, 30419), (853, 30368), (880, 30305), (888, 30287), (902, 30251), (905, 30227), (930, 30149), (946, 30092), (950, 30080), (955, 30071),

Gene: Librie\_37 Start: 26990, Stop: 25125, Start Num: 299

Candidate Starts for Librie\_37:

(Start: 299 @26990 has 38 MA's), (305, 26984), (348, 26885), (354, 26876), (368, 26852), (375, 26837), (379, 26831), (403, 26780), (406, 26777), (438, 26696), (489, 26546), (493, 26543), (526, 26444), (536, 26417), (537, 26414), (539, 26402), (549, 26372), (556, 26351), (585, 26315), (658, 26168), (703, 26066), (726, 25988), (776, 25808), (783, 25778), (797, 25724), (805, 25706), (822, 25649), (831, 25622), (845, 25580), (858, 25541), (885, 25460), (888, 25451), (903, 25391), (906, 25367), (909, 25355), (912, 25346), (919, 25328), (929, 25295), (947, 25223),

Gene: Licorice\_48 Start: 36210, Stop: 34423, Start Num: 246

Candidate Starts for Licorice\_48:

(Start: 246 @36210 has 877 MA's), (368, 35997), (374, 35982), (416, 35904), (422, 35883), (425, 35877), (429, 35868), (470, 35751), (479, 35724), (539, 35631), (544, 35616), (556, 35583), (578, 35532), (580, 35529), (607, 35475), (612, 35463), (627, 35433), (639, 35403), (662, 35358), (683, 35319), (743, 35139), (753, 35091), (767, 35052), (783, 34986), (812, 34914), (814, 34905), (843, 34821), (876, 34734), (917, 34608), (922, 34596), (946, 34512), (948, 34506),

Gene: Liebe\_42 Start: 31253, Stop: 33223, Start Num: 148

Candidate Starts for Liebe\_42:

(Start: 148 @31253 has 1 MA's), (149, 31256), (Start: 245 @31379 has 74 MA's), (416, 31676), (541, 31952), (582, 32054), (591, 32075), (659, 32213), (692, 32276), (743, 32471), (746, 32477), (752, 32501), (767, 32558), (781, 32615), (783, 32624), (820, 32741), (834, 32789), (900, 32948), (902, 32960), (924, 33041), (946, 33119), (968, 33164),

Gene: Ligma\_51 Start: 45981, Stop: 44164, Start Num: 241

Candidate Starts for Ligma\_51:

(72, 46302), (82, 46278), (Start: 241 @45981 has 13 MA's), (267, 45945), (Start: 274 @45930 has 6 MA's), (287, 45900), (356, 45774), (417, 45651), (421, 45636), (436, 45594), (476, 45498), (538, 45405), (592, 45276), (603, 45252), (727, 44940), (732, 44922), (744, 44865), (777, 44751), (780, 44742), (795, 44679), (815, 44640), (820, 44625), (847, 44547), (851, 44535), (858, 44514), (861, 44505), (901, 44418), (906, 44382), (909, 44370), (923, 44331), (926, 44322), (930, 44307), (940, 44262), (972, 44190),

Gene: LilBib\_45 Start: 35268, Stop: 33442, Start Num: 246

Candidate Starts for LilBib\_45:

(Start: 246 @35268 has 877 MA's), (368, 35055), (374, 35040), (400, 34992), (416, 34962), (422, 34941), (425, 34935), (429, 34926), (470, 34809), (479, 34782), (539, 34689), (544, 34674), (556, 34641), (578, 34590), (580, 34587), (612, 34521), (627, 34491), (639, 34461), (662, 34416), (683, 34377), (743, 34197), (753, 34149), (771, 34101), (780, 34062), (783, 34044), (793, 34005), (810, 33984), (814, 33963), (819, 33948), (861, 33825), (909, 33690), (917, 33666), (921, 33657), (925, 33645), (946, 33570), (955, 33549),

Gene: LilMcDreamy\_55 Start: 53828, Stop: 51987, Start Num: 197

Candidate Starts for LilMcDreamy\_55:

(Start: 197 @53828 has 27 MA's), (Start: 250 @53786 has 2 MA's), (267, 53759), (366, 53591), (399, 53519), (411, 53492), (433, 53441), (453, 53396), (454, 53393), (466, 53360), (469, 53351), (476, 53330), (538, 53237), (542, 53225), (556, 53189), (580, 53135), (588, 53117), (598, 53096), (602, 53087), (603, 53084), (646, 52985), (674, 52937), (724, 52793), (732, 52754), (744, 52697), (750, 52676), (759, 52646), (777, 52583), (780, 52574), (784, 52553), (807, 52490), (814, 52460), (820, 52442), (847, 52364), (851, 52352), (858, 52331), (861, 52322), (905, 52202), (926, 52139), (929, 52127), (936, 52097), (940, 52085), (956, 52043), (972, 52013),

Gene: LilSmirk\_57 Start: 52488, Stop: 50659, Start Num: 205

Candidate Starts for LilSmirk\_57:

(Start: 205 @52488 has 304 MA's), (Start: 250 @52461 has 2 MA's), (269, 52431), (Start: 274 @52419 has 6 MA's), (286, 52392), (287, 52389), (293, 52380), (318, 52362), (366, 52266), (391, 52215), (400, 52191), (463, 52029), (472, 52005), (476, 51993), (519, 51936), (538, 51900), (542, 51888), (551, 51864), (588, 51780), (602, 51750), (603, 51747), (615, 51717), (680, 51573), (707, 51507), (724, 51456), (727, 51435), (732, 51417), (744, 51360), (763, 51303), (771, 51276), (777, 51246), (780, 51237), (795, 51171), (812, 51144), (814, 51135), (820, 51117), (827, 51093), (847, 51039), (851, 51027), (858, 51006), (888, 50937), (905, 50877), (910, 50859), (922, 50826), (926, 50814), (930, 50799), (931, 50796), (933, 50784), (940, 50760), (941, 50757), (963, 50709), (965, 50706), (972, 50685), (979, 50664),

Gene: LilTerminator\_38 Start: 27012, Stop: 25147, Start Num: 299

Candidate Starts for LilTerminator\_38:

(Start: 299 @27012 has 38 MA's), (305, 27006), (348, 26907), (354, 26898), (368, 26874), (375, 26859), (379, 26853), (403, 26802), (406, 26799), (438, 26718), (489, 26568), (493, 26565), (526, 26466), (536, 26439), (537, 26436), (539, 26424), (549, 26394), (556, 26373), (585, 26337), (658, 26190), (685, 26121), (724, 26022), (726, 26010), (776, 25830), (783, 25800), (797, 25746), (805, 25728), (822, 25671), (831, 25644), (845, 25602), (885, 25482), (888, 25473), (903, 25413), (906, 25389), (909, 25377), (912, 25368), (919, 25350), (929, 25317), (947, 25245),

Gene: LilTurb\_45 Start: 31623, Stop: 29836, Start Num: 246

Candidate Starts for LilTurb\_45:

(Start: 246 @31623 has 877 MA's), (366, 31416), (368, 31410), (375, 31395), (383, 31380), (402, 31344), (416, 31317), (425, 31290), (433, 31269), (479, 31137), (539, 31044), (556, 30996), (560, 30987), (568, 30972), (598, 30906), (635, 30825), (659, 30777), (662, 30771), (697, 30708), (743, 30552), (755, 30501), (766, 30468), (767, 30465), (783, 30399), (793, 30360), (810, 30339), (831, 30264), (834, 30252), (853, 30201), (880, 30138), (888, 30120), (902, 30084), (905, 30060), (930, 29982), (946, 29925), (950, 29913), (955, 29904),

Gene: Lilbooboo\_34 Start: 26910, Stop: 28784, Start Num: 246

Candidate Starts for Lilbooboo\_34:

(Start: 246 @26910 has 877 MA's), (267, 26931), (273, 26943), (295, 26991), (364, 27111), (416, 27213), (417, 27216), (422, 27234), (429, 27249), (467, 27357), (481, 27399), (563, 27546), (567, 27558), (578, 27588), (585, 27600), (592, 27618), (611, 27654), (646, 27732), (653, 27744), (659, 27753), (687, 27810), (690, 27813), (731, 27951), (738, 27981), (743, 28011), (753, 28062), (767, 28104), (774, 28134), (776, 28140), (777, 28143), (780, 28152), (781, 28161), (783, 28170), (792, 28236), (812, 28290), (850, 28404), (878, 28473), (898, 28515), (901, 28527), (909, 28575), (912, 28584), (922, 28611), (924, 28617), (930, 28638), (946, 28695), (948, 28701), (955, 28716),

Gene: Lilbunny\_44 Start: 29422, Stop: 27581, Start Num: 246

Candidate Starts for Lilbunny\_44:

(Start: 220 @29452 has 1 MA's), (Start: 246 @29422 has 877 MA's), (364, 29218), (400, 29143), (402, 29140), (416, 29113), (420, 29098), (425, 29086), (444, 29035), (475, 28945), (479, 28933), (539, 28840), (552, 28801), (560, 28783), (568, 28768), (598, 28702), (613, 28669), (614, 28666), (663, 28564), (697, 28504), (726, 28420), (743, 28339), (766, 28255), (767, 28252), (771, 28243), (776, 28216), (783, 28186), (810, 28126), (820, 28087), (902, 27871), (903, 27868), (905, 27847), (946, 27712), (950, 27700), (955, 27691), (957, 27688), (1000, 27595),

Gene: Lilit\_49 Start: 31846, Stop: 30032, Start Num: 246

Candidate Starts for Lilit\_49:

(Start: 246 @31846 has 877 MA's), (275, 31807), (280, 31795), (364, 31642), (371, 31627), (400, 31570), (425, 31513), (429, 31504), (444, 31462), (461, 31411), (479, 31360), (539, 31267), (556, 31219), (560, 31210), (568, 31195), (585, 31156), (598, 31129), (612, 31099), (654, 31006), (662, 30994), (686, 30946), (697, 30931), (743, 30775), (767, 30688), (783, 30622), (793, 30583), (815, 30511), (827, 30472), (834, 30448), (843, 30430), (853, 30397), (864, 30370), (888, 30316), (905, 30256), (930, 30178), (946, 30121), (950, 30109), (955, 30100),

Gene: Lilleskat\_43 Start: 31443, Stop: 29650, Start Num: 246

Candidate Starts for Lilleskat\_43:

(Start: 246 @31443 has 877 MA's), (261, 31434), (280, 31392), (346, 31272), (347, 31269), (372, 31221), (402, 31161), (417, 31131), (420, 31119), (425, 31107), (479, 30954), (539, 30861), (598, 30723), (612, 30693), (687, 30534), (697, 30522), (714, 30495), (740, 30387), (743, 30366), (780, 30231), (783, 30213), (814, 30132), (827, 30090), (853, 30015), (861, 29994), (886, 29940), (902, 29898), (930, 29796), (946, 29739), (950, 29727), (955, 29718),

Gene: Lillie\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for Lillie\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (663, 27261), (683, 27225), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930,

26475), (946, 26418), (950, 26406), (955, 26397), (969, 26367), (978, 26349),

Gene: LimaBean\_42 Start: 29163, Stop: 31037, Start Num: 246

Candidate Starts for LimaBean\_42:

(Start: 243 @29160 has 7 MA's), (Start: 246 @29163 has 877 MA's), (287, 29232), (Start: 301 @29253 has 110 MA's), (429, 29499), (444, 29541), (585, 29835), (696, 30069), (731, 30192), (743, 30252), (746, 30258), (755, 30303), (762, 30318), (764, 30333), (774, 30369), (783, 30405), (813, 30498), (844, 30591), (874, 30669), (902, 30741), (903, 30744), (909, 30780), (924, 30822), (929, 30840), (939, 30876), (946, 30900), (955, 30921),

Gene: LionsBait\_46 Start: 32821, Stop: 31028, Start Num: 246

Candidate Starts for LionsBait\_46:

(Start: 246 @32821 has 877 MA's), (366, 32614), (368, 32608), (375, 32593), (383, 32578), (402, 32542), (416, 32515), (425, 32488), (433, 32467), (479, 32335), (539, 32242), (556, 32194), (560, 32185), (568, 32170), (635, 32023), (659, 31975), (662, 31969), (683, 31930), (743, 31750), (752, 31720), (755, 31693), (766, 31660), (767, 31657), (783, 31591), (793, 31552), (810, 31531), (812, 31519), (814, 31510), (818, 31498), (853, 31393), (886, 31318), (888, 31312), (902, 31276), (905, 31252), (930, 31174), (946, 31117), (950, 31105), (955, 31096),

Gene: LittleB\_45 Start: 31571, Stop: 29745, Start Num: 246

Candidate Starts for LittleB\_45:

(Start: 246 @31571 has 877 MA's), (267, 31550), (280, 31520), (295, 31490), (383, 31328), (394, 31310), (425, 31238), (429, 31229), (471, 31109), (479, 31085), (539, 30992), (558, 30944), (568, 30923), (585, 30884), (646, 30752), (659, 30731), (683, 30686), (687, 30674), (740, 30521), (743, 30500), (776, 30377), (783, 30347), (793, 30308), (814, 30242), (815, 30239), (820, 30224), (827, 30200), (834, 30176), (905, 29969), (946, 29834), (950, 29822), (955, 29813),

Gene: LittleCherry\_39 Start: 30596, Stop: 28731, Start Num: 246

Candidate Starts for LittleCherry\_39:

(Start: 246 @30596 has 877 MA's), (280, 30545), (318, 30485), (347, 30422), (364, 30392), (366, 30389), (395, 30332), (400, 30320), (416, 30290), (425, 30263), (479, 30110), (539, 30014), (556, 29966), (594, 29882), (598, 29876), (633, 29804), (646, 29771), (654, 29756), (662, 29744), (712, 29645), (743, 29510), (752, 29480), (753, 29462), (762, 29444), (767, 29423), (771, 29414), (783, 29357), (793, 29318), (814, 29276), (820, 29258), (834, 29210), (853, 29159), (876, 29105), (880, 29096), (888, 29078), (905, 29018), (910, 29000), (939, 28907), (946, 28883), (950, 28871), (1000, 28766),

Gene: LittleGuy\_45 Start: 31466, Stop: 29640, Start Num: 246

Candidate Starts for LittleGuy\_45:

(Start: 246 @31466 has 877 MA's), (267, 31445), (280, 31415), (295, 31385), (383, 31223), (394, 31205), (425, 31133), (429, 31124), (471, 31004), (479, 30980), (539, 30887), (558, 30839), (568, 30818), (585, 30779), (646, 30647), (659, 30626), (683, 30581), (687, 30569), (740, 30416), (743, 30395), (776, 30272), (783, 30242), (793, 30203), (814, 30137), (815, 30134), (820, 30119), (827, 30095), (834, 30071), (905, 29864), (946, 29729), (950, 29717), (955, 29708),

Gene: LittleMunchkin\_52 Start: 48656, Stop: 46845, Start Num: 235

Candidate Starts for LittleMunchkin\_52:

(Start: 235 @48656 has 6 MA's), (273, 48608), (Start: 274 @48605 has 6 MA's), (283, 48584), (287, 48575), (360, 48446), (411, 48338), (417, 48326), (433, 48287), (436, 48272), (469, 48197), (476, 48176), (538, 48083), (589, 47960), (603, 47930), (724, 47639), (744, 47543), (775, 47438), (777, 47432), (780, 47423), (795, 47360), (812, 47333), (820, 47306), (824, 47291), (827, 47282), (847, 47228), (851, 47216), (858, 47195), (898, 47111), (901, 47099), (906, 47063), (926, 47003), (930, 46988), (940, 46943), (963, 46895), (972, 46871),



Gene: LizLemon\_57 Start: 52610, Stop: 50781, Start Num: 205

Candidate Starts for LizLemon\_57:

(Start: 205 @52610 has 304 MA's), (Start: 250 @52583 has 2 MA's), (269, 52553), (Start: 274 @52541 has 6 MA's), (286, 52514), (287, 52511), (293, 52502), (318, 52484), (366, 52388), (391, 52337), (400, 52313), (411, 52289), (463, 52151), (472, 52127), (476, 52115), (519, 52058), (538, 52022), (542, 52010), (551, 51986), (588, 51902), (602, 51872), (603, 51869), (615, 51839), (680, 51695), (707, 51629), (721, 51590), (724, 51578), (727, 51557), (732, 51539), (744, 51482), (771, 51398), (777, 51368), (780, 51359), (795, 51293), (812, 51266), (814, 51257), (820, 51239), (827, 51215), (847, 51161), (851, 51149), (858, 51128), (888, 51059), (905, 50999), (910, 50981), (922, 50948), (926, 50936), (930, 50921), (931, 50918), (933, 50906), (940, 50882), (941, 50879), (963, 50831), (965, 50828), (972, 50807), (979, 50786),

Gene: Lizalica\_39 Start: 28785, Stop: 30650, Start Num: 245

Candidate Starts for Lizalica\_39:

(Start: 245 @28785 has 74 MA's), (279, 28833), (416, 29082), (448, 29172), (541, 29379), (544, 29388), (580, 29478), (585, 29487), (591, 29502), (613, 29547), (635, 29592), (659, 29640), (687, 29697), (717, 29778), (737, 29865), (743, 29898), (752, 29928), (767, 29985), (781, 30042), (783, 30051), (878, 30324), (902, 30387), (946, 30546), (949, 30555), (988, 30633),

Gene: LochMonster\_46 Start: 31806, Stop: 29980, Start Num: 246

Candidate Starts for LochMonster\_46:

(Start: 246 @31806 has 877 MA's), (267, 31785), (280, 31755), (295, 31725), (383, 31563), (394, 31545), (425, 31473), (429, 31464), (471, 31344), (479, 31320), (539, 31227), (558, 31179), (568, 31158), (585, 31119), (607, 31074), (610, 31068), (646, 30987), (659, 30966), (683, 30921), (687, 30909), (740, 30756), (743, 30735), (776, 30612), (783, 30582), (793, 30543), (814, 30477), (815, 30474), (820, 30459), (827, 30435), (834, 30411), (905, 30204), (946, 30069), (950, 30057), (955, 30048),

Gene: Lockley\_44 Start: 34369, Stop: 32543, Start Num: 246

Candidate Starts for Lockley\_44:

(Start: 246 @34369 has 877 MA's), (368, 34156), (400, 34093), (416, 34063), (425, 34036), (429, 34027), (470, 33910), (479, 33883), (539, 33790), (544, 33775), (578, 33691), (580, 33688), (612, 33622), (627, 33592), (639, 33562), (662, 33517), (683, 33478), (743, 33298), (753, 33250), (767, 33211), (783, 33145), (793, 33106), (810, 33085), (814, 33064), (820, 33046), (843, 32980), (902, 32830), (903, 32827), (909, 32791), (921, 32758), (925, 32746), (946, 32671), (955, 32650),

Gene: Loka\_45 Start: 31915, Stop: 30128, Start Num: 246

Candidate Starts for Loka\_45:

(Start: 246 @31915 has 877 MA's), (366, 31708), (368, 31702), (383, 31672), (400, 31639), (402, 31636), (420, 31594), (425, 31582), (479, 31429), (539, 31336), (556, 31288), (560, 31279), (568, 31264), (598, 31198), (659, 31069), (721, 30949), (726, 30925), (743, 30844), (755, 30793), (766, 30760), (767, 30757), (783, 30691), (793, 30652), (810, 30631), (831, 30556), (834, 30544), (864, 30466), (880, 30430), (888, 30412), (902, 30376), (905, 30352), (930, 30274), (946, 30217), (950, 30205), (955, 30196),

Gene: Lolalove\_54 Start: 54016, Stop: 52190, Start Num: 197

Candidate Starts for Lolalove\_54:

(Start: 197 @54016 has 27 MA's), (Start: 250 @53989 has 2 MA's), (267, 53962), (Start: 274 @53947 has 6 MA's), (283, 53926), (329, 53839), (387, 53734), (399, 53707), (406, 53692), (434, 53626), (445, 53596), (448, 53587), (453, 53584), (454, 53581), (519, 53461), (531, 53443), (538, 53425), (542, 53413), (552, 53386), (580, 53323), (598, 53284), (602, 53275), (603, 53272), (615, 53242), (633, 53206), (724, 52981), (725, 52978), (732, 52942), (738, 52918), (744, 52885), (775, 52777), (777,

52771), (780, 52762), (814, 52663), (815, 52660), (820, 52645), (847, 52567), (851, 52555), (858, 52534), (861, 52525), (875, 52495), (888, 52465), (901, 52438), (905, 52405), (912, 52381), (926, 52342), (931, 52324), (933, 52312), (940, 52288), (956, 52246), (963, 52240), (972, 52216),

Gene: London\_39 Start: 30351, Stop: 32216, Start Num: 245

Candidate Starts for London\_39:

(Start: 245 @30351 has 74 MA's), (279, 30399), (382, 30582), (386, 30588), (416, 30648), (422, 30669), (448, 30738), (544, 30954), (580, 31044), (585, 31053), (591, 31068), (613, 31113), (659, 31206), (717, 31344), (743, 31464), (752, 31494), (767, 31551), (781, 31608), (783, 31617), (790, 31641), (813, 31710), (834, 31782), (840, 31791), (878, 31890), (902, 31953), (946, 32112), (949, 32121),

Gene: LoneWolf\_45 Start: 31301, Stop: 29508, Start Num: 246

Candidate Starts for LoneWolf\_45:

(Start: 246 @31301 has 877 MA's), (261, 31292), (364, 31097), (383, 31055), (402, 31019), (416, 30992), (425, 30965), (444, 30914), (471, 30836), (479, 30812), (539, 30719), (554, 30674), (612, 30551), (714, 30353), (716, 30347), (743, 30224), (771, 30128), (776, 30101), (783, 30071), (793, 30032), (812, 29999), (814, 29990), (853, 29873), (861, 29852), (905, 29732), (930, 29654), (946, 29597), (950, 29585), (955, 29576),

Gene: Longacauda\_61 Start: 54397, Stop: 52538, Start Num: 205

Candidate Starts for Longacauda\_61:

(Start: 188 @54421 has 1 MA's), (Start: 205 @54397 has 304 MA's), (Start: 235 @54373 has 6 MA's), (Start: 250 @54367 has 2 MA's), (Start: 274 @54325 has 6 MA's), (283, 54304), (337, 54190), (342, 54184), (360, 54154), (391, 54094), (399, 54073), (421, 54019), (428, 54007), (434, 53989), (436, 53977), (476, 53872), (519, 53815), (538, 53779), (542, 53767), (552, 53740), (570, 53695), (598, 53638), (602, 53629), (603, 53626), (712, 53368), (738, 53266), (744, 53233), (750, 53212), (777, 53119), (780, 53110), (795, 53047), (814, 53011), (815, 53008), (820, 52993), (847, 52915), (851, 52903), (858, 52882), (875, 52843), (905, 52753), (910, 52735), (912, 52729), (917, 52714), (926, 52690), (930, 52675), (931, 52672), (933, 52660), (940, 52636), (963, 52588), (972, 52564),

Gene: Looper\_47 Start: 29720, Stop: 27930, Start Num: 246

Candidate Starts for Looper\_47:

(Start: 246 @29720 has 877 MA's), (347, 29546), (400, 29441), (402, 29438), (416, 29411), (425, 29384), (444, 29333), (479, 29231), (539, 29138), (554, 29093), (556, 29090), (560, 29081), (635, 28919), (646, 28892), (659, 28871), (662, 28865), (717, 28766), (726, 28727), (738, 28676), (743, 28646), (755, 28595), (766, 28562), (774, 28529), (776, 28523), (783, 28493), (810, 28433), (814, 28412), (827, 28370), (835, 28343), (843, 28328), (876, 28241), (902, 28178), (903, 28175), (946, 28019), (950, 28007), (957, 27995),

Gene: Lopsy\_59 Start: 53696, Stop: 51837, Start Num: 205

Candidate Starts for Lopsy\_59:

(Start: 188 @53720 has 1 MA's), (Start: 205 @53696 has 304 MA's), (Start: 235 @53672 has 6 MA's), (Start: 250 @53666 has 2 MA's), (Start: 274 @53624 has 6 MA's), (283, 53603), (337, 53489), (342, 53483), (360, 53453), (391, 53393), (399, 53372), (421, 53318), (428, 53306), (434, 53288), (435, 53279), (436, 53276), (476, 53171), (519, 53114), (538, 53078), (542, 53066), (551, 53042), (556, 53030), (564, 53012), (570, 52994), (580, 52976), (598, 52937), (602, 52928), (603, 52925), (604, 52922), (738, 52565), (744, 52532), (750, 52511), (777, 52418), (780, 52409), (795, 52346), (814, 52310), (815, 52307), (820, 52292), (847, 52214), (851, 52202), (858, 52181), (875, 52142), (905, 52052), (912, 52028), (917, 52013), (926, 51989), (930, 51974), (931, 51971), (933, 51959), (940, 51935), (963, 51887), (972, 51863),

Gene: Lopton\_45 Start: 35870, Stop: 34044, Start Num: 246

Candidate Starts for Lopton\_45:

(Start: 246 @35870 has 877 MA's), (368, 35657), (400, 35594), (416, 35564), (422, 35543), (425, 35537), (429, 35528), (470, 35411), (479, 35384), (539, 35291), (544, 35276), (556, 35243), (578, 35192), (580, 35189), (612, 35123), (627, 35093), (639, 35063), (662, 35018), (683, 34979), (743, 34799), (753, 34751), (767, 34712), (783, 34646), (793, 34607), (810, 34586), (814, 34565), (820, 34547), (843, 34481), (902, 34331), (903, 34328), (909, 34292), (917, 34268), (925, 34247), (932, 34220), (946, 34172), (955, 34151),

Gene: Lorenzo\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Lorenzo\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Loser\_46 Start: 32256, Stop: 30469, Start Num: 246

Candidate Starts for Loser\_46:

(Start: 246 @32256 has 877 MA's), (364, 32052), (366, 32049), (375, 32028), (383, 32013), (400, 31980), (416, 31950), (425, 31923), (433, 31902), (444, 31872), (479, 31770), (539, 31677), (556, 31629), (560, 31620), (568, 31605), (598, 31539), (635, 31458), (659, 31410), (698, 31338), (726, 31266), (743, 31185), (755, 31134), (766, 31101), (767, 31098), (783, 31032), (793, 30993), (810, 30972), (825, 30915), (831, 30897), (864, 30807), (880, 30771), (888, 30753), (902, 30717), (905, 30693), (924, 30636), (930, 30615), (946, 30558), (950, 30546), (955, 30537),

Gene: LostAndPhound\_61 Start: 54582, Stop: 52723, Start Num: 205

Candidate Starts for LostAndPhound\_61:

(Start: 188 @54606 has 1 MA's), (Start: 205 @54582 has 304 MA's), (Start: 235 @54558 has 6 MA's), (Start: 250 @54552 has 2 MA's), (Start: 274 @54510 has 6 MA's), (283, 54489), (337, 54375), (342, 54369), (360, 54339), (391, 54279), (399, 54258), (421, 54204), (428, 54192), (434, 54174), (436, 54162), (476, 54057), (519, 54000), (538, 53964), (542, 53952), (552, 53925), (564, 53898), (570, 53880), (580, 53862), (598, 53823), (602, 53814), (603, 53811), (712, 53553), (738, 53451), (744, 53418), (750, 53397), (777, 53304), (780, 53295), (795, 53232), (814, 53196), (815, 53193), (820, 53178), (847, 53100), (851, 53088), (858, 53067), (875, 53028), (905, 52938), (910, 52920), (912, 52914), (917, 52899), (926, 52875), (930, 52860), (931, 52857), (933, 52845), (940, 52821), (963, 52773), (972, 52749),

Gene: Louie6\_47 Start: 31885, Stop: 30071, Start Num: 246

Candidate Starts for Louie6\_47:

(Start: 246 @31885 has 877 MA's), (275, 31846), (280, 31834), (364, 31681), (371, 31666), (400, 31609), (425, 31552), (429, 31543), (444, 31501), (461, 31450), (479, 31399), (521, 31345), (539, 31306), (556, 31258), (568, 31234), (585, 31195), (598, 31168), (612, 31138), (654, 31045), (662, 31033), (686, 30985), (697, 30970), (743, 30814), (755, 30763), (766, 30730), (767, 30727), (783, 30661), (793, 30622), (815, 30550), (827, 30511), (834, 30487), (843, 30469), (853, 30436), (888, 30355), (905, 30295), (932, 30208), (946, 30160), (950, 30148), (955, 30139), (957, 30136),

Gene: Lovelyunicorn\_39 Start: 28935, Stop: 27070, Start Num: 301

Candidate Starts for Lovelyunicorn\_39:

(Start: 238 @29022 has 3 MA's), (Start: 241 @29019 has 13 MA's), (288, 28950), (Start: 301 @28935 has 110 MA's), (Start: 308 @28926 has 5 MA's), (354, 28821), (358, 28812), (375, 28782), (378, 28779), (433, 28659), (435, 28647), (438, 28641), (475, 28536), (484, 28509), (531, 28368), (537, 28359), (539, 28347), (548, 28320), (549, 28317), (554, 28302), (556, 28296), (559, 28290), (586, 28257), (676, 28068), (776, 27753), (779, 27744), (780, 27741), (783, 27723), (794, 27681), (796,

27675), (805, 27651), (822, 27594), (878, 27435), (885, 27405), (888, 27396), (903, 27336), (906, 27312), (919, 27273), (929, 27240), (932, 27228), (947, 27168),

Gene: Lowa\_48 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for Lowa\_48:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: Luchador\_50 Start: 33745, Stop: 31952, Start Num: 246

Candidate Starts for Luchador\_50:

(Start: 246 @33745 has 877 MA's), (261, 33736), (277, 33703), (318, 33634), (364, 33541), (400, 33466), (402, 33463), (416, 33436), (425, 33409), (444, 33358), (471, 33280), (479, 33256), (539, 33163), (547, 33139), (554, 33118), (598, 33025), (612, 32995), (683, 32848), (714, 32797), (726, 32749), (743, 32668), (752, 32638), (762, 32602), (776, 32545), (783, 32515), (814, 32434), (843, 32350), (853, 32317), (864, 32290), (902, 32200), (924, 32119), (930, 32098), (932, 32089), (946, 32041), (950, 32029), (955, 32020), (957, 32017),

Gene: Lucivia\_45 Start: 30825, Stop: 29038, Start Num: 246

Candidate Starts for Lucivia\_45:

(Start: 246 @30825 has 877 MA's), (364, 30621), (400, 30549), (416, 30519), (425, 30492), (541, 30240), (560, 30189), (598, 30108), (619, 30063), (659, 29979), (687, 29922), (715, 29880), (726, 29835), (743, 29754), (755, 29703), (767, 29667), (783, 29601), (810, 29541), (812, 29529), (846, 29427), (853, 29403), (860, 29385), (888, 29322), (901, 29295), (902, 29286), (905, 29262), (946, 29127), (950, 29115), (955, 29106),

Gene: Lucky3\_37 Start: 28582, Stop: 26732, Start Num: 297

Candidate Starts for Lucky3\_37:

(202, 28723), (Start: 272 @28633 has 4 MA's), (Start: 297 @28582 has 18 MA's), (344, 28483), (358, 28459), (378, 28426), (430, 28315), (435, 28294), (438, 28288), (454, 28243), (456, 28237), (512, 28081), (537, 28018), (539, 28006), (549, 27976), (585, 27919), (718, 27625), (776, 27415), (779, 27406), (780, 27403), (783, 27385), (794, 27343), (822, 27256), (903, 26998), (906, 26974), (907, 26971), (917, 26941), (947, 26830),

Gene: LuckyMarjie\_58 Start: 53758, Stop: 51899, Start Num: 205

Candidate Starts for LuckyMarjie\_58:

(Start: 188 @53782 has 1 MA's), (Start: 205 @53758 has 304 MA's), (Start: 235 @53734 has 6 MA's), (Start: 250 @53728 has 2 MA's), (Start: 274 @53686 has 6 MA's), (283, 53665), (337, 53551), (342, 53545), (360, 53515), (391, 53455), (399, 53434), (421, 53380), (428, 53368), (434, 53350), (436, 53338), (476, 53233), (519, 53176), (538, 53140), (542, 53128), (551, 53104), (556, 53092), (564, 53074), (570, 53056), (580, 53038), (598, 52999), (602, 52990), (603, 52987), (604, 52984), (738, 52627), (744, 52594), (750, 52573), (777, 52480), (780, 52471), (795, 52408), (814, 52372), (815, 52369), (820, 52354), (847, 52276), (851, 52264), (858, 52243), (875, 52204), (905, 52114), (910, 52096), (912, 52090), (917, 52075), (926, 52051), (930, 52036), (931, 52033), (933, 52021), (940, 51997), (963, 51949), (972, 51925),

Gene: LuckySocke\_138 Start: 73912, Stop: 75948, Start Num: 272

Candidate Starts for LuckySocke\_138:

(Start: 272 @73912 has 4 MA's), (305, 73978), (317, 74002), (330, 74053), (331, 74056), (336, 74068), (351, 74101), (388, 74170), (439, 74305), (452, 74341), (511, 74461), (533, 74515), (535, 74518),

(550, 74569), (554, 74581), (585, 74650), (594, 74671), (616, 74719), (621, 74728), (745, 75106), (770, 75223), (773, 75241), (797, 75337), (811, 75373), (830, 75442), (832, 75451), (834, 75457), (884, 75595), (887, 75610), (892, 75625), (909, 75709), (910, 75712), (932, 75784), (952, 75856), (971, 75901), (973, 75910), (976, 75916),

Gene: Lucyedi\_45 Start: 30972, Stop: 29140, Start Num: 246

Candidate Starts for Lucyedi\_45:

(Start: 246 @30972 has 877 MA's), (364, 30768), (366, 30765), (400, 30696), (402, 30693), (416, 30666), (422, 30645), (425, 30639), (429, 30630), (444, 30588), (471, 30510), (479, 30486), (539, 30393), (612, 30225), (714, 30027), (743, 29898), (771, 29802), (780, 29763), (783, 29745), (812, 29673), (814, 29664), (861, 29526), (901, 29439), (902, 29430), (930, 29328), (946, 29271), (950, 29259), (1000, 29154),

Gene: Ludgate\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Ludgate\_39:

(Start: 238 @29017 has 3 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (652, 28123), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: LugYA\_51 Start: 31853, Stop: 30039, Start Num: 246

Candidate Starts for LugYA\_51:

(Start: 246 @31853 has 877 MA's), (275, 31814), (280, 31802), (364, 31649), (371, 31634), (400, 31577), (425, 31520), (429, 31511), (444, 31469), (461, 31418), (479, 31367), (539, 31274), (556, 31226), (560, 31217), (568, 31202), (585, 31163), (598, 31136), (612, 31106), (654, 31013), (686, 30953), (697, 30938), (743, 30782), (767, 30695), (783, 30629), (793, 30590), (815, 30518), (827, 30479), (834, 30455), (843, 30437), (853, 30404), (864, 30377), (888, 30323), (905, 30263), (930, 30185), (946, 30128), (950, 30116), (955, 30107),

Gene: Lulumae\_58 Start: 53743, Stop: 51884, Start Num: 205

Candidate Starts for Lulumae\_58:

(Start: 188 @53767 has 1 MA's), (Start: 205 @53743 has 304 MA's), (Start: 235 @53719 has 6 MA's), (Start: 250 @53713 has 2 MA's), (Start: 274 @53671 has 6 MA's), (283, 53650), (337, 53536), (342, 53530), (360, 53500), (391, 53440), (399, 53419), (421, 53365), (428, 53353), (434, 53335), (436, 53323), (476, 53218), (519, 53161), (538, 53125), (542, 53113), (552, 53086), (564, 53059), (570, 53041), (580, 53023), (598, 52984), (602, 52975), (603, 52972), (604, 52969), (738, 52612), (744, 52579), (750, 52558), (777, 52465), (780, 52456), (795, 52393), (814, 52357), (815, 52354), (820, 52339), (847, 52261), (851, 52249), (858, 52228), (875, 52189), (905, 52099), (910, 52081), (912, 52075), (917, 52060), (926, 52036), (930, 52021), (931, 52018), (933, 52006), (940, 51982), (963, 51934), (972, 51910),

Gene: Lulwa\_58 Start: 53340, Stop: 51481, Start Num: 205

Candidate Starts for Lulwa\_58:

(Start: 188 @53364 has 1 MA's), (Start: 205 @53340 has 304 MA's), (Start: 235 @53316 has 6 MA's), (Start: 250 @53310 has 2 MA's), (Start: 274 @53268 has 6 MA's), (283, 53247), (337, 53133), (342, 53127), (360, 53097), (391, 53037), (399, 53016), (421, 52962), (428, 52950), (434, 52932), (436, 52920), (476, 52815), (519, 52758), (538, 52722), (542, 52710), (552, 52683), (564, 52656), (570, 52638), (580, 52620), (598, 52581), (602, 52572), (603, 52569), (712, 52311), (738, 52209), (744, 52176), (750, 52155), (777, 52062), (780, 52053), (795, 51990), (814, 51954), (815, 51951), (820, 51936), (847, 51858), (851, 51846), (858, 51825), (875, 51786), (905, 51696), (910, 51678), (912,

51672), (917, 51657), (926, 51633), (930, 51618), (931, 51615), (933, 51603), (940, 51579), (963, 51531), (972, 51507),

Gene: Lumine\_61 Start: 54227, Stop: 52368, Start Num: 205

Candidate Starts for Lumine\_61:

(Start: 188 @54251 has 1 MA's), (Start: 205 @54227 has 304 MA's), (Start: 235 @54203 has 6 MA's), (Start: 250 @54197 has 2 MA's), (Start: 274 @54155 has 6 MA's), (283, 54134), (337, 54020), (342, 54014), (360, 53984), (391, 53924), (399, 53903), (421, 53849), (428, 53837), (434, 53819), (436, 53807), (476, 53702), (519, 53645), (538, 53609), (542, 53597), (551, 53573), (556, 53561), (564, 53543), (570, 53525), (580, 53507), (598, 53468), (602, 53459), (603, 53456), (604, 53453), (738, 53096), (744, 53063), (750, 53042), (777, 52949), (780, 52940), (795, 52877), (814, 52841), (815, 52838), (820, 52823), (847, 52745), (851, 52733), (858, 52712), (875, 52673), (905, 52583), (910, 52565), (912, 52559), (917, 52544), (926, 52520), (930, 52505), (931, 52502), (933, 52490), (940, 52466), (963, 52418), (972, 52394),

Gene: Luna18\_40 Start: 28364, Stop: 26472, Start Num: 299

Candidate Starts for Luna18\_40:

(Start: 235 @28454 has 6 MA's), (Start: 299 @28364 has 38 MA's), (Start: 308 @28355 has 5 MA's), (328, 28298), (344, 28268), (368, 28229), (375, 28214), (379, 28208), (391, 28190), (403, 28157), (435, 28079), (438, 28073), (456, 28022), (469, 27983), (504, 27872), (537, 27788), (539, 27776), (549, 27746), (554, 27731), (556, 27725), (559, 27719), (562, 27713), (576, 27707), (720, 27392), (764, 27197), (783, 27125), (794, 27083), (805, 27053), (812, 27032), (822, 26996), (846, 26924), (885, 26807), (888, 26798), (903, 26738), (906, 26714), (909, 26702), (922, 26666), (947, 26570),

Gene: LunarLander\_49 Start: 34906, Stop: 33080, Start Num: 246

Candidate Starts for LunarLander\_49:

(Start: 246 @34906 has 877 MA's), (368, 34693), (374, 34678), (400, 34630), (416, 34600), (422, 34579), (425, 34573), (429, 34564), (470, 34447), (479, 34420), (539, 34327), (544, 34312), (556, 34279), (578, 34228), (580, 34225), (612, 34159), (627, 34129), (639, 34099), (662, 34054), (683, 34015), (743, 33835), (752, 33805), (753, 33787), (755, 33784), (767, 33748), (783, 33682), (814, 33601), (815, 33598), (843, 33517), (902, 33367), (903, 33364), (909, 33328), (917, 33304), (921, 33295), (925, 33283), (930, 33265), (932, 33256), (946, 33208), (955, 33187),

Gene: Lunsford\_46 Start: 31564, Stop: 29738, Start Num: 246

Candidate Starts for Lunsford\_46:

(Start: 246 @31564 has 877 MA's), (267, 31543), (280, 31513), (295, 31483), (383, 31321), (394, 31303), (425, 31231), (429, 31222), (471, 31102), (479, 31078), (539, 30985), (558, 30937), (568, 30916), (585, 30877), (646, 30745), (659, 30724), (683, 30679), (687, 30667), (740, 30514), (743, 30493), (776, 30370), (783, 30340), (793, 30301), (814, 30235), (815, 30232), (820, 30217), (827, 30193), (834, 30169), (905, 29962), (946, 29827), (950, 29815), (955, 29806),

Gene: Lynlen\_43 Start: 29644, Stop: 31518, Start Num: 246

Candidate Starts for Lynlen\_43:

(Start: 243 @29641 has 7 MA's), (Start: 246 @29644 has 877 MA's), (287, 29713), (Start: 301 @29734 has 110 MA's), (429, 29980), (444, 30022), (550, 30235), (585, 30316), (646, 30451), (696, 30550), (731, 30673), (743, 30733), (746, 30739), (755, 30784), (762, 30799), (764, 30814), (774, 30850), (783, 30886), (813, 30979), (844, 31072), (874, 31150), (902, 31222), (909, 31261), (924, 31303), (929, 31321), (946, 31381), (955, 31402),

Gene: MA5\_45 Start: 30880, Stop: 29042, Start Num: 246

Candidate Starts for MA5\_45:

(Start: 191 @30952 has 1 MA's), (Start: 246 @30880 has 877 MA's), (280, 30829), (364, 30676), (383, 30637), (400, 30604), (425, 30547), (429, 30538), (433, 30526), (471, 30418), (479, 30394), (539,

30298), (558, 30250), (585, 30190), (646, 30058), (659, 30037), (716, 29923), (726, 29881), (743, 29800), (767, 29713), (776, 29677), (783, 29647), (815, 29536), (827, 29497), (834, 29473), (843, 29455), (844, 29452), (888, 29326), (905, 29266), (946, 29131), (950, 29119), (955, 29110),

Gene: MAnor\_46 Start: 34598, Stop: 32220, Start Num: 46

Candidate Starts for MAnor\_46:

(Start: 46 @34598 has 13 MA's), (63, 34538), (93, 34457), (138, 34337), (179, 34292), (Start: 232 @34214 has 3 MA's), (Start: 238 @34208 has 3 MA's), (Start: 241 @34205 has 13 MA's), (Start: 244 @34202 has 11 MA's), (267, 34175), (283, 34136), (287, 34127), (Start: 308 @34097 has 5 MA's), (329, 34040), (354, 34001), (367, 33980), (389, 33938), (394, 33929), (398, 33914), (402, 33905), (406, 33893), (420, 33860), (421, 33857), (430, 33839), (435, 33818), (499, 33635), (526, 33560), (539, 33518), (605, 33431), (657, 33353), (660, 33347), (682, 33302), (683, 33299), (690, 33284), (702, 33263), (726, 33179), (733, 33149), (747, 33089), (749, 33080), (752, 33065), (755, 33050), (760, 33038), (783, 32945), (792, 32909), (794, 32903), (796, 32897), (797, 32891), (815, 32834), (822, 32810), (856, 32705), (858, 32702), (878, 32651), (889, 32609), (893, 32591), (903, 32552), (911, 32510), (920, 32486), (940, 32408), (947, 32384), (958, 32360), (968, 32339), (987, 32285), (1004, 32252), (1009, 32240),

Gene: MCubed\_38 Start: 28748, Stop: 26883, Start Num: 299

Candidate Starts for MCubed\_38:

(Start: 299 @28748 has 38 MA's), (344, 28649), (379, 28589), (403, 28538), (435, 28460), (438, 28454), (454, 28409), (455, 28406), (456, 28403), (469, 28364), (489, 28304), (531, 28181), (537, 28172), (539, 28160), (543, 28148), (549, 28130), (556, 28109), (562, 28097), (658, 27926), (724, 27758), (771, 27593), (779, 27557), (783, 27536), (794, 27494), (822, 27407), (836, 27362), (872, 27263), (885, 27218), (903, 27149), (906, 27125), (917, 27092), (947, 26981),

Gene: MK4\_45 Start: 30963, Stop: 29125, Start Num: 246

Candidate Starts for MK4\_45:

(Start: 191 @31035 has 1 MA's), (Start: 246 @30963 has 877 MA's), (280, 30912), (364, 30759), (383, 30720), (400, 30687), (425, 30630), (429, 30621), (433, 30609), (471, 30501), (479, 30477), (539, 30381), (558, 30333), (585, 30273), (646, 30141), (659, 30120), (697, 30051), (716, 30006), (726, 29964), (743, 29883), (767, 29796), (776, 29760), (783, 29730), (815, 29619), (827, 29580), (834, 29556), (843, 29538), (886, 29415), (888, 29409), (905, 29349), (945, 29217), (946, 29214), (950, 29202), (955, 29193),

Gene: MPlant7149\_43 Start: 33801, Stop: 32014, Start Num: 246

Candidate Starts for MPlant7149\_43:

(Start: 246 @33801 has 877 MA's), (368, 33588), (374, 33573), (400, 33525), (416, 33495), (422, 33474), (425, 33468), (429, 33459), (470, 33342), (479, 33315), (539, 33222), (544, 33207), (578, 33123), (580, 33120), (612, 33054), (627, 33024), (639, 32994), (662, 32949), (683, 32910), (743, 32730), (753, 32682), (767, 32643), (783, 32577), (812, 32505), (814, 32496), (843, 32412), (876, 32325), (917, 32199), (922, 32187), (939, 32127), (946, 32103), (948, 32097),

Gene: MRabcd\_60 Start: 54351, Stop: 52492, Start Num: 205

Candidate Starts for MRabcd\_60:

(Start: 188 @54375 has 1 MA's), (Start: 205 @54351 has 304 MA's), (Start: 235 @54327 has 6 MA's), (Start: 250 @54321 has 2 MA's), (Start: 274 @54279 has 6 MA's), (283, 54258), (337, 54144), (342, 54138), (360, 54108), (391, 54048), (399, 54027), (421, 53973), (428, 53961), (434, 53943), (436, 53931), (476, 53826), (519, 53769), (538, 53733), (542, 53721), (552, 53694), (570, 53649), (598, 53592), (602, 53583), (603, 53580), (738, 53220), (744, 53187), (750, 53166), (777, 53073), (780, 53064), (795, 53001), (814, 52965), (815, 52962), (820, 52947), (847, 52869), (851, 52857), (858, 52836), (875, 52797), (905, 52707), (910, 52689), (912, 52683), (917, 52668), (926, 52644), (930, 52629), (931, 52626), (933, 52614), (940, 52590), (963, 52542), (972, 52518),

Gene: MScarn\_47 Start: 32630, Stop: 30240, Start Num: 36

Candidate Starts for MScarn\_47:

(Start: 36 @32630 has 16 MA's), (70, 32549), (75, 32534), (93, 32480), (97, 32468), (103, 32447), (117, 32414), (128, 32387), (138, 32363), (164, 32336), (Start: 241 @32231 has 13 MA's), (275, 32183), (329, 32066), (374, 31985), (391, 31958), (398, 31937), (420, 31883), (421, 31880), (430, 31862), (435, 31841), (457, 31781), (526, 31583), (539, 31541), (605, 31454), (615, 31430), (633, 31424), (657, 31370), (660, 31364), (680, 31322), (682, 31319), (683, 31316), (733, 31169), (749, 31100), (750, 31094), (760, 31058), (783, 30965), (792, 30929), (794, 30923), (796, 30917), (797, 30911), (815, 30854), (822, 30830), (836, 30785), (947, 30404), (968, 30359), (971, 30350), (995, 30290),

Gene: MaCh\_45 Start: 30763, Stop: 28976, Start Num: 246

Candidate Starts for MaCh\_45:

(Start: 246 @30763 has 877 MA's), (364, 30559), (400, 30487), (416, 30457), (425, 30430), (541, 30178), (560, 30127), (598, 30046), (619, 30001), (620, 29998), (659, 29917), (687, 29860), (715, 29818), (726, 29773), (743, 29692), (755, 29641), (767, 29605), (783, 29539), (810, 29479), (812, 29467), (846, 29365), (853, 29341), (860, 29323), (888, 29260), (901, 29233), (902, 29224), (905, 29200), (946, 29065), (950, 29053), (955, 29044),

Gene: MaGuCo\_40 Start: 30008, Stop: 31852, Start Num: 245

Candidate Starts for MaGuCo\_40:

(Start: 245 @30008 has 74 MA's), (416, 30305), (422, 30326), (541, 30581), (582, 30683), (591, 30704), (635, 30794), (659, 30842), (692, 30905), (743, 31100), (746, 31106), (767, 31187), (783, 31253), (820, 31370), (850, 31457), (900, 31577), (902, 31589), (946, 31748), (968, 31793),

Gene: MaVan\_40 Start: 32050, Stop: 29693, Start Num: 45

Candidate Starts for MaVan\_40:

(41, 32059), (Start: 45 @32050 has 24 MA's), (50, 32035), (57, 31999), (108, 31864), (138, 31801), (Start: 176 @31759 has 2 MA's), (185, 31747), (264, 31645), (267, 31642), (305, 31567), (321, 31528), (329, 31507), (363, 31456), (386, 31414), (398, 31384), (420, 31330), (430, 31309), (435, 31288), (458, 31225), (502, 31090), (506, 31075), (526, 31030), (559, 30946), (598, 30910), (660, 30817), (680, 30775), (682, 30772), (683, 30769), (698, 30745), (703, 30733), (707, 30721), (741, 30580), (749, 30553), (783, 30418), (792, 30382), (794, 30376), (796, 30370), (797, 30364), (805, 30340), (815, 30307), (822, 30283), (836, 30238), (839, 30232), (859, 30172), (893, 30064), (907, 29998), (908, 29995), (911, 29983), (920, 29959), (940, 29881), (947, 29857), (976, 29788),

Gene: Mabel\_45 Start: 30748, Stop: 28961, Start Num: 246

Candidate Starts for Mabel\_45:

(Start: 246 @30748 has 877 MA's), (364, 30544), (400, 30472), (416, 30442), (425, 30415), (541, 30163), (560, 30112), (598, 30031), (619, 29986), (659, 29902), (687, 29845), (715, 29803), (726, 29758), (743, 29677), (755, 29626), (767, 29590), (783, 29524), (810, 29464), (812, 29452), (846, 29350), (853, 29326), (860, 29308), (888, 29245), (901, 29218), (902, 29209), (905, 29185), (946, 29050), (950, 29038), (955, 29029),

Gene: Mabodamaca\_48 Start: 32455, Stop: 34320, Start Num: 245

Candidate Starts for Mabodamaca\_48:

(196, 32392), (203, 32401), (Start: 245 @32455 has 74 MA's), (448, 32842), (554, 33088), (585, 33157), (659, 33310), (726, 33487), (743, 33568), (760, 33631), (774, 33685), (784, 33724), (832, 33880), (844, 33907), (876, 33991), (926, 34144), (946, 34216), (962, 34246),

Gene: Maco6\_42 Start: 33485, Stop: 31179, Start Num: 77

Candidate Starts for Maco6\_42:



(Start: 44 @33590 has 1 MA's), (48, 33581), (Start: 59 @33536 has 1 MA's), (Start: 64 @33524 has 1 MA's), (Start: 77 @33485 has 1 MA's), (97, 33428), (138, 33326), (Start: 148 @33296 has 1 MA's), (179, 33266), (291, 33098), (354, 32978), (403, 32876), (435, 32795), (457, 32735), (459, 32729), (481, 32669), (526, 32537), (541, 32489), (598, 32417), (605, 32408), (611, 32396), (660, 32327), (755, 32021), (756, 32018), (769, 31979), (774, 31952), (776, 31946), (792, 31880), (794, 31874), (796, 31868), (797, 31862), (805, 31838), (815, 31805), (820, 31790), (822, 31781), (878, 31622), (885, 31592), (939, 31382), (947, 31355), (976, 31286),

Gene: MadMarie\_48 Start: 31855, Stop: 30041, Start Num: 246

Candidate Starts for MadMarie\_48:

(Start: 246 @31855 has 877 MA's), (275, 31816), (280, 31804), (364, 31651), (371, 31636), (400, 31579), (425, 31522), (429, 31513), (444, 31471), (461, 31420), (479, 31369), (539, 31276), (556, 31228), (560, 31219), (568, 31204), (585, 31165), (598, 31138), (612, 31108), (654, 31015), (662, 31003), (686, 30955), (697, 30940), (743, 30784), (767, 30697), (780, 30649), (783, 30631), (793, 30592), (815, 30520), (827, 30481), (834, 30457), (843, 30439), (853, 30406), (864, 30379), (888, 30325), (905, 30265), (930, 30187), (946, 30130), (950, 30118), (955, 30109),

Gene: MaeLinda\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for MaeLinda\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (433, 28658), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (536, 28361), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (652, 28127), (676, 28067), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (798, 27665), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Mag7\_61 Start: 54187, Stop: 52328, Start Num: 205

Candidate Starts for Mag7\_61:

(Start: 188 @54211 has 1 MA's), (Start: 205 @54187 has 304 MA's), (Start: 235 @54163 has 6 MA's), (Start: 250 @54157 has 2 MA's), (Start: 274 @54115 has 6 MA's), (283, 54094), (337, 53980), (342, 53974), (360, 53944), (391, 53884), (399, 53863), (421, 53809), (428, 53797), (434, 53779), (436, 53767), (476, 53662), (519, 53605), (538, 53569), (542, 53557), (551, 53533), (556, 53521), (564, 53503), (570, 53485), (580, 53467), (598, 53428), (602, 53419), (603, 53416), (604, 53413), (738, 53056), (744, 53023), (750, 53002), (777, 52909), (780, 52900), (795, 52837), (814, 52801), (815, 52798), (820, 52783), (847, 52705), (851, 52693), (858, 52672), (875, 52633), (905, 52543), (910, 52525), (912, 52519), (917, 52504), (926, 52480), (930, 52465), (931, 52462), (933, 52450), (940, 52426), (963, 52378), (972, 52354),

Gene: Magic8\_61 Start: 54339, Stop: 52480, Start Num: 205

Candidate Starts for Magic8\_61:

(Start: 188 @54363 has 1 MA's), (Start: 205 @54339 has 304 MA's), (Start: 235 @54315 has 6 MA's), (Start: 250 @54309 has 2 MA's), (Start: 274 @54267 has 6 MA's), (283, 54246), (337, 54132), (342, 54126), (360, 54096), (391, 54036), (399, 54015), (421, 53961), (428, 53949), (434, 53931), (436, 53919), (476, 53814), (519, 53757), (538, 53721), (542, 53709), (552, 53682), (564, 53655), (570, 53637), (580, 53619), (598, 53580), (602, 53571), (603, 53568), (604, 53565), (738, 53208), (744, 53175), (750, 53154), (777, 53061), (780, 53052), (795, 52989), (814, 52953), (815, 52950), (820, 52935), (847, 52857), (851, 52845), (858, 52824), (875, 52785), (905, 52695), (910, 52677), (912, 52671), (917, 52656), (926, 52632), (930, 52617), (931, 52614), (933, 52602), (940, 52578), (963, 52530), (972, 52506),

Gene: Magnar\_44 Start: 35145, Stop: 33328, Start Num: 246

Candidate Starts for Magnar\_44:

(Start: 246 @35145 has 877 MA's), (368, 34932), (374, 34917), (416, 34839), (422, 34818), (425, 34812), (429, 34803), (470, 34686), (479, 34659), (539, 34566), (544, 34551), (556, 34518), (578, 34467), (580, 34464), (612, 34398), (627, 34368), (639, 34338), (662, 34293), (683, 34254), (743, 34074), (752, 34044), (753, 34026), (767, 33987), (783, 33921), (814, 33840), (815, 33837), (843, 33756), (902, 33606), (903, 33603), (909, 33567), (917, 33543), (921, 33534), (925, 33522), (946, 33447), (955, 33426),

Gene: Magnito\_42 Start: 33719, Stop: 31893, Start Num: 246

Candidate Starts for Magnito\_42:

(Start: 246 @33719 has 877 MA's), (368, 33506), (374, 33491), (416, 33413), (419, 33401), (422, 33392), (425, 33386), (429, 33377), (470, 33260), (479, 33233), (539, 33140), (544, 33125), (556, 33092), (578, 33041), (580, 33038), (607, 32984), (612, 32972), (627, 32942), (639, 32912), (662, 32867), (683, 32828), (743, 32648), (753, 32600), (755, 32597), (767, 32561), (783, 32495), (793, 32456), (810, 32435), (814, 32414), (820, 32396), (843, 32330), (902, 32180), (903, 32177), (909, 32141), (917, 32117), (921, 32108), (925, 32096), (938, 32048), (946, 32021), (955, 32000),

Gene: Magpie\_52 Start: 53908, Stop: 52085, Start Num: 197

Candidate Starts for Magpie\_52:

(Start: 182 @53926 has 4 MA's), (Start: 197 @53908 has 27 MA's), (Start: 250 @53884 has 2 MA's), (267, 53857), (Start: 274 @53842 has 6 MA's), (283, 53821), (329, 53734), (387, 53629), (399, 53602), (406, 53587), (434, 53521), (445, 53491), (448, 53482), (453, 53479), (454, 53476), (463, 53449), (476, 53413), (519, 53356), (531, 53338), (538, 53320), (542, 53308), (552, 53281), (580, 53218), (598, 53179), (602, 53170), (603, 53167), (615, 53137), (633, 53101), (712, 52915), (724, 52876), (725, 52873), (732, 52837), (738, 52813), (744, 52780), (775, 52672), (777, 52666), (780, 52657), (814, 52558), (815, 52555), (820, 52540), (847, 52462), (851, 52450), (858, 52429), (861, 52420), (875, 52390), (888, 52360), (901, 52333), (905, 52300), (912, 52276), (926, 52237), (931, 52219), (933, 52207), (940, 52183), (956, 52141), (963, 52135), (972, 52111),

Gene: Mahdia\_44 Start: 34961, Stop: 32724, Start Num: 3

Candidate Starts for Mahdia\_44:

(1, 35099), (Start: 3 @34961 has 5 MA's), (26, 34808), (29, 34805), (40, 34754), (88, 34676), (126, 34622), (170, 34610), (193, 34580), (203, 34568), (212, 34556), (237, 34526), (287, 34448), (Start: 308 @34424 has 5 MA's), (318, 34421), (322, 34400), (421, 34199), (435, 34163), (442, 34148), (467, 34091), (474, 34070), (476, 34064), (479, 34055), (518, 34013), (538, 33974), (562, 33911), (575, 33878), (586, 33860), (589, 33851), (603, 33821), (615, 33791), (674, 33671), (724, 33527), (730, 33497), (732, 33488), (738, 33464), (744, 33431), (771, 33350), (775, 33326), (777, 33320), (795, 33248), (812, 33221), (814, 33212), (815, 33209), (820, 33194), (827, 33170), (847, 33116), (851, 33104), (897, 32990), (901, 32975), (930, 32864), (931, 32861), (936, 32837), (940, 32825), (963, 32774), (972, 32750),

Gene: Mainiac\_48 Start: 31846, Stop: 30032, Start Num: 246

Candidate Starts for Mainiac\_48:

(Start: 246 @31846 has 877 MA's), (275, 31807), (280, 31795), (364, 31642), (371, 31627), (400, 31570), (425, 31513), (429, 31504), (444, 31462), (461, 31411), (479, 31360), (539, 31267), (556, 31219), (560, 31210), (568, 31195), (585, 31156), (598, 31129), (612, 31099), (654, 31006), (686, 30946), (697, 30931), (743, 30775), (767, 30688), (783, 30622), (793, 30583), (815, 30511), (827, 30472), (834, 30448), (843, 30430), (853, 30397), (864, 30370), (888, 30316), (905, 30256), (930, 30178), (946, 30121), (950, 30109), (955, 30100),

Gene: MajorMajor\_44 Start: 30374, Stop: 28545, Start Num: 245

Candidate Starts for MajorMajor\_44:

(Start: 245 @30374 has 74 MA's), (364, 30170), (366, 30167), (368, 30161), (375, 30146), (383, 30131), (399, 30101), (400, 30098), (416, 30068), (425, 30041), (433, 30020), (444, 29990), (479,

29888), (539, 29795), (556, 29747), (560, 29738), (568, 29723), (598, 29657), (635, 29576), (659, 29528), (683, 29483), (743, 29303), (753, 29255), (755, 29252), (767, 29216), (783, 29150), (793, 29111), (810, 29090), (831, 29015), (837, 28997), (853, 28952), (864, 28925), (880, 28889), (888, 28871), (902, 28835), (905, 28811), (930, 28733), (946, 28676), (950, 28664), (955, 28655), (978, 28607), (994, 28577), (1001, 28559), (1003, 28556),

Gene: Makemake\_44 Start: 35340, Stop: 33514, Start Num: 246

Candidate Starts for Makemake\_44:

(Start: 246 @35340 has 877 MA's), (368, 35127), (374, 35112), (400, 35064), (416, 35034), (422, 35013), (425, 35007), (429, 34998), (470, 34881), (479, 34854), (539, 34761), (544, 34746), (556, 34713), (578, 34662), (580, 34659), (612, 34593), (627, 34563), (639, 34533), (662, 34488), (683, 34449), (743, 34269), (752, 34239), (753, 34221), (755, 34218), (767, 34182), (783, 34116), (814, 34035), (815, 34032), (843, 33951), (902, 33801), (903, 33798), (909, 33762), (917, 33738), (921, 33729), (925, 33717), (946, 33642), (955, 33621),

Gene: MakoManhole\_51 Start: 47082, Stop: 45265, Start Num: 241

Candidate Starts for MakoManhole\_51:

(Start: 241 @47082 has 13 MA's), (Start: 250 @47073 has 2 MA's), (267, 47046), (273, 47034), (283, 47010), (287, 47001), (337, 46905), (366, 46863), (381, 46827), (417, 46752), (445, 46677), (476, 46599), (519, 46542), (538, 46506), (542, 46494), (551, 46470), (592, 46377), (603, 46353), (611, 46335), (724, 46062), (732, 46023), (739, 45993), (744, 45966), (775, 45858), (777, 45852), (780, 45843), (812, 45753), (814, 45744), (815, 45741), (820, 45726), (847, 45648), (851, 45636), (852, 45630), (858, 45615), (879, 45567), (901, 45519), (905, 45486), (912, 45462), (926, 45423), (929, 45411), (930, 45408), (940, 45363), (963, 45315), (972, 45291), (979, 45270),

Gene: Malec\_45 Start: 32164, Stop: 30371, Start Num: 246

Candidate Starts for Malec\_45:

(Start: 246 @32164 has 877 MA's), (364, 31960), (366, 31957), (368, 31951), (383, 31921), (400, 31888), (402, 31885), (416, 31858), (425, 31831), (444, 31780), (479, 31678), (539, 31585), (556, 31537), (560, 31528), (568, 31513), (598, 31447), (635, 31366), (659, 31318), (662, 31312), (726, 31174), (743, 31093), (755, 31036), (766, 31003), (776, 30964), (783, 30934), (793, 30895), (810, 30874), (814, 30853), (886, 30661), (888, 30655), (902, 30619), (905, 30595), (924, 30538), (930, 30517), (946, 30460), (950, 30448), (955, 30439),

Gene: Malinsilva\_50 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for Malinsilva\_50:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: Maminiaina\_44 Start: 31324, Stop: 29531, Start Num: 246

Candidate Starts for Maminiaina\_44:

(Start: 246 @31324 has 877 MA's), (261, 31315), (318, 31213), (346, 31153), (347, 31150), (364, 31120), (368, 31111), (383, 31078), (400, 31045), (402, 31042), (416, 31015), (420, 31000), (425, 30988), (479, 30835), (539, 30742), (598, 30604), (612, 30574), (697, 30403), (714, 30376), (716, 30370), (743, 30247), (780, 30112), (783, 30094), (814, 30013), (853, 29896), (902, 29779), (905, 29755), (930, 29677), (946, 29620), (950, 29608), (955, 29599),

Gene: ManRay\_38 Start: 28632, Stop: 26767, Start Num: 301

Candidate Starts for ManRay\_38:

(Start: 238 @28719 has 3 MA's), (Start: 241 @28716 has 13 MA's), (Start: 301 @28632 has 110 MA's), (Start: 308 @28623 has 5 MA's), (354, 28518), (358, 28509), (375, 28479), (378, 28476), (433, 28356), (435, 28344), (438, 28338), (475, 28233), (484, 28206), (531, 28065), (536, 28059), (537, 28056), (539, 28044), (548, 28017), (549, 28014), (554, 27999), (556, 27993), (559, 27987), (586, 27954), (652, 27825), (676, 27765), (776, 27450), (779, 27441), (780, 27438), (783, 27420), (794, 27378), (796, 27372), (798, 27363), (805, 27348), (822, 27291), (878, 27132), (885, 27102), (888, 27093), (903, 27033), (906, 27009), (919, 26970), (929, 26937), (932, 26925), (947, 26865),

Gene: Mana\_59 Start: 54023, Stop: 52164, Start Num: 205

Candidate Starts for Mana\_59:

(Start: 188 @54047 has 1 MA's), (Start: 205 @54023 has 304 MA's), (Start: 235 @53999 has 6 MA's), (Start: 250 @53993 has 2 MA's), (Start: 274 @53951 has 6 MA's), (283, 53930), (337, 53816), (342, 53810), (360, 53780), (391, 53720), (399, 53699), (421, 53645), (428, 53633), (434, 53615), (436, 53603), (476, 53498), (519, 53441), (538, 53405), (542, 53393), (552, 53366), (564, 53339), (570, 53321), (580, 53303), (598, 53264), (602, 53255), (603, 53252), (738, 52892), (744, 52859), (750, 52838), (777, 52745), (780, 52736), (795, 52673), (814, 52637), (815, 52634), (820, 52619), (847, 52541), (851, 52529), (858, 52508), (875, 52469), (905, 52379), (910, 52361), (912, 52355), (917, 52340), (926, 52316), (930, 52301), (931, 52298), (933, 52286), (940, 52262), (963, 52214), (972, 52190),

Gene: Manad\_60 Start: 54307, Stop: 52448, Start Num: 205

Candidate Starts for Manad\_60:

(Start: 188 @54331 has 1 MA's), (Start: 205 @54307 has 304 MA's), (Start: 235 @54283 has 6 MA's), (Start: 250 @54277 has 2 MA's), (Start: 274 @54235 has 6 MA's), (283, 54214), (337, 54100), (342, 54094), (360, 54064), (391, 54004), (399, 53983), (421, 53929), (428, 53917), (434, 53899), (436, 53887), (476, 53782), (519, 53725), (538, 53689), (542, 53677), (551, 53653), (556, 53641), (564, 53623), (570, 53605), (580, 53587), (598, 53548), (602, 53539), (603, 53536), (604, 53533), (738, 53176), (744, 53143), (750, 53122), (777, 53029), (780, 53020), (795, 52957), (814, 52921), (815, 52918), (820, 52903), (847, 52825), (851, 52813), (858, 52792), (875, 52753), (905, 52663), (910, 52645), (912, 52639), (917, 52624), (926, 52600), (930, 52585), (931, 52582), (933, 52570), (940, 52546), (963, 52498), (972, 52474),

Gene: Manatee\_45 Start: 34036, Stop: 32210, Start Num: 246

Candidate Starts for Manatee\_45:

(Start: 246 @34036 has 877 MA's), (368, 33823), (400, 33760), (416, 33730), (422, 33709), (425, 33703), (429, 33694), (470, 33577), (479, 33550), (539, 33457), (544, 33442), (578, 33358), (580, 33355), (612, 33289), (627, 33259), (639, 33229), (662, 33184), (683, 33145), (743, 32965), (753, 32917), (755, 32914), (767, 32878), (783, 32812), (793, 32773), (810, 32752), (814, 32731), (820, 32713), (843, 32647), (902, 32497), (903, 32494), (909, 32458), (917, 32434), (921, 32425), (925, 32413), (946, 32338), (955, 32317),

Gene: Mandalorian\_37 Start: 28518, Stop: 26617, Start Num: 299

Candidate Starts for Mandalorian\_37:

(Start: 299 @28518 has 38 MA's), (358, 28395), (368, 28380), (375, 28365), (395, 28332), (398, 28323), (403, 28308), (420, 28272), (428, 28257), (435, 28230), (438, 28224), (456, 28173), (469, 28134), (489, 28074), (531, 27948), (537, 27939), (539, 27927), (549, 27897), (556, 27876), (585, 27840), (658, 27693), (676, 27648), (720, 27537), (764, 27342), (776, 27300), (783, 27270), (794, 27228), (805, 27198), (812, 27177), (822, 27141), (903, 26883), (906, 26859), (917, 26826), (919, 26820), (947, 26715),

Gene: Manu\_48 Start: 31753, Stop: 29939, Start Num: 246

Candidate Starts for Manu\_48:

(Start: 246 @31753 has 877 MA's), (275, 31714), (280, 31702), (364, 31549), (371, 31534), (400, 31477), (425, 31420), (429, 31411), (444, 31369), (461, 31318), (479, 31267), (539, 31174), (556, 31126), (568, 31102), (585, 31063), (598, 31036), (612, 31006), (654, 30913), (662, 30901), (686, 30853), (697, 30838), (743, 30682), (755, 30631), (766, 30598), (767, 30595), (783, 30529), (793, 30490), (815, 30418), (827, 30379), (834, 30355), (843, 30337), (853, 30304), (888, 30223), (905, 30163), (910, 30145), (930, 30085), (932, 30076), (946, 30028), (950, 30016), (955, 30007),

Gene: MarQuardt\_48 Start: 31854, Stop: 30040, Start Num: 246

Candidate Starts for MarQuardt\_48:

(Start: 246 @31854 has 877 MA's), (275, 31815), (280, 31803), (364, 31650), (371, 31635), (400, 31578), (425, 31521), (429, 31512), (444, 31470), (461, 31419), (479, 31368), (539, 31275), (556, 31227), (560, 31218), (568, 31203), (585, 31164), (598, 31137), (612, 31107), (654, 31014), (686, 30954), (697, 30939), (743, 30783), (767, 30696), (783, 30630), (793, 30591), (815, 30519), (827, 30480), (834, 30456), (843, 30438), (853, 30405), (864, 30378), (888, 30324), (905, 30264), (930, 30186), (946, 30129), (950, 30117), (955, 30108),

Gene: Marcell\_43 Start: 34431, Stop: 32605, Start Num: 246

Candidate Starts for Marcell\_43:

(Start: 246 @34431 has 877 MA's), (368, 34218), (374, 34203), (400, 34155), (416, 34125), (422, 34104), (425, 34098), (429, 34089), (470, 33972), (479, 33945), (539, 33852), (544, 33837), (578, 33753), (580, 33750), (612, 33684), (627, 33654), (639, 33624), (662, 33579), (683, 33540), (743, 33360), (753, 33312), (755, 33309), (767, 33273), (783, 33207), (793, 33168), (810, 33147), (814, 33126), (820, 33108), (843, 33042), (902, 32892), (903, 32889), (909, 32853), (917, 32829), (921, 32820), (925, 32808), (946, 32733), (955, 32712),

Gene: Marchesa\_45 Start: 31433, Stop: 29595, Start Num: 246

Candidate Starts for Marchesa\_45:

(Start: 191 @31505 has 1 MA's), (Start: 246 @31433 has 877 MA's), (280, 31382), (364, 31229), (395, 31169), (400, 31157), (425, 31100), (429, 31091), (433, 31079), (471, 30971), (479, 30947), (539, 30851), (558, 30803), (585, 30743), (614, 30680), (646, 30611), (659, 30590), (697, 30521), (700, 30515), (716, 30476), (743, 30353), (767, 30266), (776, 30230), (783, 30200), (791, 30170), (815, 30089), (827, 30050), (834, 30026), (843, 30008), (888, 29879), (905, 29819), (946, 29684), (950, 29672), (955, 29663),

Gene: Marchy\_39 Start: 31191, Stop: 29365, Start Num: 246

Candidate Starts for Marchy\_39:

(Start: 246 @31191 has 877 MA's), (368, 30978), (374, 30963), (416, 30885), (422, 30864), (425, 30858), (429, 30849), (470, 30732), (479, 30705), (539, 30612), (544, 30597), (578, 30513), (580, 30510), (612, 30444), (627, 30414), (639, 30384), (662, 30339), (683, 30300), (743, 30120), (752, 30090), (753, 30072), (755, 30069), (767, 30033), (783, 29967), (814, 29886), (815, 29883), (843, 29802), (902, 29652), (903, 29649), (909, 29613), (917, 29589), (921, 29580), (925, 29568), (932, 29541), (946, 29493), (955, 29472),

Gene: Marco3\_47 Start: 35533, Stop: 33704, Start Num: 246

Candidate Starts for Marco3\_47:

(Start: 246 @35533 has 877 MA's), (368, 35320), (374, 35305), (416, 35227), (422, 35206), (425, 35200), (429, 35191), (470, 35074), (479, 35047), (539, 34954), (544, 34939), (556, 34906), (578, 34855), (580, 34852), (612, 34786), (627, 34756), (639, 34726), (662, 34681), (683, 34642), (743, 34462), (753, 34414), (771, 34366), (780, 34327), (783, 34309), (793, 34270), (810, 34249), (814, 34228), (819, 34213), (861, 34090), (922, 33919), (929, 33895), (943, 33847), (946, 33835), (955, 33814), (959, 33808), (981, 33760), (986, 33745),

Gene: Mareelih\_171 Start: 99155, Stop: 97374, Start Num: 255

Candidate Starts for Mareelih\_171:

(Start: 255 @99155 has 4 MA's), (280, 99110), (292, 99083), (346, 98990), (382, 98930), (383, 98927), (389, 98918), (399, 98894), (418, 98852), (419, 98849), (435, 98804), (458, 98762), (477, 98708), (539, 98624), (571, 98540), (585, 98513), (591, 98498), (668, 98339), (683, 98315), (690, 98300), (697, 98291), (728, 98204), (735, 98177), (736, 98174), (740, 98153), (743, 98132), (754, 98081), (780, 97997), (785, 97970), (791, 97937), (803, 97895), (840, 97784), (849, 97757), (862, 97721), (866, 97712), (867, 97709), (871, 97700), (906, 97580), (912, 97559), (914, 97553), (926, 97520), (931, 97502), (932, 97496), (942, 97463), (946, 97448), (963, 97424), (965, 97421), (977, 97397),

Gene: Margaret\_49 Start: 33864, Stop: 31474, Start Num: 45

Candidate Starts for Margaret\_49:

(16, 33993), (19, 33984), (Start: 45 @33864 has 24 MA's), (Start: 64 @33798 has 1 MA's), (89, 33732), (107, 33675), (128, 33636), (138, 33612), (145, 33591), (Start: 176 @33570 has 2 MA's), (223, 33501), (265, 33453), (273, 33438), (295, 33390), (332, 33309), (338, 33297), (374, 33228), (389, 33204), (398, 33180), (430, 33105), (435, 33084), (457, 33024), (473, 32979), (488, 32931), (524, 32823), (526, 32817), (558, 32736), (605, 32688), (649, 32628), (682, 32556), (703, 32514), (707, 32502), (741, 32361), (747, 32337), (750, 32322), (760, 32286), (783, 32193), (792, 32157), (794, 32151), (797, 32139), (805, 32115), (822, 32058), (828, 32040), (859, 31947), (884, 31878), (891, 31851), (893, 31839), (894, 31836), (903, 31800), (905, 31779), (915, 31746), (922, 31728), (939, 31659), (947, 31632), (958, 31608), (1004, 31500), (1009, 31488),

Gene: Marge\_45 Start: 35242, Stop: 33455, Start Num: 246

Candidate Starts for Marge\_45:

(Start: 246 @35242 has 877 MA's), (368, 35029), (374, 35014), (416, 34936), (422, 34915), (425, 34909), (429, 34900), (461, 34807), (470, 34783), (479, 34756), (539, 34663), (544, 34648), (556, 34615), (578, 34564), (580, 34561), (612, 34495), (627, 34465), (639, 34435), (662, 34390), (683, 34351), (743, 34171), (753, 34123), (767, 34084), (783, 34018), (812, 33946), (814, 33937), (843, 33853), (876, 33766), (917, 33640), (922, 33628), (946, 33544), (948, 33538),

Gene: Margo\_44 Start: 31623, Stop: 29785, Start Num: 246

Candidate Starts for Margo\_44:

(Start: 246 @31623 has 877 MA's), (280, 31572), (364, 31419), (400, 31347), (416, 31317), (425, 31290), (429, 31281), (479, 31137), (539, 31041), (558, 30993), (585, 30933), (629, 30846), (646, 30801), (659, 30780), (698, 30708), (716, 30666), (726, 30624), (743, 30543), (753, 30495), (767, 30456), (776, 30420), (783, 30390), (791, 30360), (815, 30279), (827, 30240), (834, 30216), (843, 30198), (844, 30195), (888, 30069), (905, 30009), (932, 29922), (946, 29874), (950, 29862), (955, 29853),

Gene: Marie\_48 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for Marie\_48:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (686, 30952), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827, 30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: Mariokart\_50 Start: 45633, Stop: 43816, Start Num: 241

Candidate Starts for Mariokart\_50:

(95, 45906), (105, 45873), (Start: 241 @45633 has 13 MA's), (267, 45597), (273, 45585), (Start: 274 @45582 has 6 MA's), (287, 45552), (356, 45426), (381, 45378), (417, 45303), (436, 45246), (469, 45171), (476, 45150), (538, 45057), (592, 44928), (603, 44904), (633, 44838), (646, 44805), (724, 44613), (727, 44592), (732, 44574), (744, 44517), (777, 44403), (780, 44394), (815, 44292), (820,

44277), (847, 44199), (851, 44187), (858, 44166), (861, 44157), (886, 44103), (901, 44070), (905, 44037), (906, 44034), (917, 43998), (926, 43974), (940, 43914), (972, 43842), (979, 43821),

Gene: Marius\_49 Start: 31750, Stop: 29936, Start Num: 246

Candidate Starts for Marius\_49:

(Start: 246 @31750 has 877 MA's), (275, 31711), (280, 31699), (364, 31546), (371, 31531), (400, 31474), (425, 31417), (429, 31408), (444, 31366), (461, 31315), (479, 31264), (539, 31171), (556, 31123), (568, 31099), (585, 31060), (598, 31033), (612, 31003), (654, 30910), (662, 30898), (686, 30850), (697, 30835), (743, 30679), (755, 30628), (766, 30595), (767, 30592), (783, 30526), (793, 30487), (815, 30415), (827, 30376), (834, 30352), (843, 30334), (853, 30301), (888, 30220), (905, 30160), (910, 30142), (930, 30082), (932, 30073), (946, 30025), (950, 30013), (955, 30004),

Gene: Marley1013\_59 Start: 54530, Stop: 52713, Start Num: 247

Candidate Starts for Marley1013\_59:

(60, 54914), (130, 54713), (Start: 247 @54530 has 43 MA's), (267, 54500), (368, 54320), (433, 54167), (435, 54155), (448, 54125), (454, 54119), (476, 54056), (478, 54050), (519, 53999), (538, 53963), (556, 53915), (603, 53810), (645, 53714), (674, 53663), (724, 53519), (732, 53480), (739, 53450), (744, 53423), (748, 53411), (775, 53315), (777, 53309), (780, 53300), (782, 53288), (807, 53216), (814, 53186), (820, 53168), (822, 53159), (847, 53090), (851, 53078), (858, 53057), (888, 52988), (898, 52973), (903, 52949), (912, 52904), (926, 52865), (931, 52847), (933, 52835), (936, 52823), (940, 52811), (956, 52769), (972, 52739),

Gene: Marlia\_59 Start: 54105, Stop: 52288, Start Num: 247

Candidate Starts for Marlia\_59:

(130, 54288), (Start: 247 @54105 has 43 MA's), (267, 54075), (368, 53895), (433, 53742), (435, 53730), (448, 53700), (454, 53694), (476, 53631), (478, 53625), (519, 53574), (538, 53538), (556, 53490), (603, 53385), (645, 53289), (674, 53238), (724, 53094), (732, 53055), (739, 53025), (744, 52998), (748, 52986), (775, 52890), (777, 52884), (780, 52875), (782, 52863), (807, 52791), (814, 52761), (820, 52743), (822, 52734), (847, 52665), (851, 52653), (858, 52632), (888, 52563), (898, 52548), (903, 52524), (905, 52503), (912, 52479), (926, 52440), (931, 52422), (933, 52410), (936, 52398), (940, 52386), (956, 52344), (972, 52314),

Gene: Maroc7\_43 Start: 34287, Stop: 32461, Start Num: 246

Candidate Starts for Maroc7\_43:

(Start: 246 @34287 has 877 MA's), (368, 34074), (374, 34059), (400, 34011), (416, 33981), (422, 33960), (425, 33954), (429, 33945), (470, 33828), (479, 33801), (539, 33708), (544, 33693), (556, 33660), (578, 33609), (580, 33606), (612, 33540), (639, 33480), (662, 33435), (683, 33396), (743, 33216), (753, 33168), (767, 33129), (783, 33063), (793, 33024), (810, 33003), (814, 32982), (820, 32964), (843, 32898), (902, 32748), (903, 32745), (909, 32709), (917, 32685), (921, 32676), (925, 32664), (932, 32637), (946, 32589), (955, 32568),

Gene: Marsha\_45 Start: 35798, Stop: 33972, Start Num: 246

Candidate Starts for Marsha\_45:

(Start: 246 @35798 has 877 MA's), (368, 35585), (374, 35570), (400, 35522), (416, 35492), (422, 35471), (425, 35465), (429, 35456), (470, 35339), (479, 35312), (539, 35219), (544, 35204), (578, 35120), (580, 35117), (612, 35051), (639, 34991), (662, 34946), (683, 34907), (743, 34727), (752, 34697), (753, 34679), (755, 34676), (767, 34640), (783, 34574), (814, 34493), (815, 34490), (843, 34409), (902, 34259), (903, 34256), (909, 34220), (917, 34196), (925, 34175), (932, 34148), (946, 34100), (955, 34079),

Gene: Martin\_40 Start: 28939, Stop: 27074, Start Num: 301

Candidate Starts for Martin\_40:

(Start: 238 @29026 has 3 MA's), (Start: 241 @29023 has 13 MA's), (Start: 301 @28939 has 110 MA's), (Start: 308 @28930 has 5 MA's), (354, 28825), (358, 28816), (375, 28786), (378, 28783), (433, 28663), (435, 28651), (438, 28645), (475, 28540), (484, 28513), (531, 28372), (536, 28366), (537, 28363), (539, 28351), (548, 28324), (549, 28321), (554, 28306), (556, 28300), (559, 28294), (586, 28261), (676, 28072), (776, 27757), (779, 27748), (780, 27745), (783, 27727), (794, 27685), (796, 27679), (798, 27670), (805, 27655), (822, 27598), (878, 27439), (885, 27409), (888, 27400), (903, 27340), (906, 27316), (919, 27277), (929, 27244), (932, 27232), (947, 27172),

Gene: Maru\_60 Start: 54462, Stop: 52603, Start Num: 205

Candidate Starts for Maru\_60:

(Start: 188 @54486 has 1 MA's), (Start: 205 @54462 has 304 MA's), (Start: 235 @54438 has 6 MA's), (Start: 250 @54432 has 2 MA's), (Start: 274 @54390 has 6 MA's), (283, 54369), (337, 54255), (342, 54249), (360, 54219), (391, 54159), (399, 54138), (421, 54084), (428, 54072), (434, 54054), (436, 54042), (476, 53937), (519, 53880), (538, 53844), (542, 53832), (552, 53805), (570, 53760), (580, 53742), (598, 53703), (602, 53694), (603, 53691), (604, 53688), (738, 53331), (744, 53298), (750, 53277), (777, 53184), (780, 53175), (795, 53112), (814, 53076), (815, 53073), (820, 53058), (847, 52980), (851, 52968), (858, 52947), (875, 52908), (905, 52818), (910, 52800), (912, 52794), (917, 52779), (926, 52755), (930, 52740), (931, 52737), (933, 52725), (940, 52701), (963, 52653), (972, 52629),

Gene: MaryBeth\_45 Start: 34704, Stop: 32875, Start Num: 246

Candidate Starts for MaryBeth\_45:

(Start: 246 @34704 has 877 MA's), (368, 34491), (374, 34476), (400, 34428), (416, 34398), (422, 34377), (425, 34371), (429, 34362), (444, 34320), (470, 34245), (479, 34218), (539, 34125), (544, 34110), (578, 34026), (580, 34023), (612, 33957), (627, 33927), (639, 33897), (662, 33852), (683, 33813), (743, 33633), (753, 33585), (771, 33537), (780, 33498), (783, 33480), (793, 33441), (810, 33420), (814, 33399), (819, 33384), (861, 33261), (922, 33090), (929, 33066), (943, 33018), (946, 33006), (955, 32985), (959, 32979), (981, 32931), (986, 32916),

Gene: MarysWell\_37 Start: 30459, Stop: 28594, Start Num: 246

Candidate Starts for MarysWell\_37:

(Start: 246 @30459 has 877 MA's), (280, 30408), (347, 30285), (364, 30255), (366, 30252), (395, 30195), (416, 30153), (425, 30126), (429, 30117), (471, 29997), (479, 29973), (539, 29877), (547, 29853), (554, 29832), (594, 29745), (598, 29739), (613, 29706), (633, 29667), (654, 29619), (662, 29607), (683, 29568), (743, 29373), (752, 29343), (753, 29325), (766, 29289), (767, 29286), (771, 29277), (783, 29220), (793, 29181), (814, 29139), (820, 29121), (834, 29073), (837, 29067), (853, 29022), (876, 28968), (880, 28959), (888, 28941), (910, 28863), (929, 28806), (939, 28770), (946, 28746), (950, 28734),

Gene: Maskar\_62 Start: 54257, Stop: 52398, Start Num: 205

Candidate Starts for Maskar\_62:

(Start: 188 @54281 has 1 MA's), (Start: 205 @54257 has 304 MA's), (Start: 235 @54233 has 6 MA's), (Start: 250 @54227 has 2 MA's), (Start: 274 @54185 has 6 MA's), (283, 54164), (337, 54050), (342, 54044), (360, 54014), (391, 53954), (399, 53933), (421, 53879), (428, 53867), (434, 53849), (436, 53837), (476, 53732), (519, 53675), (538, 53639), (542, 53627), (551, 53603), (556, 53591), (564, 53573), (570, 53555), (580, 53537), (598, 53498), (602, 53489), (603, 53486), (604, 53483), (712, 53228), (738, 53126), (744, 53093), (750, 53072), (777, 52979), (780, 52970), (795, 52907), (814, 52871), (815, 52868), (820, 52853), (847, 52775), (851, 52763), (858, 52742), (875, 52703), (905, 52613), (910, 52595), (912, 52589), (917, 52574), (926, 52550), (930, 52535), (931, 52532), (933, 52520), (940, 52496), (946, 52475), (963, 52448), (972, 52424),

Gene: MasterPo\_57 Start: 52506, Stop: 50677, Start Num: 205

Candidate Starts for MasterPo\_57:



(Start: 205 @52506 has 304 MA's), (Start: 250 @52479 has 2 MA's), (269, 52449), (Start: 274 @52437 has 6 MA's), (286, 52410), (287, 52407), (293, 52398), (318, 52380), (366, 52284), (391, 52233), (400, 52209), (411, 52185), (463, 52047), (472, 52023), (476, 52011), (519, 51954), (538, 51918), (542, 51906), (551, 51882), (588, 51798), (602, 51768), (603, 51765), (615, 51735), (680, 51591), (707, 51525), (721, 51486), (724, 51474), (727, 51453), (732, 51435), (744, 51378), (771, 51294), (777, 51264), (780, 51255), (795, 51189), (812, 51162), (814, 51153), (820, 51135), (827, 51111), (847, 51057), (851, 51045), (858, 51024), (888, 50955), (905, 50895), (910, 50877), (922, 50844), (926, 50832), (930, 50817), (931, 50814), (933, 50802), (940, 50778), (941, 50775), (963, 50727), (965, 50724), (972, 50703), (979, 50682),

Gene: Matalotodo\_60 Start: 54575, Stop: 52716, Start Num: 205

Candidate Starts for Matalotodo\_60:

(Start: 188 @54599 has 1 MA's), (Start: 205 @54575 has 304 MA's), (Start: 235 @54551 has 6 MA's), (Start: 250 @54545 has 2 MA's), (Start: 274 @54503 has 6 MA's), (283, 54482), (337, 54368), (342, 54362), (360, 54332), (391, 54272), (399, 54251), (421, 54197), (428, 54185), (434, 54167), (436, 54155), (476, 54050), (519, 53993), (538, 53957), (542, 53945), (552, 53918), (564, 53891), (570, 53873), (580, 53855), (598, 53816), (602, 53807), (603, 53804), (712, 53546), (738, 53444), (744, 53411), (750, 53390), (777, 53297), (780, 53288), (795, 53225), (814, 53189), (815, 53186), (820, 53171), (847, 53093), (851, 53081), (858, 53060), (875, 53021), (905, 52931), (910, 52913), (912, 52907), (917, 52892), (926, 52868), (930, 52853), (931, 52850), (933, 52838), (940, 52814), (963, 52766), (972, 52742),

Gene: Maureen\_42 Start: 31379, Stop: 33223, Start Num: 245

Candidate Starts for Maureen\_42:

(Start: 148 @31253 has 1 MA's), (149, 31256), (Start: 245 @31379 has 74 MA's), (416, 31676), (541, 31952), (582, 32054), (591, 32075), (659, 32213), (692, 32276), (743, 32471), (746, 32477), (752, 32501), (767, 32558), (781, 32615), (783, 32624), (820, 32741), (834, 32789), (900, 32948), (902, 32960), (924, 33041), (946, 33119), (968, 33164),

Gene: Maverick\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Maverick\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Maxo\_46 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Maxo\_46:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Mayonnaise\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Mayonnaise\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Mayweather\_49 Start: 35337, Stop: 32956, Start Num: 46

Candidate Starts for Mayweather\_49:

(Start: 46 @35337 has 13 MA's), (63, 35277), (93, 35196), (138, 35076), (179, 35031), (Start: 232 @34953 has 3 MA's), (Start: 238 @34947 has 3 MA's), (Start: 241 @34944 has 13 MA's), (267, 34914), (283, 34875), (287, 34866), (Start: 308 @34836 has 5 MA's), (329, 34779), (354, 34740), (367, 34719), (389, 34677), (394, 34668), (398, 34653), (402, 34644), (406, 34632), (420, 34599), (421, 34596), (430, 34578), (435, 34557), (499, 34374), (526, 34299), (539, 34257), (605, 34170), (643, 34122), (657, 34092), (660, 34086), (682, 34041), (683, 34038), (690, 34023), (702, 34002), (726, 33918), (733, 33888), (747, 33828), (749, 33819), (752, 33804), (755, 33789), (760, 33777), (783, 33684), (792, 33648), (794, 33642), (796, 33636), (797, 33630), (815, 33573), (822, 33549), (856, 33444), (858, 33441), (878, 33390), (889, 33348), (893, 33330), (903, 33291), (911, 33249), (920, 33225), (940, 33147), (947, 33123), (968, 33078), (993, 33012), (1004, 32991), (1006, 32985), (1009, 32979),

Gene: Mazhar510\_45 Start: 31571, Stop: 29745, Start Num: 246

Candidate Starts for Mazhar510\_45:

(Start: 246 @31571 has 877 MA's), (267, 31550), (280, 31520), (295, 31490), (383, 31328), (394, 31310), (425, 31238), (429, 31229), (471, 31109), (479, 31085), (539, 30992), (558, 30944), (568, 30923), (585, 30884), (646, 30752), (659, 30731), (683, 30686), (687, 30674), (740, 30521), (743, 30500), (776, 30377), (783, 30347), (793, 30308), (814, 30242), (815, 30239), (820, 30224), (827, 30200), (834, 30176), (905, 29969), (946, 29834), (950, 29822), (955, 29813),

Gene: McFly\_45 Start: 29627, Stop: 27786, Start Num: 246

Candidate Starts for McFly\_45:

(Start: 246 @29627 has 877 MA's), (364, 29423), (400, 29348), (402, 29345), (416, 29318), (420, 29303), (425, 29291), (444, 29240), (475, 29150), (479, 29138), (539, 29045), (552, 29006), (560, 28988), (568, 28973), (598, 28907), (613, 28874), (614, 28871), (663, 28769), (697, 28709), (726, 28625), (743, 28544), (766, 28460), (767, 28457), (771, 28448), (776, 28421), (783, 28391), (810, 28331), (820, 28292), (902, 28076), (903, 28073), (905, 28052), (946, 27917), (950, 27905), (955, 27896), (957, 27893), (1000, 27800),

Gene: McGalleon\_41 Start: 30345, Stop: 28477, Start Num: 301

Candidate Starts for McGalleon\_41:

(288, 30360), (Start: 301 @30345 has 110 MA's), (Start: 308 @30336 has 5 MA's), (375, 30192), (378, 30189), (430, 30078), (433, 30069), (435, 30057), (438, 30051), (475, 29946), (504, 29853), (531, 29778), (537, 29769), (539, 29757), (549, 29727), (554, 29712), (556, 29706), (559, 29700), (676, 29478), (776, 29163), (779, 29154), (780, 29151), (783, 29133), (794, 29091), (822, 29001), (831, 28974), (878, 28842), (888, 28803), (903, 28743), (906, 28719), (919, 28680), (929, 28647), (932, 28635),

Gene: McGuire\_45 Start: 34382, Stop: 32553, Start Num: 246

Candidate Starts for McGuire\_45:

(Start: 246 @34382 has 877 MA's), (368, 34169), (400, 34106), (416, 34076), (422, 34055), (425, 34049), (429, 34040), (470, 33923), (479, 33896), (539, 33803), (544, 33788), (556, 33755), (578, 33704), (580, 33701), (607, 33647), (612, 33635), (627, 33605), (639, 33575), (662, 33530), (683, 33491), (743, 33311), (753, 33263), (771, 33215), (780, 33176), (783, 33158), (793, 33119), (810, 33098), (814, 33077), (819, 33062), (861, 32939), (922, 32768), (929, 32744), (943, 32696), (946, 32684), (955, 32663), (959, 32657), (981, 32609), (986, 32594),

Gene: McSinger\_45 Start: 34792, Stop: 32966, Start Num: 246

Candidate Starts for McSinger\_45:

(Start: 246 @34792 has 877 MA's), (368, 34579), (374, 34564), (416, 34486), (422, 34465), (425, 34459), (429, 34450), (470, 34333), (479, 34306), (539, 34213), (544, 34198), (556, 34165), (578,

34114), (580, 34111), (612, 34045), (627, 34015), (639, 33985), (662, 33940), (683, 33901), (743, 33721), (753, 33673), (767, 33634), (783, 33568), (793, 33529), (810, 33508), (814, 33487), (820, 33469), (843, 33403), (902, 33253), (903, 33250), (909, 33214), (917, 33190), (921, 33181), (925, 33169), (946, 33094), (955, 33073),

Gene: Mcshane\_59 Start: 54021, Stop: 52162, Start Num: 205

Candidate Starts for Mcshane\_59:

(Start: 188 @54045 has 1 MA's), (Start: 205 @54021 has 304 MA's), (Start: 235 @53997 has 6 MA's), (Start: 250 @53991 has 2 MA's), (Start: 274 @53949 has 6 MA's), (283, 53928), (337, 53814), (342, 53808), (360, 53778), (391, 53718), (399, 53697), (421, 53643), (428, 53631), (434, 53613), (436, 53601), (476, 53496), (519, 53439), (538, 53403), (542, 53391), (552, 53364), (564, 53337), (570, 53319), (580, 53301), (598, 53262), (602, 53253), (603, 53250), (712, 52992), (738, 52890), (744, 52857), (750, 52836), (777, 52743), (780, 52734), (795, 52671), (814, 52635), (815, 52632), (820, 52617), (847, 52539), (851, 52527), (858, 52506), (875, 52467), (905, 52377), (910, 52359), (912, 52353), (917, 52338), (926, 52314), (930, 52299), (931, 52296), (933, 52284), (940, 52260), (963, 52212), (972, 52188),

Gene: Mecca\_60 Start: 54586, Stop: 52727, Start Num: 205

Candidate Starts for Mecca\_60:

(Start: 188 @54610 has 1 MA's), (Start: 205 @54586 has 304 MA's), (Start: 235 @54562 has 6 MA's), (Start: 250 @54556 has 2 MA's), (Start: 274 @54514 has 6 MA's), (283, 54493), (337, 54379), (342, 54373), (360, 54343), (391, 54283), (399, 54262), (421, 54208), (428, 54196), (434, 54178), (436, 54166), (476, 54061), (519, 54004), (538, 53968), (542, 53956), (551, 53932), (556, 53920), (564, 53902), (570, 53884), (580, 53866), (598, 53827), (602, 53818), (603, 53815), (604, 53812), (738, 53455), (744, 53422), (750, 53401), (777, 53308), (780, 53299), (795, 53236), (814, 53200), (815, 53197), (820, 53182), (847, 53104), (851, 53092), (858, 53071), (875, 53032), (905, 52942), (910, 52924), (912, 52918), (917, 52903), (926, 52879), (930, 52864), (931, 52861), (933, 52849), (940, 52825), (963, 52777), (972, 52753),

Gene: Medusa\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for Medusa\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: MeeZee\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for MeeZee\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Megamind20\_61 Start: 54009, Stop: 52150, Start Num: 205

Candidate Starts for Megamind20\_61:

(Start: 188 @54033 has 1 MA's), (Start: 205 @54009 has 304 MA's), (Start: 235 @53985 has 6 MA's), (Start: 250 @53979 has 2 MA's), (Start: 274 @53937 has 6 MA's), (283, 53916), (337, 53802), (342, 53796), (360, 53766), (391, 53706), (399, 53685), (421, 53631), (428, 53619), (434, 53601), (436, 53589), (476, 53484), (519, 53427), (538, 53391), (542, 53379), (552, 53352), (564, 53325), (570, 53307), (580, 53289), (598, 53250), (602, 53241), (603, 53238), (712, 52980), (738, 52878), (744, 52845), (750, 52824), (777, 52731), (780, 52722), (795, 52659), (814, 52623), (815, 52620), (820,

52605), (847, 52527), (851, 52515), (858, 52494), (875, 52455), (905, 52365), (910, 52347), (912, 52341), (917, 52326), (926, 52302), (930, 52287), (931, 52284), (933, 52272), (940, 52248), (963, 52200), (972, 52176),

Gene: Megatron\_61 Start: 54535, Stop: 52676, Start Num: 205

Candidate Starts for Megatron\_61:

(Start: 188 @54559 has 1 MA's), (Start: 205 @54535 has 304 MA's), (Start: 235 @54511 has 6 MA's), (Start: 250 @54505 has 2 MA's), (Start: 274 @54463 has 6 MA's), (283, 54442), (337, 54328), (342, 54322), (360, 54292), (391, 54232), (399, 54211), (421, 54157), (428, 54145), (434, 54127), (436, 54115), (476, 54010), (519, 53953), (538, 53917), (542, 53905), (552, 53878), (564, 53851), (570, 53833), (580, 53815), (598, 53776), (602, 53767), (603, 53764), (712, 53506), (738, 53404), (744, 53371), (750, 53350), (777, 53257), (780, 53248), (795, 53185), (814, 53149), (815, 53146), (820, 53131), (847, 53053), (851, 53041), (858, 53020), (875, 52981), (905, 52891), (910, 52873), (912, 52867), (917, 52852), (926, 52828), (930, 52813), (931, 52810), (933, 52798), (940, 52774), (963, 52726), (972, 52702),

Gene: Melc17\_60 Start: 54852, Stop: 52993, Start Num: 205

Candidate Starts for Melc17\_60:

