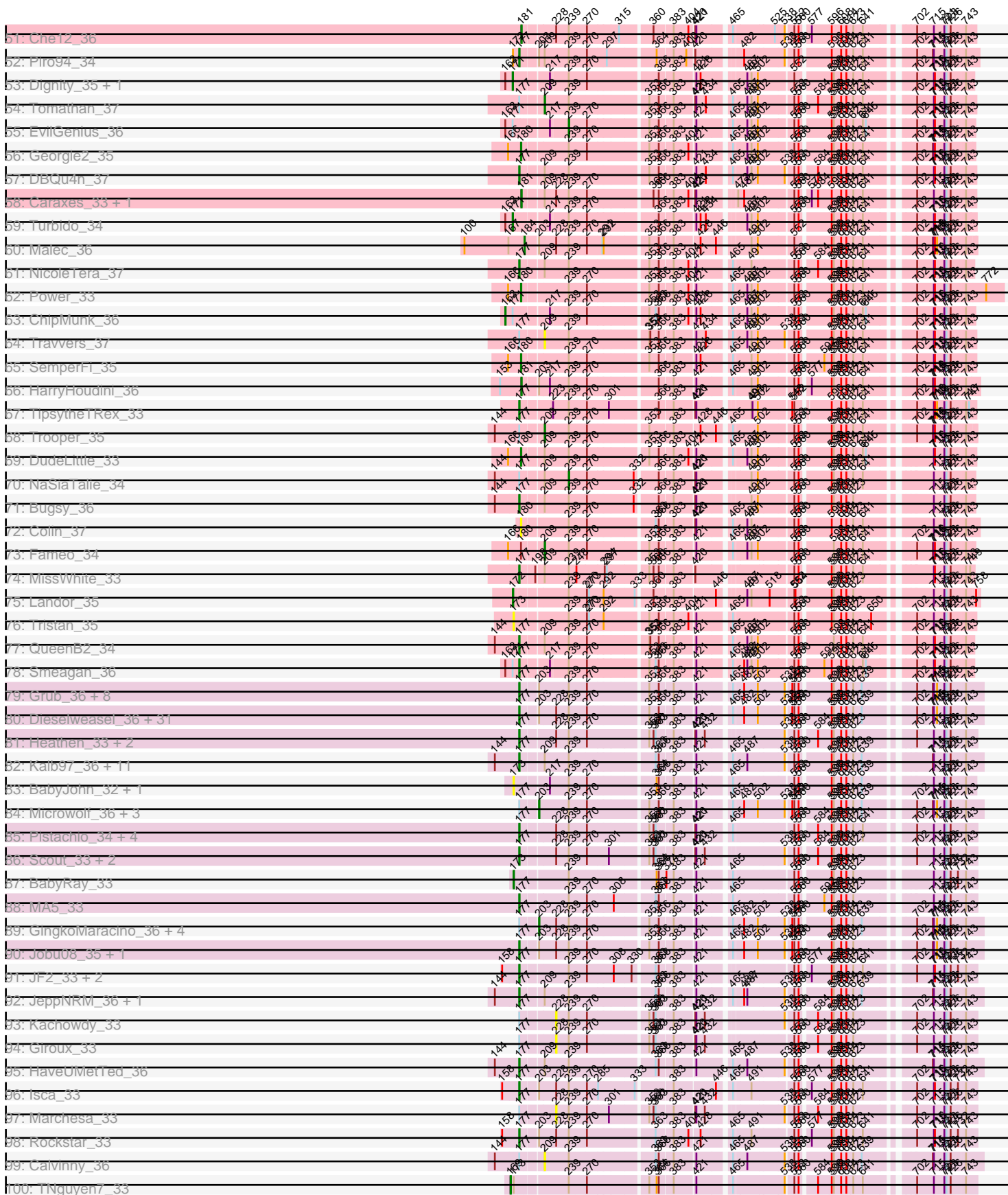


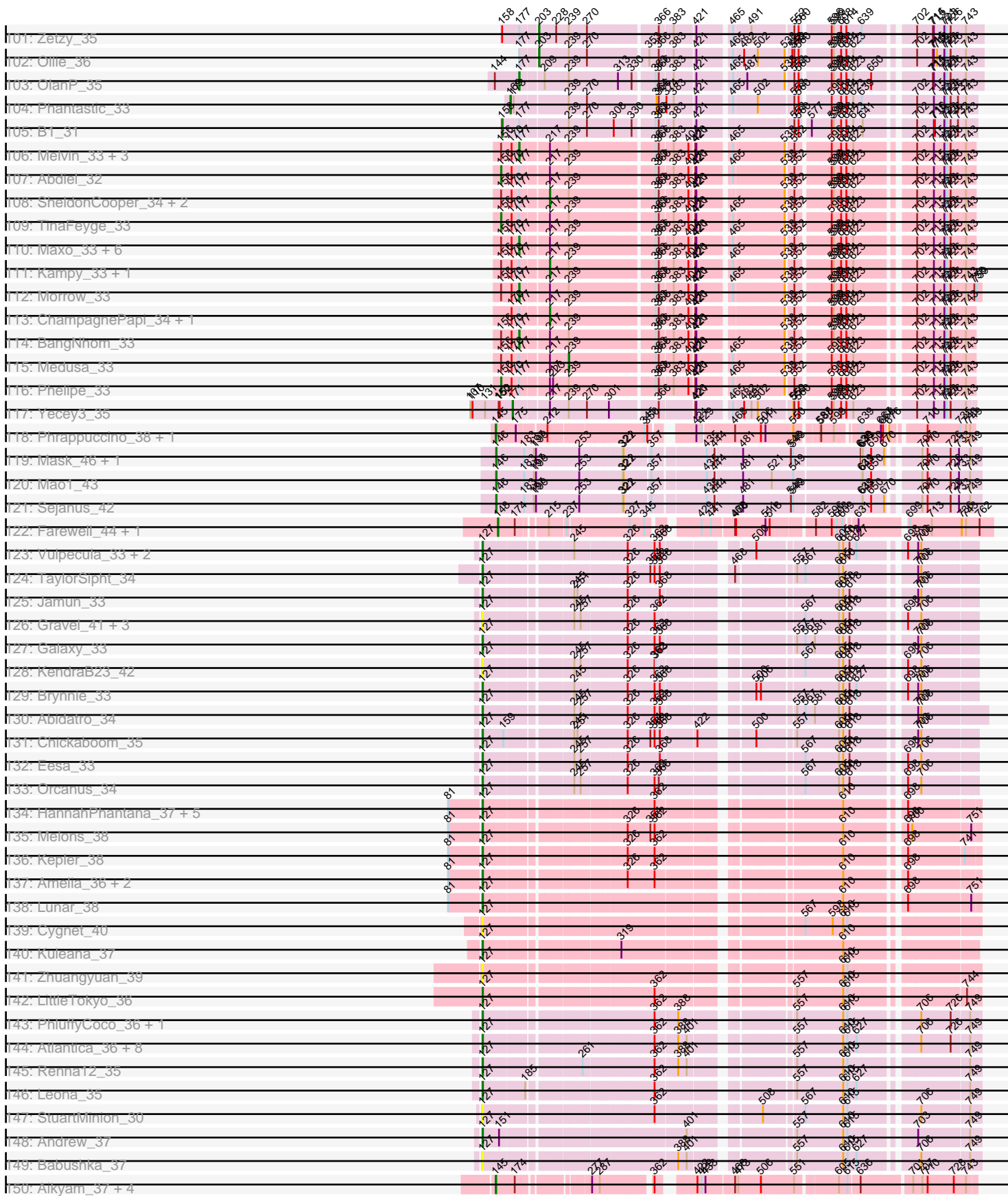
Pham 215652

	159	171	217	239	270	366	383	408	465	489	538	580	680	702	716	743	
1: Pharaoh_32	159	171	217	239	270	366	383	408	465	489	538	580	680	702	716	743	
2: Zimmer_35	159	171	217	239	270	366	383	408	465	489	538	580	680	702	716	743	
3: Kimona_30	171	203	223	239	270	366	383	421	465	489	538	580	680	702	716	743	
4: Baehexic_34 + 5	171	203	223	239	270	315	366	383	421	465	489	538	580	680	702	716	743
5: SwiftSquare_35	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
6: Gratitude_34	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
7: WeiHuaDA_38	171	181	223	239	270	366	383	421	465	489	538	580	680	702	716	743	
8: Pn8s_35	171	203	223	239	270	366	383	421	465	489	538	580	680	702	716	743	
9: XianYue_35	144	171	203	239	270	332	366	383	421	465	489	538	580	680	702	716	743
10: Sknot_35 + 1	171	203	239	270	366	383	421	465	489	518	580	680	702	716	743		
11: Bactobuster_35	171	211	239	270	366	383	421	465	489	538	580	680	702	716	743		
12: Leviathan_35	171	223	239	270	301	366	383	421	465	489	538	580	680	702	716	743	
13: MajorMajor_34 + 2	171	211	239	270	292	366	383	421	465	489	538	580	680	702	716	743	
14: Pukovnik_35	171	211	239	270	292	366	383	421	465	489	538	580	680	702	716	743	
15: KingCyrus_36	171	181	239	270	366	383	421	465	489	538	580	680	702	716	743		
16: QueenBeesly_34 + 1	171	203	239	270	292	366	383	421	465	489	538	580	680	702	716	743	
17: Jaan_37	148	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743	
18: C3_31	171	180	239	270	308	366	383	421	465	489	538	580	680	702	716	743	
19: Kaipine_35	171	239	270	366	383	421	465	489	538	580	680	702	716	743			
20: LionsBait_35	144	171	203	239	270	332	366	383	421	465	489	538	580	680	702	716	743
21: MicuUcigas_34	171	223	239	270	301	366	383	421	465	489	538	580	680	702	716	743	
22: Serenity_34	148	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743	
23: TarsusIV_33	144	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743	
24: Leogania_35	148	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743	
25: AN9_36 + 4	100	145	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743
26: Journey13_31	171	181	223	239	270	315	366	383	421	465	489	538	580	680	702	716	743
27: Koduck_33 + 1	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
28: Trixie_35	144	171	203	239	270	332	366	383	421	465	489	538	580	680	702	716	743
29: SnapTap_34 + 2	171	211	239	270	366	383	421	465	489	538	580	680	702	716	743		
30: Agape74_35 + 1	171	211	239	270	366	383	421	465	489	538	580	680	702	716	743		
31: LITurb_34 + 1	171	172	239	270	333	366	383	421	465	489	538	580	680	702	716	743	
32: Heifalump_35	148	180	203	239	270	366	383	421	465	489	538	580	680	702	716	743	
33: BiancaT1192_35	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
34: Pomar16_37	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
35: Duplo_37	144	171	203	239	270	308	333	383	421	465	489	538	580	680	702	716	743
36: Drake55_36	171	181	223	239	270	366	383	421	465	489	538	580	680	702	716	743	
37: Odin_33	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
38: Naji_37 + 2	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
39: Acolyte_34	171	223	239	270	301	366	383	421	465	489	538	580	680	702	716	743	
40: Jsquared_34	171	239	270	366	383	421	465	489	538	580	680	702	716	743			
41: Iwokeupikedis_34	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
42: Larenn_35	144	171	203	239	270	352	366	383	421	465	489	538	580	680	702	716	743
43: Daimatian_35 + 2	171	180	239	270	366	383	421	465	489	538	580	680	702	716	743		
44: JoshKayV_35	171	181	239	270	366	383	421	465	489	538	580	680	702	716	743		
45: Adzzy_35	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
46: IronVlan_36	171	203	239	270	333	366	383	421	465	489	538	580	680	702	716	743	
47: Phaded_37	144	171	203	239	270	333	366	383	421	465	489	538	580	680	702	716	743
48: GaugeLDP_35	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
49: NotmingSpecial_35	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		
50: Kerberos_37 + 1	171	203	239	270	366	383	421	465	489	538	580	680	702	716	743		