(Start: 188 @54876 has 1 MA's), (Start: 205 @54852 has 304 MA's), (Start: 235 @54828 has 6 MA's), (Start: 250 @54822 has 2 MA's), (Start: 274 @54780 has 6 MA's), (283, 54759), (337, 54645), (342, 54639), (360, 54609), (391, 54549), (399, 54528), (421, 54474), (428, 54462), (434, 54444), (436, 54432), (476, 54327), (519, 54270), (538, 54234), (542, 54222), (551, 54198), (556, 54186), (564, 54168), (570, 54150), (580, 54132), (598, 54093), (602, 54084), (603, 54081), (604, 54078), (738, 53721), (744, 53688), (750, 53667), (777, 53574), (780, 53565), (795, 53502), (814, 53466), (815, 53463), (820, 53448), (847, 53370), (851, 53358), (858, 53337), (875, 53298), (905, 53208), (910, 53190), (912, 53184), (917, 53169), (926, 53145), (930, 53130), (931, 53127), (933, 53115), (940, 53091), (963, 53043), (972, 53019),

Gene: MelsMeow\_61 Start: 54310, Stop: 52451, Start Num: 205

Candidate Starts for MelsMeow\_61:

(Start: 188 @54334 has 1 MA's), (Start: 205 @54310 has 304 MA's), (Start: 235 @54286 has 6 MA's), (Start: 250 @54280 has 2 MA's), (Start: 274 @54238 has 6 MA's), (283, 54217), (337, 54103), (342, 54097), (360, 54067), (391, 54007), (399, 53986), (421, 53932), (428, 53920), (434, 53902), (436, 53890), (476, 53785), (519, 53728), (538, 53692), (542, 53680), (552, 53653), (570, 53608), (598, 53551), (602, 53542), (603, 53539), (712, 53281), (738, 53179), (744, 53146), (750, 53125), (777, 53032), (780, 53023), (795, 52960), (814, 52924), (815, 52921), (820, 52906), (847, 52828), (851, 52816), (858, 52795), (875, 52756), (905, 52666), (910, 52648), (912, 52642), (917, 52627), (926, 52603), (930, 52588), (931, 52585), (933, 52573), (940, 52549), (946, 52528), (963, 52501), (972, 52477), (977, 52462),

Gene: Melvin\_47 Start: 31565, Stop: 29739, Start Num: 246

Candidate Starts for Melvin\_47:

(Start: 246 @31565 has 877 MA's), (267, 31544), (280, 31514), (295, 31484), (383, 31322), (394, 31304), (425, 31232), (429, 31223), (471, 31103), (479, 31079), (539, 30986), (558, 30938), (568, 30917), (585, 30878), (646, 30746), (659, 30725), (683, 30680), (687, 30668), (740, 30515), (743, 30494), (776, 30371), (783, 30341), (793, 30302), (814, 30236), (815, 30233), (820, 30218), (827, 30194), (834, 30170), (905, 29963), (946, 29828), (950, 29816), (955, 29807),

Gene: Mercedes\_34 Start: 25967, Stop: 24108, Start Num: 299

Candidate Starts for Mercedes\_34:

(Start: 299 @25967 has 38 MA's), (305, 25961), (344, 25868), (375, 25814), (379, 25808), (430, 25700), (435, 25679), (438, 25673), (456, 25622), (485, 25538), (537, 25403), (539, 25391), (549, 25361), (554, 25346), (556, 25340), (562, 25328), (658, 25157), (684, 25091), (702, 25058), (724,

24989), (726, 24977), (776, 24797), (783, 24767), (815, 24656), (822, 24632), (823, 24629), (831, 24605), (888, 24434), (903, 24374), (906, 24350), (909, 24338), (912, 24329), (929, 24278), (947, 24206),

Gene: Mesh1\_62 Start: 54599, Stop: 52740, Start Num: 205

Candidate Starts for Mesh1\_62:

(Start: 188 @54623 has 1 MA's), (Start: 205 @54599 has 304 MA's), (Start: 235 @54575 has 6 MA's), (Start: 250 @54569 has 2 MA's), (Start: 274 @54527 has 6 MA's), (283, 54506), (337, 54392), (342, 54386), (360, 54356), (391, 54296), (399, 54275), (421, 54221), (428, 54209), (434, 54191), (436, 54179), (476, 54074), (519, 54017), (538, 53981), (542, 53969), (552, 53942), (564, 53915), (570, 53897), (580, 53879), (598, 53840), (602, 53831), (603, 53828), (712, 53570), (738, 53468), (744, 53435), (750, 53414), (777, 53321), (780, 53312), (795, 53249), (814, 53213), (815, 53210), (820, 53195), (847, 53117), (851, 53105), (858, 53084), (875, 53045), (905, 52955), (910, 52937), (912, 52931), (917, 52916), (926, 52892), (930, 52877), (931, 52874), (933, 52862), (940, 52838), (963, 52790), (972, 52766),

Gene: Mesmerelda\_62 Start: 54579, Stop: 52720, Start Num: 205

Candidate Starts for Mesmerelda\_62:

(Start: 188 @54603 has 1 MA's), (Start: 205 @54579 has 304 MA's), (Start: 235 @54555 has 6 MA's), (Start: 250 @54549 has 2 MA's), (Start: 274 @54507 has 6 MA's), (283, 54486), (337, 54372), (342, 54366), (360, 54336), (391, 54276), (399, 54255), (421, 54201), (428, 54189), (434, 54171), (436, 54159), (476, 54054), (519, 53997), (538, 53961), (542, 53949), (552, 53922), (564, 53895), (570, 53877), (580, 53859), (598, 53820), (602, 53811), (603, 53808), (712, 53550), (738, 53448), (744, 53415), (750, 53394), (777, 53301), (780, 53292), (795, 53229), (814, 53193), (815, 53190), (820, 53175), (847, 53097), (851, 53085), (858, 53064), (875, 53025), (905, 52935), (910, 52917), (912, 52911), (917, 52896), (926, 52872), (930, 52857), (931, 52854), (933, 52842), (940, 52818), (963, 52770), (972, 52746),

Gene: MetalQZJ\_44 Start: 34704, Stop: 32875, Start Num: 246

Candidate Starts for MetalQZJ\_44:

(Start: 246 @34704 has 877 MA's), (368, 34491), (374, 34476), (400, 34428), (416, 34398), (422, 34377), (425, 34371), (429, 34362), (444, 34320), (470, 34245), (479, 34218), (539, 34125), (544, 34110), (578, 34026), (580, 34023), (612, 33957), (627, 33927), (639, 33897), (662, 33852), (683, 33813), (743, 33633), (753, 33585), (771, 33537), (780, 33498), (783, 33480), (793, 33441), (810, 33420), (814, 33399), (819, 33384), (861, 33261), (922, 33090), (929, 33066), (943, 33018), (946, 33006), (955, 32985), (959, 32979), (981, 32931), (986, 32916),

Gene: Methuselah\_45 Start: 31880, Stop: 30066, Start Num: 246

Candidate Starts for Methuselah\_45:

(Start: 246 @31880 has 877 MA's), (275, 31841), (280, 31829), (364, 31676), (371, 31661), (400, 31604), (425, 31547), (429, 31538), (444, 31496), (461, 31445), (479, 31394), (521, 31340), (539, 31301), (556, 31253), (568, 31229), (585, 31190), (598, 31163), (612, 31133), (654, 31040), (662, 31028), (686, 30980), (697, 30965), (743, 30809), (755, 30758), (766, 30725), (767, 30722), (783, 30656), (793, 30617), (815, 30545), (827, 30506), (834, 30482), (843, 30464), (853, 30431), (888, 30350), (905, 30290), (932, 30203), (946, 30155), (950, 30143), (955, 30134), (957, 30131),

Gene: Micasa\_40 Start: 30726, Stop: 28861, Start Num: 246

Candidate Starts for Micasa\_40:

(Start: 246 @30726 has 877 MA's), (280, 30675), (318, 30615), (347, 30552), (364, 30522), (366, 30519), (395, 30462), (400, 30450), (416, 30420), (425, 30393), (479, 30240), (539, 30144), (556, 30096), (594, 30012), (598, 30006), (633, 29934), (646, 29901), (654, 29886), (662, 29874), (712, 29775), (743, 29640), (752, 29610), (753, 29592), (755, 29589), (767, 29553), (771, 29544), (776, 29517), (783, 29487), (793, 29448), (814, 29406), (820, 29388), (834, 29340), (853, 29289), (876,

29235), (880, 29226), (888, 29208), (905, 29148), (910, 29130), (939, 29037), (946, 29013), (950, 29001), (1000, 28896),

Gene: MichaelPhcott\_61 Start: 54184, Stop: 52325, Start Num: 205

Candidate Starts for MichaelPhcott\_61:

(Start: 188 @54208 has 1 MA's), (Start: 205 @54184 has 304 MA's), (Start: 235 @54160 has 6 MA's), (Start: 250 @54154 has 2 MA's), (Start: 274 @54112 has 6 MA's), (283, 54091), (337, 53977), (342, 53971), (360, 53941), (391, 53881), (399, 53860), (421, 53806), (428, 53794), (434, 53776), (436, 53764), (476, 53659), (519, 53602), (538, 53566), (542, 53554), (551, 53530), (556, 53518), (564, 53500), (570, 53482), (580, 53464), (598, 53425), (602, 53416), (603, 53413), (604, 53410), (738, 53053), (744, 53020), (750, 52999), (777, 52906), (780, 52897), (795, 52834), (814, 52798), (815, 52795), (820, 52780), (847, 52702), (851, 52690), (858, 52669), (875, 52630), (905, 52540), (910, 52522), (912, 52516), (917, 52501), (926, 52477), (930, 52462), (931, 52459), (933, 52447), (940, 52423), (963, 52375), (972, 52351),

Gene: Michley\_44 Start: 34222, Stop: 32396, Start Num: 246

Candidate Starts for Michley\_44:

(Start: 246 @34222 has 877 MA's), (368, 34009), (416, 33916), (422, 33895), (425, 33889), (429, 33880), (470, 33763), (479, 33736), (539, 33643), (544, 33628), (556, 33595), (578, 33544), (580, 33541), (612, 33475), (627, 33445), (639, 33415), (662, 33370), (683, 33331), (743, 33151), (753, 33103), (767, 33064), (783, 32998), (793, 32959), (810, 32938), (814, 32917), (820, 32899), (843, 32833), (902, 32683), (903, 32680), (909, 32644), (917, 32620), (921, 32611), (925, 32599), (946, 32524), (955, 32503),

Gene: Microwolf\_48 Start: 31854, Stop: 30040, Start Num: 246

Candidate Starts for Microwolf\_48:

(Start: 246 @31854 has 877 MA's), (275, 31815), (280, 31803), (364, 31650), (371, 31635), (400, 31578), (425, 31521), (429, 31512), (444, 31470), (461, 31419), (479, 31368), (539, 31275), (556, 31227), (560, 31218), (568, 31203), (585, 31164), (598, 31137), (612, 31107), (654, 31014), (662, 31002), (686, 30954), (697, 30939), (743, 30783), (767, 30696), (783, 30630), (793, 30591), (815, 30519), (827, 30480), (834, 30456), (843, 30438), (853, 30405), (864, 30378), (888, 30324), (905, 30264), (930, 30186), (946, 30129), (950, 30117), (955, 30108),

Gene: MiculUcigas\_44 Start: 31260, Stop: 29473, Start Num: 246

Candidate Starts for MiculUcigas\_44:

(Start: 246 @31260 has 877 MA's), (364, 31056), (366, 31053), (368, 31047), (383, 31017), (400, 30984), (402, 30981), (416, 30954), (425, 30927), (444, 30876), (479, 30774), (539, 30681), (556, 30633), (560, 30624), (568, 30609), (598, 30543), (635, 30462), (659, 30414), (726, 30270), (743, 30189), (755, 30138), (766, 30105), (783, 30036), (793, 29997), (810, 29976), (814, 29955), (818, 29943), (886, 29763), (888, 29757), (902, 29721), (905, 29697), (930, 29619), (946, 29562), (950, 29550),

Gene: Midas2\_38 Start: 30444, Stop: 28579, Start Num: 246

Candidate Starts for Midas2\_38:

(Start: 246 @30444 has 877 MA's), (280, 30393), (318, 30333), (347, 30270), (364, 30240), (366, 30237), (395, 30180), (400, 30168), (416, 30138), (425, 30111), (479, 29958), (539, 29862), (556, 29814), (594, 29730), (598, 29724), (613, 29691), (633, 29652), (646, 29619), (654, 29604), (662, 29592), (712, 29493), (743, 29358), (752, 29328), (753, 29310), (755, 29307), (767, 29271), (771, 29262), (776, 29235), (783, 29205), (793, 29166), (814, 29124), (820, 29106), (834, 29058), (853, 29007), (876, 28953), (880, 28944), (888, 28926), (905, 28866), (910, 28848), (939, 28755), (946, 28731), (950, 28719), (1000, 28614),

Gene: Miko\_43 Start: 31812, Stop: 30025, Start Num: 246

Candidate Starts for Miko\_43:

(Start: 246 @31812 has 877 MA's), (366, 31605), (368, 31599), (383, 31569), (400, 31536), (402, 31533), (420, 31491), (425, 31479), (479, 31326), (539, 31233), (556, 31185), (560, 31176), (568, 31161), (598, 31095), (659, 30966), (726, 30822), (743, 30741), (755, 30690), (766, 30657), (767, 30654), (783, 30588), (793, 30549), (810, 30528), (831, 30453), (834, 30441), (853, 30390), (864, 30363), (880, 30327), (888, 30309), (902, 30273), (905, 30249), (930, 30171), (946, 30114), (950, 30102), (955, 30093),

Gene: Mikota\_59 Start: 53562, Stop: 51703, Start Num: 205

Candidate Starts for Mikota\_59:

(Start: 188 @53586 has 1 MA's), (Start: 205 @53562 has 304 MA's), (Start: 235 @53538 has 6 MA's), (Start: 250 @53532 has 2 MA's), (267, 53505), (Start: 274 @53490 has 6 MA's), (283, 53469), (337, 53355), (342, 53349), (360, 53319), (391, 53259), (399, 53238), (421, 53184), (428, 53172), (434, 53154), (436, 53142), (476, 53037), (519, 52980), (538, 52944), (542, 52932), (552, 52905), (570, 52860), (598, 52803), (602, 52794), (603, 52791), (604, 52788), (738, 52431), (744, 52398), (750, 52377), (777, 52284), (780, 52275), (795, 52212), (814, 52176), (815, 52173), (820, 52158), (847, 52080), (851, 52068), (858, 52047), (875, 52008), (905, 51918), (910, 51900), (912, 51894), (917, 51879), (926, 51855), (930, 51840), (931, 51837), (933, 51825), (940, 51801), (963, 51753), (972, 51729),

Gene: Milcery\_39 Start: 30563, Stop: 28704, Start Num: 246

Candidate Starts for Milcery\_39:

(Start: 246 @30563 has 877 MA's), (280, 30512), (318, 30452), (347, 30389), (364, 30359), (366, 30356), (395, 30299), (400, 30287), (416, 30257), (425, 30230), (479, 30077), (539, 29981), (550, 29948), (556, 29933), (594, 29849), (598, 29843), (633, 29771), (646, 29738), (654, 29723), (662, 29711), (712, 29612), (743, 29477), (752, 29447), (753, 29429), (755, 29426), (767, 29390), (771, 29381), (774, 29360), (777, 29351), (783, 29324), (784, 29321), (810, 29264), (814, 29243), (853, 29126), (876, 29072), (880, 29063), (888, 29045), (905, 28985), (910, 28967), (939, 28874), (946, 28850), (950, 28838), (1007, 28721), (1008, 28718),

Gene: Millski\_44 Start: 31571, Stop: 29745, Start Num: 246

Candidate Starts for Millski\_44:

(Start: 246 @31571 has 877 MA's), (267, 31550), (280, 31520), (295, 31490), (383, 31328), (394, 31310), (425, 31238), (429, 31229), (471, 31109), (479, 31085), (539, 30992), (558, 30944), (568, 30923), (585, 30884), (646, 30752), (659, 30731), (683, 30686), (687, 30674), (740, 30521), (743, 30500), (776, 30377), (783, 30347), (793, 30308), (814, 30242), (815, 30239), (820, 30224), (827, 30200), (834, 30176), (905, 29969), (946, 29834), (950, 29822), (955, 29813),

Gene: MillyPhilly\_39 Start: 28927, Stop: 27062, Start Num: 301

Candidate Starts for MillyPhilly\_39:

(Start: 238 @29014 has 3 MA's), (Start: 241 @29011 has 13 MA's), (Start: 301 @28927 has 110 MA's), (Start: 308 @28918 has 5 MA's), (354, 28813), (358, 28804), (375, 28774), (378, 28771), (433, 28651), (435, 28639), (438, 28633), (475, 28528), (484, 28501), (531, 28360), (536, 28354), (537, 28351), (539, 28339), (548, 28312), (549, 28309), (554, 28294), (556, 28288), (559, 28282), (586, 28249), (676, 28060), (776, 27745), (779, 27736), (780, 27733), (783, 27715), (794, 27673), (796, 27667), (798, 27658), (805, 27643), (822, 27586), (878, 27427), (885, 27397), (888, 27388), (903, 27328), (906, 27304), (919, 27265), (929, 27232), (932, 27220), (947, 27160),

Gene: Milomuff\_43 Start: 29387, Stop: 31261, Start Num: 246

Candidate Starts for Milomuff\_43:

(Start: 246 @29387 has 877 MA's), (287, 29456), (Start: 301 @29477 has 110 MA's), (429, 29723), (434, 29738), (444, 29765), (585, 30059), (646, 30194), (696, 30293), (731, 30416), (743, 30476), (746, 30482), (755, 30527), (762, 30542), (764, 30557), (774, 30593), (783, 30629), (813, 30722),

(844, 30815), (874, 30893), (902, 30965), (909, 31004), (924, 31046), (929, 31064), (939, 31100), (946, 31124), (955, 31145),

Gene: Mimi\_99 Start: 77797, Stop: 79593, Start Num: 262

Candidate Starts for Mimi\_99:

(Start: 262 @77797 has 4 MA's), (318, 77893), (428, 78109), (435, 78136), (438, 78142), (470, 78211), (482, 78247), (571, 78394), (573, 78400), (585, 78421), (591, 78436), (683, 78625), (706, 78670), (719, 78703), (723, 78721), (730, 78754), (740, 78793), (743, 78814), (746, 78820), (774, 78934), (792, 79018), (794, 79024), (797, 79036), (813, 79084), (816, 79096), (827, 79132), (840, 79165), (843, 79174), (858, 79219), (865, 79237), (898, 79321), (902, 79342), (906, 79369), (910, 79384), (922, 79417), (929, 79441), (934, 79465), (946, 79501), (961, 79528),

Gene: MinecraftSteve\_48 Start: 29943, Stop: 28153, Start Num: 246

Candidate Starts for MinecraftSteve\_48:

(Start: 246 @29943 has 877 MA's), (347, 29769), (400, 29664), (402, 29661), (416, 29634), (425, 29607), (444, 29556), (479, 29454), (539, 29361), (552, 29322), (560, 29304), (646, 29115), (683, 29049), (717, 28989), (726, 28950), (738, 28899), (740, 28890), (743, 28869), (755, 28818), (766, 28785), (776, 28746), (783, 28716), (810, 28656), (814, 28635), (827, 28593), (835, 28566), (876, 28464), (902, 28401), (903, 28398), (946, 28242), (950, 28230), (957, 28218),

Gene: MiniBoss\_58 Start: 53368, Stop: 51509, Start Num: 205

Candidate Starts for MiniBoss\_58:

(Start: 188 @53392 has 1 MA's), (Start: 205 @53368 has 304 MA's), (Start: 235 @53344 has 6 MA's), (Start: 250 @53338 has 2 MA's), (267, 53311), (Start: 274 @53296 has 6 MA's), (283, 53275), (337, 53161), (342, 53155), (360, 53125), (391, 53065), (399, 53044), (421, 52990), (428, 52978), (434, 52960), (436, 52948), (476, 52843), (519, 52786), (538, 52750), (542, 52738), (552, 52711), (556, 52702), (570, 52666), (598, 52609), (602, 52600), (603, 52597), (604, 52594), (738, 52237), (744, 52204), (750, 52183), (777, 52090), (780, 52081), (795, 52018), (814, 51982), (815, 51979), (820, 51964), (847, 51886), (851, 51874), (858, 51853), (875, 51814), (905, 51724), (910, 51706), (912, 51700), (917, 51685), (926, 51661), (930, 51646), (931, 51643), (933, 51631), (940, 51607), (963, 51559), (972, 51535),

Gene: MiniMommy\_47 Start: 30558, Stop: 32420, Start Num: 245

Candidate Starts for MiniMommy\_47:

(163, 30459), (178, 30477), (Start: 245 @30558 has 74 MA's), (279, 30606), (366, 30765), (368, 30771), (422, 30876), (438, 30921), (536, 31128), (585, 31257), (635, 31362), (659, 31410), (699, 31494), (743, 31668), (766, 31752), (774, 31785), (777, 31794), (790, 31845), (813, 31914), (850, 32025), (878, 32094), (880, 32100), (912, 32205), (946, 32316),

Gene: Miramae\_44 Start: 31710, Stop: 29881, Start Num: 246

Candidate Starts for Miramae\_44:

(Start: 246 @31710 has 877 MA's), (280, 31659), (295, 31629), (383, 31467), (394, 31449), (425, 31377), (429, 31368), (471, 31248), (479, 31224), (539, 31131), (558, 31083), (585, 31023), (607, 30978), (646, 30891), (659, 30870), (683, 30825), (687, 30813), (743, 30639), (771, 30543), (776, 30516), (777, 30513), (783, 30486), (793, 30447), (814, 30378), (815, 30375), (820, 30360), (827, 30336), (832, 30318), (834, 30312), (837, 30306), (905, 30105), (946, 29970), (950, 29958), (955, 29949),

Gene: Misomonster\_49 Start: 31883, Stop: 30069, Start Num: 246

Candidate Starts for Misomonster\_49:

(Start: 246 @31883 has 877 MA's), (275, 31844), (280, 31832), (364, 31679), (371, 31664), (400, 31607), (425, 31550), (429, 31541), (444, 31499), (461, 31448), (479, 31397), (521, 31343), (539, 31304), (556, 31256), (568, 31232), (585, 31193), (598, 31166), (612, 31136), (654, 31043), (662,



31031), (686, 30983), (697, 30968), (743, 30812), (755, 30761), (766, 30728), (767, 30725), (783, 30659), (793, 30620), (815, 30548), (827, 30509), (834, 30485), (843, 30467), (853, 30434), (888, 30353), (905, 30293), (932, 30206), (946, 30158), (950, 30146), (955, 30137), (957, 30134),

Gene: MissSwiss\_41 Start: 28328, Stop: 30193, Start Num: 245

Candidate Starts for MissSwiss\_41:

(Start: 245 @28328 has 74 MA's), (279, 28376), (347, 28502), (416, 28625), (448, 28715), (541, 28922), (544, 28931), (585, 29030), (591, 29045), (613, 29090), (659, 29183), (717, 29321), (743, 29441), (752, 29471), (760, 29504), (762, 29507), (767, 29528), (783, 29594), (813, 29687), (834, 29759), (878, 29867), (902, 29930), (946, 30089), (949, 30098),

Gene: MissWhite\_43 Start: 29746, Stop: 27959, Start Num: 246

Candidate Starts for MissWhite\_43:

(Start: 246 @29746 has 877 MA's), (364, 29542), (366, 29539), (368, 29533), (383, 29503), (395, 29482), (399, 29473), (400, 29470), (416, 29440), (425, 29413), (433, 29392), (444, 29362), (479, 29260), (539, 29167), (556, 29119), (560, 29110), (568, 29095), (598, 29029), (646, 28921), (659, 28900), (743, 28675), (755, 28624), (771, 28579), (783, 28522), (793, 28483), (810, 28462), (831, 28387), (837, 28369), (853, 28324), (880, 28261), (886, 28249), (902, 28207), (905, 28183), (924, 28126), (930, 28105), (946, 28048), (950, 28036), (955, 28027),

Gene: MitKao\_60 Start: 54033, Stop: 52174, Start Num: 205

Candidate Starts for MitKao\_60:

(Start: 188 @54057 has 1 MA's), (Start: 205 @54033 has 304 MA's), (Start: 235 @54009 has 6 MA's), (Start: 250 @54003 has 2 MA's), (Start: 274 @53961 has 6 MA's), (283, 53940), (337, 53826), (342, 53820), (360, 53790), (391, 53730), (399, 53709), (421, 53655), (428, 53643), (434, 53625), (436, 53613), (476, 53508), (519, 53451), (538, 53415), (542, 53403), (552, 53376), (570, 53331), (598, 53274), (602, 53265), (603, 53262), (738, 52902), (744, 52869), (750, 52848), (777, 52755), (780, 52746), (795, 52683), (814, 52647), (815, 52644), (820, 52629), (847, 52551), (851, 52539), (858, 52518), (875, 52479), (905, 52389), (910, 52371), (912, 52365), (917, 52350), (926, 52326), (930, 52311), (931, 52308), (933, 52296), (940, 52272), (963, 52224), (972, 52200),

Gene: Mithril\_53 Start: 54005, Stop: 52182, Start Num: 197

Candidate Starts for Mithril\_53:

(Start: 182 @54023 has 4 MA's), (Start: 197 @54005 has 27 MA's), (Start: 250 @53981 has 2 MA's), (Start: 274 @53939 has 6 MA's), (283, 53918), (329, 53831), (387, 53726), (399, 53699), (406, 53684), (434, 53618), (445, 53588), (448, 53579), (453, 53576), (454, 53573), (519, 53453), (531, 53435), (538, 53417), (542, 53405), (552, 53378), (580, 53315), (598, 53276), (602, 53267), (603, 53264), (615, 53234), (633, 53198), (712, 53012), (724, 52973), (725, 52970), (732, 52934), (738, 52910), (744, 52877), (775, 52769), (777, 52763), (780, 52754), (814, 52655), (815, 52652), (820, 52637), (847, 52559), (851, 52547), (858, 52526), (861, 52517), (875, 52487), (888, 52457), (901, 52430), (905, 52397), (912, 52373), (926, 52334), (931, 52316), (933, 52304), (940, 52280), (956, 52238), (963, 52232), (972, 52208),

Gene: Mkhuseli\_44 Start: 34107, Stop: 32281, Start Num: 246

Candidate Starts for Mkhuseli\_44:

(Start: 246 @34107 has 877 MA's), (368, 33894), (374, 33879), (416, 33801), (422, 33780), (425, 33774), (429, 33765), (470, 33648), (479, 33621), (539, 33528), (544, 33513), (556, 33480), (578, 33429), (580, 33426), (612, 33360), (627, 33330), (639, 33300), (662, 33255), (683, 33216), (743, 33036), (752, 33006), (753, 32988), (767, 32949), (783, 32883), (814, 32802), (815, 32799), (843, 32718), (902, 32568), (903, 32565), (909, 32529), (917, 32505), (921, 32496), (925, 32484), (946, 32409), (955, 32388),

Gene: MmasiCarm\_59 Start: 54089, Stop: 52272, Start Num: 247

Candidate Starts for MmasiCarm\_59:

(130, 54272), (Start: 247 @54089 has 43 MA's), (267, 54059), (368, 53879), (433, 53726), (435, 53714), (448, 53684), (454, 53678), (476, 53615), (478, 53609), (519, 53558), (537, 53531), (538, 53522), (556, 53474), (603, 53369), (645, 53273), (674, 53222), (724, 53078), (732, 53039), (739, 53009), (744, 52982), (748, 52970), (775, 52874), (777, 52868), (780, 52859), (782, 52847), (807, 52775), (814, 52745), (820, 52727), (822, 52718), (847, 52649), (851, 52637), (858, 52616), (888, 52547), (898, 52532), (903, 52508), (905, 52487), (910, 52469), (912, 52463), (924, 52430), (926, 52424), (931, 52406), (933, 52394), (936, 52382), (940, 52370), (956, 52328), (972, 52298),

Gene: Molivia\_56 Start: 35308, Stop: 33140, Start Num: 233

Candidate Starts for Molivia\_56:

(Start: 233 @35308 has 13 MA's), (256, 35281), (Start: 272 @35254 has 4 MA's), (317, 35170), (359, 35062), (369, 35044), (370, 35041), (382, 35017), (398, 34981), (400, 34975), (410, 34951), (415, 34942), (431, 34885), (434, 34876), (436, 34864), (446, 34846), (447, 34843), (490, 34693), (491, 34690), (493, 34651), (567, 34456), (570, 34444), (590, 34393), (593, 34387), (600, 34372), (606, 34357), (618, 34330), (682, 34174), (693, 34150), (739, 33988), (751, 33940), (757, 33907), (766, 33883), (777, 33841), (795, 33766), (811, 33706), (832, 33628), (834, 33622), (848, 33589), (873, 33526), (875, 33520), (891, 33481), (902, 33433), (907, 33403), (923, 33349), (926, 33340), (935, 33298), (940, 33280), (944, 33268), (953, 33244), (958, 33229), (975, 33187),

Gene: Molly\_45 Start: 33982, Stop: 32153, Start Num: 246

Candidate Starts for Molly\_45:

(Start: 246 @33982 has 877 MA's), (368, 33769), (374, 33754), (400, 33706), (416, 33676), (422, 33655), (425, 33649), (429, 33640), (470, 33523), (479, 33496), (539, 33403), (544, 33388), (551, 33367), (578, 33304), (580, 33301), (612, 33235), (639, 33175), (662, 33130), (683, 33091), (743, 32911), (753, 32863), (771, 32815), (780, 32776), (783, 32758), (793, 32719), (810, 32698), (814, 32677), (819, 32662), (861, 32539), (922, 32368), (929, 32344), (943, 32296), (946, 32284), (955, 32263), (959, 32257), (981, 32209), (986, 32194),

Gene: MonChoix\_37 Start: 28950, Stop: 27082, Start Num: 301

Candidate Starts for MonChoix\_37:

(Start: 182 @29115 has 4 MA's), (214, 29070), (Start: 250 @29025 has 2 MA's), (Start: 301 @28950 has 110 MA's), (Start: 308 @28941 has 5 MA's), (430, 28683), (432, 28677), (435, 28662), (438, 28656), (484, 28524), (501, 28470), (531, 28383), (537, 28374), (539, 28362), (548, 28335), (549, 28332), (554, 28317), (556, 28311), (562, 28299), (718, 27981), (779, 27759), (780, 27756), (783, 27738), (794, 27696), (822, 27606), (831, 27579), (878, 27447), (885, 27417), (888, 27408), (903, 27348), (906, 27324), (908, 27318), (919, 27285), (929, 27252), (932, 27240),

Gene: Monet\_48 Start: 36234, Stop: 34408, Start Num: 246

Candidate Starts for Monet\_48:

(Start: 246 @36234 has 877 MA's), (368, 36021), (374, 36006), (416, 35928), (422, 35907), (425, 35901), (429, 35892), (470, 35775), (479, 35748), (539, 35655), (544, 35640), (578, 35556), (580, 35553), (612, 35487), (627, 35457), (639, 35427), (662, 35382), (683, 35343), (743, 35163), (753, 35115), (767, 35076), (783, 35010), (793, 34971), (810, 34950), (814, 34929), (820, 34911), (843, 34845), (902, 34695), (903, 34692), (909, 34656), (917, 34632), (925, 34611), (932, 34584), (946, 34536), (955, 34515),

Gene: MoneyMay\_48 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for MoneyMay\_48:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (686, 30952), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827,

30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: Moose\_44 Start: 34479, Stop: 32653, Start Num: 246

Candidate Starts for Moose\_44:

(Start: 246 @34479 has 877 MA's), (368, 34266), (374, 34251), (416, 34173), (422, 34152), (425, 34146), (429, 34137), (470, 34020), (479, 33993), (539, 33900), (544, 33885), (551, 33864), (556, 33852), (578, 33801), (580, 33798), (612, 33732), (627, 33702), (639, 33672), (662, 33627), (683, 33588), (743, 33408), (753, 33360), (767, 33321), (783, 33255), (793, 33216), (810, 33195), (814, 33174), (820, 33156), (843, 33090), (902, 32940), (903, 32937), (909, 32901), (917, 32877), (921, 32868), (925, 32856), (946, 32781), (955, 32760),

Gene: Morgushi\_60 Start: 54022, Stop: 52163, Start Num: 205

Candidate Starts for Morgushi\_60:

(Start: 188 @54046 has 1 MA's), (Start: 205 @54022 has 304 MA's), (Start: 235 @53998 has 6 MA's), (Start: 250 @53992 has 2 MA's), (Start: 274 @53950 has 6 MA's), (283, 53929), (337, 53815), (342, 53809), (360, 53779), (391, 53719), (399, 53698), (421, 53644), (428, 53632), (434, 53614), (436, 53602), (476, 53497), (519, 53440), (538, 53404), (542, 53392), (552, 53365), (570, 53320), (598, 53263), (602, 53254), (603, 53251), (738, 52891), (744, 52858), (750, 52837), (777, 52744), (780, 52735), (795, 52672), (814, 52636), (815, 52633), (820, 52618), (847, 52540), (851, 52528), (858, 52507), (875, 52468), (905, 52378), (910, 52360), (912, 52354), (917, 52339), (926, 52315), (930, 52300), (931, 52297), (933, 52285), (940, 52261), (963, 52213), (972, 52189),

Gene: Morpher26\_44 Start: 31543, Stop: 29714, Start Num: 246

Candidate Starts for Morpher26\_44:

(Start: 246 @31543 has 877 MA's), (280, 31492), (295, 31462), (383, 31300), (394, 31282), (400, 31267), (425, 31210), (429, 31201), (471, 31081), (479, 31057), (513, 31015), (539, 30964), (558, 30916), (568, 30895), (585, 30856), (607, 30811), (610, 30805), (646, 30724), (659, 30703), (683, 30658), (740, 30493), (743, 30472), (783, 30319), (793, 30280), (815, 30208), (820, 30193), (827, 30169), (832, 30151), (834, 30145), (837, 30139), (905, 29938), (946, 29803), (950, 29791), (955, 29782),

Gene: Morrigan\_40 Start: 28385, Stop: 26493, Start Num: 299

Candidate Starts for Morrigan\_40:

(Start: 299 @28385 has 38 MA's), (Start: 308 @28376 has 5 MA's), (328, 28319), (344, 28289), (358, 28265), (368, 28250), (375, 28235), (379, 28229), (391, 28211), (403, 28178), (435, 28100), (438, 28094), (504, 27893), (537, 27809), (539, 27797), (549, 27767), (554, 27752), (556, 27746), (559, 27740), (562, 27734), (574, 27731), (704, 27464), (720, 27413), (736, 27347), (783, 27146), (794, 27104), (805, 27074), (812, 27053), (822, 27017), (846, 26945), (888, 26819), (903, 26759), (906, 26735), (909, 26723), (947, 26591),

Gene: Morrissey\_47 Start: 37547, Stop: 35145, Start Num: 3

Candidate Starts for Morrissey\_47:

(Start: 3 @37547 has 5 MA's), (22, 37442), (26, 37418), (40, 37364), (49, 37337), (50, 37334), (61, 37292), (62, 37289), (78, 37244), (86, 37223), (99, 37199), (110, 37160), (118, 37145), (126, 37121), (131, 37112), (134, 37106), (Start: 160 @37043 has 1 MA's), (170, 37031), (212, 36977), (287, 36869), (318, 36842), (322, 36821), (398, 36677), (420, 36623), (421, 36620), (423, 36614), (435, 36584), (442, 36569), (467, 36512), (474, 36491), (476, 36485), (479, 36476), (538, 36395), (562, 36332), (575, 36299), (589, 36272), (603, 36242), (615, 36212), (674, 36092), (675, 36083), (719, 35966), (724, 35948), (730, 35918), (732, 35909), (738, 35885), (744, 35852), (771, 35771), (775, 35747), (777, 35741), (795, 35669), (812, 35642), (820, 35615), (827, 35591), (847, 35537), (851, 35525), (895, 35414), (897, 35411), (930, 35285), (931, 35282), (936, 35258), (940, 35246), (963, 35195), (972, 35171), (979, 35150),

Gene: Morrow\_46 Start: 31576, Stop: 29750, Start Num: 246

Candidate Starts for Morrow\_46:

(Start: 246 @31576 has 877 MA's), (267, 31555), (280, 31525), (295, 31495), (383, 31333), (394, 31315), (425, 31243), (429, 31234), (471, 31114), (479, 31090), (539, 30997), (558, 30949), (568, 30928), (585, 30889), (646, 30757), (659, 30736), (683, 30691), (687, 30679), (740, 30526), (743, 30505), (776, 30382), (783, 30352), (793, 30313), (814, 30247), (815, 30244), (820, 30229), (827, 30205), (834, 30181), (905, 29974), (946, 29839), (950, 29827), (955, 29818),

Gene: Mortcellus\_58 Start: 54744, Stop: 52927, Start Num: 247

Candidate Starts for Mortcellus\_58:

(130, 54927), (Start: 247 @54744 has 43 MA's), (267, 54714), (368, 54534), (433, 54381), (435, 54369), (448, 54339), (454, 54333), (476, 54270), (478, 54264), (519, 54213), (537, 54186), (538, 54177), (556, 54129), (603, 54024), (645, 53928), (674, 53877), (724, 53733), (732, 53694), (739, 53664), (744, 53637), (748, 53625), (775, 53529), (777, 53523), (780, 53514), (782, 53502), (807, 53430), (814, 53400), (820, 53382), (822, 53373), (847, 53304), (851, 53292), (858, 53271), (888, 53202), (898, 53187), (903, 53163), (905, 53142), (912, 53118), (926, 53079), (931, 53061), (933, 53049), (936, 53037), (940, 53025), (956, 52983), (972, 52953),

Gene: Morty\_61 Start: 54544, Stop: 52685, Start Num: 205

Candidate Starts for Morty\_61:

(Start: 188 @54568 has 1 MA's), (Start: 205 @54544 has 304 MA's), (Start: 235 @54520 has 6 MA's), (Start: 250 @54514 has 2 MA's), (Start: 274 @54472 has 6 MA's), (283, 54451), (337, 54337), (342, 54331), (360, 54301), (391, 54241), (399, 54220), (421, 54166), (428, 54154), (434, 54136), (436, 54124), (476, 54019), (519, 53962), (538, 53926), (542, 53914), (551, 53890), (556, 53878), (564, 53860), (570, 53842), (580, 53824), (598, 53785), (602, 53776), (603, 53773), (604, 53770), (738, 53413), (744, 53380), (750, 53359), (777, 53266), (780, 53257), (795, 53194), (814, 53158), (815, 53155), (820, 53140), (847, 53062), (851, 53050), (858, 53029), (875, 52990), (905, 52900), (910, 52882), (912, 52876), (917, 52861), (926, 52837), (930, 52822), (931, 52819), (933, 52807), (940, 52783), (963, 52735), (972, 52711),

Gene: Morty007\_58 Start: 54530, Stop: 52713, Start Num: 247

Candidate Starts for Morty007\_58:

(60, 54914), (130, 54713), (Start: 247 @54530 has 43 MA's), (267, 54500), (368, 54320), (433, 54167), (435, 54155), (448, 54125), (454, 54119), (476, 54056), (478, 54050), (519, 53999), (538, 53963), (556, 53915), (603, 53810), (645, 53714), (674, 53663), (724, 53519), (732, 53480), (739, 53450), (744, 53423), (748, 53411), (775, 53315), (777, 53309), (780, 53300), (782, 53288), (807, 53216), (814, 53186), (820, 53168), (822, 53159), (847, 53090), (851, 53078), (858, 53057), (888, 52988), (898, 52973), (903, 52949), (912, 52904), (926, 52865), (931, 52847), (933, 52835), (936, 52823), (940, 52811), (956, 52769), (972, 52739),

Gene: Mosaic\_59 Start: 54027, Stop: 52168, Start Num: 205

Candidate Starts for Mosaic\_59:

(Start: 188 @54051 has 1 MA's), (Start: 205 @54027 has 304 MA's), (Start: 235 @54003 has 6 MA's), (Start: 250 @53997 has 2 MA's), (Start: 274 @53955 has 6 MA's), (283, 53934), (337, 53820), (342, 53814), (360, 53784), (391, 53724), (399, 53703), (421, 53649), (428, 53637), (434, 53619), (436, 53607), (476, 53502), (519, 53445), (538, 53409), (542, 53397), (552, 53370), (570, 53325), (598, 53268), (602, 53259), (603, 53256), (738, 52896), (744, 52863), (750, 52842), (777, 52749), (780, 52740), (795, 52677), (814, 52641), (815, 52638), (820, 52623), (847, 52545), (851, 52533), (858, 52512), (875, 52473), (905, 52383), (910, 52365), (912, 52359), (917, 52344), (926, 52320), (930, 52305), (931, 52302), (933, 52290), (940, 52266), (963, 52218), (972, 52194),

Gene: Moss\_38 Start: 27679, Stop: 29661, Start Num: 245

Candidate Starts for Moss\_38:

(Start: 245 @27679 has 74 MA's), (347, 27853), (364, 27883), (386, 27916), (402, 27949), (433, 28024), (442, 28051), (521, 28252), (585, 28426), (659, 28582), (717, 28720), (737, 28807), (743, 28840), (752, 28870), (767, 28927), (783, 28993), (813, 29086), (905, 29353), (912, 29377), (946, 29488),

Gene: MossRose\_53 Start: 47650, Stop: 45833, Start Num: 241

Candidate Starts for MossRose\_53:

(Start: 241 @47650 has 13 MA's), (Start: 250 @47641 has 2 MA's), (267, 47614), (273, 47602), (283, 47578), (287, 47569), (366, 47431), (381, 47395), (417, 47320), (445, 47245), (476, 47167), (519, 47110), (538, 47074), (542, 47062), (551, 47038), (592, 46945), (603, 46921), (611, 46903), (724, 46630), (732, 46591), (739, 46561), (744, 46534), (775, 46426), (777, 46420), (780, 46411), (812, 46321), (814, 46312), (815, 46309), (816, 46306), (820, 46294), (847, 46216), (851, 46204), (852, 46198), (858, 46183), (879, 46135), (901, 46087), (905, 46054), (912, 46030), (926, 45991), (930, 45976), (940, 45931), (972, 45859),

Gene: MrGordo\_44 Start: 34016, Stop: 32190, Start Num: 246

Candidate Starts for MrGordo\_44:

(Start: 246 @34016 has 877 MA's), (368, 33803), (374, 33788), (400, 33740), (416, 33710), (422, 33689), (425, 33683), (429, 33674), (470, 33557), (479, 33530), (539, 33437), (544, 33422), (556, 33389), (578, 33338), (580, 33335), (612, 33269), (627, 33239), (639, 33209), (662, 33164), (683, 33125), (743, 32945), (753, 32897), (767, 32858), (783, 32792), (793, 32753), (810, 32732), (814, 32711), (820, 32693), (843, 32627), (902, 32477), (903, 32474), (909, 32438), (917, 32414), (921, 32405), (925, 32393), (932, 32366), (946, 32318), (955, 32297),

Gene: MrPhizzler\_61 Start: 54490, Stop: 52631, Start Num: 205

Candidate Starts for MrPhizzler\_61:

(Start: 188 @54514 has 1 MA's), (Start: 205 @54490 has 304 MA's), (Start: 235 @54466 has 6 MA's), (Start: 250 @54460 has 2 MA's), (Start: 274 @54418 has 6 MA's), (283, 54397), (337, 54283), (342, 54277), (360, 54247), (391, 54187), (399, 54166), (421, 54112), (428, 54100), (434, 54082), (436, 54070), (476, 53965), (519, 53908), (538, 53872), (542, 53860), (551, 53836), (556, 53824), (564, 53806), (570, 53788), (580, 53770), (598, 53731), (602, 53722), (603, 53719), (604, 53716), (712, 53461), (738, 53359), (744, 53326), (750, 53305), (777, 53212), (780, 53203), (795, 53140), (814, 53104), (815, 53101), (820, 53086), (847, 53008), (851, 52996), (858, 52975), (875, 52936), (905, 52846), (910, 52828), (912, 52822), (917, 52807), (926, 52783), (930, 52768), (931, 52765), (933, 52753), (940, 52729), (946, 52708), (963, 52681), (972, 52657),

Gene: MrWorldwide\_39 Start: 28937, Stop: 27072, Start Num: 301

Candidate Starts for MrWorldwide\_39:

(Start: 238 @29024 has 3 MA's), (Start: 241 @29021 has 13 MA's), (Start: 301 @28937 has 110 MA's), (Start: 308 @28928 has 5 MA's), (354, 28823), (358, 28814), (375, 28784), (378, 28781), (433, 28661), (435, 28649), (438, 28643), (475, 28538), (484, 28511), (531, 28370), (536, 28364), (537, 28361), (539, 28349), (548, 28322), (549, 28319), (554, 28304), (556, 28298), (559, 28292), (586, 28259), (652, 28130), (676, 28070), (776, 27755), (779, 27746), (780, 27743), (783, 27725), (794, 27683), (796, 27677), (798, 27668), (805, 27653), (822, 27596), (878, 27437), (885, 27407), (888, 27398), (903, 27338), (906, 27314), (919, 27275), (929, 27242), (932, 27230), (947, 27170),

Gene: Mryolo\_42 Start: 33954, Stop: 32128, Start Num: 246

Candidate Starts for Mryolo\_42:

(Start: 246 @33954 has 877 MA's), (368, 33741), (400, 33678), (416, 33648), (422, 33627), (425, 33621), (429, 33612), (470, 33495), (479, 33468), (539, 33375), (544, 33360), (556, 33327), (578, 33276), (580, 33273), (612, 33207), (627, 33177), (639, 33147), (662, 33102), (683, 33063), (743, 32883), (753, 32835), (767, 32796), (783, 32730), (793, 32691), (810, 32670), (814, 32649), (820,

32631), (843, 32565), (902, 32415), (903, 32412), (909, 32376), (917, 32352), (921, 32343), (925, 32331), (932, 32304), (946, 32256), (955, 32235),

Gene: MsUbiquitous\_43 Start: 29585, Stop: 31459, Start Num: 246

Candidate Starts for MsUbiquitous\_43:

(Start: 243 @29582 has 7 MA's), (Start: 246 @29585 has 877 MA's), (287, 29654), (Start: 301 @29675 has 110 MA's), (400, 29855), (429, 29921), (444, 29963), (585, 30257), (646, 30392), (696, 30491), (731, 30614), (743, 30674), (746, 30680), (755, 30725), (764, 30755), (774, 30791), (783, 30827), (813, 30920), (844, 31013), (874, 31091), (902, 31163), (909, 31202), (924, 31244), (929, 31262), (946, 31322), (955, 31343),

Gene: MuchMore\_51 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for MuchMore\_51:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: Muddy\_44 Start: 34756, Stop: 32411, Start Num: 64

Candidate Starts for Muddy\_44:

(Start: 44 @34822 has 1 MA's), (48, 34813), (Start: 59 @34768 has 1 MA's), (Start: 64 @34756 has 1 MA's), (Start: 77 @34717 has 1 MA's), (138, 34558), (Start: 148 @34528 has 1 MA's), (179, 34498), (291, 34330), (354, 34210), (403, 34108), (435, 34027), (457, 33967), (481, 33901), (526, 33769), (598, 33649), (605, 33640), (611, 33628), (660, 33559), (736, 33346), (747, 33292), (769, 33211), (776, 33178), (792, 33112), (794, 33106), (796, 33100), (797, 33094), (805, 33070), (815, 33037), (820, 33022), (822, 33013), (878, 32854), (885, 32824), (905, 32734), (939, 32614), (947, 32587), (976, 32518),

Gene: Mudpuppy\_38 Start: 29455, Stop: 31320, Start Num: 245

Candidate Starts for Mudpuppy\_38:

(Start: 245 @29455 has 74 MA's), (279, 29503), (416, 29752), (448, 29842), (541, 30049), (544, 30058), (580, 30148), (585, 30157), (591, 30172), (613, 30217), (635, 30262), (659, 30310), (687, 30367), (717, 30448), (737, 30535), (743, 30568), (752, 30598), (767, 30655), (783, 30721), (790, 30745), (813, 30814), (834, 30886), (840, 30895), (878, 30994), (902, 31057), (905, 31081), (939, 31192), (946, 31216), (949, 31225),

Gene: Mudslide\_53 Start: 54263, Stop: 52440, Start Num: 197

Candidate Starts for Mudslide\_53:

(Start: 182 @54281 has 4 MA's), (Start: 197 @54263 has 27 MA's), (Start: 250 @54239 has 2 MA's), (267, 54212), (Start: 274 @54197 has 6 MA's), (283, 54176), (329, 54089), (387, 53984), (406, 53942), (434, 53876), (445, 53846), (448, 53837), (453, 53834), (454, 53831), (463, 53804), (519, 53711), (531, 53693), (538, 53675), (542, 53663), (547, 53648), (552, 53636), (580, 53573), (598, 53534), (602, 53525), (603, 53522), (615, 53492), (633, 53456), (724, 53231), (725, 53228), (732, 53192), (738, 53168), (744, 53135), (775, 53027), (777, 53021), (780, 53012), (814, 52913), (815, 52910), (820, 52895), (847, 52817), (851, 52805), (858, 52784), (861, 52775), (875, 52745), (901, 52688), (905, 52655), (910, 52637), (912, 52631), (926, 52592), (931, 52574), (933, 52562), (940, 52538), (956, 52496), (963, 52490), (972, 52466),

Gene: Mulan\_60 Start: 54261, Stop: 52402, Start Num: 205

Candidate Starts for Mulan\_60:

(Start: 188 @54285 has 1 MA's), (Start: 205 @54261 has 304 MA's), (Start: 235 @54237 has 6 MA's), (Start: 250 @54231 has 2 MA's), (Start: 274 @54189 has 6 MA's), (283, 54168), (337, 54054), (342, 54048), (360, 54018), (391, 53958), (399, 53937), (421, 53883), (428, 53871), (434, 53853), (436, 53841), (476, 53736), (519, 53679), (538, 53643), (542, 53631), (552, 53604), (564, 53577), (570, 53559), (580, 53541), (598, 53502), (602, 53493), (603, 53490), (712, 53232), (738, 53130), (744, 53097), (750, 53076), (777, 52983), (780, 52974), (795, 52911), (814, 52875), (815, 52872), (820, 52857), (847, 52779), (851, 52767), (858, 52746), (875, 52707), (905, 52617), (910, 52599), (912, 52593), (917, 52578), (926, 52554), (930, 52539), (931, 52536), (933, 52524), (940, 52500), (963, 52452), (972, 52428),

Gene: Mulciber\_44 Start: 30327, Stop: 28540, Start Num: 246

Candidate Starts for Mulciber\_44:

(Start: 246 @30327 has 877 MA's), (364, 30123), (400, 30051), (416, 30021), (425, 29994), (541, 29742), (560, 29691), (598, 29610), (619, 29565), (659, 29481), (687, 29424), (715, 29382), (726, 29337), (743, 29256), (755, 29205), (767, 29169), (783, 29103), (810, 29043), (812, 29031), (846, 28929), (853, 28905), (860, 28887), (888, 28824), (901, 28797), (902, 28788), (905, 28764), (946, 28629), (950, 28617), (955, 28608),

Gene: Mule\_42 Start: 32266, Stop: 30440, Start Num: 246

Candidate Starts for Mule\_42:

(Start: 246 @32266 has 877 MA's), (368, 32053), (374, 32038), (416, 31960), (422, 31939), (425, 31933), (429, 31924), (458, 31840), (470, 31807), (479, 31780), (539, 31687), (544, 31672), (551, 31651), (556, 31639), (578, 31588), (580, 31585), (612, 31519), (627, 31489), (639, 31459), (662, 31414), (683, 31375), (743, 31195), (753, 31147), (767, 31108), (783, 31042), (814, 30961), (815, 30958), (843, 30877), (902, 30727), (903, 30724), (909, 30688), (921, 30655), (925, 30643), (938, 30595), (946, 30568), (955, 30547),

Gene: Munch\_45 Start: 30776, Stop: 28989, Start Num: 246

Candidate Starts for Munch\_45:

(Start: 246 @30776 has 877 MA's), (364, 30572), (400, 30500), (416, 30470), (425, 30443), (541, 30191), (560, 30140), (598, 30059), (619, 30014), (687, 29873), (715, 29831), (726, 29786), (743, 29705), (755, 29654), (767, 29618), (783, 29552), (810, 29492), (812, 29480), (846, 29378), (853, 29354), (860, 29336), (888, 29273), (901, 29246), (902, 29237), (905, 29213), (946, 29078), (950, 29066), (955, 29057),

Gene: Mundrea\_44 Start: 31530, Stop: 29701, Start Num: 246

Candidate Starts for Mundrea\_44:

(Start: 246 @31530 has 877 MA's), (280, 31479), (295, 31449), (383, 31287), (394, 31269), (400, 31254), (425, 31197), (429, 31188), (471, 31068), (479, 31044), (539, 30951), (558, 30903), (568, 30882), (585, 30843), (607, 30798), (646, 30711), (652, 30702), (659, 30690), (683, 30645), (687, 30633), (743, 30459), (771, 30363), (776, 30336), (777, 30333), (783, 30306), (791, 30276), (793, 30267), (814, 30198), (815, 30195), (820, 30180), (827, 30156), (834, 30132), (837, 30126), (905, 29925), (946, 29790), (950, 29778), (955, 29769),

Gene: MunkgeeRoachy\_41 Start: 31903, Stop: 29510, Start Num: 36

Candidate Starts for MunkgeeRoachy\_41:

(Start: 36 @31903 has 16 MA's), (Start: 59 @31849 has 1 MA's), (75, 31807), (84, 31783), (128, 31657), (138, 31633), (179, 31588), (Start: 215 @31537 has 2 MA's), (223, 31522), (Start: 241 @31501 has 13 MA's), (275, 31453), (295, 31411), (329, 31336), (335, 31324), (374, 31255), (394, 31222), (398, 31207), (420, 31153), (421, 31150), (430, 31132), (435, 31111), (441, 31096), (457, 31051), (499, 30928), (500, 30922), (526, 30853), (539, 30811), (605, 30724), (615, 30700), (633, 30694), (643, 30670), (647, 30661), (654, 30646), (660, 30634), (680, 30592), (682, 30589), (683, 30586), (722, 30490), (733, 30439), (736, 30427), (749, 30370), (750, 30364), (760, 30328), (774,

30271), (783, 30235), (792, 30199), (794, 30193), (796, 30187), (797, 30181), (815, 30124), (822, 30100), (836, 30055), (884, 29920), (946, 29677), (947, 29674), (968, 29629), (971, 29620), (995, 29560),

Gene: Murdoc\_59 Start: 54023, Stop: 52164, Start Num: 205

Candidate Starts for Murdoc\_59:

(Start: 188 @54047 has 1 MA's), (Start: 205 @54023 has 304 MA's), (Start: 235 @53999 has 6 MA's), (Start: 250 @53993 has 2 MA's), (Start: 274 @53951 has 6 MA's), (283, 53930), (337, 53816), (342, 53810), (360, 53780), (391, 53720), (399, 53699), (421, 53645), (428, 53633), (434, 53615), (436, 53603), (476, 53498), (519, 53441), (538, 53405), (542, 53393), (552, 53366), (564, 53339), (570, 53321), (580, 53303), (598, 53264), (602, 53255), (603, 53252), (604, 53249), (738, 52892), (744, 52859), (750, 52838), (777, 52745), (780, 52736), (795, 52673), (814, 52637), (815, 52634), (820, 52619), (847, 52541), (851, 52529), (858, 52508), (875, 52469), (905, 52379), (910, 52361), (912, 52355), (917, 52340), (926, 52316), (930, 52301), (931, 52298), (933, 52286), (940, 52262), (963, 52214), (972, 52190),

Gene: Museum\_45 Start: 34023, Stop: 32197, Start Num: 246

Candidate Starts for Museum\_45:

(Start: 246 @34023 has 877 MA's), (368, 33810), (374, 33795), (400, 33747), (416, 33717), (422, 33696), (425, 33690), (429, 33681), (470, 33564), (479, 33537), (539, 33444), (544, 33429), (556, 33396), (578, 33345), (580, 33342), (612, 33276), (627, 33246), (639, 33216), (662, 33171), (683, 33132), (743, 32952), (753, 32904), (767, 32865), (783, 32799), (793, 32760), (810, 32739), (814, 32718), (820, 32700), (843, 32634), (902, 32484), (903, 32481), (909, 32445), (917, 32421), (921, 32412), (925, 32400), (946, 32325), (955, 32304),

Gene: Mutante\_60 Start: 54033, Stop: 52174, Start Num: 205

Candidate Starts for Mutante\_60:

(Start: 188 @54057 has 1 MA's), (Start: 205 @54033 has 304 MA's), (Start: 235 @54009 has 6 MA's), (Start: 250 @54003 has 2 MA's), (Start: 274 @53961 has 6 MA's), (283, 53940), (337, 53826), (342, 53820), (360, 53790), (391, 53730), (399, 53709), (421, 53655), (428, 53643), (434, 53625), (436, 53613), (476, 53508), (519, 53451), (538, 53415), (542, 53403), (552, 53376), (564, 53349), (570, 53331), (598, 53274), (602, 53265), (603, 53262), (738, 52902), (744, 52869), (750, 52848), (777, 52755), (780, 52746), (795, 52683), (815, 52644), (820, 52629), (847, 52551), (851, 52539), (858, 52518), (875, 52479), (903, 52410), (905, 52389), (910, 52371), (912, 52365), (917, 52350), (926, 52326), (930, 52311), (931, 52308), (933, 52296), (940, 52272), (963, 52224), (972, 52200),

Gene: MyraDee\_40 Start: 28864, Stop: 27056, Start Num: 246

Candidate Starts for MyraDee\_40:

(Start: 246 @28864 has 877 MA's), (275, 28825), (280, 28813), (346, 28693), (383, 28621), (425, 28531), (429, 28522), (444, 28480), (450, 28462), (461, 28429), (462, 28426), (471, 28402), (479, 28378), (537, 28297), (539, 28285), (548, 28258), (554, 28240), (585, 28174), (607, 28129), (625, 28093), (639, 28060), (652, 28033), (662, 28015), (698, 27949), (716, 27919), (743, 27796), (753, 27748), (783, 27643), (793, 27604), (815, 27535), (827, 27496), (843, 27454), (852, 27424), (910, 27262), (946, 27145), (950, 27133), (955, 27124),

Gene: Mysterious\_58 Start: 54574, Stop: 52745, Start Num: 197

Candidate Starts for Mysterious\_58:

(Start: 197 @54574 has 27 MA's), (Start: 230 @54553 has 1 MA's), (Start: 250 @54544 has 2 MA's), (267, 54517), (Start: 274 @54502 has 6 MA's), (399, 54277), (420, 54226), (433, 54199), (436, 54184), (445, 54166), (453, 54154), (466, 54118), (476, 54088), (538, 53995), (542, 53983), (543, 53980), (551, 53959), (552, 53956), (556, 53947), (564, 53929), (592, 53866), (603, 53842), (652, 53737), (703, 53614), (721, 53563), (724, 53551), (725, 53548), (727, 53530), (732, 53512), (739, 53482), (744, 53455), (759, 53404), (777, 53341), (780, 53332), (807, 53248), (815, 53215), (820, 53200),



(841, 53140), (847, 53122), (851, 53110), (858, 53089), (861, 53080), (863, 53077), (905, 52960), (910, 52942), (912, 52936), (926, 52897), (929, 52885), (930, 52882), (933, 52867), (936, 52855), (940, 52843), (956, 52801), (965, 52792), (972, 52771), (979, 52750),

Gene: Mysterium\_37 Start: 27509, Stop: 29491, Start Num: 245

Candidate Starts for Mysterium\_37:

(Start: 245 @27509 has 74 MA's), (347, 27683), (364, 27713), (386, 27746), (402, 27779), (433, 27854), (442, 27881), (478, 27983), (521, 28082), (585, 28256), (598, 28283), (659, 28412), (717, 28550), (737, 28637), (743, 28670), (752, 28700), (767, 28757), (783, 28823), (813, 28916), (842, 29003), (905, 29183), (912, 29207), (946, 29318), (998, 29426),

Gene: Myxus\_45 Start: 31483, Stop: 29690, Start Num: 246

Candidate Starts for Myxus\_45:

(Start: 246 @31483 has 877 MA's), (261, 31474), (280, 31432), (346, 31312), (347, 31309), (372, 31261), (402, 31201), (417, 31171), (420, 31159), (425, 31147), (479, 30994), (539, 30901), (598, 30763), (612, 30733), (687, 30574), (697, 30562), (714, 30535), (740, 30427), (743, 30406), (780, 30271), (783, 30253), (814, 30172), (827, 30130), (853, 30055), (886, 29980), (902, 29938), (930, 29836), (946, 29779), (950, 29767), (955, 29758),

Gene: NEHalo\_43 Start: 34014, Stop: 32185, Start Num: 246

Candidate Starts for NEHalo\_43:

(Start: 246 @34014 has 877 MA's), (368, 33801), (400, 33738), (416, 33708), (422, 33687), (425, 33681), (429, 33672), (470, 33555), (479, 33528), (539, 33435), (544, 33420), (556, 33387), (578, 33336), (580, 33333), (607, 33279), (612, 33267), (627, 33237), (639, 33207), (662, 33162), (683, 33123), (743, 32943), (753, 32895), (771, 32847), (780, 32808), (783, 32790), (793, 32751), (810, 32730), (814, 32709), (819, 32694), (861, 32571), (876, 32538), (922, 32400), (929, 32376), (943, 32328), (946, 32316), (955, 32295), (959, 32289), (981, 32241), (986, 32226),

Gene: NHagos\_52 Start: 46533, Stop: 44725, Start Num: 241

Candidate Starts for NHagos\_52:

(Start: 241 @46533 has 13 MA's), (Start: 250 @46524 has 2 MA's), (273, 46485), (Start: 274 @46482 has 6 MA's), (283, 46461), (287, 46452), (310, 46416), (337, 46356), (366, 46314), (384, 46272), (433, 46164), (436, 46149), (445, 46131), (454, 46116), (476, 46053), (519, 45996), (538, 45960), (542, 45948), (592, 45831), (598, 45819), (603, 45807), (611, 45789), (613, 45783), (724, 45516), (725, 45513), (739, 45447), (744, 45420), (763, 45363), (775, 45312), (777, 45306), (780, 45297), (795, 45234), (815, 45195), (820, 45180), (847, 45102), (851, 45090), (858, 45069), (861, 45060), (875, 45030), (901, 44973), (926, 44877), (931, 44859), (940, 44823), (963, 44775), (972, 44751),

Gene: NaSiaTalie\_44 Start: 31357, Stop: 29570, Start Num: 246

Candidate Starts for NaSiaTalie\_44:

(Start: 246 @31357 has 877 MA's), (364, 31153), (366, 31150), (368, 31144), (383, 31114), (400, 31081), (402, 31078), (416, 31051), (425, 31024), (444, 30973), (479, 30871), (539, 30778), (556, 30730), (560, 30721), (568, 30706), (598, 30640), (635, 30559), (659, 30511), (726, 30367), (743, 30286), (755, 30235), (766, 30202), (783, 30133), (793, 30094), (810, 30073), (814, 30052), (818, 30040), (886, 29860), (888, 29854), (902, 29818), (905, 29794), (930, 29716), (946, 29659), (950, 29647),

Gene: Naca\_39 Start: 30726, Stop: 28828, Start Num: 215

Candidate Starts for Naca\_39:

(Start: 215 @30726 has 2 MA's), (Start: 246 @30693 has 877 MA's), (318, 30582), (364, 30489), (366, 30486), (400, 30417), (402, 30414), (416, 30387), (425, 30360), (429, 30351), (458, 30267), (467, 30243), (479, 30207), (523, 30147), (539, 30111), (556, 30063), (567, 30042), (568, 30039), (594, 29979), (633, 29901), (654, 29853), (662, 29841), (686, 29793), (712, 29742), (743, 29607), (753,

29559), (762, 29541), (767, 29520), (771, 29511), (777, 29481), (783, 29454), (784, 29451), (814, 29373), (820, 29355), (834, 29307), (853, 29256), (876, 29202), (880, 29193), (888, 29175), (910, 29097), (939, 29004), (946, 28980), (950, 28968), (1000, 28863),

Gene: Nacho\_0062 Start: 54781, Stop: 52922, Start Num: 205

Candidate Starts for Nacho\_0062:

(Start: 188 @54805 has 1 MA's), (Start: 205 @54781 has 304 MA's), (Start: 235 @54757 has 6 MA's), (Start: 250 @54751 has 2 MA's), (Start: 274 @54709 has 6 MA's), (283, 54688), (337, 54574), (342, 54568), (360, 54538), (391, 54478), (399, 54457), (421, 54403), (428, 54391), (434, 54373), (436, 54361), (476, 54256), (519, 54199), (538, 54163), (542, 54151), (552, 54124), (564, 54097), (570, 54079), (580, 54061), (598, 54022), (602, 54013), (603, 54010), (712, 53752), (738, 53650), (744, 53617), (750, 53596), (777, 53503), (780, 53494), (795, 53431), (814, 53395), (815, 53392), (820, 53377), (847, 53299), (851, 53287), (858, 53266), (875, 53227), (905, 53137), (910, 53119), (912, 53113), (917, 53098), (926, 53074), (930, 53059), (931, 53056), (933, 53044), (940, 53020), (963, 52972), (972, 52948),

Gene: Nagem\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Nagem\_39:

(Start: 238 @29017 has 3 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (652, 28123), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: Naiad\_36 Start: 28126, Stop: 26342, Start Num: 246

Candidate Starts for Naiad\_36:

(Start: 246 @28126 has 877 MA's), (379, 27892), (395, 27862), (399, 27853), (400, 27850), (420, 27805), (425, 27793), (444, 27742), (479, 27640), (496, 27619), (539, 27547), (554, 27502), (556, 27499), (574, 27457), (577, 27451), (585, 27436), (598, 27409), (646, 27304), (652, 27295), (662, 27277), (663, 27274), (683, 27238), (743, 27058), (753, 27010), (783, 26905), (784, 26902), (810, 26845), (814, 26824), (855, 26701), (888, 26626), (902, 26590), (905, 26566), (930, 26488), (946, 26431), (950, 26419), (969, 26380), (978, 26362),

Gene: Naira\_46 Start: 36492, Stop: 34705, Start Num: 246

Candidate Starts for Naira\_46:

(Start: 246 @36492 has 877 MA's), (368, 36279), (374, 36264), (400, 36216), (416, 36186), (422, 36165), (425, 36159), (429, 36150), (470, 36033), (479, 36006), (539, 35913), (544, 35898), (578, 35814), (580, 35811), (612, 35745), (627, 35715), (639, 35685), (662, 35640), (683, 35601), (743, 35421), (753, 35373), (767, 35334), (783, 35268), (812, 35196), (814, 35187), (843, 35103), (876, 35016), (917, 34890), (922, 34878), (946, 34794), (948, 34788),

Gene: Naji\_47 Start: 31153, Stop: 29330, Start Num: 246

Candidate Starts for Naji\_47:

(Start: 246 @31153 has 877 MA's), (364, 30949), (374, 30925), (383, 30907), (394, 30889), (400, 30874), (402, 30871), (416, 30844), (425, 30817), (444, 30766), (479, 30664), (539, 30571), (556, 30523), (560, 30514), (567, 30502), (568, 30499), (598, 30433), (627, 30373), (683, 30259), (697, 30235), (715, 30196), (743, 30070), (755, 30019), (767, 29983), (783, 29917), (793, 29878), (815, 29809), (827, 29770), (844, 29725), (853, 29695), (880, 29632), (888, 29614), (905, 29554), (946, 29419), (950, 29407), (955, 29398),

Gene: Nanao\_52 Start: 52988, Stop: 51165, Start Num: 197

Candidate Starts for Nanao\_52:

(Start: 182 @53006 has 4 MA's), (Start: 197 @52988 has 27 MA's), (Start: 250 @52964 has 2 MA's), (267, 52937), (Start: 274 @52922 has 6 MA's), (283, 52901), (329, 52814), (387, 52709), (406, 52667), (434, 52601), (445, 52571), (448, 52562), (453, 52559), (454, 52556), (463, 52529), (519, 52436), (531, 52418), (538, 52400), (542, 52388), (547, 52373), (552, 52361), (602, 52250), (603, 52247), (615, 52217), (633, 52181), (724, 51956), (725, 51953), (732, 51917), (738, 51893), (744, 51860), (775, 51752), (777, 51746), (779, 51740), (780, 51737), (814, 51638), (815, 51635), (820, 51620), (847, 51542), (851, 51530), (858, 51509), (861, 51500), (875, 51470), (886, 51446), (901, 51413), (905, 51380), (910, 51362), (912, 51356), (926, 51317), (931, 51299), (933, 51287), (940, 51263), (956, 51221), (963, 51215), (972, 51191),

Gene: Nancinator\_36 Start: 28114, Stop: 26330, Start Num: 246

Candidate Starts for Nancinator\_36:

(Start: 246 @28114 has 877 MA's), (379, 27880), (395, 27850), (399, 27841), (400, 27838), (420, 27793), (425, 27781), (444, 27730), (479, 27628), (496, 27607), (539, 27535), (554, 27490), (556, 27487), (574, 27445), (577, 27439), (585, 27424), (598, 27397), (646, 27292), (652, 27283), (662, 27265), (683, 27226), (716, 27169), (743, 27046), (753, 26998), (783, 26893), (784, 26890), (810, 26833), (814, 26812), (829, 26764), (855, 26689), (886, 26620), (902, 26578), (905, 26554), (930, 26476), (946, 26419), (950, 26407), (955, 26398), (969, 26368), (978, 26350),

Gene: Nangang\_58 Start: 54780, Stop: 52933, Start Num: 189

Candidate Starts for Nangang\_58:

(143, 54846), (189, 54780), (248, 54732), (267, 54705), (292, 54654), (337, 54579), (391, 54486), (434, 54384), (453, 54342), (466, 54306), (476, 54276), (538, 54183), (551, 54147), (556, 54135), (564, 54117), (603, 54030), (652, 53925), (659, 53916), (703, 53802), (725, 53736), (727, 53718), (739, 53670), (744, 53643), (775, 53535), (777, 53529), (780, 53520), (784, 53499), (807, 53436), (815, 53403), (820, 53388), (841, 53328), (847, 53310), (851, 53298), (858, 53277), (861, 53268), (863, 53265), (868, 53253), (905, 53148), (912, 53124), (926, 53085), (930, 53070), (931, 53067), (936, 53043), (940, 53031), (941, 53028), (972, 52959),

Gene: Nathan\_61 Start: 54114, Stop: 52255, Start Num: 205

Candidate Starts for Nathan\_61:

(Start: 188 @54138 has 1 MA's), (Start: 205 @54114 has 304 MA's), (Start: 235 @54090 has 6 MA's), (Start: 250 @54084 has 2 MA's), (Start: 274 @54042 has 6 MA's), (283, 54021), (337, 53907), (342, 53901), (360, 53871), (391, 53811), (399, 53790), (421, 53736), (428, 53724), (434, 53706), (436, 53694), (476, 53589), (519, 53532), (538, 53496), (542, 53484), (551, 53460), (556, 53448), (564, 53430), (570, 53412), (580, 53394), (598, 53355), (602, 53346), (603, 53343), (604, 53340), (712, 53085), (738, 52983), (744, 52950), (750, 52929), (777, 52836), (780, 52827), (795, 52764), (815, 52725), (820, 52710), (847, 52632), (851, 52620), (858, 52599), (875, 52560), (903, 52491), (905, 52470), (910, 52452), (912, 52446), (917, 52431), (926, 52407), (930, 52392), (931, 52389), (933, 52377), (940, 52353), (963, 52305), (972, 52281),

Gene: Natosaleda\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for Natosaleda\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (683, 27225), (716, 27168), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930, 26475), (946, 26418), (950, 26406), (955, 26397), (969, 26367), (978, 26349),

Gene: Nattles\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for Nattles\_38:

(Start: 238 @28706 has 3 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: NearlyHeadless\_43 Start: 30653, Stop: 28809, Start Num: 246

Candidate Starts for NearlyHeadless\_43:

(Start: 246 @30653 has 877 MA's), (280, 30602), (347, 30479), (364, 30449), (383, 30410), (400, 30377), (416, 30347), (422, 30326), (425, 30320), (429, 30311), (444, 30269), (461, 30218), (478, 30170), (479, 30167), (539, 30071), (548, 30044), (554, 30026), (560, 30014), (585, 29960), (598, 29933), (620, 29885), (646, 29828), (662, 29801), (687, 29750), (698, 29735), (740, 29588), (743, 29567), (752, 29537), (753, 29519), (755, 29516), (762, 29501), (767, 29480), (771, 29471), (776, 29444), (780, 29432), (783, 29414), (814, 29333), (818, 29321), (834, 29267), (849, 29231), (861, 29195), (876, 29162), (886, 29141), (888, 29135), (903, 29096), (905, 29075), (910, 29057), (946, 28940), (950, 28928),

Gene: Nebs\_46 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Nebs\_46:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Nebulosus\_46 Start: 29739, Stop: 27949, Start Num: 246

Candidate Starts for Nebulosus\_46:

(Start: 246 @29739 has 877 MA's), (347, 29565), (400, 29460), (402, 29457), (416, 29430), (425, 29403), (444, 29352), (479, 29250), (539, 29157), (554, 29112), (556, 29109), (560, 29100), (646, 28911), (683, 28845), (717, 28785), (726, 28746), (738, 28695), (743, 28665), (755, 28614), (766, 28581), (776, 28542), (783, 28512), (810, 28452), (814, 28431), (827, 28389), (835, 28362), (843, 28347), (876, 28260), (902, 28197), (903, 28194), (946, 28038), (950, 28026), (957, 28014),

Gene: Nebulous\_37 Start: 30025, Stop: 28133, Start Num: 299

Candidate Starts for Nebulous\_37:

(Start: 299 @30025 has 38 MA's), (320, 29980), (344, 29926), (348, 29920), (358, 29902), (378, 29869), (379, 29866), (403, 29815), (406, 29812), (436, 29734), (438, 29731), (455, 29683), (469, 29641), (504, 29539), (517, 29506), (531, 29464), (536, 29458), (537, 29455), (539, 29443), (549, 29413), (562, 29380), (574, 29377), (585, 29356), (658, 29209), (720, 29053), (783, 28786), (792, 28750), (794, 28744), (798, 28729), (820, 28666), (822, 28657), (906, 28375), (907, 28372), (919, 28336), (947, 28231),

Gene: Nedarya\_43 Start: 29505, Stop: 27715, Start Num: 246

Candidate Starts for Nedarya\_43:

(Start: 246 @29505 has 877 MA's), (368, 29292), (400, 29226), (402, 29223), (416, 29196), (425, 29169), (479, 29016), (539, 28923), (554, 28878), (556, 28875), (568, 28851), (662, 28650), (683, 28611), (717, 28551), (726, 28512), (740, 28452), (743, 28431), (755, 28380), (766, 28347), (776, 28308), (783, 28278), (810, 28218), (814, 28197), (837, 28125), (876, 28026), (902, 27963), (945, 27807), (946, 27804), (950, 27792),

Gene: Neeharika16\_45 Start: 29638, Stop: 27797, Start Num: 246

Candidate Starts for Neeharika16\_45:

(Start: 246 @29638 has 877 MA's), (364, 29434), (400, 29359), (402, 29356), (416, 29329), (420, 29314), (425, 29302), (444, 29251), (475, 29161), (479, 29149), (539, 29056), (552, 29017), (560, 28999), (568, 28984), (598, 28918), (613, 28885), (614, 28882), (663, 28780), (697, 28720), (726, 28636), (743, 28555), (766, 28471), (767, 28468), (771, 28459), (776, 28432), (783, 28402), (810, 28342), (820, 28303), (902, 28087), (903, 28084), (905, 28063), (946, 27928), (950, 27916), (955, 27907), (957, 27904), (1000, 27811),

Gene: Neferthena\_38 Start: 29229, Stop: 27331, Start Num: 299

Candidate Starts for Neferthena\_38:

(Start: 299 @29229 has 38 MA's), (344, 29130), (348, 29124), (378, 29073), (379, 29070), (403, 29019), (406, 29016), (430, 28962), (432, 28956), (436, 28938), (455, 28887), (489, 28785), (504, 28737), (512, 28716), (517, 28704), (531, 28662), (536, 28656), (537, 28653), (539, 28641), (549, 28611), (556, 28590), (562, 28578), (574, 28575), (585, 28554), (658, 28407), (720, 28251), (783, 27984), (792, 27948), (794, 27942), (798, 27927), (820, 27864), (822, 27855), (836, 27810), (906, 27573), (907, 27570), (919, 27534),

Gene: Nehemiah\_57 Start: 54574, Stop: 52745, Start Num: 197

Candidate Starts for Nehemiah\_57:

(Start: 197 @54574 has 27 MA's), (Start: 230 @54553 has 1 MA's), (Start: 250 @54544 has 2 MA's), (267, 54517), (Start: 274 @54502 has 6 MA's), (399, 54277), (433, 54199), (445, 54166), (453, 54154), (466, 54118), (476, 54088), (538, 53995), (542, 53983), (543, 53980), (551, 53959), (552, 53956), (556, 53947), (564, 53929), (592, 53866), (603, 53842), (652, 53737), (703, 53614), (721, 53563), (724, 53551), (725, 53548), (727, 53530), (732, 53512), (739, 53482), (744, 53455), (759, 53404), (777, 53341), (780, 53332), (807, 53248), (815, 53215), (820, 53200), (841, 53140), (847, 53122), (851, 53110), (858, 53089), (861, 53080), (863, 53077), (905, 52960), (910, 52942), (912, 52936), (926, 52897), (929, 52885), (930, 52882), (933, 52867), (936, 52855), (940, 52843), (956, 52801), (965, 52792), (972, 52771), (979, 52750),

Gene: Nellie\_36 Start: 31889, Stop: 30144, Start Num: 274

Candidate Starts for Nellie\_36:

(259, 31916), (Start: 274 @31889 has 6 MA's), (276, 31886), (290, 31853), (294, 31847), (339, 31754), (362, 31721), (374, 31694), (437, 31559), (509, 31430), (514, 31424), (528, 31400), (534, 31385), (542, 31358), (553, 31328), (585, 31247), (588, 31238), (616, 31178), (627, 31157), (681, 31043), (689, 31025), (794, 30647), (810, 30629), (828, 30563), (832, 30548), (909, 30329), (922, 30287), (946, 30203), (967, 30170),

Gene: Nemo27\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for Nemo27\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: Neos5\_58 Start: 53992, Stop: 52175, Start Num: 247

Candidate Starts for Neos5\_58:

(60, 54376), (130, 54175), (Start: 247 @53992 has 43 MA's), (267, 53962), (368, 53782), (417, 53677), (433, 53629), (435, 53617), (448, 53587), (454, 53581), (476, 53518), (478, 53512), (519, 53461), (537, 53434), (538, 53425), (556, 53377), (603, 53272), (645, 53176), (674, 53125), (724, 52981), (732, 52942), (739, 52912), (744, 52885), (748, 52873), (775, 52777), (777, 52771), (780, 52762), (782, 52750), (807, 52678), (814, 52648), (820, 52630), (822, 52621), (847, 52552), (851, 52540), (858, 52519), (888, 52450), (898, 52435), (903, 52411), (905, 52390), (910, 52372), (912, 52366),

(924, 52333), (926, 52327), (931, 52309), (933, 52297), (936, 52285), (940, 52273), (956, 52231), (972, 52201),

Gene: Nerujay\_46 Start: 35102, Stop: 33276, Start Num: 246

Candidate Starts for Nerujay\_46:

(Start: 246 @35102 has 877 MA's), (368, 34889), (374, 34874), (416, 34796), (419, 34784), (422, 34775), (425, 34769), (429, 34760), (470, 34643), (479, 34616), (539, 34523), (544, 34508), (556, 34475), (578, 34424), (580, 34421), (612, 34355), (639, 34295), (662, 34250), (683, 34211), (743, 34031), (753, 33983), (767, 33944), (783, 33878), (793, 33839), (810, 33818), (814, 33797), (820, 33779), (843, 33713), (902, 33563), (903, 33560), (909, 33524), (917, 33500), (921, 33491), (925, 33479), (932, 33452), (946, 33404), (955, 33383),

Gene: Nesbitt\_42 Start: 30153, Stop: 32018, Start Num: 246

Candidate Starts for Nesbitt\_42:

(Start: 246 @30153 has 877 MA's), (279, 30201), (287, 30222), (327, 30297), (414, 30456), (416, 30459), (417, 30462), (422, 30480), (429, 30495), (438, 30525), (444, 30537), (481, 30645), (551, 30765), (568, 30807), (585, 30846), (591, 30861), (592, 30864), (594, 30867), (615, 30912), (629, 30933), (635, 30951), (639, 30960), (659, 30999), (670, 31029), (674, 31041), (699, 31104), (731, 31221), (743, 31281), (753, 31329), (767, 31368), (774, 31398), (783, 31434), (797, 31488), (815, 31536), (834, 31599), (874, 31698), (878, 31707), (900, 31758), (912, 31818), (918, 31836), (939, 31905), (946, 31929), (959, 31956),

Gene: Newman\_59 Start: 54059, Stop: 52200, Start Num: 205

Candidate Starts for Newman\_59:

(Start: 188 @54083 has 1 MA's), (Start: 205 @54059 has 304 MA's), (Start: 235 @54035 has 6 MA's), (Start: 250 @54029 has 2 MA's), (Start: 274 @53987 has 6 MA's), (283, 53966), (337, 53852), (342, 53846), (360, 53816), (391, 53756), (399, 53735), (421, 53681), (428, 53669), (434, 53651), (436, 53639), (476, 53534), (519, 53477), (538, 53441), (542, 53429), (552, 53402), (556, 53393), (570, 53357), (598, 53300), (602, 53291), (603, 53288), (604, 53285), (738, 52928), (744, 52895), (750, 52874), (777, 52781), (780, 52772), (795, 52709), (814, 52673), (815, 52670), (820, 52655), (847, 52577), (851, 52565), (858, 52544), (875, 52505), (905, 52415), (910, 52397), (912, 52391), (917, 52376), (926, 52352), (930, 52337), (931, 52334), (933, 52322), (940, 52298), (963, 52250), (972, 52226),

Gene: Newrala\_45 Start: 29638, Stop: 27797, Start Num: 246

Candidate Starts for Newrala\_45:

(Start: 246 @29638 has 877 MA's), (364, 29434), (400, 29359), (402, 29356), (416, 29329), (420, 29314), (425, 29302), (444, 29251), (475, 29161), (479, 29149), (539, 29056), (552, 29017), (560, 28999), (568, 28984), (598, 28918), (613, 28885), (614, 28882), (663, 28780), (697, 28720), (726, 28636), (743, 28555), (766, 28471), (767, 28468), (771, 28459), (776, 28432), (783, 28402), (810, 28342), (820, 28303), (902, 28087), (903, 28084), (905, 28063), (946, 27928), (950, 27916), (955, 27907), (957, 27904), (1000, 27811),

Gene: Nhonho\_45 Start: 35071, Stop: 33245, Start Num: 246

Candidate Starts for Nhonho\_45:

(Start: 246 @35071 has 877 MA's), (368, 34858), (400, 34795), (416, 34765), (422, 34744), (425, 34738), (429, 34729), (470, 34612), (479, 34585), (539, 34492), (544, 34477), (556, 34444), (578, 34393), (580, 34390), (612, 34324), (627, 34294), (639, 34264), (662, 34219), (683, 34180), (743, 34000), (753, 33952), (767, 33913), (783, 33847), (793, 33808), (810, 33787), (814, 33766), (820, 33748), (843, 33682), (902, 33532), (903, 33529), (909, 33493), (917, 33469), (921, 33460), (925, 33448), (932, 33421), (946, 33373), (955, 33352),

Gene: Nibbles\_39 Start: 31737, Stop: 29380, Start Num: 45

Candidate Starts for Nibbles\_39:

(41, 31746), (Start: 45 @31737 has 24 MA's), (50, 31722), (57, 31686), (108, 31551), (138, 31488), (Start: 176 @31446 has 2 MA's), (185, 31434), (264, 31332), (267, 31329), (305, 31254), (321, 31215), (329, 31194), (363, 31143), (386, 31101), (398, 31071), (420, 31017), (430, 30996), (435, 30975), (458, 30912), (502, 30777), (506, 30762), (520, 30735), (526, 30717), (559, 30633), (598, 30597), (660, 30504), (680, 30462), (682, 30459), (683, 30456), (698, 30432), (703, 30420), (707, 30408), (741, 30267), (749, 30240), (783, 30105), (792, 30069), (794, 30063), (796, 30057), (797, 30051), (805, 30027), (815, 29994), (822, 29970), (836, 29925), (839, 29919), (859, 29859), (893, 29751), (908, 29682), (911, 29670), (920, 29646), (940, 29568), (947, 29544), (976, 29475),

Gene: NickSell\_39 Start: 28939, Stop: 27074, Start Num: 301

Candidate Starts for NickSell\_39:

(4, 29698), (66, 29395), (Start: 211 @29065 has 1 MA's), (236, 29029), (242, 29023), (Start: 301 @28939 has 110 MA's), (Start: 308 @28930 has 5 MA's), (354, 28825), (358, 28816), (375, 28786), (378, 28783), (433, 28663), (435, 28651), (438, 28645), (475, 28540), (484, 28513), (531, 28372), (536, 28366), (537, 28363), (539, 28351), (548, 28324), (549, 28321), (554, 28306), (556, 28300), (559, 28294), (586, 28261), (676, 28072), (776, 27757), (779, 27748), (780, 27745), (783, 27727), (794, 27685), (796, 27679), (798, 27670), (805, 27655), (822, 27598), (878, 27439), (885, 27409), (888, 27400), (903, 27340), (906, 27316), (919, 27277), (929, 27244), (932, 27232), (947, 27172),

Gene: Nicky22\_43 Start: 30033, Stop: 31907, Start Num: 246

Candidate Starts for Nicky22\_43:

(Start: 243 @30030 has 7 MA's), (Start: 246 @30033 has 877 MA's), (287, 30102), (Start: 301 @30123 has 110 MA's), (325, 30174), (429, 30369), (444, 30411), (585, 30705), (646, 30840), (696, 30939), (731, 31062), (743, 31122), (746, 31128), (755, 31173), (764, 31203), (774, 31239), (783, 31275), (813, 31368), (844, 31461), (874, 31539), (902, 31611), (909, 31650), (924, 31692), (929, 31710), (939, 31746), (946, 31770), (955, 31791),

Gene: Nicole21\_61 Start: 54312, Stop: 52453, Start Num: 205

Candidate Starts for Nicole21\_61:

(Start: 188 @54336 has 1 MA's), (Start: 205 @54312 has 304 MA's), (Start: 235 @54288 has 6 MA's), (Start: 250 @54282 has 2 MA's), (Start: 274 @54240 has 6 MA's), (283, 54219), (337, 54105), (342, 54099), (360, 54069), (391, 54009), (399, 53988), (421, 53934), (428, 53922), (434, 53904), (436, 53892), (476, 53787), (519, 53730), (538, 53694), (542, 53682), (551, 53658), (556, 53646), (564, 53628), (570, 53610), (580, 53592), (598, 53553), (602, 53544), (603, 53541), (604, 53538), (738, 53181), (744, 53148), (750, 53127), (777, 53034), (780, 53025), (795, 52962), (814, 52926), (815, 52923), (820, 52908), (847, 52830), (851, 52818), (858, 52797), (875, 52758), (905, 52668), (910, 52650), (912, 52644), (917, 52629), (926, 52605), (930, 52590), (931, 52587), (933, 52575), (940, 52551), (963, 52503), (972, 52479),

Gene: NicoleTera\_45 Start: 32018, Stop: 30231, Start Num: 246

Candidate Starts for NicoleTera\_45:

(Start: 246 @32018 has 877 MA's), (366, 31811), (375, 31790), (383, 31775), (399, 31745), (400, 31742), (416, 31712), (425, 31685), (433, 31664), (444, 31634), (479, 31532), (539, 31439), (556, 31391), (560, 31382), (598, 31301), (635, 31220), (659, 31172), (697, 31103), (743, 30947), (755, 30896), (766, 30863), (767, 30860), (783, 30794), (793, 30755), (810, 30734), (831, 30659), (834, 30647), (853, 30596), (864, 30569), (880, 30533), (888, 30515), (902, 30479), (905, 30455), (924, 30398), (946, 30320), (950, 30308), (955, 30299),

Gene: Nigel\_54 Start: 53588, Stop: 51732, Start Num: 176

Candidate Starts for Nigel\_54:

(Start: 176 @53588 has 2 MA's), (Start: 199 @53561 has 2 MA's), (Start: 250 @53534 has 2 MA's), (267, 53507), (Start: 274 @53492 has 6 MA's), (318, 53420), (319, 53414), (337, 53366), (342, 53360),

(349, 53348), (360, 53330), (366, 53321), (390, 53270), (392, 53267), (434, 53168), (445, 53138), (448, 53129), (453, 53126), (463, 53096), (519, 53003), (531, 52985), (538, 52967), (542, 52955), (552, 52928), (602, 52817), (603, 52814), (611, 52796), (615, 52784), (633, 52748), (635, 52742), (642, 52724), (674, 52667), (712, 52562), (724, 52523), (725, 52520), (732, 52484), (744, 52427), (775, 52319), (777, 52313), (780, 52304), (812, 52214), (814, 52205), (815, 52202), (820, 52187), (847, 52109), (851, 52097), (858, 52076), (861, 52067), (888, 52007), (901, 51980), (905, 51947), (910, 51929), (912, 51923), (926, 51884), (930, 51869), (931, 51866), (933, 51854), (940, 51830), (956, 51788), (963, 51782), (972, 51758),

Gene: Nina\_42 Start: 32678, Stop: 30285, Start Num: 36

Candidate Starts for Nina\_42:

(Start: 36 @32678 has 16 MA's), (47, 32672), (Start: 59 @32624 has 1 MA's), (75, 32582), (84, 32558), (128, 32432), (138, 32408), (179, 32363), (Start: 215 @32312 has 2 MA's), (223, 32297), (Start: 241 @32276 has 13 MA's), (275, 32228), (289, 32195), (295, 32186), (329, 32111), (335, 32099), (374, 32030), (391, 32003), (394, 31997), (398, 31982), (420, 31928), (421, 31925), (430, 31907), (435, 31886), (457, 31826), (499, 31703), (500, 31697), (526, 31628), (539, 31586), (605, 31499), (615, 31475), (633, 31469), (643, 31445), (647, 31436), (654, 31421), (660, 31409), (680, 31367), (682, 31364), (683, 31361), (703, 31325), (733, 31214), (749, 31145), (750, 31139), (760, 31103), (774, 31046), (783, 31010), (792, 30974), (794, 30968), (796, 30962), (797, 30956), (815, 30899), (822, 30875), (836, 30830), (947, 30449), (968, 30404), (971, 30395), (995, 30335), (1004, 30317),

Gene: Niobe\_39 Start: 30355, Stop: 32220, Start Num: 245

Candidate Starts for Niobe\_39:

(Start: 245 @30355 has 74 MA's), (279, 30403), (382, 30586), (386, 30592), (416, 30652), (422, 30673), (448, 30742), (544, 30958), (580, 31048), (585, 31057), (591, 31072), (613, 31117), (659, 31210), (717, 31348), (743, 31468), (752, 31498), (767, 31555), (781, 31612), (783, 31621), (790, 31645), (813, 31714), (834, 31786), (840, 31795), (878, 31894), (902, 31957), (946, 32116), (949, 32125),

Gene: Nitro\_40 Start: 30212, Stop: 32077, Start Num: 245

Candidate Starts for Nitro\_40:

(Start: 245 @30212 has 74 MA's), (279, 30260), (416, 30509), (448, 30599), (541, 30806), (544, 30815), (578, 30902), (585, 30914), (591, 30929), (635, 31019), (687, 31124), (717, 31205), (743, 31325), (752, 31355), (767, 31412), (783, 31478), (834, 31643), (902, 31814), (905, 31838), (910, 31856), (946, 31973), (949, 31982),

Gene: Niza\_47 Start: 35869, Stop: 34082, Start Num: 246

Candidate Starts for Niza\_47:

(Start: 246 @35869 has 877 MA's), (368, 35656), (374, 35641), (400, 35593), (416, 35563), (422, 35542), (425, 35536), (429, 35527), (470, 35410), (479, 35383), (539, 35290), (544, 35275), (556, 35242), (578, 35191), (580, 35188), (612, 35122), (627, 35092), (639, 35062), (662, 35017), (683, 34978), (743, 34798), (753, 34750), (767, 34711), (783, 34645), (812, 34573), (814, 34564), (843, 34480), (876, 34393), (917, 34267), (922, 34255), (939, 34195), (946, 34171), (948, 34165),

Gene: NoShow\_52 Start: 37810, Stop: 35447, Start Num: 53

Candidate Starts for NoShow\_52:

(40, 37861), (Start: 45 @37840 has 24 MA's), (Start: 53 @37810 has 1 MA's), (Start: 59 @37786 has 1 MA's), (76, 37741), (Start: 77 @37735 has 1 MA's), (116, 37630), (120, 37621), (138, 37576), (179, 37531), (Start: 215 @37480 has 2 MA's), (223, 37465), (Start: 241 @37444 has 13 MA's), (395, 37165), (420, 37099), (457, 36997), (494, 36892), (499, 36874), (502, 36859), (525, 36802), (526, 36799), (530, 36781), (539, 36757), (541, 36751), (589, 36682), (598, 36679), (605, 36670), (664, 36580), (667, 36571), (698, 36511), (702, 36502), (704, 36496), (755, 36283), (756, 36280), (769, 36241), (776, 36208), (792, 36142), (794, 36136), (796, 36130), (797, 36124), (815, 36067), (822,



36043), (904, 35776), (929, 35689), (940, 35641), (947, 35617), (976, 35548),

Gene: Nodigi\_51 Start: 35275, Stop: 32885, Start Num: 45

Candidate Starts for Nodigi\_51:

(16, 35404), (19, 35395), (Start: 45 @35275 has 24 MA's), (89, 35143), (93, 35131), (107, 35086), (138, 35023), (145, 35002), (185, 34969), (223, 34912), (265, 34864), (273, 34849), (295, 34801), (329, 34726), (332, 34720), (335, 34714), (338, 34708), (374, 34639), (389, 34615), (398, 34591), (430, 34516), (435, 34495), (453, 34447), (457, 34435), (473, 34390), (524, 34234), (526, 34228), (605, 34099), (643, 34051), (649, 34039), (682, 33967), (703, 33925), (733, 33814), (741, 33772), (747, 33748), (749, 33739), (760, 33697), (783, 33604), (792, 33568), (794, 33562), (796, 33556), (797, 33550), (815, 33493), (822, 33469), (828, 33451), (859, 33358), (884, 33289), (893, 33250), (903, 33211), (905, 33190), (915, 33157), (922, 33139), (947, 33043), (958, 33019), (1004, 32911),

Gene: Noella\_44 Start: 31598, Stop: 29760, Start Num: 246

Candidate Starts for Noella\_44:

(Start: 246 @31598 has 877 MA's), (280, 31547), (364, 31394), (400, 31322), (416, 31292), (425, 31265), (429, 31256), (479, 31112), (539, 31016), (558, 30968), (585, 30908), (629, 30821), (646, 30776), (659, 30755), (698, 30683), (716, 30641), (726, 30599), (743, 30518), (753, 30470), (767, 30431), (776, 30395), (783, 30365), (791, 30335), (815, 30254), (827, 30215), (834, 30191), (843, 30173), (844, 30170), (888, 30044), (905, 29984), (932, 29897), (946, 29849), (950, 29837), (955, 29828),

Gene: Noelle\_45 Start: 31832, Stop: 30003, Start Num: 246

Candidate Starts for Noelle\_45:

(Start: 246 @31832 has 877 MA's), (Start: 274 @31796 has 6 MA's), (364, 31628), (383, 31589), (394, 31571), (395, 31568), (425, 31499), (429, 31490), (471, 31370), (479, 31346), (539, 31253), (558, 31205), (585, 31145), (607, 31100), (610, 31094), (646, 31013), (659, 30992), (683, 30947), (740, 30782), (743, 30761), (771, 30665), (776, 30638), (777, 30635), (783, 30608), (793, 30569), (815, 30497), (820, 30482), (827, 30458), (832, 30440), (834, 30434), (837, 30428), (905, 30227), (946, 30092), (950, 30080), (955, 30071),

Gene: Norbert\_43 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for Norbert\_43:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: NorthStar\_44 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for NorthStar\_44:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Norz\_45 Start: 34915, Stop: 33089, Start Num: 246

Candidate Starts for Norz\_45:

(Start: 246 @34915 has 877 MA's), (368, 34702), (374, 34687), (400, 34639), (416, 34609), (422, 34588), (425, 34582), (429, 34573), (470, 34456), (479, 34429), (539, 34336), (544, 34321), (578, 34237), (580, 34234), (612, 34168), (627, 34138), (639, 34108), (662, 34063), (683, 34024), (743,

33844), (752, 33814), (753, 33796), (767, 33757), (783, 33691), (814, 33610), (815, 33607), (843, 33526), (902, 33376), (903, 33373), (909, 33337), (917, 33313), (921, 33304), (925, 33292), (946, 33217), (955, 33196),

Gene: NotAPhaseMom\_45 Start: 31574, Stop: 29748, Start Num: 246

Candidate Starts for NotAPhaseMom\_45:

(Start: 246 @31574 has 877 MA's), (267, 31553), (280, 31523), (295, 31493), (383, 31331), (394, 31313), (425, 31241), (429, 31232), (471, 31112), (479, 31088), (539, 30995), (558, 30947), (568, 30926), (585, 30887), (646, 30755), (659, 30734), (683, 30689), (687, 30677), (740, 30524), (743, 30503), (776, 30380), (783, 30350), (793, 30311), (814, 30245), (815, 30242), (820, 30227), (827, 30203), (834, 30179), (905, 29972), (946, 29837), (950, 29825), (955, 29816),

Gene: NothingSpecial\_43 Start: 32022, Stop: 30235, Start Num: 246

Candidate Starts for NothingSpecial\_43:

(Start: 246 @32022 has 877 MA's), (366, 31815), (368, 31809), (383, 31779), (400, 31746), (402, 31743), (416, 31716), (425, 31689), (429, 31680), (479, 31536), (539, 31443), (556, 31395), (560, 31386), (568, 31371), (598, 31305), (635, 31224), (659, 31176), (743, 30951), (755, 30900), (766, 30867), (783, 30798), (793, 30759), (810, 30738), (814, 30717), (888, 30519), (902, 30483), (905, 30459), (930, 30381), (946, 30324), (950, 30312), (955, 30303),

Gene: Nozo\_58 Start: 54443, Stop: 52626, Start Num: 247

Candidate Starts for Nozo\_58:

(130, 54626), (Start: 247 @54443 has 43 MA's), (267, 54413), (368, 54233), (417, 54128), (433, 54080), (435, 54068), (448, 54038), (454, 54032), (476, 53969), (478, 53963), (519, 53912), (538, 53876), (556, 53828), (603, 53723), (645, 53627), (674, 53576), (724, 53432), (732, 53393), (739, 53363), (744, 53336), (748, 53324), (775, 53228), (777, 53222), (780, 53213), (782, 53201), (807, 53129), (814, 53099), (820, 53081), (822, 53072), (847, 53003), (851, 52991), (858, 52970), (888, 52901), (898, 52886), (903, 52862), (905, 52841), (910, 52823), (912, 52817), (924, 52784), (926, 52778), (931, 52760), (933, 52748), (936, 52736), (940, 52724), (956, 52682), (972, 52652),

Gene: Nucci\_37 Start: 28513, Stop: 26612, Start Num: 299

Candidate Starts for Nucci\_37:

(Start: 299 @28513 has 38 MA's), (358, 28390), (368, 28375), (375, 28360), (395, 28327), (398, 28318), (403, 28303), (420, 28267), (428, 28252), (435, 28225), (438, 28219), (456, 28168), (469, 28129), (489, 28069), (531, 27943), (537, 27934), (539, 27922), (549, 27892), (556, 27871), (585, 27835), (658, 27688), (676, 27643), (720, 27532), (764, 27337), (776, 27295), (783, 27265), (794, 27223), (805, 27193), (812, 27172), (822, 27136), (903, 26878), (906, 26854), (917, 26821), (919, 26815), (947, 26710),

Gene: Numberten\_60 Start: 54256, Stop: 52397, Start Num: 205

Candidate Starts for Numberten\_60:

(Start: 188 @54280 has 1 MA's), (Start: 205 @54256 has 304 MA's), (Start: 235 @54232 has 6 MA's), (Start: 250 @54226 has 2 MA's), (Start: 274 @54184 has 6 MA's), (283, 54163), (337, 54049), (342, 54043), (360, 54013), (391, 53953), (399, 53932), (421, 53878), (428, 53866), (434, 53848), (436, 53836), (476, 53731), (519, 53674), (538, 53638), (542, 53626), (551, 53602), (556, 53590), (564, 53572), (570, 53554), (580, 53536), (598, 53497), (602, 53488), (603, 53485), (604, 53482), (738, 53125), (744, 53092), (750, 53071), (777, 52978), (780, 52969), (795, 52906), (814, 52870), (815, 52867), (820, 52852), (847, 52774), (851, 52762), (858, 52741), (875, 52702), (905, 52612), (910, 52594), (912, 52588), (917, 52573), (926, 52549), (930, 52534), (931, 52531), (933, 52519), (940, 52495), (963, 52447), (972, 52423),

Gene: Nyala\_59 Start: 54031, Stop: 52172, Start Num: 205

Candidate Starts for Nyala\_59:

(Start: 188 @54055 has 1 MA's), (Start: 205 @54031 has 304 MA's), (Start: 235 @54007 has 6 MA's), (Start: 250 @54001 has 2 MA's), (Start: 274 @53959 has 6 MA's), (283, 53938), (337, 53824), (342, 53818), (360, 53788), (391, 53728), (399, 53707), (421, 53653), (428, 53641), (434, 53623), (436, 53611), (476, 53506), (519, 53449), (538, 53413), (542, 53401), (552, 53374), (564, 53347), (570, 53329), (580, 53311), (598, 53272), (602, 53263), (603, 53260), (738, 52900), (744, 52867), (750, 52846), (777, 52753), (780, 52744), (795, 52681), (814, 52645), (815, 52642), (820, 52627), (847, 52549), (851, 52537), (858, 52516), (875, 52477), (905, 52387), (910, 52369), (912, 52363), (917, 52348), (926, 52324), (930, 52309), (931, 52306), (933, 52294), (940, 52270), (963, 52222), (972, 52198),

Gene: Nyxis\_45 Start: 31460, Stop: 29634, Start Num: 246

Candidate Starts for Nyxis\_45:

(Start: 246 @31460 has 877 MA's), (267, 31439), (280, 31409), (295, 31379), (383, 31217), (394, 31199), (425, 31127), (429, 31118), (471, 30998), (479, 30974), (539, 30881), (558, 30833), (568, 30812), (585, 30773), (646, 30641), (659, 30620), (683, 30575), (687, 30563), (740, 30410), (743, 30389), (776, 30266), (783, 30236), (793, 30197), (814, 30131), (815, 30128), (820, 30113), (827, 30089), (834, 30065), (905, 29858), (946, 29723), (950, 29711), (955, 29702),

Gene: OKCentral2016\_43 Start: 30827, Stop: 28992, Start Num: 246

Candidate Starts for OKCentral2016\_43:

(Start: 246 @30827 has 877 MA's), (280, 30776), (319, 30710), (364, 30623), (374, 30599), (395, 30563), (400, 30551), (425, 30494), (429, 30485), (458, 30401), (471, 30365), (475, 30353), (478, 30344), (479, 30341), (539, 30248), (558, 30200), (585, 30140), (598, 30113), (610, 30089), (645, 30011), (646, 30008), (659, 29987), (662, 29981), (698, 29915), (716, 29873), (743, 29750), (753, 29702), (776, 29627), (783, 29597), (793, 29558), (815, 29486), (827, 29447), (834, 29423), (837, 29417), (843, 29405), (883, 29297), (905, 29216), (912, 29192), (932, 29129), (946, 29081), (950, 29069), (955, 29060),

Gene: OKaNui\_45 Start: 31620, Stop: 29794, Start Num: 246

Candidate Starts for OKaNui\_45:

(Start: 246 @31620 has 877 MA's), (267, 31599), (280, 31569), (295, 31539), (383, 31377), (394, 31359), (425, 31287), (429, 31278), (479, 31134), (539, 31041), (558, 30993), (568, 30972), (585, 30933), (646, 30801), (659, 30780), (683, 30735), (687, 30723), (740, 30570), (743, 30549), (776, 30426), (783, 30396), (793, 30357), (814, 30291), (815, 30288), (820, 30273), (827, 30249), (834, 30225), (905, 30018), (946, 29883), (950, 29871), (955, 29862),

Gene: OSmaximus\_62 Start: 54777, Stop: 52918, Start Num: 205

Candidate Starts for OSmaximus\_62:

(Start: 188 @54801 has 1 MA's), (Start: 205 @54777 has 304 MA's), (Start: 235 @54753 has 6 MA's), (Start: 250 @54747 has 2 MA's), (Start: 274 @54705 has 6 MA's), (283, 54684), (337, 54570), (342, 54564), (360, 54534), (391, 54474), (399, 54453), (421, 54399), (428, 54387), (434, 54369), (436, 54357), (476, 54252), (519, 54195), (538, 54159), (542, 54147), (551, 54123), (556, 54111), (564, 54093), (570, 54075), (580, 54057), (598, 54018), (602, 54009), (603, 54006), (604, 54003), (738, 53646), (744, 53613), (750, 53592), (777, 53499), (780, 53490), (795, 53427), (814, 53391), (815, 53388), (820, 53373), (847, 53295), (851, 53283), (858, 53262), (875, 53223), (905, 53133), (910, 53115), (912, 53109), (917, 53094), (926, 53070), (930, 53055), (931, 53052), (933, 53040), (940, 53016), (963, 52968), (972, 52944),

Gene: Oats\_38 Start: 28632, Stop: 26767, Start Num: 301

Candidate Starts for Oats\_38:

(Start: 238 @28719 has 3 MA's), (Start: 301 @28632 has 110 MA's), (Start: 308 @28623 has 5 MA's), (354, 28518), (358, 28509), (375, 28479), (378, 28476), (433, 28356), (435, 28344), (438, 28338), (475, 28233), (484, 28206), (531, 28065), (536, 28059), (537, 28056), (539, 28044), (548, 28017),

(549, 28014), (554, 27999), (556, 27993), (559, 27987), (586, 27954), (676, 27765), (776, 27450), (779, 27441), (780, 27438), (783, 27420), (794, 27378), (796, 27372), (798, 27363), (805, 27348), (822, 27291), (878, 27132), (885, 27102), (888, 27093), (903, 27033), (906, 27009), (919, 26970), (929, 26937), (932, 26925), (947, 26865),

Gene: Obama12\_46 Start: 31994, Stop: 30168, Start Num: 246

Candidate Starts for Obama12\_46:

(Start: 246 @31994 has 877 MA's), (279, 31946), (364, 31790), (400, 31718), (425, 31661), (429, 31652), (471, 31532), (479, 31508), (539, 31415), (558, 31367), (568, 31346), (585, 31307), (607, 31262), (646, 31175), (652, 31166), (659, 31154), (683, 31109), (687, 31097), (740, 30944), (743, 30923), (776, 30800), (783, 30770), (793, 30731), (814, 30665), (815, 30662), (827, 30623), (834, 30599), (905, 30392), (946, 30257), (950, 30245), (955, 30236),

Gene: ObiToo\_46 Start: 30468, Stop: 32333, Start Num: 245

Candidate Starts for ObiToo\_46:

(125, 30285), (Start: 180 @30390 has 1 MA's), (Start: 245 @30468 has 74 MA's), (279, 30516), (368, 30681), (382, 30699), (416, 30765), (422, 30786), (541, 31062), (544, 31071), (585, 31170), (591, 31185), (635, 31275), (659, 31323), (687, 31380), (717, 31461), (743, 31581), (767, 31668), (781, 31725), (783, 31734), (878, 32007), (946, 32229),

Gene: Obutu\_59 Start: 54042, Stop: 52225, Start Num: 247

Candidate Starts for Obutu\_59:

(130, 54225), (Start: 247 @54042 has 43 MA's), (267, 54012), (368, 53832), (433, 53679), (435, 53667), (448, 53637), (454, 53631), (476, 53568), (478, 53562), (519, 53511), (538, 53475), (556, 53427), (603, 53322), (645, 53226), (674, 53175), (724, 53031), (732, 52992), (739, 52962), (744, 52935), (748, 52923), (775, 52827), (777, 52821), (780, 52812), (782, 52800), (807, 52728), (814, 52698), (820, 52680), (822, 52671), (847, 52602), (851, 52590), (858, 52569), (888, 52500), (898, 52485), (903, 52461), (912, 52416), (926, 52377), (931, 52359), (933, 52347), (936, 52335), (940, 52323), (956, 52281), (972, 52251),

Gene: Odin\_44 Start: 30188, Stop: 28356, Start Num: 246

Candidate Starts for Odin\_44:

(Start: 246 @30188 has 877 MA's), (364, 29984), (372, 29966), (402, 29906), (412, 29885), (416, 29879), (419, 29867), (425, 29852), (434, 29828), (479, 29699), (523, 29639), (536, 29621), (539, 29606), (560, 29549), (598, 29468), (620, 29420), (659, 29339), (743, 29114), (767, 29027), (776, 28991), (783, 28961), (793, 28922), (810, 28901), (814, 28880), (820, 28862), (853, 28763), (864, 28736), (880, 28700), (888, 28682), (902, 28646), (905, 28622), (946, 28487), (950, 28475), (955, 28466), (957, 28463), (978, 28418), (993, 28388),

Gene: Ohfah\_46 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Ohfah\_46:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Ohno789\_45 Start: 35178, Stop: 33352, Start Num: 246

Candidate Starts for Ohno789\_45:

(Start: 246 @35178 has 877 MA's), (368, 34965), (400, 34902), (416, 34872), (422, 34851), (425, 34845), (429, 34836), (470, 34719), (479, 34692), (539, 34599), (544, 34584), (578, 34500), (580, 34497), (612, 34431), (639, 34371), (662, 34326), (683, 34287), (743, 34107), (753, 34059), (767, 34020), (783, 33954), (793, 33915), (810, 33894), (814, 33873), (820, 33855), (843, 33789), (902,

33639), (903, 33636), (909, 33600), (917, 33576), (921, 33567), (925, 33555), (946, 33480), (955, 33459),

Gene: Olak\_59 Start: 54034, Stop: 52175, Start Num: 205

Candidate Starts for Olak\_59:

(Start: 188 @54058 has 1 MA's), (Start: 205 @54034 has 304 MA's), (Start: 235 @54010 has 6 MA's), (Start: 250 @54004 has 2 MA's), (Start: 274 @53962 has 6 MA's), (283, 53941), (337, 53827), (342, 53821), (360, 53791), (391, 53731), (399, 53710), (421, 53656), (428, 53644), (434, 53626), (436, 53614), (476, 53509), (519, 53452), (538, 53416), (542, 53404), (552, 53377), (564, 53350), (570, 53332), (580, 53314), (598, 53275), (602, 53266), (603, 53263), (712, 53005), (738, 52903), (744, 52870), (750, 52849), (777, 52756), (780, 52747), (795, 52684), (814, 52648), (815, 52645), (820, 52630), (847, 52552), (851, 52540), (858, 52519), (875, 52480), (905, 52390), (910, 52372), (912, 52366), (917, 52351), (926, 52327), (930, 52312), (931, 52309), (933, 52297), (940, 52273), (963, 52225), (972, 52201),

Gene: OlanP\_47 Start: 31923, Stop: 30109, Start Num: 246

Candidate Starts for OlanP\_47:

(Start: 246 @31923 has 877 MA's), (275, 31884), (280, 31872), (364, 31719), (371, 31704), (400, 31647), (425, 31590), (429, 31581), (444, 31539), (461, 31488), (479, 31437), (539, 31344), (556, 31296), (568, 31272), (585, 31233), (598, 31206), (612, 31176), (654, 31083), (662, 31071), (686, 31023), (687, 31020), (697, 31008), (743, 30852), (755, 30801), (766, 30768), (767, 30765), (783, 30699), (793, 30660), (815, 30588), (827, 30549), (834, 30525), (843, 30507), (853, 30474), (888, 30393), (905, 30333), (910, 30315), (930, 30255), (932, 30246), (946, 30198), (950, 30186), (955, 30177),

Gene: OldNelly\_39 Start: 28936, Stop: 27071, Start Num: 301

Candidate Starts for OldNelly\_39:

(Start: 238 @29023 has 3 MA's), (Start: 301 @28936 has 110 MA's), (Start: 308 @28927 has 5 MA's), (354, 28822), (358, 28813), (375, 28783), (378, 28780), (433, 28660), (435, 28648), (438, 28642), (475, 28537), (484, 28510), (531, 28369), (536, 28363), (537, 28360), (539, 28348), (548, 28321), (549, 28318), (554, 28303), (556, 28297), (559, 28291), (586, 28258), (652, 28129), (676, 28069), (776, 27754), (779, 27745), (780, 27742), (783, 27724), (794, 27682), (796, 27676), (798, 27667), (805, 27652), (822, 27595), (878, 27436), (885, 27406), (888, 27397), (903, 27337), (906, 27313), (919, 27274), (929, 27241), (932, 27229), (947, 27169),

Gene: Oline\_61 Start: 54135, Stop: 52276, Start Num: 205

Candidate Starts for Oline\_61:

(Start: 188 @54159 has 1 MA's), (Start: 205 @54135 has 304 MA's), (Start: 235 @54111 has 6 MA's), (Start: 250 @54105 has 2 MA's), (Start: 274 @54063 has 6 MA's), (283, 54042), (337, 53928), (342, 53922), (360, 53892), (391, 53832), (399, 53811), (421, 53757), (428, 53745), (434, 53727), (436, 53715), (476, 53610), (519, 53553), (538, 53517), (542, 53505), (551, 53481), (556, 53469), (564, 53451), (570, 53433), (580, 53415), (598, 53376), (602, 53367), (603, 53364), (604, 53361), (738, 53004), (744, 52971), (750, 52950), (777, 52857), (780, 52848), (795, 52785), (814, 52749), (815, 52746), (820, 52731), (847, 52653), (851, 52641), (858, 52620), (875, 52581), (905, 52491), (910, 52473), (912, 52467), (917, 52452), (926, 52428), (930, 52413), (931, 52410), (933, 52398), (940, 52374), (963, 52326), (972, 52302), (977, 52287),

Gene: Olive\_60 Start: 54247, Stop: 52388, Start Num: 205

Candidate Starts for Olive\_60:

(Start: 188 @54271 has 1 MA's), (Start: 205 @54247 has 304 MA's), (Start: 235 @54223 has 6 MA's), (Start: 250 @54217 has 2 MA's), (Start: 274 @54175 has 6 MA's), (283, 54154), (337, 54040), (342, 54034), (360, 54004), (391, 53944), (399, 53923), (421, 53869), (428, 53857), (434, 53839), (436, 53827), (476, 53722), (519, 53665), (538, 53629), (542, 53617), (551, 53593), (556, 53581), (564,

53563), (570, 53545), (580, 53527), (598, 53488), (602, 53479), (603, 53476), (604, 53473), (738, 53116), (744, 53083), (750, 53062), (777, 52969), (780, 52960), (795, 52897), (814, 52861), (815, 52858), (820, 52843), (847, 52765), (851, 52753), (858, 52732), (875, 52693), (905, 52603), (910, 52585), (912, 52579), (917, 52564), (926, 52540), (930, 52525), (931, 52522), (933, 52510), (940, 52486), (963, 52438), (972, 52414),

Gene: OliverWalter\_59 Start: 54066, Stop: 52207, Start Num: 205

Candidate Starts for OliverWalter\_59:

(Start: 188 @54090 has 1 MA's), (Start: 205 @54066 has 304 MA's), (Start: 235 @54042 has 6 MA's), (Start: 250 @54036 has 2 MA's), (Start: 274 @53994 has 6 MA's), (283, 53973), (337, 53859), (342, 53853), (360, 53823), (391, 53763), (399, 53742), (421, 53688), (428, 53676), (434, 53658), (436, 53646), (476, 53541), (519, 53484), (538, 53448), (542, 53436), (552, 53409), (556, 53400), (570, 53364), (598, 53307), (602, 53298), (603, 53295), (604, 53292), (738, 52935), (744, 52902), (750, 52881), (777, 52788), (780, 52779), (795, 52716), (814, 52680), (815, 52677), (820, 52662), (847, 52584), (851, 52572), (858, 52551), (875, 52512), (905, 52422), (910, 52404), (912, 52398), (917, 52383), (926, 52359), (930, 52344), (931, 52341), (933, 52329), (940, 52305), (963, 52257), (972, 52233),

Gene: Olivio\_58 Start: 53901, Stop: 52084, Start Num: 247

Candidate Starts for Olivio\_58:

(130, 54084), (Start: 247 @53901 has 43 MA's), (267, 53871), (368, 53691), (433, 53538), (435, 53526), (448, 53496), (454, 53490), (476, 53427), (478, 53421), (519, 53370), (537, 53343), (538, 53334), (556, 53286), (603, 53181), (645, 53085), (674, 53034), (724, 52890), (732, 52851), (739, 52821), (744, 52794), (748, 52782), (775, 52686), (777, 52680), (780, 52671), (782, 52659), (807, 52587), (814, 52557), (820, 52539), (822, 52530), (847, 52461), (851, 52449), (858, 52428), (888, 52359), (898, 52344), (903, 52320), (905, 52299), (910, 52281), (912, 52275), (926, 52236), (931, 52218), (933, 52206), (940, 52182), (956, 52140), (972, 52110),

Gene: Ollie\_48 Start: 31724, Stop: 29910, Start Num: 246

Candidate Starts for Ollie\_48:

(Start: 246 @31724 has 877 MA's), (275, 31685), (280, 31673), (364, 31520), (371, 31505), (400, 31448), (425, 31391), (429, 31382), (444, 31340), (461, 31289), (479, 31238), (539, 31145), (556, 31097), (560, 31088), (568, 31073), (585, 31034), (598, 31007), (612, 30977), (654, 30884), (662, 30872), (686, 30824), (697, 30809), (743, 30653), (753, 30605), (767, 30566), (783, 30500), (793, 30461), (815, 30389), (827, 30350), (834, 30326), (843, 30308), (853, 30275), (864, 30248), (888, 30194), (905, 30134), (930, 30056), (946, 29999), (950, 29987), (955, 29978),

Gene: Olliecat\_39 Start: 28106, Stop: 29989, Start Num: 232

Candidate Starts for Olliecat\_39:

(Start: 232 @28106 has 3 MA's), (267, 28127), (287, 28175), (Start: 301 @28196 has 110 MA's), (364, 28313), (400, 28376), (416, 28406), (422, 28427), (429, 28442), (433, 28454), (467, 28535), (472, 28550), (550, 28706), (564, 28736), (585, 28787), (594, 28808), (599, 28817), (644, 28916), (743, 29204), (746, 29210), (762, 29270), (767, 29291), (774, 29321), (777, 29330), (783, 29357), (813, 29450), (820, 29474), (843, 29540), (844, 29543), (874, 29621), (876, 29627), (898, 29672), (912, 29741), (924, 29774), (926, 29780), (929, 29792), (930, 29795), (946, 29852), (953, 29867), (955, 29873), (997, 29954),

Gene: Omniscient\_61 Start: 54894, Stop: 53035, Start Num: 205

Candidate Starts for Omniscient\_61:

(Start: 188 @54918 has 1 MA's), (Start: 205 @54894 has 304 MA's), (Start: 235 @54870 has 6 MA's), (Start: 250 @54864 has 2 MA's), (Start: 274 @54822 has 6 MA's), (283, 54801), (337, 54687), (342, 54681), (360, 54651), (391, 54591), (399, 54570), (421, 54516), (428, 54504), (434, 54486), (436, 54474), (476, 54369), (519, 54312), (538, 54276), (542, 54264), (551, 54240), (556, 54228), (564,

54210), (570, 54192), (580, 54174), (598, 54135), (602, 54126), (603, 54123), (604, 54120), (738, 53763), (744, 53730), (750, 53709), (777, 53616), (780, 53607), (795, 53544), (814, 53508), (815, 53505), (820, 53490), (847, 53412), (851, 53400), (858, 53379), (875, 53340), (905, 53250), (910, 53232), (912, 53226), (917, 53211), (926, 53187), (930, 53172), (931, 53169), (933, 53157), (940, 53133), (963, 53085), (972, 53061),

Gene: Onglai\_43 Start: 29824, Stop: 28031, Start Num: 246

Candidate Starts for Onglai\_43:

(Start: 246 @29824 has 877 MA's), (261, 29815), (280, 29773), (346, 29653), (347, 29650), (372, 29602), (402, 29542), (417, 29512), (420, 29500), (425, 29488), (479, 29335), (539, 29242), (598, 29104), (612, 29074), (687, 28915), (697, 28903), (714, 28876), (740, 28768), (743, 28747), (780, 28612), (783, 28594), (814, 28513), (827, 28471), (853, 28396), (886, 28321), (902, 28279), (930, 28177), (946, 28120), (950, 28108), (955, 28099),

Gene: Oofda\_48 Start: 29834, Stop: 28044, Start Num: 246

Candidate Starts for Oofda\_48:

(Start: 246 @29834 has 877 MA's), (400, 29555), (402, 29552), (416, 29525), (425, 29498), (444, 29447), (479, 29345), (539, 29252), (552, 29213), (560, 29195), (646, 29006), (683, 28940), (717, 28880), (726, 28841), (738, 28790), (740, 28781), (743, 28760), (755, 28709), (766, 28676), (774, 28643), (776, 28637), (783, 28607), (810, 28547), (814, 28526), (827, 28484), (835, 28457), (876, 28355), (902, 28292), (903, 28289), (946, 28133), (950, 28121), (957, 28109),

Gene: Oogway\_42 Start: 33561, Stop: 31732, Start Num: 246

Candidate Starts for Oogway\_42:

(Start: 246 @33561 has 877 MA's), (368, 33348), (374, 33333), (416, 33255), (422, 33234), (425, 33228), (429, 33219), (470, 33102), (479, 33075), (539, 32982), (544, 32967), (556, 32934), (578, 32883), (580, 32880), (612, 32814), (627, 32784), (639, 32754), (662, 32709), (683, 32670), (743, 32490), (753, 32442), (771, 32394), (780, 32355), (783, 32337), (793, 32298), (810, 32277), (814, 32256), (819, 32241), (861, 32118), (922, 31947), (929, 31923), (943, 31875), (946, 31863), (955, 31842), (959, 31836), (981, 31788), (986, 31773),

Gene: Oosterbaan\_60 Start: 54313, Stop: 52454, Start Num: 205

Candidate Starts for Oosterbaan\_60:

(Start: 188 @54337 has 1 MA's), (Start: 205 @54313 has 304 MA's), (Start: 235 @54289 has 6 MA's), (Start: 250 @54283 has 2 MA's), (Start: 274 @54241 has 6 MA's), (283, 54220), (337, 54106), (342, 54100), (360, 54070), (391, 54010), (399, 53989), (421, 53935), (428, 53923), (434, 53905), (436, 53893), (476, 53788), (519, 53731), (538, 53695), (542, 53683), (552, 53656), (564, 53629), (570, 53611), (580, 53593), (598, 53554), (602, 53545), (603, 53542), (712, 53284), (738, 53182), (744, 53149), (750, 53128), (777, 53035), (780, 53026), (795, 52963), (814, 52927), (815, 52924), (820, 52909), (847, 52831), (851, 52819), (858, 52798), (875, 52759), (905, 52669), (910, 52651), (912, 52645), (917, 52630), (926, 52606), (930, 52591), (931, 52588), (933, 52576), (940, 52552), (963, 52504), (972, 52480),

Gene: Opia\_57 Start: 52500, Stop: 50671, Start Num: 205

Candidate Starts for Opia\_57:

(Start: 205 @52500 has 304 MA's), (Start: 250 @52473 has 2 MA's), (269, 52443), (Start: 274 @52431 has 6 MA's), (286, 52404), (287, 52401), (293, 52392), (318, 52374), (366, 52278), (391, 52227), (400, 52203), (411, 52179), (463, 52041), (472, 52017), (476, 52005), (519, 51948), (538, 51912), (542, 51900), (551, 51876), (588, 51792), (602, 51762), (603, 51759), (615, 51729), (680, 51585), (707, 51519), (721, 51480), (724, 51468), (727, 51447), (732, 51429), (744, 51372), (763, 51315), (771, 51288), (777, 51258), (780, 51249), (795, 51183), (812, 51156), (814, 51147), (820, 51129), (827, 51105), (847, 51051), (851, 51039), (858, 51018), (888, 50949), (905, 50889), (910, 50871), (922, 50838), (926, 50826), (930, 50811), (931, 50808), (933, 50796), (940, 50772), (941, 50769), (963,

50721), (965, 50718), (972, 50697), (979, 50676),

Gene: Orange\_44 Start: 30325, Stop: 28538, Start Num: 246

Candidate Starts for Orange\_44:

(Start: 246 @30325 has 877 MA's), (364, 30121), (400, 30049), (416, 30019), (425, 29992), (541, 29740), (560, 29689), (598, 29608), (619, 29563), (659, 29479), (687, 29422), (715, 29380), (726, 29335), (743, 29254), (755, 29203), (767, 29167), (783, 29101), (810, 29041), (812, 29029), (846, 28927), (853, 28903), (860, 28885), (888, 28822), (901, 28795), (902, 28786), (905, 28762), (946, 28627), (950, 28615), (955, 28606),

Gene: OrangeOswald\_58 Start: 53684, Stop: 51867, Start Num: 247

Candidate Starts for OrangeOswald\_58:

(130, 53867), (Start: 247 @53684 has 43 MA's), (267, 53654), (368, 53474), (417, 53369), (433, 53321), (435, 53309), (448, 53279), (454, 53273), (476, 53210), (478, 53204), (519, 53153), (538, 53117), (556, 53069), (603, 52964), (645, 52868), (674, 52817), (724, 52673), (732, 52634), (739, 52604), (744, 52577), (748, 52565), (775, 52469), (777, 52463), (780, 52454), (782, 52442), (807, 52370), (814, 52340), (820, 52322), (822, 52313), (847, 52244), (851, 52232), (858, 52211), (888, 52142), (898, 52127), (903, 52103), (905, 52082), (910, 52064), (912, 52058), (924, 52025), (926, 52019), (931, 52001), (933, 51989), (936, 51977), (940, 51965), (956, 51923), (972, 51893),

Gene: Orfeu\_59 Start: 54570, Stop: 52711, Start Num: 205

Candidate Starts for Orfeu\_59:

(Start: 188 @54594 has 1 MA's), (Start: 205 @54570 has 304 MA's), (Start: 235 @54546 has 6 MA's), (Start: 250 @54540 has 2 MA's), (Start: 274 @54498 has 6 MA's), (283, 54477), (337, 54363), (342, 54357), (360, 54327), (391, 54267), (399, 54246), (421, 54192), (428, 54180), (434, 54162), (436, 54150), (476, 54045), (519, 53988), (538, 53952), (542, 53940), (552, 53913), (564, 53886), (570, 53868), (580, 53850), (598, 53811), (602, 53802), (603, 53799), (604, 53796), (738, 53439), (744, 53406), (750, 53385), (777, 53292), (780, 53283), (795, 53220), (814, 53184), (815, 53181), (820, 53166), (847, 53088), (851, 53076), (858, 53055), (875, 53016), (905, 52926), (910, 52908), (912, 52902), (917, 52887), (926, 52863), (930, 52848), (931, 52845), (933, 52833), (940, 52809), (963, 52761), (972, 52737),

Gene: Orion\_62 Start: 53975, Stop: 52116, Start Num: 205

Candidate Starts for Orion\_62:

(Start: 188 @53999 has 1 MA's), (Start: 205 @53975 has 304 MA's), (Start: 235 @53951 has 6 MA's), (Start: 250 @53945 has 2 MA's), (Start: 274 @53903 has 6 MA's), (283, 53882), (337, 53768), (342, 53762), (360, 53732), (391, 53672), (399, 53651), (421, 53597), (428, 53585), (434, 53567), (436, 53555), (476, 53450), (519, 53393), (538, 53357), (542, 53345), (552, 53318), (564, 53291), (570, 53273), (580, 53255), (598, 53216), (602, 53207), (603, 53204), (712, 52946), (738, 52844), (744, 52811), (750, 52790), (777, 52697), (780, 52688), (795, 52625), (814, 52589), (815, 52586), (820, 52571), (847, 52493), (851, 52481), (858, 52460), (875, 52421), (905, 52331), (910, 52313), (912, 52307), (917, 52292), (926, 52268), (930, 52253), (931, 52250), (933, 52238), (940, 52214), (963, 52166), (972, 52142),

Gene: Orla\_51 Start: 35183, Stop: 32787, Start Num: 45

Candidate Starts for Orla\_51:

(16, 35312), (19, 35303), (Start: 45 @35183 has 24 MA's), (89, 35051), (93, 35039), (107, 34994), (138, 34931), (145, 34910), (185, 34877), (223, 34820), (265, 34772), (273, 34757), (295, 34709), (329, 34634), (332, 34628), (335, 34622), (338, 34616), (374, 34547), (389, 34523), (398, 34499), (430, 34424), (435, 34403), (453, 34355), (457, 34343), (473, 34298), (524, 34142), (526, 34136), (605, 34007), (643, 33959), (649, 33947), (682, 33875), (703, 33833), (733, 33722), (741, 33680), (747, 33656), (749, 33647), (760, 33605), (783, 33512), (792, 33476), (794, 33470), (796, 33464), (797, 33458), (815, 33401), (822, 33377), (828, 33359), (859, 33266), (884, 33197), (893, 33158),



(903, 33119), (905, 33098), (915, 33065), (922, 33047), (947, 32951), (958, 32927), (973, 32888), (1004, 32819),

Gene: Orwigg\_60 Start: 53955, Stop: 52096, Start Num: 205

Candidate Starts for Orwigg\_60:

(Start: 188 @53979 has 1 MA's), (Start: 205 @53955 has 304 MA's), (Start: 235 @53931 has 6 MA's), (Start: 250 @53925 has 2 MA's), (Start: 274 @53883 has 6 MA's), (283, 53862), (337, 53748), (342, 53742), (360, 53712), (391, 53652), (399, 53631), (421, 53577), (428, 53565), (434, 53547), (436, 53535), (476, 53430), (519, 53373), (538, 53337), (542, 53325), (551, 53301), (556, 53289), (564, 53271), (570, 53253), (580, 53235), (598, 53196), (602, 53187), (603, 53184), (604, 53181), (712, 52926), (738, 52824), (744, 52791), (750, 52770), (777, 52677), (780, 52668), (795, 52605), (814, 52569), (815, 52566), (820, 52551), (847, 52473), (851, 52461), (858, 52440), (875, 52401), (905, 52311), (910, 52293), (912, 52287), (917, 52272), (926, 52248), (930, 52233), (931, 52230), (933, 52218), (940, 52194), (963, 52146), (972, 52122),

Gene: Oxtob96\_39 Start: 28935, Stop: 27070, Start Num: 301

Candidate Starts for Oxtob96\_39:

(Start: 238 @29022 has 3 MA's), (Start: 241 @29019 has 13 MA's), (288, 28950), (Start: 301 @28935 has 110 MA's), (Start: 308 @28926 has 5 MA's), (354, 28821), (358, 28812), (375, 28782), (378, 28779), (433, 28659), (435, 28647), (438, 28641), (475, 28536), (484, 28509), (531, 28368), (537, 28359), (539, 28347), (548, 28320), (549, 28317), (554, 28302), (556, 28296), (559, 28290), (586, 28257), (676, 28068), (776, 27753), (779, 27744), (780, 27741), (783, 27723), (794, 27681), (796, 27675), (805, 27651), (822, 27594), (878, 27435), (885, 27405), (888, 27396), (903, 27336), (906, 27312), (919, 27273), (929, 27240), (932, 27228), (947, 27168),

Gene: P28Green\_49 Start: 31855, Stop: 30041, Start Num: 246

Candidate Starts for P28Green\_49:

(Start: 246 @31855 has 877 MA's), (275, 31816), (280, 31804), (364, 31651), (371, 31636), (400, 31579), (425, 31522), (429, 31513), (444, 31471), (461, 31420), (479, 31369), (539, 31276), (556, 31228), (560, 31219), (568, 31204), (585, 31165), (598, 31138), (612, 31108), (654, 31015), (686, 30955), (697, 30940), (743, 30784), (767, 30697), (783, 30631), (793, 30592), (815, 30520), (827, 30481), (834, 30457), (843, 30439), (853, 30406), (864, 30379), (888, 30325), (905, 30265), (930, 30187), (946, 30130), (950, 30118), (955, 30109),

Gene: PG1\_61 Start: 54546, Stop: 52687, Start Num: 205

Candidate Starts for PG1\_61:

(Start: 188 @54570 has 1 MA's), (Start: 205 @54546 has 304 MA's), (Start: 235 @54522 has 6 MA's), (Start: 250 @54516 has 2 MA's), (Start: 274 @54474 has 6 MA's), (283, 54453), (337, 54339), (342, 54333), (360, 54303), (391, 54243), (399, 54222), (421, 54168), (428, 54156), (434, 54138), (436, 54126), (476, 54021), (519, 53964), (538, 53928), (542, 53916), (552, 53889), (564, 53862), (570, 53844), (580, 53826), (598, 53787), (602, 53778), (603, 53775), (712, 53517), (738, 53415), (744, 53382), (750, 53361), (777, 53268), (780, 53259), (795, 53196), (814, 53160), (815, 53157), (820, 53142), (847, 53064), (851, 53052), (858, 53031), (875, 52992), (905, 52902), (910, 52884), (912, 52878), (917, 52863), (926, 52839), (930, 52824), (931, 52821), (933, 52809), (940, 52785), (963, 52737), (972, 52713),

Gene: PGHhamlin\_50 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for PGHhamlin\_50:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905,

30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: PP\_46 Start: 35109, Stop: 33271, Start Num: 246

Candidate Starts for PP\_46:

(Start: 246 @35109 has 877 MA's), (280, 35058), (364, 34905), (368, 34896), (374, 34881), (395, 34845), (425, 34776), (429, 34767), (433, 34755), (479, 34623), (539, 34527), (558, 34479), (560, 34473), (585, 34419), (659, 34266), (683, 34221), (743, 34029), (752, 33999), (780, 33894), (783, 33876), (784, 33873), (793, 33837), (815, 33765), (820, 33750), (842, 33687), (886, 33561), (905, 33495), (946, 33360), (950, 33348), (955, 33339),

Gene: PSirce\_37 Start: 28735, Stop: 26870, Start Num: 299

Candidate Starts for PSirce\_37:

(Start: 299 @28735 has 38 MA's), (320, 28690), (344, 28636), (379, 28576), (403, 28525), (435, 28447), (438, 28441), (454, 28396), (455, 28393), (456, 28390), (469, 28351), (489, 28291), (531, 28168), (537, 28159), (539, 28147), (543, 28135), (549, 28117), (556, 28096), (562, 28084), (658, 27913), (724, 27745), (771, 27580), (779, 27544), (783, 27523), (794, 27481), (822, 27394), (836, 27349), (872, 27250), (885, 27205), (888, 27196), (903, 27136), (906, 27112), (917, 27079), (947, 26968),

Gene: PSullivan\_44 Start: 33947, Stop: 32121, Start Num: 246

Candidate Starts for PSullivan\_44:

(Start: 246 @33947 has 877 MA's), (368, 33734), (374, 33719), (400, 33671), (416, 33641), (422, 33620), (425, 33614), (429, 33605), (470, 33488), (479, 33461), (539, 33368), (544, 33353), (551, 33332), (578, 33269), (580, 33266), (612, 33200), (627, 33170), (639, 33140), (662, 33095), (683, 33056), (743, 32876), (752, 32846), (753, 32828), (755, 32825), (767, 32789), (783, 32723), (793, 32684), (810, 32663), (814, 32642), (820, 32624), (843, 32558), (902, 32408), (903, 32405), (909, 32369), (921, 32336), (925, 32324), (946, 32249), (955, 32228),

Gene: PacerPaul\_45 Start: 34817, Stop: 32991, Start Num: 246

Candidate Starts for PacerPaul\_45:

(Start: 246 @34817 has 877 MA's), (368, 34604), (374, 34589), (416, 34511), (422, 34490), (425, 34484), (429, 34475), (470, 34358), (479, 34331), (539, 34238), (544, 34223), (556, 34190), (578, 34139), (580, 34136), (612, 34070), (627, 34040), (639, 34010), (662, 33965), (683, 33926), (743, 33746), (752, 33716), (753, 33698), (755, 33695), (767, 33659), (783, 33593), (814, 33512), (815, 33509), (843, 33428), (899, 33293), (902, 33278), (903, 33275), (909, 33239), (917, 33215), (921, 33206), (925, 33194), (932, 33167), (946, 33119), (955, 33098),

Gene: Pacifista\_59 Start: 54030, Stop: 52171, Start Num: 205

Candidate Starts for Pacifista\_59:

(Start: 188 @54054 has 1 MA's), (Start: 205 @54030 has 304 MA's), (Start: 235 @54006 has 6 MA's), (Start: 250 @54000 has 2 MA's), (Start: 274 @53958 has 6 MA's), (283, 53937), (337, 53823), (342, 53817), (360, 53787), (391, 53727), (399, 53706), (421, 53652), (428, 53640), (434, 53622), (436, 53610), (476, 53505), (519, 53448), (538, 53412), (542, 53400), (551, 53376), (556, 53364), (564, 53346), (570, 53328), (580, 53310), (598, 53271), (602, 53262), (603, 53259), (604, 53256), (738, 52899), (744, 52866), (750, 52845), (777, 52752), (780, 52743), (795, 52680), (814, 52644), (815, 52641), (820, 52626), (847, 52548), (851, 52536), (858, 52515), (875, 52476), (905, 52386), (910, 52368), (912, 52362), (917, 52347), (926, 52323), (930, 52308), (931, 52305), (933, 52293), (940, 52269), (963, 52221), (972, 52197),

Gene: PackMan\_44 Start: 31483, Stop: 29690, Start Num: 246

Candidate Starts for PackMan\_44:

(Start: 246 @31483 has 877 MA's), (261, 31474), (280, 31432), (346, 31312), (347, 31309), (372, 31261), (402, 31201), (417, 31171), (420, 31159), (425, 31147), (479, 30994), (539, 30901), (598,

30763), (612, 30733), (687, 30574), (697, 30562), (714, 30535), (740, 30427), (743, 30406), (780, 30271), (783, 30253), (814, 30172), (827, 30130), (853, 30055), (886, 29980), (902, 29938), (930, 29836), (946, 29779), (950, 29767), (955, 29758),

Gene: PainterBoy\_45 Start: 30908, Stop: 29076, Start Num: 246

Candidate Starts for PainterBoy\_45:

(Start: 246 @30908 has 877 MA's), (364, 30704), (366, 30701), (383, 30665), (400, 30632), (402, 30629), (416, 30602), (422, 30581), (425, 30575), (429, 30566), (444, 30524), (471, 30446), (479, 30422), (539, 30329), (612, 30161), (714, 29963), (743, 29834), (771, 29738), (780, 29699), (783, 29681), (812, 29609), (814, 29600), (861, 29462), (901, 29375), (902, 29366), (930, 29264), (946, 29207), (950, 29195), (1000, 29090),

Gene: Pajaza\_35 Start: 27722, Stop: 25905, Start Num: 298

Candidate Starts for Pajaza\_35:

(Start: 298 @27722 has 4 MA's), (309, 27707), (435, 27431), (438, 27425), (501, 27290), (505, 27275), (536, 27197), (537, 27194), (539, 27182), (549, 27152), (585, 27095), (658, 26948), (726, 26768), (764, 26630), (779, 26579), (780, 26576), (783, 26558), (784, 26555), (794, 26516), (822, 26429), (831, 26402), (878, 26270), (906, 26147), (917, 26114), (919, 26108), (922, 26099), (947, 26003), (949, 25997),

Gene: Palestino\_44 Start: 31570, Stop: 29741, Start Num: 246

Candidate Starts for Palestino\_44:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (607, 30838), (610, 30832), (646, 30751), (659, 30730), (683, 30685), (740, 30520), (743, 30499), (783, 30346), (792, 30310), (793, 30307), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Panamaxus\_42 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for Panamaxus\_42:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: Panchaali\_95 Start: 75288, Stop: 77090, Start Num: 258

Candidate Starts for Panchaali\_95:

(Start: 258 @75288 has 1 MA's), (292, 75357), (315, 75390), (325, 75417), (346, 75450), (391, 75525), (417, 75582), (428, 75606), (438, 75639), (467, 75699), (571, 75891), (585, 75918), (587, 75924), (591, 75933), (617, 75987), (683, 76119), (723, 76215), (730, 76248), (740, 76287), (743, 76308), (746, 76314), (766, 76398), (774, 76431), (792, 76515), (793, 76518), (813, 76581), (816, 76593), (827, 76629), (840, 76662), (858, 76716), (865, 76734), (898, 76818), (902, 76839), (906, 76866), (910, 76881), (924, 76920), (929, 76938), (932, 76950), (934, 76962), (946, 76998),

Gene: Papafritta\_38 Start: 28640, Stop: 26775, Start Num: 301

Candidate Starts for Papafritta\_38:

(Start: 238 @28727 has 3 MA's), (Start: 241 @28724 has 13 MA's), (Start: 301 @28640 has 110 MA's), (Start: 308 @28631 has 5 MA's), (354, 28526), (358, 28517), (375, 28487), (378, 28484), (433, 28364), (435, 28352), (438, 28346), (475, 28241), (484, 28214), (531, 28073), (536, 28067), (537, 28064), (539, 28052), (548, 28025), (549, 28022), (554, 28007), (556, 28001), (559, 27995), (586, 27962), (652, 27833), (676, 27773), (776, 27458), (779, 27449), (780, 27446), (783, 27428), (794,

27386), (796, 27380), (798, 27371), (805, 27356), (822, 27299), (878, 27140), (885, 27110), (888, 27101), (903, 27041), (906, 27017), (919, 26978), (929, 26945), (932, 26933), (947, 26873),

Gene: Papez\_47 Start: 36969, Stop: 35152, Start Num: 246

Candidate Starts for Papez\_47:

(Start: 246 @36969 has 877 MA's), (368, 36756), (400, 36693), (416, 36663), (422, 36642), (425, 36636), (429, 36627), (461, 36534), (470, 36510), (479, 36483), (539, 36390), (544, 36375), (556, 36342), (578, 36291), (580, 36288), (612, 36222), (639, 36162), (662, 36117), (683, 36078), (743, 35898), (753, 35850), (766, 35814), (767, 35811), (783, 35745), (793, 35706), (810, 35685), (814, 35664), (820, 35646), (843, 35580), (902, 35430), (903, 35427), (909, 35391), (917, 35367), (921, 35358), (925, 35346), (946, 35271), (955, 35250),

Gene: Paphu\_43 Start: 34328, Stop: 32499, Start Num: 246

Candidate Starts for Paphu\_43:

(Start: 246 @34328 has 877 MA's), (368, 34115), (374, 34100), (416, 34022), (422, 34001), (425, 33995), (429, 33986), (470, 33869), (479, 33842), (539, 33749), (544, 33734), (556, 33701), (578, 33650), (580, 33647), (612, 33581), (627, 33551), (639, 33521), (662, 33476), (683, 33437), (743, 33257), (753, 33209), (771, 33161), (780, 33122), (783, 33104), (793, 33065), (810, 33044), (814, 33023), (819, 33008), (861, 32885), (922, 32714), (929, 32690), (943, 32642), (946, 32630), (955, 32609), (959, 32603), (981, 32555), (986, 32540),

Gene: Paraselene\_43 Start: 34680, Stop: 32854, Start Num: 246

Candidate Starts for Paraselene\_43:

(Start: 246 @34680 has 877 MA's), (368, 34467), (374, 34452), (400, 34404), (416, 34374), (422, 34353), (425, 34347), (429, 34338), (470, 34221), (479, 34194), (539, 34101), (544, 34086), (556, 34053), (578, 34002), (580, 33999), (612, 33933), (627, 33903), (639, 33873), (662, 33828), (683, 33789), (743, 33609), (753, 33561), (767, 33522), (783, 33456), (793, 33417), (810, 33396), (814, 33375), (820, 33357), (843, 33291), (902, 33141), (903, 33138), (909, 33102), (917, 33078), (921, 33069), (925, 33057), (946, 32982), (955, 32961),

Gene: Pari\_45 Start: 34105, Stop: 32279, Start Num: 246

Candidate Starts for Pari\_45:

(Start: 246 @34105 has 877 MA's), (368, 33892), (374, 33877), (400, 33829), (416, 33799), (422, 33778), (425, 33772), (429, 33763), (470, 33646), (479, 33619), (539, 33526), (544, 33511), (578, 33427), (580, 33424), (612, 33358), (627, 33328), (639, 33298), (662, 33253), (683, 33214), (743, 33034), (753, 32986), (767, 32947), (783, 32881), (793, 32842), (810, 32821), (814, 32800), (820, 32782), (843, 32716), (902, 32566), (903, 32563), (909, 32527), (921, 32494), (925, 32482), (946, 32407), (955, 32386),

Gene: ParleG\_39 Start: 28937, Stop: 27072, Start Num: 301

Candidate Starts for ParleG\_39:

(Start: 238 @29024 has 3 MA's), (Start: 241 @29021 has 13 MA's), (Start: 301 @28937 has 110 MA's), (Start: 308 @28928 has 5 MA's), (354, 28823), (358, 28814), (375, 28784), (378, 28781), (433, 28661), (435, 28649), (438, 28643), (475, 28538), (484, 28511), (531, 28370), (536, 28364), (537, 28361), (539, 28349), (548, 28322), (549, 28319), (554, 28304), (556, 28298), (559, 28292), (586, 28259), (652, 28130), (676, 28070), (776, 27755), (779, 27746), (780, 27743), (783, 27725), (794, 27683), (796, 27677), (798, 27668), (805, 27653), (822, 27596), (878, 27437), (885, 27407), (888, 27398), (903, 27338), (906, 27314), (919, 27275), (929, 27242), (932, 27230), (947, 27170),

Gene: Parliament\_44 Start: 34876, Stop: 33050, Start Num: 246

Candidate Starts for Parliament\_44:

(Start: 246 @34876 has 877 MA's), (368, 34663), (400, 34600), (416, 34570), (422, 34549), (425, 34543), (429, 34534), (470, 34417), (479, 34390), (539, 34297), (544, 34282), (578, 34198), (580,

34195), (612, 34129), (627, 34099), (639, 34069), (662, 34024), (683, 33985), (743, 33805), (753, 33757), (755, 33754), (767, 33718), (783, 33652), (793, 33613), (810, 33592), (814, 33571), (820, 33553), (843, 33487), (902, 33337), (903, 33334), (909, 33298), (917, 33274), (921, 33265), (925, 33253), (946, 33178), (955, 33157),

Gene: Partridge\_36 Start: 28196, Stop: 26412, Start Num: 246

Candidate Starts for Partridge\_36:

(Start: 246 @28196 has 877 MA's), (346, 28025), (379, 27962), (399, 27923), (420, 27875), (425, 27863), (429, 27854), (479, 27710), (539, 27617), (556, 27569), (585, 27506), (598, 27479), (646, 27374), (662, 27347), (683, 27308), (743, 27128), (753, 27080), (783, 26975), (784, 26972), (810, 26915), (814, 26894), (829, 26846), (855, 26771), (886, 26702), (902, 26660), (903, 26657), (905, 26636), (909, 26621), (930, 26558), (946, 26501), (950, 26489), (969, 26450), (978, 26432),

Gene: PascalRango\_45 Start: 34446, Stop: 32620, Start Num: 246

Candidate Starts for PascalRango\_45:

(Start: 246 @34446 has 877 MA's), (368, 34233), (374, 34218), (400, 34170), (416, 34140), (422, 34119), (425, 34113), (429, 34104), (470, 33987), (479, 33960), (539, 33867), (544, 33852), (578, 33768), (580, 33765), (612, 33699), (627, 33669), (639, 33639), (662, 33594), (683, 33555), (743, 33375), (752, 33345), (753, 33327), (767, 33288), (783, 33222), (814, 33141), (815, 33138), (843, 33057), (902, 32907), (903, 32904), (909, 32868), (917, 32844), (921, 32835), (925, 32823), (946, 32748), (955, 32727),

Gene: PastaFagioli\_43 Start: 30294, Stop: 32099, Start Num: 287

Candidate Starts for PastaFagioli\_43:

(147, 30102), (155, 30114), (165, 30132), (198, 30177), (Start: 244 @30225 has 11 MA's), (287, 30294), (433, 30573), (434, 30576), (467, 30657), (541, 30789), (627, 30984), (696, 31131), (731, 31254), (743, 31314), (746, 31320), (755, 31365), (762, 31380), (764, 31395), (774, 31431), (783, 31467), (813, 31560), (818, 31578), (827, 31608), (874, 31731), (902, 31803), (909, 31842), (924, 31884), (939, 31938), (946, 31962), (950, 31974), (955, 31983), (968, 32007),

Gene: Patbob\_100 Start: 78526, Stop: 80328, Start Num: 262

Candidate Starts for Patbob\_100:

(Start: 262 @78526 has 4 MA's), (292, 78589), (Start: 301 @78601 has 110 MA's), (357, 78712), (391, 78766), (428, 78847), (435, 78874), (438, 78880), (470, 78949), (482, 78985), (539, 79054), (571, 79132), (585, 79159), (591, 79174), (683, 79363), (706, 79408), (716, 79432), (719, 79441), (723, 79459), (730, 79492), (740, 79531), (743, 79552), (746, 79558), (774, 79672), (792, 79756), (797, 79774), (813, 79822), (816, 79834), (827, 79870), (840, 79903), (843, 79912), (858, 79957), (865, 79975), (898, 80059), (902, 80080), (906, 80107), (929, 80179), (934, 80203), (946, 80239), (961, 80266),

Gene: PattyP\_45 Start: 34329, Stop: 32500, Start Num: 246

Candidate Starts for PattyP\_45:

(Start: 246 @34329 has 877 MA's), (368, 34116), (374, 34101), (400, 34053), (416, 34023), (422, 34002), (425, 33996), (429, 33987), (458, 33903), (470, 33870), (479, 33843), (539, 33750), (544, 33735), (578, 33651), (580, 33648), (612, 33582), (627, 33552), (639, 33522), (662, 33477), (683, 33438), (743, 33258), (753, 33210), (771, 33162), (780, 33123), (783, 33105), (793, 33066), (810, 33045), (814, 33024), (819, 33009), (861, 32886), (922, 32715), (929, 32691), (943, 32643), (946, 32631), (955, 32610), (959, 32604), (981, 32556), (986, 32541),

Gene: PauloDiaboli\_117 Start: 81175, Stop: 79307, Start Num: 258

Candidate Starts for PauloDiaboli\_117:

(Start: 199 @81250 has 2 MA's), (237, 81196), (Start: 246 @81187 has 877 MA's), (Start: 258 @81175 has 1 MA's), (352, 80977), (366, 80950), (391, 80911), (418, 80848), (428, 80830), (435, 80803), (438,

80797), (482, 80689), (542, 80611), (549, 80590), (561, 80557), (571, 80527), (585, 80500), (613, 80440), (664, 80335), (683, 80302), (716, 80233), (719, 80224), (743, 80113), (773, 79999), (791, 79915), (795, 79900), (827, 79789), (829, 79783), (832, 79771), (840, 79756), (877, 79654), (881, 79645), (905, 79555), (917, 79516), (922, 79504), (930, 79477), (946, 79420), (957, 79396),

Gene: Pawn\_48 Start: 31757, Stop: 29943, Start Num: 246

Candidate Starts for Pawn\_48:

(Start: 246 @31757 has 877 MA's), (275, 31718), (280, 31706), (364, 31553), (371, 31538), (400, 31481), (425, 31424), (429, 31415), (444, 31373), (461, 31322), (479, 31271), (539, 31178), (556, 31130), (568, 31106), (585, 31067), (598, 31040), (612, 31010), (654, 30917), (662, 30905), (686, 30857), (697, 30842), (743, 30686), (755, 30635), (766, 30602), (767, 30599), (783, 30533), (793, 30494), (815, 30422), (827, 30383), (834, 30359), (843, 30341), (853, 30308), (888, 30227), (905, 30167), (910, 30149), (930, 30089), (932, 30080), (946, 30032), (950, 30020), (955, 30011),

Gene: Payneful\_44 Start: 33908, Stop: 32082, Start Num: 246

Candidate Starts for Payneful\_44:

(Start: 246 @33908 has 877 MA's), (368, 33695), (374, 33680), (416, 33602), (422, 33581), (425, 33575), (429, 33566), (470, 33449), (479, 33422), (539, 33329), (544, 33314), (578, 33230), (580, 33227), (612, 33161), (627, 33131), (639, 33101), (662, 33056), (683, 33017), (743, 32837), (752, 32807), (753, 32789), (755, 32786), (767, 32750), (783, 32684), (814, 32603), (815, 32600), (843, 32519), (902, 32369), (903, 32366), (909, 32330), (917, 32306), (921, 32297), (925, 32285), (932, 32258), (946, 32210), (955, 32189),

Gene: PeaceMeal1\_42 Start: 30387, Stop: 28555, Start Num: 246

Candidate Starts for PeaceMeal1\_42:

(Start: 246 @30387 has 877 MA's), (280, 30336), (319, 30270), (364, 30183), (368, 30174), (395, 30123), (400, 30111), (425, 30054), (454, 29973), (458, 29961), (461, 29952), (471, 29925), (479, 29901), (539, 29808), (552, 29769), (585, 29700), (598, 29673), (662, 29541), (743, 29313), (762, 29247), (776, 29190), (783, 29160), (793, 29121), (815, 29049), (820, 29034), (827, 29010), (843, 28968), (853, 28935), (905, 28779), (912, 28755), (932, 28692), (946, 28644), (950, 28632), (955, 28623),

Gene: Peaches\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for Peaches\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: Peep\_39 Start: 28922, Stop: 27057, Start Num: 301

Candidate Starts for Peep\_39:

(Start: 238 @29009 has 3 MA's), (Start: 241 @29006 has 13 MA's), (Start: 301 @28922 has 110 MA's), (Start: 308 @28913 has 5 MA's), (354, 28808), (358, 28799), (375, 28769), (378, 28766), (433, 28646), (435, 28634), (438, 28628), (475, 28523), (484, 28496), (531, 28355), (536, 28349), (537, 28346), (539, 28334), (548, 28307), (549, 28304), (554, 28289), (556, 28283), (559, 28277), (586, 28244), (652, 28115), (676, 28055), (733, 27890), (776, 27740), (779, 27731), (780, 27728), (783, 27710), (794, 27668), (796, 27662), (798, 27653), (805, 27638), (822, 27581), (878, 27422), (885, 27392), (888, 27383), (903, 27323), (906, 27299), (919, 27260), (929, 27227), (932, 27215), (947, 27155),

Gene: Pelly\_44 Start: 34856, Stop: 33030, Start Num: 246

Candidate Starts for Pelly\_44:

(Start: 246 @34856 has 877 MA's), (374, 34628), (400, 34580), (416, 34550), (422, 34529), (425, 34523), (429, 34514), (470, 34397), (479, 34370), (539, 34277), (544, 34262), (556, 34229), (578, 34178), (580, 34175), (607, 34121), (612, 34109), (627, 34079), (639, 34049), (662, 34004), (683, 33965), (743, 33785), (753, 33737), (767, 33698), (783, 33632), (793, 33593), (810, 33572), (814, 33551), (820, 33533), (843, 33467), (902, 33317), (903, 33314), (909, 33278), (917, 33254), (925, 33233), (932, 33206), (946, 33158), (955, 33137),

Gene: Pembroke\_48 Start: 31854, Stop: 30040, Start Num: 246

Candidate Starts for Pembroke\_48:

(Start: 246 @31854 has 877 MA's), (275, 31815), (280, 31803), (364, 31650), (371, 31635), (400, 31578), (425, 31521), (429, 31512), (444, 31470), (461, 31419), (479, 31368), (539, 31275), (556, 31227), (560, 31218), (568, 31203), (585, 31164), (598, 31137), (612, 31107), (654, 31014), (662, 31002), (686, 30954), (697, 30939), (743, 30783), (767, 30696), (783, 30630), (793, 30591), (815, 30519), (827, 30480), (834, 30456), (843, 30438), (853, 30405), (864, 30378), (888, 30324), (905, 30264), (930, 30186), (946, 30129), (950, 30117), (955, 30108),

Gene: PenguinLover67\_56 Start: 54688, Stop: 52865, Start Num: 209

Candidate Starts for PenguinLover67\_56:

(206, 54691), (Start: 209 @54688 has 2 MA's), (Start: 250 @54667 has 2 MA's), (267, 54640), (287, 54595), (303, 54586), (318, 54568), (366, 54475), (428, 54337), (435, 54313), (445, 54292), (476, 54205), (519, 54148), (538, 54112), (542, 54100), (551, 54076), (552, 54073), (556, 54064), (602, 53956), (603, 53953), (604, 53950), (615, 53923), (704, 53722), (724, 53656), (725, 53653), (727, 53635), (732, 53617), (738, 53593), (739, 53587), (744, 53560), (775, 53452), (777, 53446), (780, 53437), (814, 53338), (815, 53335), (820, 53320), (847, 53242), (851, 53230), (858, 53209), (865, 53191), (879, 53161), (898, 53125), (905, 53080), (910, 53062), (912, 53056), (915, 53047), (926, 53017), (929, 53005), (930, 53002), (940, 52963), (947, 52939), (963, 52915), (972, 52891), (979, 52870),

Gene: Penny1\_49 Start: 31856, Stop: 30042, Start Num: 246

Candidate Starts for Penny1\_49:

(Start: 246 @31856 has 877 MA's), (275, 31817), (280, 31805), (364, 31652), (371, 31637), (400, 31580), (425, 31523), (429, 31514), (444, 31472), (461, 31421), (479, 31370), (539, 31277), (556, 31229), (560, 31220), (568, 31205), (585, 31166), (598, 31139), (612, 31109), (654, 31016), (686, 30956), (697, 30941), (743, 30785), (767, 30698), (783, 30632), (793, 30593), (815, 30521), (827, 30482), (834, 30458), (843, 30440), (853, 30407), (864, 30380), (888, 30326), (905, 30266), (930, 30188), (946, 30131), (950, 30119), (955, 30110),

Gene: Pepe\_42 Start: 33016, Stop: 31229, Start Num: 246

Candidate Starts for Pepe\_42:

(Start: 246 @33016 has 877 MA's), (368, 32803), (374, 32788), (400, 32740), (416, 32710), (422, 32689), (425, 32683), (429, 32674), (470, 32557), (479, 32530), (539, 32437), (544, 32422), (578, 32338), (580, 32335), (612, 32269), (627, 32239), (639, 32209), (662, 32164), (683, 32125), (743, 31945), (753, 31897), (767, 31858), (783, 31792), (812, 31720), (814, 31711), (843, 31627), (876, 31540), (917, 31414), (922, 31402), (939, 31342), (946, 31318), (948, 31312),

Gene: Peppino\_38 Start: 29047, Stop: 27182, Start Num: 301

Candidate Starts for Peppino\_38:

(Start: 301 @29047 has 110 MA's), (Start: 308 @29038 has 5 MA's), (432, 28774), (435, 28759), (438, 28753), (484, 28621), (501, 28567), (531, 28480), (537, 28471), (539, 28459), (548, 28432), (549, 28429), (554, 28414), (556, 28408), (718, 28078), (776, 27865), (779, 27856), (780, 27853), (783, 27835), (794, 27793), (798, 27778), (822, 27706), (831, 27679), (878, 27547), (885, 27517), (903, 27448), (906, 27424), (908, 27418), (919, 27385), (929, 27352), (932, 27340),

Gene: Percival\_49 Start: 32475, Stop: 34340, Start Num: 244

Candidate Starts for Percival\_49:

(153, 32349), (Start: 200 @32418 has 1 MA's), (Start: 244 @32475 has 11 MA's), (416, 32772), (467, 32916), (541, 33069), (585, 33177), (598, 33204), (629, 33264), (654, 33324), (659, 33330), (687, 33387), (692, 33393), (726, 33507), (743, 33588), (760, 33651), (774, 33705), (776, 33711), (829, 33888), (834, 33906), (840, 33915), (844, 33927), (876, 34011), (910, 34119), (926, 34164), (946, 34236), (982, 34314), (996, 34335),

Gene: Perplexer\_44 Start: 31519, Stop: 29690, Start Num: 246

Candidate Starts for Perplexer\_44:

(Start: 246 @31519 has 877 MA's), (280, 31468), (295, 31438), (383, 31276), (394, 31258), (400, 31243), (425, 31186), (429, 31177), (471, 31057), (479, 31033), (513, 30991), (539, 30940), (558, 30892), (568, 30871), (585, 30832), (607, 30787), (610, 30781), (646, 30700), (659, 30679), (683, 30634), (740, 30469), (743, 30448), (783, 30295), (793, 30256), (815, 30184), (820, 30169), (827, 30145), (832, 30127), (834, 30121), (837, 30115), (905, 29914), (946, 29779), (950, 29767), (955, 29758),

Gene: Perseus\_45 Start: 35152, Stop: 33323, Start Num: 246

Candidate Starts for Perseus\_45:

(Start: 246 @35152 has 877 MA's), (368, 34939), (374, 34924), (416, 34846), (422, 34825), (425, 34819), (429, 34810), (458, 34726), (470, 34693), (479, 34666), (539, 34573), (544, 34558), (551, 34537), (556, 34525), (578, 34474), (580, 34471), (612, 34405), (627, 34375), (639, 34345), (662, 34300), (683, 34261), (743, 34081), (753, 34033), (771, 33985), (780, 33946), (783, 33928), (793, 33889), (810, 33868), (814, 33847), (819, 33832), (861, 33709), (922, 33538), (929, 33514), (943, 33466), (946, 33454), (955, 33433), (959, 33427), (981, 33379), (986, 33364),

Gene: PeterPeter\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for PeterPeter\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Petersenfast\_43 Start: 30332, Stop: 28545, Start Num: 246

Candidate Starts for Petersenfast\_43:

(Start: 246 @30332 has 877 MA's), (364, 30128), (400, 30056), (416, 30026), (425, 29999), (541, 29747), (560, 29696), (598, 29615), (619, 29570), (620, 29567), (659, 29486), (687, 29429), (715, 29387), (726, 29342), (743, 29261), (755, 29210), (767, 29174), (783, 29108), (810, 29048), (812, 29036), (846, 28934), (853, 28910), (860, 28892), (888, 28829), (901, 28802), (902, 28793), (905, 28769), (946, 28634), (950, 28622), (955, 28613),

Gene: Peterson\_48 Start: 37027, Stop: 35201, Start Num: 246

Candidate Starts for Peterson\_48:

(Start: 246 @37027 has 877 MA's), (368, 36814), (374, 36799), (416, 36721), (425, 36694), (470, 36568), (479, 36541), (539, 36448), (544, 36433), (556, 36400), (578, 36349), (580, 36346), (612, 36280), (627, 36250), (639, 36220), (662, 36175), (683, 36136), (743, 35956), (753, 35908), (767, 35869), (783, 35803), (793, 35764), (810, 35743), (814, 35722), (820, 35704), (843, 35638), (902, 35488), (903, 35485), (909, 35449), (917, 35425), (921, 35416), (925, 35404), (946, 35329), (955, 35308),

Gene: PetiteSangsue\_44 Start: 31522, Stop: 29693, Start Num: 246

Candidate Starts for PetiteSangsue\_44:



(Start: 246 @31522 has 877 MA's), (280, 31471), (295, 31441), (383, 31279), (394, 31261), (400, 31246), (425, 31189), (429, 31180), (471, 31060), (479, 31036), (513, 30994), (539, 30943), (558, 30895), (568, 30874), (585, 30835), (607, 30790), (610, 30784), (646, 30703), (659, 30682), (683, 30637), (740, 30472), (743, 30451), (783, 30298), (793, 30259), (815, 30187), (820, 30172), (827, 30148), (832, 30130), (834, 30124), (837, 30118), (905, 29917), (946, 29782), (950, 29770), (955, 29761),

Gene: Petp2012\_45 Start: 34941, Stop: 33115, Start Num: 246

Candidate Starts for Petp2012\_45:

(Start: 246 @34941 has 877 MA's), (368, 34728), (374, 34713), (400, 34665), (416, 34635), (422, 34614), (425, 34608), (429, 34599), (470, 34482), (479, 34455), (539, 34362), (544, 34347), (551, 34326), (578, 34263), (580, 34260), (612, 34194), (627, 34164), (639, 34134), (662, 34089), (683, 34050), (743, 33870), (753, 33822), (767, 33783), (783, 33717), (793, 33678), (810, 33657), (814, 33636), (820, 33618), (843, 33552), (902, 33402), (903, 33399), (909, 33363), (917, 33339), (921, 33330), (925, 33318), (946, 33243), (955, 33222),

Gene: Petruccio\_45 Start: 34801, Stop: 32972, Start Num: 246

Candidate Starts for Petruccio\_45:

(Start: 246 @34801 has 877 MA's), (368, 34588), (374, 34573), (400, 34525), (416, 34495), (422, 34474), (425, 34468), (429, 34459), (470, 34342), (479, 34315), (539, 34222), (544, 34207), (556, 34174), (578, 34123), (580, 34120), (607, 34066), (612, 34054), (627, 34024), (639, 33994), (662, 33949), (683, 33910), (743, 33730), (753, 33682), (771, 33634), (780, 33595), (783, 33577), (793, 33538), (810, 33517), (814, 33496), (819, 33481), (861, 33358), (922, 33187), (929, 33163), (943, 33115), (946, 33103), (955, 33082), (959, 33076), (981, 33028), (986, 33013),

Gene: PetterN\_40 Start: 30056, Stop: 28191, Start Num: 246

Candidate Starts for PetterN\_40:

(185, 30131), (Start: 215 @30089 has 2 MA's), (Start: 246 @30056 has 877 MA's), (318, 29945), (364, 29852), (366, 29849), (400, 29780), (402, 29777), (416, 29750), (425, 29723), (429, 29714), (458, 29630), (461, 29621), (467, 29606), (479, 29570), (523, 29510), (539, 29474), (556, 29426), (567, 29405), (568, 29402), (594, 29342), (633, 29264), (654, 29216), (662, 29204), (686, 29156), (712, 29105), (743, 28970), (753, 28922), (767, 28883), (771, 28874), (777, 28844), (783, 28817), (784, 28814), (814, 28736), (820, 28718), (834, 28670), (853, 28619), (876, 28565), (880, 28556), (888, 28538), (910, 28460), (946, 28343), (950, 28331), (1000, 28226),

Gene: Ph8s\_46 Start: 30526, Stop: 28739, Start Num: 246

Candidate Starts for Ph8s\_46:

(Start: 246 @30526 has 877 MA's), (364, 30322), (400, 30250), (402, 30247), (416, 30220), (425, 30193), (433, 30172), (479, 30040), (539, 29947), (556, 29899), (598, 29809), (620, 29761), (743, 29455), (766, 29371), (767, 29368), (776, 29332), (783, 29302), (793, 29263), (810, 29242), (812, 29230), (814, 29221), (818, 29209), (853, 29104), (864, 29077), (880, 29041), (888, 29023), (902, 28987), (905, 28963), (946, 28828), (950, 28816), (955, 28807),

Gene: Phacado\_45 Start: 31569, Stop: 29743, Start Num: 246

Candidate Starts for Phacado\_45:

(Start: 246 @31569 has 877 MA's), (267, 31548), (280, 31518), (295, 31488), (383, 31326), (394, 31308), (425, 31236), (429, 31227), (471, 31107), (479, 31083), (539, 30990), (558, 30942), (568, 30921), (585, 30882), (646, 30750), (659, 30729), (683, 30684), (687, 30672), (740, 30519), (743, 30498), (776, 30375), (783, 30345), (793, 30306), (814, 30240), (815, 30237), (820, 30222), (827, 30198), (834, 30174), (905, 29967), (946, 29832), (950, 29820), (955, 29811),

Gene: Phaded\_46 Start: 32625, Stop: 30835, Start Num: 246

Candidate Starts for Phaded\_46:

(Start: 246 @32625 has 877 MA's), (364, 32421), (368, 32412), (402, 32343), (416, 32316), (425, 32289), (479, 32136), (539, 32043), (556, 31995), (560, 31986), (568, 31971), (598, 31905), (613, 31872), (652, 31788), (697, 31707), (715, 31677), (743, 31551), (752, 31521), (755, 31500), (776, 31428), (783, 31398), (793, 31359), (810, 31338), (814, 31317), (818, 31305), (880, 31137), (902, 31083), (905, 31059), (924, 31002), (930, 30981), (946, 30924), (950, 30912), (955, 30903),

Gene: Phaeder\_45 Start: 31483, Stop: 29690, Start Num: 246

Candidate Starts for Phaeder\_45:

(Start: 246 @31483 has 877 MA's), (261, 31474), (280, 31432), (346, 31312), (347, 31309), (372, 31261), (402, 31201), (417, 31171), (420, 31159), (425, 31147), (479, 30994), (539, 30901), (598, 30763), (612, 30733), (687, 30574), (697, 30562), (714, 30535), (740, 30427), (743, 30406), (780, 30271), (783, 30253), (814, 30172), (827, 30130), (853, 30055), (886, 29980), (902, 29938), (930, 29836), (946, 29779), (950, 29767), (955, 29758),

Gene: Phaerdrus\_54 Start: 53117, Stop: 51300, Start Num: 247

Candidate Starts for Phaerdrus\_54:

(130, 53300), (Start: 247 @53117 has 43 MA's), (267, 53087), (368, 52907), (433, 52754), (435, 52742), (448, 52712), (454, 52706), (476, 52643), (478, 52637), (519, 52586), (537, 52559), (538, 52550), (556, 52502), (603, 52397), (645, 52301), (674, 52250), (724, 52106), (732, 52067), (739, 52037), (744, 52010), (748, 51998), (775, 51902), (777, 51896), (780, 51887), (782, 51875), (807, 51803), (814, 51773), (820, 51755), (822, 51746), (847, 51677), (851, 51665), (858, 51644), (888, 51575), (898, 51560), (903, 51536), (905, 51515), (912, 51491), (926, 51452), (931, 51434), (933, 51422), (936, 51410), (940, 51398), (956, 51356), (972, 51326),

Gene: PhailMary\_35 Start: 28435, Stop: 26651, Start Num: 246

Candidate Starts for PhailMary\_35:

(Start: 246 @28435 has 877 MA's), (379, 28201), (395, 28171), (399, 28162), (400, 28159), (420, 28114), (425, 28102), (429, 28093), (444, 28051), (479, 27949), (496, 27928), (539, 27856), (554, 27811), (556, 27808), (574, 27766), (577, 27760), (585, 27745), (598, 27718), (646, 27613), (652, 27604), (662, 27586), (683, 27547), (716, 27490), (743, 27367), (753, 27319), (783, 27214), (784, 27211), (810, 27154), (814, 27133), (829, 27085), (855, 27010), (886, 26941), (902, 26899), (905, 26875), (930, 26797), (946, 26740), (950, 26728), (978, 26671),

Gene: Phamished\_62 Start: 54237, Stop: 52378, Start Num: 205

Candidate Starts for Phamished\_62:

(Start: 188 @54261 has 1 MA's), (Start: 205 @54237 has 304 MA's), (Start: 235 @54213 has 6 MA's), (Start: 250 @54207 has 2 MA's), (Start: 274 @54165 has 6 MA's), (283, 54144), (337, 54030), (342, 54024), (360, 53994), (391, 53934), (399, 53913), (421, 53859), (428, 53847), (434, 53829), (436, 53817), (476, 53712), (519, 53655), (538, 53619), (542, 53607), (551, 53583), (556, 53571), (564, 53553), (570, 53535), (580, 53517), (598, 53478), (602, 53469), (603, 53466), (604, 53463), (738, 53106), (744, 53073), (750, 53052), (777, 52959), (780, 52950), (795, 52887), (814, 52851), (815, 52848), (820, 52833), (847, 52755), (851, 52743), (858, 52722), (875, 52683), (905, 52593), (910, 52575), (912, 52569), (917, 52554), (926, 52530), (930, 52515), (931, 52512), (933, 52500), (940, 52476), (963, 52428), (972, 52404),

Gene: Phanita\_37 Start: 28715, Stop: 26850, Start Num: 299

Candidate Starts for Phanita\_37:

(Start: 299 @28715 has 38 MA's), (344, 28616), (379, 28556), (403, 28505), (435, 28427), (438, 28421), (454, 28376), (455, 28373), (456, 28370), (469, 28331), (489, 28271), (531, 28148), (537, 28139), (539, 28127), (543, 28115), (549, 28097), (556, 28076), (562, 28064), (658, 27893), (724, 27725), (771, 27560), (779, 27524), (783, 27503), (794, 27461), (822, 27374), (836, 27329), (872, 27230), (885, 27185), (903, 27116), (906, 27092), (917, 27059), (947, 26948),

Gene: Phantasmagoria\_57 Start: 52498, Stop: 50669, Start Num: 205

Candidate Starts for Phantasmagoria\_57:

(Start: 205 @52498 has 304 MA's), (Start: 250 @52471 has 2 MA's), (269, 52441), (Start: 274 @52429 has 6 MA's), (286, 52402), (287, 52399), (293, 52390), (318, 52372), (366, 52276), (391, 52225), (400, 52201), (411, 52177), (463, 52039), (469, 52024), (472, 52015), (476, 52003), (519, 51946), (538, 51910), (542, 51898), (551, 51874), (588, 51790), (602, 51760), (603, 51757), (615, 51727), (680, 51583), (707, 51517), (724, 51466), (727, 51445), (732, 51427), (744, 51370), (763, 51313), (771, 51286), (777, 51256), (780, 51247), (795, 51181), (812, 51154), (814, 51145), (820, 51127), (827, 51103), (847, 51049), (851, 51037), (858, 51016), (888, 50947), (905, 50887), (910, 50869), (922, 50836), (926, 50824), (930, 50809), (931, 50806), (933, 50794), (940, 50770), (941, 50767), (963, 50719), (965, 50716), (972, 50695), (979, 50674),

Gene: Phantastic\_46 Start: 31173, Stop: 29335, Start Num: 246

Candidate Starts for Phantastic\_46:

(Start: 191 @31245 has 1 MA's), (Start: 246 @31173 has 877 MA's), (280, 31122), (364, 30969), (400, 30897), (425, 30840), (429, 30831), (433, 30819), (471, 30711), (479, 30687), (539, 30591), (558, 30543), (585, 30483), (614, 30420), (646, 30351), (659, 30330), (697, 30261), (716, 30216), (743, 30093), (753, 30045), (776, 29970), (783, 29940), (815, 29829), (820, 29814), (827, 29790), (834, 29766), (843, 29748), (886, 29625), (888, 29619), (901, 29592), (905, 29559), (946, 29424), (950, 29412), (955, 29403),

Gene: Pharaoh\_39 Start: 30968, Stop: 29124, Start Num: 246

Candidate Starts for Pharaoh\_39:

(Start: 246 @30968 has 877 MA's), (267, 30947), (Start: 274 @30932 has 6 MA's), (279, 30920), (368, 30755), (383, 30722), (400, 30689), (402, 30686), (416, 30659), (425, 30632), (433, 30611), (479, 30479), (539, 30386), (556, 30338), (560, 30329), (568, 30314), (585, 30275), (598, 30248), (620, 30200), (652, 30131), (697, 30050), (715, 30008), (730, 29945), (743, 29882), (755, 29831), (767, 29795), (776, 29759), (783, 29729), (793, 29690), (810, 29669), (814, 29648), (853, 29531), (880, 29468), (902, 29414), (905, 29390), (924, 29333), (930, 29312), (946, 29255), (950, 29243), (978, 29186),

Gene: Phareon\_59 Start: 53752, Stop: 51893, Start Num: 205

Candidate Starts for Phareon\_59:

(Start: 188 @53776 has 1 MA's), (Start: 205 @53752 has 304 MA's), (Start: 235 @53728 has 6 MA's), (Start: 250 @53722 has 2 MA's), (Start: 274 @53680 has 6 MA's), (283, 53659), (337, 53545), (342, 53539), (360, 53509), (391, 53449), (399, 53428), (421, 53374), (428, 53362), (434, 53344), (436, 53332), (476, 53227), (519, 53170), (538, 53134), (542, 53122), (551, 53098), (556, 53086), (564, 53068), (570, 53050), (580, 53032), (598, 52993), (602, 52984), (603, 52981), (604, 52978), (738, 52621), (744, 52588), (750, 52567), (777, 52474), (780, 52465), (795, 52402), (814, 52366), (815, 52363), (820, 52348), (847, 52270), (851, 52258), (858, 52237), (875, 52198), (905, 52108), (910, 52090), (912, 52084), (917, 52069), (926, 52045), (930, 52030), (931, 52027), (933, 52015), (940, 51991), (963, 51943), (972, 51919),

Gene: PhatCats2014\_61 Start: 54551, Stop: 52692, Start Num: 205

Candidate Starts for PhatCats2014\_61:

(Start: 188 @54575 has 1 MA's), (Start: 205 @54551 has 304 MA's), (Start: 235 @54527 has 6 MA's), (Start: 250 @54521 has 2 MA's), (Start: 274 @54479 has 6 MA's), (283, 54458), (337, 54344), (342, 54338), (360, 54308), (391, 54248), (399, 54227), (421, 54173), (428, 54161), (434, 54143), (436, 54131), (476, 54026), (519, 53969), (538, 53933), (542, 53921), (552, 53894), (564, 53867), (570, 53849), (580, 53831), (598, 53792), (602, 53783), (603, 53780), (712, 53522), (738, 53420), (744, 53387), (750, 53366), (777, 53273), (780, 53264), (795, 53201), (814, 53165), (815, 53162), (820, 53147), (847, 53069), (851, 53057), (858, 53036), (875, 52997), (905, 52907), (910, 52889), (912, 52883), (917, 52868), (926, 52844), (930, 52829), (931, 52826), (933, 52814), (940, 52790), (963,

52742), (972, 52718),

Gene: PhatLouie\_62 Start: 54569, Stop: 52710, Start Num: 205

Candidate Starts for PhatLouie\_62:

(Start: 188 @54593 has 1 MA's), (Start: 205 @54569 has 304 MA's), (Start: 235 @54545 has 6 MA's), (Start: 250 @54539 has 2 MA's), (Start: 274 @54497 has 6 MA's), (283, 54476), (337, 54362), (342, 54356), (360, 54326), (391, 54266), (399, 54245), (421, 54191), (428, 54179), (434, 54161), (436, 54149), (476, 54044), (519, 53987), (538, 53951), (542, 53939), (551, 53915), (556, 53903), (564, 53885), (570, 53867), (580, 53849), (598, 53810), (602, 53801), (603, 53798), (604, 53795), (738, 53438), (744, 53405), (750, 53384), (777, 53291), (780, 53282), (795, 53219), (814, 53183), (815, 53180), (820, 53165), (847, 53087), (851, 53075), (858, 53054), (875, 53015), (905, 52925), (910, 52907), (912, 52901), (917, 52886), (926, 52862), (930, 52847), (931, 52844), (933, 52832), (940, 52808), (963, 52760), (972, 52736),

Gene: Phayeta\_60 Start: 53944, Stop: 52127, Start Num: 247

Candidate Starts for Phayeta\_60:

(130, 54127), (Start: 247 @53944 has 43 MA's), (267, 53914), (368, 53734), (433, 53581), (435, 53569), (448, 53539), (454, 53533), (476, 53470), (478, 53464), (519, 53413), (538, 53377), (556, 53329), (603, 53224), (645, 53128), (674, 53077), (724, 52933), (732, 52894), (739, 52864), (744, 52837), (748, 52825), (775, 52729), (777, 52723), (780, 52714), (782, 52702), (807, 52630), (814, 52600), (820, 52582), (822, 52573), (847, 52504), (851, 52492), (858, 52471), (888, 52402), (898, 52387), (903, 52363), (905, 52342), (910, 52324), (912, 52318), (924, 52285), (926, 52279), (931, 52261), (933, 52249), (936, 52237), (940, 52225), (956, 52183), (972, 52153),

Gene: Phelemich\_56 Start: 54570, Stop: 52741, Start Num: 197

Candidate Starts for Phelemich\_56:

(Start: 197 @54570 has 27 MA's), (Start: 230 @54549 has 1 MA's), (Start: 250 @54540 has 2 MA's), (267, 54513), (Start: 274 @54498 has 6 MA's), (318, 54441), (399, 54273), (433, 54195), (436, 54180), (445, 54162), (453, 54150), (466, 54114), (476, 54084), (538, 53991), (542, 53979), (543, 53976), (551, 53955), (552, 53952), (556, 53943), (564, 53925), (592, 53862), (603, 53838), (652, 53733), (703, 53610), (712, 53586), (721, 53559), (724, 53547), (725, 53544), (727, 53526), (732, 53508), (739, 53478), (744, 53451), (759, 53400), (777, 53337), (780, 53328), (807, 53244), (815, 53211), (820, 53196), (841, 53136), (847, 53118), (851, 53106), (858, 53085), (861, 53076), (863, 53073), (905, 52956), (910, 52938), (912, 52932), (926, 52893), (929, 52881), (930, 52878), (933, 52863), (936, 52851), (940, 52839), (956, 52797), (965, 52788), (972, 52767), (979, 52746),

Gene: Phelipe\_46 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Phelipe\_46:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Phendrix\_176 Start: 96123, Stop: 94333, Start Num: 252

Candidate Starts for Phendrix\_176:

(Start: 252 @96123 has 2 MA's), (Start: 301 @96036 has 110 MA's), (322, 95994), (356, 95937), (419, 95814), (420, 95811), (432, 95784), (443, 95754), (458, 95727), (477, 95673), (482, 95658), (521, 95628), (539, 95589), (547, 95565), (552, 95553), (571, 95505), (585, 95478), (591, 95463), (617, 95409), (639, 95364), (662, 95319), (717, 95220), (719, 95214), (740, 95118), (743, 95097), (754, 95046), (774, 94980), (803, 94860), (813, 94830), (824, 94791), (827, 94782), (832, 94764), (840, 94749), (843, 94740), (845, 94734), (847, 94728), (862, 94686), (871, 94665), (899, 94587), (901, 94581), (914, 94518), (923, 94494), (943, 94419), (946, 94407), (977, 94356),

Gene: PhenghisKhan\_61 Start: 54194, Stop: 52335, Start Num: 205

Candidate Starts for PhenghisKhan\_61:

(Start: 188 @54218 has 1 MA's), (Start: 205 @54194 has 304 MA's), (Start: 235 @54170 has 6 MA's), (Start: 250 @54164 has 2 MA's), (Start: 274 @54122 has 6 MA's), (283, 54101), (337, 53987), (342, 53981), (360, 53951), (391, 53891), (399, 53870), (421, 53816), (428, 53804), (434, 53786), (436, 53774), (476, 53669), (519, 53612), (538, 53576), (542, 53564), (551, 53540), (556, 53528), (564, 53510), (570, 53492), (580, 53474), (598, 53435), (602, 53426), (603, 53423), (604, 53420), (712, 53165), (738, 53063), (744, 53030), (750, 53009), (777, 52916), (780, 52907), (795, 52844), (814, 52808), (815, 52805), (820, 52790), (847, 52712), (851, 52700), (858, 52679), (875, 52640), (905, 52550), (910, 52532), (912, 52526), (917, 52511), (926, 52487), (930, 52472), (931, 52469), (933, 52457), (940, 52433), (946, 52412), (963, 52385), (972, 52361),

Gene: Pherbot\_37 Start: 28480, Stop: 26630, Start Num: 297

Candidate Starts for Pherbot\_37:

(Start: 297 @28480 has 18 MA's), (358, 28357), (378, 28324), (430, 28213), (435, 28192), (438, 28186), (456, 28135), (512, 27979), (531, 27925), (536, 27919), (537, 27916), (539, 27904), (549, 27874), (585, 27817), (658, 27670), (718, 27523), (776, 27313), (780, 27301), (783, 27283), (794, 27241), (798, 27226), (812, 27190), (822, 27154), (885, 26965), (888, 26956), (903, 26896), (906, 26872), (912, 26851), (917, 26839), (947, 26728),

Gene: Pherdinand\_62 Start: 54314, Stop: 52455, Start Num: 205

Candidate Starts for Pherdinand\_62:

(Start: 188 @54338 has 1 MA's), (Start: 205 @54314 has 304 MA's), (Start: 235 @54290 has 6 MA's), (Start: 250 @54284 has 2 MA's), (Start: 274 @54242 has 6 MA's), (283, 54221), (337, 54107), (342, 54101), (360, 54071), (391, 54011), (399, 53990), (421, 53936), (428, 53924), (434, 53906), (436, 53894), (476, 53789), (519, 53732), (538, 53696), (542, 53684), (551, 53660), (556, 53648), (564, 53630), (570, 53612), (580, 53594), (598, 53555), (602, 53546), (603, 53543), (604, 53540), (738, 53183), (744, 53150), (750, 53129), (777, 53036), (780, 53027), (795, 52964), (814, 52928), (815, 52925), (820, 52910), (847, 52832), (851, 52820), (858, 52799), (875, 52760), (905, 52670), (910, 52652), (912, 52646), (917, 52631), (926, 52607), (930, 52592), (931, 52589), (933, 52577), (940, 52553), (963, 52505), (972, 52481),

Gene: Pherferi\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Pherferi\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: Phergie\_62 Start: 54186, Stop: 52327, Start Num: 205

Candidate Starts for Phergie\_62:

(Start: 188 @54210 has 1 MA's), (Start: 205 @54186 has 304 MA's), (Start: 235 @54162 has 6 MA's), (Start: 250 @54156 has 2 MA's), (Start: 274 @54114 has 6 MA's), (283, 54093), (337, 53979), (342, 53973), (360, 53943), (391, 53883), (399, 53862), (421, 53808), (428, 53796), (434, 53778), (436, 53766), (476, 53661), (519, 53604), (538, 53568), (542, 53556), (551, 53532), (556, 53520), (564, 53502), (570, 53484), (580, 53466), (598, 53427), (602, 53418), (603, 53415), (604, 53412), (712, 53157), (738, 53055), (744, 53022), (750, 53001), (777, 52908), (780, 52899), (795, 52836), (814, 52800), (815, 52797), (820, 52782), (847, 52704), (851, 52692), (858, 52671), (875, 52632), (905, 52542), (910, 52524), (912, 52518), (917, 52503), (926, 52479), (930, 52464), (931, 52461), (933,

52449), (940, 52425), (946, 52404), (963, 52377), (972, 52353),

Gene: PherrisBueller\_44 Start: 33917, Stop: 32091, Start Num: 246

Candidate Starts for PherrisBueller\_44:

(Start: 246 @33917 has 877 MA's), (368, 33704), (374, 33689), (400, 33641), (416, 33611), (422, 33590), (425, 33584), (429, 33575), (470, 33458), (479, 33431), (539, 33338), (544, 33323), (578, 33239), (580, 33236), (612, 33170), (627, 33140), (639, 33110), (662, 33065), (683, 33026), (743, 32846), (753, 32798), (767, 32759), (783, 32693), (793, 32654), (810, 32633), (814, 32612), (820, 32594), (843, 32528), (902, 32378), (903, 32375), (909, 32339), (917, 32315), (921, 32306), (925, 32294), (932, 32267), (946, 32219), (955, 32198),

Gene: Phiderman\_39 Start: 28927, Stop: 27062, Start Num: 301

Candidate Starts for Phiderman\_39:

(Start: 238 @29014 has 3 MA's), (Start: 241 @29011 has 13 MA's), (Start: 301 @28927 has 110 MA's), (Start: 308 @28918 has 5 MA's), (354, 28813), (358, 28804), (375, 28774), (378, 28771), (433, 28651), (435, 28639), (438, 28633), (475, 28528), (484, 28501), (531, 28360), (536, 28354), (537, 28351), (539, 28339), (548, 28312), (549, 28309), (554, 28294), (556, 28288), (559, 28282), (586, 28249), (676, 28060), (776, 27745), (779, 27736), (780, 27733), (783, 27715), (794, 27673), (796, 27667), (798, 27658), (805, 27643), (822, 27586), (878, 27427), (885, 27397), (888, 27388), (903, 27328), (906, 27304), (919, 27265), (929, 27232), (932, 27220), (947, 27160),

Gene: PhigPhack\_43 Start: 29405, Stop: 31279, Start Num: 246

Candidate Starts for PhigPhack\_43:

(Start: 246 @29405 has 877 MA's), (287, 29474), (Start: 301 @29495 has 110 MA's), (429, 29741), (434, 29756), (444, 29783), (585, 30077), (646, 30212), (696, 30311), (731, 30434), (743, 30494), (746, 30500), (755, 30545), (762, 30560), (764, 30575), (774, 30611), (783, 30647), (813, 30740), (844, 30833), (874, 30911), (902, 30983), (909, 31022), (924, 31064), (929, 31082), (939, 31118), (946, 31142), (955, 31163),

Gene: Phighter1804\_45 Start: 31612, Stop: 29786, Start Num: 246

Candidate Starts for Phighter1804\_45:

(Start: 246 @31612 has 877 MA's), (267, 31591), (280, 31561), (295, 31531), (383, 31369), (394, 31351), (425, 31279), (429, 31270), (471, 31150), (479, 31126), (539, 31033), (558, 30985), (568, 30964), (585, 30925), (646, 30793), (659, 30772), (683, 30727), (687, 30715), (740, 30562), (743, 30541), (776, 30418), (783, 30388), (793, 30349), (814, 30283), (815, 30280), (820, 30265), (827, 30241), (834, 30217), (905, 30010), (946, 29875), (950, 29863), (955, 29854),

Gene: Phillis\_44 Start: 30925, Stop: 29081, Start Num: 246

Candidate Starts for Phillis\_44:

(139, 31090), (159, 31042), (Start: 246 @30925 has 877 MA's), (280, 30874), (347, 30751), (364, 30721), (383, 30682), (416, 30619), (422, 30598), (425, 30592), (429, 30583), (444, 30541), (461, 30490), (479, 30439), (539, 30343), (543, 30331), (548, 30316), (554, 30298), (556, 30295), (560, 30286), (585, 30232), (598, 30205), (620, 30157), (646, 30100), (662, 30073), (687, 30022), (698, 30007), (717, 29959), (740, 29860), (743, 29839), (752, 29809), (753, 29791), (755, 29788), (762, 29773), (767, 29752), (771, 29743), (776, 29716), (780, 29704), (783, 29686), (814, 29605), (818, 29593), (834, 29539), (849, 29503), (861, 29467), (876, 29434), (886, 29413), (888, 29407), (903, 29368), (910, 29329), (946, 29212), (950, 29200),

Gene: Philly\_57 Start: 53504, Stop: 51687, Start Num: 247

Candidate Starts for Philly\_57:

(130, 53687), (Start: 247 @53504 has 43 MA's), (267, 53474), (368, 53294), (433, 53141), (435, 53129), (448, 53099), (454, 53093), (476, 53030), (478, 53024), (519, 52973), (537, 52946), (538, 52937), (556, 52889), (603, 52784), (645, 52688), (674, 52637), (724, 52493), (732, 52454), (739,

52424), (744, 52397), (748, 52385), (775, 52289), (777, 52283), (780, 52274), (782, 52262), (807, 52190), (814, 52160), (820, 52142), (822, 52133), (847, 52064), (851, 52052), (858, 52031), (888, 51962), (898, 51947), (903, 51923), (905, 51902), (910, 51884), (912, 51878), (924, 51845), (926, 51839), (931, 51821), (933, 51809), (936, 51797), (940, 51785), (956, 51743), (972, 51713),

Gene: PhineBark\_45 Start: 35454, Stop: 33628, Start Num: 246

Candidate Starts for PhineBark\_45:

(Start: 246 @35454 has 877 MA's), (368, 35241), (374, 35226), (400, 35178), (416, 35148), (422, 35127), (425, 35121), (429, 35112), (470, 34995), (479, 34968), (539, 34875), (544, 34860), (551, 34839), (578, 34776), (580, 34773), (612, 34707), (627, 34677), (639, 34647), (662, 34602), (683, 34563), (743, 34383), (752, 34353), (753, 34335), (767, 34296), (783, 34230), (814, 34149), (815, 34146), (843, 34065), (902, 33915), (903, 33912), (909, 33876), (917, 33852), (921, 33843), (925, 33831), (946, 33756), (955, 33735),

Gene: Phipps\_60 Start: 53823, Stop: 51964, Start Num: 205

Candidate Starts for Phipps\_60:

(Start: 188 @53847 has 1 MA's), (Start: 205 @53823 has 304 MA's), (Start: 235 @53799 has 6 MA's), (Start: 250 @53793 has 2 MA's), (Start: 274 @53751 has 6 MA's), (283, 53730), (337, 53616), (342, 53610), (360, 53580), (391, 53520), (399, 53499), (421, 53445), (428, 53433), (434, 53415), (436, 53403), (476, 53298), (519, 53241), (538, 53205), (542, 53193), (552, 53166), (564, 53139), (570, 53121), (580, 53103), (598, 53064), (602, 53055), (603, 53052), (712, 52794), (738, 52692), (744, 52659), (750, 52638), (777, 52545), (780, 52536), (795, 52473), (814, 52437), (815, 52434), (820, 52419), (847, 52341), (851, 52329), (858, 52308), (875, 52269), (905, 52179), (910, 52161), (912, 52155), (917, 52140), (926, 52116), (930, 52101), (931, 52098), (933, 52086), (940, 52062), (963, 52014), (972, 51990),

Gene: Phireproof\_39 Start: 28936, Stop: 27071, Start Num: 301

Candidate Starts for Phireproof\_39:

(Start: 238 @29023 has 3 MA's), (Start: 241 @29020 has 13 MA's), (Start: 301 @28936 has 110 MA's), (Start: 308 @28927 has 5 MA's), (354, 28822), (358, 28813), (375, 28783), (378, 28780), (433, 28660), (435, 28648), (438, 28642), (475, 28537), (484, 28510), (531, 28369), (536, 28363), (537, 28360), (539, 28348), (548, 28321), (549, 28318), (554, 28303), (556, 28297), (559, 28291), (586, 28258), (676, 28069), (776, 27754), (779, 27745), (780, 27742), (783, 27724), (794, 27682), (796, 27676), (805, 27652), (822, 27595), (878, 27436), (885, 27406), (888, 27397), (903, 27337), (906, 27313), (919, 27274), (929, 27241), (932, 27229), (947, 27169),

Gene: Phisb\_43 Start: 29630, Stop: 31504, Start Num: 246

Candidate Starts for Phisb\_43:

(Start: 243 @29627 has 7 MA's), (Start: 246 @29630 has 877 MA's), (287, 29699), (Start: 301 @29720 has 110 MA's), (364, 29837), (400, 29900), (429, 29966), (444, 30008), (585, 30302), (646, 30437), (696, 30536), (731, 30659), (743, 30719), (746, 30725), (755, 30770), (764, 30800), (774, 30836), (783, 30872), (813, 30965), (844, 31058), (874, 31136), (902, 31208), (909, 31247), (924, 31289), (929, 31307), (946, 31367), (955, 31388),

Gene: PhishRPhriends\_46 Start: 30931, Stop: 29117, Start Num: 246

Candidate Starts for PhishRPhriends\_46:

(Start: 246 @30931 has 877 MA's), (275, 30892), (280, 30880), (364, 30727), (371, 30712), (400, 30655), (425, 30598), (429, 30589), (444, 30547), (461, 30496), (479, 30445), (539, 30352), (556, 30304), (568, 30280), (585, 30241), (598, 30214), (612, 30184), (654, 30091), (662, 30079), (686, 30031), (697, 30016), (743, 29860), (755, 29809), (766, 29776), (767, 29773), (783, 29707), (793, 29668), (815, 29596), (827, 29557), (834, 29533), (843, 29515), (853, 29482), (888, 29401), (905, 29341), (910, 29323), (930, 29263), (932, 29254), (946, 29206), (950, 29194), (955, 29185),

Gene: Phives\_43 Start: 31162, Stop: 33027, Start Num: 245

Candidate Starts for Phives\_43:

(Start: 245 @31162 has 74 MA's), (279, 31210), (364, 31366), (416, 31459), (448, 31549), (541, 31756), (580, 31855), (585, 31864), (591, 31879), (598, 31891), (635, 31969), (659, 32017), (687, 32074), (717, 32155), (743, 32275), (752, 32305), (767, 32362), (783, 32428), (813, 32521), (834, 32593), (878, 32701), (902, 32764), (946, 32923), (949, 32932), (988, 33010),

Gene: Phlei\_33 Start: 30919, Stop: 29120, Start Num: 246

Candidate Starts for Phlei\_33:

(Start: 246 @30919 has 877 MA's), (318, 30808), (319, 30802), (347, 30745), (364, 30715), (372, 30697), (402, 30637), (416, 30610), (425, 30583), (461, 30481), (479, 30430), (537, 30349), (539, 30337), (551, 30301), (556, 30289), (598, 30199), (630, 30133), (667, 30049), (712, 29971), (713, 29968), (740, 29857), (743, 29836), (755, 29785), (767, 29749), (780, 29701), (783, 29683), (793, 29644), (814, 29602), (824, 29569), (902, 29368), (905, 29344), (909, 29329), (912, 29320), (924, 29287), (946, 29209), (950, 29197), (955, 29188), (978, 29140),

Gene: Phleuron\_61 Start: 54187, Stop: 52328, Start Num: 205

Candidate Starts for Phleuron\_61:

(Start: 188 @54211 has 1 MA's), (Start: 205 @54187 has 304 MA's), (Start: 235 @54163 has 6 MA's), (Start: 250 @54157 has 2 MA's), (Start: 274 @54115 has 6 MA's), (283, 54094), (337, 53980), (342, 53974), (360, 53944), (391, 53884), (399, 53863), (421, 53809), (428, 53797), (434, 53779), (436, 53767), (476, 53662), (519, 53605), (538, 53569), (542, 53557), (551, 53533), (556, 53521), (564, 53503), (570, 53485), (580, 53467), (598, 53428), (602, 53419), (603, 53416), (604, 53413), (738, 53056), (744, 53023), (750, 53002), (777, 52909), (780, 52900), (795, 52837), (814, 52801), (815, 52798), (820, 52783), (847, 52705), (851, 52693), (858, 52672), (875, 52633), (905, 52543), (910, 52525), (912, 52519), (917, 52504), (926, 52480), (930, 52465), (931, 52462), (933, 52450), (940, 52426), (963, 52378), (972, 52354),

Gene: Phlippers\_43 Start: 35349, Stop: 33523, Start Num: 246

Candidate Starts for Phlippers\_43:

(Start: 246 @35349 has 877 MA's), (368, 35136), (374, 35121), (400, 35073), (416, 35043), (422, 35022), (425, 35016), (429, 35007), (470, 34890), (479, 34863), (539, 34770), (544, 34755), (578, 34671), (580, 34668), (612, 34602), (627, 34572), (639, 34542), (662, 34497), (683, 34458), (743, 34278), (753, 34230), (767, 34191), (783, 34125), (793, 34086), (810, 34065), (814, 34044), (820, 34026), (843, 33960), (902, 33810), (903, 33807), (909, 33771), (917, 33747), (921, 33738), (925, 33726), (938, 33678), (946, 33651), (955, 33630),

Gene: Phlorence\_37 Start: 30134, Stop: 28275, Start Num: 246

Candidate Starts for Phlorence\_37:

(Start: 246 @30134 has 877 MA's), (280, 30083), (318, 30023), (347, 29960), (364, 29930), (366, 29927), (395, 29870), (400, 29858), (416, 29828), (425, 29801), (479, 29648), (539, 29552), (556, 29504), (567, 29483), (594, 29420), (598, 29414), (633, 29342), (646, 29309), (654, 29294), (662, 29282), (712, 29183), (743, 29048), (752, 29018), (753, 29000), (762, 28982), (767, 28961), (771, 28952), (783, 28895), (793, 28856), (814, 28814), (820, 28796), (834, 28748), (853, 28697), (876, 28643), (880, 28634), (888, 28616), (905, 28556), (910, 28538), (939, 28445), (946, 28421), (950, 28409), (1007, 28292), (1008, 28289),

Gene: Phlyer\_58 Start: 54386, Stop: 52569, Start Num: 247

Candidate Starts for Phlyer\_58:

(130, 54569), (Start: 247 @54386 has 43 MA's), (267, 54356), (368, 54176), (433, 54023), (435, 54011), (448, 53981), (454, 53975), (476, 53912), (478, 53906), (519, 53855), (537, 53828), (538, 53819), (556, 53771), (603, 53666), (645, 53570), (674, 53519), (724, 53375), (732, 53336), (739, 53306), (744, 53279), (748, 53267), (775, 53171), (777, 53165), (780, 53156), (782, 53144), (807,



53072), (814, 53042), (820, 53024), (822, 53015), (847, 52946), (851, 52934), (858, 52913), (888, 52844), (898, 52829), (903, 52805), (905, 52784), (910, 52766), (912, 52760), (924, 52727), (926, 52721), (931, 52703), (933, 52691), (936, 52679), (940, 52667), (956, 52625), (972, 52595),

Gene: Phoebe\_49 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for Phoebe\_49:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: Phonnegut\_45 Start: 31538, Stop: 29745, Start Num: 246

Candidate Starts for Phonnegut\_45:

(Start: 246 @31538 has 877 MA's), (261, 31529), (280, 31487), (346, 31367), (347, 31364), (372, 31316), (402, 31256), (417, 31226), (420, 31214), (425, 31202), (479, 31049), (539, 30956), (598, 30818), (612, 30788), (687, 30629), (697, 30617), (714, 30590), (740, 30482), (743, 30461), (780, 30326), (783, 30308), (814, 30227), (827, 30185), (853, 30110), (886, 30035), (902, 29993), (930, 29891), (946, 29834), (950, 29822), (955, 29813),

Gene: Phontbonne\_45 Start: 31461, Stop: 29635, Start Num: 246

Candidate Starts for Phontbonne\_45:

(Start: 246 @31461 has 877 MA's), (267, 31440), (280, 31410), (295, 31380), (383, 31218), (394, 31200), (425, 31128), (429, 31119), (471, 30999), (479, 30975), (539, 30882), (558, 30834), (568, 30813), (585, 30774), (646, 30642), (659, 30621), (683, 30576), (687, 30564), (740, 30411), (743, 30390), (776, 30267), (783, 30237), (793, 30198), (814, 30132), (815, 30129), (820, 30114), (827, 30090), (834, 30066), (905, 29859), (946, 29724), (950, 29712), (955, 29703),

Gene: Phoxy\_48 Start: 31881, Stop: 30067, Start Num: 246

Candidate Starts for Phoxy\_48:

(Start: 246 @31881 has 877 MA's), (275, 31842), (280, 31830), (364, 31677), (371, 31662), (400, 31605), (425, 31548), (429, 31539), (444, 31497), (461, 31446), (479, 31395), (521, 31341), (539, 31302), (556, 31254), (568, 31230), (585, 31191), (598, 31164), (612, 31134), (654, 31041), (662, 31029), (686, 30981), (697, 30966), (743, 30810), (755, 30759), (766, 30726), (767, 30723), (783, 30657), (793, 30618), (815, 30546), (827, 30507), (834, 30483), (843, 30465), (853, 30432), (888, 30351), (905, 30291), (932, 30204), (946, 30156), (950, 30144), (955, 30135), (957, 30132),

Gene: Phrampa\_94 Start: 80024, Stop: 81826, Start Num: 262

Candidate Starts for Phrampa\_94:

(Start: 262 @80024 has 4 MA's), (Start: 274 @80045 has 6 MA's), (289, 80081), (292, 80087), (319, 80135), (325, 80156), (357, 80210), (386, 80255), (391, 80264), (428, 80345), (435, 80372), (438, 80378), (470, 80447), (482, 80483), (539, 80552), (543, 80564), (547, 80576), (571, 80630), (585, 80657), (591, 80672), (683, 80861), (706, 80906), (716, 80930), (719, 80939), (723, 80957), (730, 80990), (740, 81029), (743, 81050), (746, 81056), (774, 81170), (777, 81179), (792, 81254), (797, 81272), (813, 81320), (816, 81332), (827, 81368), (840, 81401), (843, 81410), (858, 81455), (865, 81473), (898, 81557), (902, 81578), (906, 81605), (929, 81677), (934, 81701), (946, 81737), (974, 81788),

Gene: PhrankReynolds\_60 Start: 54191, Stop: 52332, Start Num: 205

Candidate Starts for PhrankReynolds\_60:

(Start: 188 @54215 has 1 MA's), (Start: 205 @54191 has 304 MA's), (Start: 235 @54167 has 6 MA's), (Start: 250 @54161 has 2 MA's), (Start: 274 @54119 has 6 MA's), (283, 54098), (337, 53984), (342,

53978), (360, 53948), (391, 53888), (399, 53867), (421, 53813), (428, 53801), (434, 53783), (436, 53771), (476, 53666), (519, 53609), (538, 53573), (542, 53561), (551, 53537), (556, 53525), (564, 53507), (570, 53489), (580, 53471), (598, 53432), (602, 53423), (603, 53420), (604, 53417), (712, 53162), (738, 53060), (744, 53027), (750, 53006), (777, 52913), (780, 52904), (795, 52841), (814, 52805), (815, 52802), (820, 52787), (847, 52709), (851, 52697), (858, 52676), (875, 52637), (905, 52547), (910, 52529), (912, 52523), (917, 52508), (926, 52484), (930, 52469), (931, 52466), (933, 52454), (940, 52430), (946, 52409), (963, 52382), (972, 52358),

Gene: Phrankenstein\_36 Start: 28059, Stop: 26275, Start Num: 246

Candidate Starts for Phrankenstein\_36:

(Start: 246 @28059 has 877 MA's), (379, 27825), (395, 27795), (399, 27786), (400, 27783), (420, 27738), (425, 27726), (444, 27675), (479, 27573), (496, 27552), (539, 27480), (554, 27435), (556, 27432), (574, 27390), (577, 27384), (585, 27369), (598, 27342), (646, 27237), (652, 27228), (662, 27210), (663, 27207), (683, 27171), (716, 27114), (743, 26991), (753, 26943), (783, 26838), (784, 26835), (810, 26778), (814, 26757), (829, 26709), (855, 26634), (886, 26565), (902, 26523), (905, 26499), (930, 26421), (946, 26364), (950, 26352), (955, 26343), (969, 26313), (978, 26295),

Gene: Phranny\_49 Start: 31739, Stop: 29925, Start Num: 246

Candidate Starts for Phranny\_49:

(Start: 246 @31739 has 877 MA's), (275, 31700), (280, 31688), (364, 31535), (371, 31520), (400, 31463), (425, 31406), (429, 31397), (444, 31355), (461, 31304), (479, 31253), (539, 31160), (556, 31112), (568, 31088), (585, 31049), (598, 31022), (612, 30992), (654, 30899), (662, 30887), (686, 30839), (697, 30824), (743, 30668), (755, 30617), (766, 30584), (767, 30581), (783, 30515), (793, 30476), (815, 30404), (827, 30365), (834, 30341), (843, 30323), (853, 30290), (888, 30209), (905, 30149), (910, 30131), (930, 30071), (932, 30062), (946, 30014), (950, 30002), (955, 29993),

Gene: PhredFlintston\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for PhredFlintston\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: Phriends\_39 Start: 28936, Stop: 27071, Start Num: 301

Candidate Starts for Phriends\_39:

(Start: 238 @29023 has 3 MA's), (Start: 301 @28936 has 110 MA's), (Start: 308 @28927 has 5 MA's), (354, 28822), (358, 28813), (375, 28783), (378, 28780), (433, 28660), (435, 28648), (438, 28642), (475, 28537), (484, 28510), (531, 28369), (536, 28363), (537, 28360), (539, 28348), (548, 28321), (549, 28318), (554, 28303), (556, 28297), (559, 28291), (586, 28258), (652, 28129), (676, 28069), (776, 27754), (779, 27745), (780, 27742), (783, 27724), (794, 27682), (796, 27676), (798, 27667), (805, 27652), (822, 27595), (878, 27436), (885, 27406), (888, 27397), (903, 27337), (906, 27313), (919, 27274), (929, 27241), (932, 27229), (947, 27169),

Gene: PhrodoBaggins\_61 Start: 54411, Stop: 52552, Start Num: 205

Candidate Starts for PhrodoBaggins\_61:

(Start: 188 @54435 has 1 MA's), (Start: 205 @54411 has 304 MA's), (Start: 235 @54387 has 6 MA's), (Start: 250 @54381 has 2 MA's), (Start: 274 @54339 has 6 MA's), (283, 54318), (337, 54204), (342, 54198), (360, 54168), (391, 54108), (399, 54087), (421, 54033), (428, 54021), (434, 54003), (436, 53991), (476, 53886), (519, 53829), (538, 53793), (542, 53781), (552, 53754), (564, 53727), (570, 53709), (580, 53691), (598, 53652), (602, 53643), (603, 53640), (604, 53637), (738, 53280), (744,

53247), (750, 53226), (777, 53133), (780, 53124), (795, 53061), (814, 53025), (815, 53022), (820, 53007), (847, 52929), (851, 52917), (858, 52896), (875, 52857), (905, 52767), (910, 52749), (912, 52743), (917, 52728), (926, 52704), (930, 52689), (931, 52686), (933, 52674), (940, 52650), (963, 52602), (972, 52578),

Gene: Phroglets\_31 Start: 31082, Stop: 29427, Start Num: 355

Candidate Starts for Phroglets\_31:

(Start: 246 @31286 has 877 MA's), (268, 31253), (279, 31229), (300, 31196), (355, 31082), (416, 30962), (426, 30932), (452, 30860), (470, 30803), (498, 30752), (514, 30734), (515, 30731), (517, 30728), (579, 30572), (580, 30566), (582, 30563), (585, 30557), (605, 30512), (616, 30488), (642, 30428), (646, 30419), (651, 30410), (653, 30404), (691, 30323), (717, 30266), (731, 30206), (762, 30065), (773, 30020), (794, 29933), (810, 29915), (828, 29849), (875, 29726), (909, 29615), (916, 29594), (922, 29579), (924, 29573), (929, 29555), (946, 29495),

Gene: PhrostyMug\_44 Start: 34431, Stop: 32605, Start Num: 246

Candidate Starts for PhrostyMug\_44:

(Start: 246 @34431 has 877 MA's), (368, 34218), (374, 34203), (416, 34125), (422, 34104), (425, 34098), (429, 34089), (470, 33972), (479, 33945), (539, 33852), (544, 33837), (551, 33816), (556, 33804), (578, 33753), (580, 33750), (612, 33684), (627, 33654), (639, 33624), (662, 33579), (683, 33540), (743, 33360), (752, 33330), (753, 33312), (767, 33273), (783, 33207), (814, 33126), (815, 33123), (843, 33042), (902, 32892), (903, 32889), (909, 32853), (917, 32829), (921, 32820), (925, 32808), (932, 32781), (946, 32733), (955, 32712),

Gene: Phunky\_59 Start: 54049, Stop: 52190, Start Num: 205

Candidate Starts for Phunky\_59:

(Start: 188 @54073 has 1 MA's), (Start: 205 @54049 has 304 MA's), (Start: 235 @54025 has 6 MA's), (Start: 250 @54019 has 2 MA's), (Start: 274 @53977 has 6 MA's), (283, 53956), (337, 53842), (342, 53836), (360, 53806), (391, 53746), (399, 53725), (421, 53671), (428, 53659), (434, 53641), (436, 53629), (476, 53524), (519, 53467), (538, 53431), (542, 53419), (551, 53395), (556, 53383), (564, 53365), (570, 53347), (580, 53329), (598, 53290), (602, 53281), (603, 53278), (604, 53275), (738, 52918), (744, 52885), (750, 52864), (777, 52771), (780, 52762), (795, 52699), (814, 52663), (815, 52660), (820, 52645), (847, 52567), (851, 52555), (858, 52534), (875, 52495), (905, 52405), (910, 52387), (912, 52381), (917, 52366), (926, 52342), (930, 52327), (931, 52324), (933, 52312), (940, 52288), (963, 52240), (972, 52216),

Gene: PickleBack\_38 Start: 30260, Stop: 28416, Start Num: 246

Candidate Starts for PickleBack\_38:

(Start: 246 @30260 has 877 MA's), (280, 30209), (318, 30149), (347, 30086), (364, 30056), (366, 30053), (395, 29996), (400, 29984), (416, 29954), (425, 29927), (461, 29825), (467, 29810), (479, 29774), (523, 29714), (539, 29678), (556, 29630), (594, 29546), (598, 29540), (633, 29468), (646, 29435), (654, 29420), (662, 29408), (712, 29309), (743, 29174), (752, 29144), (753, 29126), (755, 29123), (767, 29087), (771, 29078), (774, 29057), (777, 29048), (783, 29021), (784, 29018), (810, 28961), (814, 28940), (853, 28823), (876, 28769), (880, 28760), (888, 28742), (910, 28664), (929, 28607), (939, 28571), (946, 28547), (950, 28535),

Gene: Piglet\_0060 Start: 54547, Stop: 52664, Start Num: 188

Candidate Starts for Piglet\_0060:

(Start: 188 @54547 has 1 MA's), (Start: 205 @54523 has 304 MA's), (Start: 235 @54499 has 6 MA's), (Start: 250 @54493 has 2 MA's), (Start: 274 @54451 has 6 MA's), (283, 54430), (337, 54316), (342, 54310), (360, 54280), (391, 54220), (399, 54199), (421, 54145), (428, 54133), (434, 54115), (436, 54103), (476, 53998), (519, 53941), (538, 53905), (542, 53893), (552, 53866), (564, 53839), (570, 53821), (580, 53803), (598, 53764), (602, 53755), (603, 53752), (712, 53494), (738, 53392), (744, 53359), (750, 53338), (777, 53245), (780, 53236), (795, 53173), (814, 53137), (815, 53134), (820,

53119), (847, 53041), (851, 53029), (858, 53008), (875, 52969), (905, 52879), (910, 52861), (912, 52855), (917, 52840), (926, 52816), (930, 52801), (931, 52798), (933, 52786), (940, 52762), (963, 52714), (972, 52690),

Gene: Pikmin\_35 Start: 27722, Stop: 25905, Start Num: 298

Candidate Starts for Pikmin\_35:

(Start: 298 @27722 has 4 MA's), (309, 27707), (435, 27431), (438, 27425), (501, 27290), (505, 27275), (536, 27197), (537, 27194), (539, 27182), (549, 27152), (585, 27095), (658, 26948), (726, 26768), (764, 26630), (779, 26579), (780, 26576), (783, 26558), (784, 26555), (794, 26516), (822, 26429), (831, 26402), (878, 26270), (906, 26147), (917, 26114), (919, 26108), (922, 26099), (947, 26003), (949, 25997),

Gene: Pine5\_49 Start: 43969, Stop: 42167, Start Num: 234

Candidate Starts for Pine5\_49:

(234, 43969), (Start: 274 @43918 has 6 MA's), (371, 43756), (421, 43642), (429, 43627), (436, 43603), (438, 43600), (442, 43591), (448, 43576), (453, 43573), (461, 43549), (463, 43543), (466, 43537), (468, 43531), (472, 43519), (478, 43501), (479, 43498), (589, 43291), (596, 43279), (603, 43261), (615, 43231), (623, 43216), (634, 43195), (674, 43120), (704, 43036), (710, 43027), (750, 42856), (769, 42799), (780, 42754), (827, 42613), (847, 42559), (851, 42547), (895, 42436), (926, 42322), (930, 42307), (940, 42268), (946, 42247), (979, 42172),

Gene: PinheadLarry\_61 Start: 54548, Stop: 52689, Start Num: 205

Candidate Starts for PinheadLarry\_61:

(Start: 188 @54572 has 1 MA's), (Start: 205 @54548 has 304 MA's), (Start: 235 @54524 has 6 MA's), (Start: 250 @54518 has 2 MA's), (Start: 274 @54476 has 6 MA's), (283, 54455), (337, 54341), (342, 54335), (360, 54305), (391, 54245), (399, 54224), (421, 54170), (428, 54158), (434, 54140), (436, 54128), (476, 54023), (519, 53966), (538, 53930), (542, 53918), (552, 53891), (564, 53864), (570, 53846), (580, 53828), (598, 53789), (602, 53780), (603, 53777), (712, 53519), (738, 53417), (744, 53384), (750, 53363), (777, 53270), (780, 53261), (795, 53198), (814, 53162), (815, 53159), (820, 53144), (847, 53066), (851, 53054), (858, 53033), (875, 52994), (905, 52904), (910, 52886), (912, 52880), (917, 52865), (926, 52841), (930, 52826), (931, 52823), (933, 52811), (940, 52787), (963, 52739), (972, 52715),

Gene: PinkPlastic\_43 Start: 34151, Stop: 32325, Start Num: 246

Candidate Starts for PinkPlastic\_43:

(Start: 246 @34151 has 877 MA's), (368, 33938), (374, 33923), (400, 33875), (416, 33845), (422, 33824), (425, 33818), (429, 33809), (444, 33767), (470, 33692), (479, 33665), (539, 33572), (544, 33557), (556, 33524), (578, 33473), (580, 33470), (612, 33404), (627, 33374), (639, 33344), (662, 33299), (683, 33260), (743, 33080), (753, 33032), (767, 32993), (783, 32927), (793, 32888), (810, 32867), (814, 32846), (820, 32828), (843, 32762), (902, 32612), (903, 32609), (909, 32573), (921, 32540), (925, 32528), (932, 32501), (946, 32453), (955, 32432),

Gene: Pinkman\_60 Start: 54129, Stop: 52270, Start Num: 205

Candidate Starts for Pinkman\_60:

(Start: 188 @54153 has 1 MA's), (Start: 205 @54129 has 304 MA's), (Start: 235 @54105 has 6 MA's), (Start: 250 @54099 has 2 MA's), (Start: 274 @54057 has 6 MA's), (283, 54036), (337, 53922), (342, 53916), (360, 53886), (391, 53826), (399, 53805), (421, 53751), (428, 53739), (434, 53721), (436, 53709), (476, 53604), (519, 53547), (538, 53511), (542, 53499), (552, 53472), (570, 53427), (598, 53370), (602, 53361), (603, 53358), (712, 53100), (738, 52998), (744, 52965), (750, 52944), (777, 52851), (780, 52842), (795, 52779), (814, 52743), (815, 52740), (820, 52725), (847, 52647), (851, 52635), (858, 52614), (875, 52575), (905, 52485), (910, 52467), (912, 52461), (917, 52446), (926, 52422), (930, 52407), (931, 52404), (933, 52392), (940, 52368), (946, 52347), (963, 52320), (972, 52296), (977, 52281),

Gene: Pinto\_45 Start: 34258, Stop: 32429, Start Num: 246

Candidate Starts for Pinto\_45:

(Start: 246 @34258 has 877 MA's), (368, 34045), (374, 34030), (400, 33982), (416, 33952), (422, 33931), (425, 33925), (429, 33916), (470, 33799), (479, 33772), (539, 33679), (544, 33664), (556, 33631), (578, 33580), (580, 33577), (607, 33523), (612, 33511), (627, 33481), (639, 33451), (662, 33406), (683, 33367), (743, 33187), (753, 33139), (771, 33091), (780, 33052), (783, 33034), (793, 32995), (810, 32974), (814, 32953), (819, 32938), (861, 32815), (922, 32644), (929, 32620), (943, 32572), (946, 32560), (955, 32539), (959, 32533), (981, 32485), (986, 32470),

Gene: Pioneer\_45 Start: 31538, Stop: 29745, Start Num: 246

Candidate Starts for Pioneer\_45:

(Start: 246 @31538 has 877 MA's), (261, 31529), (280, 31487), (346, 31367), (347, 31364), (372, 31316), (402, 31256), (417, 31226), (420, 31214), (425, 31202), (479, 31049), (539, 30956), (598, 30818), (612, 30788), (687, 30629), (697, 30617), (714, 30590), (740, 30482), (743, 30461), (780, 30326), (783, 30308), (814, 30227), (827, 30185), (853, 30110), (886, 30035), (902, 29993), (930, 29891), (946, 29834), (950, 29822), (955, 29813),

Gene: Pipcraft\_43 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Pipcraft\_43:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Pipefish\_59 Start: 54415, Stop: 52598, Start Num: 247

Candidate Starts for Pipefish\_59:

(130, 54598), (Start: 247 @54415 has 43 MA's), (267, 54385), (368, 54205), (433, 54052), (435, 54040), (448, 54010), (454, 54004), (476, 53941), (478, 53935), (519, 53884), (538, 53848), (556, 53800), (603, 53695), (645, 53599), (674, 53548), (724, 53404), (732, 53365), (739, 53335), (744, 53308), (748, 53296), (775, 53200), (777, 53194), (780, 53185), (782, 53173), (807, 53101), (814, 53071), (820, 53053), (822, 53044), (847, 52975), (851, 52963), (858, 52942), (888, 52873), (898, 52858), (903, 52834), (912, 52789), (924, 52756), (926, 52750), (931, 52732), (933, 52720), (936, 52708), (940, 52696), (956, 52654), (972, 52624),

Gene: Pippin\_47 Start: 35168, Stop: 33381, Start Num: 246

Candidate Starts for Pippin\_47:

(Start: 246 @35168 has 877 MA's), (368, 34955), (374, 34940), (400, 34892), (416, 34862), (422, 34841), (425, 34835), (429, 34826), (470, 34709), (479, 34682), (539, 34589), (544, 34574), (556, 34541), (578, 34490), (580, 34487), (612, 34421), (627, 34391), (639, 34361), (662, 34316), (683, 34277), (743, 34097), (753, 34049), (767, 34010), (783, 33944), (812, 33872), (814, 33863), (843, 33779), (876, 33692), (917, 33566), (922, 33554), (946, 33470), (948, 33464),

Gene: Pipsqueak\_59 Start: 53979, Stop: 52120, Start Num: 205

Candidate Starts for Pipsqueak\_59:

(Start: 188 @54003 has 1 MA's), (Start: 205 @53979 has 304 MA's), (Start: 235 @53955 has 6 MA's), (Start: 250 @53949 has 2 MA's), (Start: 274 @53907 has 6 MA's), (283, 53886), (337, 53772), (342, 53766), (360, 53736), (391, 53676), (399, 53655), (421, 53601), (428, 53589), (434, 53571), (436, 53559), (476, 53454), (519, 53397), (538, 53361), (542, 53349), (551, 53325), (556, 53313), (564, 53295), (570, 53277), (580, 53259), (598, 53220), (602, 53211), (603, 53208), (604, 53205), (738, 52848), (744, 52815), (750, 52794), (777, 52701), (780, 52692), (795, 52629), (814, 52593), (815, 52590), (820, 52575), (847, 52497), (851, 52485), (858, 52464), (875, 52425), (905, 52335), (910,

52317), (912, 52311), (917, 52296), (926, 52272), (930, 52257), (931, 52254), (933, 52242), (940, 52218), (963, 52170), (972, 52146),

Gene: Piro94\_44 Start: 31722, Stop: 29935, Start Num: 246

Candidate Starts for Piro94\_44:

(Start: 246 @31722 has 877 MA's), (364, 31518), (366, 31515), (368, 31509), (383, 31479), (400, 31446), (402, 31443), (416, 31416), (425, 31389), (444, 31338), (479, 31236), (539, 31143), (556, 31095), (560, 31086), (568, 31071), (598, 31005), (635, 30924), (659, 30876), (726, 30732), (743, 30651), (755, 30600), (766, 30567), (783, 30498), (793, 30459), (810, 30438), (814, 30417), (818, 30405), (886, 30225), (888, 30219), (902, 30183), (905, 30159), (930, 30081), (946, 30024), (950, 30012),

Gene: Pistachio\_47 Start: 31102, Stop: 29264, Start Num: 246

Candidate Starts for Pistachio\_47:

(Start: 246 @31102 has 877 MA's), (280, 31051), (319, 30985), (364, 30898), (395, 30838), (400, 30826), (425, 30769), (429, 30760), (471, 30640), (479, 30616), (539, 30520), (558, 30472), (585, 30412), (614, 30349), (646, 30280), (659, 30259), (698, 30187), (716, 30145), (726, 30103), (743, 30022), (753, 29974), (776, 29899), (783, 29869), (791, 29839), (815, 29758), (827, 29719), (834, 29695), (843, 29677), (888, 29548), (905, 29488), (946, 29353), (950, 29341), (955, 29332),

Gene: Pita2\_47 Start: 35444, Stop: 33618, Start Num: 246

Candidate Starts for Pita2\_47:

(Start: 246 @35444 has 877 MA's), (368, 35231), (374, 35216), (400, 35168), (416, 35138), (422, 35117), (425, 35111), (429, 35102), (470, 34985), (479, 34958), (539, 34865), (544, 34850), (551, 34829), (578, 34766), (580, 34763), (612, 34697), (627, 34667), (639, 34637), (662, 34592), (683, 34553), (743, 34373), (752, 34343), (753, 34325), (755, 34322), (767, 34286), (783, 34220), (793, 34181), (810, 34160), (814, 34139), (820, 34121), (843, 34055), (902, 33905), (903, 33902), (909, 33866), (921, 33833), (925, 33821), (946, 33746), (955, 33725),

Gene: Pixelle\_41 Start: 30386, Stop: 32251, Start Num: 245

Candidate Starts for Pixelle\_41:

(Start: 245 @30386 has 74 MA's), (279, 30434), (382, 30617), (386, 30623), (416, 30683), (448, 30773), (541, 30980), (544, 30989), (585, 31088), (591, 31103), (659, 31241), (717, 31379), (737, 31466), (743, 31499), (760, 31562), (767, 31586), (783, 31652), (813, 31745), (878, 31925), (902, 31988), (905, 32012), (946, 32147), (949, 32156),

Gene: Placalicious\_61 Start: 55080, Stop: 53221, Start Num: 205

Candidate Starts for Placalicious\_61:

(Start: 188 @55104 has 1 MA's), (Start: 205 @55080 has 304 MA's), (Start: 235 @55056 has 6 MA's), (Start: 250 @55050 has 2 MA's), (Start: 274 @55008 has 6 MA's), (283, 54987), (337, 54873), (342, 54867), (360, 54837), (391, 54777), (399, 54756), (421, 54702), (428, 54690), (434, 54672), (476, 54555), (519, 54498), (538, 54462), (542, 54450), (552, 54423), (564, 54396), (570, 54378), (580, 54360), (598, 54321), (602, 54312), (603, 54309), (712, 54051), (738, 53949), (744, 53916), (750, 53895), (777, 53802), (780, 53793), (795, 53730), (814, 53694), (815, 53691), (820, 53676), (847, 53598), (851, 53586), (858, 53565), (875, 53526), (905, 53436), (910, 53418), (912, 53412), (917, 53397), (926, 53373), (930, 53358), (931, 53355), (933, 53343), (940, 53319), (963, 53271), (972, 53247),

Gene: Plata\_61 Start: 54281, Stop: 52422, Start Num: 205

Candidate Starts for Plata\_61:

(Start: 188 @54305 has 1 MA's), (Start: 205 @54281 has 304 MA's), (Start: 235 @54257 has 6 MA's), (Start: 250 @54251 has 2 MA's), (Start: 274 @54209 has 6 MA's), (283, 54188), (337, 54074), (342, 54068), (360, 54038), (391, 53978), (399, 53957), (421, 53903), (428, 53891), (434, 53873), (436,

53861), (476, 53756), (519, 53699), (538, 53663), (542, 53651), (551, 53627), (556, 53615), (564, 53597), (570, 53579), (580, 53561), (598, 53522), (602, 53513), (603, 53510), (604, 53507), (738, 53150), (744, 53117), (750, 53096), (777, 53003), (780, 52994), (795, 52931), (814, 52895), (815, 52892), (820, 52877), (847, 52799), (851, 52787), (858, 52766), (875, 52727), (905, 52637), (910, 52619), (912, 52613), (917, 52598), (926, 52574), (930, 52559), (931, 52556), (933, 52544), (940, 52520), (946, 52499), (963, 52472), (972, 52448), (977, 52433),

Gene: Plmatters\_59 Start: 54053, Stop: 52194, Start Num: 205

Candidate Starts for Plmatters\_59:

(Start: 188 @54077 has 1 MA's), (Start: 205 @54053 has 304 MA's), (Start: 235 @54029 has 6 MA's), (Start: 250 @54023 has 2 MA's), (Start: 274 @53981 has 6 MA's), (283, 53960), (337, 53846), (342, 53840), (360, 53810), (391, 53750), (399, 53729), (421, 53675), (428, 53663), (434, 53645), (436, 53633), (476, 53528), (519, 53471), (538, 53435), (542, 53423), (552, 53396), (564, 53369), (570, 53351), (580, 53333), (598, 53294), (602, 53285), (603, 53282), (712, 53024), (738, 52922), (744, 52889), (750, 52868), (777, 52775), (780, 52766), (795, 52703), (814, 52667), (815, 52664), (820, 52649), (847, 52571), (851, 52559), (858, 52538), (875, 52499), (905, 52409), (910, 52391), (912, 52385), (917, 52370), (926, 52346), (930, 52331), (931, 52328), (933, 52316), (940, 52292), (963, 52244), (972, 52220),

Gene: Pmask\_45 Start: 29639, Stop: 27798, Start Num: 246

Candidate Starts for Pmask\_45:

(Start: 246 @29639 has 877 MA's), (364, 29435), (400, 29360), (402, 29357), (416, 29330), (420, 29315), (425, 29303), (444, 29252), (475, 29162), (479, 29150), (539, 29057), (552, 29018), (560, 29000), (568, 28985), (598, 28919), (613, 28886), (614, 28883), (663, 28781), (697, 28721), (726, 28637), (743, 28556), (766, 28472), (767, 28469), (771, 28460), (776, 28433), (783, 28403), (810, 28343), (820, 28304), (902, 28088), (903, 28085), (905, 28064), (946, 27929), (950, 27917), (955, 27908), (957, 27905), (1000, 27812),

Gene: Pocahontas\_44 Start: 31594, Stop: 29756, Start Num: 246

Candidate Starts for Pocahontas\_44:

(Start: 246 @31594 has 877 MA's), (280, 31543), (364, 31390), (400, 31318), (416, 31288), (425, 31261), (429, 31252), (479, 31108), (539, 31012), (558, 30964), (585, 30904), (629, 30817), (646, 30772), (659, 30751), (698, 30679), (716, 30637), (726, 30595), (743, 30514), (753, 30466), (767, 30427), (776, 30391), (783, 30361), (791, 30331), (815, 30250), (827, 30211), (834, 30187), (843, 30169), (844, 30166), (888, 30040), (905, 29980), (932, 29893), (946, 29845), (950, 29833), (955, 29824),

Gene: Pocket\_38 Start: 28623, Stop: 26758, Start Num: 301

Candidate Starts for Pocket\_38:

(Start: 238 @28710 has 3 MA's), (Start: 301 @28623 has 110 MA's), (Start: 308 @28614 has 5 MA's), (354, 28509), (358, 28500), (375, 28470), (378, 28467), (433, 28347), (435, 28335), (438, 28329), (475, 28224), (484, 28197), (531, 28056), (536, 28050), (537, 28047), (539, 28035), (548, 28008), (549, 28005), (554, 27990), (556, 27984), (559, 27978), (586, 27945), (652, 27816), (676, 27756), (776, 27441), (779, 27432), (780, 27429), (783, 27411), (794, 27369), (796, 27363), (805, 27339), (822, 27282), (878, 27123), (885, 27093), (888, 27084), (903, 27024), (906, 27000), (919, 26961), (929, 26928), (932, 26916), (947, 26856),

Gene: Podrick\_59 Start: 53832, Stop: 51973, Start Num: 205

Candidate Starts for Podrick\_59:

(Start: 188 @53856 has 1 MA's), (Start: 205 @53832 has 304 MA's), (Start: 235 @53808 has 6 MA's), (Start: 250 @53802 has 2 MA's), (Start: 274 @53760 has 6 MA's), (283, 53739), (337, 53625), (342, 53619), (360, 53589), (391, 53529), (399, 53508), (421, 53454), (428, 53442), (434, 53424), (436, 53412), (476, 53307), (519, 53250), (538, 53214), (542, 53202), (552, 53175), (564, 53148), (570,

53130), (580, 53112), (598, 53073), (602, 53064), (603, 53061), (712, 52803), (738, 52701), (744, 52668), (750, 52647), (777, 52554), (780, 52545), (795, 52482), (814, 52446), (815, 52443), (820, 52428), (847, 52350), (851, 52338), (858, 52317), (875, 52278), (905, 52188), (910, 52170), (912, 52164), (917, 52149), (926, 52125), (930, 52110), (931, 52107), (933, 52095), (940, 52071), (963, 52023), (972, 51999),

Gene: Polymorphads\_46 Start: 31563, Stop: 29737, Start Num: 246

Candidate Starts for Polymorphads\_46:

(Start: 246 @31563 has 877 MA's), (267, 31542), (280, 31512), (295, 31482), (383, 31320), (394, 31302), (425, 31230), (429, 31221), (471, 31101), (479, 31077), (539, 30984), (558, 30936), (568, 30915), (585, 30876), (646, 30744), (659, 30723), (683, 30678), (687, 30666), (740, 30513), (743, 30492), (776, 30369), (783, 30339), (793, 30300), (814, 30234), (815, 30231), (820, 30216), (827, 30192), (834, 30168), (905, 29961), (946, 29826), (950, 29814), (955, 29805),

Gene: Polyphemus\_46 Start: 29782, Stop: 27941, Start Num: 246

Candidate Starts for Polyphemus\_46:

(Start: 246 @29782 has 877 MA's), (364, 29578), (400, 29503), (402, 29500), (416, 29473), (420, 29458), (425, 29446), (444, 29395), (475, 29305), (479, 29293), (539, 29200), (552, 29161), (560, 29143), (568, 29128), (598, 29062), (613, 29029), (614, 29026), (663, 28924), (697, 28864), (726, 28780), (743, 28699), (766, 28615), (767, 28612), (771, 28603), (776, 28576), (783, 28546), (810, 28486), (820, 28447), (902, 28231), (903, 28228), (905, 28207), (946, 28072), (950, 28060), (955, 28051), (957, 28048), (1000, 27955),

Gene: Pomar16\_47 Start: 31194, Stop: 29371, Start Num: 246

Candidate Starts for Pomar16\_47:

(Start: 246 @31194 has 877 MA's), (364, 30990), (374, 30966), (383, 30948), (394, 30930), (400, 30915), (402, 30912), (416, 30885), (425, 30858), (444, 30807), (479, 30705), (539, 30612), (556, 30564), (560, 30555), (567, 30543), (568, 30540), (598, 30474), (627, 30414), (683, 30300), (697, 30276), (715, 30237), (743, 30111), (755, 30060), (767, 30024), (783, 29958), (793, 29919), (815, 29850), (827, 29811), (844, 29766), (853, 29736), (880, 29673), (886, 29661), (888, 29655), (905, 29595), (946, 29460), (950, 29448), (955, 29439),

Gene: Pons\_46 Start: 34228, Stop: 31850, Start Num: 46

Candidate Starts for Pons\_46:

(Start: 46 @34228 has 13 MA's), (63, 34168), (93, 34087), (138, 33967), (179, 33922), (Start: 232 @33844 has 3 MA's), (Start: 238 @33838 has 3 MA's), (Start: 241 @33835 has 13 MA's), (267, 33805), (283, 33766), (287, 33757), (305, 33730), (Start: 308 @33727 has 5 MA's), (329, 33670), (354, 33631), (389, 33568), (398, 33544), (402, 33535), (406, 33523), (420, 33490), (421, 33487), (430, 33469), (435, 33448), (457, 33388), (499, 33265), (526, 33190), (539, 33148), (605, 33061), (643, 33013), (657, 32983), (660, 32977), (682, 32932), (683, 32929), (690, 32914), (702, 32893), (722, 32830), (733, 32779), (747, 32719), (749, 32710), (752, 32695), (755, 32680), (760, 32668), (783, 32575), (792, 32539), (794, 32533), (796, 32527), (797, 32521), (815, 32464), (822, 32440), (856, 32335), (858, 32332), (878, 32281), (889, 32239), (893, 32221), (903, 32182), (911, 32140), (920, 32116), (929, 32086), (940, 32038), (943, 32029), (947, 32014), (968, 31969), (987, 31915), (1004, 31882), (1009, 31870),

Gene: Ponzi\_14 Start: 9802, Stop: 8006, Start Num: 246

Candidate Starts for Ponzi\_14:

(Start: 246 @9802 has 877 MA's), (416, 9493), (479, 9313), (523, 9253), (539, 9220), (554, 9175), (556, 9172), (585, 9103), (594, 9082), (654, 8956), (692, 8905), (716, 8857), (736, 8776), (743, 8734), (759, 8671), (762, 8665), (765, 8647), (768, 8641), (773, 8620), (780, 8596), (783, 8578), (784, 8575), (809, 8518), (814, 8497), (820, 8479), (828, 8452), (912, 8215), (922, 8188), (940, 8125), (946, 8104), (955, 8083), (978, 8035),



Gene: Poompha\_43 Start: 30385, Stop: 28553, Start Num: 246

Candidate Starts for Poompha\_43:

(Start: 246 @30385 has 877 MA's), (280, 30334), (319, 30268), (364, 30181), (368, 30172), (395, 30121), (400, 30109), (425, 30052), (454, 29971), (458, 29959), (461, 29950), (471, 29923), (479, 29899), (539, 29806), (585, 29698), (598, 29671), (662, 29539), (743, 29311), (762, 29245), (776, 29188), (783, 29158), (793, 29119), (815, 29047), (820, 29032), (827, 29008), (843, 28966), (853, 28933), (905, 28777), (912, 28753), (932, 28690), (946, 28642), (950, 28630), (955, 28621),

Gene: Popcicle\_44 Start: 31594, Stop: 29756, Start Num: 246

Candidate Starts for Popcicle\_44:

(Start: 246 @31594 has 877 MA's), (280, 31543), (364, 31390), (400, 31318), (416, 31288), (425, 31261), (429, 31252), (479, 31108), (539, 31012), (558, 30964), (585, 30904), (629, 30817), (646, 30772), (659, 30751), (698, 30679), (716, 30637), (726, 30595), (743, 30514), (753, 30466), (767, 30427), (776, 30391), (783, 30361), (791, 30331), (815, 30250), (827, 30211), (834, 30187), (843, 30169), (844, 30166), (888, 30040), (905, 29980), (932, 29893), (946, 29845), (950, 29833), (955, 29824),

Gene: Pops\_60 Start: 54238, Stop: 52379, Start Num: 205

Candidate Starts for Pops\_60:

(Start: 188 @54262 has 1 MA's), (Start: 205 @54238 has 304 MA's), (Start: 235 @54214 has 6 MA's), (Start: 250 @54208 has 2 MA's), (Start: 274 @54166 has 6 MA's), (283, 54145), (337, 54031), (342, 54025), (360, 53995), (391, 53935), (399, 53914), (421, 53860), (428, 53848), (434, 53830), (436, 53818), (476, 53713), (519, 53656), (538, 53620), (542, 53608), (551, 53584), (556, 53572), (564, 53554), (570, 53536), (580, 53518), (598, 53479), (602, 53470), (603, 53467), (604, 53464), (738, 53107), (744, 53074), (750, 53053), (777, 52960), (780, 52951), (795, 52888), (814, 52852), (815, 52849), (820, 52834), (847, 52756), (851, 52744), (858, 52723), (875, 52684), (905, 52594), (910, 52576), (912, 52570), (917, 52555), (926, 52531), (930, 52516), (931, 52513), (933, 52501), (940, 52477), (963, 52429), (972, 52405),

Gene: Poster\_52 Start: 52989, Stop: 51166, Start Num: 197

Candidate Starts for Poster\_52:

(Start: 182 @53007 has 4 MA's), (Start: 197 @52989 has 27 MA's), (Start: 250 @52965 has 2 MA's), (267, 52938), (Start: 274 @52923 has 6 MA's), (283, 52902), (329, 52815), (387, 52710), (406, 52668), (434, 52602), (445, 52572), (448, 52563), (453, 52560), (454, 52557), (463, 52530), (519, 52437), (531, 52419), (538, 52401), (542, 52389), (547, 52374), (552, 52362), (602, 52251), (603, 52248), (615, 52218), (633, 52182), (724, 51957), (725, 51954), (732, 51918), (738, 51894), (744, 51861), (775, 51753), (777, 51747), (779, 51741), (780, 51738), (814, 51639), (815, 51636), (820, 51621), (847, 51543), (851, 51531), (858, 51510), (861, 51501), (875, 51471), (886, 51447), (901, 51414), (905, 51381), (910, 51363), (912, 51357), (926, 51318), (931, 51300), (933, 51288), (940, 51264), (956, 51222), (963, 51216), (972, 51192),

Gene: PotPie\_44 Start: 34903, Stop: 32528, Start Num: 46

Candidate Starts for PotPie\_44:

(Start: 46 @34903 has 13 MA's), (63, 34843), (80, 34801), (93, 34762), (138, 34642), (145, 34621), (179, 34597), (Start: 232 @34519 has 3 MA's), (Start: 238 @34513 has 3 MA's), (Start: 241 @34510 has 13 MA's), (267, 34480), (287, 34432), (305, 34405), (Start: 308 @34402 has 5 MA's), (329, 34345), (354, 34306), (367, 34285), (389, 34243), (398, 34219), (402, 34210), (403, 34204), (406, 34198), (420, 34165), (430, 34144), (435, 34123), (499, 33940), (526, 33865), (539, 33823), (605, 33736), (633, 33712), (643, 33688), (647, 33679), (657, 33658), (682, 33607), (683, 33604), (690, 33589), (702, 33568), (736, 33442), (747, 33394), (749, 33385), (760, 33343), (783, 33250), (792, 33214), (794, 33208), (796, 33202), (797, 33196), (815, 33139), (822, 33115), (856, 33010), (858, 33007), (889, 32914), (893, 32896), (903, 32857), (911, 32815), (920, 32791), (929, 32761), (940,

32713), (947, 32689), (968, 32644), (1004, 32557),

Gene: PotatoSplit\_50 Start: 31856, Stop: 30042, Start Num: 246

Candidate Starts for PotatoSplit\_50:

(Start: 246 @31856 has 877 MA's), (275, 31817), (280, 31805), (364, 31652), (371, 31637), (400, 31580), (425, 31523), (429, 31514), (444, 31472), (461, 31421), (479, 31370), (539, 31277), (556, 31229), (560, 31220), (568, 31205), (585, 31166), (598, 31139), (612, 31109), (654, 31016), (686, 30956), (697, 30941), (743, 30785), (767, 30698), (783, 30632), (793, 30593), (815, 30521), (827, 30482), (834, 30458), (843, 30440), (853, 30407), (864, 30380), (888, 30326), (905, 30266), (930, 30188), (946, 30131), (950, 30119), (955, 30110),

Gene: Potter\_59 Start: 54044, Stop: 52185, Start Num: 205

Candidate Starts for Potter\_59:

(Start: 188 @54068 has 1 MA's), (Start: 205 @54044 has 304 MA's), (Start: 235 @54020 has 6 MA's), (Start: 250 @54014 has 2 MA's), (Start: 274 @53972 has 6 MA's), (283, 53951), (337, 53837), (342, 53831), (360, 53801), (391, 53741), (399, 53720), (421, 53666), (428, 53654), (434, 53636), (436, 53624), (476, 53519), (519, 53462), (538, 53426), (542, 53414), (552, 53387), (570, 53342), (598, 53285), (602, 53276), (603, 53273), (738, 52913), (744, 52880), (750, 52859), (777, 52766), (780, 52757), (795, 52694), (814, 52658), (815, 52655), (820, 52640), (847, 52562), (851, 52550), (858, 52529), (875, 52490), (905, 52400), (910, 52382), (912, 52376), (917, 52361), (926, 52337), (930, 52322), (931, 52319), (933, 52307), (940, 52283), (963, 52235), (972, 52211),

Gene: Power\_43 Start: 31319, Stop: 29532, Start Num: 246

Candidate Starts for Power\_43:

(102, 31574), (Start: 246 @31319 has 877 MA's), (364, 31115), (366, 31112), (368, 31106), (375, 31091), (383, 31076), (400, 31043), (402, 31040), (416, 31013), (425, 30986), (433, 30965), (444, 30935), (479, 30833), (482, 30824), (539, 30740), (556, 30692), (560, 30683), (568, 30668), (598, 30602), (635, 30521), (659, 30473), (662, 30467), (697, 30404), (726, 30329), (743, 30248), (755, 30197), (766, 30164), (767, 30161), (783, 30095), (793, 30056), (810, 30035), (843, 29930), (853, 29897), (864, 29870), (880, 29834), (886, 29822), (888, 29816), (902, 29780), (905, 29756), (930, 29678), (946, 29621), (950, 29609), (955, 29600),

Gene: Powerpuff\_43 Start: 30792, Stop: 32657, Start Num: 245

Candidate Starts for Powerpuff\_43:

(Start: 245 @30792 has 74 MA's), (279, 30840), (416, 31089), (448, 31179), (541, 31386), (544, 31395), (580, 31485), (585, 31494), (591, 31509), (613, 31554), (635, 31599), (659, 31647), (687, 31704), (717, 31785), (737, 31872), (743, 31905), (752, 31935), (767, 31992), (783, 32058), (790, 32082), (813, 32151), (834, 32223), (840, 32232), (878, 32331), (902, 32394), (905, 32418), (939, 32529), (946, 32553), (949, 32562),

Gene: Priamo\_47 Start: 29939, Stop: 28098, Start Num: 246

Candidate Starts for Priamo\_47:

(Start: 246 @29939 has 877 MA's), (364, 29735), (400, 29660), (402, 29657), (416, 29630), (420, 29615), (425, 29603), (444, 29552), (479, 29450), (539, 29357), (552, 29318), (560, 29300), (598, 29219), (614, 29183), (663, 29081), (697, 29021), (726, 28937), (743, 28856), (766, 28772), (767, 28769), (771, 28760), (776, 28733), (783, 28703), (810, 28643), (820, 28604), (827, 28580), (902, 28388), (903, 28385), (905, 28364), (946, 28229), (950, 28217), (955, 28208), (957, 28205), (1000, 28112),

Gene: Prickles\_62 Start: 54544, Stop: 52685, Start Num: 205

Candidate Starts for Prickles\_62:

(Start: 188 @54568 has 1 MA's), (Start: 205 @54544 has 304 MA's), (Start: 235 @54520 has 6 MA's), (Start: 250 @54514 has 2 MA's), (Start: 274 @54472 has 6 MA's), (283, 54451), (337, 54337), (342,

54331), (360, 54301), (391, 54241), (399, 54220), (421, 54166), (428, 54154), (434, 54136), (436, 54124), (476, 54019), (519, 53962), (538, 53926), (542, 53914), (552, 53887), (556, 53878), (570, 53842), (598, 53785), (602, 53776), (603, 53773), (604, 53770), (738, 53413), (744, 53380), (750, 53359), (777, 53266), (780, 53257), (795, 53194), (814, 53158), (815, 53155), (820, 53140), (847, 53062), (851, 53050), (858, 53029), (875, 52990), (905, 52900), (910, 52882), (912, 52876), (917, 52861), (926, 52837), (930, 52822), (931, 52819), (933, 52807), (940, 52783), (963, 52735), (972, 52711),

Gene: Prin Ashe11\_39 Start: 30426, Stop: 28582, Start Num: 246

Candidate Starts for Prin Ashe11\_39:

(Start: 246 @30426 has 877 MA's), (280, 30375), (318, 30315), (347, 30252), (364, 30222), (366, 30219), (395, 30162), (400, 30150), (416, 30120), (425, 30093), (479, 29940), (539, 29844), (556, 29796), (594, 29712), (598, 29706), (633, 29634), (646, 29601), (654, 29586), (662, 29574), (712, 29475), (743, 29340), (752, 29310), (753, 29292), (755, 29289), (767, 29253), (771, 29244), (774, 29223), (777, 29214), (783, 29187), (784, 29184), (810, 29127), (814, 29106), (853, 28989), (876, 28935), (880, 28926), (888, 28908), (910, 28830), (929, 28773), (939, 28737), (946, 28713), (950, 28701),

Gene: Prince\_53 Start: 54170, Stop: 52347, Start Num: 197

Candidate Starts for Prince\_53:

(Start: 182 @54188 has 4 MA's), (Start: 197 @54170 has 27 MA's), (Start: 250 @54146 has 2 MA's), (267, 54119), (Start: 274 @54104 has 6 MA's), (283, 54083), (329, 53996), (387, 53891), (406, 53849), (434, 53783), (445, 53753), (448, 53744), (453, 53741), (454, 53738), (519, 53618), (531, 53600), (538, 53582), (542, 53570), (547, 53555), (552, 53543), (602, 53432), (603, 53429), (615, 53399), (633, 53363), (724, 53138), (725, 53135), (732, 53099), (738, 53075), (744, 53042), (775, 52934), (777, 52928), (780, 52919), (814, 52820), (815, 52817), (820, 52802), (847, 52724), (851, 52712), (858, 52691), (861, 52682), (875, 52652), (901, 52595), (905, 52562), (910, 52544), (912, 52538), (926, 52499), (931, 52481), (933, 52469), (940, 52445), (956, 52403), (963, 52397), (972, 52373),

Gene: PrinceCharming\_57 Start: 52594, Stop: 50765, Start Num: 205

Candidate Starts for PrinceCharming\_57:

(Start: 205 @52594 has 304 MA's), (Start: 250 @52567 has 2 MA's), (269, 52537), (Start: 274 @52525 has 6 MA's), (286, 52498), (287, 52495), (293, 52486), (318, 52468), (366, 52372), (391, 52321), (400, 52297), (411, 52273), (463, 52135), (472, 52111), (476, 52099), (519, 52042), (538, 52006), (542, 51994), (551, 51970), (588, 51886), (602, 51856), (603, 51853), (615, 51823), (680, 51679), (707, 51613), (721, 51574), (724, 51562), (727, 51541), (732, 51523), (744, 51466), (771, 51382), (777, 51352), (780, 51343), (795, 51277), (812, 51250), (814, 51241), (820, 51223), (827, 51199), (847, 51145), (851, 51133), (858, 51112), (888, 51043), (905, 50983), (910, 50965), (922, 50932), (926, 50920), (930, 50905), (931, 50902), (933, 50890), (940, 50866), (941, 50863), (963, 50815), (965, 50812), (972, 50791), (979, 50770),

Gene: PrincePhergus\_37 Start: 28495, Stop: 26645, Start Num: 297

Candidate Starts for PrincePhergus\_37:

(Start: 297 @28495 has 18 MA's), (358, 28372), (378, 28339), (430, 28228), (435, 28207), (438, 28201), (441, 28192), (456, 28150), (512, 27994), (531, 27940), (536, 27934), (537, 27931), (539, 27919), (549, 27889), (585, 27832), (658, 27685), (718, 27538), (776, 27328), (779, 27319), (780, 27316), (783, 27298), (794, 27256), (798, 27241), (822, 27169), (885, 26980), (888, 26971), (903, 26911), (906, 26887), (917, 26854), (947, 26743),

Gene: Priya\_45 Start: 31550, Stop: 29757, Start Num: 246

Candidate Starts for Priya\_45:

(Start: 246 @31550 has 877 MA's), (261, 31541), (280, 31499), (346, 31379), (347, 31376), (372, 31328), (402, 31268), (417, 31238), (420, 31226), (425, 31214), (479, 31061), (539, 30968), (598,

30830), (612, 30800), (687, 30641), (697, 30629), (714, 30602), (740, 30494), (743, 30473), (780, 30338), (783, 30320), (814, 30239), (827, 30197), (853, 30122), (886, 30047), (902, 30005), (930, 29903), (946, 29846), (950, 29834), (955, 29825),

Gene: ProMouse\_45 Start: 35152, Stop: 33326, Start Num: 246

Candidate Starts for ProMouse\_45:

(Start: 246 @35152 has 877 MA's), (368, 34939), (400, 34876), (416, 34846), (422, 34825), (425, 34819), (429, 34810), (470, 34693), (479, 34666), (539, 34573), (544, 34558), (578, 34474), (580, 34471), (612, 34405), (627, 34375), (639, 34345), (662, 34300), (683, 34261), (743, 34081), (755, 34030), (767, 33994), (783, 33928), (793, 33889), (810, 33868), (814, 33847), (902, 33613), (903, 33610), (909, 33574), (917, 33550), (938, 33481), (946, 33454), (955, 33433),

Gene: ProfessorX\_60 Start: 54043, Stop: 52184, Start Num: 205

Candidate Starts for ProfessorX\_60:

(Start: 188 @54067 has 1 MA's), (Start: 205 @54043 has 304 MA's), (Start: 235 @54019 has 6 MA's), (Start: 250 @54013 has 2 MA's), (Start: 274 @53971 has 6 MA's), (283, 53950), (337, 53836), (342, 53830), (360, 53800), (391, 53740), (399, 53719), (421, 53665), (428, 53653), (434, 53635), (436, 53623), (476, 53518), (519, 53461), (538, 53425), (542, 53413), (551, 53389), (556, 53377), (564, 53359), (570, 53341), (580, 53323), (598, 53284), (602, 53275), (603, 53272), (604, 53269), (738, 52912), (744, 52879), (750, 52858), (777, 52765), (780, 52756), (795, 52693), (814, 52657), (815, 52654), (820, 52639), (847, 52561), (851, 52549), (858, 52528), (875, 52489), (905, 52399), (910, 52381), (912, 52375), (917, 52360), (926, 52336), (930, 52321), (931, 52318), (933, 52306), (940, 52282), (963, 52234), (972, 52210),

Gene: PsychoKiller\_42 Start: 32441, Stop: 30048, Start Num: 36

Candidate Starts for PsychoKiller\_42:

(Start: 36 @32441 has 16 MA's), (47, 32435), (Start: 59 @32387 has 1 MA's), (75, 32345), (84, 32321), (128, 32195), (138, 32171), (179, 32126), (Start: 215 @32075 has 2 MA's), (223, 32060), (Start: 241 @32039 has 13 MA's), (275, 31991), (289, 31958), (295, 31949), (329, 31874), (335, 31862), (374, 31793), (391, 31766), (394, 31760), (398, 31745), (420, 31691), (421, 31688), (430, 31670), (435, 31649), (457, 31589), (499, 31466), (500, 31460), (526, 31391), (539, 31349), (605, 31262), (615, 31238), (633, 31232), (643, 31208), (647, 31199), (654, 31184), (660, 31172), (680, 31130), (682, 31127), (683, 31124), (733, 30977), (741, 30935), (749, 30908), (750, 30902), (783, 30773), (792, 30737), (794, 30731), (796, 30725), (797, 30719), (815, 30662), (822, 30638), (836, 30593), (946, 30215), (947, 30212), (968, 30167), (971, 30158), (995, 30098),

Gene: Puhltonio\_60 Start: 54318, Stop: 52459, Start Num: 205

Candidate Starts for Puhltonio\_60:

(Start: 188 @54342 has 1 MA's), (Start: 205 @54318 has 304 MA's), (Start: 235 @54294 has 6 MA's), (Start: 250 @54288 has 2 MA's), (Start: 274 @54246 has 6 MA's), (283, 54225), (337, 54111), (342, 54105), (360, 54075), (391, 54015), (399, 53994), (421, 53940), (428, 53928), (434, 53910), (436, 53898), (476, 53793), (519, 53736), (538, 53700), (542, 53688), (552, 53661), (564, 53634), (570, 53616), (580, 53598), (598, 53559), (602, 53550), (603, 53547), (712, 53289), (738, 53187), (744, 53154), (750, 53133), (777, 53040), (780, 53031), (795, 52968), (814, 52932), (815, 52929), (820, 52914), (847, 52836), (851, 52824), (858, 52803), (875, 52764), (905, 52674), (910, 52656), (912, 52650), (917, 52635), (926, 52611), (930, 52596), (931, 52593), (933, 52581), (940, 52557), (963, 52509), (972, 52485),

Gene: Pukovnik\_43 Start: 32125, Stop: 30323, Start Num: 246

Candidate Starts for Pukovnik\_43:

(Start: 246 @32125 has 877 MA's), (364, 31921), (366, 31918), (402, 31843), (416, 31816), (425, 31789), (433, 31768), (475, 31648), (479, 31636), (539, 31543), (556, 31495), (560, 31486), (568, 31471), (598, 31405), (652, 31288), (683, 31231), (697, 31207), (715, 31165), (730, 31102), (743,

31039), (755, 30988), (767, 30952), (776, 30916), (783, 30886), (793, 30847), (810, 30826), (814, 30805), (853, 30688), (880, 30625), (902, 30571), (905, 30547), (924, 30490), (930, 30469), (946, 30412), (950, 30400), (955, 30391),

Gene: Pumbaa\_45 Start: 31515, Stop: 29686, Start Num: 246

Candidate Starts for Pumbaa\_45:

(Start: 246 @31515 has 877 MA's), (267, 31494), (280, 31464), (295, 31434), (383, 31272), (394, 31254), (425, 31182), (429, 31173), (471, 31053), (479, 31029), (539, 30936), (558, 30888), (568, 30867), (585, 30828), (646, 30696), (659, 30675), (683, 30630), (687, 30618), (743, 30444), (780, 30309), (783, 30291), (793, 30252), (815, 30180), (827, 30141), (834, 30117), (837, 30111), (844, 30096), (905, 29910), (946, 29775), (950, 29763), (955, 29754),

Gene: Pumpnickel\_113 Start: 82450, Stop: 80615, Start Num: 246

Candidate Starts for Pumpnickel\_113:

(Start: 246 @82450 has 877 MA's), (279, 82408), (366, 82222), (398, 82165), (428, 82102), (435, 82075), (466, 82012), (542, 81886), (549, 81865), (555, 81847), (571, 81802), (585, 81775), (607, 81730), (613, 81715), (622, 81697), (629, 81685), (646, 81640), (652, 81631), (743, 81385), (762, 81319), (773, 81271), (795, 81172), (824, 81076), (827, 81067), (840, 81034), (843, 81025), (853, 80992), (868, 80956), (910, 80815), (922, 80782), (926, 80770), (935, 80731), (946, 80698),

Gene: Pumpkins\_40 Start: 29815, Stop: 31680, Start Num: 245

Candidate Starts for Pumpkins\_40:

(Start: 245 @29815 has 74 MA's), (279, 29863), (416, 30112), (458, 30232), (541, 30409), (585, 30517), (591, 30532), (659, 30670), (717, 30808), (743, 30928), (767, 31015), (783, 31081), (813, 31174), (902, 31417), (946, 31576), (949, 31585),

Gene: Puppies\_42 Start: 34640, Stop: 32244, Start Num: 3

Candidate Starts for Puppies\_42:

(Start: 3 @34640 has 5 MA's), (5, 34631), (22, 34535), (124, 34199), (Start: 160 @34169 has 1 MA's), (170, 34157), (212, 34103), (295, 33983), (318, 33962), (332, 33917), (363, 33869), (372, 33848), (442, 33686), (469, 33623), (476, 33602), (479, 33593), (538, 33512), (542, 33500), (563, 33446), (575, 33416), (589, 33389), (602, 33362), (603, 33359), (604, 33356), (674, 33209), (704, 33125), (719, 33074), (727, 33035), (730, 33026), (732, 33017), (744, 32960), (771, 32879), (777, 32849), (806, 32759), (812, 32747), (820, 32720), (847, 32642), (851, 32630), (861, 32600), (897, 32510), (901, 32495), (905, 32462), (924, 32405), (930, 32384), (931, 32381), (936, 32357), (940, 32345), (963, 32294), (972, 32270),

Gene: Puppy\_47 Start: 31175, Stop: 29337, Start Num: 246

Candidate Starts for Puppy\_47:

(Start: 246 @31175 has 877 MA's), (280, 31124), (319, 31058), (364, 30971), (395, 30911), (400, 30899), (425, 30842), (429, 30833), (471, 30713), (479, 30689), (539, 30593), (558, 30545), (585, 30485), (614, 30422), (646, 30353), (659, 30332), (698, 30260), (716, 30218), (726, 30176), (743, 30095), (753, 30047), (776, 29972), (783, 29942), (791, 29912), (815, 29831), (827, 29792), (834, 29768), (843, 29750), (888, 29621), (905, 29561), (946, 29426), (950, 29414), (955, 29405),

Gene: PuppyEggo\_39 Start: 28937, Stop: 27072, Start Num: 301

Candidate Starts for PuppyEggo\_39:

(Start: 238 @29024 has 3 MA's), (Start: 241 @29021 has 13 MA's), (Start: 301 @28937 has 110 MA's), (Start: 308 @28928 has 5 MA's), (354, 28823), (358, 28814), (375, 28784), (378, 28781), (433, 28661), (435, 28649), (438, 28643), (475, 28538), (484, 28511), (531, 28370), (536, 28364), (537, 28361), (539, 28349), (548, 28322), (549, 28319), (554, 28304), (556, 28298), (559, 28292), (586, 28259), (652, 28130), (676, 28070), (709, 27995), (776, 27755), (779, 27746), (780, 27743), (783, 27725), (794, 27683), (796, 27677), (798, 27668), (805, 27653), (822, 27596), (878, 27437), (885,

27407), (888, 27398), (903, 27338), (906, 27314), (919, 27275), (929, 27242), (932, 27230), (947, 27170),

Gene: PurpleHaze\_48 Start: 31752, Stop: 29938, Start Num: 246

Candidate Starts for PurpleHaze\_48:

(Start: 246 @31752 has 877 MA's), (275, 31713), (280, 31701), (364, 31548), (371, 31533), (400, 31476), (425, 31419), (429, 31410), (444, 31368), (461, 31317), (479, 31266), (539, 31173), (556, 31125), (568, 31101), (585, 31062), (598, 31035), (612, 31005), (654, 30912), (662, 30900), (686, 30852), (697, 30837), (743, 30681), (755, 30630), (766, 30597), (767, 30594), (783, 30528), (793, 30489), (815, 30417), (827, 30378), (834, 30354), (843, 30336), (853, 30303), (888, 30222), (905, 30162), (910, 30144), (930, 30084), (932, 30075), (946, 30027), (950, 30015), (955, 30006),

Gene: QMacho\_45 Start: 30268, Stop: 32142, Start Num: 246

Candidate Starts for QMacho\_45:

(Start: 243 @30265 has 7 MA's), (Start: 246 @30268 has 877 MA's), (287, 30337), (Start: 301 @30358 has 110 MA's), (318, 30382), (400, 30538), (429, 30604), (585, 30940), (646, 31075), (696, 31174), (731, 31297), (743, 31357), (746, 31363), (755, 31408), (764, 31438), (774, 31474), (783, 31510), (813, 31603), (844, 31696), (874, 31774), (902, 31846), (909, 31885), (924, 31927), (929, 31945), (946, 32005), (955, 32026),

Gene: QTRlifeCrisis\_45 Start: 35266, Stop: 33440, Start Num: 246

Candidate Starts for QTRlifeCrisis\_45:

(Start: 246 @35266 has 877 MA's), (368, 35053), (400, 34990), (416, 34960), (422, 34939), (425, 34933), (429, 34924), (470, 34807), (479, 34780), (539, 34687), (544, 34672), (556, 34639), (578, 34588), (580, 34585), (612, 34519), (627, 34489), (639, 34459), (662, 34414), (683, 34375), (743, 34195), (753, 34147), (767, 34108), (783, 34042), (793, 34003), (810, 33982), (814, 33961), (820, 33943), (843, 33877), (902, 33727), (903, 33724), (909, 33688), (917, 33664), (921, 33655), (925, 33643), (946, 33568), (955, 33547),

Gene: Qobbit\_45 Start: 31512, Stop: 29719, Start Num: 246

Candidate Starts for Qobbit\_45:

(Start: 246 @31512 has 877 MA's), (261, 31503), (280, 31461), (346, 31341), (347, 31338), (372, 31290), (402, 31230), (417, 31200), (420, 31188), (425, 31176), (479, 31023), (539, 30930), (598, 30792), (612, 30762), (687, 30603), (697, 30591), (714, 30564), (740, 30456), (743, 30435), (780, 30300), (783, 30282), (814, 30201), (827, 30159), (853, 30084), (886, 30009), (902, 29967), (930, 29865), (946, 29808), (950, 29796), (955, 29787),

Gene: QuadZero\_37 Start: 27017, Stop: 25152, Start Num: 299

Candidate Starts for QuadZero\_37:

(Start: 299 @27017 has 38 MA's), (305, 27011), (348, 26912), (354, 26903), (368, 26879), (375, 26864), (379, 26858), (403, 26807), (406, 26804), (438, 26723), (489, 26573), (493, 26570), (526, 26471), (536, 26444), (537, 26441), (539, 26429), (549, 26399), (556, 26378), (585, 26342), (658, 26195), (726, 26015), (776, 25835), (783, 25805), (797, 25751), (805, 25733), (822, 25676), (831, 25649), (845, 25607), (858, 25568), (885, 25487), (888, 25478), (903, 25418), (906, 25394), (909, 25382), (912, 25373), (919, 25355), (929, 25322), (947, 25250),

Gene: Quartz\_38 Start: 28631, Stop: 26730, Start Num: 299

Candidate Starts for Quartz\_38:

(Start: 299 @28631 has 38 MA's), (358, 28508), (368, 28493), (375, 28478), (395, 28445), (398, 28436), (403, 28421), (420, 28385), (428, 28370), (435, 28343), (438, 28337), (456, 28286), (469, 28247), (489, 28187), (531, 28061), (537, 28052), (539, 28040), (549, 28010), (585, 27953), (658, 27806), (676, 27761), (720, 27650), (764, 27455), (776, 27413), (783, 27383), (794, 27341), (805, 27311), (812, 27290), (822, 27254), (903, 26996), (906, 26972), (917, 26939), (919, 26933), (947,

26828),

Gene: Quasar\_43 Start: 33103, Stop: 30710, Start Num: 36

Candidate Starts for Quasar\_43:

(Start: 36 @33103 has 16 MA's), (47, 33097), (Start: 59 @33049 has 1 MA's), (75, 33007), (84, 32983), (128, 32857), (138, 32833), (179, 32788), (Start: 215 @32737 has 2 MA's), (223, 32722), (Start: 241 @32701 has 13 MA's), (275, 32653), (289, 32620), (295, 32611), (329, 32536), (335, 32524), (374, 32455), (391, 32428), (394, 32422), (398, 32407), (420, 32353), (421, 32350), (430, 32332), (435, 32311), (457, 32251), (499, 32128), (500, 32122), (526, 32053), (539, 32011), (605, 31924), (615, 31900), (633, 31894), (643, 31870), (647, 31861), (654, 31846), (660, 31834), (680, 31792), (682, 31789), (683, 31786), (703, 31750), (733, 31639), (749, 31570), (750, 31564), (760, 31528), (783, 31435), (785, 31426), (792, 31399), (794, 31393), (796, 31387), (797, 31381), (815, 31324), (820, 31309), (822, 31300), (836, 31255), (946, 30877), (947, 30874), (968, 30829), (971, 30820), (995, 30760),

Gene: QueenB2\_44 Start: 31390, Stop: 29603, Start Num: 246

Candidate Starts for QueenB2\_44:

(Start: 246 @31390 has 877 MA's), (366, 31183), (368, 31177), (375, 31162), (383, 31147), (400, 31114), (402, 31111), (416, 31084), (425, 31057), (433, 31036), (479, 30904), (539, 30811), (551, 30775), (556, 30763), (560, 30754), (568, 30739), (598, 30673), (635, 30592), (659, 30544), (662, 30538), (697, 30475), (743, 30319), (755, 30268), (766, 30235), (767, 30232), (783, 30166), (793, 30127), (810, 30106), (831, 30031), (834, 30019), (880, 29905), (888, 29887), (902, 29851), (905, 29827), (930, 29749), (946, 29692), (950, 29680), (955, 29671),

Gene: QueenBeane\_60 Start: 54350, Stop: 52491, Start Num: 205

Candidate Starts for QueenBeane\_60:

(Start: 188 @54374 has 1 MA's), (Start: 205 @54350 has 304 MA's), (Start: 235 @54326 has 6 MA's), (Start: 250 @54320 has 2 MA's), (Start: 274 @54278 has 6 MA's), (283, 54257), (337, 54143), (342, 54137), (360, 54107), (391, 54047), (399, 54026), (421, 53972), (428, 53960), (434, 53942), (436, 53930), (476, 53825), (519, 53768), (538, 53732), (542, 53720), (552, 53693), (570, 53648), (598, 53591), (602, 53582), (603, 53579), (738, 53219), (744, 53186), (750, 53165), (777, 53072), (780, 53063), (795, 53000), (814, 52964), (815, 52961), (820, 52946), (847, 52868), (851, 52856), (858, 52835), (875, 52796), (905, 52706), (910, 52688), (912, 52682), (917, 52667), (926, 52643), (930, 52628), (931, 52625), (933, 52613), (940, 52589), (963, 52541), (972, 52517),

Gene: QueenBeesly\_44 Start: 31266, Stop: 29479, Start Num: 246

Candidate Starts for QueenBeesly\_44:

(102, 31521), (Start: 246 @31266 has 877 MA's), (364, 31062), (366, 31059), (368, 31053), (375, 31038), (383, 31023), (400, 30990), (402, 30987), (416, 30960), (425, 30933), (433, 30912), (444, 30882), (479, 30780), (539, 30687), (556, 30639), (560, 30630), (568, 30615), (598, 30549), (635, 30468), (659, 30420), (662, 30414), (697, 30351), (726, 30276), (743, 30195), (755, 30144), (766, 30111), (767, 30108), (783, 30042), (793, 30003), (810, 29982), (831, 29907), (837, 29889), (853, 29844), (864, 29817), (880, 29781), (886, 29769), (888, 29763), (902, 29727), (905, 29703), (930, 29625), (946, 29568), (950, 29556), (955, 29547),

Gene: QueenPie\_51 Start: 53683, Stop: 51860, Start Num: 197

Candidate Starts for QueenPie\_51:

(Start: 182 @53701 has 4 MA's), (Start: 197 @53683 has 27 MA's), (Start: 250 @53659 has 2 MA's), (267, 53632), (Start: 274 @53617 has 6 MA's), (283, 53596), (329, 53509), (387, 53404), (406, 53362), (434, 53296), (445, 53266), (448, 53257), (453, 53254), (454, 53251), (463, 53224), (519, 53131), (531, 53113), (538, 53095), (542, 53083), (552, 53056), (580, 52993), (589, 52972), (598, 52954), (602, 52945), (603, 52942), (633, 52876), (724, 52651), (725, 52648), (732, 52612), (738, 52588), (744, 52555), (775, 52447), (777, 52441), (780, 52432), (814, 52333), (815, 52330), (820, 52315),

(847, 52237), (851, 52225), (858, 52204), (861, 52195), (875, 52165), (888, 52135), (901, 52108), (905, 52075), (910, 52057), (912, 52051), (926, 52012), (931, 51994), (933, 51982), (940, 51958), (956, 51916), (963, 51910), (972, 51886),

Gene: Quenya\_42 Start: 30106, Stop: 31977, Start Num: 254

Candidate Starts for Quenya\_42:

(213, 30058), (Start: 254 @30106 has 2 MA's), (265, 30124), (287, 30175), (364, 30313), (433, 30454), (434, 30457), (467, 30538), (550, 30697), (566, 30733), (585, 30778), (591, 30793), (627, 30865), (635, 30886), (743, 31192), (755, 31243), (762, 31258), (774, 31309), (777, 31318), (783, 31345), (813, 31438), (844, 31531), (874, 31609), (902, 31681), (905, 31705), (924, 31762), (939, 31816), (946, 31840), (955, 31861),

Gene: Quesadilla\_58 Start: 54997, Stop: 53174, Start Num: 205

Candidate Starts for Quesadilla\_58:

(Start: 205 @54997 has 304 MA's), (267, 54943), (287, 54898), (303, 54889), (318, 54871), (337, 54817), (366, 54778), (411, 54679), (428, 54640), (435, 54616), (462, 54547), (476, 54508), (519, 54451), (538, 54415), (542, 54403), (551, 54379), (552, 54376), (556, 54367), (603, 54256), (611, 54238), (615, 54226), (633, 54190), (721, 53977), (724, 53965), (725, 53962), (727, 53944), (732, 53926), (738, 53902), (739, 53896), (744, 53869), (777, 53755), (780, 53746), (814, 53647), (815, 53644), (820, 53629), (847, 53551), (851, 53539), (858, 53518), (865, 53500), (879, 53470), (898, 53434), (905, 53389), (910, 53371), (912, 53365), (926, 53326), (929, 53314), (930, 53311), (940, 53272), (963, 53224), (972, 53200),

Gene: QuinnKiro\_43 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for QuinnKiro\_43:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: Quisquilliae\_61 Start: 54311, Stop: 52452, Start Num: 205

Candidate Starts for Quisquilliae\_61:

(Start: 188 @54335 has 1 MA's), (Start: 205 @54311 has 304 MA's), (Start: 235 @54287 has 6 MA's), (Start: 250 @54281 has 2 MA's), (Start: 274 @54239 has 6 MA's), (283, 54218), (337, 54104), (342, 54098), (360, 54068), (391, 54008), (399, 53987), (421, 53933), (428, 53921), (434, 53903), (436, 53891), (476, 53786), (519, 53729), (538, 53693), (542, 53681), (551, 53657), (556, 53645), (564, 53627), (570, 53609), (580, 53591), (598, 53552), (602, 53543), (603, 53540), (604, 53537), (738, 53180), (744, 53147), (777, 53033), (780, 53024), (795, 52961), (814, 52925), (815, 52922), (820, 52907), (847, 52829), (851, 52817), (858, 52796), (875, 52757), (905, 52667), (910, 52649), (912, 52643), (917, 52628), (926, 52604), (930, 52589), (931, 52586), (933, 52574), (940, 52550), (963, 52502), (972, 52478),

Gene: Quokka\_43 Start: 30374, Stop: 28545, Start Num: 245

Candidate Starts for Quokka\_43:

(Start: 245 @30374 has 74 MA's), (364, 30170), (366, 30167), (368, 30161), (375, 30146), (383, 30131), (399, 30101), (400, 30098), (416, 30068), (425, 30041), (433, 30020), (444, 29990), (479, 29888), (539, 29795), (556, 29747), (560, 29738), (568, 29723), (598, 29657), (635, 29576), (659, 29528), (683, 29483), (743, 29303), (753, 29255), (755, 29252), (767, 29216), (783, 29150), (793, 29111), (810, 29090), (831, 29015), (837, 28997), (853, 28952), (864, 28925), (880, 28889), (888, 28871), (902, 28835), (905, 28811), (930, 28733), (946, 28676), (950, 28664), (955, 28655), (978, 28607), (994, 28577), (1001, 28559), (1003, 28556),



Gene: Qyrzula\_52 Start: 52584, Stop: 50782, Start Num: 250

Candidate Starts for Qyrzula\_52:

(Start: 205 @52611 has 304 MA's), (Start: 250 @52584 has 2 MA's), (269, 52554), (Start: 274 @52542 has 6 MA's), (286, 52515), (287, 52512), (293, 52503), (318, 52485), (366, 52389), (391, 52338), (400, 52314), (463, 52152), (472, 52128), (476, 52116), (519, 52059), (538, 52023), (542, 52011), (551, 51987), (586, 51909), (588, 51903), (592, 51894), (602, 51873), (603, 51870), (615, 51840), (680, 51696), (707, 51630), (721, 51591), (724, 51579), (727, 51558), (732, 51540), (744, 51483), (763, 51426), (771, 51399), (777, 51369), (780, 51360), (795, 51294), (812, 51267), (814, 51258), (820, 51240), (827, 51216), (847, 51162), (851, 51150), (858, 51129), (888, 51060), (905, 51000), (910, 50982), (922, 50949), (926, 50937), (930, 50922), (931, 50919), (933, 50907), (940, 50883), (941, 50880), (963, 50832), (965, 50829), (972, 50808), (979, 50787),

Gene: RER2\_29 Start: 24985, Stop: 23201, Start Num: 246

Candidate Starts for RER2\_29:

(Start: 246 @24985 has 877 MA's), (379, 24751), (395, 24721), (399, 24712), (400, 24709), (420, 24664), (425, 24652), (429, 24643), (444, 24601), (479, 24499), (496, 24478), (539, 24406), (554, 24361), (556, 24358), (574, 24316), (577, 24310), (585, 24295), (598, 24268), (646, 24163), (662, 24136), (683, 24097), (743, 23917), (753, 23869), (783, 23764), (784, 23761), (810, 23704), (814, 23683), (829, 23635), (855, 23560), (886, 23491), (902, 23449), (905, 23425), (930, 23347), (946, 23290), (950, 23278), (978, 23221),

Gene: RGL3\_31 Start: 25970, Stop: 24174, Start Num: 246

Candidate Starts for RGL3\_31:

(Start: 246 @25970 has 877 MA's), (364, 25766), (368, 25757), (383, 25727), (395, 25706), (422, 25643), (429, 25628), (433, 25616), (471, 25508), (479, 25484), (482, 25475), (519, 25433), (521, 25430), (539, 25391), (554, 25346), (556, 25343), (585, 25280), (594, 25259), (598, 25253), (646, 25148), (662, 25121), (683, 25082), (686, 25073), (698, 25055), (716, 25013), (743, 24890), (753, 24842), (783, 24737), (814, 24656), (818, 24644), (886, 24464), (888, 24458), (902, 24422), (903, 24419), (905, 24398), (946, 24263), (950, 24251), (955, 24242), (969, 24212), (978, 24194),

Gene: Raccoon\_38 Start: 29022, Stop: 27157, Start Num: 301

Candidate Starts for Raccoon\_38:

(Start: 301 @29022 has 110 MA's), (Start: 308 @29013 has 5 MA's), (432, 28749), (435, 28734), (438, 28728), (484, 28596), (501, 28542), (531, 28455), (537, 28446), (539, 28434), (548, 28407), (549, 28404), (554, 28389), (556, 28383), (718, 28053), (776, 27840), (779, 27831), (780, 27828), (783, 27810), (794, 27768), (798, 27753), (822, 27681), (831, 27654), (878, 27522), (885, 27492), (903, 27423), (906, 27399), (919, 27360), (932, 27315),

Gene: Racecar\_100 Start: 78450, Stop: 80246, Start Num: 262

Candidate Starts for Racecar\_100:

(Start: 262 @78450 has 4 MA's), (318, 78546), (428, 78762), (435, 78789), (438, 78795), (470, 78864), (482, 78900), (571, 79047), (573, 79053), (585, 79074), (591, 79089), (683, 79278), (706, 79323), (719, 79356), (723, 79374), (730, 79407), (740, 79446), (743, 79467), (746, 79473), (774, 79587), (792, 79671), (794, 79677), (797, 79689), (813, 79737), (816, 79749), (827, 79785), (840, 79818), (843, 79827), (858, 79872), (865, 79890), (898, 79974), (902, 79995), (906, 80022), (910, 80037), (922, 80070), (929, 80094), (934, 80118), (946, 80154), (961, 80181),

Gene: Rachaly\_45 Start: 31989, Stop: 30202, Start Num: 246

Candidate Starts for Rachaly\_45:

(Start: 246 @31989 has 877 MA's), (366, 31782), (368, 31776), (383, 31746), (400, 31713), (402, 31710), (420, 31668), (425, 31656), (479, 31503), (539, 31410), (556, 31362), (560, 31353), (568, 31338), (598, 31272), (659, 31143), (726, 30999), (743, 30918), (755, 30867), (766, 30834), (767,

30831), (783, 30765), (793, 30726), (810, 30705), (831, 30630), (834, 30618), (864, 30540), (880, 30504), (888, 30486), (902, 30450), (905, 30426), (930, 30348), (946, 30291), (950, 30279), (955, 30270),

Gene: RagingRooster\_57 Start: 53332, Stop: 51515, Start Num: 247

Candidate Starts for RagingRooster\_57:

(130, 53515), (Start: 247 @53332 has 43 MA's), (267, 53302), (368, 53122), (433, 52969), (435, 52957), (448, 52927), (454, 52921), (476, 52858), (478, 52852), (519, 52801), (537, 52774), (538, 52765), (556, 52717), (603, 52612), (645, 52516), (674, 52465), (724, 52321), (732, 52282), (739, 52252), (744, 52225), (748, 52213), (775, 52117), (777, 52111), (780, 52102), (782, 52090), (807, 52018), (814, 51988), (820, 51970), (822, 51961), (847, 51892), (851, 51880), (858, 51859), (888, 51790), (898, 51775), (903, 51751), (905, 51730), (910, 51712), (912, 51706), (924, 51673), (926, 51667), (931, 51649), (933, 51637), (936, 51625), (940, 51613), (956, 51571), (972, 51541),

Gene: Rahalelujah\_44 Start: 30731, Stop: 28938, Start Num: 246

Candidate Starts for Rahalelujah\_44:

(Start: 246 @30731 has 877 MA's), (261, 30722), (280, 30680), (325, 30593), (364, 30527), (368, 30518), (372, 30509), (380, 30491), (402, 30449), (416, 30422), (420, 30407), (425, 30395), (444, 30344), (479, 30242), (536, 30164), (539, 30149), (560, 30092), (612, 29981), (655, 29885), (687, 29822), (714, 29783), (716, 29777), (743, 29654), (771, 29558), (776, 29531), (783, 29501), (793, 29462), (814, 29420), (853, 29303), (886, 29228), (902, 29186), (930, 29084), (946, 29027), (950, 29015), (955, 29006),

Gene: Raid\_45 Start: 34729, Stop: 32903, Start Num: 246

Candidate Starts for Raid\_45:

(Start: 246 @34729 has 877 MA's), (368, 34516), (400, 34453), (416, 34423), (422, 34402), (425, 34396), (429, 34387), (435, 34363), (470, 34270), (479, 34243), (539, 34150), (544, 34135), (578, 34051), (580, 34048), (612, 33982), (627, 33952), (639, 33922), (662, 33877), (683, 33838), (743, 33658), (753, 33610), (767, 33571), (783, 33505), (793, 33466), (810, 33445), (814, 33424), (820, 33406), (843, 33340), (902, 33190), (903, 33187), (909, 33151), (917, 33127), (921, 33118), (925, 33106), (946, 33031), (955, 33010),

Gene: Rajelicia\_46 Start: 35200, Stop: 33413, Start Num: 246

Candidate Starts for Rajelicia\_46:

(Start: 246 @35200 has 877 MA's), (368, 34987), (374, 34972), (416, 34894), (422, 34873), (425, 34867), (429, 34858), (470, 34741), (479, 34714), (539, 34621), (544, 34606), (578, 34522), (580, 34519), (612, 34453), (627, 34423), (639, 34393), (662, 34348), (683, 34309), (743, 34129), (753, 34081), (767, 34042), (783, 33976), (812, 33904), (814, 33895), (843, 33811), (876, 33724), (917, 33598), (922, 33586), (946, 33502), (948, 33496),

Gene: RanchParmCat\_48 Start: 34005, Stop: 31612, Start Num: 45

Candidate Starts for RanchParmCat\_48:

(16, 34134), (19, 34125), (Start: 45 @34005 has 24 MA's), (Start: 64 @33939 has 1 MA's), (89, 33873), (107, 33816), (128, 33777), (138, 33753), (145, 33732), (223, 33642), (265, 33594), (273, 33579), (295, 33531), (312, 33501), (332, 33450), (335, 33444), (338, 33438), (374, 33366), (389, 33342), (398, 33318), (430, 33243), (435, 33222), (457, 33162), (473, 33117), (488, 33069), (524, 32961), (526, 32955), (558, 32874), (605, 32826), (649, 32766), (682, 32694), (703, 32652), (707, 32640), (741, 32499), (747, 32475), (749, 32466), (760, 32424), (783, 32331), (792, 32295), (794, 32289), (797, 32277), (805, 32253), (815, 32220), (822, 32196), (828, 32178), (859, 32085), (891, 31989), (893, 31977), (894, 31974), (903, 31938), (905, 31917), (915, 31884), (922, 31866), (939, 31797), (947, 31770), (958, 31746), (1004, 31638), (1009, 31626),

Gene: Rapheph\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Rapheph\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (652, 28123), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: Raptor\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for Raptor\_39:

(Start: 238 @29021 has 3 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (433, 28658), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (536, 28361), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (652, 28127), (676, 28067), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Rasputia\_89 Start: 56570, Stop: 58606, Start Num: 216

Candidate Starts for Rasputia\_89:

(Start: 216 @56570 has 4 MA's), (223, 56582), (264, 56627), (282, 56669), (Start: 308 @56711 has 5 MA's), (389, 56894), (391, 56897), (396, 56909), (408, 56948), (412, 56954), (457, 57086), (467, 57116), (504, 57230), (540, 57323), (549, 57350), (601, 57416), (619, 57458), (624, 57473), (641, 57512), (646, 57524), (650, 57530), (656, 57545), (679, 57611), (752, 57812), (783, 57926), (822, 58061), (847, 58136), (858, 58169), (884, 58241), (894, 58283), (901, 58307), (903, 58319), (906, 58343), (908, 58349), (912, 58364), (921, 58394), (927, 58412), (933, 58439), (934, 58445), (941, 58472), (947, 58493), (954, 58511), (960, 58523), (968, 58541), (990, 58601),

Gene: Rasputin\_36 Start: 28083, Stop: 26299, Start Num: 246

Candidate Starts for Rasputin\_36:

(Start: 246 @28083 has 877 MA's), (379, 27849), (395, 27819), (399, 27810), (400, 27807), (420, 27762), (425, 27750), (444, 27699), (479, 27597), (496, 27576), (539, 27504), (554, 27459), (556, 27456), (574, 27414), (577, 27408), (585, 27393), (598, 27366), (646, 27261), (652, 27252), (662, 27234), (683, 27195), (716, 27138), (743, 27015), (753, 26967), (783, 26862), (784, 26859), (810, 26802), (814, 26781), (829, 26733), (855, 26658), (886, 26589), (902, 26547), (905, 26523), (930, 26445), (946, 26388), (950, 26376), (955, 26367), (969, 26337), (978, 26319),

Gene: RawrgerThat\_54 Start: 54025, Stop: 52202, Start Num: 197

Candidate Starts for RawrgerThat\_54:

(Start: 182 @54043 has 4 MA's), (Start: 197 @54025 has 27 MA's), (Start: 250 @54001 has 2 MA's), (267, 53974), (Start: 274 @53959 has 6 MA's), (283, 53938), (329, 53851), (387, 53746), (399, 53719), (406, 53704), (434, 53638), (445, 53608), (448, 53599), (453, 53596), (454, 53593), (463, 53566), (476, 53530), (519, 53473), (531, 53455), (538, 53437), (542, 53425), (552, 53398), (580, 53335), (598, 53296), (602, 53287), (603, 53284), (615, 53254), (633, 53218), (724, 52993), (725, 52990), (732, 52954), (744, 52897), (775, 52789), (777, 52783), (780, 52774), (814, 52675), (815, 52672), (820, 52657), (847, 52579), (851, 52567), (858, 52546), (861, 52537), (875, 52507), (888, 52477), (901, 52450), (905, 52417), (912, 52393), (926, 52354), (931, 52336), (933, 52324), (940, 52300), (956, 52258), (963, 52252), (972, 52228),

Gene: ReMo\_46 Start: 29740, Stop: 27950, Start Num: 246

Candidate Starts for ReMo\_46:

(Start: 246 @29740 has 877 MA's), (347, 29566), (400, 29461), (402, 29458), (416, 29431), (425, 29404), (444, 29353), (479, 29251), (539, 29158), (554, 29113), (556, 29110), (560, 29101), (635, 28939), (646, 28912), (659, 28891), (662, 28885), (717, 28786), (726, 28747), (738, 28696), (743, 28666), (755, 28615), (766, 28582), (774, 28549), (776, 28543), (783, 28513), (810, 28453), (814, 28432), (827, 28390), (835, 28363), (843, 28348), (876, 28261), (902, 28198), (903, 28195), (946, 28039), (950, 28027), (957, 28015),

Gene: Reba\_48 Start: 31412, Stop: 29598, Start Num: 246

Candidate Starts for Reba\_48:

(Start: 246 @31412 has 877 MA's), (275, 31373), (280, 31361), (364, 31208), (371, 31193), (400, 31136), (425, 31079), (429, 31070), (444, 31028), (461, 30977), (479, 30926), (539, 30833), (556, 30785), (568, 30761), (585, 30722), (598, 30695), (612, 30665), (654, 30572), (662, 30560), (686, 30512), (697, 30497), (743, 30341), (755, 30290), (766, 30257), (767, 30254), (783, 30188), (793, 30149), (815, 30077), (827, 30038), (834, 30014), (843, 29996), (853, 29963), (888, 29882), (905, 29822), (910, 29804), (930, 29744), (932, 29735), (946, 29687), (950, 29675), (955, 29666),

Gene: Rebeuca\_44 Start: 31493, Stop: 29658, Start Num: 246

Candidate Starts for Rebeuca\_44:

(Start: 246 @31493 has 877 MA's), (280, 31442), (319, 31376), (364, 31289), (374, 31265), (395, 31229), (400, 31217), (425, 31160), (429, 31151), (479, 31007), (513, 30965), (539, 30914), (558, 30866), (585, 30806), (645, 30677), (646, 30674), (659, 30653), (662, 30647), (716, 30539), (743, 30416), (753, 30368), (776, 30293), (783, 30263), (793, 30224), (814, 30155), (815, 30152), (827, 30113), (834, 30089), (837, 30083), (843, 30071), (905, 29882), (912, 29858), (932, 29795), (946, 29747), (950, 29735), (955, 29726),

Gene: RedBaron\_45 Start: 32770, Stop: 30377, Start Num: 36

Candidate Starts for RedBaron\_45:

(Start: 36 @32770 has 16 MA's), (47, 32764), (Start: 59 @32716 has 1 MA's), (75, 32674), (84, 32650), (128, 32524), (138, 32500), (179, 32455), (Start: 215 @32404 has 2 MA's), (223, 32389), (Start: 241 @32368 has 13 MA's), (275, 32320), (295, 32278), (329, 32203), (335, 32191), (374, 32122), (394, 32089), (398, 32074), (420, 32020), (421, 32017), (430, 31999), (435, 31978), (457, 31918), (499, 31795), (500, 31789), (526, 31720), (539, 31678), (605, 31591), (615, 31567), (633, 31561), (643, 31537), (647, 31528), (654, 31513), (660, 31501), (680, 31459), (682, 31456), (683, 31453), (733, 31306), (749, 31237), (750, 31231), (760, 31195), (783, 31102), (785, 31093), (792, 31066), (794, 31060), (796, 31054), (797, 31048), (815, 30991), (822, 30967), (836, 30922), (946, 30544), (947, 30541), (968, 30496), (971, 30487), (995, 30427),

Gene: RedMaple\_62 Start: 54786, Stop: 52927, Start Num: 205

Candidate Starts for RedMaple\_62:

(Start: 188 @54810 has 1 MA's), (Start: 205 @54786 has 304 MA's), (Start: 235 @54762 has 6 MA's), (Start: 250 @54756 has 2 MA's), (Start: 274 @54714 has 6 MA's), (283, 54693), (337, 54579), (342, 54573), (360, 54543), (391, 54483), (399, 54462), (421, 54408), (428, 54396), (434, 54378), (436, 54366), (476, 54261), (519, 54204), (538, 54168), (542, 54156), (551, 54132), (556, 54120), (564, 54102), (570, 54084), (580, 54066), (598, 54027), (602, 54018), (603, 54015), (604, 54012), (738, 53655), (744, 53622), (750, 53601), (777, 53508), (780, 53499), (795, 53436), (814, 53400), (815, 53397), (820, 53382), (847, 53304), (851, 53292), (858, 53271), (875, 53232), (905, 53142), (910, 53124), (912, 53118), (917, 53103), (926, 53079), (930, 53064), (931, 53061), (933, 53049), (940, 53025), (963, 52977), (972, 52953),

Gene: RedRock\_46 Start: 32469, Stop: 30682, Start Num: 246

Candidate Starts for RedRock\_46:

(Start: 246 @32469 has 877 MA's), (364, 32265), (366, 32262), (375, 32241), (383, 32226), (400, 32193), (416, 32163), (425, 32136), (433, 32115), (479, 31983), (539, 31890), (556, 31842), (560,

31833), (568, 31818), (598, 31752), (635, 31671), (659, 31623), (698, 31551), (726, 31479), (743, 31398), (755, 31347), (766, 31314), (767, 31311), (783, 31245), (793, 31206), (810, 31185), (814, 31164), (888, 30966), (902, 30930), (903, 30927), (905, 30906), (924, 30849), (930, 30828), (946, 30771), (950, 30759), (955, 30750),

Gene: Redfield\_38 Start: 29054, Stop: 27189, Start Num: 301

Candidate Starts for Redfield\_38:

(Start: 301 @29054 has 110 MA's), (Start: 308 @29045 has 5 MA's), (432, 28781), (435, 28766), (438, 28760), (484, 28628), (501, 28574), (531, 28487), (537, 28478), (539, 28466), (548, 28439), (549, 28436), (554, 28421), (556, 28415), (718, 28085), (776, 27872), (779, 27863), (780, 27860), (783, 27842), (794, 27800), (807, 27770), (822, 27713), (878, 27554), (885, 27524), (903, 27455), (906, 27431), (908, 27425), (919, 27392), (929, 27359), (932, 27347),

Gene: Reedo\_40 Start: 27887, Stop: 29797, Start Num: 245

Candidate Starts for Reedo\_40:

(98, 27626), (142, 27752), (Start: 245 @27887 has 74 MA's), (279, 27935), (347, 28061), (364, 28091), (416, 28184), (422, 28205), (448, 28274), (541, 28526), (544, 28535), (585, 28634), (591, 28649), (659, 28787), (717, 28925), (726, 28964), (743, 29045), (767, 29132), (776, 29168), (781, 29189), (783, 29198), (834, 29363), (840, 29372), (946, 29693), (949, 29702),

Gene: Refuge\_44 Start: 32644, Stop: 30800, Start Num: 246

Candidate Starts for Refuge\_44:

(Start: 246 @32644 has 877 MA's), (Start: 274 @32608 has 6 MA's), (279, 32596), (280, 32593), (318, 32533), (319, 32527), (347, 32470), (368, 32431), (400, 32365), (402, 32362), (425, 32308), (433, 32287), (475, 32167), (479, 32155), (539, 32062), (556, 32014), (560, 32005), (568, 31990), (598, 31924), (620, 31876), (652, 31807), (697, 31726), (715, 31684), (726, 31639), (732, 31612), (743, 31558), (755, 31507), (767, 31471), (783, 31405), (793, 31366), (810, 31345), (814, 31324), (880, 31144), (902, 31090), (903, 31087), (905, 31066), (924, 31009), (930, 30988), (946, 30931), (950, 30919), (978, 30862),

Gene: ReginaGlobina\_98 Start: 78225, Stop: 79943, Start Num: 301

Candidate Starts for ReginaGlobina\_98:

(Start: 262 @78150 has 4 MA's), (287, 78204), (292, 78213), (Start: 301 @78225 has 110 MA's), (418, 78444), (428, 78462), (435, 78489), (438, 78495), (482, 78600), (571, 78747), (585, 78774), (591, 78789), (617, 78843), (716, 79044), (723, 79071), (730, 79104), (740, 79143), (743, 79164), (746, 79170), (774, 79287), (792, 79371), (793, 79374), (813, 79437), (816, 79449), (827, 79485), (840, 79518), (858, 79572), (865, 79590), (902, 79695), (906, 79722), (910, 79737), (922, 79770), (924, 79776), (929, 79794), (932, 79806), (934, 79818), (935, 79821), (946, 79854), (974, 79905),

Gene: Relief\_44 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Relief\_44:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Remus\_47 Start: 29659, Stop: 27869, Start Num: 246

Candidate Starts for Remus\_47:

(Start: 246 @29659 has 877 MA's), (347, 29485), (400, 29380), (402, 29377), (416, 29350), (425, 29323), (444, 29272), (479, 29170), (539, 29077), (554, 29032), (556, 29029), (560, 29020), (635, 28858), (646, 28831), (659, 28810), (662, 28804), (717, 28705), (726, 28666), (738, 28615), (743, 28585), (755, 28534), (766, 28501), (776, 28462), (783, 28432), (810, 28372), (814, 28351), (827,

28309), (835, 28282), (876, 28180), (902, 28117), (903, 28114), (946, 27958), (950, 27946), (957, 27934),

Gene: RemusLoopin\_36 Start: 28123, Stop: 30075, Start Num: 246

Candidate Starts for RemusLoopin\_36:

(Start: 246 @28123 has 877 MA's), (267, 28144), (295, 28204), (364, 28333), (394, 28390), (416, 28435), (417, 28438), (481, 28621), (527, 28672), (541, 28711), (563, 28768), (568, 28783), (578, 28810), (584, 28819), (585, 28822), (586, 28825), (592, 28840), (610, 28873), (646, 28954), (659, 28975), (664, 28987), (712, 29119), (743, 29254), (753, 29302), (767, 29341), (769, 29344), (774, 29371), (781, 29398), (783, 29407), (791, 29437), (797, 29461), (820, 29524), (878, 29680), (898, 29722), (901, 29734), (905, 29767), (909, 29782), (912, 29791), (922, 29818), (946, 29902), (950, 29914), (981, 29977),

Gene: RenegadeRaider\_39 Start: 28571, Stop: 26721, Start Num: 297

Candidate Starts for RenegadeRaider\_39:

(Start: 297 @28571 has 18 MA's), (358, 28448), (378, 28415), (430, 28304), (435, 28283), (438, 28277), (441, 28268), (456, 28226), (512, 28070), (531, 28016), (536, 28010), (537, 28007), (539, 27995), (549, 27965), (585, 27908), (685, 27692), (718, 27614), (776, 27404), (780, 27392), (783, 27374), (794, 27332), (822, 27245), (885, 27056), (888, 27047), (903, 26987), (906, 26963), (912, 26942), (917, 26930), (947, 26819),

Gene: Renzie\_39 Start: 28913, Stop: 27057, Start Num: 308

Candidate Starts for Renzie\_39:

(Start: 238 @29009 has 3 MA's), (Start: 301 @28922 has 110 MA's), (Start: 308 @28913 has 5 MA's), (354, 28808), (358, 28799), (375, 28769), (378, 28766), (433, 28646), (435, 28634), (438, 28628), (475, 28523), (484, 28496), (531, 28355), (536, 28349), (537, 28346), (539, 28334), (548, 28307), (549, 28304), (554, 28289), (556, 28283), (559, 28277), (586, 28244), (652, 28115), (676, 28055), (776, 27740), (779, 27731), (780, 27728), (783, 27710), (794, 27668), (796, 27662), (805, 27638), (822, 27581), (878, 27422), (885, 27392), (888, 27383), (903, 27323), (906, 27299), (919, 27260), (929, 27227), (932, 27215), (947, 27155),

Gene: Reprobate\_57 Start: 54575, Stop: 52746, Start Num: 197

Candidate Starts for Reprobate\_57:

(Start: 197 @54575 has 27 MA's), (Start: 230 @54554 has 1 MA's), (Start: 250 @54545 has 2 MA's), (267, 54518), (Start: 274 @54503 has 6 MA's), (318, 54446), (399, 54278), (433, 54200), (436, 54185), (445, 54167), (453, 54155), (466, 54119), (476, 54089), (538, 53996), (542, 53984), (543, 53981), (551, 53960), (552, 53957), (556, 53948), (564, 53930), (592, 53867), (603, 53843), (652, 53738), (703, 53615), (712, 53591), (721, 53564), (724, 53552), (725, 53549), (727, 53531), (732, 53513), (739, 53483), (744, 53456), (759, 53405), (777, 53342), (780, 53333), (807, 53249), (815, 53216), (820, 53201), (841, 53141), (847, 53123), (851, 53111), (858, 53090), (861, 53081), (863, 53078), (905, 52961), (910, 52943), (912, 52937), (926, 52898), (929, 52886), (930, 52883), (933, 52868), (936, 52856), (940, 52844), (956, 52802), (965, 52793), (972, 52772), (979, 52751),

Gene: ResDef\_44 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for ResDef\_44:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: Retro23\_45 Start: 31674, Stop: 29887, Start Num: 246

Candidate Starts for Retro23\_45:

(Start: 246 @31674 has 877 MA's), (364, 31470), (366, 31467), (368, 31461), (375, 31446), (383, 31431), (400, 31398), (402, 31395), (416, 31368), (425, 31341), (433, 31320), (479, 31188), (539, 31095), (551, 31059), (556, 31047), (560, 31038), (568, 31023), (598, 30957), (635, 30876), (659, 30828), (662, 30822), (697, 30759), (743, 30603), (755, 30552), (766, 30519), (767, 30516), (783, 30450), (793, 30411), (810, 30390), (831, 30315), (834, 30303), (880, 30189), (888, 30171), (902, 30135), (905, 30111), (930, 30033), (946, 29976), (950, 29964), (955, 29955),

Gene: RexFury\_36 Start: 28144, Stop: 26360, Start Num: 246

Candidate Starts for RexFury\_36:

(Start: 246 @28144 has 877 MA's), (379, 27910), (395, 27880), (399, 27871), (400, 27868), (420, 27823), (425, 27811), (444, 27760), (479, 27658), (496, 27637), (539, 27565), (554, 27520), (556, 27517), (574, 27475), (577, 27469), (585, 27454), (598, 27427), (646, 27322), (652, 27313), (662, 27295), (663, 27292), (683, 27256), (716, 27199), (743, 27076), (753, 27028), (783, 26923), (784, 26920), (810, 26863), (814, 26842), (815, 26839), (829, 26794), (855, 26719), (886, 26650), (902, 26608), (905, 26584), (930, 26506), (946, 26449), (950, 26437), (955, 26428), (969, 26398), (978, 26380),

Gene: Rhinoforte\_57 Start: 52610, Stop: 50781, Start Num: 205

Candidate Starts for Rhinoforte\_57:

(Start: 205 @52610 has 304 MA's), (Start: 250 @52583 has 2 MA's), (269, 52553), (Start: 274 @52541 has 6 MA's), (286, 52514), (287, 52511), (293, 52502), (318, 52484), (366, 52388), (391, 52337), (400, 52313), (411, 52289), (463, 52151), (472, 52127), (476, 52115), (519, 52058), (538, 52022), (542, 52010), (551, 51986), (588, 51902), (602, 51872), (603, 51869), (615, 51839), (680, 51695), (707, 51629), (721, 51590), (724, 51578), (727, 51557), (732, 51539), (744, 51482), (763, 51425), (771, 51398), (777, 51368), (780, 51359), (795, 51293), (812, 51266), (814, 51257), (820, 51239), (827, 51215), (847, 51161), (851, 51149), (858, 51128), (888, 51059), (905, 50999), (910, 50981), (922, 50948), (926, 50936), (930, 50921), (931, 50918), (933, 50906), (940, 50882), (941, 50879), (963, 50831), (965, 50828), (972, 50807), (979, 50786),

Gene: Rhodalysa\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for Rhodalysa\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (663, 27261), (683, 27225), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930, 26475), (946, 26418), (950, 26406), (955, 26397), (969, 26367), (978, 26349),

Gene: RhynO\_45 Start: 31292, Stop: 29457, Start Num: 246

Candidate Starts for RhynO\_45:

(Start: 246 @31292 has 877 MA's), (280, 31241), (319, 31175), (364, 31088), (374, 31064), (395, 31028), (400, 31016), (425, 30959), (429, 30950), (458, 30866), (471, 30830), (475, 30818), (479, 30806), (539, 30713), (558, 30665), (585, 30605), (645, 30476), (646, 30473), (659, 30452), (662, 30446), (716, 30338), (743, 30215), (753, 30167), (776, 30092), (783, 30062), (793, 30023), (814, 29954), (815, 29951), (827, 29912), (834, 29888), (837, 29882), (843, 29870), (883, 29762), (905, 29681), (912, 29657), (932, 29594), (946, 29546), (950, 29534), (955, 29525),

Gene: Rhynn\_44 Start: 34513, Stop: 32687, Start Num: 246

Candidate Starts for Rhynn\_44:

(Start: 246 @34513 has 877 MA's), (368, 34300), (400, 34237), (416, 34207), (422, 34186), (425, 34180), (429, 34171), (470, 34054), (479, 34027), (539, 33934), (544, 33919), (556, 33886), (578, 33835), (580, 33832), (612, 33766), (627, 33736), (639, 33706), (662, 33661), (683, 33622), (743,

33442), (753, 33394), (767, 33355), (783, 33289), (793, 33250), (810, 33229), (814, 33208), (820, 33190), (843, 33124), (902, 32974), (903, 32971), (909, 32935), (917, 32911), (921, 32902), (925, 32890), (946, 32815), (955, 32794),

Gene: Rich\_58 Start: 55836, Stop: 53983, Start Num: 197

Candidate Starts for Rich\_58:

(112, 55995), (143, 55914), (Start: 197 @55836 has 27 MA's), (Start: 230 @55791 has 1 MA's), (267, 55755), (304, 55695), (367, 55584), (434, 55434), (453, 55392), (466, 55356), (476, 55326), (538, 55233), (542, 55221), (551, 55197), (556, 55185), (564, 55167), (592, 55104), (603, 55080), (652, 54975), (725, 54786), (727, 54768), (739, 54720), (744, 54693), (750, 54672), (775, 54585), (777, 54579), (780, 54570), (784, 54549), (807, 54486), (815, 54453), (820, 54438), (841, 54378), (847, 54360), (851, 54348), (858, 54327), (861, 54318), (863, 54315), (905, 54198), (912, 54174), (926, 54135), (930, 54120), (931, 54117), (940, 54081), (941, 54078), (972, 54009),

Gene: Ricotta\_60 Start: 54043, Stop: 52184, Start Num: 205

Candidate Starts for Ricotta\_60:

(Start: 188 @54067 has 1 MA's), (Start: 205 @54043 has 304 MA's), (Start: 235 @54019 has 6 MA's), (Start: 250 @54013 has 2 MA's), (Start: 274 @53971 has 6 MA's), (283, 53950), (337, 53836), (342, 53830), (360, 53800), (391, 53740), (399, 53719), (421, 53665), (428, 53653), (434, 53635), (436, 53623), (476, 53518), (519, 53461), (538, 53425), (542, 53413), (551, 53389), (556, 53377), (564, 53359), (570, 53341), (580, 53323), (598, 53284), (602, 53275), (603, 53272), (604, 53269), (712, 53014), (738, 52912), (744, 52879), (750, 52858), (777, 52765), (780, 52756), (795, 52693), (814, 52657), (815, 52654), (820, 52639), (847, 52561), (851, 52549), (858, 52528), (875, 52489), (905, 52399), (910, 52381), (912, 52375), (917, 52360), (926, 52336), (930, 52321), (931, 52318), (933, 52306), (940, 52282), (963, 52234), (972, 52210),

Gene: RidgeCB\_44 Start: 34287, Stop: 32458, Start Num: 246

Candidate Starts for RidgeCB\_44:

(Start: 246 @34287 has 877 MA's), (368, 34074), (400, 34011), (416, 33981), (422, 33960), (425, 33954), (470, 33828), (479, 33801), (539, 33708), (544, 33693), (578, 33609), (580, 33606), (612, 33540), (627, 33510), (639, 33480), (662, 33435), (683, 33396), (743, 33216), (753, 33168), (771, 33120), (780, 33081), (783, 33063), (793, 33024), (810, 33003), (814, 32982), (819, 32967), (861, 32844), (922, 32673), (929, 32649), (943, 32601), (946, 32589), (955, 32568), (959, 32562), (981, 32514), (986, 32499),

Gene: Rifter\_47 Start: 29753, Stop: 27954, Start Num: 246

Candidate Starts for Rifter\_47:

(Start: 246 @29753 has 877 MA's), (364, 29549), (368, 29540), (400, 29474), (402, 29471), (416, 29444), (420, 29429), (425, 29417), (444, 29366), (475, 29276), (479, 29264), (539, 29171), (556, 29123), (560, 29114), (644, 28931), (721, 28781), (743, 28676), (755, 28619), (767, 28583), (771, 28574), (776, 28547), (783, 28517), (793, 28478), (810, 28457), (818, 28424), (820, 28418), (853, 28319), (880, 28256), (902, 28202), (905, 28178), (924, 28121), (946, 28043), (950, 28031), (955, 28022), (957, 28019),

Gene: Riggan\_61 Start: 54343, Stop: 52484, Start Num: 205

Candidate Starts for Riggan\_61:

(Start: 188 @54367 has 1 MA's), (Start: 205 @54343 has 304 MA's), (Start: 235 @54319 has 6 MA's), (Start: 250 @54313 has 2 MA's), (Start: 274 @54271 has 6 MA's), (283, 54250), (337, 54136), (342, 54130), (360, 54100), (391, 54040), (399, 54019), (421, 53965), (428, 53953), (434, 53935), (436, 53923), (476, 53818), (519, 53761), (538, 53725), (542, 53713), (552, 53686), (564, 53659), (570, 53641), (580, 53623), (598, 53584), (602, 53575), (603, 53572), (712, 53314), (738, 53212), (744, 53179), (750, 53158), (777, 53065), (780, 53056), (795, 52993), (814, 52957), (815, 52954), (820, 52939), (847, 52861), (851, 52849), (858, 52828), (875, 52789), (905, 52699), (910, 52681), (912,



52675), (917, 52660), (926, 52636), (930, 52621), (931, 52618), (933, 52606), (940, 52582), (963, 52534), (972, 52510),

Gene: Rimu\_63 Start: 54511, Stop: 52652, Start Num: 205

Candidate Starts for Rimu\_63:

(Start: 188 @54535 has 1 MA's), (Start: 205 @54511 has 304 MA's), (Start: 235 @54487 has 6 MA's), (Start: 250 @54481 has 2 MA's), (Start: 274 @54439 has 6 MA's), (283, 54418), (337, 54304), (342, 54298), (360, 54268), (391, 54208), (399, 54187), (421, 54133), (428, 54121), (434, 54103), (436, 54091), (476, 53986), (519, 53929), (538, 53893), (542, 53881), (551, 53857), (556, 53845), (564, 53827), (570, 53809), (580, 53791), (598, 53752), (602, 53743), (603, 53740), (604, 53737), (712, 53482), (738, 53380), (744, 53347), (750, 53326), (777, 53233), (780, 53224), (795, 53161), (814, 53125), (815, 53122), (820, 53107), (847, 53029), (851, 53017), (858, 52996), (875, 52957), (905, 52867), (910, 52849), (912, 52843), (917, 52828), (926, 52804), (930, 52789), (931, 52786), (933, 52774), (940, 52750), (946, 52729), (963, 52702), (972, 52678),

Gene: Ringer\_46 Start: 35532, Stop: 33745, Start Num: 246

Candidate Starts for Ringer\_46:

(Start: 246 @35532 has 877 MA's), (368, 35319), (374, 35304), (416, 35226), (422, 35205), (425, 35199), (429, 35190), (470, 35073), (479, 35046), (539, 34953), (544, 34938), (556, 34905), (578, 34854), (580, 34851), (612, 34785), (627, 34755), (639, 34725), (662, 34680), (683, 34641), (743, 34461), (753, 34413), (767, 34374), (783, 34308), (812, 34236), (814, 34227), (843, 34143), (876, 34056), (917, 33930), (922, 33918), (946, 33834), (948, 33828),

Gene: Rings\_55 Start: 36927, Stop: 34759, Start Num: 233

Candidate Starts for Rings\_55:

(231, 36930), (Start: 233 @36927 has 13 MA's), (Start: 272 @36873 has 4 MA's), (317, 36789), (369, 36663), (382, 36636), (387, 36627), (405, 36582), (431, 36504), (434, 36495), (438, 36480), (446, 36465), (447, 36462), (466, 36405), (490, 36312), (493, 36270), (570, 36063), (572, 36057), (581, 36033), (590, 36012), (600, 35991), (606, 35976), (609, 35970), (638, 35907), (662, 35856), (693, 35769), (714, 35709), (726, 35661), (751, 35559), (752, 35553), (757, 35526), (758, 35523), (766, 35502), (777, 35460), (779, 35454), (784, 35430), (794, 35388), (795, 35385), (802, 35358), (811, 35325), (813, 35313), (823, 35277), (831, 35253), (832, 35247), (834, 35241), (854, 35187), (875, 35139), (876, 35136), (897, 35076), (902, 35052), (907, 35022), (923, 34968), (940, 34899), (944, 34887), (958, 34848),

Gene: Rinke\_56 Start: 54543, Stop: 52693, Start Num: 205

Candidate Starts for Rinke\_56:

(Start: 205 @54543 has 304 MA's), (273, 54474), (283, 54450), (349, 54330), (400, 54228), (411, 54204), (435, 54141), (436, 54138), (445, 54120), (461, 54075), (476, 54033), (519, 53976), (529, 53964), (538, 53940), (542, 53928), (551, 53904), (556, 53892), (592, 53805), (603, 53781), (611, 53763), (613, 53757), (615, 53751), (642, 53691), (659, 53667), (724, 53484), (725, 53481), (732, 53445), (739, 53415), (744, 53388), (750, 53367), (775, 53280), (777, 53274), (780, 53265), (795, 53202), (814, 53166), (815, 53163), (816, 53160), (820, 53148), (827, 53124), (847, 53070), (851, 53058), (858, 53037), (861, 53028), (865, 53019), (888, 52968), (898, 52953), (903, 52929), (905, 52908), (912, 52884), (917, 52869), (926, 52845), (929, 52833), (930, 52830), (940, 52791), (947, 52767), (948, 52764), (956, 52749), (972, 52719),

Gene: Rita130\_57 Start: 54424, Stop: 52598, Start Num: 197

Candidate Starts for Rita130\_57:

(112, 54583), (143, 54502), (Start: 197 @54424 has 27 MA's), (267, 54370), (304, 54310), (367, 54199), (391, 54151), (434, 54049), (453, 54007), (466, 53971), (476, 53941), (538, 53848), (542, 53836), (551, 53812), (556, 53800), (564, 53782), (592, 53719), (603, 53695), (604, 53692), (652, 53590), (725, 53401), (727, 53383), (739, 53335), (744, 53308), (775, 53200), (777, 53194), (780,

53185), (784, 53164), (807, 53101), (815, 53068), (820, 53053), (841, 52993), (847, 52975), (851, 52963), (858, 52942), (861, 52933), (863, 52930), (905, 52813), (912, 52789), (926, 52750), (930, 52735), (931, 52732), (936, 52708), (940, 52696), (941, 52693), (965, 52645), (972, 52624),

Gene: Rita1961\_59 Start: 54042, Stop: 52225, Start Num: 247

Candidate Starts for Rita1961\_59:

(130, 54225), (Start: 247 @54042 has 43 MA's), (267, 54012), (368, 53832), (433, 53679), (435, 53667), (448, 53637), (454, 53631), (476, 53568), (478, 53562), (519, 53511), (538, 53475), (556, 53427), (603, 53322), (645, 53226), (674, 53175), (724, 53031), (732, 52992), (739, 52962), (744, 52935), (748, 52923), (775, 52827), (777, 52821), (780, 52812), (782, 52800), (807, 52728), (814, 52698), (820, 52680), (822, 52671), (847, 52602), (851, 52590), (858, 52569), (888, 52500), (898, 52485), (903, 52461), (912, 52416), (926, 52377), (931, 52359), (933, 52347), (936, 52335), (940, 52323), (956, 52281), (972, 52251),

Gene: Riverton\_60 Start: 54271, Stop: 52412, Start Num: 205

Candidate Starts for Riverton\_60:

(Start: 188 @54295 has 1 MA's), (Start: 205 @54271 has 304 MA's), (Start: 235 @54247 has 6 MA's), (Start: 250 @54241 has 2 MA's), (Start: 274 @54199 has 6 MA's), (283, 54178), (337, 54064), (342, 54058), (360, 54028), (391, 53968), (399, 53947), (421, 53893), (428, 53881), (434, 53863), (436, 53851), (476, 53746), (519, 53689), (538, 53653), (542, 53641), (552, 53614), (556, 53605), (570, 53569), (598, 53512), (602, 53503), (603, 53500), (604, 53497), (712, 53242), (738, 53140), (744, 53107), (750, 53086), (777, 52993), (780, 52984), (795, 52921), (814, 52885), (815, 52882), (820, 52867), (847, 52789), (851, 52777), (858, 52756), (875, 52717), (905, 52627), (910, 52609), (912, 52603), (917, 52588), (926, 52564), (930, 52549), (931, 52546), (933, 52534), (940, 52510), (963, 52462), (972, 52438),

Gene: Riyhil\_39 Start: 28940, Stop: 27075, Start Num: 301

Candidate Starts for Riyhil\_39:

(Start: 238 @29027 has 3 MA's), (Start: 241 @29024 has 13 MA's), (Start: 301 @28940 has 110 MA's), (Start: 308 @28931 has 5 MA's), (354, 28826), (358, 28817), (375, 28787), (378, 28784), (433, 28664), (435, 28652), (438, 28646), (475, 28541), (484, 28514), (531, 28373), (536, 28367), (537, 28364), (539, 28352), (548, 28325), (549, 28322), (554, 28307), (556, 28301), (559, 28295), (586, 28262), (652, 28133), (676, 28073), (776, 27758), (779, 27749), (780, 27746), (783, 27728), (794, 27686), (796, 27680), (798, 27671), (805, 27656), (822, 27599), (878, 27440), (885, 27410), (888, 27401), (903, 27341), (906, 27317), (919, 27278), (929, 27245), (932, 27233), (947, 27173),

Gene: Roary\_43 Start: 30556, Stop: 28712, Start Num: 246

Candidate Starts for Roary\_43:

(139, 30721), (Start: 246 @30556 has 877 MA's), (280, 30505), (347, 30382), (364, 30352), (383, 30313), (400, 30280), (416, 30250), (422, 30229), (425, 30223), (429, 30214), (461, 30121), (479, 30070), (539, 29974), (543, 29962), (548, 29947), (554, 29929), (556, 29926), (560, 29917), (585, 29863), (598, 29836), (620, 29788), (662, 29704), (687, 29653), (698, 29638), (740, 29491), (743, 29470), (752, 29440), (753, 29422), (755, 29419), (762, 29404), (767, 29383), (771, 29374), (776, 29347), (780, 29335), (783, 29317), (814, 29236), (818, 29224), (834, 29170), (849, 29134), (876, 29065), (886, 29044), (888, 29038), (903, 28999), (905, 28978), (910, 28960), (946, 28843), (950, 28831),

Gene: Robinson\_39 Start: 28928, Stop: 27063, Start Num: 301

Candidate Starts for Robinson\_39:

(Start: 238 @29015 has 3 MA's), (Start: 241 @29012 has 13 MA's), (Start: 301 @28928 has 110 MA's), (Start: 308 @28919 has 5 MA's), (354, 28814), (358, 28805), (375, 28775), (378, 28772), (433, 28652), (435, 28640), (438, 28634), (475, 28529), (484, 28502), (531, 28361), (536, 28355), (537, 28352), (539, 28340), (548, 28313), (549, 28310), (554, 28295), (556, 28289), (559, 28283), (586,

28250), (652, 28121), (676, 28061), (776, 27746), (779, 27737), (780, 27734), (783, 27716), (794, 27674), (796, 27668), (798, 27659), (805, 27644), (822, 27587), (878, 27428), (885, 27398), (888, 27389), (903, 27329), (906, 27305), (919, 27266), (929, 27233), (932, 27221), (947, 27161),

Gene: Robyn\_60 Start: 54190, Stop: 52331, Start Num: 205

Candidate Starts for Robyn\_60:

(42, 54586), (69, 54499), (74, 54484), (76, 54478), (83, 54463), (87, 54445), (Start: 188 @54214 has 1 MA's), (Start: 205 @54190 has 304 MA's), (Start: 235 @54166 has 6 MA's), (Start: 250 @54160 has 2 MA's), (Start: 274 @54118 has 6 MA's), (283, 54097), (337, 53983), (342, 53977), (360, 53947), (391, 53887), (399, 53866), (421, 53812), (428, 53800), (436, 53770), (476, 53665), (519, 53608), (538, 53572), (542, 53560), (552, 53533), (556, 53524), (570, 53488), (580, 53470), (598, 53431), (602, 53422), (603, 53419), (738, 53059), (744, 53026), (750, 53005), (777, 52912), (780, 52903), (795, 52840), (814, 52804), (815, 52801), (820, 52786), (847, 52708), (851, 52696), (858, 52675), (875, 52636), (905, 52546), (910, 52528), (912, 52522), (917, 52507), (926, 52483), (930, 52468), (931, 52465), (933, 52453), (940, 52429), (963, 52381), (972, 52357),

Gene: RockScotty\_40 Start: 27507, Stop: 29489, Start Num: 245

Candidate Starts for RockScotty\_40:

(Start: 245 @27507 has 74 MA's), (347, 27681), (364, 27711), (386, 27744), (402, 27777), (433, 27852), (442, 27879), (478, 27981), (521, 28080), (585, 28254), (598, 28281), (659, 28410), (717, 28548), (737, 28635), (743, 28668), (752, 28698), (767, 28755), (783, 28821), (813, 28914), (842, 29001), (905, 29181), (912, 29205), (946, 29316), (998, 29424),

Gene: Rockabye\_103 Start: 71780, Stop: 73480, Start Num: 315

Candidate Starts for Rockabye\_103:

(263, 71684), (292, 71747), (315, 71780), (391, 71915), (428, 71996), (435, 72023), (438, 72029), (482, 72134), (537, 72191), (571, 72281), (585, 72308), (591, 72323), (683, 72512), (690, 72527), (723, 72608), (730, 72641), (738, 72671), (740, 72680), (743, 72701), (746, 72707), (774, 72824), (792, 72908), (813, 72974), (816, 72986), (827, 73022), (840, 73055), (858, 73109), (869, 73136), (906, 73259), (908, 73265), (922, 73307), (924, 73313), (929, 73331), (946, 73391), (974, 73442),

Gene: Rockstar\_45 Start: 30972, Stop: 29134, Start Num: 246

Candidate Starts for Rockstar\_45:

(Start: 191 @31044 has 1 MA's), (Start: 246 @30972 has 877 MA's), (280, 30921), (364, 30768), (383, 30729), (400, 30696), (425, 30639), (429, 30630), (433, 30618), (471, 30510), (479, 30486), (539, 30390), (558, 30342), (585, 30282), (646, 30150), (659, 30129), (697, 30060), (716, 30015), (726, 29973), (743, 29892), (767, 29805), (776, 29769), (783, 29739), (815, 29628), (827, 29589), (834, 29565), (843, 29547), (886, 29424), (888, 29418), (905, 29358), (946, 29223), (950, 29211), (955, 29202),

Gene: Rog141\_38 Start: 28619, Stop: 26754, Start Num: 301

Candidate Starts for Rog141\_38:

(Start: 238 @28706 has 3 MA's), (Start: 241 @28703 has 13 MA's), (Start: 301 @28619 has 110 MA's), (Start: 308 @28610 has 5 MA's), (354, 28505), (358, 28496), (375, 28466), (378, 28463), (433, 28343), (435, 28331), (438, 28325), (475, 28220), (484, 28193), (531, 28052), (536, 28046), (537, 28043), (539, 28031), (548, 28004), (549, 28001), (554, 27986), (556, 27980), (559, 27974), (586, 27941), (652, 27812), (676, 27752), (776, 27437), (779, 27428), (780, 27425), (783, 27407), (794, 27365), (796, 27359), (798, 27350), (805, 27335), (822, 27278), (878, 27119), (885, 27089), (888, 27080), (903, 27020), (906, 26996), (919, 26957), (929, 26924), (932, 26912), (947, 26852),

Gene: Rohr\_45 Start: 34984, Stop: 33155, Start Num: 246

Candidate Starts for Rohr\_45:

(Start: 246 @34984 has 877 MA's), (368, 34771), (374, 34756), (400, 34708), (416, 34678), (422, 34657), (425, 34651), (429, 34642), (470, 34525), (479, 34498), (539, 34405), (544, 34390), (578, 34306), (580, 34303), (612, 34237), (627, 34207), (639, 34177), (662, 34132), (683, 34093), (743, 33913), (753, 33865), (771, 33817), (780, 33778), (783, 33760), (793, 33721), (810, 33700), (814, 33679), (861, 33541), (922, 33370), (929, 33346), (938, 33313), (943, 33298), (946, 33286), (955, 33265), (959, 33259), (981, 33211), (986, 33196),

Gene: Roksolana\_46 Start: 29675, Stop: 27834, Start Num: 246

Candidate Starts for Roksolana\_46:

(Start: 220 @29705 has 1 MA's), (Start: 246 @29675 has 877 MA's), (364, 29471), (400, 29396), (402, 29393), (416, 29366), (420, 29351), (425, 29339), (444, 29288), (475, 29198), (479, 29186), (539, 29093), (552, 29054), (560, 29036), (568, 29021), (598, 28955), (613, 28922), (614, 28919), (663, 28817), (697, 28757), (726, 28673), (743, 28592), (766, 28508), (767, 28505), (771, 28496), (776, 28469), (783, 28439), (810, 28379), (820, 28340), (902, 28124), (903, 28121), (905, 28100), (946, 27965), (950, 27953), (955, 27944), (957, 27941), (1000, 27848),

Gene: Roliet\_58 Start: 53385, Stop: 51526, Start Num: 205

Candidate Starts for Roliet\_58:

(Start: 188 @53409 has 1 MA's), (Start: 205 @53385 has 304 MA's), (Start: 235 @53361 has 6 MA's), (Start: 250 @53355 has 2 MA's), (Start: 274 @53313 has 6 MA's), (283, 53292), (337, 53178), (342, 53172), (360, 53142), (391, 53082), (399, 53061), (421, 53007), (428, 52995), (434, 52977), (436, 52965), (476, 52860), (519, 52803), (538, 52767), (542, 52755), (552, 52728), (556, 52719), (570, 52683), (598, 52626), (602, 52617), (603, 52614), (604, 52611), (712, 52356), (738, 52254), (744, 52221), (750, 52200), (777, 52107), (780, 52098), (795, 52035), (814, 51999), (815, 51996), (820, 51981), (847, 51903), (851, 51891), (858, 51870), (875, 51831), (905, 51741), (910, 51723), (912, 51717), (917, 51702), (926, 51678), (930, 51663), (931, 51660), (933, 51648), (940, 51624), (963, 51576), (972, 51552),

Gene: Rollins\_40 Start: 27521, Stop: 29389, Start Num: 243

Candidate Starts for Rollins\_40:

(Start: 243 @27521 has 7 MA's), (Start: 246 @27524 has 877 MA's), (249, 27527), (287, 27596), (434, 27878), (444, 27905), (467, 27959), (552, 28124), (585, 28199), (594, 28220), (731, 28574), (743, 28634), (755, 28685), (774, 28751), (783, 28787), (813, 28880), (874, 29051), (902, 29123), (924, 29204), (945, 29279), (946, 29282), (955, 29303), (989, 29372),

Gene: RomaT\_58 Start: 54241, Stop: 52424, Start Num: 247

Candidate Starts for RomaT\_58:

(130, 54424), (Start: 247 @54241 has 43 MA's), (267, 54211), (368, 54031), (433, 53878), (435, 53866), (448, 53836), (454, 53830), (476, 53767), (478, 53761), (519, 53710), (537, 53683), (538, 53674), (556, 53626), (603, 53521), (645, 53425), (674, 53374), (724, 53230), (732, 53191), (739, 53161), (744, 53134), (748, 53122), (775, 53026), (777, 53020), (780, 53011), (782, 52999), (807, 52927), (814, 52897), (820, 52879), (822, 52870), (847, 52801), (851, 52789), (858, 52768), (888, 52699), (898, 52684), (903, 52660), (905, 52639), (910, 52621), (912, 52615), (924, 52582), (926, 52576), (931, 52558), (933, 52546), (936, 52534), (940, 52522), (956, 52480), (972, 52450),

Gene: Romney\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Romney\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Rona\_40 Start: 29912, Stop: 31783, Start Num: 246

Candidate Starts for Rona\_40:

(Start: 246 @29912 has 877 MA's), (352, 30095), (371, 30134), (386, 30152), (419, 30224), (429, 30248), (433, 30260), (434, 30263), (467, 30344), (565, 30536), (585, 30584), (629, 30674), (696, 30815), (731, 30938), (743, 30998), (762, 31064), (764, 31079), (774, 31115), (777, 31124), (783, 31151), (813, 31244), (844, 31337), (874, 31415), (902, 31487), (909, 31526), (924, 31568), (939, 31622), (946, 31646), (955, 31667), (968, 31691),

Gene: Roosevelt\_44 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Roosevelt\_44:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Rosa24\_44 Start: 31601, Stop: 29775, Start Num: 246

Candidate Starts for Rosa24\_44:

(Start: 246 @31601 has 877 MA's), (267, 31580), (280, 31550), (295, 31520), (383, 31358), (394, 31340), (425, 31268), (429, 31259), (471, 31139), (479, 31115), (539, 31022), (558, 30974), (568, 30953), (585, 30914), (646, 30782), (659, 30761), (683, 30716), (687, 30704), (740, 30551), (743, 30530), (776, 30407), (783, 30377), (793, 30338), (814, 30272), (815, 30269), (820, 30254), (827, 30230), (834, 30206), (905, 29999), (946, 29864), (950, 29852), (955, 29843),

Gene: Rosalind\_46 Start: 29862, Stop: 28072, Start Num: 246

Candidate Starts for Rosalind\_46:

(Start: 246 @29862 has 877 MA's), (347, 29688), (400, 29583), (402, 29580), (416, 29553), (425, 29526), (444, 29475), (479, 29373), (539, 29280), (554, 29235), (556, 29232), (560, 29223), (635, 29061), (646, 29034), (659, 29013), (662, 29007), (717, 28908), (726, 28869), (738, 28818), (743, 28788), (755, 28737), (766, 28704), (774, 28671), (776, 28665), (783, 28635), (810, 28575), (814, 28554), (827, 28512), (835, 28485), (843, 28470), (876, 28383), (902, 28320), (903, 28317), (946, 28161), (950, 28149), (957, 28137),

Gene: Roscoe\_61 Start: 54489, Stop: 52630, Start Num: 205

Candidate Starts for Roscoe\_61:

(Start: 188 @54513 has 1 MA's), (Start: 205 @54489 has 304 MA's), (Start: 235 @54465 has 6 MA's), (Start: 250 @54459 has 2 MA's), (Start: 274 @54417 has 6 MA's), (283, 54396), (337, 54282), (342, 54276), (360, 54246), (391, 54186), (399, 54165), (421, 54111), (428, 54099), (434, 54081), (436, 54069), (476, 53964), (519, 53907), (538, 53871), (542, 53859), (552, 53832), (556, 53823), (570, 53787), (598, 53730), (602, 53721), (603, 53718), (604, 53715), (738, 53358), (744, 53325), (750, 53304), (777, 53211), (780, 53202), (795, 53139), (814, 53103), (815, 53100), (820, 53085), (847, 53007), (851, 52995), (858, 52974), (875, 52935), (905, 52845), (910, 52827), (912, 52821), (917, 52806), (926, 52782), (930, 52767), (931, 52764), (933, 52752), (940, 52728), (963, 52680), (972, 52656),

Gene: Rosebush\_56 Start: 52637, Stop: 50808, Start Num: 205

Candidate Starts for Rosebush\_56:

(Start: 205 @52637 has 304 MA's), (Start: 250 @52610 has 2 MA's), (269, 52580), (Start: 274 @52568 has 6 MA's), (286, 52541), (287, 52538), (293, 52529), (318, 52511), (366, 52415), (391, 52364), (400, 52340), (463, 52178), (472, 52154), (476, 52142), (519, 52085), (538, 52049), (542, 52037), (551, 52013), (586, 51935), (588, 51929), (592, 51920), (602, 51899), (603, 51896), (615, 51866), (680, 51722), (707, 51656), (724, 51605), (727, 51584), (732, 51566), (744, 51509), (763, 51452), (771, 51425), (777, 51395), (780, 51386), (795, 51320), (812, 51293), (814, 51284), (820, 51266), (827,

51242), (847, 51188), (851, 51176), (858, 51155), (888, 51086), (905, 51026), (910, 51008), (922, 50975), (926, 50963), (930, 50948), (931, 50945), (933, 50933), (940, 50909), (941, 50906), (963, 50858), (965, 50855), (972, 50834), (979, 50813),

Gene: RosieMae\_39 Start: 28677, Stop: 26812, Start Num: 301

Candidate Starts for RosieMae\_39:

(Start: 238 @28764 has 3 MA's), (Start: 241 @28761 has 13 MA's), (Start: 301 @28677 has 110 MA's), (Start: 308 @28668 has 5 MA's), (354, 28563), (358, 28554), (375, 28524), (378, 28521), (433, 28401), (435, 28389), (438, 28383), (475, 28278), (484, 28251), (531, 28110), (536, 28104), (537, 28101), (539, 28089), (548, 28062), (549, 28059), (554, 28044), (556, 28038), (559, 28032), (586, 27999), (652, 27870), (676, 27810), (776, 27495), (779, 27486), (780, 27483), (783, 27465), (794, 27423), (796, 27417), (798, 27408), (805, 27393), (822, 27336), (878, 27177), (885, 27147), (888, 27138), (903, 27078), (906, 27054), (919, 27015), (929, 26982), (932, 26970), (947, 26910),

Gene: Rowa\_41 Start: 29682, Stop: 31553, Start Num: 246

Candidate Starts for Rowa\_41:

(218, 29652), (226, 29661), (Start: 246 @29682 has 877 MA's), (416, 29994), (429, 30045), (462, 30141), (467, 30153), (536, 30264), (559, 30333), (560, 30336), (585, 30396), (591, 30411), (592, 30414), (635, 30501), (639, 30510), (659, 30549), (687, 30612), (690, 30615), (730, 30753), (731, 30756), (736, 30774), (738, 30786), (740, 30795), (743, 30816), (746, 30822), (753, 30864), (766, 30900), (767, 30903), (776, 30939), (777, 30942), (781, 30960), (783, 30969), (791, 30999), (797, 31023), (840, 31143), (844, 31155), (850, 31173), (853, 31185), (856, 31194), (874, 31233), (875, 31236), (878, 31242), (880, 31248), (901, 31296), (917, 31368), (929, 31404), (946, 31464), (985, 31548),

Gene: Rowdy\_48 Start: 31200, Stop: 29365, Start Num: 246

Candidate Starts for Rowdy\_48:

(Start: 246 @31200 has 877 MA's), (280, 31149), (319, 31083), (364, 30996), (374, 30972), (395, 30936), (400, 30924), (425, 30867), (429, 30858), (458, 30774), (471, 30738), (475, 30726), (479, 30714), (539, 30621), (558, 30573), (585, 30513), (645, 30384), (646, 30381), (659, 30360), (662, 30354), (716, 30246), (743, 30123), (753, 30075), (776, 30000), (783, 29970), (793, 29931), (814, 29862), (815, 29859), (827, 29820), (834, 29796), (837, 29790), (843, 29778), (883, 29670), (905, 29589), (912, 29565), (932, 29502), (946, 29454), (950, 29442), (955, 29433),

Gene: Roy17\_59 Start: 53743, Stop: 51884, Start Num: 205

Candidate Starts for Roy17\_59:

(Start: 188 @53767 has 1 MA's), (Start: 205 @53743 has 304 MA's), (Start: 235 @53719 has 6 MA's), (Start: 250 @53713 has 2 MA's), (Start: 274 @53671 has 6 MA's), (283, 53650), (337, 53536), (342, 53530), (360, 53500), (391, 53440), (399, 53419), (421, 53365), (428, 53353), (434, 53335), (436, 53323), (476, 53218), (519, 53161), (538, 53125), (542, 53113), (552, 53086), (564, 53059), (570, 53041), (580, 53023), (598, 52984), (602, 52975), (603, 52972), (604, 52969), (738, 52612), (744, 52579), (750, 52558), (777, 52465), (780, 52456), (795, 52393), (814, 52357), (815, 52354), (820, 52339), (847, 52261), (851, 52249), (858, 52228), (875, 52189), (905, 52099), (910, 52081), (912, 52075), (917, 52060), (926, 52036), (930, 52021), (931, 52018), (933, 52006), (940, 51982), (963, 51934), (972, 51910),

Gene: Rubeus\_45 Start: 33074, Stop: 31248, Start Num: 246

Candidate Starts for Rubeus\_45:

(Start: 246 @33074 has 877 MA's), (368, 32861), (400, 32798), (416, 32768), (422, 32747), (425, 32741), (429, 32732), (470, 32615), (479, 32588), (539, 32495), (544, 32480), (578, 32396), (580, 32393), (612, 32327), (627, 32297), (639, 32267), (662, 32222), (683, 32183), (743, 32003), (753, 31955), (767, 31916), (783, 31850), (793, 31811), (810, 31790), (814, 31769), (820, 31751), (843, 31685), (902, 31535), (903, 31532), (909, 31496), (917, 31472), (921, 31463), (925, 31451), (946,

31376), (955, 31355),

Gene: Rufus\_45 Start: 34607, Stop: 32778, Start Num: 246

Candidate Starts for Rufus\_45:

(Start: 246 @34607 has 877 MA's), (368, 34394), (400, 34331), (416, 34301), (422, 34280), (425, 34274), (429, 34265), (470, 34148), (479, 34121), (539, 34028), (544, 34013), (578, 33929), (580, 33926), (612, 33860), (627, 33830), (639, 33800), (662, 33755), (683, 33716), (743, 33536), (753, 33488), (771, 33440), (780, 33401), (783, 33383), (793, 33344), (810, 33323), (814, 33302), (861, 33164), (922, 32993), (929, 32969), (938, 32936), (943, 32921), (946, 32909), (955, 32888), (959, 32882), (981, 32834), (986, 32819),

Gene: Ruin\_45 Start: 31563, Stop: 29737, Start Num: 246

Candidate Starts for Ruin\_45:

(Start: 246 @31563 has 877 MA's), (267, 31542), (280, 31512), (295, 31482), (383, 31320), (394, 31302), (425, 31230), (429, 31221), (471, 31101), (479, 31077), (539, 30984), (558, 30936), (568, 30915), (585, 30876), (646, 30744), (659, 30723), (683, 30678), (687, 30666), (740, 30513), (743, 30492), (776, 30369), (783, 30339), (793, 30300), (814, 30234), (815, 30231), (820, 30216), (827, 30192), (834, 30168), (905, 29961), (946, 29826), (950, 29814), (955, 29805),

Gene: Rummer\_47 Start: 31884, Stop: 30070, Start Num: 246

Candidate Starts for Rummer\_47:

(Start: 246 @31884 has 877 MA's), (275, 31845), (280, 31833), (364, 31680), (371, 31665), (400, 31608), (425, 31551), (429, 31542), (444, 31500), (461, 31449), (479, 31398), (521, 31344), (539, 31305), (556, 31257), (568, 31233), (585, 31194), (598, 31167), (612, 31137), (654, 31044), (662, 31032), (686, 30984), (697, 30969), (743, 30813), (755, 30762), (766, 30729), (767, 30726), (783, 30660), (793, 30621), (815, 30549), (827, 30510), (834, 30486), (843, 30468), (853, 30435), (888, 30354), (905, 30294), (932, 30207), (946, 30159), (950, 30147), (955, 30138), (957, 30135),

Gene: Ruotula\_48 Start: 36337, Stop: 34550, Start Num: 246

Candidate Starts for Ruotula\_48:

(Start: 246 @36337 has 877 MA's), (368, 36124), (374, 36109), (400, 36061), (416, 36031), (422, 36010), (425, 36004), (429, 35995), (470, 35878), (479, 35851), (539, 35758), (544, 35743), (556, 35710), (578, 35659), (580, 35656), (612, 35590), (627, 35560), (639, 35530), (662, 35485), (683, 35446), (743, 35266), (753, 35218), (767, 35179), (783, 35113), (812, 35041), (814, 35032), (843, 34948), (876, 34861), (917, 34735), (922, 34723), (939, 34663), (946, 34639), (948, 34633),

Gene: Rutherferd\_47 Start: 35726, Stop: 33900, Start Num: 246

Candidate Starts for Rutherferd\_47:

(Start: 246 @35726 has 877 MA's), (379, 35492), (400, 35450), (416, 35420), (422, 35399), (425, 35393), (429, 35384), (470, 35267), (479, 35240), (539, 35147), (544, 35132), (556, 35099), (578, 35048), (580, 35045), (612, 34979), (627, 34949), (639, 34919), (662, 34874), (683, 34835), (743, 34655), (753, 34607), (767, 34568), (783, 34502), (793, 34463), (810, 34442), (814, 34421), (820, 34403), (843, 34337), (902, 34187), (903, 34184), (909, 34148), (917, 34124), (925, 34103), (946, 34028), (955, 34007),

Gene: RyeScarlet\_46 Start: 31507, Stop: 29714, Start Num: 246

Candidate Starts for RyeScarlet\_46:

(Start: 246 @31507 has 877 MA's), (261, 31498), (280, 31456), (346, 31336), (347, 31333), (372, 31285), (402, 31225), (417, 31195), (420, 31183), (425, 31171), (479, 31018), (539, 30925), (598, 30787), (612, 30757), (687, 30598), (697, 30586), (714, 30559), (740, 30451), (743, 30430), (780, 30295), (783, 30277), (814, 30196), (827, 30154), (853, 30079), (886, 30004), (902, 29962), (930, 29860), (946, 29803), (950, 29791), (955, 29782),

Gene: SDcharge11\_60 Start: 53557, Stop: 51698, Start Num: 205

Candidate Starts for SDcharge11\_60:

(Start: 188 @53581 has 1 MA's), (Start: 205 @53557 has 304 MA's), (Start: 235 @53533 has 6 MA's), (Start: 250 @53527 has 2 MA's), (267, 53500), (Start: 274 @53485 has 6 MA's), (283, 53464), (337, 53350), (342, 53344), (360, 53314), (391, 53254), (399, 53233), (421, 53179), (428, 53167), (434, 53149), (436, 53137), (476, 53032), (519, 52975), (538, 52939), (542, 52927), (552, 52900), (556, 52891), (570, 52855), (598, 52798), (602, 52789), (603, 52786), (604, 52783), (738, 52426), (744, 52393), (750, 52372), (777, 52279), (780, 52270), (795, 52207), (814, 52171), (815, 52168), (820, 52153), (847, 52075), (851, 52063), (858, 52042), (875, 52003), (905, 51913), (910, 51895), (912, 51889), (917, 51874), (926, 51850), (930, 51835), (931, 51832), (933, 51820), (940, 51796), (963, 51748), (972, 51724),

Gene: SJReid\_106 Start: 70795, Stop: 72594, Start Num: 263

Candidate Starts for SJReid\_106:

(225, 70753), (263, 70795), (292, 70858), (313, 70888), (315, 70891), (391, 71026), (428, 71107), (435, 71134), (438, 71140), (482, 71245), (537, 71302), (571, 71392), (585, 71419), (591, 71434), (712, 71680), (723, 71719), (730, 71752), (740, 71791), (743, 71812), (746, 71818), (766, 71902), (773, 71929), (774, 71935), (792, 72019), (797, 72037), (813, 72085), (816, 72097), (827, 72133), (840, 72166), (858, 72220), (906, 72370), (910, 72385), (922, 72418), (924, 72424), (929, 72442), (934, 72466), (945, 72499), (946, 72502),

Gene: SJay\_39 Start: 28931, Stop: 27066, Start Num: 301

Candidate Starts for SJay\_39:

(Start: 238 @29018 has 3 MA's), (Start: 301 @28931 has 110 MA's), (Start: 308 @28922 has 5 MA's), (354, 28817), (358, 28808), (375, 28778), (378, 28775), (433, 28655), (435, 28643), (438, 28637), (475, 28532), (484, 28505), (531, 28364), (536, 28358), (537, 28355), (539, 28343), (548, 28316), (549, 28313), (554, 28298), (556, 28292), (559, 28286), (586, 28253), (652, 28124), (676, 28064), (776, 27749), (779, 27740), (780, 27737), (783, 27719), (794, 27677), (796, 27671), (805, 27647), (822, 27590), (878, 27431), (885, 27401), (888, 27392), (903, 27332), (906, 27308), (919, 27269), (929, 27236), (932, 27224), (947, 27164),

Gene: STLscum\_46 Start: 35717, Stop: 33930, Start Num: 246

Candidate Starts for STLscum\_46:

(Start: 246 @35717 has 877 MA's), (368, 35504), (400, 35441), (416, 35411), (422, 35390), (425, 35384), (429, 35375), (470, 35258), (479, 35231), (539, 35138), (544, 35123), (578, 35039), (580, 35036), (612, 34970), (627, 34940), (639, 34910), (662, 34865), (683, 34826), (743, 34646), (753, 34598), (767, 34559), (783, 34493), (812, 34421), (814, 34412), (843, 34328), (876, 34241), (917, 34115), (922, 34103), (939, 34043), (946, 34019), (948, 34013),

Gene: Sabella\_56 Start: 52482, Stop: 50653, Start Num: 205

Candidate Starts for Sabella\_56:

(Start: 205 @52482 has 304 MA's), (Start: 250 @52455 has 2 MA's), (269, 52425), (Start: 274 @52413 has 6 MA's), (286, 52386), (287, 52383), (293, 52374), (318, 52356), (366, 52260), (391, 52209), (400, 52185), (463, 52023), (469, 52008), (472, 51999), (476, 51987), (519, 51930), (538, 51894), (542, 51882), (551, 51858), (588, 51774), (602, 51744), (603, 51741), (615, 51711), (680, 51567), (707, 51501), (724, 51450), (727, 51429), (732, 51411), (744, 51354), (771, 51270), (777, 51240), (780, 51231), (795, 51165), (812, 51138), (814, 51129), (820, 51111), (827, 51087), (847, 51033), (851, 51021), (858, 51000), (888, 50931), (905, 50871), (910, 50853), (922, 50820), (926, 50808), (930, 50793), (931, 50790), (933, 50778), (940, 50754), (941, 50751), (963, 50703), (965, 50700), (972, 50679), (979, 50658),

Gene: Sabertooth\_45 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Sabertooth\_45:



(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Sabia\_48 Start: 31846, Stop: 30032, Start Num: 246

Candidate Starts for Sabia\_48:

(Start: 246 @31846 has 877 MA's), (275, 31807), (280, 31795), (364, 31642), (371, 31627), (400, 31570), (425, 31513), (429, 31504), (444, 31462), (461, 31411), (479, 31360), (539, 31267), (556, 31219), (560, 31210), (568, 31195), (585, 31156), (598, 31129), (612, 31099), (654, 31006), (686, 30946), (697, 30931), (743, 30775), (767, 30688), (783, 30622), (793, 30583), (815, 30511), (827, 30472), (834, 30448), (843, 30430), (853, 30397), (864, 30370), (888, 30316), (905, 30256), (930, 30178), (946, 30121), (950, 30109), (955, 30100),

Gene: Sabinator\_47 Start: 31851, Stop: 30037, Start Num: 246

Candidate Starts for Sabinator\_47:

(Start: 246 @31851 has 877 MA's), (275, 31812), (280, 31800), (364, 31647), (371, 31632), (400, 31575), (425, 31518), (429, 31509), (444, 31467), (461, 31416), (479, 31365), (539, 31272), (556, 31224), (560, 31215), (568, 31200), (585, 31161), (598, 31134), (612, 31104), (654, 31011), (697, 30936), (743, 30780), (767, 30693), (783, 30627), (793, 30588), (815, 30516), (827, 30477), (834, 30453), (843, 30435), (853, 30402), (864, 30375), (888, 30321), (905, 30261), (930, 30183), (946, 30126), (950, 30114), (955, 30105),

Gene: Sabourin\_42 Start: 27589, Stop: 29571, Start Num: 245

Candidate Starts for Sabourin\_42:

(Start: 245 @27589 has 74 MA's), (347, 27763), (386, 27826), (402, 27859), (433, 27934), (521, 28162), (585, 28336), (659, 28492), (717, 28630), (737, 28717), (743, 28750), (752, 28780), (767, 28837), (783, 28903), (813, 28996), (905, 29263), (912, 29287), (946, 29398), (998, 29506),

Gene: Sachima\_42 Start: 31423, Stop: 29630, Start Num: 246

Candidate Starts for Sachima\_42:

(Start: 246 @31423 has 877 MA's), (261, 31414), (280, 31372), (346, 31252), (347, 31249), (372, 31201), (402, 31141), (417, 31111), (420, 31099), (425, 31087), (479, 30934), (539, 30841), (598, 30703), (612, 30673), (687, 30514), (697, 30502), (714, 30475), (740, 30367), (743, 30346), (780, 30211), (783, 30193), (814, 30112), (827, 30070), (853, 29995), (861, 29974), (886, 29920), (902, 29878), (930, 29776), (946, 29719), (950, 29707), (955, 29698),

Gene: Sagefire\_48 Start: 36086, Stop: 34299, Start Num: 246

Candidate Starts for Sagefire\_48:

(Start: 246 @36086 has 877 MA's), (368, 35873), (416, 35780), (422, 35759), (425, 35753), (429, 35744), (470, 35627), (479, 35600), (539, 35507), (544, 35492), (556, 35459), (578, 35408), (580, 35405), (612, 35339), (627, 35309), (639, 35279), (662, 35234), (683, 35195), (743, 35015), (753, 34967), (767, 34928), (783, 34862), (812, 34790), (814, 34781), (843, 34697), (876, 34610), (917, 34484), (922, 34472), (946, 34388), (948, 34382),

Gene: Saguaro\_58 Start: 54786, Stop: 52945, Start Num: 207

Candidate Starts for Saguaro\_58:

(Start: 207 @54786 has 1 MA's), (267, 54732), (283, 54696), (349, 54576), (377, 54522), (435, 54387), (436, 54384), (445, 54366), (476, 54279), (519, 54222), (538, 54186), (542, 54174), (551, 54150), (602, 54030), (603, 54027), (611, 54009), (615, 53997), (674, 53880), (714, 53769), (724, 53736), (725, 53733), (727, 53715), (739, 53667), (744, 53640), (759, 53589), (775, 53532), (777, 53526), (780, 53517), (791, 53469), (795, 53454), (814, 53418), (815, 53415), (820, 53400), (847, 53322),

(851, 53310), (858, 53289), (865, 53271), (874, 53253), (888, 53220), (905, 53160), (910, 53142), (912, 53136), (926, 53097), (929, 53085), (930, 53082), (931, 53079), (933, 53067), (936, 53055), (940, 53043), (956, 53001), (963, 52995), (972, 52971), (979, 52950),

Gene: Saintus\_38 Start: 27584, Stop: 25740, Start Num: 246

Candidate Starts for Saintus\_38:

(Start: 246 @27584 has 877 MA's), (280, 27533), (347, 27410), (364, 27380), (383, 27341), (400, 27308), (416, 27278), (422, 27257), (425, 27251), (429, 27242), (444, 27200), (461, 27149), (478, 27101), (479, 27098), (539, 27002), (543, 26990), (548, 26975), (554, 26957), (560, 26945), (585, 26891), (598, 26864), (620, 26816), (646, 26759), (653, 26747), (662, 26732), (687, 26681), (698, 26666), (740, 26519), (743, 26498), (752, 26468), (753, 26450), (755, 26447), (762, 26432), (767, 26411), (771, 26402), (776, 26375), (780, 26363), (783, 26345), (814, 26264), (818, 26252), (834, 26198), (849, 26162), (861, 26126), (876, 26093), (886, 26072), (888, 26066), (903, 26027), (905, 26006), (910, 25988), (946, 25871), (950, 25859),

Gene: Salz\_44 Start: 30686, Stop: 28899, Start Num: 246

Candidate Starts for Salz\_44:

(Start: 246 @30686 has 877 MA's), (364, 30482), (400, 30410), (416, 30380), (425, 30353), (541, 30101), (560, 30050), (598, 29969), (619, 29924), (659, 29840), (687, 29783), (715, 29741), (726, 29696), (743, 29615), (755, 29564), (767, 29528), (783, 29462), (810, 29402), (812, 29390), (846, 29288), (853, 29264), (860, 29246), (888, 29183), (901, 29156), (902, 29147), (905, 29123), (946, 28988), (950, 28976), (955, 28967),

Gene: Samaymay\_60 Start: 54350, Stop: 52491, Start Num: 205

Candidate Starts for Samaymay\_60:

(Start: 188 @54374 has 1 MA's), (Start: 205 @54350 has 304 MA's), (Start: 235 @54326 has 6 MA's), (Start: 250 @54320 has 2 MA's), (Start: 274 @54278 has 6 MA's), (283, 54257), (337, 54143), (342, 54137), (360, 54107), (391, 54047), (399, 54026), (421, 53972), (428, 53960), (434, 53942), (436, 53930), (476, 53825), (519, 53768), (538, 53732), (542, 53720), (552, 53693), (570, 53648), (598, 53591), (602, 53582), (603, 53579), (738, 53219), (744, 53186), (750, 53165), (777, 53072), (780, 53063), (795, 53000), (814, 52964), (815, 52961), (820, 52946), (847, 52868), (851, 52856), (858, 52835), (875, 52796), (905, 52706), (910, 52688), (912, 52682), (917, 52667), (926, 52643), (930, 52628), (931, 52625), (933, 52613), (940, 52589), (963, 52541), (972, 52517),

Gene: Samora\_36 Start: 27510, Stop: 29363, Start Num: 246

Candidate Starts for Samora\_36:

(Start: 246 @27510 has 877 MA's), (273, 27543), (295, 27591), (319, 27624), (379, 27741), (416, 27813), (417, 27816), (422, 27834), (429, 27849), (484, 28011), (563, 28146), (567, 28158), (578, 28188), (585, 28200), (592, 28218), (611, 28254), (653, 28344), (659, 28353), (687, 28410), (690, 28413), (694, 28422), (738, 28581), (743, 28611), (752, 28644), (753, 28662), (767, 28704), (774, 28734), (776, 28740), (777, 28743), (780, 28752), (783, 28770), (792, 28815), (812, 28869), (875, 29046), (878, 29052), (880, 29058), (901, 29106), (909, 29154), (912, 29163), (922, 29190), (924, 29196), (930, 29217), (946, 29274), (948, 29280), (955, 29295),

Gene: Samy\_65 Start: 41466, Stop: 43436, Start Num: 246

Candidate Starts for Samy\_65:

(Start: 246 @41466 has 877 MA's), (265, 41484), (319, 41583), (347, 41643), (352, 41649), (400, 41745), (422, 41799), (435, 41838), (481, 41964), (543, 42060), (585, 42165), (635, 42270), (659, 42318), (666, 42336), (740, 42576), (743, 42597), (746, 42603), (781, 42741), (783, 42750), (819, 42864), (834, 42915), (853, 42966), (874, 43014), (875, 43017), (880, 43029), (900, 43074), (906, 43113), (912, 43134), (946, 43245), (955, 43266), (981, 43320), (1012, 43407),

Gene: SanaSana\_45 Start: 31138, Stop: 33012, Start Num: 246

Candidate Starts for SanaSana\_45:

(Start: 246 @31138 has 877 MA's), (287, 31207), (Start: 301 @31228 has 110 MA's), (429, 31474), (434, 31489), (444, 31516), (585, 31810), (696, 32044), (730, 32164), (731, 32167), (743, 32227), (746, 32233), (755, 32278), (762, 32293), (764, 32308), (774, 32344), (783, 32380), (813, 32473), (844, 32566), (874, 32644), (875, 32647), (902, 32716), (905, 32740), (909, 32755), (924, 32797), (929, 32815), (946, 32875), (955, 32896),

Gene: Sandaddy\_44 Start: 34872, Stop: 33046, Start Num: 246

Candidate Starts for Sandaddy\_44:

(Start: 246 @34872 has 877 MA's), (368, 34659), (374, 34644), (416, 34566), (422, 34545), (425, 34539), (429, 34530), (470, 34413), (479, 34386), (539, 34293), (544, 34278), (556, 34245), (578, 34194), (580, 34191), (612, 34125), (627, 34095), (639, 34065), (662, 34020), (683, 33981), (743, 33801), (753, 33753), (767, 33714), (783, 33648), (814, 33567), (815, 33564), (843, 33483), (902, 33333), (903, 33330), (909, 33294), (917, 33270), (921, 33261), (925, 33249), (946, 33174), (955, 33153),

Gene: SansAfet\_43 Start: 29492, Stop: 31366, Start Num: 246

Candidate Starts for SansAfet\_43:

(Start: 246 @29492 has 877 MA's), (287, 29561), (Start: 301 @29582 has 110 MA's), (429, 29828), (434, 29843), (444, 29870), (585, 30164), (646, 30299), (696, 30398), (731, 30521), (743, 30581), (746, 30587), (755, 30632), (762, 30647), (764, 30662), (774, 30698), (783, 30734), (813, 30827), (844, 30920), (874, 30998), (902, 31070), (909, 31109), (924, 31151), (929, 31169), (939, 31205), (946, 31229), (955, 31250),

Gene: Sansa\_37 Start: 28809, Stop: 26944, Start Num: 299

Candidate Starts for Sansa\_37:

(Start: 299 @28809 has 38 MA's), (320, 28764), (344, 28710), (379, 28650), (403, 28599), (430, 28542), (435, 28521), (438, 28515), (454, 28470), (455, 28467), (456, 28464), (469, 28425), (489, 28365), (531, 28242), (537, 28233), (539, 28221), (543, 28209), (549, 28191), (556, 28170), (562, 28158), (585, 28134), (649, 28008), (658, 27987), (724, 27819), (771, 27654), (779, 27618), (783, 27597), (794, 27555), (822, 27468), (836, 27423), (872, 27324), (885, 27279), (888, 27270), (903, 27210), (906, 27186), (917, 27153), (947, 27042),

Gene: Sanya\_43 Start: 35162, Stop: 33336, Start Num: 246

Candidate Starts for Sanya\_43:

(Start: 246 @35162 has 877 MA's), (368, 34949), (400, 34886), (416, 34856), (422, 34835), (425, 34829), (429, 34820), (470, 34703), (479, 34676), (539, 34583), (544, 34568), (578, 34484), (580, 34481), (612, 34415), (627, 34385), (639, 34355), (662, 34310), (683, 34271), (743, 34091), (753, 34043), (767, 34004), (783, 33938), (793, 33899), (810, 33878), (814, 33857), (820, 33839), (843, 33773), (902, 33623), (903, 33620), (909, 33584), (921, 33551), (925, 33539), (932, 33512), (946, 33464), (955, 33443),

Gene: SarBear\_42 Start: 29278, Stop: 31152, Start Num: 246

Candidate Starts for SarBear\_42:

(Start: 243 @29275 has 7 MA's), (Start: 246 @29278 has 877 MA's), (287, 29347), (Start: 301 @29368 has 110 MA's), (364, 29485), (400, 29548), (429, 29614), (444, 29656), (585, 29950), (646, 30085), (696, 30184), (731, 30307), (743, 30367), (746, 30373), (755, 30418), (762, 30433), (764, 30448), (774, 30484), (783, 30520), (813, 30613), (844, 30706), (874, 30784), (902, 30856), (909, 30895), (924, 30937), (929, 30955), (946, 31015), (955, 31036),

Gene: SarFire\_43 Start: 34438, Stop: 32612, Start Num: 246

Candidate Starts for SarFire\_43:

(Start: 246 @34438 has 877 MA's), (368, 34225), (374, 34210), (416, 34132), (422, 34111), (425, 34105), (429, 34096), (470, 33979), (479, 33952), (539, 33859), (544, 33844), (578, 33760), (580, 33757), (612, 33691), (627, 33661), (639, 33631), (662, 33586), (683, 33547), (743, 33367), (753, 33319), (767, 33280), (783, 33214), (793, 33175), (810, 33154), (814, 33133), (820, 33115), (843, 33049), (902, 32899), (903, 32896), (909, 32860), (921, 32827), (925, 32815), (938, 32767), (946, 32740), (955, 32719),

Gene: Saratos\_38 Start: 28717, Stop: 26852, Start Num: 299

Candidate Starts for Saratos\_38:

(Start: 299 @28717 has 38 MA's), (320, 28672), (344, 28618), (379, 28558), (403, 28507), (435, 28429), (438, 28423), (454, 28378), (455, 28375), (456, 28372), (469, 28333), (489, 28273), (531, 28150), (537, 28141), (539, 28129), (543, 28117), (549, 28099), (556, 28078), (562, 28066), (585, 28042), (658, 27895), (724, 27727), (771, 27562), (779, 27526), (783, 27505), (794, 27463), (822, 27376), (836, 27331), (872, 27232), (885, 27187), (888, 27178), (903, 27118), (906, 27094), (917, 27061), (947, 26950),

Gene: SassyCat97\_59 Start: 54035, Stop: 52176, Start Num: 205

Candidate Starts for SassyCat97\_59:

(Start: 188 @54059 has 1 MA's), (Start: 205 @54035 has 304 MA's), (Start: 235 @54011 has 6 MA's), (Start: 250 @54005 has 2 MA's), (Start: 274 @53963 has 6 MA's), (283, 53942), (337, 53828), (342, 53822), (360, 53792), (391, 53732), (399, 53711), (421, 53657), (428, 53645), (434, 53627), (436, 53615), (476, 53510), (519, 53453), (538, 53417), (542, 53405), (552, 53378), (564, 53351), (570, 53333), (580, 53315), (598, 53276), (602, 53267), (603, 53264), (712, 53006), (738, 52904), (744, 52871), (750, 52850), (777, 52757), (780, 52748), (795, 52685), (814, 52649), (815, 52646), (820, 52631), (847, 52553), (851, 52541), (858, 52520), (875, 52481), (905, 52391), (910, 52373), (912, 52367), (917, 52352), (926, 52328), (930, 52313), (931, 52310), (933, 52298), (940, 52274), (963, 52226), (972, 52202),

Gene: SaturnRing\_46 Start: 31555, Stop: 29717, Start Num: 246

Candidate Starts for SaturnRing\_46:

(Start: 246 @31555 has 877 MA's), (280, 31504), (319, 31438), (364, 31351), (395, 31291), (400, 31279), (425, 31222), (429, 31213), (471, 31093), (479, 31069), (539, 30973), (558, 30925), (585, 30865), (614, 30802), (646, 30733), (659, 30712), (698, 30640), (716, 30598), (726, 30556), (743, 30475), (753, 30427), (776, 30352), (783, 30322), (791, 30292), (815, 30211), (827, 30172), (834, 30148), (843, 30130), (888, 30001), (905, 29941), (946, 29806), (950, 29794), (955, 29785),

Gene: Scamp\_45 Start: 31572, Stop: 29746, Start Num: 246

Candidate Starts for Scamp\_45:

(Start: 246 @31572 has 877 MA's), (267, 31551), (280, 31521), (295, 31491), (383, 31329), (394, 31311), (425, 31239), (429, 31230), (471, 31110), (479, 31086), (539, 30993), (558, 30945), (568, 30924), (585, 30885), (646, 30753), (659, 30732), (683, 30687), (687, 30675), (740, 30522), (743, 30501), (776, 30378), (783, 30348), (793, 30309), (814, 30243), (815, 30240), (820, 30225), (827, 30201), (834, 30177), (905, 29970), (946, 29835), (950, 29823), (955, 29814),

Gene: Schadenfreude\_60 Start: 53915, Stop: 52056, Start Num: 205

Candidate Starts for Schadenfreude\_60:

(Start: 188 @53939 has 1 MA's), (Start: 205 @53915 has 304 MA's), (Start: 235 @53891 has 6 MA's), (Start: 250 @53885 has 2 MA's), (Start: 274 @53843 has 6 MA's), (283, 53822), (337, 53708), (342, 53702), (360, 53672), (391, 53612), (399, 53591), (421, 53537), (428, 53525), (434, 53507), (436, 53495), (476, 53390), (519, 53333), (538, 53297), (542, 53285), (551, 53261), (556, 53249), (564, 53231), (570, 53213), (580, 53195), (598, 53156), (602, 53147), (603, 53144), (604, 53141), (738, 52784), (744, 52751), (750, 52730), (777, 52637), (780, 52628), (795, 52565), (814, 52529), (815, 52526), (820, 52511), (847, 52433), (851, 52421), (858, 52400), (875, 52361), (905, 52271), (910,

52253), (912, 52247), (917, 52232), (926, 52208), (930, 52193), (931, 52190), (933, 52178), (940, 52154), (963, 52106), (972, 52082),

Gene: Scherzo\_45 Start: 31727, Stop: 29934, Start Num: 246

Candidate Starts for Scherzo\_45:

(Start: 246 @31727 has 877 MA's), (261, 31718), (280, 31676), (346, 31556), (347, 31553), (372, 31505), (402, 31445), (417, 31415), (420, 31403), (425, 31391), (479, 31238), (539, 31145), (598, 31007), (612, 30977), (687, 30818), (697, 30806), (714, 30779), (740, 30671), (743, 30650), (780, 30515), (783, 30497), (814, 30416), (827, 30374), (853, 30299), (861, 30278), (886, 30224), (902, 30182), (930, 30080), (946, 30023), (950, 30011), (955, 30002),

Gene: Schimmels22\_37 Start: 27687, Stop: 25789, Start Num: 297

Candidate Starts for Schimmels22\_37:

(8, 28425), (9, 28419), (56, 28164), (Start: 272 @27738 has 4 MA's), (Start: 297 @27687 has 18 MA's), (324, 27624), (354, 27573), (375, 27534), (403, 27477), (430, 27420), (433, 27411), (435, 27399), (438, 27393), (456, 27342), (469, 27303), (493, 27240), (504, 27195), (531, 27120), (537, 27111), (539, 27099), (549, 27069), (556, 27048), (562, 27036), (585, 27012), (660, 26862), (742, 26601), (771, 26499), (774, 26478), (783, 26442), (792, 26406), (794, 26400), (822, 26313), (831, 26286), (878, 26154), (888, 26115), (893, 26094), (903, 26055), (906, 26031), (908, 26025), (917, 25998), (947, 25887),

Gene: Schnapsidee\_38 Start: 29060, Stop: 27195, Start Num: 301

Candidate Starts for Schnapsidee\_38:

(Start: 301 @29060 has 110 MA's), (Start: 308 @29051 has 5 MA's), (432, 28787), (435, 28772), (438, 28766), (484, 28634), (501, 28580), (531, 28493), (537, 28484), (539, 28472), (548, 28445), (549, 28442), (554, 28427), (556, 28421), (718, 28091), (776, 27878), (779, 27869), (780, 27866), (783, 27848), (794, 27806), (798, 27791), (822, 27719), (831, 27692), (878, 27560), (885, 27530), (903, 27461), (906, 27437), (908, 27431), (919, 27398), (929, 27365), (932, 27353),

Gene: Schubert\_36 Start: 28339, Stop: 26486, Start Num: 297

Candidate Starts for Schubert\_36:

(Start: 254 @28408 has 2 MA's), (Start: 297 @28339 has 18 MA's), (375, 28186), (378, 28183), (406, 28126), (435, 28051), (438, 28045), (454, 28000), (469, 27955), (480, 27925), (512, 27838), (537, 27775), (539, 27763), (549, 27733), (556, 27712), (562, 27700), (718, 27382), (774, 27175), (776, 27169), (780, 27157), (783, 27139), (794, 27097), (798, 27082), (822, 27010), (836, 26965), (903, 26752), (906, 26728), (909, 26716), (912, 26707), (917, 26695), (940, 26608), (947, 26584), (949, 26578),

Gene: Schueller\_61 Start: 54272, Stop: 52413, Start Num: 205

Candidate Starts for Schueller\_61:

(Start: 188 @54296 has 1 MA's), (Start: 205 @54272 has 304 MA's), (Start: 235 @54248 has 6 MA's), (Start: 250 @54242 has 2 MA's), (Start: 274 @54200 has 6 MA's), (283, 54179), (337, 54065), (342, 54059), (360, 54029), (391, 53969), (399, 53948), (421, 53894), (428, 53882), (434, 53864), (436, 53852), (476, 53747), (519, 53690), (538, 53654), (542, 53642), (551, 53618), (556, 53606), (564, 53588), (570, 53570), (580, 53552), (598, 53513), (602, 53504), (603, 53501), (604, 53498), (712, 53243), (738, 53141), (744, 53108), (750, 53087), (777, 52994), (780, 52985), (795, 52922), (814, 52886), (815, 52883), (820, 52868), (847, 52790), (851, 52778), (858, 52757), (875, 52718), (905, 52628), (910, 52610), (912, 52604), (917, 52589), (926, 52565), (930, 52550), (931, 52547), (933, 52535), (940, 52511), (946, 52490), (963, 52463), (972, 52439), (977, 52424),

Gene: Scissor2024\_37 Start: 27324, Stop: 25426, Start Num: 298

Candidate Starts for Scissor2024\_37:

(248, 27405), (Start: 298 @27324 has 4 MA's), (324, 27261), (354, 27210), (375, 27171), (403, 27114), (430, 27057), (433, 27048), (435, 27036), (438, 27030), (456, 26979), (469, 26940), (504, 26832), (531, 26757), (537, 26748), (539, 26736), (549, 26706), (556, 26685), (562, 26673), (585, 26649), (660, 26499), (742, 26238), (771, 26136), (774, 26115), (783, 26079), (792, 26043), (794, 26037), (822, 25950), (831, 25923), (878, 25791), (888, 25752), (893, 25731), (903, 25692), (906, 25668), (908, 25662), (917, 25635), (947, 25524),

Gene: Scoot17C\_61 Start: 53977, Stop: 52118, Start Num: 205

Candidate Starts for Scoot17C\_61:

(Start: 188 @54001 has 1 MA's), (Start: 205 @53977 has 304 MA's), (Start: 235 @53953 has 6 MA's), (Start: 250 @53947 has 2 MA's), (Start: 274 @53905 has 6 MA's), (283, 53884), (337, 53770), (342, 53764), (360, 53734), (391, 53674), (399, 53653), (421, 53599), (428, 53587), (434, 53569), (436, 53557), (476, 53452), (519, 53395), (538, 53359), (542, 53347), (552, 53320), (564, 53293), (570, 53275), (580, 53257), (598, 53218), (602, 53209), (603, 53206), (712, 52948), (738, 52846), (744, 52813), (750, 52792), (777, 52699), (780, 52690), (795, 52627), (814, 52591), (815, 52588), (820, 52573), (847, 52495), (851, 52483), (858, 52462), (875, 52423), (905, 52333), (910, 52315), (912, 52309), (917, 52294), (926, 52270), (930, 52255), (931, 52252), (933, 52240), (940, 52216), (963, 52168), (972, 52144),

Gene: Scorpia\_40 Start: 30133, Stop: 28268, Start Num: 246

Candidate Starts for Scorpia\_40:

(Start: 215 @30166 has 2 MA's), (Start: 246 @30133 has 877 MA's), (318, 30022), (366, 29926), (400, 29857), (402, 29854), (416, 29827), (425, 29800), (429, 29791), (458, 29707), (461, 29698), (467, 29683), (479, 29647), (523, 29587), (539, 29551), (556, 29503), (567, 29482), (568, 29479), (594, 29419), (633, 29341), (654, 29293), (662, 29281), (686, 29233), (712, 29182), (743, 29047), (753, 28999), (762, 28981), (767, 28960), (771, 28951), (777, 28921), (783, 28894), (784, 28891), (814, 28813), (820, 28795), (834, 28747), (853, 28696), (876, 28642), (880, 28633), (888, 28615), (910, 28537), (946, 28420), (950, 28408), (1000, 28303),

Gene: Scout\_45 Start: 30682, Stop: 28844, Start Num: 246

Candidate Starts for Scout\_45:

(Start: 191 @30754 has 1 MA's), (Start: 246 @30682 has 877 MA's), (280, 30631), (364, 30478), (395, 30418), (400, 30406), (425, 30349), (429, 30340), (433, 30328), (471, 30220), (479, 30196), (539, 30100), (558, 30052), (585, 29992), (614, 29929), (646, 29860), (659, 29839), (697, 29770), (700, 29764), (716, 29725), (743, 29602), (767, 29515), (776, 29479), (783, 29449), (791, 29419), (815, 29338), (827, 29299), (834, 29275), (843, 29257), (888, 29128), (905, 29068), (946, 28933), (950, 28921), (955, 28912),

Gene: Scowl\_45 Start: 35221, Stop: 33395, Start Num: 246

Candidate Starts for Scowl\_45:

(Start: 246 @35221 has 877 MA's), (368, 35008), (374, 34993), (400, 34945), (416, 34915), (422, 34894), (425, 34888), (429, 34879), (470, 34762), (479, 34735), (539, 34642), (544, 34627), (578, 34543), (580, 34540), (612, 34474), (627, 34444), (639, 34414), (662, 34369), (683, 34330), (743, 34150), (753, 34102), (767, 34063), (783, 33997), (793, 33958), (810, 33937), (814, 33916), (820, 33898), (843, 33832), (902, 33682), (903, 33679), (909, 33643), (917, 33619), (921, 33610), (925, 33598), (932, 33571), (946, 33523), (955, 33502),

Gene: Scrick\_61 Start: 54049, Stop: 52190, Start Num: 205

Candidate Starts for Scrick\_61:

(Start: 188 @54073 has 1 MA's), (Start: 205 @54049 has 304 MA's), (Start: 235 @54025 has 6 MA's), (Start: 250 @54019 has 2 MA's), (Start: 274 @53977 has 6 MA's), (283, 53956), (337, 53842), (342, 53836), (360, 53806), (391, 53746), (399, 53725), (421, 53671), (428, 53659), (434, 53641), (436, 53629), (476, 53524), (519, 53467), (538, 53431), (542, 53419), (551, 53395), (556, 53383), (564,

53365), (570, 53347), (580, 53329), (598, 53290), (602, 53281), (603, 53278), (604, 53275), (738, 52918), (744, 52885), (750, 52864), (777, 52771), (780, 52762), (795, 52699), (814, 52663), (815, 52660), (820, 52645), (847, 52567), (851, 52555), (858, 52534), (875, 52495), (905, 52405), (910, 52387), (912, 52381), (917, 52366), (926, 52342), (930, 52327), (931, 52324), (933, 52312), (940, 52288), (963, 52240), (972, 52216),

Gene: Seabiscuit\_46 Start: 34373, Stop: 32547, Start Num: 246

Candidate Starts for Seabiscuit\_46:

(Start: 246 @34373 has 877 MA's), (368, 34160), (400, 34097), (416, 34067), (422, 34046), (425, 34040), (429, 34031), (470, 33914), (479, 33887), (539, 33794), (544, 33779), (556, 33746), (578, 33695), (580, 33692), (612, 33626), (639, 33566), (662, 33521), (683, 33482), (743, 33302), (753, 33254), (767, 33215), (783, 33149), (793, 33110), (810, 33089), (814, 33068), (820, 33050), (843, 32984), (902, 32834), (903, 32831), (909, 32795), (921, 32762), (925, 32750), (938, 32702), (946, 32675), (955, 32654),

Gene: Seanderson\_47 Start: 35777, Stop: 33948, Start Num: 246

Candidate Starts for Seanderson\_47:

(Start: 246 @35777 has 877 MA's), (368, 35564), (374, 35549), (400, 35501), (416, 35471), (422, 35450), (425, 35444), (429, 35435), (470, 35318), (479, 35291), (539, 35198), (544, 35183), (578, 35099), (580, 35096), (612, 35030), (639, 34970), (662, 34925), (683, 34886), (743, 34706), (753, 34658), (771, 34610), (780, 34571), (783, 34553), (793, 34514), (810, 34493), (814, 34472), (819, 34457), (861, 34334), (922, 34163), (929, 34139), (943, 34091), (946, 34079), (955, 34058), (959, 34052), (981, 34004), (986, 33989),

Gene: Sebastisaurus\_36 Start: 27845, Stop: 29776, Start Num: 246

Candidate Starts for Sebastisaurus\_36:

(221, 27815), (Start: 246 @27845 has 877 MA's), (295, 27926), (347, 28025), (386, 28097), (389, 28103), (416, 28157), (417, 28160), (537, 28415), (541, 28433), (563, 28490), (568, 28505), (578, 28532), (584, 28541), (585, 28544), (586, 28547), (592, 28562), (659, 28697), (683, 28742), (694, 28766), (743, 28955), (746, 28961), (753, 29003), (767, 29042), (774, 29072), (781, 29099), (783, 29108), (791, 29138), (797, 29162), (820, 29225), (875, 29375), (878, 29381), (898, 29423), (901, 29435), (905, 29468), (909, 29483), (912, 29492), (922, 29519), (924, 29525), (929, 29543), (932, 29555), (946, 29603), (950, 29615), (981, 29678),

Gene: Sedgewig\_38 Start: 28617, Stop: 26752, Start Num: 301

Candidate Starts for Sedgewig\_38:

(Start: 238 @28704 has 3 MA's), (Start: 241 @28701 has 13 MA's), (Start: 301 @28617 has 110 MA's), (Start: 308 @28608 has 5 MA's), (354, 28503), (358, 28494), (375, 28464), (378, 28461), (433, 28341), (435, 28329), (438, 28323), (475, 28218), (484, 28191), (531, 28050), (536, 28044), (537, 28041), (539, 28029), (548, 28002), (549, 27999), (554, 27984), (556, 27978), (559, 27972), (586, 27939), (652, 27810), (676, 27750), (776, 27435), (779, 27426), (780, 27423), (783, 27405), (794, 27363), (796, 27357), (798, 27348), (805, 27333), (822, 27276), (878, 27117), (885, 27087), (888, 27078), (903, 27018), (906, 26994), (919, 26955), (929, 26922), (932, 26910), (947, 26850),

Gene: Selr12\_61 Start: 54059, Stop: 52200, Start Num: 205

Candidate Starts for Selr12\_61:

(Start: 188 @54083 has 1 MA's), (Start: 205 @54059 has 304 MA's), (Start: 235 @54035 has 6 MA's), (Start: 250 @54029 has 2 MA's), (Start: 274 @53987 has 6 MA's), (283, 53966), (337, 53852), (342, 53846), (360, 53816), (391, 53756), (399, 53735), (421, 53681), (428, 53669), (434, 53651), (436, 53639), (476, 53534), (519, 53477), (538, 53441), (542, 53429), (552, 53402), (564, 53375), (570, 53357), (580, 53339), (598, 53300), (602, 53291), (603, 53288), (738, 52928), (744, 52895), (750, 52874), (777, 52781), (780, 52772), (795, 52709), (814, 52673), (815, 52670), (820, 52655), (847, 52577), (851, 52565), (858, 52544), (875, 52505), (905, 52415), (910, 52397), (912, 52391), (917,

52376), (926, 52352), (930, 52337), (931, 52334), (933, 52322), (940, 52298), (963, 52250), (972, 52226),

Gene: SemperFi\_45 Start: 31534, Stop: 29747, Start Num: 246

Candidate Starts for SemperFi\_45:

(102, 31789), (Start: 246 @31534 has 877 MA's), (364, 31330), (366, 31327), (368, 31321), (375, 31306), (383, 31291), (400, 31258), (402, 31255), (416, 31228), (425, 31201), (433, 31180), (444, 31150), (479, 31048), (539, 30955), (556, 30907), (560, 30898), (568, 30883), (598, 30817), (635, 30736), (659, 30688), (662, 30682), (697, 30619), (726, 30544), (743, 30463), (755, 30412), (766, 30379), (767, 30376), (783, 30310), (793, 30271), (810, 30250), (831, 30175), (837, 30157), (853, 30112), (864, 30085), (880, 30049), (886, 30037), (888, 30031), (902, 29995), (905, 29971), (930, 29893), (946, 29836), (950, 29824), (955, 29815),

Gene: SenorClean\_43 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for SenorClean\_43:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Serendipitous\_56 Start: 53740, Stop: 51905, Start Num: 209

Candidate Starts for Serendipitous\_56:

(189, 53764), (Start: 209 @53740 has 2 MA's), (Start: 250 @53704 has 2 MA's), (434, 53356), (445, 53326), (453, 53314), (466, 53278), (476, 53248), (538, 53155), (542, 53143), (545, 53134), (551, 53119), (556, 53107), (564, 53089), (592, 53026), (603, 53002), (652, 52897), (725, 52708), (727, 52690), (739, 52642), (744, 52615), (775, 52507), (777, 52501), (780, 52492), (807, 52408), (815, 52375), (820, 52360), (841, 52300), (847, 52282), (851, 52270), (858, 52249), (861, 52240), (863, 52237), (912, 52096), (915, 52087), (926, 52057), (930, 52042), (931, 52039), (936, 52015), (940, 52003), (941, 52000), (956, 51961), (972, 51931), (979, 51910),

Gene: Serendipity\_60 Start: 54332, Stop: 52473, Start Num: 205

Candidate Starts for Serendipity\_60:

(Start: 188 @54356 has 1 MA's), (Start: 205 @54332 has 304 MA's), (Start: 235 @54308 has 6 MA's), (Start: 250 @54302 has 2 MA's), (Start: 274 @54260 has 6 MA's), (283, 54239), (337, 54125), (342, 54119), (360, 54089), (391, 54029), (399, 54008), (421, 53954), (428, 53942), (434, 53924), (436, 53912), (476, 53807), (519, 53750), (538, 53714), (542, 53702), (552, 53675), (570, 53630), (598, 53573), (602, 53564), (603, 53561), (738, 53201), (744, 53168), (750, 53147), (777, 53054), (780, 53045), (795, 52982), (814, 52946), (815, 52943), (820, 52928), (847, 52850), (851, 52838), (858, 52817), (875, 52778), (905, 52688), (910, 52670), (912, 52664), (917, 52649), (926, 52625), (930, 52610), (931, 52607), (933, 52595), (940, 52571), (963, 52523), (972, 52499),

Gene: Serenity\_45 Start: 30497, Stop: 28668, Start Num: 246

Candidate Starts for Serenity\_45:

(Start: 246 @30497 has 877 MA's), (364, 30293), (366, 30290), (368, 30284), (375, 30269), (383, 30254), (399, 30224), (400, 30221), (416, 30191), (425, 30164), (433, 30143), (444, 30113), (479, 30011), (539, 29918), (556, 29870), (560, 29861), (568, 29846), (598, 29780), (635, 29699), (659, 29651), (683, 29606), (743, 29426), (753, 29378), (755, 29375), (767, 29339), (783, 29273), (793, 29234), (810, 29213), (831, 29138), (837, 29120), (853, 29075), (864, 29048), (880, 29012), (888, 28994), (902, 28958), (905, 28934), (930, 28856), (946, 28799), (950, 28787), (955, 28778), (978, 28730), (994, 28700), (1001, 28682), (1003, 28679),

Gene: Serpentine\_0060 Start: 54415, Stop: 52556, Start Num: 205



Candidate Starts for Serpentine\_0060:

(Start: 188 @54439 has 1 MA's), (Start: 205 @54415 has 304 MA's), (Start: 235 @54391 has 6 MA's), (Start: 250 @54385 has 2 MA's), (Start: 274 @54343 has 6 MA's), (283, 54322), (337, 54208), (342, 54202), (360, 54172), (391, 54112), (399, 54091), (421, 54037), (428, 54025), (434, 54007), (436, 53995), (476, 53890), (519, 53833), (538, 53797), (542, 53785), (552, 53758), (564, 53731), (570, 53713), (580, 53695), (598, 53656), (602, 53647), (603, 53644), (712, 53386), (738, 53284), (744, 53251), (750, 53230), (777, 53137), (780, 53128), (795, 53065), (814, 53029), (815, 53026), (820, 53011), (847, 52933), (851, 52921), (858, 52900), (875, 52861), (905, 52771), (910, 52753), (912, 52747), (917, 52732), (926, 52708), (930, 52693), (931, 52690), (933, 52678), (940, 52654), (963, 52606), (972, 52582),

Gene: Severus\_42 Start: 30385, Stop: 28553, Start Num: 246

Candidate Starts for Severus\_42:

(Start: 246 @30385 has 877 MA's), (280, 30334), (319, 30268), (364, 30181), (368, 30172), (395, 30121), (400, 30109), (425, 30052), (454, 29971), (458, 29959), (461, 29950), (471, 29923), (479, 29899), (539, 29806), (552, 29767), (585, 29698), (598, 29671), (662, 29539), (743, 29311), (762, 29245), (776, 29188), (783, 29158), (793, 29119), (815, 29047), (820, 29032), (827, 29008), (843, 28966), (853, 28933), (905, 28777), (912, 28753), (932, 28690), (946, 28642), (950, 28630), (955, 28621),

Gene: Shaffner\_41 Start: 30040, Stop: 31905, Start Num: 245

Candidate Starts for Shaffner\_41:

(Start: 245 @30040 has 74 MA's), (279, 30088), (325, 30178), (366, 30247), (416, 30337), (458, 30457), (541, 30634), (585, 30742), (591, 30757), (598, 30769), (659, 30895), (717, 31033), (743, 31153), (767, 31240), (783, 31306), (813, 31399), (946, 31801), (949, 31810), (955, 31822),

Gene: ShaiHulud\_39 Start: 28925, Stop: 27069, Start Num: 308

Candidate Starts for ShaiHulud\_39:

(Start: 238 @29021 has 3 MA's), (Start: 241 @29018 has 13 MA's), (Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (433, 28658), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (536, 28361), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (652, 28127), (676, 28067), (709, 27992), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (798, 27665), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Shaka\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Shaka\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: ShakeltOph\_47 Start: 30557, Stop: 32419, Start Num: 245

Candidate Starts for ShakeltOph\_47:

(163, 30458), (178, 30476), (Start: 245 @30557 has 74 MA's), (279, 30605), (366, 30764), (368, 30770), (422, 30875), (438, 30920), (536, 31127), (585, 31256), (635, 31361), (659, 31409), (699, 31493), (743, 31667), (766, 31751), (774, 31784), (777, 31793), (790, 31844), (813, 31913), (850, 32024), (878, 32093), (880, 32099), (912, 32204), (946, 32315),

Gene: Sham4\_44 Start: 30331, Stop: 28544, Start Num: 246

Candidate Starts for Sham4\_44:

(Start: 246 @30331 has 877 MA's), (364, 30127), (400, 30055), (416, 30025), (425, 29998), (541, 29746), (560, 29695), (598, 29614), (619, 29569), (620, 29566), (659, 29485), (687, 29428), (715, 29386), (726, 29341), (743, 29260), (755, 29209), (767, 29173), (783, 29107), (810, 29047), (812, 29035), (846, 28933), (853, 28909), (860, 28891), (888, 28828), (901, 28801), (902, 28792), (905, 28768), (946, 28633), (950, 28621), (955, 28612),

Gene: Shamu\_38 Start: 28738, Stop: 26873, Start Num: 299

Candidate Starts for Shamu\_38:

(Start: 299 @28738 has 38 MA's), (320, 28693), (344, 28639), (379, 28579), (403, 28528), (435, 28450), (438, 28444), (454, 28399), (455, 28396), (456, 28393), (469, 28354), (489, 28294), (531, 28171), (537, 28162), (539, 28150), (543, 28138), (549, 28120), (556, 28099), (562, 28087), (658, 27916), (724, 27748), (771, 27583), (779, 27547), (783, 27526), (794, 27484), (822, 27397), (836, 27352), (872, 27253), (885, 27208), (888, 27199), (903, 27139), (906, 27115), (917, 27082), (947, 26971),

Gene: Shapes\_48 Start: 31200, Stop: 29365, Start Num: 246

Candidate Starts for Shapes\_48:

(Start: 246 @31200 has 877 MA's), (280, 31149), (319, 31083), (364, 30996), (374, 30972), (395, 30936), (400, 30924), (425, 30867), (429, 30858), (458, 30774), (471, 30738), (475, 30726), (479, 30714), (539, 30621), (558, 30573), (585, 30513), (645, 30384), (646, 30381), (659, 30360), (662, 30354), (716, 30246), (743, 30123), (753, 30075), (776, 30000), (783, 29970), (793, 29931), (814, 29862), (815, 29859), (827, 29820), (834, 29796), (837, 29790), (843, 29778), (883, 29670), (905, 29589), (912, 29565), (932, 29502), (946, 29454), (950, 29442), (955, 29433),

Gene: Sharkboy\_41 Start: 30011, Stop: 31882, Start Num: 246

Candidate Starts for Sharkboy\_41:

(Start: 246 @30011 has 877 MA's), (352, 30194), (371, 30233), (386, 30251), (419, 30323), (429, 30347), (433, 30359), (434, 30362), (467, 30443), (565, 30635), (585, 30683), (629, 30773), (696, 30914), (731, 31037), (743, 31097), (762, 31163), (764, 31178), (774, 31214), (777, 31223), (783, 31250), (813, 31343), (844, 31436), (874, 31514), (902, 31586), (909, 31625), (924, 31667), (939, 31721), (946, 31745), (955, 31766), (968, 31790),

Gene: Shatter\_51 Start: 45981, Stop: 44164, Start Num: 241

Candidate Starts for Shatter\_51:

(72, 46302), (82, 46278), (Start: 241 @45981 has 13 MA's), (267, 45945), (Start: 274 @45930 has 6 MA's), (287, 45900), (356, 45774), (417, 45651), (421, 45636), (436, 45594), (476, 45498), (538, 45405), (592, 45276), (603, 45252), (727, 44940), (732, 44922), (744, 44865), (777, 44751), (780, 44742), (795, 44679), (815, 44640), (820, 44625), (847, 44547), (851, 44535), (858, 44514), (861, 44505), (901, 44418), (906, 44382), (909, 44370), (923, 44331), (926, 44322), (930, 44307), (940, 44262), (972, 44190),

Gene: Shawty\_33 Start: 26720, Stop: 28573, Start Num: 246

Candidate Starts for Shawty\_33:

(Start: 246 @26720 has 877 MA's), (295, 26801), (364, 26921), (422, 27044), (429, 27059), (541, 27299), (550, 27326), (563, 27356), (567, 27368), (578, 27398), (585, 27410), (592, 27428), (611, 27464), (653, 27554), (659, 27563), (690, 27623), (694, 27632), (738, 27791), (743, 27821), (752, 27854), (753, 27872), (760, 27887), (767, 27914), (774, 27944), (776, 27950), (777, 27953), (780, 27962), (781, 27971), (783, 27980), (786, 27995), (792, 28025), (812, 28079), (850, 28193), (875, 28256), (878, 28262), (880, 28268), (898, 28304), (901, 28316), (905, 28349), (909, 28364), (910, 28367), (912, 28373), (922, 28400), (924, 28406), (930, 28427), (946, 28484), (948, 28490), (950, 28496), (955, 28505),

Gene: ShayRa\_48 Start: 29944, Stop: 28154, Start Num: 246

Candidate Starts for ShayRa\_48:

(Start: 246 @29944 has 877 MA's), (347, 29770), (400, 29665), (402, 29662), (416, 29635), (425, 29608), (444, 29557), (479, 29455), (539, 29362), (554, 29317), (556, 29314), (560, 29305), (635, 29143), (646, 29116), (659, 29095), (662, 29089), (717, 28990), (726, 28951), (738, 28900), (743, 28870), (755, 28819), (766, 28786), (774, 28753), (776, 28747), (783, 28717), (810, 28657), (814, 28636), (827, 28594), (835, 28567), (843, 28552), (876, 28465), (902, 28402), (903, 28399), (946, 28243), (950, 28231), (957, 28219),

Gene: Shayna\_42 Start: 28849, Stop: 30720, Start Num: 246

Candidate Starts for Shayna\_42:

(Start: 246 @28849 has 877 MA's), (279, 28897), (287, 28918), (Start: 301 @28939 has 110 MA's), (429, 29182), (433, 29194), (435, 29206), (438, 29212), (467, 29278), (565, 29473), (585, 29521), (711, 29800), (743, 29938), (782, 30085), (783, 30091), (813, 30184), (831, 30244), (874, 30355), (876, 30361), (912, 30475), (923, 30505), (924, 30508), (946, 30586), (949, 30595),

Gene: SheaKeira\_43 Start: 30794, Stop: 29001, Start Num: 246

Candidate Starts for SheaKeira\_43:

(Start: 246 @30794 has 877 MA's), (261, 30785), (280, 30743), (346, 30623), (347, 30620), (368, 30581), (372, 30572), (402, 30512), (416, 30485), (420, 30470), (425, 30458), (444, 30407), (479, 30305), (539, 30212), (547, 30188), (554, 30167), (612, 30044), (687, 29885), (690, 29882), (714, 29846), (716, 29840), (743, 29717), (762, 29651), (776, 29594), (780, 29582), (783, 29564), (810, 29504), (814, 29483), (820, 29465), (853, 29366), (880, 29303), (902, 29249), (924, 29168), (930, 29147), (946, 29090), (950, 29078), (955, 29069),

Gene: SheckWes\_48 Start: 33927, Stop: 31552, Start Num: 46

Candidate Starts for SheckWes\_48:

(Start: 46 @33927 has 13 MA's), (63, 33867), (93, 33786), (138, 33666), (179, 33621), (Start: 232 @33543 has 3 MA's), (Start: 238 @33537 has 3 MA's), (Start: 241 @33534 has 13 MA's), (267, 33504), (275, 33486), (287, 33456), (305, 33429), (Start: 308 @33426 has 5 MA's), (329, 33369), (340, 33348), (354, 33330), (389, 33267), (398, 33243), (402, 33234), (406, 33222), (420, 33189), (430, 33168), (435, 33147), (499, 32964), (526, 32889), (531, 32868), (539, 32847), (605, 32760), (643, 32712), (657, 32682), (660, 32676), (682, 32631), (683, 32628), (690, 32613), (702, 32592), (703, 32589), (726, 32508), (733, 32478), (747, 32418), (749, 32409), (752, 32394), (755, 32379), (760, 32367), (783, 32274), (792, 32238), (794, 32232), (796, 32226), (797, 32220), (815, 32163), (822, 32139), (856, 32034), (858, 32031), (878, 31980), (889, 31938), (893, 31920), (903, 31881), (911, 31839), (920, 31815), (929, 31785), (940, 31737), (943, 31728), (947, 31713), (958, 31689), (968, 31668), (987, 31614), (1004, 31581),

Gene: Shee\_39 Start: 28927, Stop: 27062, Start Num: 301

Candidate Starts for Shee\_39:

(Start: 238 @29014 has 3 MA's), (Start: 241 @29011 has 13 MA's), (Start: 301 @28927 has 110 MA's), (Start: 308 @28918 has 5 MA's), (354, 28813), (358, 28804), (375, 28774), (378, 28771), (433, 28651), (435, 28639), (438, 28633), (475, 28528), (484, 28501), (531, 28360), (536, 28354), (537, 28351), (539, 28339), (548, 28312), (549, 28309), (554, 28294), (556, 28288), (559, 28282), (586, 28249), (676, 28060), (776, 27745), (779, 27736), (780, 27733), (783, 27715), (794, 27673), (796, 27667), (798, 27658), (805, 27643), (822, 27586), (878, 27427), (885, 27397), (888, 27388), (903, 27328), (906, 27304), (919, 27265), (929, 27232), (932, 27220), (947, 27160),

Gene: Sheen\_44 Start: 33301, Stop: 31466, Start Num: 246

Candidate Starts for Sheen\_44:

(Start: 246 @33301 has 877 MA's), (267, 33280), (318, 33190), (387, 33052), (422, 32974), (425, 32968), (479, 32815), (537, 32731), (539, 32719), (554, 32674), (558, 32671), (585, 32611), (610,

32560), (614, 32548), (659, 32458), (683, 32413), (716, 32344), (726, 32302), (740, 32242), (743, 32221), (753, 32173), (771, 32125), (776, 32098), (777, 32095), (783, 32068), (793, 32029), (815, 31960), (827, 31921), (843, 31879), (844, 31876), (853, 31846), (888, 31750), (901, 31723), (909, 31675), (910, 31672), (946, 31555), (950, 31543), (955, 31534),

Gene: Sheila\_58 Start: 53417, Stop: 51558, Start Num: 205

Candidate Starts for Sheila\_58:

(Start: 188 @53441 has 1 MA's), (Start: 205 @53417 has 304 MA's), (Start: 235 @53393 has 6 MA's), (Start: 250 @53387 has 2 MA's), (267, 53360), (Start: 274 @53345 has 6 MA's), (283, 53324), (342, 53204), (360, 53174), (391, 53114), (399, 53093), (421, 53039), (428, 53027), (434, 53009), (436, 52997), (476, 52892), (519, 52835), (538, 52799), (542, 52787), (552, 52760), (570, 52715), (598, 52658), (602, 52649), (603, 52646), (604, 52643), (712, 52388), (738, 52286), (744, 52253), (750, 52232), (777, 52139), (780, 52130), (795, 52067), (814, 52031), (815, 52028), (820, 52013), (847, 51935), (851, 51923), (858, 51902), (875, 51863), (905, 51773), (910, 51755), (912, 51749), (917, 51734), (926, 51710), (930, 51695), (931, 51692), (933, 51680), (940, 51656), (963, 51608), (972, 51584),

Gene: SheldonCooper\_47 Start: 31993, Stop: 30167, Start Num: 246

Candidate Starts for SheldonCooper\_47:

(Start: 246 @31993 has 877 MA's), (279, 31945), (364, 31789), (400, 31717), (425, 31660), (429, 31651), (471, 31531), (479, 31507), (539, 31414), (558, 31366), (568, 31345), (585, 31306), (607, 31261), (646, 31174), (652, 31165), (659, 31153), (683, 31108), (687, 31096), (740, 30943), (743, 30922), (776, 30799), (783, 30769), (793, 30730), (814, 30664), (815, 30661), (827, 30622), (834, 30598), (905, 30391), (946, 30256), (950, 30244), (955, 30235),

Gene: Shenandoah\_57 Start: 53309, Stop: 51492, Start Num: 247

Candidate Starts for Shenandoah\_57:

(130, 53492), (Start: 247 @53309 has 43 MA's), (267, 53279), (368, 53099), (417, 52994), (433, 52946), (435, 52934), (448, 52904), (454, 52898), (476, 52835), (478, 52829), (519, 52778), (538, 52742), (556, 52694), (603, 52589), (645, 52493), (674, 52442), (724, 52298), (732, 52259), (739, 52229), (744, 52202), (748, 52190), (775, 52094), (777, 52088), (780, 52079), (782, 52067), (807, 51995), (814, 51965), (820, 51947), (822, 51938), (847, 51869), (851, 51857), (858, 51836), (888, 51767), (898, 51752), (903, 51728), (910, 51689), (912, 51683), (926, 51644), (931, 51626), (933, 51614), (936, 51602), (940, 51590), (972, 51518),

Gene: Shenyu\_58 Start: 54813, Stop: 52966, Start Num: 189

Candidate Starts for Shenyu\_58:

(15, 55296), (17, 55290), (27, 55239), (33, 55221), (43, 55164), (143, 54876), (189, 54813), (248, 54765), (267, 54738), (292, 54687), (367, 54567), (434, 54417), (453, 54375), (466, 54339), (476, 54309), (538, 54216), (542, 54204), (551, 54180), (556, 54168), (564, 54150), (592, 54087), (603, 54063), (652, 53958), (659, 53949), (703, 53835), (725, 53769), (727, 53751), (739, 53703), (744, 53676), (775, 53568), (777, 53562), (780, 53553), (784, 53532), (807, 53469), (815, 53436), (820, 53421), (841, 53361), (847, 53343), (851, 53331), (858, 53310), (861, 53301), (863, 53298), (868, 53286), (905, 53181), (910, 53163), (912, 53157), (926, 53118), (930, 53103), (931, 53100), (936, 53076), (940, 53064), (941, 53061), (965, 53013), (972, 52992), (979, 52971),