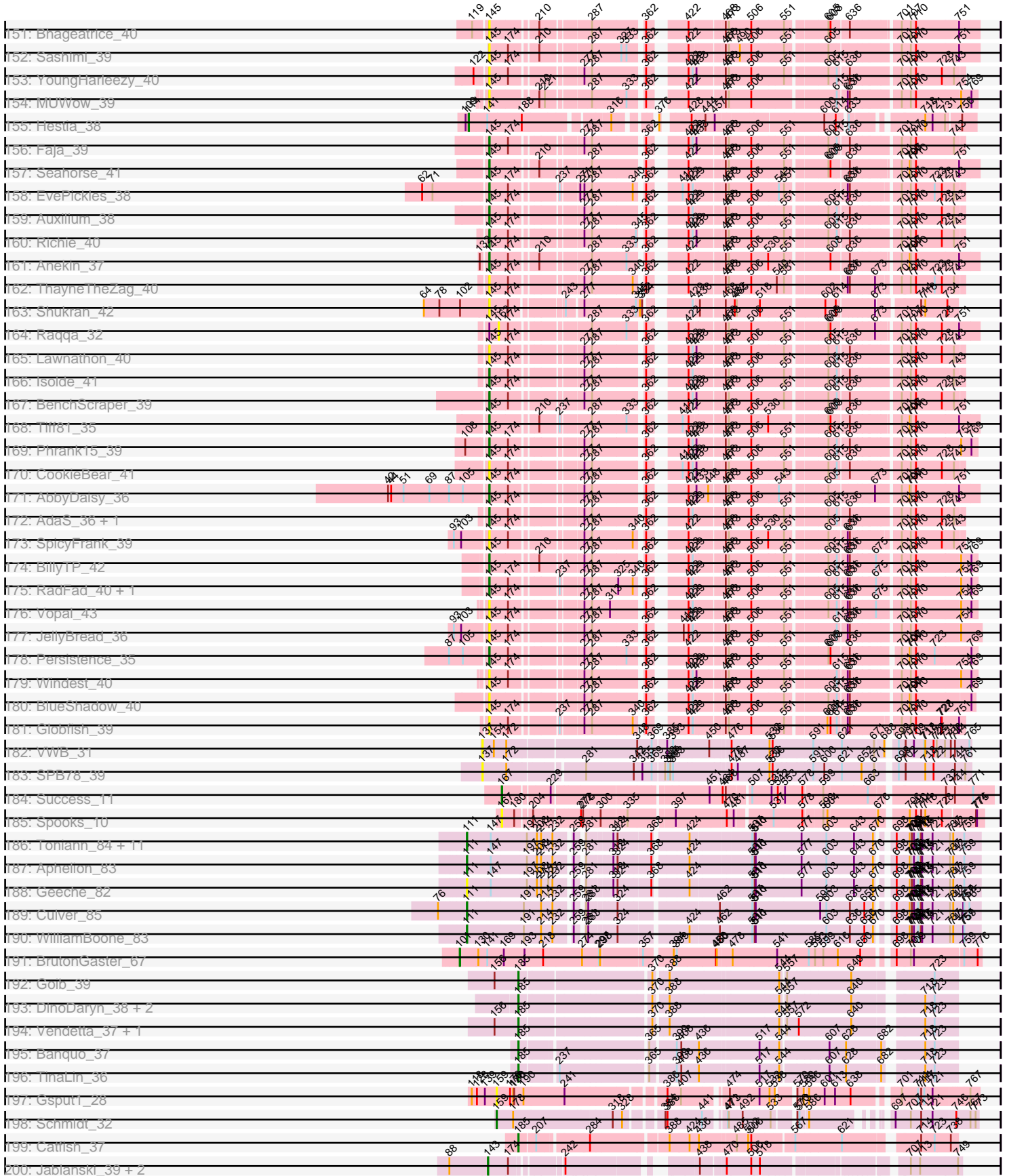
Pham 215652



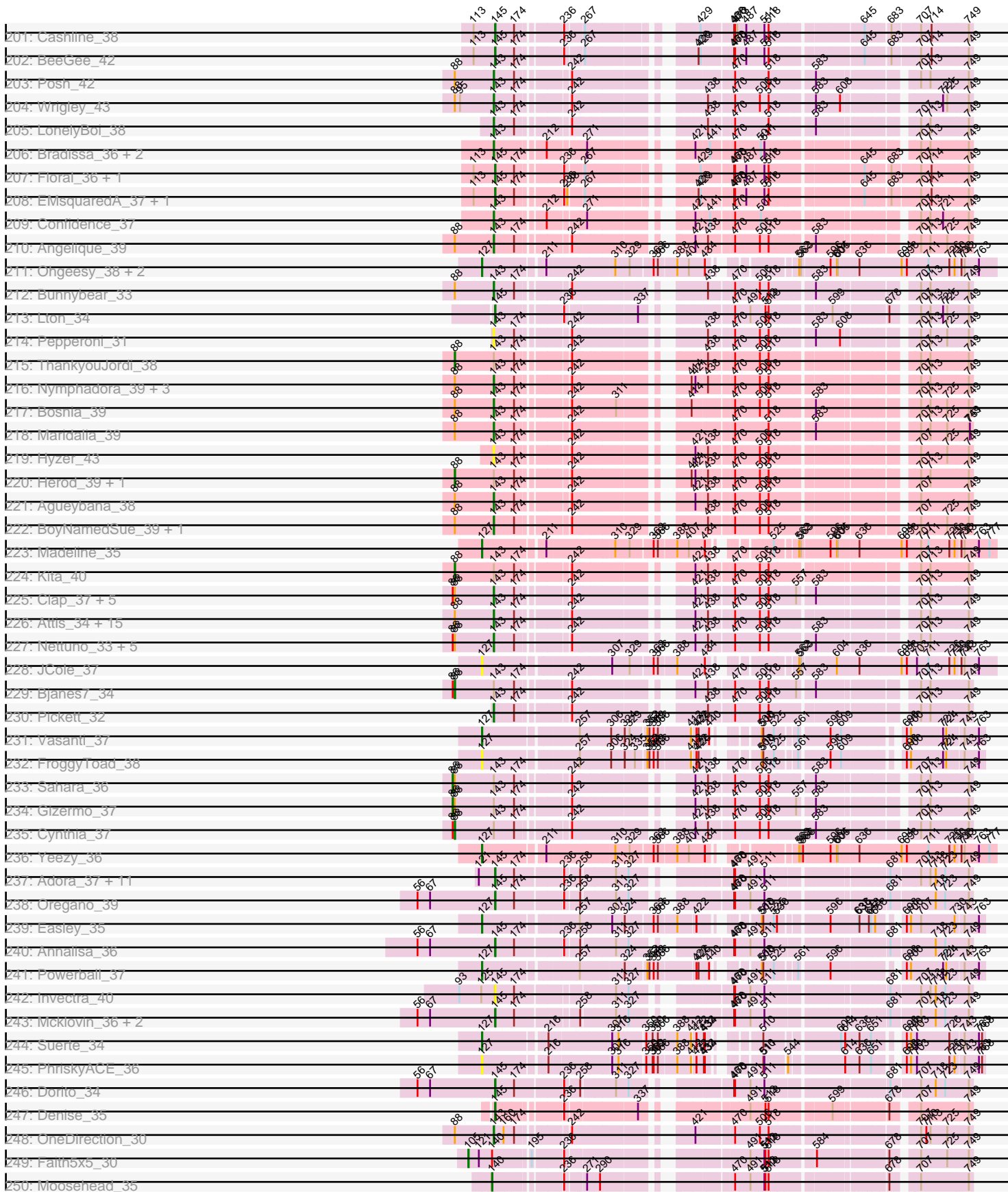
Pham 215652



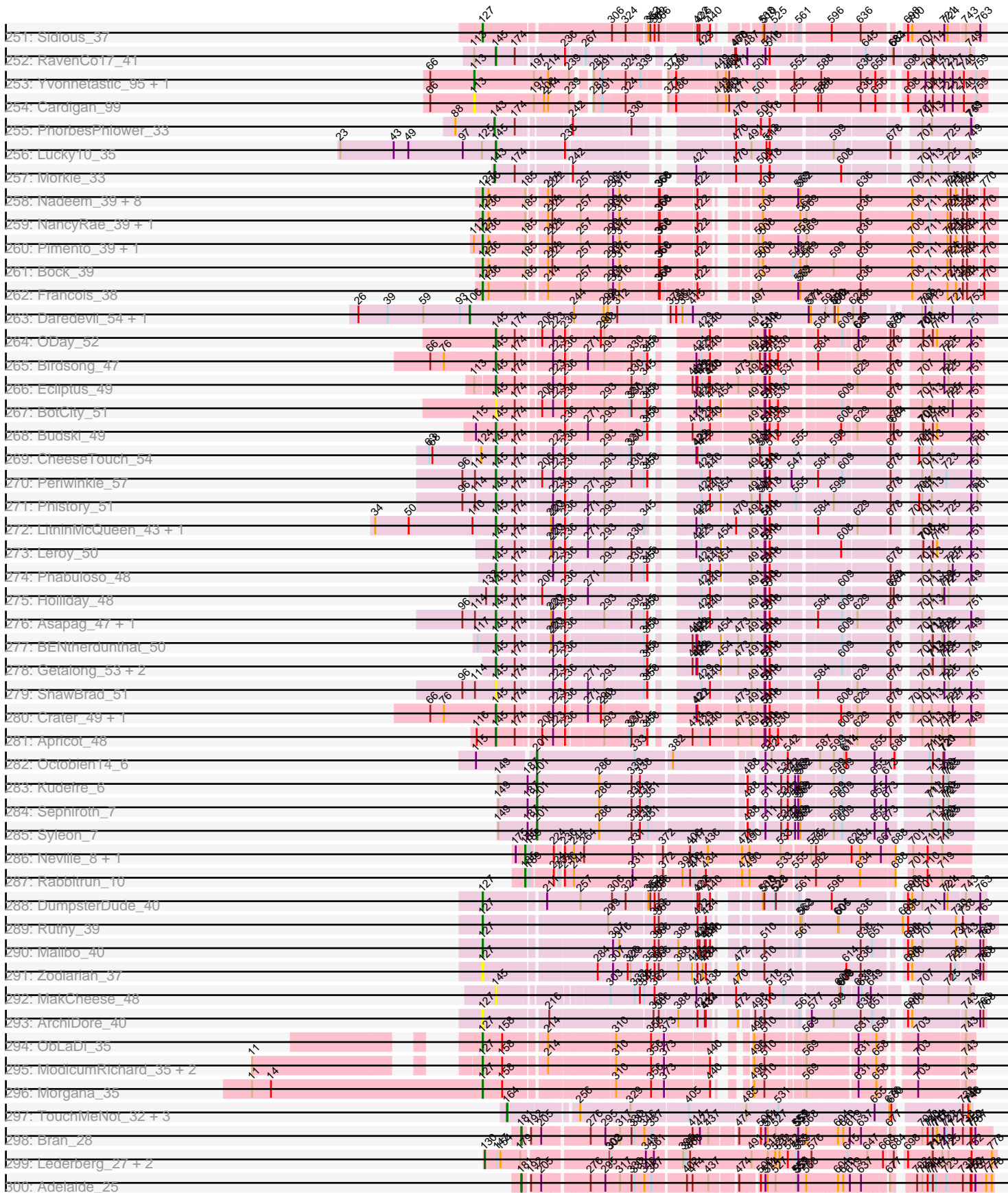
Pham 215652



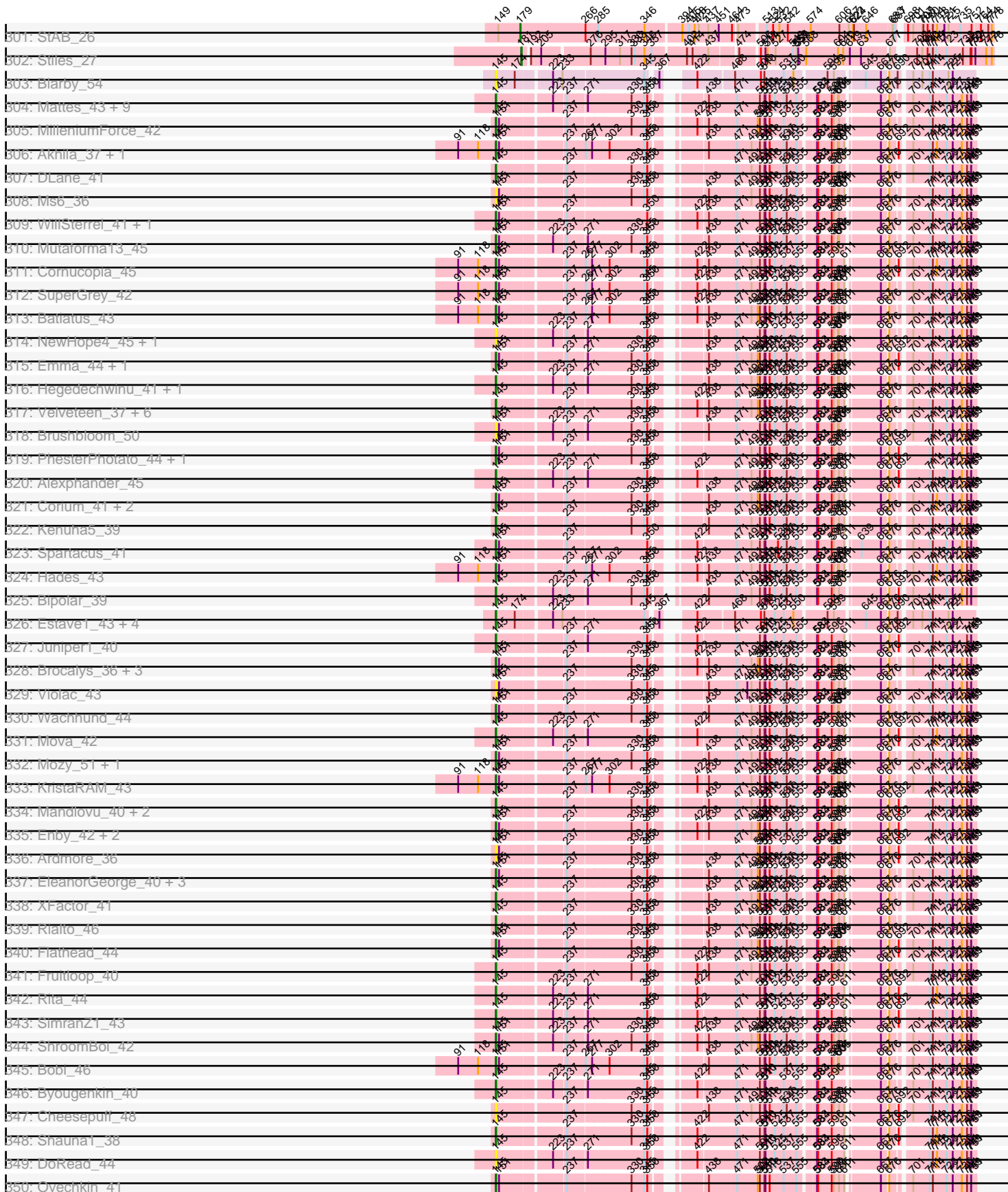
Pham 215652



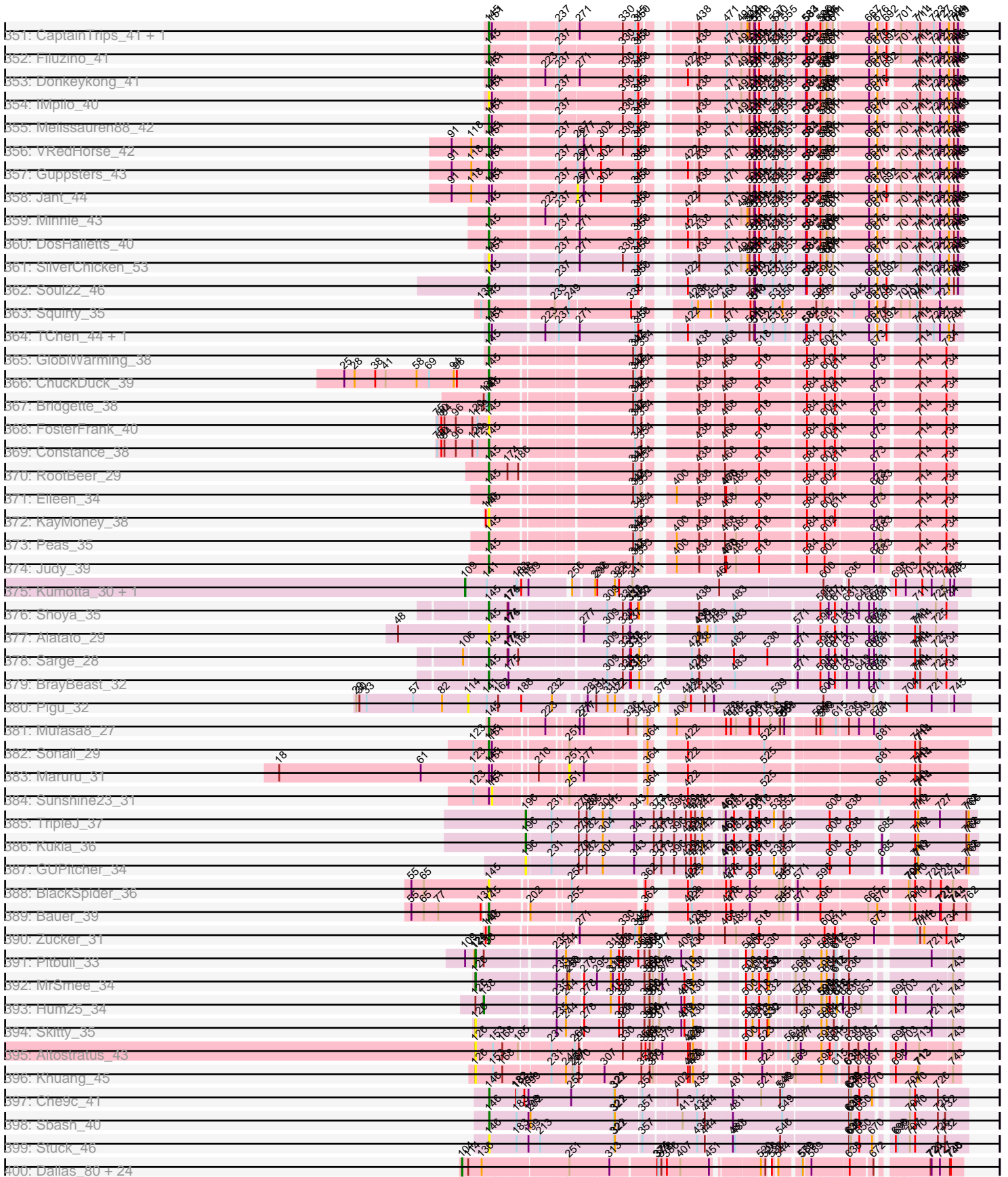
Pham 215652



Pham 215652

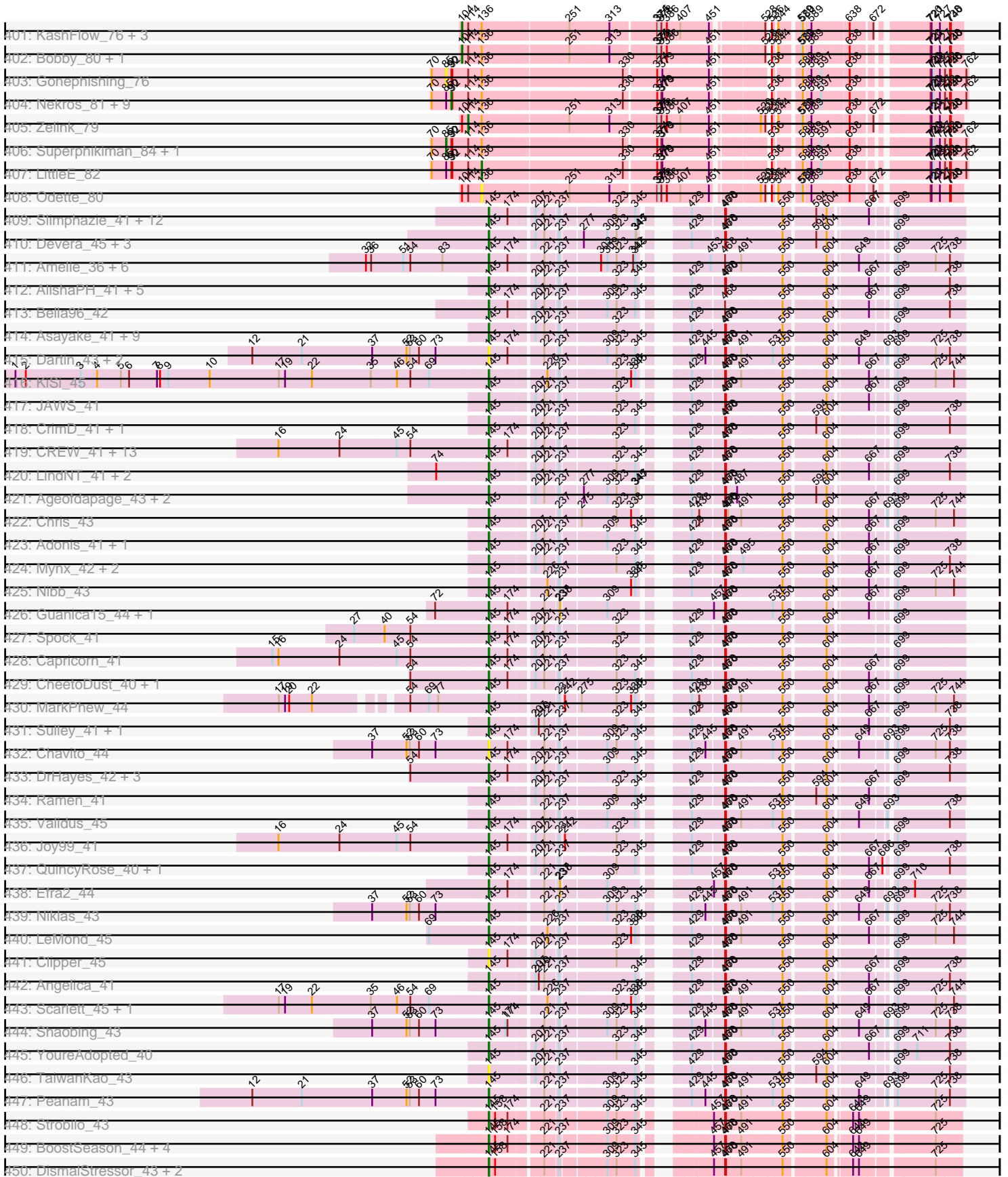


Pham 215652

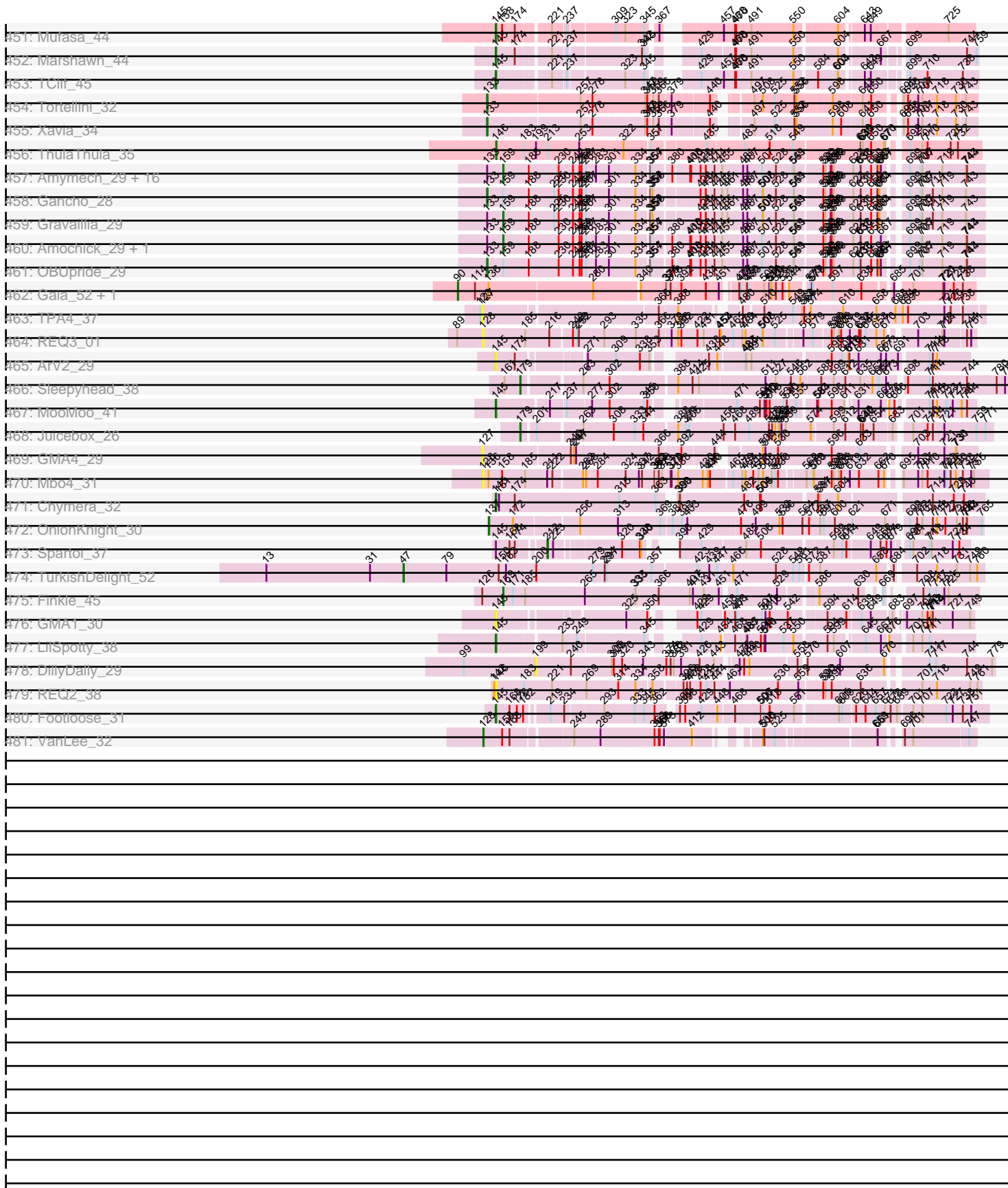




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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 215652 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 215652 has 878 members, 137 are drafts.

Phages represented in each track:

- Track 1 : Pharaoh\_32
- Track 2 : Zimmer\_35
- Track 3 : Kimona\_30
- Track 4 : Baehexic\_34, Centaur\_35, WideWale\_35, Terrific\_37, Updawg\_35, Equemioh13\_35
- Track 5 : SwirlSquare\_35
- Track 6 : Gratitude\_34
- Track 7 : WeiHuaDA\_38
- Track 8 : Ph8s\_35
- Track 9 : XianYue\_35
- Track 10 : Sknot\_35, Flare16\_34
- Track 11 : Bactobuster\_35
- Track 12 : Leviathan\_35
- Track 13 : MajorMajor\_34, Bradman\_34, Quokka\_33
- Track 14 : Pukovnik\_35
- Track 15 : KingCyrus\_36
- Track 16 : QueenBeesly\_34, FiringLine\_34
- Track 17 : Jaan\_37
- Track 18 : C3\_31
- Track 19 : Kalpine\_35
- Track 20 : LionsBait\_35
- Track 21 : MiculUcigas\_34
- Track 22 : Serenity\_34
- Track 23 : TarsusIV\_33
- Track 24 : Leogania\_35
- Track 25 : AN9\_36, VC3\_36, ANI8\_36, AN3\_33, VA6\_33
- Track 26 : Journey13\_31
- Track 27 : Koduck\_33, L5\_33
- Track 28 : Trixie\_35
- Track 29 : SnapTap\_34, Crucio\_34, SweetiePie\_34
- Track 30 : Agape74\_35, AbbyPaige\_35
- Track 31 : LilTurb\_34, Whabigail7\_34
- Track 32 : Heffalump\_35

- Track 33 : BiancaTri92\_35
- Track 34 : Pomar16\_37