Gene: ShiVal\_58 Start: 54054, Stop: 52195, Start Num: 205

Candidate Starts for ShiVal\_58:

(Start: 188 @54078 has 1 MA's), (Start: 205 @54054 has 304 MA's), (Start: 235 @54030 has 6 MA's), (Start: 250 @54024 has 2 MA's), (Start: 274 @53982 has 6 MA's), (283, 53961), (337, 53847), (342, 53841), (360, 53811), (391, 53751), (399, 53730), (421, 53676), (428, 53664), (434, 53646), (436, 53634), (476, 53529), (519, 53472), (538, 53436), (542, 53424), (552, 53397), (564, 53370), (570, 53352), (580, 53334), (598, 53295), (602, 53286), (603, 53283), (712, 53025), (738, 52923), (744,

52890), (750, 52869), (777, 52776), (780, 52767), (795, 52704), (814, 52668), (815, 52665), (820, 52650), (847, 52572), (851, 52560), (858, 52539), (875, 52500), (905, 52410), (910, 52392), (912, 52386), (917, 52371), (926, 52347), (930, 52332), (931, 52329), (933, 52317), (940, 52293), (963, 52245), (972, 52221),

Gene: Shocker\_43 Start: 33276, Stop: 31243, Start Num: 284

Candidate Starts for Shocker\_43:

(Start: 284 @33276 has 1 MA's), (362, 33123), (376, 33090), (385, 33072), (401, 33033), (440, 32913), (444, 32904), (532, 32709), (547, 32664), (578, 32583), (582, 32577), (585, 32571), (594, 32550), (613, 32511), (630, 32481), (640, 32454), (661, 32412), (664, 32403), (687, 32343), (717, 32268), (778, 32001), (787, 31935), (815, 31803), (826, 31764), (857, 31668), (872, 31632), (876, 31617), (880, 31608), (893, 31566), (898, 31551), (906, 31497), (907, 31494), (922, 31440), (968, 31302), (971, 31293),

Gene: ShortQueendom\_39 Start: 30936, Stop: 29110, Start Num: 246

Candidate Starts for ShortQueendom\_39:

(Start: 246 @30936 has 877 MA's), (368, 30723), (374, 30708), (400, 30660), (416, 30630), (422, 30609), (425, 30603), (429, 30594), (470, 30477), (479, 30450), (539, 30357), (544, 30342), (556, 30309), (578, 30258), (580, 30255), (612, 30189), (627, 30159), (639, 30129), (662, 30084), (683, 30045), (743, 29865), (752, 29835), (753, 29817), (755, 29814), (767, 29778), (783, 29712), (814, 29631), (815, 29628), (843, 29547), (902, 29397), (903, 29394), (909, 29358), (917, 29334), (921, 29325), (925, 29313), (946, 29238), (955, 29217),

Gene: Shrew\_79 Start: 46522, Stop: 49053, Start Num: 28

Candidate Starts for Shrew\_79:

(Start: 28 @46522 has 1 MA's), (81, 46708), (138, 46867), (218, 46969), (Start: 238 @46996 has 3 MA's), (Start: 241 @46999 has 13 MA's), (278, 47047), (Start: 299 @47089 has 38 MA's), (328, 47167), (343, 47194), (350, 47215), (371, 47251), (421, 47365), (435, 47404), (456, 47461), (487, 47530), (498, 47563), (526, 47641), (631, 47848), (647, 47887), (677, 47965), (680, 47977), (683, 47983), (698, 48007), (703, 48019), (747, 48193), (750, 48208), (752, 48217), (779, 48316), (783, 48337), (799, 48400), (813, 48439), (822, 48475), (870, 48613), (884, 48655), (893, 48694), (903, 48733), (909, 48769), (929, 48829), (947, 48901), (950, 48910), (966, 48940), (973, 48967), (1000, 49033),

Gene: Shuman\_36 Start: 28126, Stop: 26342, Start Num: 246

Candidate Starts for Shuman\_36:

(Start: 246 @28126 has 877 MA's), (379, 27892), (395, 27862), (399, 27853), (400, 27850), (420, 27805), (425, 27793), (444, 27742), (479, 27640), (496, 27619), (539, 27547), (554, 27502), (556, 27499), (574, 27457), (577, 27451), (585, 27436), (598, 27409), (646, 27304), (652, 27295), (662, 27277), (683, 27238), (716, 27181), (743, 27058), (753, 27010), (783, 26905), (784, 26902), (810, 26845), (814, 26824), (829, 26776), (855, 26701), (886, 26632), (902, 26590), (905, 26566), (930, 26488), (946, 26431), (950, 26419), (955, 26410), (969, 26380), (978, 26362),

Gene: Shygu2\_44 Start: 31522, Stop: 29693, Start Num: 246

Candidate Starts for Shygu2\_44:

(Start: 246 @31522 has 877 MA's), (280, 31471), (295, 31441), (383, 31279), (394, 31261), (400, 31246), (425, 31189), (429, 31180), (433, 31168), (471, 31060), (479, 31036), (539, 30943), (558, 30895), (568, 30874), (585, 30835), (646, 30703), (659, 30682), (683, 30637), (687, 30625), (740, 30472), (743, 30451), (783, 30298), (792, 30262), (793, 30259), (815, 30187), (820, 30172), (827, 30148), (832, 30130), (834, 30124), (837, 30118), (905, 29917), (946, 29782), (950, 29770), (955, 29761),

Gene: Sibs6\_45 Start: 33579, Stop: 31753, Start Num: 246

Candidate Starts for Sibs6\_45:

(Start: 246 @33579 has 877 MA's), (368, 33366), (374, 33351), (400, 33303), (416, 33273), (422, 33252), (425, 33246), (429, 33237), (470, 33120), (479, 33093), (539, 33000), (544, 32985), (578, 32901), (580, 32898), (612, 32832), (627, 32802), (639, 32772), (662, 32727), (683, 32688), (743, 32508), (753, 32460), (767, 32421), (783, 32355), (793, 32316), (810, 32295), (814, 32274), (820, 32256), (843, 32190), (902, 32040), (903, 32037), (909, 32001), (917, 31977), (921, 31968), (925, 31956), (938, 31908), (946, 31881), (955, 31860),

Gene: Sigman\_61 Start: 54010, Stop: 52151, Start Num: 205

Candidate Starts for Sigman\_61:

(Start: 188 @54034 has 1 MA's), (Start: 205 @54010 has 304 MA's), (Start: 235 @53986 has 6 MA's), (Start: 250 @53980 has 2 MA's), (Start: 274 @53938 has 6 MA's), (283, 53917), (337, 53803), (342, 53797), (360, 53767), (391, 53707), (399, 53686), (421, 53632), (428, 53620), (434, 53602), (436, 53590), (476, 53485), (519, 53428), (538, 53392), (542, 53380), (551, 53356), (556, 53344), (564, 53326), (570, 53308), (580, 53290), (598, 53251), (602, 53242), (603, 53239), (604, 53236), (738, 52879), (744, 52846), (750, 52825), (777, 52732), (780, 52723), (795, 52660), (814, 52624), (815, 52621), (820, 52606), (847, 52528), (851, 52516), (858, 52495), (875, 52456), (905, 52366), (910, 52348), (912, 52342), (917, 52327), (926, 52303), (930, 52288), (931, 52285), (933, 52273), (940, 52249), (963, 52201), (972, 52177),

Gene: SilverBell\_61 Start: 54295, Stop: 52436, Start Num: 205

Candidate Starts for SilverBell\_61:

(Start: 188 @54319 has 1 MA's), (Start: 205 @54295 has 304 MA's), (Start: 235 @54271 has 6 MA's), (Start: 250 @54265 has 2 MA's), (Start: 274 @54223 has 6 MA's), (283, 54202), (337, 54088), (342, 54082), (360, 54052), (391, 53992), (399, 53971), (421, 53917), (428, 53905), (434, 53887), (436, 53875), (476, 53770), (519, 53713), (538, 53677), (542, 53665), (551, 53641), (556, 53629), (564, 53611), (570, 53593), (580, 53575), (598, 53536), (602, 53527), (603, 53524), (604, 53521), (738, 53164), (744, 53131), (750, 53110), (777, 53017), (780, 53008), (795, 52945), (814, 52909), (815, 52906), (820, 52891), (847, 52813), (851, 52801), (858, 52780), (875, 52741), (905, 52651), (910, 52633), (912, 52627), (917, 52612), (926, 52588), (930, 52573), (931, 52570), (933, 52558), (940, 52534), (963, 52486), (972, 52462),

Gene: Simielle\_60 Start: 54014, Stop: 52155, Start Num: 205

Candidate Starts for Simielle\_60:

(Start: 188 @54038 has 1 MA's), (Start: 205 @54014 has 304 MA's), (Start: 235 @53990 has 6 MA's), (Start: 250 @53984 has 2 MA's), (Start: 274 @53942 has 6 MA's), (283, 53921), (337, 53807), (342, 53801), (360, 53771), (391, 53711), (399, 53690), (421, 53636), (428, 53624), (434, 53606), (436, 53594), (476, 53489), (519, 53432), (538, 53396), (542, 53384), (552, 53357), (570, 53312), (598, 53255), (602, 53246), (603, 53243), (712, 52985), (738, 52883), (744, 52850), (750, 52829), (777, 52736), (780, 52727), (795, 52664), (814, 52628), (815, 52625), (820, 52610), (847, 52532), (851, 52520), (858, 52499), (875, 52460), (905, 52370), (910, 52352), (912, 52346), (917, 52331), (926, 52307), (930, 52292), (931, 52289), (933, 52277), (940, 52253), (963, 52205), (972, 52181),

Gene: Simpson\_43 Start: 29708, Stop: 31573, Start Num: 245

Candidate Starts for Simpson\_43:

(Start: 245 @29708 has 74 MA's), (279, 29756), (416, 30005), (433, 30053), (448, 30095), (541, 30302), (544, 30311), (580, 30401), (585, 30410), (591, 30425), (613, 30470), (635, 30515), (659, 30563), (687, 30620), (717, 30701), (737, 30788), (743, 30821), (752, 30851), (767, 30908), (783, 30974), (813, 31067), (834, 31139), (878, 31247), (902, 31310), (905, 31334), (939, 31445), (946, 31469), (949, 31478),

Gene: Sinatra\_37 Start: 28491, Stop: 26641, Start Num: 297

Candidate Starts for Sinatra\_37:

(Start: 297 @28491 has 18 MA's), (358, 28368), (378, 28335), (430, 28224), (435, 28203), (438, 28197), (456, 28146), (512, 27990), (531, 27936), (536, 27930), (537, 27927), (539, 27915), (549, 27885), (559, 27858), (585, 27828), (658, 27681), (718, 27534), (776, 27324), (780, 27312), (783, 27294), (794, 27252), (798, 27237), (812, 27201), (822, 27165), (885, 26976), (888, 26967), (903, 26907), (906, 26883), (912, 26862), (917, 26850), (947, 26739),

Gene: SirBeauregard\_61 Start: 54580, Stop: 52721, Start Num: 205

Candidate Starts for SirBeauregard\_61:

(Start: 188 @54604 has 1 MA's), (Start: 205 @54580 has 304 MA's), (Start: 235 @54556 has 6 MA's), (Start: 250 @54550 has 2 MA's), (Start: 274 @54508 has 6 MA's), (283, 54487), (337, 54373), (342, 54367), (360, 54337), (391, 54277), (399, 54256), (421, 54202), (428, 54190), (434, 54172), (436, 54160), (476, 54055), (519, 53998), (538, 53962), (542, 53950), (551, 53926), (556, 53914), (564, 53896), (570, 53878), (580, 53860), (598, 53821), (602, 53812), (603, 53809), (604, 53806), (738, 53449), (744, 53416), (750, 53395), (777, 53302), (780, 53293), (795, 53230), (814, 53194), (815, 53191), (820, 53176), (847, 53098), (851, 53086), (858, 53065), (875, 53026), (905, 52936), (910, 52918), (912, 52912), (917, 52897), (926, 52873), (930, 52858), (931, 52855), (933, 52843), (940, 52819), (963, 52771), (972, 52747),

Gene: SirJeffery\_57 Start: 54475, Stop: 52676, Start Num: 250

Candidate Starts for SirJeffery\_57:

(129, 54625), (157, 54559), (Start: 197 @54505 has 27 MA's), (Start: 230 @54484 has 1 MA's), (Start: 250 @54475 has 2 MA's), (267, 54448), (291, 54400), (357, 54289), (367, 54277), (434, 54127), (445, 54097), (453, 54085), (466, 54049), (476, 54019), (538, 53926), (542, 53914), (543, 53911), (551, 53890), (556, 53878), (564, 53860), (592, 53797), (603, 53773), (652, 53668), (703, 53545), (712, 53521), (721, 53494), (724, 53482), (725, 53479), (727, 53461), (739, 53413), (744, 53386), (759, 53335), (777, 53272), (780, 53263), (807, 53179), (815, 53146), (820, 53131), (841, 53071), (847, 53053), (851, 53041), (858, 53020), (861, 53011), (863, 53008), (905, 52891), (910, 52873), (912, 52867), (926, 52828), (929, 52816), (930, 52813), (933, 52798), (936, 52786), (940, 52774), (941, 52771), (956, 52732), (965, 52723), (972, 52702), (979, 52681),

Gene: SirVictor\_37 Start: 28567, Stop: 26717, Start Num: 297

Candidate Starts for SirVictor\_37:

(202, 28708), (Start: 272 @28618 has 4 MA's), (Start: 297 @28567 has 18 MA's), (344, 28468), (358, 28444), (378, 28411), (430, 28300), (435, 28279), (438, 28273), (454, 28228), (456, 28222), (512, 28066), (537, 28003), (539, 27991), (549, 27961), (585, 27904), (718, 27610), (776, 27400), (779, 27391), (780, 27388), (783, 27370), (794, 27328), (822, 27241), (903, 26983), (906, 26959), (907, 26956), (917, 26926), (947, 26815),

Gene: Sisko\_49 Start: 45974, Stop: 44160, Start Num: 235

Candidate Starts for Sisko\_49:

(171, 46064), (175, 46058), (Start: 235 @45974 has 6 MA's), (Start: 250 @45965 has 2 MA's), (Start: 274 @45923 has 6 MA's), (337, 45797), (366, 45755), (384, 45713), (417, 45644), (433, 45605), (435, 45593), (436, 45590), (469, 45515), (476, 45494), (538, 45401), (591, 45275), (598, 45260), (603, 45248), (642, 45158), (727, 44936), (744, 44861), (777, 44747), (780, 44738), (795, 44675), (815, 44636), (820, 44621), (847, 44543), (851, 44531), (852, 44525), (858, 44510), (861, 44501), (865, 44492), (901, 44414), (905, 44381), (906, 44378), (924, 44324), (926, 44318), (934, 44282), (940, 44258), (972, 44186),

Gene: Sixama\_172 Start: 99122, Stop: 97338, Start Num: 254

Candidate Starts for Sixama\_172:

(202, 99188), (Start: 220 @99161 has 1 MA's), (Start: 254 @99122 has 2 MA's), (315, 99014), (346, 98954), (364, 98921), (399, 98858), (419, 98813), (435, 98768), (436, 98765), (472, 98687), (477, 98672), (478, 98669), (482, 98657), (539, 98588), (571, 98504), (585, 98477), (591, 98462), (668,

98303), (683, 98279), (736, 98138), (740, 98117), (743, 98096), (788, 97916), (803, 97859), (834, 97757), (840, 97748), (862, 97685), (867, 97673), (871, 97664), (906, 97544), (909, 97532), (912, 97523), (914, 97517), (922, 97496), (924, 97490), (926, 97484), (931, 97466), (932, 97460), (946, 97412), (977, 97361),

Gene: SketchMex\_43 Start: 32515, Stop: 30125, Start Num: 36

Candidate Starts for SketchMex\_43:

(Start: 36 @32515 has 16 MA's), (63, 32452), (70, 32434), (75, 32419), (93, 32365), (97, 32353), (103, 32332), (117, 32299), (128, 32272), (138, 32248), (164, 32221), (Start: 241 @32116 has 13 MA's), (275, 32068), (329, 31951), (374, 31870), (391, 31843), (398, 31822), (420, 31768), (421, 31765), (430, 31747), (435, 31726), (457, 31666), (526, 31468), (539, 31426), (605, 31339), (615, 31315), (633, 31309), (657, 31255), (660, 31249), (680, 31207), (682, 31204), (683, 31201), (733, 31054), (741, 31012), (749, 30985), (760, 30943), (783, 30850), (792, 30814), (794, 30808), (796, 30802), (797, 30796), (805, 30772), (815, 30739), (822, 30715), (836, 30670), (856, 30610), (903, 30457), (947, 30289), (968, 30244), (971, 30235), (973, 30226),

Gene: SkiPole\_47 Start: 35312, Stop: 33483, Start Num: 246

Candidate Starts for SkiPole\_47:

(Start: 246 @35312 has 877 MA's), (368, 35099), (374, 35084), (400, 35036), (416, 35006), (422, 34985), (425, 34979), (429, 34970), (470, 34853), (479, 34826), (539, 34733), (544, 34718), (578, 34634), (580, 34631), (612, 34565), (639, 34505), (662, 34460), (683, 34421), (743, 34241), (753, 34193), (771, 34145), (780, 34106), (783, 34088), (793, 34049), (810, 34028), (814, 34007), (819, 33992), (861, 33869), (922, 33698), (929, 33674), (943, 33626), (946, 33614), (955, 33593), (959, 33587), (981, 33539), (986, 33524),

Gene: Skipitt\_44 Start: 31564, Stop: 29738, Start Num: 246

Candidate Starts for Skipitt\_44:

(Start: 246 @31564 has 877 MA's), (267, 31543), (280, 31513), (295, 31483), (383, 31321), (394, 31303), (425, 31231), (429, 31222), (471, 31102), (479, 31078), (539, 30985), (558, 30937), (568, 30916), (585, 30877), (646, 30745), (659, 30724), (683, 30679), (687, 30667), (740, 30514), (743, 30493), (776, 30370), (783, 30340), (793, 30301), (814, 30235), (815, 30232), (820, 30217), (827, 30193), (834, 30169), (905, 29962), (946, 29827), (950, 29815), (955, 29806),

Gene: Skippy\_61 Start: 54268, Stop: 52409, Start Num: 205

Candidate Starts for Skippy\_61:

(Start: 188 @54292 has 1 MA's), (Start: 205 @54268 has 304 MA's), (Start: 235 @54244 has 6 MA's), (Start: 250 @54238 has 2 MA's), (Start: 274 @54196 has 6 MA's), (283, 54175), (337, 54061), (342, 54055), (360, 54025), (391, 53965), (399, 53944), (421, 53890), (428, 53878), (434, 53860), (436, 53848), (476, 53743), (519, 53686), (538, 53650), (542, 53638), (551, 53614), (556, 53602), (564, 53584), (570, 53566), (580, 53548), (598, 53509), (602, 53500), (603, 53497), (604, 53494), (712, 53239), (738, 53137), (744, 53104), (750, 53083), (777, 52990), (780, 52981), (795, 52918), (814, 52882), (815, 52879), (820, 52864), (847, 52786), (851, 52774), (858, 52753), (875, 52714), (905, 52624), (910, 52606), (912, 52600), (917, 52585), (926, 52561), (930, 52546), (931, 52543), (933, 52531), (940, 52507), (946, 52486), (963, 52459), (972, 52435),

Gene: Sknot\_46 Start: 31360, Stop: 29573, Start Num: 246

Candidate Starts for Sknot\_46:

(Start: 246 @31360 has 877 MA's), (364, 31156), (366, 31153), (368, 31147), (383, 31117), (400, 31084), (402, 31081), (416, 31054), (425, 31027), (444, 30976), (479, 30874), (539, 30781), (556, 30733), (560, 30724), (568, 30709), (598, 30643), (635, 30562), (659, 30514), (726, 30370), (743, 30289), (755, 30238), (766, 30205), (783, 30136), (793, 30097), (810, 30076), (814, 30055), (818, 30043), (886, 29863), (888, 29857), (902, 29821), (905, 29797), (930, 29719), (946, 29662), (950, 29650),



Gene: Skylord\_40 Start: 27452, Stop: 29320, Start Num: 243

Candidate Starts for Skylord\_40:

(Start: 243 @27452 has 7 MA's), (Start: 246 @27455 has 877 MA's), (249, 27458), (287, 27527), (434, 27809), (444, 27836), (467, 27890), (552, 28055), (585, 28130), (594, 28151), (731, 28505), (743, 28565), (755, 28616), (774, 28682), (783, 28718), (813, 28811), (874, 28982), (902, 29054), (924, 29135), (945, 29210), (946, 29213), (955, 29234), (989, 29303),

Gene: Slagathor\_47 Start: 35125, Stop: 33338, Start Num: 246

Candidate Starts for Slagathor\_47:

(Start: 246 @35125 has 877 MA's), (368, 34912), (374, 34897), (416, 34819), (422, 34798), (425, 34792), (429, 34783), (470, 34666), (479, 34639), (539, 34546), (544, 34531), (556, 34498), (578, 34447), (580, 34444), (612, 34378), (627, 34348), (639, 34318), (662, 34273), (683, 34234), (743, 34054), (753, 34006), (767, 33967), (783, 33901), (812, 33829), (814, 33820), (843, 33736), (876, 33649), (917, 33523), (922, 33511), (946, 33427), (948, 33421),

Gene: Slatt\_61 Start: 54333, Stop: 52474, Start Num: 205

Candidate Starts for Slatt\_61:

(Start: 188 @54357 has 1 MA's), (Start: 205 @54333 has 304 MA's), (Start: 235 @54309 has 6 MA's), (Start: 250 @54303 has 2 MA's), (Start: 274 @54261 has 6 MA's), (283, 54240), (337, 54126), (342, 54120), (360, 54090), (391, 54030), (399, 54009), (421, 53955), (428, 53943), (434, 53925), (436, 53913), (476, 53808), (519, 53751), (538, 53715), (542, 53703), (552, 53676), (564, 53649), (570, 53631), (580, 53613), (598, 53574), (602, 53565), (603, 53562), (738, 53202), (744, 53169), (750, 53148), (777, 53055), (780, 53046), (795, 52983), (814, 52947), (815, 52944), (820, 52929), (847, 52851), (851, 52839), (858, 52818), (875, 52779), (905, 52689), (910, 52671), (912, 52665), (917, 52650), (926, 52626), (930, 52611), (931, 52608), (933, 52596), (940, 52572), (963, 52524), (972, 52500),

Gene: Slay\_43 Start: 30006, Stop: 31880, Start Num: 246

Candidate Starts for Slay\_43:

(Start: 243 @30003 has 7 MA's), (Start: 246 @30006 has 877 MA's), (287, 30075), (Start: 301 @30096 has 110 MA's), (364, 30213), (400, 30276), (429, 30342), (444, 30384), (585, 30678), (646, 30813), (696, 30912), (731, 31035), (743, 31095), (746, 31101), (755, 31146), (762, 31161), (764, 31176), (774, 31212), (783, 31248), (813, 31341), (844, 31434), (874, 31512), (902, 31584), (909, 31623), (924, 31665), (929, 31683), (946, 31743), (955, 31764),

Gene: SlippinJimmy\_60 Start: 54842, Stop: 53025, Start Num: 247

Candidate Starts for SlippinJimmy\_60:

(130, 55025), (Start: 247 @54842 has 43 MA's), (267, 54812), (368, 54632), (433, 54479), (435, 54467), (448, 54437), (454, 54431), (476, 54368), (478, 54362), (519, 54311), (538, 54275), (556, 54227), (603, 54122), (645, 54026), (674, 53975), (724, 53831), (732, 53792), (739, 53762), (744, 53735), (748, 53723), (775, 53627), (777, 53621), (780, 53612), (782, 53600), (807, 53528), (814, 53498), (820, 53480), (822, 53471), (847, 53402), (851, 53390), (858, 53369), (888, 53300), (898, 53285), (903, 53261), (905, 53240), (910, 53222), (912, 53216), (924, 53183), (926, 53177), (931, 53159), (933, 53147), (936, 53135), (940, 53123), (956, 53081), (972, 53051),

Gene: Smairt\_47 Start: 35424, Stop: 33637, Start Num: 246

Candidate Starts for Smairt\_47:

(Start: 246 @35424 has 877 MA's), (368, 35211), (374, 35196), (416, 35118), (422, 35097), (425, 35091), (429, 35082), (470, 34965), (479, 34938), (539, 34845), (544, 34830), (551, 34809), (556, 34797), (578, 34746), (580, 34743), (607, 34689), (612, 34677), (627, 34647), (639, 34617), (662, 34572), (683, 34533), (743, 34353), (753, 34305), (767, 34266), (783, 34200), (812, 34128), (814, 34119), (843, 34035), (876, 33948), (917, 33822), (922, 33810), (946, 33726), (948, 33720),

Gene: Smeadley\_43 Start: 30722, Stop: 28878, Start Num: 246

Candidate Starts for Smeadley\_43:

(139, 30887), (Start: 246 @30722 has 877 MA's), (280, 30671), (347, 30548), (364, 30518), (383, 30479), (400, 30446), (416, 30416), (422, 30395), (425, 30389), (429, 30380), (444, 30338), (461, 30287), (478, 30239), (479, 30236), (539, 30140), (548, 30113), (554, 30095), (556, 30092), (560, 30083), (585, 30029), (598, 30002), (620, 29954), (646, 29897), (662, 29870), (687, 29819), (698, 29804), (740, 29657), (743, 29636), (752, 29606), (753, 29588), (755, 29585), (762, 29570), (767, 29549), (771, 29540), (776, 29513), (780, 29501), (783, 29483), (814, 29402), (818, 29390), (834, 29336), (849, 29300), (861, 29264), (876, 29231), (886, 29210), (888, 29204), (903, 29165), (905, 29144), (910, 29126), (946, 29009), (948, 29003), (950, 28997),

Gene: Smeagan\_47 Start: 31877, Stop: 30090, Start Num: 246

Candidate Starts for Smeagan\_47:

(Start: 246 @31877 has 877 MA's), (366, 31670), (368, 31664), (375, 31649), (383, 31634), (402, 31598), (416, 31571), (425, 31544), (433, 31523), (479, 31391), (539, 31298), (554, 31253), (556, 31250), (560, 31241), (568, 31226), (598, 31160), (635, 31079), (659, 31031), (662, 31025), (743, 30806), (755, 30755), (766, 30722), (767, 30719), (783, 30653), (793, 30614), (810, 30593), (831, 30518), (834, 30506), (853, 30455), (880, 30392), (888, 30374), (902, 30338), (905, 30314), (930, 30236), (946, 30179), (950, 30167), (955, 30158),

Gene: Smeagol\_46 Start: 35946, Stop: 34120, Start Num: 246

Candidate Starts for Smeagol\_46:

(Start: 246 @35946 has 877 MA's), (368, 35733), (374, 35718), (416, 35640), (422, 35619), (425, 35613), (429, 35604), (470, 35487), (479, 35460), (539, 35367), (544, 35352), (556, 35319), (578, 35268), (580, 35265), (612, 35199), (627, 35169), (639, 35139), (662, 35094), (683, 35055), (743, 34875), (753, 34827), (755, 34824), (767, 34788), (783, 34722), (814, 34641), (815, 34638), (843, 34557), (902, 34407), (903, 34404), (909, 34368), (917, 34344), (925, 34323), (946, 34248), (955, 34227),

Gene: SmellyB\_45 Start: 29627, Stop: 27786, Start Num: 246

Candidate Starts for SmellyB\_45:

(Start: 246 @29627 has 877 MA's), (364, 29423), (400, 29348), (402, 29345), (416, 29318), (420, 29303), (425, 29291), (444, 29240), (475, 29150), (479, 29138), (539, 29045), (552, 29006), (560, 28988), (568, 28973), (598, 28907), (613, 28874), (614, 28871), (663, 28769), (697, 28709), (726, 28625), (743, 28544), (766, 28460), (767, 28457), (771, 28448), (776, 28421), (783, 28391), (810, 28331), (820, 28292), (902, 28076), (903, 28073), (905, 28052), (946, 27917), (950, 27905), (955, 27896), (957, 27893), (1000, 27800),

Gene: SnapTap\_44 Start: 31345, Stop: 29558, Start Num: 246

Candidate Starts for SnapTap\_44:

(102, 31600), (Start: 246 @31345 has 877 MA's), (364, 31141), (366, 31138), (368, 31132), (375, 31117), (383, 31102), (400, 31069), (402, 31066), (416, 31039), (425, 31012), (433, 30991), (444, 30961), (479, 30859), (539, 30766), (556, 30718), (560, 30709), (568, 30694), (598, 30628), (635, 30547), (659, 30499), (662, 30493), (697, 30430), (726, 30355), (743, 30274), (755, 30223), (766, 30190), (767, 30187), (783, 30121), (793, 30082), (810, 30061), (831, 29986), (837, 29968), (853, 29923), (864, 29896), (880, 29860), (886, 29848), (888, 29842), (902, 29806), (905, 29782), (930, 29704), (946, 29647), (950, 29635), (955, 29626),

Gene: Snape\_44 Start: 30329, Stop: 28542, Start Num: 246

Candidate Starts for Snape\_44:

(Start: 246 @30329 has 877 MA's), (364, 30125), (400, 30053), (416, 30023), (425, 29996), (541, 29744), (560, 29693), (598, 29612), (619, 29567), (659, 29483), (687, 29426), (715, 29384), (726,

29339), (743, 29258), (755, 29207), (767, 29171), (783, 29105), (810, 29045), (812, 29033), (846, 28931), (853, 28907), (860, 28889), (888, 28826), (901, 28799), (902, 28790), (905, 28766), (946, 28631), (950, 28619), (955, 28610),

Gene: Snazzy\_42 Start: 34003, Stop: 32177, Start Num: 246

Candidate Starts for Snazzy\_42:

(Start: 246 @34003 has 877 MA's), (368, 33790), (374, 33775), (416, 33697), (422, 33676), (425, 33670), (429, 33661), (470, 33544), (479, 33517), (539, 33424), (544, 33409), (556, 33376), (578, 33325), (580, 33322), (612, 33256), (627, 33226), (639, 33196), (662, 33151), (683, 33112), (743, 32932), (752, 32902), (753, 32884), (755, 32881), (767, 32845), (783, 32779), (814, 32698), (815, 32695), (843, 32614), (902, 32464), (903, 32461), (909, 32425), (917, 32401), (921, 32392), (925, 32380), (946, 32305), (955, 32284),

Gene: Snek\_40 Start: 28185, Stop: 30029, Start Num: 245

Candidate Starts for Snek\_40:

(Start: 245 @28185 has 74 MA's), (279, 28233), (317, 28293), (364, 28389), (382, 28416), (402, 28455), (422, 28503), (448, 28572), (541, 28758), (585, 28866), (591, 28881), (653, 29010), (659, 29019), (717, 29157), (743, 29277), (767, 29364), (781, 29421), (783, 29430), (813, 29523), (902, 29766), (946, 29925), (949, 29934), (988, 30012),

Gene: Snickers\_48 Start: 31826, Stop: 30012, Start Num: 246

Candidate Starts for Snickers\_48:

(Start: 246 @31826 has 877 MA's), (275, 31787), (280, 31775), (364, 31622), (371, 31607), (400, 31550), (425, 31493), (429, 31484), (444, 31442), (461, 31391), (479, 31340), (539, 31247), (556, 31199), (560, 31190), (568, 31175), (585, 31136), (598, 31109), (612, 31079), (654, 30986), (686, 30926), (697, 30911), (743, 30755), (767, 30668), (783, 30602), (793, 30563), (815, 30491), (827, 30452), (834, 30428), (843, 30410), (853, 30377), (864, 30350), (888, 30296), (905, 30236), (930, 30158), (946, 30101), (950, 30089), (955, 30080),

Gene: SoYo\_48 Start: 31764, Stop: 29950, Start Num: 246

Candidate Starts for SoYo\_48:

(Start: 246 @31764 has 877 MA's), (275, 31725), (280, 31713), (364, 31560), (371, 31545), (400, 31488), (425, 31431), (429, 31422), (444, 31380), (461, 31329), (479, 31278), (539, 31185), (556, 31137), (560, 31128), (568, 31113), (585, 31074), (598, 31047), (612, 31017), (654, 30924), (686, 30864), (697, 30849), (743, 30693), (767, 30606), (783, 30540), (793, 30501), (815, 30429), (827, 30390), (834, 30366), (843, 30348), (853, 30315), (864, 30288), (888, 30234), (905, 30174), (930, 30096), (946, 30039), (950, 30027), (955, 30018),

Gene: Socotra\_44 Start: 32553, Stop: 30160, Start Num: 36

Candidate Starts for Socotra\_44:

(Start: 36 @32553 has 16 MA's), (47, 32547), (Start: 59 @32499 has 1 MA's), (75, 32457), (84, 32433), (128, 32307), (138, 32283), (179, 32238), (Start: 215 @32187 has 2 MA's), (223, 32172), (Start: 241 @32151 has 13 MA's), (275, 32103), (295, 32061), (329, 31986), (335, 31974), (374, 31905), (394, 31872), (398, 31857), (420, 31803), (421, 31800), (430, 31782), (435, 31761), (457, 31701), (499, 31578), (500, 31572), (526, 31503), (539, 31461), (605, 31374), (615, 31350), (633, 31344), (643, 31320), (647, 31311), (654, 31296), (660, 31284), (680, 31242), (682, 31239), (683, 31236), (733, 31089), (749, 31020), (750, 31014), (760, 30978), (783, 30885), (792, 30849), (794, 30843), (796, 30837), (797, 30831), (815, 30774), (822, 30750), (836, 30705), (947, 30324), (968, 30279), (971, 30270), (995, 30210),

Gene: Softsoap\_42 Start: 29403, Stop: 31277, Start Num: 246

Candidate Starts for Softsoap\_42:

(Start: 246 @29403 has 877 MA's), (287, 29472), (Start: 301 @29493 has 110 MA's), (429, 29739), (434, 29754), (444, 29781), (585, 30075), (646, 30210), (696, 30309), (731, 30432), (743, 30492), (755, 30543), (762, 30558), (764, 30573), (774, 30609), (783, 30645), (813, 30738), (844, 30831), (874, 30909), (902, 30981), (909, 31020), (924, 31062), (929, 31080), (939, 31116), (946, 31140), (955, 31161),

Gene: SoilDragon\_48 Start: 31301, Stop: 29487, Start Num: 246

Candidate Starts for SoilDragon\_48:

(Start: 246 @31301 has 877 MA's), (275, 31262), (280, 31250), (364, 31097), (371, 31082), (400, 31025), (425, 30968), (429, 30959), (444, 30917), (461, 30866), (479, 30815), (539, 30722), (556, 30674), (560, 30665), (568, 30650), (585, 30611), (598, 30584), (612, 30554), (654, 30461), (662, 30449), (686, 30401), (697, 30386), (743, 30230), (767, 30143), (783, 30077), (793, 30038), (815, 29966), (827, 29927), (834, 29903), (843, 29885), (853, 29852), (864, 29825), (888, 29771), (905, 29711), (930, 29633), (946, 29576), (950, 29564), (955, 29555),

Gene: SoilGremlin\_39 Start: 28933, Stop: 27068, Start Num: 301

Candidate Starts for SoilGremlin\_39:

(Start: 238 @29020 has 3 MA's), (Start: 301 @28933 has 110 MA's), (Start: 308 @28924 has 5 MA's), (354, 28819), (358, 28810), (375, 28780), (378, 28777), (433, 28657), (435, 28645), (438, 28639), (475, 28534), (484, 28507), (531, 28366), (536, 28360), (537, 28357), (539, 28345), (548, 28318), (549, 28315), (554, 28300), (556, 28294), (559, 28288), (586, 28255), (652, 28126), (676, 28066), (776, 27751), (779, 27742), (780, 27739), (783, 27721), (794, 27679), (796, 27673), (798, 27664), (805, 27649), (822, 27592), (878, 27433), (885, 27403), (888, 27394), (903, 27334), (906, 27310), (919, 27271), (929, 27238), (932, 27226), (947, 27166),

Gene: Soile\_61 Start: 54557, Stop: 52698, Start Num: 205

Candidate Starts for Soile\_61:

(Start: 188 @54581 has 1 MA's), (Start: 205 @54557 has 304 MA's), (Start: 235 @54533 has 6 MA's), (Start: 250 @54527 has 2 MA's), (Start: 274 @54485 has 6 MA's), (283, 54464), (337, 54350), (342, 54344), (360, 54314), (391, 54254), (399, 54233), (421, 54179), (428, 54167), (434, 54149), (436, 54137), (476, 54032), (519, 53975), (538, 53939), (542, 53927), (551, 53903), (556, 53891), (564, 53873), (570, 53855), (580, 53837), (598, 53798), (602, 53789), (603, 53786), (604, 53783), (738, 53426), (744, 53393), (750, 53372), (777, 53279), (780, 53270), (795, 53207), (814, 53171), (815, 53168), (820, 53153), (847, 53075), (851, 53063), (858, 53042), (875, 53003), (905, 52913), (910, 52895), (912, 52889), (917, 52874), (926, 52850), (930, 52835), (931, 52832), (933, 52820), (940, 52796), (963, 52748), (972, 52724),

Gene: Solea\_43 Start: 29387, Stop: 31261, Start Num: 246

Candidate Starts for Solea\_43:

(Start: 246 @29387 has 877 MA's), (287, 29456), (Start: 301 @29477 has 110 MA's), (429, 29723), (434, 29738), (444, 29765), (585, 30059), (646, 30194), (696, 30293), (731, 30416), (743, 30476), (746, 30482), (755, 30527), (762, 30542), (764, 30557), (774, 30593), (783, 30629), (813, 30722), (844, 30815), (874, 30893), (902, 30965), (909, 31004), (924, 31046), (929, 31064), (939, 31100), (946, 31124), (955, 31145),

Gene: Solon\_44 Start: 34769, Stop: 32940, Start Num: 246

Candidate Starts for Solon\_44:

(Start: 246 @34769 has 877 MA's), (368, 34556), (374, 34541), (400, 34493), (416, 34463), (422, 34442), (425, 34436), (429, 34427), (470, 34310), (479, 34283), (539, 34190), (544, 34175), (556, 34142), (578, 34091), (580, 34088), (612, 34022), (627, 33992), (639, 33962), (662, 33917), (683, 33878), (743, 33698), (753, 33650), (771, 33602), (780, 33563), (783, 33545), (793, 33506), (810, 33485), (814, 33464), (819, 33449), (861, 33326), (922, 33155), (929, 33131), (943, 33083), (946, 33071), (955, 33050), (959, 33044), (981, 32996), (986, 32981),

Gene: Solosis\_59 Start: 54029, Stop: 52170, Start Num: 205

Candidate Starts for Solosis\_59:

(Start: 188 @54053 has 1 MA's), (Start: 205 @54029 has 304 MA's), (Start: 235 @54005 has 6 MA's), (Start: 250 @53999 has 2 MA's), (Start: 274 @53957 has 6 MA's), (283, 53936), (337, 53822), (342, 53816), (360, 53786), (391, 53726), (399, 53705), (421, 53651), (428, 53639), (434, 53621), (436, 53609), (476, 53504), (519, 53447), (538, 53411), (542, 53399), (552, 53372), (570, 53327), (598, 53270), (602, 53261), (603, 53258), (738, 52898), (744, 52865), (750, 52844), (777, 52751), (780, 52742), (795, 52679), (814, 52643), (815, 52640), (820, 52625), (847, 52547), (851, 52535), (858, 52514), (875, 52475), (905, 52385), (910, 52367), (912, 52361), (917, 52346), (926, 52322), (930, 52307), (931, 52304), (933, 52292), (940, 52268), (963, 52220), (972, 52196),

Gene: SonOfLevi\_38 Start: 28701, Stop: 26749, Start Num: 238

Candidate Starts for SonOfLevi\_38:

(Start: 238 @28701 has 3 MA's), (Start: 301 @28614 has 110 MA's), (Start: 308 @28605 has 5 MA's), (354, 28500), (358, 28491), (375, 28461), (378, 28458), (433, 28338), (435, 28326), (438, 28320), (475, 28215), (484, 28188), (531, 28047), (536, 28041), (537, 28038), (539, 28026), (548, 27999), (549, 27996), (554, 27981), (556, 27975), (559, 27969), (586, 27936), (652, 27807), (676, 27747), (776, 27432), (779, 27423), (780, 27420), (783, 27402), (794, 27360), (796, 27354), (805, 27330), (822, 27273), (878, 27114), (885, 27084), (888, 27075), (903, 27015), (906, 26991), (919, 26952), (929, 26919), (932, 26907), (947, 26847),

Gene: Soondubu\_37 Start: 30879, Stop: 32723, Start Num: 245

Candidate Starts for Soondubu\_37:

(Start: 245 @30879 has 74 MA's), (391, 31125), (416, 31176), (567, 31518), (585, 31560), (591, 31575), (598, 31587), (646, 31692), (653, 31704), (659, 31713), (717, 31851), (743, 31971), (752, 32001), (783, 32124), (791, 32154), (813, 32217), (815, 32226), (902, 32460), (905, 32484), (917, 32523), (922, 32535), (924, 32541), (929, 32559), (946, 32619),

Gene: Sooty\_38 Start: 27604, Stop: 29586, Start Num: 245

Candidate Starts for Sooty\_38:

(Start: 245 @27604 has 74 MA's), (347, 27778), (386, 27841), (402, 27874), (433, 27949), (521, 28177), (585, 28351), (659, 28507), (717, 28645), (737, 28732), (743, 28765), (752, 28795), (767, 28852), (783, 28918), (813, 29011), (905, 29278), (912, 29302), (946, 29413), (998, 29521),

Gene: Sopespian\_41 Start: 32442, Stop: 30049, Start Num: 36

Candidate Starts for Sopespian\_41:

(Start: 36 @32442 has 16 MA's), (47, 32436), (Start: 59 @32388 has 1 MA's), (75, 32346), (84, 32322), (128, 32196), (138, 32172), (179, 32127), (Start: 215 @32076 has 2 MA's), (223, 32061), (Start: 241 @32040 has 13 MA's), (275, 31992), (289, 31959), (295, 31950), (329, 31875), (335, 31863), (374, 31794), (391, 31767), (394, 31761), (398, 31746), (420, 31692), (421, 31689), (430, 31671), (435, 31650), (457, 31590), (499, 31467), (500, 31461), (526, 31392), (539, 31350), (605, 31263), (615, 31239), (633, 31233), (643, 31209), (647, 31200), (654, 31185), (660, 31173), (680, 31131), (682, 31128), (683, 31125), (733, 30978), (741, 30936), (749, 30909), (750, 30903), (783, 30774), (792, 30738), (794, 30732), (796, 30726), (797, 30720), (815, 30663), (822, 30639), (836, 30594), (946, 30216), (947, 30213), (968, 30168), (971, 30159), (995, 30099),

Gene: Sophia\_59 Start: 54023, Stop: 52164, Start Num: 205

Candidate Starts for Sophia\_59:

(Start: 188 @54047 has 1 MA's), (Start: 205 @54023 has 304 MA's), (Start: 235 @53999 has 6 MA's), (Start: 250 @53993 has 2 MA's), (Start: 274 @53951 has 6 MA's), (283, 53930), (337, 53816), (342, 53810), (360, 53780), (391, 53720), (399, 53699), (421, 53645), (428, 53633), (434, 53615), (436, 53603), (476, 53498), (519, 53441), (538, 53405), (542, 53393), (552, 53366), (570, 53321), (598,

53264), (602, 53255), (603, 53252), (712, 52994), (738, 52892), (744, 52859), (750, 52838), (777, 52745), (780, 52736), (795, 52673), (815, 52634), (820, 52619), (847, 52541), (851, 52529), (858, 52508), (875, 52469), (905, 52379), (910, 52361), (912, 52355), (917, 52340), (926, 52316), (930, 52301), (931, 52298), (933, 52286), (940, 52262), (963, 52214), (972, 52190),

Gene: SorJuana\_54 Start: 36486, Stop: 34318, Start Num: 233

Candidate Starts for SorJuana\_54:

(231, 36489), (Start: 233 @36486 has 13 MA's), (Start: 272 @36432 has 4 MA's), (317, 36348), (382, 36195), (387, 36186), (405, 36141), (431, 36063), (434, 36054), (438, 36039), (446, 36024), (447, 36021), (466, 35964), (490, 35871), (493, 35829), (567, 35634), (570, 35622), (572, 35616), (581, 35592), (590, 35571), (600, 35550), (606, 35535), (609, 35529), (638, 35466), (662, 35415), (693, 35328), (714, 35268), (726, 35220), (751, 35118), (752, 35112), (757, 35085), (758, 35082), (766, 35061), (777, 35019), (779, 35013), (784, 34989), (794, 34947), (795, 34944), (802, 34917), (811, 34884), (813, 34872), (823, 34836), (831, 34812), (832, 34806), (834, 34800), (854, 34746), (875, 34698), (876, 34695), (897, 34635), (902, 34611), (907, 34581), (923, 34527), (940, 34458), (944, 34446), (958, 34407),

Gene: SororFago\_48 Start: 33066, Stop: 31273, Start Num: 246

Candidate Starts for SororFago\_48:

(Start: 246 @33066 has 877 MA's), (261, 33057), (277, 33024), (318, 32955), (364, 32862), (400, 32787), (402, 32784), (425, 32730), (429, 32721), (471, 32601), (479, 32577), (539, 32484), (554, 32439), (612, 32316), (683, 32169), (714, 32118), (743, 31989), (753, 31941), (755, 31938), (762, 31923), (783, 31836), (810, 31776), (812, 31764), (814, 31755), (820, 31737), (843, 31671), (853, 31638), (864, 31611), (901, 31530), (902, 31521), (924, 31440), (930, 31419), (932, 31410), (946, 31362), (950, 31350), (955, 31341),

Gene: Sorpresa\_44 Start: 34874, Stop: 33048, Start Num: 246

Candidate Starts for Sorpresa\_44:

(Start: 246 @34874 has 877 MA's), (368, 34661), (374, 34646), (416, 34568), (422, 34547), (425, 34541), (429, 34532), (470, 34415), (479, 34388), (539, 34295), (544, 34280), (556, 34247), (578, 34196), (580, 34193), (612, 34127), (627, 34097), (639, 34067), (662, 34022), (683, 33983), (743, 33803), (753, 33755), (767, 33716), (783, 33650), (814, 33569), (815, 33566), (843, 33485), (902, 33335), (903, 33332), (909, 33296), (917, 33272), (921, 33263), (925, 33251), (946, 33176), (955, 33155),

Gene: Soshari\_50 Start: 31880, Stop: 30066, Start Num: 246

Candidate Starts for Soshari\_50:

(Start: 246 @31880 has 877 MA's), (275, 31841), (280, 31829), (364, 31676), (371, 31661), (400, 31604), (425, 31547), (429, 31538), (444, 31496), (461, 31445), (479, 31394), (521, 31340), (539, 31301), (556, 31253), (568, 31229), (585, 31190), (598, 31163), (612, 31133), (654, 31040), (662, 31028), (686, 30980), (697, 30965), (743, 30809), (755, 30758), (766, 30725), (767, 30722), (783, 30656), (793, 30617), (815, 30545), (827, 30506), (834, 30482), (843, 30464), (853, 30431), (888, 30350), (905, 30290), (932, 30203), (946, 30155), (950, 30143), (955, 30134), (957, 30131),

Gene: Soto\_59 Start: 53590, Stop: 51731, Start Num: 205

Candidate Starts for Soto\_59:

(Start: 188 @53614 has 1 MA's), (Start: 205 @53590 has 304 MA's), (Start: 235 @53566 has 6 MA's), (Start: 250 @53560 has 2 MA's), (267, 53533), (Start: 274 @53518 has 6 MA's), (283, 53497), (337, 53383), (342, 53377), (360, 53347), (391, 53287), (399, 53266), (421, 53212), (428, 53200), (434, 53182), (436, 53170), (476, 53065), (519, 53008), (538, 52972), (542, 52960), (552, 52933), (556, 52924), (570, 52888), (598, 52831), (602, 52822), (603, 52819), (604, 52816), (738, 52459), (744, 52426), (750, 52405), (777, 52312), (780, 52303), (795, 52240), (814, 52204), (815, 52201), (820, 52186), (847, 52108), (851, 52096), (858, 52075), (875, 52036), (905, 51946), (910, 51928), (912,

51922), (917, 51907), (926, 51883), (930, 51868), (931, 51865), (933, 51853), (940, 51829), (963, 51781), (972, 51757),

Gene: Soups\_47 Start: 29943, Stop: 28153, Start Num: 246

Candidate Starts for Soups\_47:

(Start: 246 @29943 has 877 MA's), (347, 29769), (400, 29664), (402, 29661), (416, 29634), (425, 29607), (444, 29556), (479, 29454), (539, 29361), (554, 29316), (556, 29313), (560, 29304), (635, 29142), (646, 29115), (659, 29094), (662, 29088), (717, 28989), (726, 28950), (738, 28899), (743, 28869), (755, 28818), (766, 28785), (774, 28752), (776, 28746), (783, 28716), (810, 28656), (814, 28635), (827, 28593), (835, 28566), (843, 28551), (876, 28464), (902, 28401), (903, 28398), (946, 28242), (950, 28230), (957, 28218),

Gene: Sour\_53 Start: 49160, Stop: 47364, Start Num: 250

Candidate Starts for Sour\_53:

(Start: 235 @49166 has 6 MA's), (Start: 250 @49160 has 2 MA's), (267, 49133), (273, 49121), (Start: 274 @49118 has 6 MA's), (287, 49088), (360, 48962), (417, 48842), (433, 48803), (436, 48788), (469, 48713), (476, 48695), (538, 48602), (556, 48554), (592, 48473), (603, 48449), (613, 48425), (633, 48383), (674, 48302), (678, 48284), (727, 48137), (744, 48062), (775, 47957), (777, 47951), (780, 47942), (795, 47879), (815, 47840), (816, 47837), (820, 47825), (847, 47747), (851, 47735), (858, 47714), (861, 47705), (879, 47666), (898, 47630), (901, 47618), (905, 47585), (906, 47582), (926, 47522), (930, 47507), (940, 47462), (963, 47414), (972, 47390),

Gene: Spartan300\_60 Start: 54251, Stop: 52392, Start Num: 205

Candidate Starts for Spartan300\_60:

(Start: 188 @54275 has 1 MA's), (Start: 205 @54251 has 304 MA's), (Start: 235 @54227 has 6 MA's), (Start: 250 @54221 has 2 MA's), (Start: 274 @54179 has 6 MA's), (283, 54158), (337, 54044), (342, 54038), (360, 54008), (391, 53948), (399, 53927), (421, 53873), (428, 53861), (434, 53843), (436, 53831), (476, 53726), (519, 53669), (538, 53633), (542, 53621), (551, 53597), (556, 53585), (564, 53567), (570, 53549), (580, 53531), (598, 53492), (602, 53483), (603, 53480), (604, 53477), (738, 53120), (744, 53087), (750, 53066), (777, 52973), (780, 52964), (795, 52901), (814, 52865), (815, 52862), (820, 52847), (847, 52769), (851, 52757), (858, 52736), (875, 52697), (905, 52607), (910, 52589), (912, 52583), (917, 52568), (926, 52544), (930, 52529), (931, 52526), (933, 52514), (940, 52490), (963, 52442), (972, 52418),

Gene: Sparxx\_46 Start: 31565, Stop: 29739, Start Num: 246

Candidate Starts for Sparxx\_46:

(Start: 246 @31565 has 877 MA's), (267, 31544), (280, 31514), (295, 31484), (383, 31322), (394, 31304), (425, 31232), (429, 31223), (471, 31103), (479, 31079), (539, 30986), (558, 30938), (568, 30917), (585, 30878), (659, 30725), (683, 30680), (687, 30668), (740, 30515), (743, 30494), (776, 30371), (783, 30341), (793, 30302), (814, 30236), (815, 30233), (820, 30218), (827, 30194), (834, 30170), (905, 29963), (946, 29828), (950, 29816), (955, 29807),

Gene: SpecialK\_38 Start: 27587, Stop: 29569, Start Num: 245

Candidate Starts for SpecialK\_38:

(Start: 245 @27587 has 74 MA's), (347, 27761), (364, 27791), (386, 27824), (402, 27857), (433, 27932), (442, 27959), (521, 28160), (585, 28334), (659, 28490), (717, 28628), (737, 28715), (743, 28748), (752, 28778), (767, 28835), (783, 28901), (813, 28994), (905, 29261), (912, 29285), (946, 29396), (998, 29504),

Gene: Spike509\_48 Start: 31881, Stop: 30067, Start Num: 246

Candidate Starts for Spike509\_48:

(Start: 246 @31881 has 877 MA's), (275, 31842), (280, 31830), (364, 31677), (371, 31662), (400, 31605), (425, 31548), (429, 31539), (444, 31497), (461, 31446), (479, 31395), (521, 31341), (539,

31302), (556, 31254), (568, 31230), (585, 31191), (598, 31164), (612, 31134), (654, 31041), (662, 31029), (686, 30981), (697, 30966), (743, 30810), (755, 30759), (766, 30726), (767, 30723), (783, 30657), (793, 30618), (815, 30546), (827, 30507), (834, 30483), (843, 30465), (853, 30432), (888, 30351), (905, 30291), (932, 30204), (946, 30156), (950, 30144), (955, 30135), (957, 30132),

Gene: SpikeBT\_45 Start: 35111, Stop: 33285, Start Num: 246

Candidate Starts for SpikeBT\_45:

(Start: 246 @35111 has 877 MA's), (368, 34898), (400, 34835), (416, 34805), (422, 34784), (425, 34778), (429, 34769), (470, 34652), (479, 34625), (539, 34532), (544, 34517), (556, 34484), (578, 34433), (580, 34430), (607, 34376), (612, 34364), (627, 34334), (639, 34304), (662, 34259), (683, 34220), (743, 34040), (752, 34010), (753, 33992), (755, 33989), (767, 33953), (783, 33887), (814, 33806), (815, 33803), (843, 33722), (902, 33572), (903, 33569), (909, 33533), (917, 33509), (921, 33500), (925, 33488), (946, 33413), (955, 33392),

Gene: Spino\_44 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for Spino\_44:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827, 30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Spooks\_18 Start: 12624, Stop: 10834, Start Num: 246

Candidate Starts for Spooks\_18:

(Start: 246 @12624 has 877 MA's), (364, 12423), (368, 12414), (383, 12384), (416, 12321), (425, 12294), (433, 12273), (479, 12141), (536, 12063), (539, 12048), (659, 11778), (662, 11772), (692, 11733), (700, 11718), (728, 11631), (736, 11604), (743, 11562), (759, 11499), (773, 11448), (774, 11442), (783, 11406), (809, 11346), (812, 11334), (814, 11325), (828, 11280), (901, 11100), (922, 11016), (939, 10956), (946, 10932), (978, 10863),

Gene: Spouty\_45 Start: 31549, Stop: 29756, Start Num: 246

Candidate Starts for Spouty\_45:

(Start: 246 @31549 has 877 MA's), (261, 31540), (280, 31498), (346, 31378), (347, 31375), (372, 31327), (402, 31267), (417, 31237), (420, 31225), (425, 31213), (479, 31060), (539, 30967), (598, 30829), (612, 30799), (687, 30640), (697, 30628), (714, 30601), (740, 30493), (743, 30472), (780, 30337), (783, 30319), (814, 30238), (827, 30196), (853, 30121), (886, 30046), (902, 30004), (930, 29902), (946, 29845), (950, 29833), (955, 29824),

Gene: Squee\_44 Start: 34851, Stop: 33025, Start Num: 246

Candidate Starts for Squee\_44:

(Start: 246 @34851 has 877 MA's), (368, 34638), (374, 34623), (400, 34575), (416, 34545), (422, 34524), (425, 34518), (429, 34509), (470, 34392), (479, 34365), (539, 34272), (544, 34257), (578, 34173), (580, 34170), (612, 34104), (627, 34074), (639, 34044), (662, 33999), (683, 33960), (743, 33780), (752, 33750), (753, 33732), (755, 33729), (767, 33693), (783, 33627), (814, 33546), (815, 33543), (843, 33462), (902, 33312), (903, 33309), (909, 33273), (917, 33249), (921, 33240), (925, 33228), (946, 33153), (955, 33132),

Gene: Squid\_60 Start: 54035, Stop: 52176, Start Num: 205

Candidate Starts for Squid\_60:

(Start: 188 @54059 has 1 MA's), (Start: 205 @54035 has 304 MA's), (Start: 235 @54011 has 6 MA's), (Start: 250 @54005 has 2 MA's), (Start: 274 @53963 has 6 MA's), (283, 53942), (337, 53828), (342, 53822), (360, 53792), (391, 53732), (399, 53711), (421, 53657), (428, 53645), (434, 53627), (436, 53615), (476, 53510), (519, 53453), (538, 53417), (542, 53405), (552, 53378), (564, 53351), (570,



53333), (580, 53315), (598, 53276), (602, 53267), (603, 53264), (712, 53006), (738, 52904), (744, 52871), (750, 52850), (777, 52757), (780, 52748), (795, 52685), (814, 52649), (815, 52646), (820, 52631), (847, 52553), (851, 52541), (858, 52520), (875, 52481), (905, 52391), (910, 52373), (912, 52367), (917, 52352), (926, 52328), (930, 52313), (931, 52310), (933, 52298), (940, 52274), (963, 52226), (972, 52202),

Gene: Squiggle\_61 Start: 54043, Stop: 52184, Start Num: 205

Candidate Starts for Squiggle\_61:

(Start: 188 @54067 has 1 MA's), (Start: 205 @54043 has 304 MA's), (Start: 235 @54019 has 6 MA's), (Start: 250 @54013 has 2 MA's), (Start: 274 @53971 has 6 MA's), (283, 53950), (337, 53836), (342, 53830), (360, 53800), (391, 53740), (399, 53719), (421, 53665), (428, 53653), (434, 53635), (436, 53623), (476, 53518), (519, 53461), (538, 53425), (542, 53413), (552, 53386), (570, 53341), (598, 53284), (602, 53275), (603, 53272), (738, 52912), (744, 52879), (750, 52858), (777, 52765), (780, 52756), (795, 52693), (814, 52657), (815, 52654), (820, 52639), (847, 52561), (851, 52549), (858, 52528), (875, 52489), (903, 52420), (905, 52399), (910, 52381), (912, 52375), (917, 52360), (926, 52336), (930, 52321), (931, 52318), (933, 52306), (940, 52282), (963, 52234), (972, 52210),

Gene: Squirrel\_39 Start: 28105, Stop: 29988, Start Num: 232

Candidate Starts for Squirrel\_39:

(Start: 232 @28105 has 3 MA's), (267, 28126), (287, 28174), (Start: 301 @28195 has 110 MA's), (364, 28312), (400, 28375), (416, 28405), (422, 28426), (429, 28441), (433, 28453), (467, 28534), (472, 28549), (550, 28705), (564, 28735), (585, 28786), (594, 28807), (599, 28816), (644, 28915), (743, 29203), (746, 29209), (762, 29269), (767, 29290), (774, 29320), (777, 29329), (783, 29356), (813, 29449), (820, 29473), (843, 29539), (844, 29542), (874, 29620), (876, 29626), (898, 29671), (912, 29740), (924, 29773), (926, 29779), (929, 29791), (930, 29794), (946, 29851), (953, 29866), (955, 29872), (997, 29953),

Gene: StAugustine\_85 Start: 66670, Stop: 64871, Start Num: 244

Candidate Starts for StAugustine\_85:

(Start: 244 @66670 has 11 MA's), (267, 66637), (Start: 274 @66622 has 6 MA's), (280, 66610), (294, 66583), (307, 66565), (325, 66538), (379, 66445), (391, 66427), (398, 66409), (421, 66352), (442, 66301), (519, 66160), (537, 66133), (538, 66124), (586, 66010), (603, 65971), (615, 65941), (625, 65923), (674, 65809), (712, 65704), (717, 65689), (738, 65602), (744, 65569), (747, 65563), (775, 65461), (777, 65455), (780, 65446), (814, 65347), (815, 65344), (820, 65329), (824, 65314), (847, 65251), (851, 65239), (858, 65218), (901, 65122), (905, 65089), (926, 65026), (933, 64996), (935, 64990), (936, 64984), (940, 64972), (961, 64924), (972, 64897), (977, 64882), (979, 64876),

Gene: StCroix\_36 Start: 28126, Stop: 26342, Start Num: 246

Candidate Starts for StCroix\_36:

(Start: 246 @28126 has 877 MA's), (379, 27892), (395, 27862), (399, 27853), (400, 27850), (420, 27805), (425, 27793), (444, 27742), (479, 27640), (496, 27619), (539, 27547), (554, 27502), (556, 27499), (574, 27457), (577, 27451), (585, 27436), (598, 27409), (646, 27304), (652, 27295), (662, 27277), (663, 27274), (683, 27238), (743, 27058), (753, 27010), (783, 26905), (784, 26902), (810, 26845), (814, 26824), (855, 26701), (888, 26626), (902, 26590), (905, 26566), (930, 26488), (946, 26431), (950, 26419), (969, 26380), (978, 26362),

Gene: Stagni\_48 Start: 31855, Stop: 30041, Start Num: 246

Candidate Starts for Stagni\_48:

(Start: 246 @31855 has 877 MA's), (275, 31816), (280, 31804), (364, 31651), (371, 31636), (400, 31579), (425, 31522), (429, 31513), (444, 31471), (461, 31420), (479, 31369), (539, 31276), (556, 31228), (560, 31219), (568, 31204), (585, 31165), (598, 31138), (612, 31108), (654, 31015), (686, 30955), (697, 30940), (743, 30784), (767, 30697), (783, 30631), (793, 30592), (815, 30520), (827, 30481), (834, 30457), (843, 30439), (853, 30406), (864, 30379), (888, 30325), (905, 30265), (930,

30187), (946, 30130), (950, 30118), (955, 30109),

Gene: Stanktossa\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Stanktossa\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: StarStuff\_47 Start: 31156, Stop: 29333, Start Num: 246

Candidate Starts for StarStuff\_47:

(Start: 246 @31156 has 877 MA's), (364, 30952), (374, 30928), (383, 30910), (394, 30892), (400, 30877), (402, 30874), (416, 30847), (425, 30820), (444, 30769), (479, 30667), (539, 30574), (556, 30526), (560, 30517), (567, 30505), (598, 30436), (627, 30376), (683, 30262), (697, 30238), (715, 30199), (743, 30073), (755, 30022), (767, 29986), (783, 29920), (793, 29881), (815, 29812), (827, 29773), (844, 29728), (853, 29698), (880, 29635), (886, 29623), (888, 29617), (905, 29557), (946, 29422), (950, 29410), (955, 29401),

Gene: Starburst\_43 Start: 32435, Stop: 30042, Start Num: 36

Candidate Starts for Starburst\_43:

(Start: 36 @32435 has 16 MA's), (47, 32429), (Start: 59 @32381 has 1 MA's), (75, 32339), (84, 32315), (128, 32189), (138, 32165), (179, 32120), (Start: 215 @32069 has 2 MA's), (223, 32054), (Start: 241 @32033 has 13 MA's), (275, 31985), (295, 31943), (329, 31868), (335, 31856), (374, 31787), (391, 31760), (394, 31754), (398, 31739), (420, 31685), (421, 31682), (430, 31664), (435, 31643), (457, 31583), (499, 31460), (500, 31454), (526, 31385), (539, 31343), (605, 31256), (615, 31232), (633, 31226), (643, 31202), (647, 31193), (654, 31178), (660, 31166), (680, 31124), (682, 31121), (683, 31118), (733, 30971), (749, 30902), (750, 30896), (760, 30860), (774, 30803), (783, 30767), (792, 30731), (794, 30725), (796, 30719), (797, 30713), (815, 30656), (822, 30632), (836, 30587), (946, 30209), (947, 30206), (968, 30161), (971, 30152), (995, 30092),

Gene: Stasia\_44 Start: 31442, Stop: 29613, Start Num: 246

Candidate Starts for Stasia\_44:

(174, 31535), (186, 31520), (189, 31517), (198, 31502), (Start: 246 @31442 has 877 MA's), (280, 31391), (295, 31361), (383, 31199), (394, 31181), (400, 31166), (425, 31109), (429, 31100), (471, 30980), (479, 30956), (539, 30863), (558, 30815), (568, 30794), (585, 30755), (646, 30623), (652, 30614), (659, 30602), (683, 30557), (740, 30392), (743, 30371), (776, 30248), (783, 30218), (793, 30179), (814, 30110), (815, 30107), (820, 30092), (827, 30068), (834, 30044), (837, 30038), (844, 30023), (905, 29837), (946, 29702), (950, 29690), (955, 29681),

Gene: SteamedHams\_43 Start: 32003, Stop: 29616, Start Num: 45

Candidate Starts for SteamedHams\_43:

(20, 32075), (23, 32060), (Start: 45 @32003 has 24 MA's), (48, 31994), (50, 31988), (75, 31907), (117, 31787), (138, 31736), (Start: 241 @31604 has 13 MA's), (265, 31577), (273, 31562), (295, 31514), (312, 31484), (329, 31439), (374, 31361), (398, 31313), (420, 31259), (421, 31256), (430, 31238), (435, 31217), (454, 31166), (457, 31157), (458, 31154), (484, 31079), (499, 31034), (522, 30974), (526, 30959), (559, 30875), (605, 30830), (615, 30806), (633, 30800), (643, 30776), (680, 30698), (682, 30695), (683, 30692), (733, 30545), (749, 30476), (774, 30377), (783, 30341), (792, 30305), (794, 30299), (796, 30293), (797, 30287), (805, 30263), (815, 30230), (822, 30206), (836, 30161), (856, 30101), (903, 29948), (910, 29909), (911, 29906), (947, 29780), (968, 29735), (971, 29726),

Gene: Steamy\_41 Start: 30942, Stop: 29098, Start Num: 246

Candidate Starts for Steamy\_41:

(109, 31173), (137, 31104), (Start: 246 @30942 has 877 MA's), (267, 30921), (Start: 274 @30906 has 6 MA's), (279, 30894), (347, 30768), (368, 30729), (391, 30684), (402, 30660), (416, 30633), (425, 30606), (433, 30585), (479, 30453), (539, 30360), (556, 30312), (560, 30303), (568, 30288), (598, 30222), (715, 29982), (730, 29919), (743, 29856), (755, 29805), (767, 29769), (776, 29733), (783, 29703), (793, 29664), (810, 29643), (814, 29622), (853, 29505), (875, 29454), (880, 29442), (902, 29388), (903, 29385), (905, 29364), (924, 29307), (930, 29286), (937, 29259), (946, 29229), (950, 29217), (978, 29160),

Gene: StepMih\_48 Start: 31846, Stop: 30032, Start Num: 246

Candidate Starts for StepMih\_48:

(Start: 246 @31846 has 877 MA's), (275, 31807), (280, 31795), (364, 31642), (371, 31627), (400, 31570), (425, 31513), (429, 31504), (444, 31462), (461, 31411), (479, 31360), (539, 31267), (556, 31219), (560, 31210), (568, 31195), (585, 31156), (598, 31129), (612, 31099), (654, 31006), (686, 30946), (697, 30931), (743, 30775), (767, 30688), (783, 30622), (793, 30583), (815, 30511), (827, 30472), (834, 30448), (843, 30430), (853, 30397), (864, 30370), (888, 30316), (905, 30256), (930, 30178), (946, 30121), (950, 30109), (955, 30100),

Gene: Stephig9\_43 Start: 30581, Stop: 28737, Start Num: 246

Candidate Starts for Stephig9\_43:

(132, 30764), (139, 30746), (Start: 246 @30581 has 877 MA's), (280, 30530), (347, 30407), (364, 30377), (383, 30338), (400, 30305), (416, 30275), (422, 30254), (425, 30248), (429, 30239), (444, 30197), (461, 30146), (478, 30098), (479, 30095), (539, 29999), (548, 29972), (556, 29951), (560, 29942), (585, 29888), (598, 29861), (620, 29813), (635, 29783), (646, 29756), (662, 29729), (687, 29678), (698, 29663), (740, 29516), (743, 29495), (752, 29465), (753, 29447), (755, 29444), (762, 29429), (767, 29408), (771, 29399), (776, 29372), (780, 29360), (783, 29342), (814, 29261), (834, 29195), (849, 29159), (861, 29123), (876, 29090), (886, 29069), (888, 29063), (903, 29024), (905, 29003), (910, 28985), (946, 28868), (950, 28856),

Gene: StewieG\_44 Start: 32301, Stop: 30472, Start Num: 246

Candidate Starts for StewieG\_44:

(Start: 246 @32301 has 877 MA's), (368, 32088), (374, 32073), (400, 32025), (416, 31995), (422, 31974), (425, 31968), (429, 31959), (470, 31842), (479, 31815), (539, 31722), (544, 31707), (556, 31674), (578, 31623), (580, 31620), (612, 31554), (627, 31524), (639, 31494), (662, 31449), (683, 31410), (743, 31230), (753, 31182), (771, 31134), (780, 31095), (783, 31077), (793, 31038), (810, 31017), (814, 30996), (819, 30981), (861, 30858), (922, 30687), (929, 30663), (943, 30615), (946, 30603), (955, 30582), (959, 30576), (981, 30528), (986, 30513),

Gene: StingRay\_38 Start: 28635, Stop: 26770, Start Num: 301

Candidate Starts for StingRay\_38:

(Start: 238 @28722 has 3 MA's), (Start: 241 @28719 has 13 MA's), (Start: 301 @28635 has 110 MA's), (Start: 308 @28626 has 5 MA's), (354, 28521), (358, 28512), (375, 28482), (378, 28479), (433, 28359), (435, 28347), (438, 28341), (475, 28236), (484, 28209), (531, 28068), (536, 28062), (537, 28059), (539, 28047), (548, 28020), (549, 28017), (554, 28002), (556, 27996), (559, 27990), (586, 27957), (652, 27828), (676, 27768), (776, 27453), (779, 27444), (780, 27441), (783, 27423), (794, 27381), (796, 27375), (798, 27366), (805, 27351), (822, 27294), (878, 27135), (885, 27105), (888, 27096), (903, 27036), (906, 27012), (919, 26973), (929, 26940), (932, 26928), (947, 26868),

Gene: Stinger\_54 Start: 52910, Stop: 51081, Start Num: 191

Candidate Starts for Stinger\_54:

(Start: 191 @52910 has 1 MA's), (Start: 250 @52880 has 2 MA's), (267, 52853), (Start: 274 @52838 has 6 MA's), (283, 52817), (329, 52730), (337, 52712), (387, 52625), (399, 52598), (406, 52583), (434,

52517), (436, 52505), (445, 52487), (448, 52478), (453, 52475), (454, 52472), (463, 52445), (519, 52352), (531, 52334), (538, 52316), (542, 52304), (552, 52277), (602, 52166), (603, 52163), (615, 52133), (623, 52118), (633, 52097), (671, 52019), (725, 51869), (732, 51833), (739, 51803), (744, 51776), (775, 51668), (777, 51662), (780, 51653), (812, 51563), (814, 51554), (815, 51551), (820, 51536), (847, 51458), (851, 51446), (858, 51425), (861, 51416), (875, 51386), (901, 51329), (905, 51296), (910, 51278), (912, 51272), (922, 51245), (926, 51233), (930, 51218), (931, 51215), (933, 51203), (940, 51179), (956, 51137), (963, 51131), (972, 51107),

Gene: Stink\_45 Start: 31990, Stop: 30161, Start Num: 246

Candidate Starts for Stink\_45:

(Start: 246 @31990 has 877 MA's), (280, 31939), (295, 31909), (383, 31747), (394, 31729), (425, 31657), (429, 31648), (471, 31528), (479, 31504), (539, 31411), (558, 31363), (568, 31342), (585, 31303), (607, 31258), (610, 31252), (646, 31171), (652, 31162), (659, 31150), (683, 31105), (687, 31093), (743, 30919), (771, 30823), (776, 30796), (777, 30793), (783, 30766), (793, 30727), (814, 30658), (815, 30655), (820, 30640), (827, 30616), (834, 30592), (837, 30586), (905, 30385), (946, 30250), (950, 30238), (955, 30229),

Gene: StinkyVeggy\_58 Start: 54598, Stop: 52751, Start Num: 189

Candidate Starts for StinkyVeggy\_58:

(15, 55093), (17, 55087), (27, 55036), (33, 55018), (43, 54961), (90, 54817), (143, 54664), (189, 54598), (248, 54550), (267, 54523), (292, 54472), (318, 54451), (337, 54397), (367, 54352), (393, 54301), (434, 54202), (453, 54160), (466, 54124), (476, 54094), (538, 54001), (542, 53989), (551, 53965), (556, 53953), (564, 53935), (592, 53872), (603, 53848), (652, 53743), (703, 53620), (725, 53554), (727, 53536), (739, 53488), (744, 53461), (775, 53353), (777, 53347), (780, 53338), (784, 53317), (807, 53254), (815, 53221), (820, 53206), (841, 53146), (847, 53128), (851, 53116), (858, 53095), (861, 53086), (863, 53083), (868, 53071), (905, 52966), (910, 52948), (912, 52942), (926, 52903), (930, 52888), (931, 52885), (936, 52861), (940, 52849), (941, 52846), (965, 52798), (972, 52777),

Gene: StirfryIV\_38 Start: 28628, Stop: 26763, Start Num: 301

Candidate Starts for StirfryIV\_38:

(Start: 238 @28715 has 3 MA's), (Start: 241 @28712 has 13 MA's), (Start: 301 @28628 has 110 MA's), (Start: 308 @28619 has 5 MA's), (354, 28514), (358, 28505), (375, 28475), (378, 28472), (433, 28352), (435, 28340), (438, 28334), (475, 28229), (484, 28202), (531, 28061), (536, 28055), (537, 28052), (539, 28040), (548, 28013), (549, 28010), (554, 27995), (556, 27989), (559, 27983), (586, 27950), (652, 27821), (676, 27761), (776, 27446), (779, 27437), (780, 27434), (783, 27416), (794, 27374), (796, 27368), (798, 27359), (805, 27344), (822, 27287), (878, 27128), (885, 27098), (888, 27089), (903, 27029), (906, 27005), (919, 26966), (929, 26933), (932, 26921), (947, 26861),

Gene: Stoor\_43 Start: 30807, Stop: 32681, Start Num: 246

Candidate Starts for Stoor\_43:

(Start: 246 @30807 has 877 MA's), (287, 30876), (Start: 301 @30897 has 110 MA's), (429, 31143), (434, 31158), (444, 31185), (541, 31371), (550, 31398), (556, 31413), (585, 31479), (696, 31713), (730, 31833), (731, 31836), (743, 31896), (746, 31902), (755, 31947), (762, 31962), (764, 31977), (774, 32013), (783, 32049), (813, 32142), (844, 32235), (874, 32313), (875, 32316), (902, 32385), (905, 32409), (909, 32424), (924, 32466), (929, 32484), (946, 32544), (955, 32565),

Gene: Stormbreaker8\_38 Start: 29054, Stop: 27189, Start Num: 301

Candidate Starts for Stormbreaker8\_38:

(Start: 301 @29054 has 110 MA's), (Start: 308 @29045 has 5 MA's), (432, 28781), (435, 28766), (438, 28760), (484, 28628), (501, 28574), (504, 28562), (531, 28487), (537, 28478), (539, 28466), (548, 28439), (549, 28436), (554, 28421), (556, 28415), (562, 28403), (605, 28334), (718, 28085), (776, 27872), (779, 27863), (780, 27860), (783, 27842), (794, 27800), (822, 27713), (878, 27554), (885,

27524), (903, 27455), (906, 27431), (919, 27392), (929, 27359), (932, 27347),

Gene: Strathdee\_39 Start: 28935, Stop: 27070, Start Num: 301

Candidate Starts for Strathdee\_39:

(Start: 238 @29022 has 3 MA's), (Start: 241 @29019 has 13 MA's), (Start: 301 @28935 has 110 MA's), (Start: 308 @28926 has 5 MA's), (354, 28821), (358, 28812), (375, 28782), (378, 28779), (433, 28659), (435, 28647), (438, 28641), (475, 28536), (484, 28509), (531, 28368), (536, 28362), (537, 28359), (539, 28347), (548, 28320), (549, 28317), (554, 28302), (556, 28296), (559, 28290), (586, 28257), (652, 28128), (676, 28068), (709, 27993), (776, 27753), (779, 27744), (780, 27741), (783, 27723), (794, 27681), (796, 27675), (798, 27666), (805, 27651), (822, 27594), (878, 27435), (885, 27405), (888, 27396), (903, 27336), (906, 27312), (919, 27273), (929, 27240), (932, 27228), (947, 27168),

Gene: Stromboli\_43 Start: 30669, Stop: 32543, Start Num: 246

Candidate Starts for Stromboli\_43:

(Start: 246 @30669 has 877 MA's), (287, 30738), (Start: 301 @30759 has 110 MA's), (429, 31005), (434, 31020), (444, 31047), (550, 31260), (556, 31275), (585, 31341), (696, 31575), (730, 31695), (731, 31698), (743, 31758), (746, 31764), (755, 31809), (762, 31824), (764, 31839), (774, 31875), (783, 31911), (813, 32004), (844, 32097), (874, 32175), (875, 32178), (902, 32247), (905, 32271), (909, 32286), (924, 32328), (929, 32346), (946, 32406), (955, 32427),

Gene: StrongArm\_44 Start: 35747, Stop: 33960, Start Num: 246

Candidate Starts for StrongArm\_44:

(Start: 246 @35747 has 877 MA's), (368, 35534), (400, 35471), (416, 35441), (422, 35420), (425, 35414), (429, 35405), (470, 35288), (479, 35261), (539, 35168), (544, 35153), (556, 35120), (578, 35069), (580, 35066), (612, 35000), (627, 34970), (639, 34940), (662, 34895), (683, 34856), (743, 34676), (753, 34628), (767, 34589), (783, 34523), (812, 34451), (814, 34442), (843, 34358), (876, 34271), (917, 34145), (922, 34133), (939, 34073), (946, 34049), (948, 34043),

Gene: Strosahl\_47 Start: 29659, Stop: 27869, Start Num: 246

Candidate Starts for Strosahl\_47:

(Start: 246 @29659 has 877 MA's), (347, 29485), (400, 29380), (402, 29377), (416, 29350), (425, 29323), (444, 29272), (479, 29170), (539, 29077), (554, 29032), (556, 29029), (560, 29020), (635, 28858), (646, 28831), (659, 28810), (662, 28804), (717, 28705), (726, 28666), (738, 28615), (743, 28585), (755, 28534), (766, 28501), (776, 28462), (783, 28432), (810, 28372), (814, 28351), (827, 28309), (835, 28282), (876, 28180), (902, 28117), (903, 28114), (946, 27958), (950, 27946), (957, 27934),

Gene: Struggle\_61 Start: 54120, Stop: 52261, Start Num: 205

Candidate Starts for Struggle\_61:

(Start: 188 @54144 has 1 MA's), (Start: 205 @54120 has 304 MA's), (Start: 235 @54096 has 6 MA's), (Start: 250 @54090 has 2 MA's), (Start: 274 @54048 has 6 MA's), (283, 54027), (337, 53913), (342, 53907), (360, 53877), (391, 53817), (399, 53796), (421, 53742), (428, 53730), (434, 53712), (436, 53700), (476, 53595), (519, 53538), (538, 53502), (542, 53490), (551, 53466), (556, 53454), (564, 53436), (570, 53418), (580, 53400), (598, 53361), (602, 53352), (603, 53349), (604, 53346), (738, 52989), (744, 52956), (750, 52935), (777, 52842), (780, 52833), (795, 52770), (814, 52734), (815, 52731), (820, 52716), (847, 52638), (851, 52626), (858, 52605), (875, 52566), (905, 52476), (910, 52458), (912, 52452), (917, 52437), (926, 52413), (930, 52398), (931, 52395), (933, 52383), (940, 52359), (946, 52338), (963, 52311), (972, 52287), (977, 52272),

Gene: Stuu\_42 Start: 27699, Stop: 29681, Start Num: 245

Candidate Starts for Stuu\_42:

(Start: 245 @27699 has 74 MA's), (347, 27873), (364, 27903), (386, 27936), (402, 27969), (433, 28044), (442, 28071), (478, 28173), (521, 28272), (585, 28446), (598, 28473), (659, 28602), (717, 28740), (737, 28827), (743, 28860), (752, 28890), (767, 28947), (783, 29013), (813, 29106), (905, 29373), (912, 29397), (946, 29508), (998, 29616),

Gene: SuMoo\_50 Start: 32117, Stop: 33982, Start Num: 244

Candidate Starts for SuMoo\_50:

(Start: 244 @32117 has 11 MA's), (448, 32504), (554, 32750), (585, 32819), (659, 32972), (692, 33035), (726, 33149), (743, 33230), (760, 33293), (774, 33347), (784, 33386), (844, 33569), (876, 33653), (926, 33806), (946, 33878), (962, 33908),

Gene: Subaru\_40 Start: 30351, Stop: 32216, Start Num: 245

Candidate Starts for Subaru\_40:

(Start: 245 @30351 has 74 MA's), (279, 30399), (382, 30582), (386, 30588), (416, 30648), (422, 30669), (448, 30738), (544, 30954), (580, 31044), (585, 31053), (591, 31068), (613, 31113), (659, 31206), (717, 31344), (743, 31464), (752, 31494), (767, 31551), (781, 31608), (783, 31617), (790, 31641), (813, 31710), (834, 31782), (840, 31791), (878, 31890), (902, 31953), (946, 32112), (949, 32121),

Gene: Success\_19 Start: 11835, Stop: 10045, Start Num: 246

Candidate Starts for Success\_19:

(Start: 246 @11835 has 877 MA's), (364, 11634), (368, 11625), (416, 11532), (425, 11505), (433, 11484), (444, 11454), (449, 11439), (479, 11352), (536, 11274), (539, 11259), (585, 11142), (659, 10989), (692, 10944), (700, 10929), (743, 10773), (759, 10710), (762, 10704), (773, 10659), (774, 10653), (783, 10617), (814, 10536), (828, 10491), (922, 10227), (939, 10167), (946, 10143), (978, 10074), (980, 10071),

Gene: Sue2\_42 Start: 30222, Stop: 32132, Start Num: 245

Candidate Starts for Sue2\_42:

(141, 30078), (172, 30132), (Start: 245 @30222 has 74 MA's), (279, 30270), (382, 30453), (386, 30459), (416, 30519), (448, 30609), (541, 30861), (544, 30870), (580, 30960), (585, 30969), (598, 30996), (613, 31029), (659, 31122), (687, 31179), (717, 31260), (743, 31380), (752, 31410), (762, 31446), (767, 31467), (776, 31503), (783, 31533), (813, 31626), (878, 31806), (886, 31827), (905, 31893), (946, 32028),

Gene: Suffolk\_59 Start: 53538, Stop: 51679, Start Num: 205

Candidate Starts for Suffolk\_59:

(Start: 188 @53562 has 1 MA's), (Start: 205 @53538 has 304 MA's), (Start: 235 @53514 has 6 MA's), (Start: 250 @53508 has 2 MA's), (Start: 274 @53466 has 6 MA's), (283, 53445), (337, 53331), (342, 53325), (360, 53295), (391, 53235), (399, 53214), (421, 53160), (428, 53148), (434, 53130), (436, 53118), (476, 53013), (519, 52956), (538, 52920), (542, 52908), (551, 52884), (556, 52872), (564, 52854), (570, 52836), (580, 52818), (598, 52779), (602, 52770), (603, 52767), (604, 52764), (738, 52407), (744, 52374), (750, 52353), (777, 52260), (780, 52251), (795, 52188), (814, 52152), (815, 52149), (820, 52134), (847, 52056), (851, 52044), (858, 52023), (875, 51984), (905, 51894), (910, 51876), (912, 51870), (917, 51855), (926, 51831), (930, 51816), (931, 51813), (933, 51801), (940, 51777), (963, 51729), (972, 51705),

Gene: Suigeneris\_59 Start: 54668, Stop: 52842, Start Num: 197

Candidate Starts for Suigeneris\_59:

(Start: 197 @54668 has 27 MA's), (267, 54614), (304, 54554), (367, 54443), (391, 54395), (434, 54293), (445, 54263), (453, 54251), (466, 54215), (476, 54185), (538, 54092), (542, 54080), (551, 54056), (556, 54044), (564, 54026), (592, 53963), (603, 53939), (604, 53936), (652, 53834), (725, 53645), (727, 53627), (732, 53609), (739, 53579), (744, 53552), (775, 53444), (777, 53438), (780,

53429), (784, 53408), (807, 53345), (815, 53312), (820, 53297), (841, 53237), (847, 53219), (851, 53207), (858, 53186), (861, 53177), (863, 53174), (905, 53057), (912, 53033), (926, 52994), (930, 52979), (931, 52976), (936, 52952), (940, 52940), (941, 52937), (946, 52919), (965, 52889), (972, 52868), (979, 52847),

Gene: SummitAcademy\_44 Start: 33992, Stop: 31611, Start Num: 46

Candidate Starts for SummitAcademy\_44:

(Start: 46 @33992 has 13 MA's), (63, 33932), (80, 33890), (93, 33851), (138, 33731), (145, 33710), (179, 33686), (Start: 232 @33608 has 3 MA's), (Start: 238 @33602 has 3 MA's), (Start: 241 @33599 has 13 MA's), (267, 33569), (287, 33521), (305, 33494), (Start: 308 @33491 has 5 MA's), (329, 33434), (354, 33395), (367, 33374), (389, 33332), (398, 33308), (402, 33299), (403, 33293), (406, 33287), (420, 33254), (430, 33233), (435, 33212), (499, 33029), (526, 32954), (539, 32912), (605, 32825), (633, 32801), (643, 32777), (647, 32768), (657, 32747), (682, 32696), (683, 32693), (690, 32678), (702, 32657), (736, 32531), (747, 32483), (749, 32474), (760, 32432), (783, 32339), (792, 32303), (794, 32297), (796, 32291), (797, 32285), (815, 32228), (822, 32204), (856, 32099), (858, 32096), (889, 32003), (893, 31985), (903, 31946), (911, 31904), (920, 31880), (929, 31850), (940, 31802), (947, 31778), (968, 31733), (993, 31667), (1004, 31646), (1006, 31640), (1009, 31634),

Gene: Sumter\_42 Start: 34474, Stop: 32645, Start Num: 246

Candidate Starts for Sumter\_42:

(Start: 246 @34474 has 877 MA's), (368, 34261), (374, 34246), (416, 34168), (422, 34147), (425, 34141), (429, 34132), (470, 34015), (479, 33988), (539, 33895), (544, 33880), (556, 33847), (578, 33796), (580, 33793), (607, 33739), (612, 33727), (627, 33697), (639, 33667), (662, 33622), (683, 33583), (743, 33403), (753, 33355), (771, 33307), (780, 33268), (783, 33250), (793, 33211), (810, 33190), (814, 33169), (819, 33154), (861, 33031), (922, 32860), (929, 32836), (943, 32788), (946, 32776), (955, 32755), (959, 32749), (981, 32701), (986, 32686),

Gene: Sunhee\_47 Start: 31200, Stop: 29407, Start Num: 246

Candidate Starts for Sunhee\_47:

(Start: 246 @31200 has 877 MA's), (261, 31191), (280, 31149), (347, 31026), (368, 30987), (372, 30978), (402, 30918), (425, 30864), (471, 30735), (479, 30711), (539, 30618), (554, 30573), (612, 30450), (714, 30252), (743, 30123), (776, 30000), (783, 29970), (810, 29910), (814, 29889), (818, 29877), (853, 29772), (861, 29751), (902, 29655), (924, 29574), (930, 29553), (932, 29544), (946, 29496), (950, 29484), (955, 29475),

Gene: SunnyD\_42 Start: 28854, Stop: 30725, Start Num: 246

Candidate Starts for SunnyD\_42:

(Start: 246 @28854 has 877 MA's), (287, 28923), (Start: 301 @28944 has 110 MA's), (429, 29187), (433, 29199), (435, 29211), (438, 29217), (467, 29283), (565, 29478), (585, 29526), (711, 29805), (743, 29943), (782, 30090), (783, 30096), (813, 30189), (831, 30249), (874, 30360), (876, 30366), (912, 30480), (923, 30510), (924, 30513), (946, 30591), (949, 30600),

Gene: Sunshine924\_45 Start: 34152, Stop: 32323, Start Num: 246

Candidate Starts for Sunshine924\_45:

(Start: 246 @34152 has 877 MA's), (368, 33939), (400, 33876), (416, 33846), (422, 33825), (425, 33819), (429, 33810), (470, 33693), (479, 33666), (539, 33573), (544, 33558), (578, 33474), (580, 33471), (612, 33405), (627, 33375), (639, 33345), (662, 33300), (683, 33261), (743, 33081), (753, 33033), (771, 32985), (780, 32946), (783, 32928), (793, 32889), (810, 32868), (814, 32847), (819, 32832), (861, 32709), (922, 32538), (929, 32514), (943, 32466), (946, 32454), (955, 32433), (959, 32427), (981, 32379), (986, 32364),

Gene: SuperAwesome\_45 Start: 29638, Stop: 27797, Start Num: 246

Candidate Starts for SuperAwesome\_45:

(Start: 246 @29638 has 877 MA's), (364, 29434), (400, 29359), (402, 29356), (416, 29329), (420, 29314), (425, 29302), (444, 29251), (475, 29161), (479, 29149), (539, 29056), (552, 29017), (560, 28999), (568, 28984), (598, 28918), (613, 28885), (614, 28882), (663, 28780), (697, 28720), (726, 28636), (743, 28555), (766, 28471), (767, 28468), (771, 28459), (776, 28432), (783, 28402), (810, 28342), (820, 28303), (902, 28087), (903, 28084), (905, 28063), (946, 27928), (950, 27916), (955, 27907), (957, 27904), (1000, 27811),

Gene: SuperCallie99\_45 Start: 29637, Stop: 27796, Start Num: 246

Candidate Starts for SuperCallie99\_45:

(Start: 246 @29637 has 877 MA's), (364, 29433), (400, 29358), (402, 29355), (416, 29328), (420, 29313), (425, 29301), (444, 29250), (475, 29160), (479, 29148), (539, 29055), (552, 29016), (560, 28998), (568, 28983), (598, 28917), (613, 28884), (614, 28881), (663, 28779), (697, 28719), (726, 28635), (743, 28554), (766, 28470), (767, 28467), (771, 28458), (776, 28431), (783, 28401), (810, 28341), (820, 28302), (902, 28086), (903, 28083), (905, 28062), (946, 27927), (950, 27915), (955, 27906), (957, 27903), (1000, 27810),

Gene: Superchunk\_44 Start: 30012, Stop: 28183, Start Num: 246

Candidate Starts for Superchunk\_44:

(Start: 246 @30012 has 877 MA's), (364, 29808), (368, 29799), (383, 29769), (400, 29736), (402, 29733), (416, 29706), (425, 29679), (433, 29658), (479, 29526), (539, 29433), (556, 29385), (598, 29295), (620, 29247), (659, 29166), (743, 28941), (767, 28854), (776, 28818), (783, 28788), (793, 28749), (810, 28728), (814, 28707), (820, 28689), (853, 28590), (864, 28563), (880, 28527), (888, 28509), (902, 28473), (946, 28314), (950, 28302), (955, 28293), (978, 28245), (993, 28215),

Gene: Superfresh\_39 Start: 28922, Stop: 27057, Start Num: 301

Candidate Starts for Superfresh\_39:

(Start: 238 @29009 has 3 MA's), (Start: 301 @28922 has 110 MA's), (Start: 308 @28913 has 5 MA's), (354, 28808), (358, 28799), (375, 28769), (378, 28766), (433, 28646), (435, 28634), (438, 28628), (475, 28523), (484, 28496), (531, 28355), (536, 28349), (537, 28346), (539, 28334), (548, 28307), (549, 28304), (554, 28289), (556, 28283), (559, 28277), (586, 28244), (652, 28115), (676, 28055), (776, 27740), (779, 27731), (780, 27728), (783, 27710), (794, 27668), (796, 27662), (805, 27638), (822, 27581), (878, 27422), (885, 27392), (888, 27383), (903, 27323), (906, 27299), (919, 27260), (929, 27227), (932, 27215), (947, 27155),

Gene: Surely\_60 Start: 54325, Stop: 52466, Start Num: 205

Candidate Starts for Surely\_60:

(Start: 188 @54349 has 1 MA's), (Start: 205 @54325 has 304 MA's), (Start: 235 @54301 has 6 MA's), (Start: 250 @54295 has 2 MA's), (Start: 274 @54253 has 6 MA's), (283, 54232), (337, 54118), (342, 54112), (360, 54082), (391, 54022), (399, 54001), (421, 53947), (428, 53935), (434, 53917), (436, 53905), (476, 53800), (519, 53743), (538, 53707), (542, 53695), (552, 53668), (564, 53641), (570, 53623), (580, 53605), (598, 53566), (602, 53557), (603, 53554), (712, 53296), (738, 53194), (744, 53161), (750, 53140), (777, 53047), (780, 53038), (795, 52975), (814, 52939), (815, 52936), (820, 52921), (847, 52843), (851, 52831), (858, 52810), (875, 52771), (905, 52681), (910, 52663), (912, 52657), (917, 52642), (926, 52618), (930, 52603), (931, 52600), (933, 52588), (940, 52564), (946, 52543), (963, 52516), (972, 52492),

Gene: Survivors\_40 Start: 31946, Stop: 29589, Start Num: 45

Candidate Starts for Survivors\_40:

(41, 31955), (Start: 45 @31946 has 24 MA's), (50, 31931), (57, 31895), (108, 31760), (138, 31697), (185, 31643), (264, 31541), (267, 31538), (305, 31463), (329, 31403), (363, 31352), (386, 31310), (398, 31280), (420, 31226), (430, 31205), (435, 31184), (458, 31121), (502, 30986), (506, 30971), (520, 30944), (526, 30926), (559, 30842), (598, 30806), (660, 30713), (680, 30671), (682, 30668), (683, 30665), (698, 30641), (703, 30629), (707, 30617), (741, 30476), (749, 30449), (783, 30314),



(792, 30278), (794, 30272), (796, 30266), (797, 30260), (805, 30236), (815, 30203), (822, 30179), (836, 30134), (839, 30128), (859, 30068), (893, 29960), (907, 29894), (908, 29891), (911, 29879), (920, 29855), (940, 29777), (947, 29753), (976, 29684),

Gene: SwainyDoc\_59 Start: 54074, Stop: 52254, Start Num: 244

Candidate Starts for SwainyDoc\_59:

(Start: 244 @54074 has 11 MA's), (267, 54041), (368, 53861), (417, 53756), (433, 53708), (435, 53696), (448, 53666), (454, 53660), (476, 53597), (478, 53591), (519, 53540), (538, 53504), (556, 53456), (603, 53351), (645, 53255), (674, 53204), (724, 53060), (732, 53021), (739, 52991), (744, 52964), (748, 52952), (775, 52856), (777, 52850), (780, 52841), (782, 52829), (807, 52757), (814, 52727), (820, 52709), (822, 52700), (847, 52631), (851, 52619), (858, 52598), (888, 52529), (898, 52514), (903, 52490), (905, 52469), (910, 52451), (912, 52445), (924, 52412), (926, 52406), (931, 52388), (933, 52376), (936, 52364), (940, 52352), (956, 52310), (972, 52280),

Gene: Swann\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for Swann\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (663, 27261), (683, 27225), (716, 27168), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930, 26475), (946, 26418), (950, 26406), (955, 26397), (969, 26367), (978, 26349),

Gene: SweatNTears\_44 Start: 32451, Stop: 30061, Start Num: 36

Candidate Starts for SweatNTears\_44:

(Start: 36 @32451 has 16 MA's), (63, 32388), (70, 32370), (75, 32355), (93, 32301), (97, 32289), (103, 32268), (117, 32235), (128, 32208), (138, 32184), (164, 32157), (Start: 241 @32052 has 13 MA's), (275, 32004), (329, 31887), (374, 31806), (391, 31779), (398, 31758), (420, 31704), (421, 31701), (430, 31683), (435, 31662), (457, 31602), (526, 31404), (539, 31362), (605, 31275), (615, 31251), (633, 31245), (657, 31191), (660, 31185), (680, 31143), (682, 31140), (683, 31137), (733, 30990), (741, 30948), (749, 30921), (760, 30879), (783, 30786), (792, 30750), (794, 30744), (796, 30738), (797, 30732), (805, 30708), (815, 30675), (822, 30651), (836, 30606), (856, 30546), (903, 30393), (947, 30225), (968, 30180), (971, 30171), (973, 30162),

Gene: SweetiePie\_44 Start: 31345, Stop: 29558, Start Num: 246

Candidate Starts for SweetiePie\_44:

(Start: 246 @31345 has 877 MA's), (364, 31141), (366, 31138), (368, 31132), (375, 31117), (383, 31102), (400, 31069), (402, 31066), (416, 31039), (425, 31012), (433, 30991), (444, 30961), (479, 30859), (539, 30766), (556, 30718), (560, 30709), (568, 30694), (598, 30628), (635, 30547), (659, 30499), (662, 30493), (697, 30430), (726, 30355), (743, 30274), (755, 30223), (766, 30190), (767, 30187), (783, 30121), (793, 30082), (810, 30061), (831, 29986), (837, 29968), (853, 29923), (864, 29896), (880, 29860), (886, 29848), (888, 29842), (902, 29806), (905, 29782), (930, 29704), (946, 29647), (950, 29635), (955, 29626),

Gene: Swervy\_43 Start: 29550, Stop: 31424, Start Num: 246

Candidate Starts for Swervy\_43:

(Start: 243 @29547 has 7 MA's), (Start: 246 @29550 has 877 MA's), (287, 29619), (Start: 301 @29640 has 110 MA's), (364, 29757), (400, 29820), (429, 29886), (444, 29928), (585, 30222), (646, 30357), (696, 30456), (731, 30579), (743, 30639), (746, 30645), (755, 30690), (764, 30720), (774, 30756), (783, 30792), (813, 30885), (844, 30978), (874, 31056), (902, 31128), (909, 31167), (924, 31209), (929, 31227), (946, 31287), (955, 31308),

Gene: Swiphy\_64 Start: 54569, Stop: 52710, Start Num: 205

Candidate Starts for Swiphy\_64:

(Start: 188 @54593 has 1 MA's), (Start: 205 @54569 has 304 MA's), (Start: 235 @54545 has 6 MA's), (Start: 250 @54539 has 2 MA's), (Start: 274 @54497 has 6 MA's), (283, 54476), (337, 54362), (342, 54356), (360, 54326), (391, 54266), (399, 54245), (421, 54191), (428, 54179), (434, 54161), (436, 54149), (476, 54044), (519, 53987), (538, 53951), (542, 53939), (551, 53915), (556, 53903), (564, 53885), (570, 53867), (580, 53849), (598, 53810), (602, 53801), (603, 53798), (604, 53795), (738, 53438), (744, 53405), (750, 53384), (777, 53291), (780, 53282), (795, 53219), (814, 53183), (815, 53180), (820, 53165), (847, 53087), (851, 53075), (858, 53054), (875, 53015), (905, 52925), (910, 52907), (912, 52901), (917, 52886), (926, 52862), (930, 52847), (931, 52844), (933, 52832), (940, 52808), (963, 52760), (972, 52736),

Gene: SwirlSquare\_48 Start: 30249, Stop: 28459, Start Num: 246

Candidate Starts for SwirlSquare\_48:

(Start: 246 @30249 has 877 MA's), (364, 30045), (372, 30027), (391, 29991), (400, 29970), (402, 29967), (416, 29940), (419, 29928), (425, 29913), (433, 29892), (479, 29760), (539, 29667), (556, 29619), (598, 29529), (659, 29400), (743, 29175), (767, 29088), (776, 29052), (783, 29022), (793, 28983), (810, 28962), (814, 28941), (820, 28923), (853, 28824), (864, 28797), (880, 28761), (888, 28743), (902, 28707), (905, 28683), (946, 28548), (950, 28536), (955, 28527),