- Track 35 : Duplo\_37
- Track 36 : Drake55\_36
- Track 37 : Odin\_33
- Track 38 : Naji\_37, D29\_33, D32\_37
- Track 39 : Acolyte\_34
- Track 40 : Jsquared\_34
- Track 41 : Iwokeuplikedis\_34
- Track 42 : Larenn\_35
- Track 43 : Dalmatian\_35, Anselm\_35, Retro23\_35
- Track 44 : JoshKayV\_35
- Track 45 : Adzzy\_35
- Track 46 : IronMan\_36
- Track 47 : Phaded\_37
- Track 48 : GaugeLDP\_35
- Track 49 : NothingSpecial\_35
- Track 50 : Kerberos\_37, StarStuff\_37
- Track 51 : Che12\_36
- Track 52 : Piro94\_34
- Track 53 : Dignity\_35, Jerm\_35
- Track 54 : Tomathan\_37
- Track 55 : EvilGenius\_36
- Track 56 : Georgie2\_35
- Track 57 : DBQu4n\_37
- Track 58 : Caraxes\_33, Superchunk\_33
- Track 59 : Turbido\_34
- Track 60 : Malec\_36
- Track 61 : NicoleTera\_37
- Track 62 : Power\_33
- Track 63 : ChipMunk\_36
- Track 64 : Travvers\_37
- Track 65 : SemperFi\_35