Gene: Swirley\_41 Start: 30927, Stop: 29062, Start Num: 246

Candidate Starts for Swirley\_41:

(Start: 246 @30927 has 877 MA's), (280, 30876), (318, 30816), (347, 30753), (364, 30723), (366, 30720), (395, 30663), (400, 30651), (416, 30621), (425, 30594), (479, 30441), (539, 30345), (556, 30297), (594, 30213), (598, 30207), (633, 30135), (646, 30102), (654, 30087), (662, 30075), (712, 29976), (743, 29841), (752, 29811), (753, 29793), (762, 29775), (767, 29754), (771, 29745), (783, 29688), (793, 29649), (814, 29607), (820, 29589), (834, 29541), (853, 29490), (876, 29436), (880, 29427), (888, 29409), (905, 29349), (910, 29331), (939, 29238), (946, 29214), (950, 29202), (1000, 29097),

Gene: Swish\_62 Start: 54299, Stop: 52440, Start Num: 205

Candidate Starts for Swish\_62:

(Start: 188 @54323 has 1 MA's), (Start: 205 @54299 has 304 MA's), (Start: 235 @54275 has 6 MA's), (Start: 250 @54269 has 2 MA's), (Start: 274 @54227 has 6 MA's), (283, 54206), (337, 54092), (342, 54086), (360, 54056), (391, 53996), (399, 53975), (421, 53921), (428, 53909), (434, 53891), (436, 53879), (476, 53774), (519, 53717), (538, 53681), (542, 53669), (551, 53645), (556, 53633), (564, 53615), (570, 53597), (580, 53579), (598, 53540), (602, 53531), (603, 53528), (604, 53525), (738, 53168), (744, 53135), (750, 53114), (777, 53021), (780, 53012), (795, 52949), (814, 52913), (815, 52910), (820, 52895), (847, 52817), (851, 52805), (858, 52784), (875, 52745), (905, 52655), (910, 52637), (912, 52631), (917, 52616), (926, 52592), (930, 52577), (931, 52574), (933, 52562), (940, 52538), (963, 52490), (972, 52466),

Gene: SwissCheese\_46 Start: 34979, Stop: 33153, Start Num: 246

Candidate Starts for SwissCheese\_46:

(Start: 246 @34979 has 877 MA's), (368, 34766), (374, 34751), (416, 34673), (422, 34652), (425, 34646), (429, 34637), (470, 34520), (479, 34493), (539, 34400), (544, 34385), (551, 34364), (556, 34352), (578, 34301), (580, 34298), (612, 34232), (627, 34202), (639, 34172), (662, 34127), (683, 34088), (743, 33908), (753, 33860), (767, 33821), (783, 33755), (793, 33716), (810, 33695), (814, 33674), (820, 33656), (843, 33590), (902, 33440), (903, 33437), (909, 33401), (917, 33377), (921, 33368), (925, 33356), (946, 33281), (955, 33260),

Gene: Switzer\_45 Start: 34442, Stop: 32616, Start Num: 246

Candidate Starts for Switzer\_45:

(Start: 246 @34442 has 877 MA's), (368, 34229), (400, 34166), (416, 34136), (422, 34115), (425, 34109), (429, 34100), (470, 33983), (479, 33956), (539, 33863), (544, 33848), (578, 33764), (580, 33761), (612, 33695), (627, 33665), (639, 33635), (662, 33590), (683, 33551), (743, 33371), (753, 33323), (767, 33284), (783, 33218), (793, 33179), (810, 33158), (814, 33137), (820, 33119), (843, 33053), (902, 32903), (903, 32900), (909, 32864), (921, 32831), (925, 32819), (932, 32792), (946, 32744), (955, 32723),

Gene: Switzerland\_47 Start: 30042, Stop: 28252, Start Num: 246

Candidate Starts for Switzerland\_47:

(Start: 246 @30042 has 877 MA's), (347, 29868), (400, 29763), (402, 29760), (416, 29733), (425, 29706), (444, 29655), (479, 29553), (539, 29460), (554, 29415), (556, 29412), (560, 29403), (635, 29241), (646, 29214), (659, 29193), (662, 29187), (717, 29088), (726, 29049), (738, 28998), (743, 28968), (755, 28917), (766, 28884), (774, 28851), (776, 28845), (783, 28815), (810, 28755), (814, 28734), (827, 28692), (835, 28665), (843, 28650), (876, 28563), (902, 28500), (903, 28497), (946, 28341), (950, 28329), (957, 28317),

Gene: Swole\_45 Start: 34149, Stop: 32320, Start Num: 246

Candidate Starts for Swole\_45:

(Start: 246 @34149 has 877 MA's), (368, 33936), (374, 33921), (400, 33873), (416, 33843), (422, 33822), (425, 33816), (429, 33807), (470, 33690), (479, 33663), (539, 33570), (544, 33555), (551, 33534), (578, 33471), (580, 33468), (612, 33402), (627, 33372), (639, 33342), (662, 33297), (683, 33258), (743, 33078), (753, 33030), (771, 32982), (780, 32943), (783, 32925), (793, 32886), (810, 32865), (814, 32844), (819, 32829), (861, 32706), (922, 32535), (929, 32511), (943, 32463), (946, 32451), (955, 32430), (959, 32424), (981, 32376), (986, 32361),

Gene: SydNat\_40 Start: 31117, Stop: 29252, Start Num: 246

Candidate Starts for SydNat\_40:

(Start: 246 @31117 has 877 MA's), (280, 31066), (318, 31006), (347, 30943), (364, 30913), (366, 30910), (395, 30853), (416, 30811), (425, 30784), (479, 30631), (539, 30535), (550, 30502), (556, 30487), (594, 30403), (598, 30397), (613, 30364), (654, 30277), (662, 30265), (683, 30226), (712, 30166), (743, 30031), (752, 30001), (753, 29983), (766, 29947), (767, 29944), (783, 29878), (793, 29839), (814, 29797), (820, 29779), (834, 29731), (837, 29725), (853, 29680), (876, 29626), (880, 29617), (888, 29599), (910, 29521), (929, 29464), (939, 29428), (946, 29404), (950, 29392), (1010, 29260),

Gene: Symere\_39 Start: 28615, Stop: 26750, Start Num: 301

Candidate Starts for Symere\_39:

(Start: 238 @28702 has 3 MA's), (Start: 241 @28699 has 13 MA's), (Start: 301 @28615 has 110 MA's), (Start: 308 @28606 has 5 MA's), (354, 28501), (358, 28492), (375, 28462), (378, 28459), (433, 28339), (435, 28327), (438, 28321), (475, 28216), (484, 28189), (531, 28048), (536, 28042), (537, 28039), (539, 28027), (548, 28000), (549, 27997), (554, 27982), (556, 27976), (559, 27970), (586, 27937), (652, 27808), (676, 27748), (776, 27433), (779, 27424), (780, 27421), (783, 27403), (794, 27361), (796, 27355), (798, 27346), (805, 27331), (822, 27274), (878, 27115), (885, 27085), (888, 27076), (903, 27016), (906, 26992), (919, 26953), (929, 26920), (932, 26908), (947, 26848),

Gene: SynergyX\_58 Start: 53681, Stop: 51864, Start Num: 247

Candidate Starts for SynergyX\_58:

(130, 53864), (Start: 247 @53681 has 43 MA's), (267, 53651), (368, 53471), (433, 53318), (435, 53306), (448, 53276), (454, 53270), (476, 53207), (478, 53201), (519, 53150), (538, 53114), (556, 53066), (603, 52961), (645, 52865), (674, 52814), (724, 52670), (732, 52631), (739, 52601), (744, 52574), (748, 52562), (775, 52466), (777, 52460), (780, 52451), (782, 52439), (807, 52367), (814, 52337), (820, 52319), (822, 52310), (847, 52241), (851, 52229), (858, 52208), (888, 52139), (898, 52124), (903, 52100), (905, 52079), (910, 52061), (912, 52055), (924, 52022), (926, 52016), (931,

51998), (933, 51986), (936, 51974), (940, 51962), (956, 51920), (972, 51890),

Gene: TA17A\_58 Start: 52484, Stop: 50655, Start Num: 205

Candidate Starts for TA17A\_58:

(Start: 205 @52484 has 304 MA's), (Start: 250 @52457 has 2 MA's), (269, 52427), (Start: 274 @52415 has 6 MA's), (286, 52388), (287, 52385), (293, 52376), (318, 52358), (366, 52262), (391, 52211), (400, 52187), (411, 52163), (463, 52025), (472, 52001), (476, 51989), (519, 51932), (538, 51896), (551, 51860), (588, 51776), (602, 51746), (603, 51743), (615, 51713), (680, 51569), (707, 51503), (724, 51452), (727, 51431), (732, 51413), (744, 51356), (763, 51299), (771, 51272), (777, 51242), (780, 51233), (795, 51167), (812, 51140), (814, 51131), (820, 51113), (827, 51089), (847, 51035), (851, 51023), (858, 51002), (888, 50933), (905, 50873), (910, 50855), (922, 50822), (926, 50810), (930, 50795), (931, 50792), (933, 50780), (940, 50756), (941, 50753), (963, 50705), (965, 50702), (972, 50681), (979, 50660),

Gene: TG1\_31 Start: 25848, Stop: 27695, Start Num: 246

Candidate Starts for TG1\_31:

(184, 25767), (Start: 199 @25788 has 2 MA's), (210, 25803), (221, 25821), (Start: 246 @25848 has 877 MA's), (277, 25890), (295, 25929), (316, 25953), (364, 26049), (389, 26097), (414, 26148), (422, 26172), (481, 26337), (541, 26427), (542, 26430), (563, 26484), (568, 26499), (578, 26526), (585, 26538), (591, 26553), (611, 26592), (654, 26685), (659, 26691), (687, 26748), (690, 26751), (737, 26916), (743, 26949), (753, 26997), (760, 27012), (774, 27066), (776, 27072), (781, 27093), (783, 27102), (786, 27117), (792, 27147), (820, 27228), (824, 27243), (875, 27378), (878, 27384), (880, 27390), (898, 27426), (909, 27486), (912, 27495), (917, 27510), (922, 27522), (924, 27528), (932, 27558), (946, 27606), (948, 27612), (955, 27627), (959, 27633),

Gene: TMaxx\_43 Start: 29595, Stop: 27817, Start Num: 246

Candidate Starts for TMaxx\_43:

(151, 29724), (Start: 246 @29595 has 877 MA's), (289, 29517), (315, 29475), (333, 29427), (400, 29322), (435, 29235), (444, 29217), (472, 29154), (474, 29148), (482, 29124), (539, 29055), (571, 28974), (585, 28947), (591, 28932), (622, 28869), (648, 28812), (664, 28782), (683, 28746), (687, 28734), (703, 28710), (736, 28617), (740, 28596), (743, 28575), (746, 28569), (772, 28473), (777, 28449), (783, 28422), (793, 28383), (827, 28272), (832, 28254), (840, 28239), (853, 28197), (855, 28191), (864, 28170), (884, 28116), (887, 28101), (906, 28035), (910, 28020), (915, 28005), (922, 27984), (924, 27978), (930, 27957), (931, 27954), (934, 27936), (940, 27921), (983, 27828),

Gene: TNguyen7\_46 Start: 31522, Stop: 29684, Start Num: 246

Candidate Starts for TNguyen7\_46:

(Start: 246 @31522 has 877 MA's), (280, 31471), (319, 31405), (364, 31318), (395, 31258), (400, 31246), (425, 31189), (429, 31180), (471, 31060), (479, 31036), (539, 30940), (558, 30892), (585, 30832), (614, 30769), (646, 30700), (659, 30679), (698, 30607), (716, 30565), (726, 30523), (743, 30442), (753, 30394), (776, 30319), (783, 30289), (791, 30259), (815, 30178), (827, 30139), (834, 30115), (843, 30097), (888, 29968), (905, 29908), (946, 29773), (950, 29761), (955, 29752),

Gene: TPA2\_63 Start: 52427, Stop: 50550, Start Num: 236

Candidate Starts for TPA2\_63:

(67, 52787), (130, 52604), (236, 52427), (Start: 250 @52418 has 2 MA's), (273, 52379), (293, 52337), (302, 52325), (306, 52319), (360, 52232), (366, 52223), (384, 52181), (398, 52154), (407, 52133), (441, 52043), (453, 52022), (460, 52004), (462, 51998), (469, 51980), (519, 51902), (538, 51866), (542, 51854), (543, 51851), (551, 51830), (595, 51734), (608, 51701), (633, 51647), (704, 51482), (722, 51431), (732, 51383), (744, 51326), (767, 51248), (771, 51239), (775, 51215), (777, 51209), (795, 51137), (814, 51101), (820, 51083), (841, 51023), (847, 51005), (851, 50993), (858, 50972), (861, 50963), (885, 50912), (922, 50792), (926, 50780), (936, 50732), (939, 50723), (940, 50720), (943, 50711), (946, 50699), (970, 50651), (983, 50612), (991, 50594),

Gene: TWAMP\_36 Start: 28113, Stop: 26329, Start Num: 246

Candidate Starts for TWAMP\_36:

(Start: 246 @28113 has 877 MA's), (379, 27879), (395, 27849), (399, 27840), (400, 27837), (420, 27792), (425, 27780), (444, 27729), (479, 27627), (496, 27606), (539, 27534), (554, 27489), (556, 27486), (574, 27444), (577, 27438), (585, 27423), (598, 27396), (646, 27291), (652, 27282), (662, 27264), (663, 27261), (683, 27225), (743, 27045), (753, 26997), (783, 26892), (784, 26889), (810, 26832), (814, 26811), (829, 26763), (855, 26688), (886, 26619), (902, 26577), (905, 26553), (930, 26475), (946, 26418), (950, 26406), (955, 26397), (969, 26367), (978, 26349),

Gene: Takoda\_36 Start: 28086, Stop: 26302, Start Num: 246

Candidate Starts for Takoda\_36:

(Start: 246 @28086 has 877 MA's), (346, 27915), (383, 27843), (399, 27813), (400, 27810), (420, 27765), (425, 27753), (429, 27744), (444, 27702), (479, 27600), (496, 27579), (519, 27549), (539, 27507), (556, 27459), (585, 27396), (598, 27369), (646, 27264), (652, 27255), (662, 27237), (683, 27198), (743, 27018), (753, 26970), (783, 26865), (784, 26862), (810, 26805), (814, 26784), (829, 26736), (855, 26661), (886, 26592), (902, 26550), (905, 26526), (930, 26448), (946, 26391), (950, 26379), (969, 26340), (978, 26322),

Gene: Talia1610\_99 Start: 77815, Stop: 79611, Start Num: 262

Candidate Starts for Talia1610\_99:

(Start: 262 @77815 has 4 MA's), (318, 77911), (428, 78127), (435, 78154), (438, 78160), (470, 78229), (482, 78265), (571, 78412), (573, 78418), (585, 78439), (591, 78454), (683, 78643), (706, 78688), (719, 78721), (723, 78739), (730, 78772), (740, 78811), (743, 78832), (746, 78838), (774, 78952), (792, 79036), (794, 79042), (797, 79054), (813, 79102), (816, 79114), (827, 79150), (840, 79183), (843, 79192), (858, 79237), (865, 79255), (902, 79360), (906, 79387), (910, 79402), (922, 79435), (929, 79459), (934, 79483), (946, 79519), (961, 79546),

Gene: TallGrassMM\_60 Start: 53939, Stop: 52080, Start Num: 205

Candidate Starts for TallGrassMM\_60:

(Start: 188 @53963 has 1 MA's), (Start: 205 @53939 has 304 MA's), (Start: 235 @53915 has 6 MA's), (Start: 250 @53909 has 2 MA's), (Start: 274 @53867 has 6 MA's), (283, 53846), (337, 53732), (342, 53726), (360, 53696), (391, 53636), (399, 53615), (421, 53561), (428, 53549), (434, 53531), (436, 53519), (476, 53414), (519, 53357), (538, 53321), (542, 53309), (552, 53282), (570, 53237), (598, 53180), (602, 53171), (603, 53168), (738, 52808), (744, 52775), (750, 52754), (777, 52661), (780, 52652), (795, 52589), (814, 52553), (815, 52550), (820, 52535), (847, 52457), (851, 52445), (858, 52424), (875, 52385), (905, 52295), (910, 52277), (912, 52271), (917, 52256), (926, 52232), (930, 52217), (931, 52214), (933, 52202), (940, 52178), (963, 52130), (972, 52106),

Gene: Tallboi\_40 Start: 30542, Stop: 32407, Start Num: 245

Candidate Starts for Tallboi\_40:

(Start: 245 @30542 has 74 MA's), (279, 30590), (347, 30716), (416, 30839), (448, 30929), (541, 31136), (544, 31145), (585, 31244), (591, 31259), (598, 31271), (659, 31397), (717, 31535), (743, 31655), (752, 31685), (767, 31742), (783, 31808), (813, 31901), (834, 31973), (878, 32081), (902, 32144), (946, 32303), (949, 32312),

Gene: Talos\_141 Start: 74147, Stop: 76183, Start Num: 272

Candidate Starts for Talos\_141:

(Start: 272 @74147 has 4 MA's), (305, 74213), (317, 74237), (330, 74288), (336, 74303), (351, 74336), (388, 74405), (439, 74540), (452, 74576), (511, 74696), (533, 74750), (535, 74753), (550, 74804), (554, 74816), (585, 74885), (594, 74906), (616, 74954), (745, 75341), (770, 75458), (773, 75476), (807, 75596), (811, 75608), (830, 75677), (832, 75686), (884, 75830), (887, 75845), (909, 75944), (932, 76019), (952, 76091), (971, 76136), (973, 76145), (976, 76151),

Gene: Taquarus\_45 Start: 31573, Stop: 29747, Start Num: 246

Candidate Starts for Taquarus\_45:

(Start: 246 @31573 has 877 MA's), (267, 31552), (280, 31522), (295, 31492), (383, 31330), (394, 31312), (425, 31240), (429, 31231), (471, 31111), (479, 31087), (539, 30994), (558, 30946), (568, 30925), (585, 30886), (646, 30754), (659, 30733), (683, 30688), (687, 30676), (740, 30523), (743, 30502), (776, 30379), (783, 30349), (793, 30310), (814, 30244), (815, 30241), (820, 30226), (827, 30202), (834, 30178), (905, 29971), (946, 29836), (950, 29824), (955, 29815),

Gene: Target\_45 Start: 33552, Stop: 31723, Start Num: 246

Candidate Starts for Target\_45:

(Start: 246 @33552 has 877 MA's), (368, 33339), (374, 33324), (400, 33276), (416, 33246), (422, 33225), (425, 33219), (429, 33210), (470, 33093), (479, 33066), (539, 32973), (544, 32958), (556, 32925), (578, 32874), (580, 32871), (612, 32805), (639, 32745), (662, 32700), (683, 32661), (743, 32481), (753, 32433), (771, 32385), (780, 32346), (783, 32328), (793, 32289), (810, 32268), (814, 32247), (819, 32232), (861, 32109), (922, 31938), (929, 31914), (943, 31866), (946, 31854), (955, 31833), (959, 31827), (981, 31779), (986, 31764),

Gene: TarsusIV\_42 Start: 31027, Stop: 29240, Start Num: 245

Candidate Starts for TarsusIV\_42:

(Start: 245 @31027 has 74 MA's), (368, 30814), (375, 30799), (383, 30784), (400, 30751), (402, 30748), (416, 30721), (425, 30694), (429, 30685), (479, 30541), (539, 30448), (551, 30412), (556, 30400), (560, 30391), (568, 30376), (635, 30229), (659, 30181), (662, 30175), (743, 29956), (755, 29905), (766, 29872), (767, 29869), (783, 29803), (793, 29764), (810, 29743), (831, 29668), (834, 29656), (853, 29605), (880, 29542), (902, 29488), (905, 29464), (924, 29407), (930, 29386), (946, 29329), (950, 29317), (955, 29308),

Gene: Tarynearal\_37 Start: 30369, Stop: 28504, Start Num: 246

Candidate Starts for Tarynearal\_37:

(Start: 246 @30369 has 877 MA's), (280, 30318), (318, 30258), (347, 30195), (364, 30165), (366, 30162), (395, 30105), (400, 30093), (416, 30063), (425, 30036), (479, 29883), (539, 29787), (556, 29739), (594, 29655), (598, 29649), (633, 29577), (646, 29544), (654, 29529), (662, 29517), (712, 29418), (743, 29283), (752, 29253), (753, 29235), (755, 29232), (767, 29196), (771, 29187), (774, 29166), (777, 29157), (783, 29130), (784, 29127), (810, 29070), (814, 29049), (853, 28932), (876, 28878), (880, 28869), (888, 28851), (905, 28791), (910, 28773), (929, 28716), (939, 28680), (946, 28656), (950, 28644),

Gene: Tasp14\_46 Start: 35011, Stop: 33185, Start Num: 246

Candidate Starts for Tasp14\_46:

(Start: 246 @35011 has 877 MA's), (368, 34798), (374, 34783), (416, 34705), (422, 34684), (425, 34678), (429, 34669), (470, 34552), (479, 34525), (539, 34432), (544, 34417), (578, 34333), (580, 34330), (612, 34264), (627, 34234), (639, 34204), (662, 34159), (683, 34120), (743, 33940), (753, 33892), (767, 33853), (783, 33787), (793, 33748), (810, 33727), (814, 33706), (820, 33688), (843, 33622), (902, 33472), (903, 33469), (909, 33433), (917, 33409), (921, 33400), (925, 33388), (946, 33313), (955, 33292),

Gene: TatarkaPM\_39 Start: 29065, Stop: 27074, Start Num: 211

Candidate Starts for TatarkaPM\_39:

(4, 29698), (66, 29395), (Start: 211 @29065 has 1 MA's), (236, 29029), (242, 29023), (Start: 301 @28939 has 110 MA's), (Start: 308 @28930 has 5 MA's), (354, 28825), (358, 28816), (375, 28786), (378, 28783), (433, 28663), (435, 28651), (438, 28645), (475, 28540), (484, 28513), (531, 28372), (536, 28366), (537, 28363), (539, 28351), (548, 28324), (549, 28321), (554, 28306), (556, 28300), (559, 28294), (586, 28261), (676, 28072), (776, 27757), (779, 27748), (780, 27745), (783, 27727),

(794, 27685), (796, 27679), (798, 27670), (805, 27655), (822, 27598), (878, 27439), (885, 27409), (888, 27400), (903, 27340), (906, 27316), (919, 27277), (929, 27244), (932, 27232), (947, 27172),

Gene: Taurus\_49 Start: 31852, Stop: 30038, Start Num: 246

Candidate Starts for Taurus\_49:

(Start: 246 @31852 has 877 MA's), (275, 31813), (280, 31801), (364, 31648), (371, 31633), (400, 31576), (425, 31519), (429, 31510), (444, 31468), (461, 31417), (479, 31366), (539, 31273), (556, 31225), (560, 31216), (568, 31201), (585, 31162), (598, 31135), (612, 31105), (654, 31012), (686, 30952), (697, 30937), (743, 30781), (767, 30694), (783, 30628), (793, 30589), (815, 30517), (827, 30478), (834, 30454), (843, 30436), (853, 30403), (864, 30376), (888, 30322), (905, 30262), (930, 30184), (946, 30127), (950, 30115), (955, 30106),

Gene: Tbone\_40 Start: 29503, Stop: 31368, Start Num: 245

Candidate Starts for Tbone\_40:

(Start: 245 @29503 has 74 MA's), (279, 29551), (416, 29800), (448, 29890), (541, 30097), (544, 30106), (580, 30196), (585, 30205), (591, 30220), (613, 30265), (635, 30310), (659, 30358), (687, 30415), (717, 30496), (743, 30616), (752, 30646), (767, 30703), (783, 30769), (790, 30793), (813, 30862), (834, 30934), (840, 30943), (878, 31042), (902, 31105), (905, 31129), (946, 31264), (949, 31273),

Gene: Teagan\_39 Start: 28930, Stop: 27065, Start Num: 301

Candidate Starts for Teagan\_39:

(Start: 238 @29017 has 3 MA's), (Start: 241 @29014 has 13 MA's), (Start: 301 @28930 has 110 MA's), (Start: 308 @28921 has 5 MA's), (354, 28816), (358, 28807), (375, 28777), (378, 28774), (433, 28654), (435, 28642), (438, 28636), (475, 28531), (484, 28504), (531, 28363), (536, 28357), (537, 28354), (539, 28342), (548, 28315), (549, 28312), (554, 28297), (556, 28291), (559, 28285), (586, 28252), (676, 28063), (709, 27988), (776, 27748), (779, 27739), (780, 27736), (783, 27718), (794, 27676), (796, 27670), (798, 27661), (805, 27646), (822, 27589), (878, 27430), (885, 27400), (888, 27391), (903, 27331), (906, 27307), (919, 27268), (929, 27235), (932, 27223), (947, 27163),

Gene: Teagster\_43 Start: 29747, Stop: 31618, Start Num: 246

Candidate Starts for Teagster\_43:

(Start: 246 @29747 has 877 MA's), (267, 29768), (279, 29795), (287, 29816), (Start: 301 @29837 has 110 MA's), (429, 30080), (433, 30092), (435, 30104), (438, 30110), (467, 30176), (551, 30338), (565, 30371), (585, 30419), (711, 30698), (743, 30836), (782, 30983), (783, 30989), (813, 31082), (831, 31142), (874, 31253), (876, 31259), (912, 31373), (923, 31403), (924, 31406), (946, 31484), (949, 31493),

Gene: TeddyBear\_38 Start: 28632, Stop: 26767, Start Num: 301

Candidate Starts for TeddyBear\_38:

(Start: 238 @28719 has 3 MA's), (Start: 301 @28632 has 110 MA's), (Start: 308 @28623 has 5 MA's), (354, 28518), (358, 28509), (375, 28479), (378, 28476), (433, 28356), (435, 28344), (438, 28338), (475, 28233), (484, 28206), (531, 28065), (536, 28059), (537, 28056), (539, 28044), (548, 28017), (549, 28014), (554, 27999), (556, 27993), (559, 27987), (586, 27954), (652, 27825), (676, 27765), (776, 27450), (779, 27441), (780, 27438), (783, 27420), (794, 27378), (796, 27372), (805, 27348), (822, 27291), (878, 27132), (885, 27102), (888, 27093), (903, 27033), (906, 27009), (919, 26970), (929, 26937), (932, 26925), (947, 26865),

Gene: Telesworld\_58 Start: 54144, Stop: 52285, Start Num: 205

Candidate Starts for Telesworld\_58:

(Start: 188 @54168 has 1 MA's), (Start: 205 @54144 has 304 MA's), (Start: 235 @54120 has 6 MA's), (Start: 250 @54114 has 2 MA's), (Start: 274 @54072 has 6 MA's), (283, 54051), (337, 53937), (342, 53931), (360, 53901), (391, 53841), (399, 53820), (421, 53766), (428, 53754), (434, 53736), (436,

53724), (476, 53619), (519, 53562), (538, 53526), (542, 53514), (552, 53487), (570, 53442), (598, 53385), (602, 53376), (603, 53373), (738, 53013), (744, 52980), (750, 52959), (777, 52866), (780, 52857), (795, 52794), (814, 52758), (815, 52755), (820, 52740), (847, 52662), (851, 52650), (858, 52629), (875, 52590), (905, 52500), (910, 52482), (912, 52476), (917, 52461), (926, 52437), (930, 52422), (931, 52419), (933, 52407), (940, 52383), (963, 52335), (972, 52311),

Gene: Temprado\_47 Start: 29791, Stop: 27950, Start Num: 246

Candidate Starts for Temprado\_47:

(Start: 246 @29791 has 877 MA's), (364, 29587), (400, 29512), (402, 29509), (416, 29482), (420, 29467), (425, 29455), (444, 29404), (475, 29314), (479, 29302), (539, 29209), (552, 29170), (560, 29152), (568, 29137), (598, 29071), (613, 29038), (614, 29035), (663, 28933), (697, 28873), (726, 28789), (743, 28708), (766, 28624), (767, 28621), (771, 28612), (776, 28585), (783, 28555), (810, 28495), (820, 28456), (902, 28240), (903, 28237), (905, 28216), (946, 28081), (950, 28069), (955, 28060), (957, 28057), (1000, 27964),

Gene: Tenda\_38 Start: 28630, Stop: 26765, Start Num: 301

Candidate Starts for Tenda\_38:

(Start: 238 @28717 has 3 MA's), (Start: 241 @28714 has 13 MA's), (Start: 301 @28630 has 110 MA's), (Start: 308 @28621 has 5 MA's), (354, 28516), (358, 28507), (375, 28477), (378, 28474), (433, 28354), (435, 28342), (438, 28336), (475, 28231), (484, 28204), (531, 28063), (536, 28057), (537, 28054), (539, 28042), (548, 28015), (549, 28012), (554, 27997), (556, 27991), (559, 27985), (586, 27952), (652, 27823), (676, 27763), (776, 27448), (779, 27439), (780, 27436), (783, 27418), (794, 27376), (796, 27370), (798, 27361), (805, 27346), (822, 27289), (878, 27130), (885, 27100), (888, 27091), (903, 27031), (906, 27007), (919, 26968), (929, 26935), (932, 26923), (947, 26863),

Gene: Teodoridan\_43 Start: 34199, Stop: 32412, Start Num: 246

Candidate Starts for Teodoridan\_43:

(Start: 246 @34199 has 877 MA's), (368, 33986), (400, 33923), (416, 33893), (422, 33872), (425, 33866), (429, 33857), (470, 33740), (479, 33713), (539, 33620), (544, 33605), (551, 33584), (578, 33521), (580, 33518), (612, 33452), (627, 33422), (639, 33392), (662, 33347), (683, 33308), (743, 33128), (753, 33080), (767, 33041), (783, 32975), (812, 32903), (814, 32894), (843, 32810), (876, 32723), (917, 32597), (922, 32585), (946, 32501), (948, 32495),

Gene: Terrific\_47 Start: 31714, Stop: 29927, Start Num: 246

Candidate Starts for Terrific\_47:

(Start: 246 @31714 has 877 MA's), (364, 31510), (366, 31507), (368, 31501), (383, 31471), (400, 31438), (402, 31435), (416, 31408), (425, 31381), (444, 31330), (479, 31228), (539, 31135), (556, 31087), (560, 31078), (568, 31063), (598, 30997), (635, 30916), (659, 30868), (726, 30724), (743, 30643), (755, 30592), (766, 30559), (783, 30490), (793, 30451), (810, 30430), (812, 30418), (814, 30409), (818, 30397), (886, 30217), (888, 30211), (902, 30175), (905, 30151), (930, 30073), (946, 30016), (950, 30004),

Gene: Texage\_43 Start: 31598, Stop: 29760, Start Num: 246

Candidate Starts for Texage\_43:

(Start: 246 @31598 has 877 MA's), (280, 31547), (364, 31394), (400, 31322), (416, 31292), (425, 31265), (429, 31256), (479, 31112), (539, 31016), (558, 30968), (585, 30908), (629, 30821), (646, 30776), (659, 30755), (698, 30683), (716, 30641), (726, 30599), (743, 30518), (753, 30470), (767, 30431), (776, 30395), (783, 30365), (791, 30335), (815, 30254), (827, 30215), (834, 30191), (843, 30173), (844, 30170), (888, 30044), (905, 29984), (932, 29897), (946, 29849), (950, 29837), (955, 29828),

Gene: TforTroy\_42 Start: 29677, Stop: 31542, Start Num: 245

Candidate Starts for TforTroy\_42:



(Start: 245 @29677 has 74 MA's), (279, 29725), (422, 29995), (458, 30094), (544, 30280), (585, 30379), (591, 30394), (598, 30406), (659, 30532), (717, 30670), (743, 30790), (752, 30820), (767, 30877), (783, 30943), (813, 31036), (902, 31279), (946, 31438), (949, 31447),

Gene: Thanksgivukkah\_44 Start: 31568, Stop: 29742, Start Num: 246

Candidate Starts for Thanksgivukkah\_44:

(Start: 246 @31568 has 877 MA's), (267, 31547), (280, 31517), (295, 31487), (383, 31325), (394, 31307), (400, 31292), (425, 31235), (429, 31226), (471, 31106), (479, 31082), (539, 30989), (558, 30941), (568, 30920), (585, 30881), (646, 30749), (659, 30728), (683, 30683), (687, 30671), (740, 30518), (743, 30497), (776, 30374), (783, 30344), (793, 30305), (814, 30239), (815, 30236), (820, 30221), (827, 30197), (834, 30173), (905, 29966), (946, 29831), (950, 29819), (955, 29810),

Gene: Theia\_36 Start: 30392, Stop: 28533, Start Num: 246

Candidate Starts for Theia\_36:

(Start: 246 @30392 has 877 MA's), (280, 30341), (318, 30281), (347, 30218), (364, 30188), (366, 30185), (395, 30128), (416, 30086), (425, 30059), (479, 29906), (539, 29810), (556, 29762), (594, 29678), (598, 29672), (633, 29600), (646, 29567), (654, 29552), (662, 29540), (712, 29441), (743, 29306), (752, 29276), (753, 29258), (755, 29255), (767, 29219), (771, 29210), (774, 29189), (777, 29180), (783, 29153), (784, 29150), (810, 29093), (814, 29072), (853, 28955), (876, 28901), (880, 28892), (888, 28874), (910, 28796), (939, 28703), (946, 28679), (950, 28667), (1007, 28550), (1008, 28547),

Gene: TheloniousMonk\_46 Start: 36133, Stop: 34346, Start Num: 246

Candidate Starts for TheloniousMonk\_46:

(Start: 246 @36133 has 877 MA's), (368, 35920), (374, 35905), (416, 35827), (422, 35806), (425, 35800), (429, 35791), (470, 35674), (479, 35647), (539, 35554), (544, 35539), (556, 35506), (578, 35455), (580, 35452), (607, 35398), (612, 35386), (627, 35356), (639, 35326), (662, 35281), (683, 35242), (743, 35062), (753, 35014), (767, 34975), (783, 34909), (812, 34837), (814, 34828), (843, 34744), (876, 34657), (917, 34531), (922, 34519), (946, 34435), (948, 34429),

Gene: Thompsone\_39 Start: 28937, Stop: 27072, Start Num: 301

Candidate Starts for Thompsone\_39:

(Start: 238 @29024 has 3 MA's), (Start: 241 @29021 has 13 MA's), (Start: 301 @28937 has 110 MA's), (Start: 308 @28928 has 5 MA's), (354, 28823), (358, 28814), (375, 28784), (378, 28781), (432, 28664), (435, 28649), (438, 28643), (475, 28538), (484, 28511), (531, 28370), (537, 28361), (539, 28349), (548, 28322), (549, 28319), (554, 28304), (556, 28298), (559, 28292), (586, 28259), (652, 28130), (676, 28070), (709, 27995), (776, 27755), (779, 27746), (780, 27743), (783, 27725), (794, 27683), (796, 27677), (798, 27668), (805, 27653), (822, 27596), (878, 27437), (885, 27407), (888, 27398), (903, 27338), (906, 27314), (919, 27275), (929, 27242), (932, 27230), (947, 27170),

Gene: Thonko\_60 Start: 53153, Stop: 51336, Start Num: 230

Candidate Starts for Thonko\_60:

(Start: 230 @53153 has 1 MA's), (Start: 250 @53135 has 2 MA's), (267, 53108), (326, 52991), (366, 52925), (476, 52664), (519, 52607), (538, 52571), (542, 52559), (556, 52523), (569, 52490), (598, 52430), (602, 52421), (603, 52418), (680, 52244), (724, 52127), (728, 52103), (739, 52058), (744, 52031), (750, 52010), (775, 51923), (777, 51917), (780, 51908), (795, 51845), (815, 51806), (817, 51800), (820, 51791), (847, 51713), (851, 51701), (858, 51680), (863, 51668), (875, 51641), (901, 51584), (905, 51551), (912, 51527), (926, 51488), (940, 51434), (972, 51362),

Gene: Thor\_43 Start: 33796, Stop: 31970, Start Num: 246

Candidate Starts for Thor\_43:

(Start: 246 @33796 has 877 MA's), (368, 33583), (374, 33568), (416, 33490), (422, 33469), (425, 33463), (429, 33454), (470, 33337), (479, 33310), (539, 33217), (544, 33202), (578, 33118), (580,

33115), (612, 33049), (627, 33019), (639, 32989), (662, 32944), (683, 32905), (743, 32725), (753, 32677), (767, 32638), (783, 32572), (793, 32533), (810, 32512), (814, 32491), (820, 32473), (843, 32407), (902, 32257), (903, 32254), (909, 32218), (921, 32185), (925, 32173), (938, 32125), (946, 32098), (955, 32077),

Gene: Thora\_60 Start: 54321, Stop: 52462, Start Num: 205

Candidate Starts for Thora\_60:

(Start: 188 @54345 has 1 MA's), (Start: 205 @54321 has 304 MA's), (Start: 235 @54297 has 6 MA's), (Start: 250 @54291 has 2 MA's), (Start: 274 @54249 has 6 MA's), (283, 54228), (337, 54114), (342, 54108), (360, 54078), (391, 54018), (399, 53997), (421, 53943), (428, 53931), (434, 53913), (436, 53901), (476, 53796), (519, 53739), (538, 53703), (542, 53691), (552, 53664), (564, 53637), (570, 53619), (580, 53601), (598, 53562), (602, 53553), (603, 53550), (712, 53292), (738, 53190), (744, 53157), (750, 53136), (777, 53043), (780, 53034), (795, 52971), (814, 52935), (815, 52932), (820, 52917), (847, 52839), (851, 52827), (858, 52806), (875, 52767), (905, 52677), (910, 52659), (912, 52653), (917, 52638), (926, 52614), (930, 52599), (931, 52596), (933, 52584), (940, 52560), (963, 52512), (972, 52488),

Gene: Thorongil\_39 Start: 28937, Stop: 27072, Start Num: 301

Candidate Starts for Thorongil\_39:

(Start: 238 @29024 has 3 MA's), (Start: 241 @29021 has 13 MA's), (Start: 301 @28937 has 110 MA's), (Start: 308 @28928 has 5 MA's), (354, 28823), (358, 28814), (375, 28784), (378, 28781), (433, 28661), (435, 28649), (438, 28643), (475, 28538), (484, 28511), (531, 28370), (536, 28364), (537, 28361), (539, 28349), (548, 28322), (549, 28319), (554, 28304), (556, 28298), (559, 28292), (586, 28259), (652, 28130), (676, 28070), (776, 27755), (779, 27746), (780, 27743), (783, 27725), (794, 27683), (796, 27677), (798, 27668), (805, 27653), (822, 27596), (878, 27437), (885, 27407), (888, 27398), (903, 27338), (906, 27314), (919, 27275), (929, 27242), (932, 27230), (947, 27170),

Gene: ThreeOh3D2\_62 Start: 54542, Stop: 52683, Start Num: 205

Candidate Starts for ThreeOh3D2\_62:

(Start: 188 @54566 has 1 MA's), (Start: 205 @54542 has 304 MA's), (Start: 235 @54518 has 6 MA's), (Start: 250 @54512 has 2 MA's), (Start: 274 @54470 has 6 MA's), (283, 54449), (337, 54335), (342, 54329), (360, 54299), (391, 54239), (399, 54218), (421, 54164), (428, 54152), (434, 54134), (436, 54122), (476, 54017), (519, 53960), (538, 53924), (542, 53912), (552, 53885), (564, 53858), (570, 53840), (580, 53822), (598, 53783), (602, 53774), (603, 53771), (604, 53768), (738, 53411), (744, 53378), (750, 53357), (777, 53264), (780, 53255), (795, 53192), (814, 53156), (815, 53153), (820, 53138), (847, 53060), (851, 53048), (858, 53027), (875, 52988), (905, 52898), (910, 52880), (912, 52874), (917, 52859), (926, 52835), (930, 52820), (931, 52817), (933, 52805), (940, 52781), (963, 52733), (972, 52709),

Gene: Thunderbird\_60 Start: 54275, Stop: 52416, Start Num: 205

Candidate Starts for Thunderbird\_60:

(Start: 188 @54299 has 1 MA's), (Start: 205 @54275 has 304 MA's), (Start: 235 @54251 has 6 MA's), (Start: 250 @54245 has 2 MA's), (Start: 274 @54203 has 6 MA's), (283, 54182), (337, 54068), (342, 54062), (360, 54032), (391, 53972), (399, 53951), (421, 53897), (428, 53885), (434, 53867), (436, 53855), (476, 53750), (519, 53693), (538, 53657), (542, 53645), (552, 53618), (570, 53573), (598, 53516), (602, 53507), (603, 53504), (738, 53144), (744, 53111), (750, 53090), (777, 52997), (780, 52988), (795, 52925), (814, 52889), (815, 52886), (820, 52871), (847, 52793), (851, 52781), (858, 52760), (875, 52721), (905, 52631), (910, 52613), (912, 52607), (917, 52592), (926, 52568), (930, 52553), (931, 52550), (933, 52538), (940, 52514), (963, 52466), (972, 52442), (977, 52427),

Gene: Thunderclap\_54 Start: 36908, Stop: 34740, Start Num: 233

Candidate Starts for Thunderclap\_54:

(231, 36911), (Start: 233 @36908 has 13 MA's), (Start: 272 @36854 has 4 MA's), (317, 36770), (382, 36617), (387, 36608), (405, 36563), (431, 36485), (434, 36476), (438, 36461), (446, 36446), (447, 36443), (466, 36386), (490, 36293), (493, 36251), (567, 36056), (570, 36044), (572, 36038), (581, 36014), (590, 35993), (600, 35972), (606, 35957), (609, 35951), (638, 35888), (662, 35837), (693, 35750), (714, 35690), (726, 35642), (751, 35540), (752, 35534), (757, 35507), (758, 35504), (766, 35483), (777, 35441), (779, 35435), (784, 35411), (794, 35369), (795, 35366), (802, 35339), (811, 35306), (813, 35294), (823, 35258), (831, 35234), (832, 35228), (834, 35222), (854, 35168), (875, 35120), (876, 35117), (897, 35057), (902, 35033), (907, 35003), (923, 34949), (940, 34880), (944, 34868), (958, 34829),

Gene: Tian\_39 Start: 30363, Stop: 32228, Start Num: 245

Candidate Starts for Tian\_39:

(Start: 180 @30285 has 1 MA's), (Start: 245 @30363 has 74 MA's), (279, 30411), (347, 30537), (364, 30567), (382, 30594), (386, 30600), (416, 30660), (448, 30750), (541, 30957), (544, 30966), (585, 31065), (591, 31080), (659, 31218), (717, 31356), (737, 31443), (743, 31476), (760, 31539), (767, 31563), (781, 31620), (783, 31629), (813, 31722), (834, 31794), (878, 31902), (902, 31965), (905, 31989), (946, 32124), (949, 32133),

Gene: Tiffany\_48 Start: 31738, Stop: 29924, Start Num: 246

Candidate Starts for Tiffany\_48:

(Start: 246 @31738 has 877 MA's), (275, 31699), (280, 31687), (364, 31534), (371, 31519), (400, 31462), (425, 31405), (429, 31396), (444, 31354), (461, 31303), (479, 31252), (539, 31159), (556, 31111), (560, 31102), (568, 31087), (585, 31048), (598, 31021), (612, 30991), (654, 30898), (686, 30838), (697, 30823), (743, 30667), (767, 30580), (783, 30514), (793, 30475), (815, 30403), (827, 30364), (834, 30340), (843, 30322), (853, 30289), (864, 30262), (888, 30208), (905, 30148), (930, 30070), (946, 30013), (950, 30001), (955, 29992),

Gene: Tiger\_37 Start: 29925, Stop: 28066, Start Num: 246

Candidate Starts for Tiger\_37:

(Start: 246 @29925 has 877 MA's), (280, 29874), (318, 29814), (347, 29751), (364, 29721), (366, 29718), (395, 29661), (400, 29649), (416, 29619), (425, 29592), (479, 29439), (539, 29343), (556, 29295), (567, 29274), (594, 29211), (598, 29205), (633, 29133), (646, 29100), (654, 29085), (662, 29073), (712, 28974), (743, 28839), (752, 28809), (753, 28791), (762, 28773), (767, 28752), (771, 28743), (783, 28686), (793, 28647), (814, 28605), (820, 28587), (834, 28539), (853, 28488), (876, 28434), (880, 28425), (888, 28407), (905, 28347), (910, 28329), (939, 28236), (946, 28212), (950, 28200), (1007, 28083), (1008, 28080),

Gene: Timmi\_59 Start: 54024, Stop: 52165, Start Num: 205

Candidate Starts for Timmi\_59:

(Start: 188 @54048 has 1 MA's), (Start: 205 @54024 has 304 MA's), (Start: 235 @54000 has 6 MA's), (Start: 250 @53994 has 2 MA's), (Start: 274 @53952 has 6 MA's), (283, 53931), (337, 53817), (342, 53811), (360, 53781), (391, 53721), (399, 53700), (421, 53646), (428, 53634), (434, 53616), (436, 53604), (476, 53499), (519, 53442), (538, 53406), (542, 53394), (552, 53367), (570, 53322), (598, 53265), (602, 53256), (603, 53253), (738, 52893), (744, 52860), (750, 52839), (777, 52746), (780, 52737), (795, 52674), (814, 52638), (815, 52635), (820, 52620), (847, 52542), (851, 52530), (858, 52509), (875, 52470), (905, 52380), (910, 52362), (912, 52356), (917, 52341), (926, 52317), (930, 52302), (931, 52299), (933, 52287), (940, 52263), (963, 52215), (972, 52191),

Gene: Timothy\_45 Start: 30689, Stop: 28902, Start Num: 246

Candidate Starts for Timothy\_45:

(Start: 246 @30689 has 877 MA's), (364, 30485), (400, 30413), (416, 30383), (425, 30356), (541, 30104), (560, 30053), (598, 29972), (619, 29927), (659, 29843), (687, 29786), (715, 29744), (726, 29699), (743, 29618), (755, 29567), (767, 29531), (783, 29465), (810, 29405), (812, 29393), (846,

29291), (853, 29267), (860, 29249), (888, 29186), (901, 29159), (902, 29150), (905, 29126), (946, 28991), (950, 28979), (955, 28970),

Gene: Timshel\_43 Start: 33330, Stop: 31495, Start Num: 246

Candidate Starts for Timshel\_43:

(Start: 246 @33330 has 877 MA's), (318, 33219), (368, 33117), (387, 33081), (399, 33057), (422, 33003), (425, 32997), (433, 32976), (461, 32895), (479, 32844), (536, 32763), (539, 32748), (548, 32721), (554, 32703), (558, 32700), (568, 32679), (585, 32640), (614, 32577), (645, 32511), (646, 32508), (659, 32487), (706, 32397), (716, 32376), (726, 32334), (743, 32253), (753, 32205), (771, 32157), (776, 32130), (783, 32100), (793, 32061), (814, 31992), (815, 31989), (820, 31974), (827, 31950), (843, 31908), (888, 31779), (901, 31752), (905, 31719), (910, 31701), (922, 31668), (946, 31584), (950, 31572), (955, 31563),

Gene: TinSulphur\_39 Start: 28936, Stop: 27071, Start Num: 301

Candidate Starts for TinSulphur\_39:

(Start: 238 @29023 has 3 MA's), (Start: 241 @29020 has 13 MA's), (Start: 301 @28936 has 110 MA's), (Start: 308 @28927 has 5 MA's), (354, 28822), (358, 28813), (375, 28783), (378, 28780), (433, 28660), (435, 28648), (438, 28642), (475, 28537), (484, 28510), (531, 28369), (536, 28363), (537, 28360), (539, 28348), (548, 28321), (549, 28318), (554, 28303), (556, 28297), (559, 28291), (586, 28258), (676, 28069), (776, 27754), (779, 27745), (780, 27742), (783, 27724), (794, 27682), (796, 27676), (798, 27667), (805, 27652), (822, 27595), (878, 27436), (885, 27406), (888, 27397), (903, 27337), (906, 27313), (919, 27274), (929, 27241), (932, 27229), (947, 27169),

Gene: TinaFeyge\_45 Start: 31565, Stop: 29739, Start Num: 246

Candidate Starts for TinaFeyge\_45:

(Start: 246 @31565 has 877 MA's), (267, 31544), (280, 31514), (295, 31484), (383, 31322), (394, 31304), (425, 31232), (429, 31223), (471, 31103), (479, 31079), (539, 30986), (558, 30938), (568, 30917), (585, 30878), (646, 30746), (659, 30725), (683, 30680), (687, 30668), (740, 30515), (743, 30494), (776, 30371), (783, 30341), (793, 30302), (814, 30236), (815, 30233), (820, 30218), (827, 30194), (834, 30170), (905, 29963), (946, 29828), (950, 29816), (955, 29807),

Gene: Tinciduntolum\_58 Start: 52640, Stop: 50811, Start Num: 205

Candidate Starts for Tinciduntolum\_58:

(Start: 205 @52640 has 304 MA's), (Start: 250 @52613 has 2 MA's), (269, 52583), (Start: 274 @52571 has 6 MA's), (286, 52544), (287, 52541), (293, 52532), (318, 52514), (366, 52418), (391, 52367), (400, 52343), (463, 52181), (469, 52166), (472, 52157), (476, 52145), (519, 52088), (538, 52052), (542, 52040), (551, 52016), (588, 51932), (602, 51902), (603, 51899), (615, 51869), (680, 51725), (707, 51659), (721, 51620), (724, 51608), (727, 51587), (732, 51569), (744, 51512), (763, 51455), (771, 51428), (777, 51398), (780, 51389), (795, 51323), (812, 51296), (814, 51287), (820, 51269), (827, 51245), (847, 51191), (851, 51179), (858, 51158), (888, 51089), (905, 51029), (910, 51011), (922, 50978), (926, 50966), (930, 50951), (931, 50948), (933, 50936), (940, 50912), (941, 50909), (963, 50861), (965, 50858), (972, 50837), (979, 50816),

Gene: TinyPebbles\_47 Start: 31886, Stop: 30072, Start Num: 246

Candidate Starts for TinyPebbles\_47:

(Start: 246 @31886 has 877 MA's), (275, 31847), (280, 31835), (364, 31682), (371, 31667), (400, 31610), (425, 31553), (429, 31544), (444, 31502), (461, 31451), (479, 31400), (521, 31346), (539, 31307), (556, 31259), (568, 31235), (585, 31196), (598, 31169), (612, 31139), (654, 31046), (662, 31034), (686, 30986), (697, 30971), (743, 30815), (755, 30764), (766, 30731), (767, 30728), (783, 30662), (793, 30623), (815, 30551), (827, 30512), (834, 30488), (843, 30470), (853, 30437), (888, 30356), (905, 30296), (932, 30209), (946, 30161), (950, 30149), (955, 30140), (957, 30137),

Gene: TinyTerror\_59 Start: 54114, Stop: 52294, Start Num: 244

Candidate Starts for TinyTerror\_59:

(Start: 244 @54114 has 11 MA's), (267, 54081), (433, 53748), (435, 53736), (448, 53706), (454, 53700), (476, 53637), (478, 53631), (519, 53580), (538, 53544), (556, 53496), (603, 53391), (645, 53295), (674, 53244), (724, 53100), (732, 53061), (739, 53031), (744, 53004), (748, 52992), (775, 52896), (777, 52890), (780, 52881), (782, 52869), (807, 52797), (814, 52767), (820, 52749), (822, 52740), (847, 52671), (851, 52659), (858, 52638), (888, 52569), (898, 52554), (903, 52530), (905, 52509), (910, 52491), (912, 52485), (924, 52452), (926, 52446), (931, 52428), (933, 52416), (936, 52404), (940, 52392), (956, 52350), (972, 52320),

Gene: TinyTimmy\_45 Start: 30732, Stop: 28945, Start Num: 246

Candidate Starts for TinyTimmy\_45:

(Start: 246 @30732 has 877 MA's), (364, 30528), (400, 30456), (416, 30426), (425, 30399), (541, 30147), (560, 30096), (598, 30015), (619, 29970), (659, 29886), (687, 29829), (715, 29787), (726, 29742), (743, 29661), (755, 29610), (767, 29574), (783, 29508), (810, 29448), (812, 29436), (846, 29334), (853, 29310), (860, 29292), (888, 29229), (901, 29202), (902, 29193), (905, 29169), (946, 29034), (950, 29022), (955, 29013),

Gene: Tinybot\_44 Start: 31597, Stop: 29771, Start Num: 246

Candidate Starts for Tinybot\_44:

(Start: 246 @31597 has 877 MA's), (267, 31576), (280, 31546), (295, 31516), (383, 31354), (394, 31336), (425, 31264), (429, 31255), (471, 31135), (479, 31111), (539, 31018), (558, 30970), (568, 30949), (585, 30910), (646, 30778), (659, 30757), (683, 30712), (687, 30700), (740, 30547), (743, 30526), (776, 30403), (783, 30373), (793, 30334), (814, 30268), (815, 30265), (820, 30250), (827, 30226), (834, 30202), (905, 29995), (946, 29860), (950, 29848), (955, 29839),

Gene: Tinyman4\_37 Start: 27313, Stop: 25415, Start Num: 297

Candidate Starts for Tinyman4\_37:

(8, 28051), (9, 28045), (56, 27790), (Start: 272 @27364 has 4 MA's), (Start: 297 @27313 has 18 MA's), (324, 27250), (354, 27199), (375, 27160), (403, 27103), (430, 27046), (433, 27037), (435, 27025), (438, 27019), (454, 26974), (456, 26968), (493, 26866), (504, 26821), (531, 26746), (537, 26737), (539, 26725), (549, 26695), (556, 26674), (562, 26662), (585, 26638), (660, 26488), (742, 26227), (771, 26125), (774, 26104), (783, 26068), (792, 26032), (794, 26026), (822, 25939), (831, 25912), (878, 25780), (888, 25741), (893, 25720), (903, 25681), (906, 25657), (908, 25651), (917, 25624), (947, 25513),

Gene: TipsytheTRex\_42 Start: 30574, Stop: 28787, Start Num: 246

Candidate Starts for TipsytheTRex\_42:

(Start: 246 @30574 has 877 MA's), (364, 30370), (366, 30367), (368, 30361), (375, 30346), (383, 30331), (400, 30298), (416, 30268), (425, 30241), (433, 30220), (444, 30190), (479, 30088), (539, 29995), (556, 29947), (560, 29938), (568, 29923), (598, 29857), (635, 29776), (659, 29728), (683, 29683), (743, 29503), (753, 29455), (755, 29452), (767, 29416), (783, 29350), (793, 29311), (810, 29290), (831, 29215), (837, 29197), (853, 29152), (864, 29125), (880, 29089), (888, 29071), (902, 29035), (905, 29011), (930, 28933), (946, 28876), (950, 28864), (955, 28855), (957, 28852),

Gene: TiroTheta9\_45 Start: 31564, Stop: 29738, Start Num: 246

Candidate Starts for TiroTheta9\_45:

(Start: 246 @31564 has 877 MA's), (267, 31543), (280, 31513), (295, 31483), (383, 31321), (394, 31303), (425, 31231), (429, 31222), (471, 31102), (479, 31078), (539, 30985), (558, 30937), (568, 30916), (585, 30877), (646, 30745), (659, 30724), (683, 30679), (687, 30667), (740, 30514), (743, 30493), (776, 30370), (783, 30340), (793, 30301), (814, 30235), (815, 30232), (820, 30217), (827, 30193), (834, 30169), (905, 29962), (946, 29827), (950, 29815), (955, 29806),

Gene: Toaka\_44 Start: 30969, Stop: 29176, Start Num: 245

Candidate Starts for Toaka\_44:

(Start: 245 @30969 has 74 MA's), (261, 30960), (346, 30798), (347, 30795), (364, 30765), (379, 30732), (402, 30687), (416, 30660), (420, 30645), (425, 30633), (444, 30582), (471, 30504), (479, 30480), (539, 30387), (560, 30330), (612, 30219), (655, 30123), (714, 30021), (716, 30015), (743, 29892), (771, 29796), (776, 29769), (780, 29757), (783, 29739), (814, 29658), (853, 29541), (902, 29424), (946, 29265), (950, 29253),

Gene: Todacoro\_44 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for Todacoro\_44:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: Tolls\_44 Start: 32396, Stop: 30009, Start Num: 45

Candidate Starts for Tolls\_44:

(20, 32468), (23, 32453), (Start: 45 @32396 has 24 MA's), (48, 32387), (50, 32381), (75, 32300), (117, 32180), (138, 32129), (Start: 241 @31997 has 13 MA's), (265, 31970), (312, 31877), (329, 31832), (374, 31754), (398, 31706), (420, 31652), (421, 31649), (430, 31631), (435, 31610), (454, 31559), (457, 31550), (458, 31547), (484, 31472), (499, 31427), (522, 31367), (526, 31352), (559, 31268), (605, 31223), (615, 31199), (633, 31193), (643, 31169), (680, 31091), (682, 31088), (683, 31085), (733, 30938), (749, 30869), (774, 30770), (783, 30734), (792, 30698), (794, 30692), (796, 30686), (797, 30680), (805, 30656), (815, 30623), (822, 30599), (836, 30554), (856, 30494), (903, 30341), (910, 30302), (911, 30299), (947, 30173), (968, 30128), (971, 30119),

Gene: TomBombadil\_60 Start: 54309, Stop: 52450, Start Num: 205

Candidate Starts for TomBombadil\_60:

(Start: 188 @54333 has 1 MA's), (Start: 205 @54309 has 304 MA's), (Start: 235 @54285 has 6 MA's), (Start: 250 @54279 has 2 MA's), (Start: 274 @54237 has 6 MA's), (283, 54216), (337, 54102), (342, 54096), (360, 54066), (391, 54006), (399, 53985), (421, 53931), (428, 53919), (434, 53901), (436, 53889), (476, 53784), (519, 53727), (538, 53691), (542, 53679), (552, 53652), (564, 53625), (570, 53607), (580, 53589), (598, 53550), (602, 53541), (603, 53538), (712, 53280), (738, 53178), (744, 53145), (750, 53124), (777, 53031), (780, 53022), (795, 52959), (814, 52923), (815, 52920), (820, 52905), (847, 52827), (851, 52815), (858, 52794), (875, 52755), (905, 52665), (910, 52647), (912, 52641), (917, 52626), (926, 52602), (930, 52587), (931, 52584), (933, 52572), (940, 52548), (963, 52500), (972, 52476),

Gene: Tomathan\_47 Start: 31153, Stop: 29330, Start Num: 246

Candidate Starts for Tomathan\_47:

(Start: 246 @31153 has 877 MA's), (364, 30949), (374, 30925), (383, 30907), (394, 30889), (400, 30874), (402, 30871), (416, 30844), (425, 30817), (444, 30766), (479, 30664), (539, 30571), (556, 30523), (560, 30514), (567, 30502), (568, 30499), (598, 30433), (627, 30373), (683, 30259), (697, 30235), (715, 30196), (743, 30070), (755, 30019), (767, 29983), (783, 29917), (793, 29878), (815, 29809), (827, 29770), (844, 29725), (853, 29695), (880, 29632), (886, 29620), (888, 29614), (905, 29554), (946, 29419), (950, 29407), (955, 29398),

Gene: Tomlarah\_61 Start: 54878, Stop: 53019, Start Num: 205

Candidate Starts for Tomlarah\_61:

(Start: 188 @54902 has 1 MA's), (Start: 205 @54878 has 304 MA's), (Start: 235 @54854 has 6 MA's), (Start: 250 @54848 has 2 MA's), (Start: 274 @54806 has 6 MA's), (283, 54785), (337, 54671), (342, 54665), (360, 54635), (391, 54575), (399, 54554), (421, 54500), (428, 54488), (434, 54470), (436,

54458), (476, 54353), (519, 54296), (538, 54260), (542, 54248), (552, 54221), (564, 54194), (570, 54176), (580, 54158), (598, 54119), (602, 54110), (603, 54107), (712, 53849), (738, 53747), (744, 53714), (750, 53693), (777, 53600), (780, 53591), (795, 53528), (814, 53492), (815, 53489), (820, 53474), (847, 53396), (851, 53384), (858, 53363), (875, 53324), (905, 53234), (910, 53216), (912, 53210), (917, 53195), (926, 53171), (930, 53156), (931, 53153), (933, 53141), (940, 53117), (963, 53069), (972, 53045),

Gene: ToneTone\_42 Start: 29354, Stop: 27513, Start Num: 246

Candidate Starts for ToneTone\_42:

(Start: 220 @29384 has 1 MA's), (Start: 246 @29354 has 877 MA's), (364, 29150), (400, 29075), (402, 29072), (416, 29045), (420, 29030), (425, 29018), (444, 28967), (475, 28877), (479, 28865), (539, 28772), (552, 28733), (560, 28715), (568, 28700), (598, 28634), (613, 28601), (614, 28598), (663, 28496), (697, 28436), (726, 28352), (743, 28271), (766, 28187), (767, 28184), (771, 28175), (776, 28148), (783, 28118), (810, 28058), (820, 28019), (902, 27803), (903, 27800), (905, 27779), (946, 27644), (950, 27632), (955, 27623), (957, 27620), (1000, 27527),

Gene: Toni\_60 Start: 54471, Stop: 52612, Start Num: 205

Candidate Starts for Toni\_60:

(Start: 188 @54495 has 1 MA's), (Start: 205 @54471 has 304 MA's), (Start: 235 @54447 has 6 MA's), (Start: 250 @54441 has 2 MA's), (Start: 274 @54399 has 6 MA's), (283, 54378), (337, 54264), (342, 54258), (360, 54228), (391, 54168), (399, 54147), (421, 54093), (428, 54081), (434, 54063), (436, 54051), (476, 53946), (519, 53889), (538, 53853), (542, 53841), (552, 53814), (564, 53787), (570, 53769), (580, 53751), (598, 53712), (602, 53703), (603, 53700), (604, 53697), (738, 53340), (744, 53307), (750, 53286), (777, 53193), (780, 53184), (795, 53121), (814, 53085), (815, 53082), (820, 53067), (847, 52989), (851, 52977), (858, 52956), (875, 52917), (905, 52827), (910, 52809), (912, 52803), (917, 52788), (926, 52764), (930, 52749), (931, 52746), (933, 52734), (940, 52710), (963, 52662), (972, 52638),

Gene: TooFast2Furius\_62 Start: 54290, Stop: 52431, Start Num: 205

Candidate Starts for TooFast2Furius\_62:

(Start: 188 @54314 has 1 MA's), (Start: 205 @54290 has 304 MA's), (Start: 235 @54266 has 6 MA's), (Start: 250 @54260 has 2 MA's), (Start: 274 @54218 has 6 MA's), (283, 54197), (337, 54083), (342, 54077), (360, 54047), (391, 53987), (399, 53966), (421, 53912), (428, 53900), (434, 53882), (436, 53870), (476, 53765), (519, 53708), (538, 53672), (542, 53660), (552, 53633), (564, 53606), (570, 53588), (580, 53570), (598, 53531), (602, 53522), (603, 53519), (738, 53159), (744, 53126), (750, 53105), (777, 53012), (780, 53003), (795, 52940), (814, 52904), (815, 52901), (820, 52886), (847, 52808), (851, 52796), (858, 52775), (875, 52736), (905, 52646), (910, 52628), (912, 52622), (917, 52607), (926, 52583), (930, 52568), (931, 52565), (933, 52553), (940, 52529), (963, 52481), (972, 52457),

Gene: Tooj\_59 Start: 53694, Stop: 51835, Start Num: 205

Candidate Starts for Tooj\_59:

(Start: 188 @53718 has 1 MA's), (Start: 205 @53694 has 304 MA's), (Start: 235 @53670 has 6 MA's), (Start: 250 @53664 has 2 MA's), (Start: 274 @53622 has 6 MA's), (283, 53601), (337, 53487), (342, 53481), (360, 53451), (391, 53391), (399, 53370), (421, 53316), (428, 53304), (434, 53286), (436, 53274), (476, 53169), (519, 53112), (538, 53076), (542, 53064), (552, 53037), (556, 53028), (570, 52992), (598, 52935), (602, 52926), (603, 52923), (604, 52920), (738, 52563), (744, 52530), (750, 52509), (777, 52416), (780, 52407), (795, 52344), (814, 52308), (815, 52305), (820, 52290), (847, 52212), (851, 52200), (858, 52179), (875, 52140), (905, 52050), (910, 52032), (912, 52026), (917, 52011), (926, 51987), (930, 51972), (931, 51969), (933, 51957), (940, 51933), (963, 51885), (972, 51861),

Gene: Topanga\_42 Start: 31142, Stop: 29307, Start Num: 246

Candidate Starts for Topanga\_42:

(Start: 246 @31142 has 877 MA's), (280, 31091), (319, 31025), (364, 30938), (374, 30914), (395, 30878), (400, 30866), (425, 30809), (429, 30800), (458, 30716), (471, 30680), (475, 30668), (479, 30656), (539, 30563), (558, 30515), (585, 30455), (598, 30428), (645, 30326), (646, 30323), (659, 30302), (662, 30296), (716, 30188), (743, 30065), (753, 30017), (776, 29942), (783, 29912), (791, 29882), (793, 29873), (814, 29804), (815, 29801), (827, 29762), (834, 29738), (837, 29732), (843, 29720), (905, 29531), (912, 29507), (932, 29444), (946, 29396), (950, 29384), (955, 29375),

Gene: Topgun\_44 Start: 34288, Stop: 32462, Start Num: 246

Candidate Starts for Topgun\_44:

(Start: 246 @34288 has 877 MA's), (368, 34075), (374, 34060), (400, 34012), (416, 33982), (422, 33961), (425, 33955), (429, 33946), (470, 33829), (479, 33802), (539, 33709), (544, 33694), (578, 33610), (580, 33607), (612, 33541), (627, 33511), (639, 33481), (662, 33436), (683, 33397), (743, 33217), (753, 33169), (767, 33130), (783, 33064), (793, 33025), (810, 33004), (814, 32983), (820, 32965), (843, 32899), (902, 32749), (903, 32746), (909, 32710), (917, 32686), (921, 32677), (925, 32665), (938, 32617), (946, 32590), (955, 32569),

Gene: Toro\_45 Start: 33412, Stop: 31577, Start Num: 246

Candidate Starts for Toro\_45:

(Start: 246 @33412 has 877 MA's), (267, 33391), (318, 33301), (387, 33163), (422, 33085), (425, 33079), (479, 32926), (537, 32842), (539, 32830), (554, 32785), (558, 32782), (585, 32722), (610, 32671), (614, 32659), (659, 32569), (683, 32524), (716, 32455), (726, 32413), (740, 32353), (743, 32332), (753, 32284), (771, 32236), (776, 32209), (777, 32206), (783, 32179), (793, 32140), (815, 32071), (827, 32032), (843, 31990), (844, 31987), (853, 31957), (888, 31861), (901, 31834), (909, 31786), (910, 31783), (946, 31666), (950, 31654), (955, 31645),

Gene: Tote\_40 Start: 31416, Stop: 29587, Start Num: 246

Candidate Starts for Tote\_40:

(Start: 246 @31416 has 877 MA's), (368, 31203), (374, 31188), (400, 31140), (416, 31110), (422, 31089), (425, 31083), (429, 31074), (470, 30957), (479, 30930), (539, 30837), (544, 30822), (551, 30801), (578, 30738), (580, 30735), (612, 30669), (627, 30639), (639, 30609), (662, 30564), (683, 30525), (743, 30345), (753, 30297), (771, 30249), (780, 30210), (783, 30192), (793, 30153), (810, 30132), (814, 30111), (819, 30096), (861, 29973), (922, 29802), (929, 29778), (943, 29730), (946, 29718), (955, 29697), (959, 29691), (981, 29643), (986, 29628),

Gene: Traft412\_45 Start: 35231, Stop: 33405, Start Num: 246

Candidate Starts for Traft412\_45:

(Start: 246 @35231 has 877 MA's), (368, 35018), (374, 35003), (416, 34925), (422, 34904), (425, 34898), (429, 34889), (470, 34772), (479, 34745), (539, 34652), (544, 34637), (551, 34616), (578, 34553), (580, 34550), (607, 34496), (612, 34484), (627, 34454), (639, 34424), (662, 34379), (683, 34340), (743, 34160), (753, 34112), (767, 34073), (783, 34007), (793, 33968), (810, 33947), (814, 33926), (820, 33908), (843, 33842), (902, 33692), (903, 33689), (909, 33653), (917, 33629), (921, 33620), (925, 33608), (932, 33581), (946, 33533), (955, 33512),

Gene: Travvers\_47 Start: 31153, Stop: 29330, Start Num: 246

Candidate Starts for Travvers\_47:

(Start: 246 @31153 has 877 MA's), (364, 30949), (374, 30925), (383, 30907), (394, 30889), (400, 30874), (402, 30871), (416, 30844), (425, 30817), (444, 30766), (479, 30664), (539, 30571), (556, 30523), (560, 30514), (567, 30502), (568, 30499), (598, 30433), (627, 30373), (683, 30259), (697, 30235), (715, 30196), (743, 30070), (755, 30019), (767, 29983), (783, 29917), (793, 29878), (815, 29809), (827, 29770), (844, 29725), (853, 29695), (880, 29632), (888, 29614), (905, 29554), (946, 29419), (950, 29407), (955, 29398),



Gene: Treddle\_46 Start: 35746, Stop: 33920, Start Num: 246

Candidate Starts for Treddle\_46:

(Start: 246 @35746 has 877 MA's), (368, 35533), (374, 35518), (400, 35470), (416, 35440), (422, 35419), (425, 35413), (429, 35404), (470, 35287), (479, 35260), (539, 35167), (544, 35152), (578, 35068), (580, 35065), (612, 34999), (627, 34969), (639, 34939), (662, 34894), (683, 34855), (743, 34675), (753, 34627), (767, 34588), (783, 34522), (814, 34441), (815, 34438), (843, 34357), (902, 34207), (903, 34204), (909, 34168), (917, 34144), (921, 34135), (925, 34123), (946, 34048), (955, 34027),

Gene: Tres\_57 Start: 52494, Stop: 50665, Start Num: 205

Candidate Starts for Tres\_57:

(Start: 205 @52494 has 304 MA's), (Start: 250 @52467 has 2 MA's), (269, 52437), (Start: 274 @52425 has 6 MA's), (286, 52398), (287, 52395), (293, 52386), (318, 52368), (366, 52272), (391, 52221), (400, 52197), (463, 52035), (472, 52011), (476, 51999), (519, 51942), (538, 51906), (542, 51894), (551, 51870), (588, 51786), (602, 51756), (603, 51753), (615, 51723), (680, 51579), (707, 51513), (721, 51474), (724, 51462), (727, 51441), (732, 51423), (744, 51366), (763, 51309), (771, 51282), (777, 51252), (780, 51243), (795, 51177), (812, 51150), (814, 51141), (820, 51123), (827, 51099), (847, 51045), (851, 51033), (858, 51012), (888, 50943), (905, 50883), (910, 50865), (922, 50832), (926, 50820), (930, 50805), (931, 50802), (933, 50790), (940, 50766), (941, 50763), (963, 50715), (965, 50712), (972, 50691), (979, 50670),

Gene: Trike\_42 Start: 30393, Stop: 28561, Start Num: 246

Candidate Starts for Trike\_42:

(Start: 246 @30393 has 877 MA's), (280, 30342), (319, 30276), (364, 30189), (368, 30180), (395, 30129), (400, 30117), (425, 30060), (454, 29979), (458, 29967), (461, 29958), (471, 29931), (479, 29907), (539, 29814), (552, 29775), (585, 29706), (598, 29679), (662, 29547), (743, 29319), (762, 29253), (776, 29196), (783, 29166), (793, 29127), (815, 29055), (820, 29040), (827, 29016), (843, 28974), (853, 28941), (905, 28785), (912, 28761), (932, 28698), (946, 28650), (950, 28638), (955, 28629),

Gene: Trine\_42 Start: 34854, Stop: 32935, Start Num: 160

Candidate Starts for Trine\_42:

(Start: 160 @34854 has 1 MA's), (193, 34812), (212, 34788), (237, 34758), (269, 34722), (Start: 274 @34710 has 6 MA's), (287, 34680), (363, 34560), (393, 34500), (411, 34455), (421, 34428), (436, 34389), (442, 34377), (464, 34326), (476, 34293), (508, 34260), (518, 34242), (538, 34203), (575, 34107), (589, 34080), (598, 34062), (603, 34050), (615, 34020), (704, 33816), (724, 33747), (730, 33717), (732, 33708), (738, 33684), (744, 33651), (771, 33570), (777, 33540), (806, 33450), (814, 33429), (815, 33426), (820, 33411), (827, 33387), (847, 33333), (851, 33321), (876, 33258), (896, 33204), (901, 33186), (931, 33072), (940, 33036), (963, 32985), (972, 32961), (979, 32940),

Gene: Tripl3t\_45 Start: 35417, Stop: 33591, Start Num: 246

Candidate Starts for Tripl3t\_45:

(Start: 246 @35417 has 877 MA's), (368, 35204), (374, 35189), (400, 35141), (416, 35111), (422, 35090), (425, 35084), (429, 35075), (470, 34958), (479, 34931), (539, 34838), (544, 34823), (556, 34790), (578, 34739), (580, 34736), (612, 34670), (627, 34640), (639, 34610), (662, 34565), (683, 34526), (743, 34346), (753, 34298), (767, 34259), (783, 34193), (793, 34154), (810, 34133), (814, 34112), (820, 34094), (843, 34028), (902, 33878), (903, 33875), (909, 33839), (917, 33815), (921, 33806), (925, 33794), (946, 33719), (955, 33698),

Gene: Triscuit\_70 Start: 43915, Stop: 46587, Start Num: 25

Candidate Starts for Triscuit\_70:

(Start: 25 @43915 has 2 MA's), (48, 44005), (49, 44008), (50, 44011), (68, 44071), (179, 44317), (Start: 299 @44494 has 38 MA's), (Start: 308 @44506 has 5 MA's), (322, 44551), (328, 44566), (343,

44593), (394, 44692), (403, 44722), (420, 44761), (435, 44803), (456, 44860), (461, 44875), (487, 44929), (526, 45040), (574, 45181), (583, 45205), (647, 45355), (649, 45358), (657, 45376), (677, 45433), (703, 45493), (722, 45553), (769, 45748), (783, 45811), (799, 45874), (822, 45949), (849, 46030), (859, 46060), (882, 46120), (893, 46168), (903, 46207), (907, 46234), (909, 46243), (928, 46306), (929, 46309), (947, 46381), (950, 46390), (966, 46420), (1007, 46528), (1011, 46546), (1013, 46564),

Gene: Tristan\_43 Start: 32429, Stop: 30639, Start Num: 246

Candidate Starts for Tristan\_43:

(Start: 246 @32429 has 877 MA's), (364, 32225), (368, 32216), (402, 32147), (416, 32120), (425, 32093), (479, 31940), (536, 31862), (539, 31847), (556, 31799), (560, 31790), (568, 31775), (598, 31709), (613, 31676), (652, 31592), (697, 31511), (715, 31481), (743, 31355), (752, 31325), (755, 31304), (776, 31232), (783, 31202), (793, 31163), (810, 31142), (814, 31121), (818, 31109), (880, 30941), (886, 30929), (902, 30887), (905, 30863), (924, 30806), (930, 30785), (932, 30776), (946, 30728), (950, 30716), (955, 30707),

Gene: Trixie\_44 Start: 31811, Stop: 30024, Start Num: 246

Candidate Starts for Trixie\_44:

(Start: 246 @31811 has 877 MA's), (366, 31604), (368, 31598), (375, 31583), (383, 31568), (402, 31532), (416, 31505), (425, 31478), (433, 31457), (444, 31427), (479, 31325), (539, 31232), (556, 31184), (560, 31175), (568, 31160), (598, 31094), (659, 30965), (743, 30740), (755, 30689), (766, 30656), (767, 30653), (783, 30587), (793, 30548), (810, 30527), (831, 30452), (834, 30440), (837, 30434), (880, 30326), (902, 30272), (905, 30248), (924, 30191), (930, 30170), (946, 30113), (950, 30101), (957, 30089),

Gene: Troje\_45 Start: 32853, Stop: 30463, Start Num: 36

Candidate Starts for Troje\_45:

(Start: 36 @32853 has 16 MA's), (63, 32790), (70, 32772), (75, 32757), (93, 32703), (97, 32691), (103, 32670), (117, 32637), (128, 32610), (138, 32586), (164, 32559), (Start: 241 @32454 has 13 MA's), (275, 32406), (329, 32289), (374, 32208), (391, 32181), (398, 32160), (420, 32106), (421, 32103), (430, 32085), (435, 32064), (457, 32004), (526, 31806), (539, 31764), (605, 31677), (615, 31653), (633, 31647), (657, 31593), (660, 31587), (680, 31545), (682, 31542), (683, 31539), (733, 31392), (741, 31350), (749, 31323), (760, 31281), (783, 31188), (792, 31152), (794, 31146), (796, 31140), (797, 31134), (805, 31110), (815, 31077), (822, 31053), (836, 31008), (884, 30873), (946, 30630), (947, 30627), (968, 30582), (971, 30573), (995, 30513),

Gene: Trooper\_45 Start: 31579, Stop: 29792, Start Num: 245

Candidate Starts for Trooper\_45:

(Start: 245 @31579 has 74 MA's), (366, 31372), (368, 31366), (375, 31351), (383, 31336), (400, 31303), (402, 31300), (416, 31273), (425, 31246), (429, 31237), (479, 31093), (482, 31084), (539, 31000), (556, 30952), (560, 30943), (568, 30928), (598, 30862), (635, 30781), (659, 30733), (662, 30727), (726, 30589), (743, 30508), (766, 30424), (767, 30421), (783, 30355), (793, 30316), (810, 30295), (831, 30220), (834, 30208), (880, 30094), (886, 30082), (888, 30076), (902, 30040), (905, 30016), (924, 29959), (930, 29938), (946, 29881), (950, 29869),

Gene: Trouble\_46 Start: 35902, Stop: 34073, Start Num: 246

Candidate Starts for Trouble\_46:

(Start: 246 @35902 has 877 MA's), (374, 35674), (416, 35596), (422, 35575), (425, 35569), (429, 35560), (470, 35443), (479, 35416), (539, 35323), (544, 35308), (556, 35275), (578, 35224), (580, 35221), (612, 35155), (627, 35125), (639, 35095), (662, 35050), (683, 35011), (743, 34831), (753, 34783), (771, 34735), (780, 34696), (783, 34678), (793, 34639), (810, 34618), (814, 34597), (819, 34582), (861, 34459), (909, 34324), (922, 34288), (929, 34264), (943, 34216), (946, 34204), (955, 34183), (959, 34177), (981, 34129), (986, 34114),

Gene: TroyPia\_46 Start: 31568, Stop: 29742, Start Num: 246

Candidate Starts for TroyPia\_46:

(Start: 246 @31568 has 877 MA's), (267, 31547), (280, 31517), (295, 31487), (383, 31325), (394, 31307), (425, 31235), (429, 31226), (471, 31106), (479, 31082), (539, 30989), (558, 30941), (568, 30920), (585, 30881), (646, 30749), (659, 30728), (683, 30683), (687, 30671), (740, 30518), (743, 30497), (776, 30374), (783, 30344), (793, 30305), (814, 30239), (815, 30236), (820, 30221), (827, 30197), (834, 30173), (905, 29966), (946, 29831), (950, 29819), (955, 29810),

Gene: True\_59 Start: 54034, Stop: 52175, Start Num: 205

Candidate Starts for True\_59:

(Start: 188 @54058 has 1 MA's), (Start: 205 @54034 has 304 MA's), (Start: 235 @54010 has 6 MA's), (Start: 250 @54004 has 2 MA's), (Start: 274 @53962 has 6 MA's), (283, 53941), (337, 53827), (342, 53821), (360, 53791), (391, 53731), (399, 53710), (421, 53656), (428, 53644), (434, 53626), (436, 53614), (476, 53509), (519, 53452), (538, 53416), (542, 53404), (551, 53380), (556, 53368), (564, 53350), (570, 53332), (580, 53314), (598, 53275), (602, 53266), (603, 53263), (604, 53260), (738, 52903), (744, 52870), (750, 52849), (777, 52756), (780, 52747), (795, 52684), (814, 52648), (815, 52645), (820, 52630), (847, 52552), (851, 52540), (858, 52519), (875, 52480), (905, 52390), (910, 52372), (912, 52366), (917, 52351), (926, 52327), (930, 52312), (931, 52309), (933, 52297), (940, 52273), (963, 52225), (972, 52201),

Gene: Trypo\_63 Start: 54706, Stop: 52847, Start Num: 205

Candidate Starts for Trypo\_63:

(Start: 188 @54730 has 1 MA's), (Start: 205 @54706 has 304 MA's), (Start: 235 @54682 has 6 MA's), (Start: 250 @54676 has 2 MA's), (Start: 274 @54634 has 6 MA's), (283, 54613), (337, 54499), (342, 54493), (360, 54463), (391, 54403), (399, 54382), (421, 54328), (428, 54316), (434, 54298), (436, 54286), (476, 54181), (519, 54124), (538, 54088), (542, 54076), (551, 54052), (556, 54040), (564, 54022), (570, 54004), (580, 53986), (598, 53947), (602, 53938), (603, 53935), (604, 53932), (712, 53677), (738, 53575), (744, 53542), (750, 53521), (777, 53428), (780, 53419), (795, 53356), (814, 53320), (815, 53317), (820, 53302), (847, 53224), (851, 53212), (858, 53191), (875, 53152), (905, 53062), (910, 53044), (912, 53038), (917, 53023), (926, 52999), (930, 52984), (931, 52981), (933, 52969), (940, 52945), (946, 52924), (963, 52897), (972, 52873),

Gene: Tubs\_45 Start: 31483, Stop: 29690, Start Num: 246

Candidate Starts for Tubs\_45:

(Start: 246 @31483 has 877 MA's), (261, 31474), (280, 31432), (346, 31312), (347, 31309), (372, 31261), (402, 31201), (417, 31171), (420, 31159), (425, 31147), (479, 30994), (539, 30901), (598, 30763), (612, 30733), (687, 30574), (697, 30562), (714, 30535), (740, 30427), (743, 30406), (780, 30271), (783, 30253), (814, 30172), (827, 30130), (853, 30055), (886, 29980), (902, 29938), (930, 29836), (946, 29779), (950, 29767), (955, 29758),

Gene: Tuck\_44 Start: 31714, Stop: 33579, Start Num: 245

Candidate Starts for Tuck\_44:

(Start: 245 @31714 has 74 MA's), (279, 31762), (364, 31918), (416, 32011), (448, 32101), (541, 32308), (580, 32407), (585, 32416), (591, 32431), (598, 32443), (635, 32521), (659, 32569), (687, 32626), (717, 32707), (743, 32827), (752, 32857), (767, 32914), (783, 32980), (813, 33073), (834, 33145), (878, 33253), (902, 33316), (946, 33475), (949, 33484), (988, 33562),

Gene: Tucker\_46 Start: 29792, Stop: 27951, Start Num: 246

Candidate Starts for Tucker\_46:

(Start: 220 @29822 has 1 MA's), (Start: 246 @29792 has 877 MA's), (364, 29588), (400, 29513), (402, 29510), (416, 29483), (420, 29468), (425, 29456), (444, 29405), (475, 29315), (479, 29303), (539, 29210), (552, 29171), (560, 29153), (568, 29138), (598, 29072), (613, 29039), (614, 29036), (663,

28934), (697, 28874), (726, 28790), (743, 28709), (766, 28625), (767, 28622), (771, 28613), (776, 28586), (783, 28556), (810, 28496), (820, 28457), (902, 28241), (903, 28238), (905, 28217), (946, 28082), (950, 28070), (955, 28061), (957, 28058), (1000, 27965),

Gene: TukTuk\_43 Start: 29558, Stop: 31432, Start Num: 246

Candidate Starts for TukTuk\_43:

(Start: 243 @29555 has 7 MA's), (Start: 246 @29558 has 877 MA's), (287, 29627), (Start: 301 @29648 has 110 MA's), (400, 29828), (429, 29894), (444, 29936), (585, 30230), (646, 30365), (696, 30464), (731, 30587), (743, 30647), (746, 30653), (755, 30698), (764, 30728), (774, 30764), (783, 30800), (813, 30893), (844, 30986), (874, 31064), (902, 31136), (909, 31175), (924, 31217), (929, 31235), (946, 31295), (955, 31316),

Gene: Turab\_38 Start: 28808, Stop: 30673, Start Num: 245

Candidate Starts for Turab\_38:

(Start: 245 @28808 has 74 MA's), (279, 28856), (364, 29012), (422, 29126), (448, 29195), (541, 29402), (580, 29501), (585, 29510), (591, 29525), (598, 29537), (613, 29570), (659, 29663), (687, 29720), (717, 29801), (743, 29921), (752, 29951), (767, 30008), (781, 30065), (783, 30074), (813, 30167), (834, 30239), (840, 30248), (878, 30347), (902, 30410), (939, 30545), (946, 30569), (949, 30578), (988, 30656),

Gene: Turbido\_45 Start: 31617, Stop: 29830, Start Num: 246

Candidate Starts for Turbido\_45:

(166, 31704), (Start: 246 @31617 has 877 MA's), (366, 31410), (368, 31404), (375, 31389), (383, 31374), (402, 31338), (416, 31311), (425, 31284), (433, 31263), (479, 31131), (539, 31038), (556, 30990), (560, 30981), (568, 30966), (598, 30900), (635, 30819), (659, 30771), (662, 30765), (697, 30702), (743, 30546), (755, 30495), (766, 30462), (767, 30459), (783, 30393), (793, 30354), (810, 30333), (831, 30258), (834, 30246), (853, 30195), (880, 30132), (888, 30114), (902, 30078), (905, 30054), (930, 29976), (946, 29919), (950, 29907), (955, 29898),

Gene: Turj99\_42 Start: 33989, Stop: 32163, Start Num: 246

Candidate Starts for Turj99\_42:

(Start: 246 @33989 has 877 MA's), (368, 33776), (374, 33761), (416, 33683), (419, 33671), (422, 33662), (425, 33656), (429, 33647), (470, 33530), (479, 33503), (539, 33410), (544, 33395), (556, 33362), (578, 33311), (580, 33308), (607, 33254), (612, 33242), (627, 33212), (639, 33182), (662, 33137), (683, 33098), (743, 32918), (753, 32870), (755, 32867), (767, 32831), (783, 32765), (793, 32726), (810, 32705), (814, 32684), (820, 32666), (843, 32600), (902, 32450), (903, 32447), (909, 32411), (917, 32387), (921, 32378), (925, 32366), (938, 32318), (946, 32291), (955, 32270),

Gene: Tutumahutu\_42 Start: 29675, Stop: 31540, Start Num: 245

Candidate Starts for Tutumahutu\_42:

(100, 29414), (Start: 180 @29597 has 1 MA's), (Start: 245 @29675 has 74 MA's), (279, 29723), (416, 29972), (448, 30062), (541, 30269), (544, 30278), (580, 30368), (585, 30377), (591, 30392), (613, 30437), (635, 30482), (659, 30530), (687, 30587), (717, 30668), (737, 30755), (743, 30788), (752, 30818), (767, 30875), (783, 30941), (813, 31034), (834, 31106), (878, 31214), (902, 31277), (905, 31301), (939, 31412), (946, 31436), (949, 31445),

Gene: Tweety19\_41 Start: 28185, Stop: 30029, Start Num: 245

Candidate Starts for Tweety19\_41:

(Start: 245 @28185 has 74 MA's), (279, 28233), (317, 28293), (364, 28389), (382, 28416), (402, 28455), (422, 28503), (448, 28572), (541, 28758), (585, 28866), (591, 28881), (653, 29010), (659, 29019), (717, 29157), (743, 29277), (767, 29364), (781, 29421), (783, 29430), (813, 29523), (902, 29766), (946, 29925), (949, 29934), (988, 30012),

Gene: Twigg\_39 Start: 30566, Stop: 28701, Start Num: 246

Candidate Starts for Twigg\_39:

(Start: 246 @30566 has 877 MA's), (280, 30515), (318, 30455), (347, 30392), (364, 30362), (366, 30359), (395, 30302), (400, 30290), (416, 30260), (425, 30233), (479, 30080), (539, 29984), (556, 29936), (594, 29852), (598, 29846), (633, 29774), (646, 29741), (654, 29726), (662, 29714), (712, 29615), (743, 29480), (752, 29450), (753, 29432), (762, 29414), (767, 29393), (771, 29384), (783, 29327), (793, 29288), (814, 29246), (820, 29228), (834, 29180), (853, 29129), (876, 29075), (880, 29066), (888, 29048), (905, 28988), (910, 28970), (939, 28877), (946, 28853), (950, 28841), (1000, 28736),

Gene: Twister\_42 Start: 31053, Stop: 29218, Start Num: 246

Candidate Starts for Twister\_42:

(Start: 246 @31053 has 877 MA's), (280, 31002), (319, 30936), (364, 30849), (374, 30825), (395, 30789), (400, 30777), (425, 30720), (429, 30711), (458, 30627), (471, 30591), (475, 30579), (479, 30567), (539, 30474), (558, 30426), (585, 30366), (598, 30339), (645, 30237), (646, 30234), (659, 30213), (662, 30207), (716, 30099), (743, 29976), (753, 29928), (776, 29853), (783, 29823), (791, 29793), (793, 29784), (814, 29715), (815, 29712), (827, 29673), (834, 29649), (837, 29643), (843, 29631), (905, 29442), (912, 29418), (932, 29355), (946, 29307), (950, 29295), (955, 29286),

Gene: TwoBits\_36 Start: 27427, Stop: 25562, Start Num: 299

Candidate Starts for TwoBits\_36:

(Start: 299 @27427 has 38 MA's), (305, 27421), (348, 27322), (354, 27313), (368, 27289), (375, 27274), (379, 27268), (395, 27241), (403, 27217), (406, 27214), (438, 27133), (451, 27097), (469, 27043), (489, 26983), (493, 26980), (536, 26854), (537, 26851), (539, 26839), (549, 26809), (556, 26788), (585, 26752), (658, 26605), (724, 26437), (726, 26425), (776, 26245), (783, 26215), (805, 26143), (822, 26086), (831, 26059), (845, 26017), (885, 25897), (888, 25888), (903, 25828), (906, 25804), (909, 25792), (912, 25783), (919, 25765), (929, 25732), (947, 25660),

Gene: TwoPeat\_45 Start: 34739, Stop: 32910, Start Num: 246

Candidate Starts for TwoPeat\_45:

(Start: 246 @34739 has 877 MA's), (368, 34526), (374, 34511), (400, 34463), (416, 34433), (422, 34412), (425, 34406), (429, 34397), (470, 34280), (479, 34253), (539, 34160), (544, 34145), (551, 34124), (578, 34061), (580, 34058), (612, 33992), (627, 33962), (639, 33932), (662, 33887), (683, 33848), (743, 33668), (753, 33620), (771, 33572), (780, 33533), (783, 33515), (793, 33476), (810, 33455), (814, 33434), (819, 33419), (861, 33296), (922, 33125), (929, 33101), (943, 33053), (946, 33041), (955, 33020), (959, 33014), (981, 32966), (986, 32951),

Gene: Tydolla\_56 Start: 53884, Stop: 52067, Start Num: 247

Candidate Starts for Tydolla\_56:

(60, 54268), (130, 54067), (Start: 247 @53884 has 43 MA's), (267, 53854), (368, 53674), (433, 53521), (435, 53509), (448, 53479), (454, 53473), (476, 53410), (478, 53404), (519, 53353), (537, 53326), (538, 53317), (556, 53269), (603, 53164), (645, 53068), (674, 53017), (724, 52873), (732, 52834), (739, 52804), (744, 52777), (748, 52765), (775, 52669), (777, 52663), (780, 52654), (782, 52642), (807, 52570), (814, 52540), (820, 52522), (822, 52513), (847, 52444), (851, 52432), (858, 52411), (888, 52342), (898, 52327), (903, 52303), (905, 52282), (910, 52264), (912, 52258), (924, 52225), (926, 52219), (931, 52201), (933, 52189), (936, 52177), (940, 52165), (956, 52123), (972, 52093),

Gene: TygerBlood\_45 Start: 31570, Stop: 29744, Start Num: 246

Candidate Starts for TygerBlood\_45:

(Start: 246 @31570 has 877 MA's), (267, 31549), (280, 31519), (295, 31489), (383, 31327), (394, 31309), (425, 31237), (429, 31228), (471, 31108), (479, 31084), (539, 30991), (558, 30943), (568, 30922), (585, 30883), (646, 30751), (659, 30730), (683, 30685), (687, 30673), (740, 30520), (743, 30499), (776, 30376), (783, 30346), (793, 30307), (814, 30241), (815, 30238), (820, 30223), (827,

30199), (834, 30175), (905, 29968), (946, 29833), (950, 29821), (955, 29812),

Gene: Typhonomachy\_43 Start: 32264, Stop: 29871, Start Num: 36

Candidate Starts for Typhonomachy\_43:

(Start: 36 @32264 has 16 MA's), (47, 32258), (Start: 59 @32210 has 1 MA's), (75, 32168), (84, 32144), (128, 32018), (138, 31994), (179, 31949), (Start: 215 @31898 has 2 MA's), (223, 31883), (Start: 241 @31862 has 13 MA's), (275, 31814), (295, 31772), (329, 31697), (335, 31685), (374, 31616), (391, 31589), (394, 31583), (398, 31568), (420, 31514), (421, 31511), (430, 31493), (435, 31472), (499, 31289), (500, 31283), (526, 31214), (539, 31172), (605, 31085), (615, 31061), (633, 31055), (643, 31031), (647, 31022), (654, 31007), (660, 30995), (680, 30953), (682, 30950), (683, 30947), (733, 30800), (749, 30731), (750, 30725), (760, 30689), (783, 30596), (785, 30587), (792, 30560), (794, 30554), (796, 30548), (797, 30542), (815, 30485), (822, 30461), (836, 30416), (947, 30035), (968, 29990), (971, 29981), (995, 29921),

Gene: TyrionL\_61 Start: 54131, Stop: 52272, Start Num: 205

Candidate Starts for TyrionL\_61:

(Start: 188 @54155 has 1 MA's), (Start: 205 @54131 has 304 MA's), (Start: 235 @54107 has 6 MA's), (Start: 250 @54101 has 2 MA's), (Start: 274 @54059 has 6 MA's), (283, 54038), (337, 53924), (342, 53918), (360, 53888), (391, 53828), (399, 53807), (421, 53753), (428, 53741), (434, 53723), (436, 53711), (476, 53606), (519, 53549), (538, 53513), (542, 53501), (551, 53477), (556, 53465), (564, 53447), (570, 53429), (580, 53411), (598, 53372), (602, 53363), (603, 53360), (604, 53357), (712, 53102), (738, 53000), (744, 52967), (750, 52946), (777, 52853), (780, 52844), (795, 52781), (814, 52745), (815, 52742), (820, 52727), (847, 52649), (851, 52637), (858, 52616), (875, 52577), (905, 52487), (910, 52469), (912, 52463), (917, 52448), (926, 52424), (930, 52409), (931, 52406), (933, 52394), (940, 52370), (946, 52349), (963, 52322), (972, 52298), (977, 52283),

Gene: U2\_43 Start: 34422, Stop: 32596, Start Num: 246

Candidate Starts for U2\_43:

(Start: 246 @34422 has 877 MA's), (368, 34209), (374, 34194), (400, 34146), (416, 34116), (422, 34095), (425, 34089), (429, 34080), (479, 33936), (539, 33843), (544, 33828), (578, 33744), (580, 33741), (612, 33675), (639, 33615), (662, 33570), (683, 33531), (743, 33351), (753, 33303), (767, 33264), (783, 33198), (793, 33159), (810, 33138), (814, 33117), (820, 33099), (843, 33033), (902, 32883), (903, 32880), (909, 32844), (917, 32820), (921, 32811), (925, 32799), (946, 32724), (955, 32703),

Gene: UAch1\_60 Start: 54265, Stop: 52406, Start Num: 205

Candidate Starts for UAch1\_60:

(Start: 188 @54289 has 1 MA's), (Start: 205 @54265 has 304 MA's), (Start: 235 @54241 has 6 MA's), (Start: 250 @54235 has 2 MA's), (Start: 274 @54193 has 6 MA's), (283, 54172), (337, 54058), (342, 54052), (360, 54022), (391, 53962), (399, 53941), (421, 53887), (428, 53875), (434, 53857), (436, 53845), (476, 53740), (519, 53683), (538, 53647), (542, 53635), (551, 53611), (556, 53599), (564, 53581), (570, 53563), (580, 53545), (598, 53506), (602, 53497), (603, 53494), (604, 53491), (738, 53134), (744, 53101), (750, 53080), (777, 52987), (780, 52978), (795, 52915), (814, 52879), (815, 52876), (820, 52861), (847, 52783), (851, 52771), (858, 52750), (875, 52711), (905, 52621), (910, 52603), (912, 52597), (917, 52582), (926, 52558), (930, 52543), (931, 52540), (933, 52528), (940, 52504), (963, 52456), (972, 52432),

Gene: Ugenie5\_42 Start: 31726, Stop: 29933, Start Num: 246

Candidate Starts for Ugenie5\_42:

(Start: 246 @31726 has 877 MA's), (261, 31717), (280, 31675), (346, 31555), (347, 31552), (372, 31504), (402, 31444), (417, 31414), (420, 31402), (425, 31390), (479, 31237), (539, 31144), (598, 31006), (612, 30976), (687, 30817), (697, 30805), (714, 30778), (740, 30670), (743, 30649), (780, 30514), (783, 30496), (814, 30415), (827, 30373), (853, 30298), (861, 30277), (886, 30223), (902,

30181), (930, 30079), (946, 30022), (950, 30010), (955, 30001),

Gene: UhSalsa\_36 Start: 28114, Stop: 26330, Start Num: 246

Candidate Starts for UhSalsa\_36:

(Start: 246 @28114 has 877 MA's), (379, 27880), (395, 27850), (399, 27841), (400, 27838), (420, 27793), (425, 27781), (444, 27730), (479, 27628), (496, 27607), (539, 27535), (554, 27490), (556, 27487), (574, 27445), (577, 27439), (585, 27424), (598, 27397), (646, 27292), (652, 27283), (662, 27265), (683, 27226), (716, 27169), (743, 27046), (753, 26998), (783, 26893), (784, 26890), (810, 26833), (814, 26812), (829, 26764), (855, 26689), (886, 26620), (902, 26578), (905, 26554), (930, 26476), (946, 26419), (950, 26407), (955, 26398), (969, 26368), (978, 26350),

Gene: Ulysses\_44 Start: 31247, Stop: 29421, Start Num: 246

Candidate Starts for Ulysses\_44:

(Start: 246 @31247 has 877 MA's), (267, 31226), (280, 31196), (295, 31166), (383, 31004), (394, 30986), (425, 30914), (429, 30905), (471, 30785), (479, 30761), (539, 30668), (558, 30620), (568, 30599), (585, 30560), (607, 30515), (610, 30509), (646, 30428), (659, 30407), (683, 30362), (687, 30350), (740, 30197), (743, 30176), (776, 30053), (783, 30023), (793, 29984), (814, 29918), (815, 29915), (820, 29900), (827, 29876), (834, 29852), (905, 29645), (946, 29510), (950, 29498), (955, 29489),

Gene: UncleHowie\_59 Start: 53736, Stop: 51877, Start Num: 205

Candidate Starts for UncleHowie\_59:

(Start: 188 @53760 has 1 MA's), (Start: 205 @53736 has 304 MA's), (Start: 235 @53712 has 6 MA's), (Start: 250 @53706 has 2 MA's), (Start: 274 @53664 has 6 MA's), (283, 53643), (337, 53529), (342, 53523), (360, 53493), (391, 53433), (399, 53412), (421, 53358), (428, 53346), (434, 53328), (436, 53316), (476, 53211), (519, 53154), (538, 53118), (542, 53106), (552, 53079), (564, 53052), (570, 53034), (580, 53016), (598, 52977), (602, 52968), (603, 52965), (604, 52962), (738, 52605), (744, 52572), (750, 52551), (777, 52458), (780, 52449), (795, 52386), (814, 52350), (815, 52347), (820, 52332), (847, 52254), (851, 52242), (858, 52221), (875, 52182), (905, 52092), (910, 52074), (912, 52068), (917, 52053), (926, 52029), (930, 52014), (931, 52011), (933, 51999), (940, 51975), (963, 51927), (972, 51903),

Gene: UnionJack\_39 Start: 29889, Stop: 28024, Start Num: 246

Candidate Starts for UnionJack\_39:

(Start: 246 @29889 has 877 MA's), (318, 29778), (364, 29685), (366, 29682), (400, 29613), (416, 29583), (425, 29556), (429, 29547), (461, 29454), (467, 29439), (479, 29403), (539, 29307), (554, 29262), (556, 29259), (568, 29235), (594, 29175), (633, 29097), (646, 29064), (654, 29049), (662, 29037), (712, 28938), (743, 28803), (752, 28773), (753, 28755), (755, 28752), (767, 28716), (771, 28707), (774, 28686), (777, 28677), (783, 28650), (784, 28647), (810, 28590), (814, 28569), (834, 28503), (853, 28452), (876, 28398), (880, 28389), (888, 28371), (905, 28311), (910, 28293), (939, 28200), (946, 28176), (950, 28164), (1000, 28059),

Gene: Updawg\_45 Start: 31601, Stop: 29814, Start Num: 246

Candidate Starts for Updawg\_45:

(Start: 246 @31601 has 877 MA's), (364, 31397), (366, 31394), (368, 31388), (383, 31358), (400, 31325), (402, 31322), (416, 31295), (425, 31268), (444, 31217), (479, 31115), (539, 31022), (556, 30974), (560, 30965), (568, 30950), (598, 30884), (635, 30803), (659, 30755), (726, 30611), (743, 30530), (755, 30479), (766, 30446), (783, 30377), (793, 30338), (810, 30317), (814, 30296), (818, 30284), (886, 30104), (888, 30098), (902, 30062), (905, 30038), (930, 29960), (946, 29903), (950, 29891),

Gene: Upyo\_46 Start: 36456, Stop: 34090, Start Num: 18

Candidate Starts for Upyo\_46:

(1, 36705), (2, 36570), (6, 36546), (7, 36540), (10, 36528), (12, 36480), (Start: 18 @36456 has 1 MA's), (Start: 45 @36330 has 24 MA's), (61, 36273), (80, 36219), (91, 36183), (113, 36114), (115, 36108), (156, 36009), (322, 35775), (334, 35748), (395, 35640), (421, 35574), (429, 35559), (442, 35523), (476, 35439), (479, 35430), (519, 35382), (538, 35346), (542, 35334), (563, 35280), (575, 35250), (586, 35232), (589, 35223), (603, 35193), (637, 35115), (674, 35043), (730, 34869), (732, 34860), (738, 34836), (744, 34803), (763, 34746), (771, 34722), (777, 34692), (782, 34671), (812, 34593), (820, 34566), (842, 34503), (847, 34488), (851, 34476), (858, 34455), (897, 34356), (905, 34308), (909, 34293), (912, 34284), (930, 34230), (931, 34227), (940, 34191), (963, 34140), (972, 34116),

Gene: Usavi\_60 Start: 54404, Stop: 52545, Start Num: 205

Candidate Starts for Usavi\_60:

(Start: 188 @54428 has 1 MA's), (Start: 205 @54404 has 304 MA's), (Start: 235 @54380 has 6 MA's), (Start: 250 @54374 has 2 MA's), (Start: 274 @54332 has 6 MA's), (283, 54311), (337, 54197), (342, 54191), (360, 54161), (391, 54101), (399, 54080), (421, 54026), (428, 54014), (434, 53996), (436, 53984), (476, 53879), (519, 53822), (538, 53786), (542, 53774), (552, 53747), (564, 53720), (570, 53702), (580, 53684), (598, 53645), (602, 53636), (603, 53633), (712, 53375), (738, 53273), (744, 53240), (750, 53219), (777, 53126), (780, 53117), (795, 53054), (814, 53018), (815, 53015), (820, 53000), (847, 52922), (851, 52910), (858, 52889), (875, 52850), (905, 52760), (910, 52742), (912, 52736), (917, 52721), (926, 52697), (930, 52682), (931, 52679), (933, 52667), (940, 52643), (963, 52595), (972, 52571),

Gene: UtzChips\_47 Start: 31134, Stop: 32999, Start Num: 245

Candidate Starts for UtzChips\_47:

(157, 31014), (168, 31032), (Start: 245 @31134 has 74 MA's), (317, 31242), (582, 31830), (585, 31836), (659, 31989), (692, 32052), (743, 32247), (760, 32310), (774, 32364), (776, 32370), (784, 32403), (844, 32586), (946, 32895), (982, 32973), (996, 32994),

Gene: VA6\_43 Start: 31120, Stop: 29333, Start Num: 246

Candidate Starts for VA6\_43:

(Start: 246 @31120 has 877 MA's), (364, 30916), (366, 30913), (368, 30907), (375, 30892), (383, 30877), (400, 30844), (402, 30841), (416, 30814), (425, 30787), (433, 30766), (444, 30736), (479, 30634), (539, 30541), (542, 30532), (556, 30493), (560, 30484), (568, 30469), (598, 30403), (635, 30322), (659, 30274), (662, 30268), (726, 30130), (743, 30049), (755, 29998), (766, 29965), (767, 29962), (783, 29896), (793, 29857), (810, 29836), (831, 29761), (837, 29743), (853, 29698), (864, 29671), (880, 29635), (888, 29617), (902, 29581), (905, 29557), (924, 29500), (946, 29422), (950, 29410), (955, 29401),

Gene: VC3\_48 Start: 31569, Stop: 29770, Start Num: 246

Candidate Starts for VC3\_48:

(Start: 246 @31569 has 877 MA's), (364, 31365), (400, 31290), (402, 31287), (416, 31260), (420, 31245), (425, 31233), (444, 31182), (479, 31080), (539, 30987), (542, 30978), (556, 30939), (560, 30930), (598, 30849), (613, 30816), (627, 30789), (683, 30675), (697, 30651), (743, 30486), (753, 30438), (767, 30399), (776, 30363), (783, 30333), (793, 30294), (810, 30273), (843, 30168), (853, 30135), (880, 30072), (902, 30018), (905, 29994), (946, 29859), (950, 29847), (955, 29838),

Gene: VResidence\_41 Start: 29109, Stop: 31019, Start Num: 245

Candidate Starts for VResidence\_41:

(Start: 245 @29109 has 74 MA's), (279, 29157), (347, 29283), (382, 29340), (422, 29427), (448, 29496), (541, 29748), (544, 29757), (585, 29856), (591, 29871), (659, 30009), (717, 30147), (726, 30186), (743, 30267), (767, 30354), (776, 30390), (781, 30411), (783, 30420), (834, 30585), (840, 30594), (902, 30756), (910, 30798), (922, 30831), (946, 30915), (949, 30924), (988, 31002),

Gene: Vaishali24\_59 Start: 53939, Stop: 52080, Start Num: 205



Candidate Starts for Vaishali24\_59:

(42, 54335), (69, 54248), (74, 54233), (76, 54227), (83, 54212), (87, 54194), (Start: 188 @53963 has 1 MA's), (Start: 205 @53939 has 304 MA's), (Start: 235 @53915 has 6 MA's), (Start: 250 @53909 has 2 MA's), (Start: 274 @53867 has 6 MA's), (283, 53846), (337, 53732), (342, 53726), (360, 53696), (391, 53636), (399, 53615), (421, 53561), (428, 53549), (436, 53519), (476, 53414), (519, 53357), (538, 53321), (542, 53309), (552, 53282), (556, 53273), (570, 53237), (580, 53219), (598, 53180), (602, 53171), (603, 53168), (738, 52808), (744, 52775), (750, 52754), (777, 52661), (780, 52652), (795, 52589), (814, 52553), (815, 52550), (820, 52535), (847, 52457), (851, 52445), (858, 52424), (875, 52385), (905, 52295), (910, 52277), (912, 52271), (917, 52256), (926, 52232), (930, 52217), (931, 52214), (933, 52202), (940, 52178), (963, 52130), (972, 52106),

Gene: Valjean\_60 Start: 54261, Stop: 52402, Start Num: 205

Candidate Starts for Valjean\_60:

(Start: 188 @54285 has 1 MA's), (Start: 205 @54261 has 304 MA's), (Start: 235 @54237 has 6 MA's), (Start: 250 @54231 has 2 MA's), (Start: 274 @54189 has 6 MA's), (283, 54168), (337, 54054), (342, 54048), (360, 54018), (391, 53958), (399, 53937), (421, 53883), (428, 53871), (434, 53853), (436, 53841), (476, 53736), (519, 53679), (538, 53643), (542, 53631), (551, 53607), (556, 53595), (564, 53577), (570, 53559), (580, 53541), (598, 53502), (602, 53493), (603, 53490), (604, 53487), (738, 53130), (744, 53097), (750, 53076), (777, 52983), (780, 52974), (795, 52911), (814, 52875), (815, 52872), (820, 52857), (847, 52779), (851, 52767), (858, 52746), (875, 52707), (905, 52617), (910, 52599), (912, 52593), (917, 52578), (926, 52554), (930, 52539), (931, 52536), (933, 52524), (940, 52500), (963, 52452), (972, 52428),

Gene: Vanisoa\_44 Start: 32049, Stop: 30256, Start Num: 246

Candidate Starts for Vanisoa\_44:

(Start: 246 @32049 has 877 MA's), (261, 32040), (280, 31998), (346, 31878), (347, 31875), (364, 31845), (372, 31827), (400, 31770), (402, 31767), (417, 31737), (420, 31725), (425, 31713), (429, 31704), (444, 31662), (450, 31644), (478, 31563), (479, 31560), (539, 31467), (612, 31299), (655, 31203), (687, 31140), (714, 31101), (716, 31095), (743, 30972), (752, 30942), (762, 30906), (771, 30876), (783, 30819), (814, 30738), (853, 30621), (902, 30504), (905, 30480), (930, 30402), (946, 30345), (950, 30333), (955, 30324),

Gene: Vash\_34 Start: 26753, Stop: 28627, Start Num: 246

Candidate Starts for Vash\_34:

(Start: 246 @26753 has 877 MA's), (295, 26834), (364, 26954), (416, 27056), (417, 27059), (422, 27077), (429, 27092), (567, 27401), (578, 27431), (585, 27443), (592, 27461), (611, 27497), (646, 27575), (653, 27587), (659, 27596), (687, 27653), (690, 27656), (692, 27659), (734, 27803), (743, 27854), (753, 27905), (774, 27977), (776, 27983), (777, 27986), (781, 28004), (783, 28013), (792, 28079), (812, 28133), (850, 28247), (875, 28310), (878, 28316), (880, 28322), (898, 28358), (901, 28370), (909, 28418), (912, 28427), (922, 28454), (930, 28481), (946, 28538), (948, 28544), (955, 28559), (959, 28565),

Gene: Vaticameos\_57 Start: 52569, Stop: 50710, Start Num: 205

Candidate Starts for Vaticameos\_57:

(Start: 188 @52593 has 1 MA's), (Start: 205 @52569 has 304 MA's), (Start: 235 @52545 has 6 MA's), (Start: 250 @52539 has 2 MA's), (Start: 274 @52497 has 6 MA's), (283, 52476), (337, 52362), (342, 52356), (360, 52326), (391, 52266), (399, 52245), (421, 52191), (428, 52179), (434, 52161), (436, 52149), (476, 52044), (519, 51987), (538, 51951), (542, 51939), (552, 51912), (564, 51885), (570, 51867), (580, 51849), (598, 51810), (602, 51801), (603, 51798), (712, 51540), (738, 51438), (744, 51405), (750, 51384), (777, 51291), (780, 51282), (795, 51219), (814, 51183), (815, 51180), (820, 51165), (847, 51087), (851, 51075), (858, 51054), (875, 51015), (905, 50925), (910, 50907), (912, 50901), (917, 50886), (926, 50862), (930, 50847), (931, 50844), (933, 50832), (940, 50808), (963, 50760), (972, 50736),

Gene: Velene\_39 Start: 28935, Stop: 27070, Start Num: 301

Candidate Starts for Velene\_39:

(Start: 238 @29022 has 3 MA's), (Start: 241 @29019 has 13 MA's), (288, 28950), (Start: 301 @28935 has 110 MA's), (Start: 308 @28926 has 5 MA's), (354, 28821), (358, 28812), (375, 28782), (378, 28779), (433, 28659), (435, 28647), (438, 28641), (475, 28536), (484, 28509), (531, 28368), (537, 28359), (539, 28347), (548, 28320), (549, 28317), (554, 28302), (556, 28296), (559, 28290), (586, 28257), (676, 28068), (776, 27753), (779, 27744), (780, 27741), (783, 27723), (794, 27681), (796, 27675), (805, 27651), (822, 27594), (878, 27435), (885, 27405), (888, 27396), (903, 27336), (906, 27312), (919, 27273), (929, 27240), (932, 27228), (947, 27168),

Gene: Veracruz\_43 Start: 31597, Stop: 29759, Start Num: 246

Candidate Starts for Veracruz\_43:

(Start: 246 @31597 has 877 MA's), (280, 31546), (364, 31393), (400, 31321), (416, 31291), (425, 31264), (429, 31255), (479, 31111), (539, 31015), (558, 30967), (585, 30907), (629, 30820), (646, 30775), (659, 30754), (698, 30682), (716, 30640), (726, 30598), (743, 30517), (753, 30469), (767, 30430), (776, 30394), (783, 30364), (791, 30334), (815, 30253), (827, 30214), (834, 30190), (843, 30172), (844, 30169), (888, 30043), (905, 29983), (932, 29896), (946, 29848), (950, 29836), (955, 29827),

Gene: Veritas\_62 Start: 54399, Stop: 52540, Start Num: 205

Candidate Starts for Veritas\_62:

(Start: 188 @54423 has 1 MA's), (Start: 205 @54399 has 304 MA's), (Start: 235 @54375 has 6 MA's), (Start: 250 @54369 has 2 MA's), (Start: 274 @54327 has 6 MA's), (283, 54306), (337, 54192), (342, 54186), (360, 54156), (391, 54096), (399, 54075), (421, 54021), (428, 54009), (434, 53991), (436, 53979), (476, 53874), (519, 53817), (538, 53781), (542, 53769), (552, 53742), (570, 53697), (598, 53640), (602, 53631), (603, 53628), (738, 53268), (744, 53235), (750, 53214), (777, 53121), (780, 53112), (795, 53049), (814, 53013), (815, 53010), (820, 52995), (847, 52917), (851, 52905), (858, 52884), (875, 52845), (905, 52755), (910, 52737), (912, 52731), (917, 52716), (926, 52692), (930, 52677), (931, 52674), (933, 52662), (940, 52638), (963, 52590), (972, 52566), (977, 52551),

Gene: Vic9\_00057 Start: 53336, Stop: 51507, Start Num: 205

Candidate Starts for Vic9\_00057:

(Start: 205 @53336 has 304 MA's), (Start: 250 @53309 has 2 MA's), (269, 53279), (Start: 274 @53267 has 6 MA's), (286, 53240), (287, 53237), (293, 53228), (318, 53210), (366, 53114), (391, 53063), (400, 53039), (463, 52877), (469, 52862), (472, 52853), (476, 52841), (519, 52784), (538, 52748), (542, 52736), (551, 52712), (586, 52634), (588, 52628), (592, 52619), (602, 52598), (603, 52595), (615, 52565), (680, 52421), (707, 52355), (724, 52304), (727, 52283), (732, 52265), (744, 52208), (763, 52151), (771, 52124), (777, 52094), (780, 52085), (795, 52019), (812, 51992), (814, 51983), (820, 51965), (827, 51941), (847, 51887), (851, 51875), (858, 51854), (888, 51785), (905, 51725), (910, 51707), (922, 51674), (926, 51662), (930, 51647), (931, 51644), (933, 51632), (940, 51608), (941, 51605), (963, 51557), (965, 51554), (972, 51533), (979, 51512),

Gene: Vincenzo\_56 Start: 55146, Stop: 53320, Start Num: 197

Candidate Starts for Vincenzo\_56:

(Start: 197 @55146 has 27 MA's), (Start: 230 @55128 has 1 MA's), (Start: 274 @55077 has 6 MA's), (283, 55056), (360, 54918), (387, 54864), (411, 54810), (434, 54756), (445, 54726), (453, 54714), (454, 54711), (519, 54591), (538, 54555), (542, 54543), (552, 54516), (598, 54414), (603, 54402), (619, 54366), (633, 54336), (646, 54303), (674, 54255), (739, 54042), (744, 54015), (775, 53907), (777, 53901), (780, 53892), (782, 53880), (795, 53829), (812, 53802), (814, 53793), (815, 53790), (816, 53787), (820, 53775), (847, 53697), (851, 53685), (858, 53664), (861, 53655), (865, 53646), (905, 53535), (910, 53517), (912, 53511), (926, 53472), (930, 53457), (933, 53442), (936, 53430), (940, 53418), (963, 53370), (972, 53346),

Gene: Vine\_47 Start: 34669, Stop: 32288, Start Num: 46

Candidate Starts for Vine\_47:

(Start: 46 @34669 has 13 MA's), (63, 34609), (80, 34567), (93, 34528), (138, 34408), (145, 34387), (179, 34363), (Start: 232 @34285 has 3 MA's), (Start: 238 @34279 has 3 MA's), (Start: 241 @34276 has 13 MA's), (267, 34246), (287, 34198), (305, 34171), (Start: 308 @34168 has 5 MA's), (329, 34111), (354, 34072), (367, 34051), (389, 34009), (398, 33985), (402, 33976), (403, 33970), (406, 33964), (420, 33931), (430, 33910), (435, 33889), (499, 33706), (526, 33631), (539, 33589), (605, 33502), (633, 33478), (643, 33454), (647, 33445), (657, 33424), (682, 33373), (683, 33370), (690, 33355), (702, 33334), (736, 33208), (747, 33160), (749, 33151), (760, 33109), (783, 33016), (792, 32980), (794, 32974), (796, 32968), (797, 32962), (815, 32905), (822, 32881), (856, 32776), (858, 32773), (889, 32680), (893, 32662), (903, 32623), (911, 32581), (920, 32557), (929, 32527), (940, 32479), (947, 32455), (968, 32410), (993, 32344), (1004, 32323), (1006, 32317), (1009, 32311),

Gene: Violet\_42 Start: 34578, Stop: 32752, Start Num: 246

Candidate Starts for Violet\_42:

(Start: 246 @34578 has 877 MA's), (368, 34365), (400, 34302), (416, 34272), (422, 34251), (425, 34245), (429, 34236), (470, 34119), (479, 34092), (539, 33999), (544, 33984), (578, 33900), (580, 33897), (612, 33831), (639, 33771), (662, 33726), (683, 33687), (743, 33507), (753, 33459), (767, 33420), (783, 33354), (791, 33324), (793, 33315), (810, 33294), (814, 33273), (820, 33255), (843, 33189), (902, 33039), (903, 33036), (909, 33000), (917, 32976), (921, 32967), (925, 32955), (946, 32880), (955, 32859),

Gene: VioletZ\_55 Start: 54089, Stop: 52266, Start Num: 197

Candidate Starts for VioletZ\_55:

(Start: 182 @54107 has 4 MA's), (Start: 197 @54089 has 27 MA's), (Start: 250 @54065 has 2 MA's), (267, 54038), (Start: 274 @54023 has 6 MA's), (283, 54002), (329, 53915), (387, 53810), (399, 53783), (406, 53768), (434, 53702), (445, 53672), (448, 53663), (453, 53660), (454, 53657), (463, 53630), (519, 53537), (531, 53519), (538, 53501), (542, 53489), (552, 53462), (580, 53399), (602, 53351), (603, 53348), (615, 53318), (633, 53282), (724, 53057), (725, 53054), (732, 53018), (738, 52994), (744, 52961), (775, 52853), (777, 52847), (780, 52838), (814, 52739), (815, 52736), (820, 52721), (847, 52643), (851, 52631), (858, 52610), (861, 52601), (875, 52571), (888, 52541), (901, 52514), (905, 52481), (912, 52457), (926, 52418), (931, 52400), (933, 52388), (940, 52364), (956, 52322), (963, 52316), (972, 52292),

Gene: Virapocalypse\_61 Start: 54360, Stop: 52501, Start Num: 205

Candidate Starts for Virapocalypse\_61:

(Start: 188 @54384 has 1 MA's), (Start: 205 @54360 has 304 MA's), (Start: 235 @54336 has 6 MA's), (Start: 250 @54330 has 2 MA's), (Start: 274 @54288 has 6 MA's), (283, 54267), (337, 54153), (342, 54147), (360, 54117), (391, 54057), (399, 54036), (421, 53982), (428, 53970), (434, 53952), (436, 53940), (476, 53835), (519, 53778), (538, 53742), (542, 53730), (551, 53706), (556, 53694), (564, 53676), (570, 53658), (580, 53640), (598, 53601), (602, 53592), (603, 53589), (604, 53586), (738, 53229), (744, 53196), (750, 53175), (777, 53082), (780, 53073), (795, 53010), (814, 52974), (815, 52971), (820, 52956), (847, 52878), (851, 52866), (858, 52845), (875, 52806), (905, 52716), (910, 52698), (912, 52692), (917, 52677), (926, 52653), (930, 52638), (931, 52635), (933, 52623), (940, 52599), (963, 52551), (972, 52527),

Gene: Virgeve\_60 Start: 53997, Stop: 52138, Start Num: 205

Candidate Starts for Virgeve\_60:

(Start: 188 @54021 has 1 MA's), (Start: 205 @53997 has 304 MA's), (Start: 235 @53973 has 6 MA's), (Start: 250 @53967 has 2 MA's), (Start: 274 @53925 has 6 MA's), (283, 53904), (337, 53790), (342, 53784), (360, 53754), (391, 53694), (399, 53673), (421, 53619), (428, 53607), (434, 53589), (436, 53577), (476, 53472), (519, 53415), (538, 53379), (542, 53367), (551, 53343), (556, 53331), (564,

53313), (570, 53295), (580, 53277), (598, 53238), (602, 53229), (603, 53226), (604, 53223), (738, 52866), (744, 52833), (750, 52812), (777, 52719), (780, 52710), (795, 52647), (814, 52611), (815, 52608), (820, 52593), (847, 52515), (851, 52503), (858, 52482), (875, 52443), (905, 52353), (910, 52335), (912, 52329), (917, 52314), (926, 52290), (930, 52275), (931, 52272), (933, 52260), (940, 52236), (963, 52188), (972, 52164),

Gene: Vispistious\_39 Start: 28937, Stop: 27072, Start Num: 301

Candidate Starts for Vispistious\_39:

(Start: 238 @29024 has 3 MA's), (Start: 241 @29021 has 13 MA's), (Start: 301 @28937 has 110 MA's), (Start: 308 @28928 has 5 MA's), (354, 28823), (358, 28814), (375, 28784), (378, 28781), (433, 28661), (435, 28649), (438, 28643), (475, 28538), (484, 28511), (531, 28370), (536, 28364), (537, 28361), (539, 28349), (548, 28322), (549, 28319), (554, 28304), (556, 28298), (559, 28292), (586, 28259), (652, 28130), (676, 28070), (709, 27995), (776, 27755), (779, 27746), (780, 27743), (783, 27725), (794, 27683), (796, 27677), (798, 27668), (805, 27653), (822, 27596), (878, 27437), (885, 27407), (888, 27398), (903, 27338), (906, 27314), (919, 27275), (929, 27242), (932, 27230), (947, 27170),

Gene: Vista\_60 Start: 54037, Stop: 52178, Start Num: 205

Candidate Starts for Vista\_60:

(Start: 188 @54061 has 1 MA's), (Start: 205 @54037 has 304 MA's), (Start: 235 @54013 has 6 MA's), (Start: 250 @54007 has 2 MA's), (Start: 274 @53965 has 6 MA's), (283, 53944), (337, 53830), (342, 53824), (360, 53794), (391, 53734), (399, 53713), (421, 53659), (428, 53647), (434, 53629), (436, 53617), (476, 53512), (519, 53455), (538, 53419), (542, 53407), (552, 53380), (564, 53353), (570, 53335), (580, 53317), (598, 53278), (602, 53269), (603, 53266), (738, 52906), (744, 52873), (750, 52852), (777, 52759), (780, 52750), (795, 52687), (814, 52651), (815, 52648), (820, 52633), (847, 52555), (851, 52543), (858, 52522), (875, 52483), (905, 52393), (910, 52375), (912, 52369), (917, 52354), (926, 52330), (930, 52315), (931, 52312), (933, 52300), (940, 52276), (963, 52228), (972, 52204),

Gene: Vitas\_40 Start: 27434, Stop: 29302, Start Num: 243

Candidate Starts for Vitas\_40:

(Start: 243 @27434 has 7 MA's), (Start: 246 @27437 has 877 MA's), (249, 27440), (287, 27509), (434, 27791), (444, 27818), (467, 27872), (552, 28037), (585, 28112), (594, 28133), (731, 28487), (743, 28547), (755, 28598), (774, 28664), (783, 28700), (813, 28793), (874, 28964), (902, 29036), (924, 29117), (945, 29192), (946, 29195), (955, 29216), (989, 29285),

Gene: Vivaldi\_62 Start: 54495, Stop: 52636, Start Num: 205

Candidate Starts for Vivaldi\_62:

(Start: 188 @54519 has 1 MA's), (Start: 205 @54495 has 304 MA's), (Start: 235 @54471 has 6 MA's), (Start: 250 @54465 has 2 MA's), (Start: 274 @54423 has 6 MA's), (283, 54402), (337, 54288), (342, 54282), (360, 54252), (391, 54192), (399, 54171), (421, 54117), (428, 54105), (434, 54087), (436, 54075), (476, 53970), (519, 53913), (538, 53877), (542, 53865), (551, 53841), (556, 53829), (564, 53811), (570, 53793), (580, 53775), (598, 53736), (602, 53727), (603, 53724), (604, 53721), (738, 53364), (744, 53331), (750, 53310), (777, 53217), (780, 53208), (795, 53145), (814, 53109), (815, 53106), (820, 53091), (847, 53013), (851, 53001), (858, 52980), (875, 52941), (905, 52851), (910, 52833), (912, 52827), (917, 52812), (926, 52788), (930, 52773), (931, 52770), (933, 52758), (940, 52734), (963, 52686), (972, 52662),

Gene: Vix\_48 Start: 31935, Stop: 30121, Start Num: 246

Candidate Starts for Vix\_48:

(Start: 246 @31935 has 877 MA's), (275, 31896), (280, 31884), (364, 31731), (371, 31716), (400, 31659), (425, 31602), (429, 31593), (444, 31551), (461, 31500), (479, 31449), (539, 31356), (556, 31308), (560, 31299), (568, 31284), (585, 31245), (598, 31218), (612, 31188), (654, 31095), (686,

31035), (697, 31020), (743, 30864), (767, 30777), (783, 30711), (793, 30672), (815, 30600), (827, 30561), (834, 30537), (843, 30519), (853, 30486), (864, 30459), (888, 30405), (905, 30345), (930, 30267), (946, 30210), (950, 30198), (955, 30189),

Gene: VohminGhazi\_45 Start: 29628, Stop: 27787, Start Num: 246

Candidate Starts for VohminGhazi\_45:

(Start: 246 @29628 has 877 MA's), (364, 29424), (400, 29349), (402, 29346), (416, 29319), (420, 29304), (425, 29292), (444, 29241), (475, 29151), (479, 29139), (539, 29046), (552, 29007), (560, 28989), (568, 28974), (598, 28908), (613, 28875), (614, 28872), (663, 28770), (697, 28710), (726, 28626), (743, 28545), (766, 28461), (767, 28458), (771, 28449), (776, 28422), (783, 28392), (810, 28332), (820, 28293), (902, 28077), (903, 28074), (905, 28053), (946, 27918), (950, 27906), (955, 27897), (957, 27894), (1000, 27801),

Gene: Vortex\_60 Start: 54019, Stop: 52160, Start Num: 205

Candidate Starts for Vortex\_60:

(Start: 188 @54043 has 1 MA's), (Start: 205 @54019 has 304 MA's), (Start: 235 @53995 has 6 MA's), (Start: 250 @53989 has 2 MA's), (Start: 274 @53947 has 6 MA's), (283, 53926), (337, 53812), (342, 53806), (360, 53776), (391, 53716), (399, 53695), (421, 53641), (428, 53629), (434, 53611), (436, 53599), (476, 53494), (519, 53437), (538, 53401), (542, 53389), (552, 53362), (570, 53317), (598, 53260), (602, 53251), (603, 53248), (738, 52888), (744, 52855), (750, 52834), (777, 52741), (780, 52732), (795, 52669), (814, 52633), (815, 52630), (820, 52615), (847, 52537), (851, 52525), (858, 52504), (875, 52465), (905, 52375), (910, 52357), (912, 52351), (917, 52336), (926, 52312), (930, 52297), (931, 52294), (933, 52282), (940, 52258), (963, 52210), (972, 52186),

Gene: VroomVroom\_45 Start: 30595, Stop: 32457, Start Num: 245

Candidate Starts for VroomVroom\_45:

(Start: 245 @30595 has 74 MA's), (279, 30643), (400, 30862), (438, 30958), (536, 31165), (585, 31294), (613, 31354), (635, 31399), (659, 31447), (699, 31531), (743, 31705), (752, 31735), (774, 31822), (776, 31828), (813, 31951), (815, 31960), (850, 32062), (905, 32218), (912, 32242), (946, 32353),

Gene: WaddleDee\_92 Start: 73545, Stop: 75263, Start Num: 301

Candidate Starts for WaddleDee\_92:

(Start: 262 @73470 has 4 MA's), (279, 73503), (287, 73524), (292, 73533), (Start: 301 @73545 has 110 MA's), (428, 73782), (435, 73809), (438, 73815), (521, 73950), (571, 74067), (585, 74094), (587, 74100), (591, 74109), (617, 74163), (683, 74295), (693, 74316), (707, 74343), (723, 74391), (730, 74424), (740, 74463), (743, 74484), (746, 74490), (774, 74607), (792, 74691), (793, 74694), (813, 74757), (816, 74769), (827, 74805), (840, 74838), (858, 74892), (865, 74910), (898, 74994), (902, 75015), (906, 75042), (922, 75090), (924, 75096), (929, 75114), (932, 75126), (934, 75138), (935, 75141), (946, 75174), (961, 75201), (974, 75225),

Gene: Waits\_47 Start: 29831, Stop: 28041, Start Num: 246

Candidate Starts for Waits\_47:

(Start: 246 @29831 has 877 MA's), (400, 29552), (402, 29549), (416, 29522), (425, 29495), (444, 29444), (479, 29342), (539, 29249), (552, 29210), (560, 29192), (646, 29003), (683, 28937), (717, 28877), (726, 28838), (738, 28787), (740, 28778), (743, 28757), (755, 28706), (766, 28673), (774, 28640), (776, 28634), (783, 28604), (810, 28544), (814, 28523), (827, 28481), (835, 28454), (876, 28352), (902, 28289), (903, 28286), (946, 28130), (950, 28118), (957, 28106),

Gene: Waleliano\_53 Start: 54042, Stop: 52219, Start Num: 197

Candidate Starts for Waleliano\_53:

(Start: 182 @54060 has 4 MA's), (Start: 197 @54042 has 27 MA's), (Start: 250 @54018 has 2 MA's), (267, 53991), (Start: 274 @53976 has 6 MA's), (283, 53955), (329, 53868), (387, 53763), (399, 53736),

(406, 53721), (434, 53655), (445, 53625), (448, 53616), (453, 53613), (454, 53610), (463, 53583), (519, 53490), (531, 53472), (538, 53454), (542, 53442), (552, 53415), (580, 53352), (598, 53313), (602, 53304), (603, 53301), (615, 53271), (633, 53235), (724, 53010), (725, 53007), (732, 52971), (738, 52947), (744, 52914), (775, 52806), (777, 52800), (780, 52791), (814, 52692), (815, 52689), (820, 52674), (847, 52596), (851, 52584), (858, 52563), (861, 52554), (875, 52524), (901, 52467), (905, 52434), (912, 52410), (926, 52371), (931, 52353), (933, 52341), (940, 52317), (956, 52275), (963, 52269), (972, 52245),

Gene: WalkingDead\_44 Start: 31418, Stop: 33292, Start Num: 241

Candidate Starts for WalkingDead\_44:

(Start: 241 @31418 has 13 MA's), (271, 31445), (287, 31487), (Start: 301 @31508 has 110 MA's), (429, 31754), (434, 31769), (444, 31796), (541, 31982), (550, 32009), (585, 32090), (654, 32240), (696, 32324), (730, 32444), (731, 32447), (743, 32507), (746, 32513), (755, 32558), (762, 32573), (764, 32588), (774, 32624), (777, 32633), (783, 32660), (813, 32753), (844, 32846), (874, 32924), (875, 32927), (902, 32996), (909, 33035), (924, 33077), (929, 33095), (946, 33155), (955, 33176),

Gene: Wallhey\_61 Start: 54135, Stop: 52276, Start Num: 205

Candidate Starts for Wallhey\_61:

(Start: 188 @54159 has 1 MA's), (Start: 205 @54135 has 304 MA's), (Start: 235 @54111 has 6 MA's), (Start: 250 @54105 has 2 MA's), (Start: 274 @54063 has 6 MA's), (283, 54042), (337, 53928), (342, 53922), (360, 53892), (391, 53832), (399, 53811), (421, 53757), (428, 53745), (434, 53727), (436, 53715), (476, 53610), (519, 53553), (538, 53517), (542, 53505), (552, 53478), (570, 53433), (598, 53376), (602, 53367), (603, 53364), (712, 53106), (738, 53004), (744, 52971), (750, 52950), (777, 52857), (780, 52848), (795, 52785), (814, 52749), (815, 52746), (820, 52731), (847, 52653), (851, 52641), (858, 52620), (875, 52581), (905, 52491), (910, 52473), (912, 52467), (917, 52452), (926, 52428), (930, 52413), (931, 52410), (933, 52398), (940, 52374), (946, 52353), (963, 52326), (972, 52302), (977, 52287),

Gene: WalterMcMickey\_42 Start: 31053, Stop: 29218, Start Num: 246

Candidate Starts for WalterMcMickey\_42:

(Start: 246 @31053 has 877 MA's), (280, 31002), (319, 30936), (364, 30849), (374, 30825), (395, 30789), (400, 30777), (425, 30720), (429, 30711), (458, 30627), (471, 30591), (475, 30579), (479, 30567), (539, 30474), (558, 30426), (585, 30366), (598, 30339), (645, 30237), (646, 30234), (659, 30213), (662, 30207), (716, 30099), (743, 29976), (753, 29928), (776, 29853), (783, 29823), (791, 29793), (793, 29784), (814, 29715), (815, 29712), (827, 29673), (834, 29649), (837, 29643), (843, 29631), (905, 29442), (912, 29418), (932, 29355), (946, 29307), (950, 29295), (955, 29286),

Gene: Wander\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Wander\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: Warda\_41 Start: 29679, Stop: 31544, Start Num: 245

Candidate Starts for Warda\_41:

(Start: 245 @29679 has 74 MA's), (279, 29727), (416, 29976), (448, 30066), (541, 30273), (544, 30282), (580, 30372), (585, 30381), (591, 30396), (613, 30441), (635, 30486), (659, 30534), (687, 30591), (717, 30672), (743, 30792), (752, 30822), (767, 30879), (781, 30936), (783, 30945), (878, 31218), (902, 31281), (939, 31416), (946, 31440), (949, 31449),

Gene: Wardwill\_39 Start: 27171, Stop: 25306, Start Num: 299

Candidate Starts for Wardwill\_39:

(Start: 299 @27171 has 38 MA's), (305, 27165), (348, 27066), (354, 27057), (355, 27054), (368, 27033), (375, 27018), (379, 27012), (403, 26961), (406, 26958), (438, 26877), (469, 26787), (489, 26727), (493, 26724), (536, 26598), (537, 26595), (539, 26583), (549, 26553), (556, 26532), (585, 26496), (658, 26349), (724, 26181), (726, 26169), (776, 25989), (783, 25959), (797, 25905), (805, 25887), (822, 25830), (831, 25803), (845, 25761), (885, 25641), (888, 25632), (903, 25572), (906, 25548), (909, 25536), (912, 25527), (919, 25509), (929, 25476), (947, 25404),

Gene: Warrior24\_49 Start: 30037, Stop: 28247, Start Num: 246

Candidate Starts for Warrior24\_49:

(150, 30169), (Start: 246 @30037 has 877 MA's), (400, 29758), (402, 29755), (416, 29728), (425, 29701), (444, 29650), (479, 29548), (539, 29455), (552, 29416), (560, 29398), (646, 29209), (683, 29143), (717, 29083), (726, 29044), (738, 28993), (740, 28984), (743, 28963), (755, 28912), (766, 28879), (776, 28840), (783, 28810), (810, 28750), (814, 28729), (827, 28687), (835, 28660), (876, 28558), (902, 28495), (903, 28492), (946, 28336), (950, 28324), (957, 28312),

Gene: Waterdiva\_60 Start: 54398, Stop: 52539, Start Num: 205

Candidate Starts for Waterdiva\_60:

(Start: 188 @54422 has 1 MA's), (Start: 205 @54398 has 304 MA's), (Start: 235 @54374 has 6 MA's), (Start: 250 @54368 has 2 MA's), (Start: 274 @54326 has 6 MA's), (283, 54305), (337, 54191), (342, 54185), (360, 54155), (391, 54095), (399, 54074), (421, 54020), (428, 54008), (434, 53990), (436, 53978), (476, 53873), (519, 53816), (538, 53780), (542, 53768), (552, 53741), (564, 53714), (570, 53696), (580, 53678), (598, 53639), (602, 53630), (603, 53627), (712, 53369), (738, 53267), (744, 53234), (750, 53213), (777, 53120), (780, 53111), (795, 53048), (814, 53012), (815, 53009), (820, 52994), (847, 52916), (851, 52904), (858, 52883), (875, 52844), (905, 52754), (910, 52736), (912, 52730), (917, 52715), (926, 52691), (930, 52676), (931, 52673), (933, 52661), (940, 52637), (963, 52589), (972, 52565),

Gene: Watermelon\_46 Start: 35165, Stop: 33339, Start Num: 246

Candidate Starts for Watermelon\_46:

(Start: 246 @35165 has 877 MA's), (368, 34952), (374, 34937), (416, 34859), (422, 34838), (425, 34832), (429, 34823), (470, 34706), (479, 34679), (539, 34586), (544, 34571), (578, 34487), (580, 34484), (612, 34418), (627, 34388), (639, 34358), (662, 34313), (683, 34274), (743, 34094), (753, 34046), (767, 34007), (783, 33941), (814, 33860), (815, 33857), (843, 33776), (902, 33626), (903, 33623), (909, 33587), (917, 33563), (921, 33554), (925, 33542), (946, 33467), (955, 33446),

Gene: Watson\_48 Start: 31845, Stop: 30031, Start Num: 246

Candidate Starts for Watson\_48:

(Start: 246 @31845 has 877 MA's), (275, 31806), (280, 31794), (364, 31641), (371, 31626), (400, 31569), (425, 31512), (429, 31503), (444, 31461), (461, 31410), (479, 31359), (539, 31266), (556, 31218), (560, 31209), (568, 31194), (585, 31155), (598, 31128), (612, 31098), (654, 31005), (662, 30993), (686, 30945), (697, 30930), (743, 30774), (767, 30687), (783, 30621), (793, 30582), (815, 30510), (827, 30471), (834, 30447), (843, 30429), (853, 30396), (864, 30369), (888, 30315), (905, 30255), (930, 30177), (946, 30120), (950, 30108), (955, 30099),

Gene: Weher20\_60 Start: 54841, Stop: 52982, Start Num: 205

Candidate Starts for Weher20\_60:

(Start: 188 @54865 has 1 MA's), (Start: 205 @54841 has 304 MA's), (Start: 235 @54817 has 6 MA's), (Start: 250 @54811 has 2 MA's), (Start: 274 @54769 has 6 MA's), (283, 54748), (337, 54634), (342, 54628), (360, 54598), (391, 54538), (399, 54517), (421, 54463), (428, 54451), (434, 54433), (436, 54421), (476, 54316), (519, 54259), (538, 54223), (542, 54211), (551, 54187), (556, 54175), (564, 54157), (570, 54139), (580, 54121), (598, 54082), (602, 54073), (603, 54070), (604, 54067), (738, 53710), (744, 53677), (750, 53656), (777, 53563), (780, 53554), (795, 53491), (814, 53455), (815,

53452), (820, 53437), (847, 53359), (851, 53347), (858, 53326), (875, 53287), (905, 53197), (910, 53179), (912, 53173), (917, 53158), (926, 53134), (930, 53119), (931, 53116), (933, 53104), (940, 53080), (963, 53032), (972, 53008),

Gene: WeiHuaDA\_48 Start: 32697, Stop: 30910, Start Num: 246

Candidate Starts for WeiHuaDA\_48:

(Start: 246 @32697 has 877 MA's), (366, 32490), (368, 32484), (383, 32454), (399, 32424), (402, 32418), (416, 32391), (425, 32364), (433, 32343), (444, 32313), (475, 32223), (479, 32211), (539, 32118), (556, 32070), (560, 32061), (568, 32046), (598, 31980), (635, 31899), (659, 31851), (743, 31626), (755, 31575), (766, 31542), (767, 31539), (783, 31473), (793, 31434), (810, 31413), (831, 31338), (834, 31326), (837, 31320), (880, 31212), (902, 31158), (905, 31134), (924, 31077), (930, 31056), (946, 30999), (950, 30987), (957, 30975),

Gene: West99\_57 Start: 52637, Stop: 50808, Start Num: 205

Candidate Starts for West99\_57:

(Start: 205 @52637 has 304 MA's), (Start: 250 @52610 has 2 MA's), (269, 52580), (Start: 274 @52568 has 6 MA's), (286, 52541), (287, 52538), (293, 52529), (318, 52511), (366, 52415), (391, 52364), (400, 52340), (463, 52178), (469, 52163), (472, 52154), (476, 52142), (519, 52085), (538, 52049), (542, 52037), (551, 52013), (588, 51929), (602, 51899), (603, 51896), (615, 51866), (680, 51722), (707, 51656), (721, 51617), (724, 51605), (727, 51584), (732, 51566), (744, 51509), (771, 51425), (777, 51395), (780, 51386), (795, 51320), (812, 51293), (814, 51284), (820, 51266), (827, 51242), (847, 51188), (851, 51176), (858, 51155), (888, 51086), (905, 51026), (910, 51008), (922, 50975), (926, 50963), (930, 50948), (931, 50945), (933, 50933), (940, 50909), (941, 50906), (963, 50858), (965, 50855), (972, 50834), (979, 50813),

Gene: WestPM\_35 Start: 27173, Stop: 25272, Start Num: 298

Candidate Starts for WestPM\_35:

(Start: 298 @27173 has 4 MA's), (358, 27050), (375, 27020), (379, 27014), (400, 26972), (403, 26963), (430, 26906), (433, 26897), (435, 26885), (438, 26879), (504, 26678), (531, 26603), (537, 26594), (539, 26582), (549, 26552), (556, 26531), (562, 26519), (585, 26495), (660, 26345), (733, 26138), (742, 26084), (771, 25982), (774, 25961), (783, 25925), (792, 25889), (794, 25883), (822, 25796), (831, 25769), (878, 25637), (888, 25598), (893, 25577), (903, 25538), (906, 25514), (908, 25508), (917, 25481), (947, 25370),

Gene: Whabigail7\_45 Start: 31605, Stop: 29818, Start Num: 246

Candidate Starts for Whabigail7\_45:

(166, 31692), (Start: 246 @31605 has 877 MA's), (366, 31398), (368, 31392), (375, 31377), (383, 31362), (402, 31326), (416, 31299), (425, 31272), (433, 31251), (479, 31119), (539, 31026), (556, 30978), (560, 30969), (568, 30954), (598, 30888), (635, 30807), (659, 30759), (662, 30753), (697, 30690), (743, 30534), (755, 30483), (766, 30450), (767, 30447), (783, 30381), (793, 30342), (810, 30321), (831, 30246), (834, 30234), (853, 30183), (880, 30120), (888, 30102), (902, 30066), (905, 30042), (930, 29964), (946, 29907), (950, 29895), (955, 29886),

Gene: Wheeler\_45 Start: 34873, Stop: 33047, Start Num: 246

Candidate Starts for Wheeler\_45:

(Start: 246 @34873 has 877 MA's), (368, 34660), (374, 34645), (400, 34597), (416, 34567), (422, 34546), (425, 34540), (429, 34531), (470, 34414), (479, 34387), (539, 34294), (544, 34279), (556, 34246), (578, 34195), (580, 34192), (612, 34126), (627, 34096), (639, 34066), (662, 34021), (683, 33982), (743, 33802), (752, 33772), (753, 33754), (755, 33751), (767, 33715), (783, 33649), (814, 33568), (815, 33565), (843, 33484), (902, 33334), (903, 33331), (909, 33295), (917, 33271), (921, 33262), (925, 33250), (946, 33175), (955, 33154),

Gene: WideWale\_45 Start: 31601, Stop: 29814, Start Num: 246



Candidate Starts for WideWale\_45:

(Start: 246 @31601 has 877 MA's), (364, 31397), (366, 31394), (368, 31388), (383, 31358), (400, 31325), (402, 31322), (416, 31295), (425, 31268), (444, 31217), (479, 31115), (539, 31022), (556, 30974), (560, 30965), (568, 30950), (598, 30884), (635, 30803), (659, 30755), (726, 30611), (743, 30530), (755, 30479), (766, 30446), (783, 30377), (793, 30338), (810, 30317), (814, 30296), (818, 30284), (886, 30104), (888, 30098), (902, 30062), (905, 30038), (930, 29960), (946, 29903), (950, 29891),

Gene: Widow\_43 Start: 35284, Stop: 32969, Start Num: 3

Candidate Starts for Widow\_43:

(Start: 3 @35284 has 5 MA's), (5, 35275), (22, 35179), (30, 35149), (Start: 45 @35083 has 24 MA's), (124, 34924), (Start: 160 @34894 has 1 MA's), (170, 34882), (212, 34828), (229, 34807), (295, 34708), (318, 34687), (332, 34642), (363, 34594), (442, 34411), (469, 34348), (476, 34327), (479, 34318), (538, 34237), (542, 34225), (563, 34171), (575, 34141), (589, 34114), (602, 34087), (603, 34084), (604, 34081), (674, 33934), (704, 33850), (719, 33799), (727, 33760), (730, 33751), (732, 33742), (744, 33685), (771, 33604), (777, 33574), (806, 33484), (812, 33472), (820, 33445), (847, 33367), (851, 33355), (861, 33325), (897, 33235), (901, 33220), (905, 33187), (930, 33109), (931, 33106), (936, 33082), (940, 33070), (963, 33019), (972, 32995),

Gene: Wiks\_44 Start: 29422, Stop: 27581, Start Num: 246

Candidate Starts for Wiks\_44:

(Start: 220 @29452 has 1 MA's), (Start: 246 @29422 has 877 MA's), (364, 29218), (400, 29143), (402, 29140), (416, 29113), (420, 29098), (425, 29086), (444, 29035), (475, 28945), (479, 28933), (539, 28840), (552, 28801), (560, 28783), (568, 28768), (598, 28702), (613, 28669), (614, 28666), (663, 28564), (697, 28504), (726, 28420), (743, 28339), (766, 28255), (767, 28252), (771, 28243), (776, 28216), (783, 28186), (810, 28126), (820, 28087), (902, 27871), (903, 27868), (905, 27847), (946, 27712), (950, 27700), (955, 27691), (957, 27688), (1000, 27595),

Gene: Wilbur\_45 Start: 31567, Stop: 29741, Start Num: 246

Candidate Starts for Wilbur\_45:

(Start: 246 @31567 has 877 MA's), (267, 31546), (280, 31516), (295, 31486), (383, 31324), (394, 31306), (425, 31234), (429, 31225), (471, 31105), (479, 31081), (539, 30988), (558, 30940), (568, 30919), (585, 30880), (646, 30748), (659, 30727), (683, 30682), (687, 30670), (740, 30517), (743, 30496), (776, 30373), (783, 30343), (793, 30304), (814, 30238), (815, 30235), (820, 30220), (827, 30196), (834, 30172), (905, 29965), (946, 29830), (950, 29818), (955, 29809),

Gene: WildNOut\_39 Start: 28934, Stop: 27069, Start Num: 301

Candidate Starts for WildNOut\_39:

(Start: 301 @28934 has 110 MA's), (Start: 308 @28925 has 5 MA's), (354, 28820), (358, 28811), (375, 28781), (378, 28778), (433, 28658), (435, 28646), (438, 28640), (475, 28535), (484, 28508), (531, 28367), (536, 28361), (537, 28358), (539, 28346), (548, 28319), (549, 28316), (554, 28301), (556, 28295), (559, 28289), (586, 28256), (652, 28127), (676, 28067), (709, 27992), (776, 27752), (779, 27743), (780, 27740), (783, 27722), (794, 27680), (796, 27674), (798, 27665), (805, 27650), (822, 27593), (878, 27434), (885, 27404), (888, 27395), (903, 27335), (906, 27311), (919, 27272), (929, 27239), (932, 27227), (947, 27167),

Gene: Wildwest\_40 Start: 29139, Stop: 30983, Start Num: 245

Candidate Starts for Wildwest\_40:

(122, 28944), (154, 29022), (173, 29052), (Start: 245 @29139 has 74 MA's), (347, 29313), (364, 29343), (382, 29370), (416, 29436), (448, 29526), (541, 29712), (544, 29721), (554, 29751), (585, 29820), (591, 29835), (659, 29973), (717, 30111), (743, 30231), (767, 30318), (781, 30375), (783, 30384), (834, 30549), (902, 30720), (946, 30879), (949, 30888), (955, 30900),

Gene: Wile\_44 Start: 31553, Stop: 29724, Start Num: 246

Candidate Starts for Wile\_44:

(Start: 246 @31553 has 877 MA's), (280, 31502), (295, 31472), (383, 31310), (394, 31292), (400, 31277), (425, 31220), (429, 31211), (471, 31091), (479, 31067), (513, 31025), (539, 30974), (558, 30926), (568, 30905), (585, 30866), (607, 30821), (610, 30815), (646, 30734), (659, 30713), (683, 30668), (740, 30503), (743, 30482), (783, 30329), (793, 30290), (815, 30218), (820, 30203), (827, 30179), (832, 30161), (834, 30155), (837, 30149), (905, 29948), (946, 29813), (950, 29801), (955, 29792),

Gene: Wilkins\_44 Start: 34221, Stop: 32395, Start Num: 246

Candidate Starts for Wilkins\_44:

(Start: 246 @34221 has 877 MA's), (368, 34008), (374, 33993), (400, 33945), (416, 33915), (422, 33894), (425, 33888), (429, 33879), (470, 33762), (479, 33735), (539, 33642), (544, 33627), (578, 33543), (580, 33540), (612, 33474), (627, 33444), (639, 33414), (662, 33369), (683, 33330), (743, 33150), (753, 33102), (767, 33063), (783, 32997), (793, 32958), (810, 32937), (814, 32916), (820, 32898), (843, 32832), (902, 32682), (903, 32679), (909, 32643), (917, 32619), (921, 32610), (925, 32598), (938, 32550), (946, 32523), (955, 32502),

Gene: WilliamStrong\_38 Start: 28667, Stop: 26775, Start Num: 299

Candidate Starts for WilliamStrong\_38:

(Start: 299 @28667 has 38 MA's), (Start: 308 @28658 has 5 MA's), (344, 28571), (368, 28532), (375, 28517), (379, 28511), (403, 28460), (435, 28382), (438, 28376), (469, 28286), (512, 28154), (531, 28100), (537, 28091), (539, 28079), (549, 28049), (556, 28028), (559, 28022), (562, 28016), (574, 28013), (652, 27866), (673, 27821), (676, 27806), (720, 27695), (733, 27641), (736, 27629), (780, 27446), (783, 27428), (794, 27386), (805, 27356), (812, 27335), (822, 27299), (846, 27227), (878, 27140), (888, 27101), (903, 27041), (906, 27017), (922, 26969), (929, 26945), (947, 26873),

Gene: Windsor\_60 Start: 54584, Stop: 52725, Start Num: 205

Candidate Starts for Windsor\_60:

(Start: 188 @54608 has 1 MA's), (Start: 205 @54584 has 304 MA's), (Start: 235 @54560 has 6 MA's), (Start: 250 @54554 has 2 MA's), (Start: 274 @54512 has 6 MA's), (283, 54491), (337, 54377), (342, 54371), (360, 54341), (391, 54281), (399, 54260), (421, 54206), (428, 54194), (434, 54176), (436, 54164), (476, 54059), (519, 54002), (538, 53966), (542, 53954), (551, 53930), (556, 53918), (564, 53900), (570, 53882), (580, 53864), (598, 53825), (602, 53816), (603, 53813), (604, 53810), (738, 53453), (744, 53420), (750, 53399), (777, 53306), (780, 53297), (795, 53234), (814, 53198), (815, 53195), (820, 53180), (847, 53102), (851, 53090), (858, 53069), (875, 53030), (905, 52940), (910, 52922), (912, 52916), (917, 52901), (926, 52877), (930, 52862), (931, 52859), (933, 52847), (940, 52823), (963, 52775), (972, 52751),

Gene: Winzigespinne\_38 Start: 28618, Stop: 26753, Start Num: 301

Candidate Starts for Winzigespinne\_38:

(Start: 238 @28705 has 3 MA's), (Start: 301 @28618 has 110 MA's), (Start: 308 @28609 has 5 MA's), (354, 28504), (358, 28495), (375, 28465), (378, 28462), (433, 28342), (435, 28330), (438, 28324), (475, 28219), (484, 28192), (531, 28051), (536, 28045), (537, 28042), (539, 28030), (548, 28003), (549, 28000), (554, 27985), (556, 27979), (559, 27973), (586, 27940), (676, 27751), (776, 27436), (779, 27427), (780, 27424), (783, 27406), (794, 27364), (796, 27358), (805, 27334), (822, 27277), (878, 27118), (885, 27088), (888, 27079), (903, 27019), (906, 26995), (919, 26956), (929, 26923), (932, 26911), (947, 26851),

Gene: Wizard007\_45 Start: 31575, Stop: 29749, Start Num: 246

Candidate Starts for Wizard007\_45:

(Start: 246 @31575 has 877 MA's), (267, 31554), (280, 31524), (295, 31494), (383, 31332), (394, 31314), (425, 31242), (429, 31233), (471, 31113), (479, 31089), (539, 30996), (558, 30948), (568,

30927), (585, 30888), (646, 30756), (659, 30735), (683, 30690), (687, 30678), (740, 30525), (743, 30504), (776, 30381), (783, 30351), (793, 30312), (814, 30246), (815, 30243), (820, 30228), (827, 30204), (834, 30180), (905, 29973), (946, 29838), (950, 29826), (955, 29817),

Gene: Wooldri\_50 Start: 31764, Stop: 29950, Start Num: 246

Candidate Starts for Wooldri\_50:

(Start: 246 @31764 has 877 MA's), (275, 31725), (280, 31713), (364, 31560), (371, 31545), (400, 31488), (425, 31431), (429, 31422), (444, 31380), (461, 31329), (479, 31278), (539, 31185), (556, 31137), (560, 31128), (568, 31113), (585, 31074), (598, 31047), (612, 31017), (654, 30924), (686, 30864), (697, 30849), (743, 30693), (767, 30606), (783, 30540), (793, 30501), (815, 30429), (827, 30390), (834, 30366), (843, 30348), (853, 30315), (864, 30288), (888, 30234), (905, 30174), (930, 30096), (946, 30039), (950, 30027), (955, 30018),

Gene: Wooper\_54 Start: 47982, Stop: 46165, Start Num: 241

Candidate Starts for Wooper\_54:

(Start: 241 @47982 has 13 MA's), (Start: 250 @47973 has 2 MA's), (267, 47946), (273, 47934), (283, 47910), (287, 47901), (381, 47727), (417, 47652), (445, 47577), (476, 47499), (519, 47442), (538, 47406), (542, 47394), (551, 47370), (592, 47277), (603, 47253), (611, 47235), (724, 46962), (732, 46923), (739, 46893), (744, 46866), (775, 46758), (777, 46752), (780, 46743), (812, 46653), (814, 46644), (815, 46641), (820, 46626), (847, 46548), (851, 46536), (852, 46530), (858, 46515), (879, 46467), (901, 46419), (905, 46386), (912, 46362), (926, 46323), (930, 46308), (940, 46263), (972, 46191),

Gene: WunderPhul\_45 Start: 29420, Stop: 27579, Start Num: 246

Candidate Starts for WunderPhul\_45:

(Start: 220 @29450 has 1 MA's), (Start: 246 @29420 has 877 MA's), (364, 29216), (400, 29141), (402, 29138), (416, 29111), (420, 29096), (425, 29084), (444, 29033), (475, 28943), (479, 28931), (539, 28838), (552, 28799), (560, 28781), (568, 28766), (598, 28700), (613, 28667), (614, 28664), (663, 28562), (697, 28502), (726, 28418), (743, 28337), (766, 28253), (767, 28250), (771, 28241), (776, 28214), (783, 28184), (810, 28124), (820, 28085), (902, 27869), (903, 27866), (905, 27845), (946, 27710), (950, 27698), (955, 27689), (957, 27686), (1000, 27593),

Gene: Xavier\_59 Start: 54026, Stop: 52167, Start Num: 205

Candidate Starts for Xavier\_59:

(Start: 188 @54050 has 1 MA's), (Start: 205 @54026 has 304 MA's), (Start: 235 @54002 has 6 MA's), (Start: 250 @53996 has 2 MA's), (Start: 274 @53954 has 6 MA's), (283, 53933), (337, 53819), (342, 53813), (360, 53783), (391, 53723), (399, 53702), (421, 53648), (428, 53636), (434, 53618), (436, 53606), (476, 53501), (519, 53444), (538, 53408), (542, 53396), (552, 53369), (570, 53324), (598, 53267), (602, 53258), (603, 53255), (738, 52895), (744, 52862), (750, 52841), (777, 52748), (780, 52739), (795, 52676), (814, 52640), (815, 52637), (820, 52622), (847, 52544), (851, 52532), (858, 52511), (875, 52472), (905, 52382), (910, 52364), (912, 52358), (917, 52343), (926, 52319), (930, 52304), (931, 52301), (933, 52289), (940, 52265), (963, 52217), (972, 52193),

Gene: Xena\_43 Start: 31519, Stop: 29690, Start Num: 246

Candidate Starts for Xena\_43:

(Start: 246 @31519 has 877 MA's), (280, 31468), (295, 31438), (383, 31276), (394, 31258), (400, 31243), (425, 31186), (429, 31177), (471, 31057), (479, 31033), (513, 30991), (539, 30940), (558, 30892), (568, 30871), (585, 30832), (607, 30787), (610, 30781), (646, 30700), (659, 30679), (683, 30634), (740, 30469), (743, 30448), (783, 30295), (793, 30256), (815, 30184), (820, 30169), (827, 30145), (832, 30127), (834, 30121), (837, 30115), (905, 29914), (946, 29779), (950, 29767), (955, 29758),

Gene: XianYue\_44 Start: 31263, Stop: 29476, Start Num: 246

Candidate Starts for XianYue\_44:

(Start: 246 @31263 has 877 MA's), (364, 31059), (366, 31056), (368, 31050), (383, 31020), (395, 30999), (400, 30987), (416, 30957), (425, 30930), (433, 30909), (479, 30777), (539, 30684), (560, 30627), (568, 30612), (598, 30546), (635, 30465), (659, 30417), (698, 30345), (743, 30192), (755, 30141), (766, 30108), (767, 30105), (783, 30039), (793, 30000), (810, 29979), (831, 29904), (834, 29892), (837, 29886), (853, 29841), (880, 29778), (902, 29724), (905, 29700), (930, 29622), (946, 29565), (950, 29553), (955, 29544),

Gene: Xincheng\_54 Start: 55076, Stop: 53253, Start Num: 197

Candidate Starts for Xincheng\_54:

(Start: 182 @55094 has 4 MA's), (Start: 197 @55076 has 27 MA's), (Start: 250 @55052 has 2 MA's), (267, 55025), (Start: 274 @55010 has 6 MA's), (283, 54989), (329, 54902), (337, 54884), (387, 54797), (399, 54770), (406, 54755), (434, 54689), (445, 54659), (448, 54650), (453, 54647), (454, 54644), (463, 54617), (519, 54524), (531, 54506), (538, 54488), (542, 54476), (552, 54449), (580, 54386), (598, 54347), (602, 54338), (603, 54335), (615, 54305), (633, 54269), (724, 54044), (725, 54041), (732, 54005), (738, 53981), (744, 53948), (775, 53840), (777, 53834), (780, 53825), (814, 53726), (815, 53723), (820, 53708), (847, 53630), (851, 53618), (858, 53597), (861, 53588), (875, 53558), (888, 53528), (901, 53501), (905, 53468), (910, 53450), (912, 53444), (926, 53405), (931, 53387), (933, 53375), (940, 53351), (956, 53309), (963, 53303), (972, 53279),

Gene: Yago84\_49 Start: 46049, Stop: 44235, Start Num: 235

Candidate Starts for Yago84\_49:

(171, 46139), (175, 46133), (Start: 235 @46049 has 6 MA's), (Start: 250 @46040 has 2 MA's), (Start: 274 @45998 has 6 MA's), (337, 45872), (366, 45830), (384, 45788), (417, 45719), (433, 45680), (435, 45668), (436, 45665), (469, 45590), (476, 45569), (538, 45476), (591, 45350), (598, 45335), (603, 45323), (642, 45233), (727, 45011), (744, 44936), (777, 44822), (780, 44813), (795, 44750), (815, 44711), (820, 44696), (847, 44618), (851, 44606), (852, 44600), (858, 44585), (861, 44576), (865, 44567), (901, 44489), (905, 44456), (906, 44453), (924, 44399), (926, 44393), (934, 44357), (940, 44333), (972, 44261),

Gene: Yahalom\_57 Start: 53658, Stop: 51841, Start Num: 247

Candidate Starts for Yahalom\_57:

(60, 54042), (130, 53841), (Start: 247 @53658 has 43 MA's), (267, 53628), (368, 53448), (433, 53295), (435, 53283), (448, 53253), (454, 53247), (476, 53184), (478, 53178), (519, 53127), (537, 53100), (538, 53091), (556, 53043), (603, 52938), (645, 52842), (674, 52791), (724, 52647), (732, 52608), (739, 52578), (744, 52551), (748, 52539), (775, 52443), (777, 52437), (780, 52428), (782, 52416), (807, 52344), (814, 52314), (820, 52296), (822, 52287), (847, 52218), (851, 52206), (858, 52185), (888, 52116), (898, 52101), (903, 52077), (905, 52056), (910, 52038), (912, 52032), (924, 51999), (926, 51993), (931, 51975), (933, 51963), (936, 51951), (940, 51939), (956, 51897), (972, 51867),

Gene: Yakult\_46 Start: 33938, Stop: 31554, Start Num: 45

Candidate Starts for Yakult\_46:

(Start: 45 @33938 has 24 MA's), (Start: 53 @33908 has 1 MA's), (84, 33824), (93, 33794), (138, 33686), (145, 33665), (265, 33527), (273, 33512), (295, 33464), (329, 33389), (332, 33383), (335, 33377), (338, 33371), (374, 33302), (389, 33278), (397, 33257), (398, 33254), (402, 33245), (430, 33179), (435, 33158), (454, 33107), (488, 33011), (503, 32957), (526, 32897), (531, 32876), (551, 32819), (559, 32813), (605, 32768), (643, 32720), (649, 32708), (682, 32636), (703, 32594), (707, 32582), (733, 32483), (741, 32441), (747, 32417), (760, 32366), (783, 32273), (792, 32237), (794, 32231), (796, 32225), (797, 32219), (815, 32162), (822, 32138), (878, 31979), (884, 31958), (893, 31919), (903, 31880), (905, 31859), (911, 31838), (915, 31826), (922, 31808), (934, 31760), (947, 31712), (958, 31688), (968, 31667), (1004, 31580),

Gene: Yang\_41 Start: 29089, Stop: 31023, Start Num: 180

Candidate Starts for Yang\_41:

(Start: 180 @29089 has 1 MA's), (Start: 245 @29158 has 74 MA's), (279, 29206), (416, 29455), (458, 29575), (541, 29752), (544, 29761), (585, 29860), (591, 29875), (598, 29887), (659, 30013), (717, 30151), (743, 30271), (767, 30358), (781, 30415), (783, 30424), (790, 30448), (840, 30598), (902, 30760), (946, 30919),

Gene: Yappy\_80 Start: 40185, Stop: 38026, Start Num: 235

Candidate Starts for Yappy\_80:

(Start: 235 @40185 has 6 MA's), (266, 40149), (Start: 272 @40137 has 4 MA's), (275, 40128), (281, 40113), (296, 40083), (327, 40014), (333, 39999), (365, 39933), (393, 39885), (394, 39882), (409, 39846), (413, 39840), (415, 39837), (424, 39804), (446, 39741), (461, 39696), (475, 39654), (490, 39588), (495, 39534), (547, 39393), (567, 39339), (572, 39321), (597, 39261), (652, 39138), (694, 39027), (705, 38997), (723, 38949), (731, 38913), (736, 38898), (774, 38700), (776, 38694), (777, 38691), (789, 38640), (795, 38616), (819, 38523), (890, 38331), (891, 38328), (907, 38250), (932, 38160), (936, 38136), (944, 38112), (968, 38052),

Gene: Yarn\_40 Start: 32156, Stop: 29769, Start Num: 45

Candidate Starts for Yarn\_40:

(20, 32228), (23, 32213), (Start: 45 @32156 has 24 MA's), (48, 32147), (50, 32141), (75, 32060), (117, 31940), (138, 31889), (Start: 241 @31757 has 13 MA's), (265, 31730), (312, 31637), (329, 31592), (374, 31514), (398, 31466), (420, 31412), (421, 31409), (430, 31391), (435, 31370), (454, 31319), (457, 31310), (458, 31307), (484, 31232), (499, 31187), (522, 31127), (526, 31112), (559, 31028), (605, 30983), (615, 30959), (633, 30953), (643, 30929), (647, 30920), (680, 30851), (682, 30848), (683, 30845), (733, 30698), (749, 30629), (774, 30530), (783, 30494), (792, 30458), (794, 30452), (796, 30446), (797, 30440), (805, 30416), (815, 30383), (822, 30359), (836, 30314), (856, 30254), (910, 30062), (911, 30059), (947, 29933), (968, 29888), (971, 29879),

Gene: Yecey3\_46 Start: 30987, Stop: 29194, Start Num: 246

Candidate Starts for Yecey3\_46:

(Start: 246 @30987 has 877 MA's), (261, 30978), (364, 30783), (380, 30747), (383, 30741), (400, 30708), (416, 30678), (425, 30651), (429, 30642), (479, 30498), (539, 30405), (612, 30237), (646, 30159), (714, 30039), (716, 30033), (743, 29910), (762, 29844), (776, 29787), (780, 29775), (783, 29757), (812, 29685), (814, 29676), (888, 29478), (905, 29418), (930, 29340), (946, 29283), (950, 29271), (969, 29232),

Gene: Yeezus\_55 Start: 36878, Stop: 34710, Start Num: 233

Candidate Starts for Yeezus\_55:

(231, 36881), (Start: 233 @36878 has 13 MA's), (Start: 272 @36824 has 4 MA's), (317, 36740), (382, 36587), (387, 36578), (405, 36533), (431, 36455), (434, 36446), (438, 36431), (446, 36416), (447, 36413), (466, 36356), (490, 36263), (493, 36221), (567, 36026), (570, 36014), (572, 36008), (581, 35984), (590, 35963), (600, 35942), (606, 35927), (609, 35921), (638, 35858), (662, 35807), (693, 35720), (714, 35660), (726, 35612), (751, 35510), (752, 35504), (757, 35477), (758, 35474), (766, 35453), (777, 35411), (779, 35405), (784, 35381), (794, 35339), (795, 35336), (802, 35309), (811, 35276), (813, 35264), (823, 35228), (831, 35204), (832, 35198), (834, 35192), (854, 35138), (875, 35090), (876, 35087), (897, 35027), (902, 35003), (907, 34973), (923, 34919), (940, 34850), (944, 34838), (958, 34799),

Gene: YesChef\_41 Start: 29651, Stop: 31516, Start Num: 245

Candidate Starts for YesChef\_41:

(Start: 245 @29651 has 74 MA's), (279, 29699), (416, 29948), (448, 30038), (541, 30245), (544, 30254), (580, 30344), (585, 30353), (591, 30368), (613, 30413), (635, 30458), (659, 30506), (687, 30563), (717, 30644), (737, 30731), (743, 30764), (752, 30794), (767, 30851), (783, 30917), (790, 30941), (813, 31010), (834, 31082), (840, 31091), (878, 31190), (902, 31253), (905, 31277), (939,

31388), (946, 31412), (949, 31421),

Gene: Yeshua\_54 Start: 47959, Stop: 46142, Start Num: 241

Candidate Starts for Yeshua\_54:

(Start: 241 @47959 has 13 MA's), (Start: 250 @47950 has 2 MA's), (267, 47923), (273, 47911), (283, 47887), (287, 47878), (381, 47704), (417, 47629), (445, 47554), (476, 47476), (519, 47419), (538, 47383), (542, 47371), (551, 47347), (592, 47254), (603, 47230), (611, 47212), (724, 46939), (725, 46936), (739, 46870), (744, 46843), (775, 46735), (777, 46729), (780, 46720), (812, 46630), (814, 46621), (815, 46618), (820, 46603), (847, 46525), (851, 46513), (858, 46492), (879, 46444), (901, 46396), (905, 46363), (912, 46339), (926, 46300), (930, 46285), (940, 46240), (972, 46168),

Gene: Yinz\_58 Start: 53540, Stop: 51720, Start Num: 244

Candidate Starts for Yinz\_58:

(130, 53720), (Start: 244 @53540 has 11 MA's), (267, 53507), (368, 53327), (433, 53174), (435, 53162), (448, 53132), (454, 53126), (476, 53063), (478, 53057), (519, 53006), (537, 52979), (538, 52970), (556, 52922), (603, 52817), (645, 52721), (674, 52670), (724, 52526), (732, 52487), (739, 52457), (744, 52430), (748, 52418), (775, 52322), (777, 52316), (780, 52307), (782, 52295), (807, 52223), (814, 52193), (820, 52175), (822, 52166), (847, 52097), (851, 52085), (858, 52064), (888, 51995), (898, 51980), (903, 51956), (905, 51935), (912, 51911), (926, 51872), (931, 51854), (933, 51842), (936, 51830), (940, 51818), (956, 51776), (972, 51746),

Gene: YoSam321\_45 Start: 31564, Stop: 29738, Start Num: 246

Candidate Starts for YoSam321\_45:

(Start: 246 @31564 has 877 MA's), (267, 31543), (280, 31513), (295, 31483), (383, 31321), (394, 31303), (425, 31231), (429, 31222), (471, 31102), (479, 31078), (539, 30985), (558, 30937), (568, 30916), (585, 30877), (646, 30745), (659, 30724), (683, 30679), (687, 30667), (740, 30514), (743, 30493), (776, 30370), (783, 30340), (793, 30301), (814, 30235), (815, 30232), (820, 30217), (827, 30193), (834, 30169), (905, 29962), (946, 29827), (950, 29815), (955, 29806),

Gene: Yogi\_36 Start: 28087, Stop: 26303, Start Num: 246

Candidate Starts for Yogi\_36:

(Start: 246 @28087 has 877 MA's), (379, 27853), (395, 27823), (399, 27814), (400, 27811), (420, 27766), (425, 27754), (429, 27745), (444, 27703), (479, 27601), (496, 27580), (539, 27508), (554, 27463), (556, 27460), (574, 27418), (577, 27412), (585, 27397), (598, 27370), (646, 27265), (662, 27238), (683, 27199), (743, 27019), (753, 26971), (783, 26866), (784, 26863), (810, 26806), (814, 26785), (829, 26737), (855, 26662), (886, 26593), (902, 26551), (905, 26527), (930, 26449), (946, 26392), (950, 26380), (978, 26323),

Gene: Yokurt\_45 Start: 29422, Stop: 27581, Start Num: 246

Candidate Starts for Yokurt\_45:

(Start: 220 @29452 has 1 MA's), (Start: 246 @29422 has 877 MA's), (364, 29218), (400, 29143), (402, 29140), (416, 29113), (420, 29098), (425, 29086), (444, 29035), (475, 28945), (479, 28933), (539, 28840), (552, 28801), (560, 28783), (568, 28768), (598, 28702), (613, 28669), (614, 28666), (663, 28564), (697, 28504), (726, 28420), (743, 28339), (766, 28255), (767, 28252), (771, 28243), (776, 28216), (783, 28186), (810, 28126), (820, 28087), (902, 27871), (903, 27868), (905, 27847), (946, 27712), (950, 27700), (955, 27691), (957, 27688), (1000, 27595),

Gene: Yoncess\_36 Start: 28088, Stop: 26304, Start Num: 246

Candidate Starts for Yoncess\_36:

(Start: 246 @28088 has 877 MA's), (379, 27854), (395, 27824), (399, 27815), (400, 27812), (420, 27767), (425, 27755), (444, 27704), (479, 27602), (496, 27581), (539, 27509), (554, 27464), (556, 27461), (574, 27419), (577, 27413), (578, 27410), (585, 27398), (598, 27371), (625, 27317), (646, 27266), (662, 27239), (683, 27200), (743, 27020), (753, 26972), (783, 26867), (784, 26864), (810,

26807), (814, 26786), (829, 26738), (855, 26663), (886, 26594), (902, 26552), (905, 26528), (930, 26450), (946, 26393), (950, 26381), (978, 26324),

Gene: Yoshand\_62 Start: 54312, Stop: 52453, Start Num: 205

Candidate Starts for Yoshand\_62:

(Start: 188 @54336 has 1 MA's), (Start: 205 @54312 has 304 MA's), (Start: 235 @54288 has 6 MA's), (Start: 250 @54282 has 2 MA's), (Start: 274 @54240 has 6 MA's), (283, 54219), (337, 54105), (342, 54099), (360, 54069), (391, 54009), (399, 53988), (421, 53934), (428, 53922), (434, 53904), (436, 53892), (476, 53787), (519, 53730), (538, 53694), (542, 53682), (551, 53658), (556, 53646), (564, 53628), (570, 53610), (580, 53592), (598, 53553), (602, 53544), (603, 53541), (604, 53538), (738, 53181), (744, 53148), (750, 53127), (777, 53034), (780, 53025), (795, 52962), (814, 52926), (815, 52923), (820, 52908), (847, 52830), (851, 52818), (858, 52797), (875, 52758), (905, 52668), (910, 52650), (912, 52644), (917, 52629), (926, 52605), (930, 52590), (931, 52587), (933, 52575), (940, 52551), (963, 52503), (972, 52479),

Gene: YouGoGlencoco\_61 Start: 54264, Stop: 52405, Start Num: 205

Candidate Starts for YouGoGlencoco\_61:

(Start: 188 @54288 has 1 MA's), (Start: 205 @54264 has 304 MA's), (Start: 235 @54240 has 6 MA's), (Start: 250 @54234 has 2 MA's), (Start: 274 @54192 has 6 MA's), (283, 54171), (337, 54057), (342, 54051), (360, 54021), (391, 53961), (399, 53940), (421, 53886), (428, 53874), (434, 53856), (436, 53844), (476, 53739), (519, 53682), (538, 53646), (542, 53634), (552, 53607), (564, 53580), (570, 53562), (580, 53544), (598, 53505), (602, 53496), (603, 53493), (712, 53235), (738, 53133), (744, 53100), (750, 53079), (777, 52986), (780, 52977), (795, 52914), (814, 52878), (815, 52875), (820, 52860), (847, 52782), (851, 52770), (858, 52749), (875, 52710), (905, 52620), (910, 52602), (912, 52596), (917, 52581), (926, 52557), (930, 52542), (931, 52539), (933, 52527), (940, 52503), (963, 52455), (972, 52431),

Gene: Yucky\_48 Start: 34461, Stop: 32086, Start Num: 46

Candidate Starts for Yucky\_48:

(Start: 46 @34461 has 13 MA's), (63, 34401), (80, 34359), (93, 34320), (138, 34200), (145, 34179), (179, 34155), (Start: 232 @34077 has 3 MA's), (Start: 238 @34071 has 3 MA's), (Start: 241 @34068 has 13 MA's), (267, 34038), (287, 33990), (305, 33963), (Start: 308 @33960 has 5 MA's), (329, 33903), (354, 33864), (367, 33843), (389, 33801), (398, 33777), (402, 33768), (403, 33762), (406, 33756), (420, 33723), (430, 33702), (435, 33681), (499, 33498), (500, 33492), (526, 33423), (539, 33381), (605, 33294), (633, 33270), (643, 33246), (657, 33216), (682, 33165), (683, 33162), (690, 33147), (702, 33126), (736, 33000), (747, 32952), (749, 32943), (760, 32901), (783, 32808), (792, 32772), (794, 32766), (796, 32760), (797, 32754), (815, 32697), (822, 32673), (856, 32568), (858, 32565), (889, 32472), (893, 32454), (903, 32415), (911, 32373), (920, 32349), (929, 32319), (940, 32271), (947, 32247), (1004, 32115),

Gene: Yummy\_45 Start: 32562, Stop: 30172, Start Num: 36

Candidate Starts for Yummy\_45:

(Start: 36 @32562 has 16 MA's), (63, 32499), (70, 32481), (75, 32466), (93, 32412), (97, 32400), (103, 32379), (117, 32346), (128, 32319), (138, 32295), (164, 32268), (Start: 241 @32163 has 13 MA's), (275, 32115), (329, 31998), (374, 31917), (391, 31890), (398, 31869), (420, 31815), (421, 31812), (430, 31794), (435, 31773), (457, 31713), (526, 31515), (539, 31473), (605, 31386), (615, 31362), (633, 31356), (657, 31302), (660, 31296), (680, 31254), (682, 31251), (683, 31248), (733, 31101), (741, 31059), (749, 31032), (760, 30990), (783, 30897), (792, 30861), (794, 30855), (796, 30849), (797, 30843), (805, 30819), (815, 30786), (822, 30762), (836, 30717), (856, 30657), (903, 30504), (947, 30336), (968, 30291), (971, 30282), (973, 30273),

Gene: YuuY\_37 Start: 29162, Stop: 27261, Start Num: 299

Candidate Starts for YuuY\_37:

(Start: 299 @29162 has 38 MA's), (368, 29024), (375, 29009), (379, 29003), (395, 28976), (403, 28952), (420, 28916), (435, 28874), (438, 28868), (456, 28817), (469, 28778), (489, 28718), (512, 28649), (531, 28592), (537, 28583), (539, 28571), (549, 28541), (574, 28505), (658, 28337), (676, 28292), (720, 28181), (773, 27956), (774, 27950), (777, 27941), (783, 27914), (822, 27785), (839, 27734), (903, 27527), (906, 27503), (917, 27470), (919, 27464), (947, 27359),

Gene: Zada\_39 Start: 28906, Stop: 27041, Start Num: 301

Candidate Starts for Zada\_39:

(Start: 238 @28993 has 3 MA's), (Start: 241 @28990 has 13 MA's), (Start: 301 @28906 has 110 MA's), (Start: 308 @28897 has 5 MA's), (354, 28792), (358, 28783), (375, 28753), (378, 28750), (433, 28630), (435, 28618), (438, 28612), (475, 28507), (484, 28480), (531, 28339), (536, 28333), (537, 28330), (539, 28318), (548, 28291), (549, 28288), (554, 28273), (556, 28267), (559, 28261), (586, 28228), (652, 28099), (676, 28039), (776, 27724), (779, 27715), (780, 27712), (783, 27694), (794, 27652), (796, 27646), (798, 27637), (805, 27622), (822, 27565), (878, 27406), (885, 27376), (888, 27367), (903, 27307), (906, 27283), (919, 27244), (929, 27211), (932, 27199), (947, 27139),

Gene: Zaider\_61 Start: 54505, Stop: 52646, Start Num: 205

Candidate Starts for Zaider\_61:

(Start: 188 @54529 has 1 MA's), (Start: 205 @54505 has 304 MA's), (Start: 235 @54481 has 6 MA's), (Start: 250 @54475 has 2 MA's), (Start: 274 @54433 has 6 MA's), (283, 54412), (337, 54298), (342, 54292), (360, 54262), (391, 54202), (399, 54181), (421, 54127), (428, 54115), (434, 54097), (436, 54085), (476, 53980), (519, 53923), (538, 53887), (542, 53875), (551, 53851), (556, 53839), (564, 53821), (570, 53803), (580, 53785), (598, 53746), (602, 53737), (603, 53734), (604, 53731), (738, 53374), (744, 53341), (750, 53320), (777, 53227), (780, 53218), (795, 53155), (814, 53119), (815, 53116), (820, 53101), (847, 53023), (851, 53011), (858, 52990), (875, 52951), (905, 52861), (910, 52843), (912, 52837), (917, 52822), (926, 52798), (930, 52783), (931, 52780), (933, 52768), (940, 52744), (963, 52696), (972, 52672),

Gene: Zaka\_45 Start: 29422, Stop: 27581, Start Num: 246

Candidate Starts for Zaka\_45:

(Start: 220 @29452 has 1 MA's), (Start: 246 @29422 has 877 MA's), (364, 29218), (400, 29143), (402, 29140), (416, 29113), (420, 29098), (425, 29086), (444, 29035), (475, 28945), (479, 28933), (539, 28840), (552, 28801), (560, 28783), (568, 28768), (598, 28702), (613, 28669), (614, 28666), (663, 28564), (697, 28504), (726, 28420), (743, 28339), (766, 28255), (767, 28252), (771, 28243), (776, 28216), (783, 28186), (810, 28126), (820, 28087), (902, 27871), (903, 27868), (905, 27847), (946, 27712), (950, 27700), (955, 27691), (957, 27688), (1000, 27595),

Gene: Zareef\_42 Start: 32040, Stop: 29683, Start Num: 45

Candidate Starts for Zareef\_42:

(41, 32049), (Start: 45 @32040 has 24 MA's), (50, 32025), (57, 31989), (108, 31854), (138, 31791), (Start: 176 @31749 has 2 MA's), (185, 31737), (264, 31635), (267, 31632), (305, 31557), (321, 31518), (329, 31497), (363, 31446), (386, 31404), (398, 31374), (420, 31320), (430, 31299), (435, 31278), (458, 31215), (502, 31080), (506, 31065), (520, 31038), (526, 31020), (559, 30936), (598, 30900), (660, 30807), (680, 30765), (682, 30762), (683, 30759), (698, 30735), (703, 30723), (707, 30711), (741, 30570), (749, 30543), (783, 30408), (792, 30372), (794, 30366), (796, 30360), (797, 30354), (805, 30330), (815, 30297), (822, 30273), (836, 30228), (839, 30222), (859, 30162), (893, 30054), (908, 29985), (911, 29973), (920, 29949), (940, 29871), (947, 29847), (976, 29778),

Gene: Zayuliv\_37 Start: 27590, Stop: 25725, Start Num: 299

Candidate Starts for Zayuliv\_37:

(Start: 299 @27590 has 38 MA's), (305, 27584), (348, 27485), (354, 27476), (368, 27452), (375, 27437), (379, 27431), (403, 27380), (406, 27377), (438, 27296), (489, 27146), (493, 27143), (526, 27044), (536, 27017), (537, 27014), (539, 27002), (549, 26972), (556, 26951), (585, 26915), (658,



26768), (726, 26588), (776, 26408), (783, 26378), (797, 26324), (805, 26306), (822, 26249), (831, 26222), (845, 26180), (885, 26060), (888, 26051), (903, 25991), (906, 25967), (909, 25955), (912, 25946), (919, 25928), (929, 25895), (947, 25823),

Gene: Zeeculate\_43 Start: 34848, Stop: 33013, Start Num: 246

Candidate Starts for Zeeculate\_43:

(Start: 246 @34848 has 877 MA's), (346, 34677), (374, 34620), (416, 34542), (422, 34521), (425, 34515), (429, 34506), (461, 34413), (470, 34389), (479, 34362), (539, 34269), (544, 34254), (556, 34221), (578, 34170), (580, 34167), (612, 34101), (627, 34071), (639, 34041), (662, 33996), (683, 33957), (743, 33777), (752, 33747), (753, 33729), (767, 33690), (783, 33624), (814, 33543), (815, 33540), (843, 33459), (902, 33309), (903, 33306), (909, 33270), (917, 33246), (925, 33225), (946, 33150), (955, 33129),

Gene: Zelda\_61 Start: 54666, Stop: 52807, Start Num: 205

Candidate Starts for Zelda\_61:

(Start: 188 @54690 has 1 MA's), (Start: 205 @54666 has 304 MA's), (Start: 235 @54642 has 6 MA's), (Start: 250 @54636 has 2 MA's), (Start: 274 @54594 has 6 MA's), (283, 54573), (337, 54459), (342, 54453), (360, 54423), (391, 54363), (399, 54342), (421, 54288), (428, 54276), (434, 54258), (436, 54246), (476, 54141), (519, 54084), (538, 54048), (542, 54036), (552, 54009), (570, 53964), (598, 53907), (602, 53898), (603, 53895), (738, 53535), (744, 53502), (750, 53481), (777, 53388), (780, 53379), (795, 53316), (814, 53280), (815, 53277), (820, 53262), (847, 53184), (851, 53172), (858, 53151), (875, 53112), (905, 53022), (910, 53004), (912, 52998), (917, 52983), (926, 52959), (930, 52944), (931, 52941), (933, 52929), (940, 52905), (963, 52857), (972, 52833),

Gene: Zemanar\_54 Start: 53874, Stop: 52054, Start Num: 200

Candidate Starts for Zemanar\_54:

(Start: 182 @53892 has 4 MA's), (Start: 200 @53874 has 1 MA's), (Start: 250 @53850 has 2 MA's), (267, 53823), (Start: 274 @53808 has 6 MA's), (318, 53736), (319, 53730), (384, 53601), (390, 53592), (392, 53589), (400, 53568), (411, 53544), (427, 53508), (429, 53502), (436, 53478), (438, 53475), (445, 53460), (448, 53451), (453, 53448), (519, 53325), (531, 53307), (538, 53289), (542, 53277), (552, 53250), (602, 53139), (603, 53136), (611, 53118), (615, 53106), (635, 53064), (640, 53052), (674, 52989), (724, 52845), (725, 52842), (732, 52806), (738, 52782), (739, 52776), (744, 52749), (777, 52635), (780, 52626), (812, 52536), (814, 52527), (820, 52509), (847, 52431), (851, 52419), (858, 52398), (865, 52380), (875, 52359), (888, 52329), (905, 52269), (910, 52251), (912, 52245), (926, 52206), (930, 52191), (931, 52188), (933, 52176), (940, 52152), (956, 52110), (963, 52104), (965, 52101), (972, 52080),

Gene: Zenitsu\_38 Start: 28753, Stop: 26888, Start Num: 299

Candidate Starts for Zenitsu\_38:

(Start: 299 @28753 has 38 MA's), (344, 28654), (379, 28594), (403, 28543), (435, 28465), (438, 28459), (454, 28414), (455, 28411), (456, 28408), (469, 28369), (489, 28309), (531, 28186), (537, 28177), (539, 28165), (543, 28153), (549, 28135), (556, 28114), (562, 28102), (658, 27931), (724, 27763), (771, 27598), (779, 27562), (783, 27541), (794, 27499), (822, 27412), (836, 27367), (872, 27268), (885, 27223), (903, 27154), (906, 27130), (917, 27097), (947, 26986),

Gene: Zenteno07\_62 Start: 54178, Stop: 52334, Start Num: 228

Candidate Starts for Zenteno07\_62:

(Start: 228 @54178 has 3 MA's), (Start: 274 @54121 has 6 MA's), (286, 54094), (312, 54058), (342, 53992), (391, 53905), (400, 53881), (414, 53851), (421, 53830), (433, 53806), (436, 53791), (476, 53686), (538, 53593), (542, 53581), (556, 53545), (603, 53440), (674, 53293), (704, 53209), (706, 53203), (724, 53143), (725, 53140), (732, 53104), (738, 53080), (744, 53047), (777, 52933), (780, 52924), (814, 52810), (820, 52792), (847, 52714), (851, 52702), (858, 52681), (888, 52612), (898, 52597), (905, 52552), (912, 52528), (926, 52489), (930, 52474), (933, 52459), (940, 52435), (956,

52390), (963, 52384), (972, 52360),

Gene: Zephyr\_44 Start: 34559, Stop: 32733, Start Num: 246

Candidate Starts for Zephyr\_44:

(Start: 246 @34559 has 877 MA's), (346, 34388), (368, 34346), (374, 34331), (400, 34283), (416, 34253), (422, 34232), (425, 34226), (429, 34217), (470, 34100), (479, 34073), (539, 33980), (544, 33965), (578, 33881), (580, 33878), (612, 33812), (627, 33782), (639, 33752), (662, 33707), (683, 33668), (743, 33488), (752, 33458), (753, 33440), (767, 33401), (783, 33335), (814, 33254), (815, 33251), (843, 33170), (902, 33020), (903, 33017), (909, 32981), (917, 32957), (921, 32948), (925, 32936), (946, 32861), (955, 32840),

Gene: Zepp\_38 Start: 27049, Stop: 25184, Start Num: 299

Candidate Starts for Zepp\_38:

(Start: 299 @27049 has 38 MA's), (305, 27043), (348, 26944), (354, 26935), (368, 26911), (375, 26896), (379, 26890), (403, 26839), (406, 26836), (438, 26755), (459, 26695), (489, 26605), (493, 26602), (526, 26503), (536, 26476), (537, 26473), (539, 26461), (549, 26431), (556, 26410), (585, 26374), (658, 26227), (726, 26047), (776, 25867), (783, 25837), (797, 25783), (805, 25765), (822, 25708), (831, 25681), (845, 25639), (885, 25519), (888, 25510), (903, 25450), (906, 25426), (909, 25414), (912, 25405), (919, 25387), (929, 25354), (947, 25282),

Gene: Zeta1847\_40 Start: 29119, Stop: 31065, Start Num: 244

Candidate Starts for Zeta1847\_40:

(146, 28978), (159, 29005), (Start: 199 @29059 has 2 MA's), (201, 29062), (Start: 244 @29119 has 11 MA's), (279, 29167), (317, 29227), (339, 29284), (347, 29293), (364, 29323), (397, 29380), (402, 29389), (433, 29464), (478, 29593), (536, 29692), (541, 29713), (577, 29806), (585, 29821), (591, 29836), (659, 29974), (692, 30040), (716, 30112), (743, 30235), (750, 30256), (774, 30352), (776, 30358), (797, 30442), (820, 30505), (827, 30529), (832, 30547), (844, 30574), (885, 30679), (903, 30727), (917, 30787), (946, 30883), (968, 30928),

Gene: Zetzy\_47 Start: 31416, Stop: 29602, Start Num: 246

Candidate Starts for Zetzy\_47:

(Start: 246 @31416 has 877 MA's), (275, 31377), (280, 31365), (364, 31212), (371, 31197), (400, 31140), (425, 31083), (429, 31074), (444, 31032), (461, 30981), (479, 30930), (539, 30837), (556, 30789), (560, 30780), (568, 30765), (585, 30726), (598, 30699), (612, 30669), (646, 30591), (654, 30576), (686, 30516), (697, 30501), (743, 30345), (766, 30261), (767, 30258), (783, 30192), (793, 30153), (815, 30081), (827, 30042), (834, 30018), (843, 30000), (853, 29967), (864, 29940), (888, 29886), (905, 29826), (946, 29691), (950, 29679), (955, 29670),

Gene: Zeuska\_44 Start: 34791, Stop: 32962, Start Num: 246

Candidate Starts for Zeuska\_44:

(Start: 246 @34791 has 877 MA's), (368, 34578), (374, 34563), (400, 34515), (416, 34485), (422, 34464), (425, 34458), (429, 34449), (470, 34332), (479, 34305), (539, 34212), (544, 34197), (556, 34164), (578, 34113), (580, 34110), (612, 34044), (627, 34014), (639, 33984), (662, 33939), (683, 33900), (743, 33720), (753, 33672), (771, 33624), (780, 33585), (783, 33567), (793, 33528), (810, 33507), (814, 33486), (819, 33471), (861, 33348), (922, 33177), (929, 33153), (943, 33105), (946, 33093), (955, 33072), (959, 33066), (981, 33018), (986, 33003),

Gene: Zimmer\_42 Start: 32129, Stop: 30285, Start Num: 246

Candidate Starts for Zimmer\_42:

(143, 32273), (158, 32246), (Start: 246 @32129 has 877 MA's), (325, 31991), (347, 31955), (364, 31925), (383, 31883), (402, 31847), (422, 31799), (425, 31793), (433, 31772), (475, 31652), (479, 31640), (539, 31547), (542, 31538), (556, 31499), (560, 31490), (568, 31475), (598, 31409), (620, 31361), (652, 31292), (697, 31211), (715, 31169), (726, 31124), (732, 31097), (743, 31043), (755,

30992), (767, 30956), (783, 30890), (793, 30851), (810, 30830), (814, 30809), (853, 30692), (880, 30629), (902, 30575), (903, 30572), (905, 30551), (924, 30494), (930, 30473), (946, 30416), (950, 30404), (978, 30347),

Gene: Zolita\_39 Start: 31121, Stop: 29256, Start Num: 246

Candidate Starts for Zolita\_39:

(Start: 246 @31121 has 877 MA's), (280, 31070), (318, 31010), (347, 30947), (364, 30917), (366, 30914), (395, 30857), (416, 30815), (425, 30788), (479, 30635), (539, 30539), (550, 30506), (556, 30491), (594, 30407), (598, 30401), (613, 30368), (654, 30281), (662, 30269), (683, 30230), (712, 30170), (743, 30035), (752, 30005), (753, 29987), (766, 29951), (767, 29948), (783, 29882), (793, 29843), (814, 29801), (820, 29783), (834, 29735), (837, 29729), (853, 29684), (876, 29630), (880, 29621), (888, 29603), (910, 29525), (929, 29468), (939, 29432), (946, 29408), (950, 29396), (1010, 29264),

Gene: Zonia\_62 Start: 54586, Stop: 52727, Start Num: 205

Candidate Starts for Zonia\_62:

(Start: 188 @54610 has 1 MA's), (Start: 205 @54586 has 304 MA's), (Start: 235 @54562 has 6 MA's), (Start: 250 @54556 has 2 MA's), (Start: 274 @54514 has 6 MA's), (283, 54493), (337, 54379), (342, 54373), (360, 54343), (391, 54283), (399, 54262), (421, 54208), (428, 54196), (434, 54178), (436, 54166), (476, 54061), (519, 54004), (538, 53968), (542, 53956), (552, 53929), (570, 53884), (598, 53827), (602, 53818), (603, 53815), (712, 53557), (738, 53455), (744, 53422), (750, 53401), (777, 53308), (780, 53299), (795, 53236), (814, 53200), (815, 53197), (820, 53182), (847, 53104), (851, 53092), (858, 53071), (875, 53032), (905, 52942), (910, 52924), (912, 52918), (917, 52903), (926, 52879), (930, 52864), (931, 52861), (933, 52849), (940, 52825), (946, 52804), (963, 52777), (972, 52753), (977, 52738),

Gene: Zooman\_100 Start: 78594, Stop: 76723, Start Num: 246

Candidate Starts for Zooman\_100:

(Start: 199 @78654 has 2 MA's), (204, 78648), (219, 78624), (227, 78615), (234, 78606), (Start: 246 @78594 has 877 MA's), (346, 78393), (382, 78333), (391, 78318), (435, 78210), (438, 78204), (477, 78111), (483, 78093), (521, 78066), (542, 78018), (571, 77934), (585, 77907), (613, 77847), (630, 77814), (648, 77772), (683, 77709), (698, 77682), (707, 77661), (743, 77520), (754, 77469), (773, 77406), (791, 77322), (795, 77307), (797, 77298), (824, 77211), (827, 77202), (840, 77169), (898, 77013), (922, 76917), (930, 76890), (934, 76869), (946, 76833),

Gene: Zuko\_78 Start: 57486, Stop: 60083, Start Num: 14

Candidate Starts for Zuko\_78:

(Start: 14 @57486 has 1 MA's), (24, 57528), (30, 57549), (32, 57558), (Start: 37 @57591 has 1 MA's), (76, 57720), (Start: 77 @57726 has 1 MA's), (120, 57849), (149, 57927), (195, 57990), (218, 58023), (223, 58032), (277, 58110), (281, 58122), (Start: 308 @58167 has 5 MA's), (329, 58236), (340, 58257), (420, 58416), (428, 58431), (435, 58458), (457, 58518), (461, 58530), (486, 58578), (526, 58695), (598, 58815), (677, 58995), (682, 59010), (683, 59013), (720, 59103), (730, 59148), (749, 59232), (769, 59304), (776, 59337), (783, 59367), (792, 59403), (794, 59409), (796, 59415), (797, 59421), (815, 59478), (822, 59502), (871, 59643), (884, 59682), (905, 59781), (910, 59799), (920, 59826), (937, 59895), (943, 59913), (947, 59928), (967, 59967), (968, 59973), (984, 60021),

Gene: Zulu\_46 Start: 29773, Stop: 27932, Start Num: 246

Candidate Starts for Zulu\_46:

(Start: 220 @29803 has 1 MA's), (Start: 246 @29773 has 877 MA's), (364, 29569), (400, 29494), (402, 29491), (416, 29464), (420, 29449), (425, 29437), (444, 29386), (475, 29296), (479, 29284), (539, 29191), (552, 29152), (560, 29134), (568, 29119), (598, 29053), (613, 29020), (614, 29017), (663, 28915), (697, 28855), (726, 28771), (743, 28690), (766, 28606), (767, 28603), (771, 28594), (776, 28567), (783, 28537), (810, 28477), (820, 28438), (902, 28222), (903, 28219), (905, 28198), (946,

28063), (950, 28051), (955, 28042), (957, 28039), (1000, 27946),

Gene: phiBT1\_11 Start: 28224, Stop: 30098, Start Num: 246

Candidate Starts for phiBT1\_11:

(Start: 246 @28224 has 877 MA's), (295, 28305), (319, 28338), (364, 28425), (407, 28512), (416, 28527), (422, 28548), (429, 28563), (478, 28704), (537, 28785), (541, 28803), (563, 28860), (578, 28902), (585, 28914), (592, 28932), (611, 28968), (646, 29046), (653, 29058), (659, 29067), (683, 29112), (687, 29124), (694, 29136), (724, 29232), (734, 29274), (743, 29325), (753, 29376), (774, 29448), (776, 29454), (777, 29457), (780, 29466), (783, 29484), (792, 29550), (812, 29604), (875, 29781), (878, 29787), (898, 29829), (901, 29841), (905, 29874), (909, 29889), (912, 29898), (922, 29925), (930, 29952), (946, 30009), (948, 30015), (955, 30030),

Gene: phiSASD1\_12 Start: 28284, Stop: 30140, Start Num: 246

Candidate Starts for phiSASD1\_12:

(Start: 246 @28284 has 877 MA's), (279, 28332), (280, 28335), (379, 28530), (428, 28638), (450, 28701), (541, 28881), (563, 28938), (574, 28971), (585, 28992), (635, 29097), (683, 29190), (692, 29208), (731, 29343), (740, 29382), (743, 29403), (746, 29409), (753, 29451), (767, 29490), (769, 29493), (773, 29514), (776, 29526), (777, 29529), (783, 29556), (797, 29610), (827, 29697), (844, 29742), (874, 29820), (912, 29940), (929, 29991), (946, 30051),