- Track 66 : HarryHoudini\_36
- Track 67 : TipsytheTRex\_33
- Track 68 : Trooper\_35
- Track 69 : DudeLittle\_33
- Track 70 : NaSiaTalie\_34
- Track 71 : Buggy\_36
- Track 72 : Colin\_37
- Track 73 : Fameo\_34
- Track 74 : MissWhite\_33
- Track 75 : Landor\_35
- Track 76 : Tristan\_35
- Track 77 : QueenB2\_34
- Track 78 : Smeagan\_36
- Track 79 : Grub\_36, DaHudson\_36, GtownJaz\_36, Aglet\_36, Pembroke\_36, Watson\_36, Iowa\_36, Wooldri\_38, PGHhamlin\_38
- Track 80 : Dieselweasel\_36, MuchMore\_38, Colbster\_36, Vix\_36, Grum1\_36, JHC117\_36, Grif\_36, Penny1\_36, EpicPhail\_36, LBerry\_36, Tiffany\_36, AugsMagnumOpus\_38, Mainiac\_36, Cullens\_36, LugYA\_38, Bigflo\_36, Anubis\_38, Phoebe\_36, P28Green\_36, Beauxregard13\_36, MoneyMay\_36, Marie\_36, Sabinator\_36, Hercules11\_36, StepMih\_36, MadMarie\_36, PotatoSplit\_37, SoYo\_36,

BreSam8\_36, Stagni\_36, Sabia\_36, MarQuardt\_36

- Track 81 : Heathen\_33, HelDan\_33, Puppy\_34
- Track 82 : Kalb97\_36, Reba\_36, Manu\_36, Marius\_36, Groupthink\_36, Kalnoky\_36, Phranny\_36, PurpleHaze\_35, Pawn\_35, Heliosoles\_35, PhishRPhriends\_34, Gemma\_35
- Track 83 : BabyJohn\_32, Chiqui\_32
- Track 84 : Microwolf\_36, Lilith\_36, Malinsilva\_38, Farber\_36
- Track 85 : Pistachio\_34, SaturnRing\_33, BlueBird\_34, Idleandcovert\_33, Bugatti\_33
- Track 86 : Scout\_33, Fred313\_33, DropBear\_33
- Track 87 : BabyRay\_33
- Track 88 : MA5\_33
- Track 89 : GingkoMaracino\_36, Snickers\_36, Fernando\_36, Taurus\_36, JenCasNa\_36
- Track 90 : Jobu08\_35, SoilDragon\_35
- Track 91 : JF2\_33, MK4\_33, JF4\_33
- Track 92 : JeppNRM\_36, ACFishhook\_35
- Track 93 : Kachowdy\_33
- Track 94 : Giroux\_33
- Track 95 : HaveUMetTed\_36
- Track 96 : Isca\_33
- Track 97 : Marchesa\_33
- Track 98 : Rockstar\_33
- Track 99 : Calvinny\_36
- Track 100 : TNguyen7\_33
- Track 101 : Zetzy\_35
- Track 102 : Ollie\_36
- Track 103 : OlanP\_35
- Track 104 : Phantastic\_33
- Track 105 : B1\_31
- Track 106 : Melvin\_33, TroyPia\_33, BellusTerra\_33, Commander\_33
- Track 107 : Abdiel\_32
- Track 108 : SheldonCooper\_34, Cerulean\_34, Obama12\_34
- Track 109 : TinaFeyge\_33
- Track 110 : Maxo\_33, Eurydice\_33, Eagle\_32, Ohfah\_33, Sparxx\_33, Nebs\_33, Polymorphads\_33
- Track 111 : Kampy\_33, LeoAvram\_33
- Track 112 : Morrow\_33
- Track 113 : ChampagnePapi\_34, LHTSCC\_34
- Track 114 : BangNhom\_33
- Track 115 : Medusa\_33
- Track 116 : Felipe\_33
- Track 117 : Yecey3\_35
- Track 118 : Phrappuccino\_38, Settecandela\_38
- Track 119 : Mask\_46, Dori\_45
- Track 120 : Mao1\_43
- Track 121 : Sejanus\_42
- Track 122 : Farewell\_44, Sparky\_45
- Track 123 : Vulpecula\_33, Basilisk\_34, Ruchi\_33
- Track 124 : TaylorSipht\_34
- Track 125 : Jamun\_33
- Track 126 : Gravel\_41, Toad24\_36, Pelletreau\_41, Westrich\_40
- Track 127 : Galaxy\_33
- Track 128 : KendraB23\_42

- Track 129 : Brynnie\_33
- Track 130 : Abidatro\_34
- Track 131 : Chickaboom\_35
- Track 132 : Eesa\_33
- Track 133 : Orcanus\_34
- Track 134 : HannahPhantana\_37, Bedetta\_40, Cote\_38, Coral\_36, OtsoOtso\_40, Polka\_36
- Track 135 : Melons\_38
- Track 136 : Kepler\_38
- Track 137 : Amelia\_36, Daob\_38, Colusalem\_39
- Track 138 : Lunar\_38
- Track 139 : Cygnet\_40
- Track 140 : Kuleana\_37
- Track 141 : Zhuangyuan\_39
- Track 142 : LittleTokyo\_36
- Track 143 : PhluffyCoco\_36, Rattail\_36
- Track 144 : Atlantica\_36, RedFox\_36, AmiCi24\_35, DanHam62\_36, KHumphrey\_36, Juno112\_35, Camara\_36, HamCheese\_35, Glotell\_38
- Track 145 : Renna12\_35
- Track 146 : Leona\_35
- Track 147 : StuartMinion\_30
- Track 148 : Andrew\_37
- Track 149 : Babushka\_37
- Track 150 : Aikyam\_37, MaterMagnus\_40, Gorpy\_41, Raffaella\_40, Sakai\_40
- Track 151 : Bhageatrice\_40
- Track 152 : Sashimi\_39
- Track 153 : YoungHarleezy\_40
- Track 154 : MUWow\_39
- Track 155 : Hestia\_38
- Track 156 : Faja\_39
- Track 157 : Seahorse\_41
- Track 158 : EvePickles\_38
- Track 159 : Auxilium\_38
- Track 160 : Richie\_40
- Track 161 : Anekin\_37
- Track 162 : ThayneTheZag\_40
- Track 163 : Shukran\_42
- Track 164 : Raqqa\_32
- Track 165 : Lawnathon\_40
- Track 166 : Isolde\_41
- Track 167 : BenchScraper\_39
- Track 168 : Tiff81\_35
- Track 169 : Phrank15\_39
- Track 170 : CookieBear\_41
- Track 171 : AbbyDaisy\_36
- Track 172 : AdaS\_36, MidnightRain\_42
- Track 173 : SpicyFrank\_39
- Track 174 : BillyTP\_42
- Track 175 : RadFad\_40, Hillester\_40
- Track 176 : Vopal\_43
- Track 177 : JellyBread\_36
- Track 178 : Persistence\_35
- Track 179 : Windest\_40

- Track 180 : BlueShadow\_40
- Track 181 : Globfish\_39
- Track 182 : VWB\_31
- Track 183 : SPB78\_39
- Track 184 : Success\_11
- Track 185 : Spooks\_10
- Track 186 : Toniann\_84, Dusty\_80, Bachita\_85, Abscondus\_83, Norvs\_84, Smoothie\_85, Miskis\_80, Cucurbita\_85, ClubL\_83, PhinkBoden\_83, Lozinak\_84, Engineer\_85
- Track 187 : Aphelion\_83
- Track 188 : Geeche\_82
- Track 189 : Culver\_85
- Track 190 : WilliamBoone\_83
- Track 191 : BrutonGaster\_67
- Track 192 : Goib\_39
- Track 193 : DinoDaryn\_38, TZGordon\_39, Huffy\_38
- Track 194 : Vendetta\_37, Splinter\_37
- Track 195 : Banquo\_37
- Track 196 : TinaLin\_36
- Track 197 : Gspu1\_28
- Track 198 : Schmidt\_32
- Track 199 : Catfish\_37
- Track 200 : Jablanski\_39, WelcomeAyanna\_38, Pytheas\_39
- Track 201 : Cashline\_38
- Track 202 : BeeGee\_42
- Track 203 : Posh\_42
- Track 204 : Wrigley\_43
- Track 205 : LonelyBoi\_38
- Track 206 : Bradissa\_36, EnalisNailo\_35, Lilas\_38
- Track 207 : Floral\_36, Pollux\_38
- Track 208 : EMSquaredA\_37, Marteena\_36
- Track 209 : Confidence\_37
- Track 210 : Angelique\_39
- Track 211 : Ohgeesy\_38, BaxterFox\_37, PantheRoc\_37
- Track 212 : Bunnybear\_33
- Track 213 : Lton\_34
- Track 214 : Pepperoni\_31
- Track 215 : ThankyouJordi\_38
- Track 216 : Nymphadora\_39, Hugley\_36, Eviarto\_39, TimTam\_39
- Track 217 : Bosnia\_39
- Track 218 : Maridalia\_39
- Track 219 : Hyzer\_43
- Track 220 : Herod\_39, BatStarr\_39
- Track 221 : Agueybana\_38
- Track 222 : BoyNamedSue\_39, AlumE\_39
- Track 223 : Madeline\_35
- Track 224 : Kita\_40
- Track 225 : Clap\_37, GemG\_37, Mocha12\_37, Ebert\_39, Lamberg\_33, Haley23\_37
- Track 226 : Attis\_34, EdnaMode\_33, Eudoria\_39, Neobush\_39, Suscepit\_39, Bialota\_37, Zameen\_39, Zirinka\_36, Antonio\_39, Tayonia\_39, Manasvini\_39, LordFarquaad\_35, Polly\_36, SoilAssassin\_34, Trumpet\_39, Yeet412\_34
- Track 227 : Nettuno\_33, Savage\_37, Matteo\_30, Sproutie\_37, TuertoX\_37, Whiteclaw\_37

- Track 228 : JCole\_37
- Track 229 : Bjanest7\_34
- Track 230 : Pickett\_32
- Track 231 : Vasanti\_37
- Track 232 : FroggyToad\_38
- Track 233 : Sahara\_36
- Track 234 : Gizermo\_37
- Track 235 : Cynthia\_37
- Track 236 : Yeezy\_36
- Track 237 : Adora\_37, Samman98\_40, Dolores\_40, Twinkle\_39, WinkNick\_41, Howe\_40, Shlim410\_38, Beenie\_33, Clark\_39, Sekhmet\_40, MichaelScott\_40, Hortense\_40
- Track 238 : Oregano\_39
- Track 239 : Easley\_35
- Track 240 : Annalisa\_36
- Track 241 : Powerball\_37
- Track 242 : Invectra\_40
- Track 243 : Mcklovin\_36, Thimann\_36, DobbysSock\_31
- Track 244 : Suerte\_34
- Track 245 : PhriskyACE\_36
- Track 246 : Dorito\_34
- Track 247 : Denise\_35
- Track 248 : OneDirection\_30
- Track 249 : Faith5x5\_30
- Track 250 : Moosehead\_35
- Track 251 : Sidious\_37
- Track 252 : RavenCo17\_41
- Track 253 : Yvonnetastic\_95, JonJames\_97
- Track 254 : Cardigan\_99
- Track 255 : PhorbesPhlower\_33
- Track 256 : Lucky10\_35
- Track 257 : Morkie\_33
- Track 258 : Nadeem\_39, Brylie\_39, Mulch\_39, Ayotoya\_39, Hamood\_39, Chop\_39, GrandSlam\_39, Parada\_39, WheatThin\_39
- Track 259 : NancyRae\_39, BetterKatz\_39
- Track 260 : Pimento\_39, DelRio\_40
- Track 261 : Bock\_39
- Track 262 : Francois\_38
- Track 263 : Daredevil\_54, Towmatter\_55
- Track 264 : ODay\_52
- Track 265 : Birdsong\_47
- Track 266 : Ecliptus\_49
- Track 267 : BotCity\_51
- Track 268 : Budski\_49
- Track 269 : CheeseTouch\_54
- Track 270 : Periwinkle\_57
- Track 271 : Phistory\_51
- Track 272 : LitninMcQueen\_43, Kamaru\_44
- Track 273 : Leroy\_50
- Track 274 : Phabuloso\_48
- Track 275 : Holliday\_48
- Track 276 : Asapag\_47, Frickyeah\_52
- Track 277 : BENtherdunthat\_50



- Track 278 : Getalong\_53, Kenna\_49, Lutum\_50
- Track 279 : ShawBrad\_51
- Track 280 : Crater\_49, Horus\_48
- Track 281 : Apricot\_48
- Track 282 : Octobien14\_6
- Track 283 : Kudefre\_6
- Track 284 : Sephiroth\_7
- Track 285 : Syleon\_7
- Track 286 : Neville\_8, Trax\_8
- Track 287 : Rabbitrun\_10
- Track 288 : DumpsterDude\_40
- Track 289 : Ruthy\_39
- Track 290 : Malibo\_40
- Track 291 : Zodiariah\_37
- Track 292 : MakCheese\_48
- Track 293 : ArchiDore\_40
- Track 294 : ObLaDi\_35
- Track 295 : ModicumRichard\_35, Aleemily\_34, Cafasso\_35
- Track 296 : Morgana\_35
- Track 297 : TouchMeNot\_32, Colleen\_32, Arianna\_32, Poushou\_32
- Track 298 : Bran\_28
- Track 299 : Lederberg\_27, Troy\_27, SamW\_27
- Track 300 : Adelaide\_25
- Track 301 : StAB\_26
- Track 302 : Stiles\_27
- Track 303 : Blarby\_54
- Track 304 : Mattes\_43, SwagPiggett\_45, Saal\_43, Gorge\_43, DRBy19\_43, BobaPhett\_43, Zizzle\_44, Philus\_43, Whatsapiecost\_41, James\_43
- Track 305 : MilleniumForce\_42
- Track 306 : Akhila\_37, MilanaBonita\_37
- Track 307 : DLane\_41
- Track 308 : Ms6\_36
- Track 309 : WillSterrel\_41, IrishSherpFalk\_41
- Track 310 : Mutaforma13\_45
- Track 311 : Cornucopia\_45
- Track 312 : SuperGrey\_42
- Track 313 : Batiatus\_43
- Track 314 : NewHope4\_45, Polo2Bam\_48
- Track 315 : Emma\_44, Moonbeam\_41
- Track 316 : Hegedechwinu\_41, Juice456\_44
- Track 317 : Velveteen\_37, Kingsley\_38, Sarma624\_38, Cerasum\_38, Brookers\_40, Coco12\_40, BigPhil\_38
- Track 318 : Brushbloom\_50
- Track 319 : PhesterPhotato\_44, Phalconet\_41
- Track 320 : Alexphander\_45
- Track 321 : Corium\_41, Phanphagia\_37, KingJulian\_41
- Track 322 : Kenuha5\_39
- Track 323 : Spartacus\_41
- Track 324 : Hades\_43
- Track 325 : Bipolar\_39
- Track 326 : Estave1\_43, Wee\_46, DeadP\_46, Renaud18\_46, Taj\_45
- Track 327 : Juniper1\_40
- Track 328 : Brocalys\_36, Clifton\_35, LastJedi\_34, Pippy\_38

- Track 329 : Violac\_43
- Track 330 : Wachhund\_44
- Track 331 : Mova\_42
- Track 332 : Mozy\_51, StAnnes\_42
- Track 333 : KristaRAM\_43
- Track 334 : Mandlovu\_40, Strokeseat\_41, Hlubikazi\_41
- Track 335 : Enby\_42, Lorde\_42, SG4\_40
- Track 336 : Ardmore\_36
- Track 337 : EleanorGeorge\_40, Beakin\_43, LunaBlu\_46, Galactic\_43
- Track 338 : XFactor\_41
- Track 339 : Rialto\_46
- Track 340 : Flathead\_44
- Track 341 : Fruitloop\_40
- Track 342 : Rita\_44
- Track 343 : SimranZ1\_43
- Track 344 : ShroomBoi\_42
- Track 345 : Bobi\_46
- Track 346 : Byougenkin\_40
- Track 347 : Cheesepuff\_48
- Track 348 : Shauna1\_38
- Track 349 : DoRead\_44
- Track 350 : Ovechkin\_41
- Track 351 : CaptainTrips\_41, MinionDave\_43
- Track 352 : Filuzino\_41
- Track 353 : Donkeykong\_41
- Track 354 : IMpilo\_40
- Track 355 : Melissauren88\_42
- Track 356 : VRedHorse\_42
- Track 357 : Guppsters\_43
- Track 358 : Jant\_44
- Track 359 : Minnie\_43
- Track 360 : DosHalletts\_40
- Track 361 : SilverChicken\_53
- Track 362 : Soul22\_46
- Track 363 : Squirty\_35
- Track 364 : TChen\_44, LunaStella\_42
- Track 365 : GlobiWarming\_38
- Track 366 : ChuckDuck\_39
- Track 367 : Bridgette\_38
- Track 368 : FosterFrank\_40
- Track 369 : Constance\_38
- Track 370 : RootBeer\_29
- Track 371 : Eileen\_34
- Track 372 : KayMoney\_38
- Track 373 : Peas\_35
- Track 374 : Judy\_39
- Track 375 : Kumotta\_30, MargaretKali\_30
- Track 376 : Shoya\_35
- Track 377 : Alatato\_29
- Track 378 : Sarge\_28
- Track 379 : BrayBeast\_32
- Track 380 : Pigu\_32
- Track 381 : Mufasa8\_27

- Track 382 : Sonali\_29
- Track 383 : Maruru\_31
- Track 384 : Sunshine23\_31
- Track 385 : TripleJ\_37
- Track 386 : Kukla\_36
- Track 387 : GUPitcher\_34
- Track 388 : BlackSpider\_36
- Track 389 : Bauer\_39
- Track 390 : Zucker\_31
- Track 391 : Pitbull\_33
- Track 392 : MrSmee\_34
- Track 393 : Hum25\_34
- Track 394 : Skitty\_35
- Track 395 : Altostratus\_43
- Track 396 : Khuang\_45
- Track 397 : Che9c\_41
- Track 398 : Sbash\_40
- Track 399 : Stuck\_46
- Track 400 : Dallas\_80, NihilNomen\_82, Phoebus\_84, Yeet\_76, ThreeRngTarjay\_79, Halley\_83, Kalah2\_76, Redno2\_78, Beem\_81, Dove\_67, Hughesyang\_81, Optimus\_79, Wanda\_85, BAKA\_86, Bombitas\_71, Duke13\_85, Minerva\_84, JuicyJay\_79, Bagrid\_82, EricMillard\_80, DmpstrDiver\_82, Pound\_82, Klein\_81, HokkenD\_73, Schatzie\_77
- Track 401 : KashFlow\_76, Constella\_68, Ejimix\_81, Thibault\_69
- Track 402 : Bobby\_80, Marleymoo\_72
- Track 403 : Gonephishing\_76
- Track 404 : Nekros\_81, Shaboozey\_79, Courthouse\_82, MiaZeal\_87, Hannaconda\_75, Omega\_85, Ariel\_86, Lucky2013\_84, Porcelain\_86, Squint\_87
- Track 405 : Zelink\_79
- Track 406 : Superphikiman\_84, Rearden\_78
- Track 407 : LittleE\_82
- Track 408 : Odette\_80
- Track 409 : Slimphazie\_41, BarrelRoll\_41, TruffulaTree\_41, Adephegia\_41, ActinUp\_41, Atiba\_41, Tachez\_41, Padpat\_42, HedwigODU\_41, Jayhawk\_42, Rapunzel97\_41, Veliki\_41, Emerson\_42
- Track 410 : Devera\_45, Dole\_44, Illumine\_44, Stinson\_42
- Track 411 : Amelie\_36, Binglebops\_36, Nikao\_39, LilPharaoh\_36, Nutello\_36, Enkosi\_39, SgtBeansprout\_36
- Track 412 : AlishaPH\_41, Beezoo\_43, Tiri\_42, Pokerus\_40, Geraldini\_43, Apocalypse\_44
- Track 413 : Bella96\_42
- Track 414 : Asayake\_41, BEEST\_41, Hyperbowlee\_41, Durfee\_41, Padfoot\_41, Blizzard\_41, CaseJules\_42, ShiaSurprise\_42, Boiiii\_41, Piatt\_41
- Track 415 : Dartin\_43, McMater\_43, Richo\_43
- Track 416 : KiSi\_45
- Track 417 : JAWS\_41
- Track 418 : CrimD\_41, Megsy\_42
- Track 419 : CREW\_41, Topper\_41, Dalmuri\_41, Rosmarinus\_41, Belladonna\_41, Homura\_41, Inky\_41, Lunahalos\_41, Jeckyll\_41, Peel\_41, Llorens\_41, BGIlluviae\_41, Jarvi\_41, Twitch\_41
- Track 420 : LindNT\_41, TreyKay\_42, Prithvi\_42
- Track 421 : Ageofdapage\_43, LaterM\_42, Murucutumbu\_42
- Track 422 : Chris\_43

- Track 423 : Adonis\_41, Anaya\_43
- Track 424 : Mynx\_42, MeaningOfLife\_42, Zavala\_42
- Track 425 : Nibb\_43
- Track 426 : Guanica15\_44, Yunkel11\_44
- Track 427 : Spock\_41
- Track 428 : Capricorn\_41
- Track 429 : CheetoDust\_40, BaghaKamala\_40
- Track 430 : MarkPhew\_44
- Track 431 : Sulley\_41, Deby\_41
- Track 432 : Chavito\_44
- Track 433 : DrHayes\_42, TiniBug\_42, SamuelLPlaqson\_42, Urkel\_42
- Track 434 : Ramen\_41
- Track 435 : Validus\_45
- Track 436 : Joy99\_41
- Track 437 : QuincyRose\_40, Ganymede\_42
- Track 438 : Efra2\_44
- Track 439 : Niklas\_43
- Track 440 : LeMond\_45
- Track 441 : Clipper\_45
- Track 442 : Angelica\_41
- Track 443 : Scarlett\_45, Oscar\_45
- Track 444 : Shaobing\_43
- Track 445 : YoureAdopted\_40
- Track 446 : TaiwanKao\_43
- Track 447 : Peanam\_43
- Track 448 : Strobilo\_43
- Track 449 : BoostSeason\_44, Doughnut\_44, Findley\_43, Milly\_43, ZoeJ\_43
- Track 450 : DismalStressor\_43, Marcoliusprime\_43, DismalFunk\_43
- Track 451 : Mufasa\_44
- Track 452 : Marshawn\_44
- Track 453 : TClif\_45
- Track 454 : Tortellini\_32
- Track 455 : Xavia\_34
- Track 456 : ThulaThula\_35
- Track 457 : Amymech\_29, Webster2\_29, Giles\_29, LilHazelNut\_29, Kinbote\_29, Hadrien\_29, Evanesce\_29, HH92\_29, Wishmaker\_29, Ein37\_29, Dewey\_29, Luna22\_29, Luke\_29, Hail\_29, Ubuntu\_29, DeepSoil15\_29, Forge\_29
- Track 458 : Gancho\_28
- Track 459 : Gravaillia\_29
- Track 460 : Amochick\_29, Daegal\_30
- Track 461 : OBUpride\_29
- Track 462 : Gaia\_52, Nebkiss\_56
- Track 463 : TPA4\_37
- Track 464 : REQ3\_01
- Track 465 : ArV2\_29
- Track 466 : Sleepyhead\_38
- Track 467 : MooMoo\_41
- Track 468 : Juicebox\_26
- Track 469 : GMA4\_29
- Track 470 : Mbo4\_31
- Track 471 : Chymera\_32
- Track 472 : OnionKnight\_30
- Track 473 : Spartoi\_37

- Track 474 : TurkishDelight\_52
- Track 475 : Finkle\_45
- Track 476 : GMA1\_30
- Track 477 : LilSpotty\_38
- Track 478 : DillyDally\_29
- Track 479 : REQ2\_38
- Track 480 : Footloose\_31
- Track 481 : VanLee\_32

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

The start number called the most often in the published annotations is 145, it was called in 284 of the 741 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbyDaisy\_36, ActinUp\_41, AdaS\_36, Adephagia\_41, Adonis\_41, Adora\_37, Ageofdapage\_43, Aikyam\_37, Akhila\_37, Alatato\_29, Alexphander\_45, AlishaPH\_41, Amelie\_36, Anaya\_43, Anekin\_37, Angelica\_41, Annalisa\_36, Apocalypse\_44, Apricot\_48, ArV2\_29, Ardmore\_36, Asapag\_47, Asayake\_41, Atiba\_41, Auxilium\_38, BEEST\_41, BENtherdunthat\_50, BGlluviae\_41, BaghaKamala\_40, BarrelRoll\_41, Batiatus\_43, Bauer\_39, Beakin\_43, BeeGee\_42, Beenie\_33, Beezoo\_43, Bella96\_42, Belladonna\_41, BenchScraper\_39, Bhageatrice\_40, BigPhil\_38, Biglebops\_36, BillyTP\_42, Bipolar\_39, Birdsong\_47, BlackSpider\_36, Blarby\_54, Blizzard\_41, BlueShadow\_40, BobaPhett\_43, Bobi\_46, Boiiii\_41, BoostSeason\_44, BotCity\_51, BrayBeast\_32, Bridgette\_38, Brocalys\_36, Brookers\_40, Brushbloom\_50, Budski\_49, Byougenkin\_40, CREW\_41, Capricorn\_41, CaptainTrips\_41, CaseJules\_42, Cashline\_38, Cerasum\_38, Chavito\_44, CheeseTouch\_54, Cheesepuff\_48, CheetoDust\_40, Chris\_43, ChuckDuck\_39, Chymera\_32, Clark\_39, Clifton\_35, Clipper\_45, Coco12\_40, Constance\_38, CookieBear\_41, Corium\_41, Cornucopia\_45, Crater\_49, CrimD\_41, DLane\_41, DRBy19\_43, Dalmuri\_41, Dartin\_43, DeadP\_46, Deby\_41, Denise\_35, Devera\_45, DismalFunk\_43, DismalStressor\_43, DoRead\_44, DobbysSock\_31, Dole\_44, Dolores\_40, Donkeykong\_41, Dorito\_34, DosHalletts\_40, Doughnut\_44, DrHayes\_42, Durfee\_41, EMSquaredA\_37, Ecliptus\_49, Efra2\_44, Eileen\_34, EleanorGeorge\_40, Emerson\_42, Emma\_44, Enby\_42, Enkosi\_39, Estave1\_43, EvePickles\_38, Faja\_39, Filuzino\_41, Findley\_43, Flathead\_44, Floral\_36, Footloose\_31, FosterFrank\_40, Frickyeah\_52, Fruitloop\_40, GMA1\_30, Galactic\_43, Ganymede\_42, Geraldini\_43, Getalong\_53, Globfish\_39, GlobiWarming\_38, Gorge\_43, Gorpy\_41, Guanica15\_44, Guppsters\_43, Hades\_43, HedwigODU\_41, Hegedechwinu\_41, Hillester\_40, Hlubikazi\_41, Holliday\_48, Homura\_41, Hortense\_40, Horus\_48, Howe\_40, Hyperbowlee\_41, IMpilo\_40, Illumine\_44, Inky\_41, Invectra\_40, IrishSherpFalk\_41, Isolde\_41, JAWS\_41, James\_43, Jarvi\_41, Jayhawk\_42, Jeckyll\_41, JellyBread\_36, Joy99\_41, Judy\_39, Juice456\_44, Juniper1\_40, Kamaru\_44, KayMoney\_38, Kenna\_49, Kenuha5\_39, KiSi\_45, KingJulian\_41, Kingsley\_38, KristaRAM\_43, LastJedi\_34, LaterM\_42, Lawnathon\_40, LeMond\_45, Leroy\_50, LilPharaoh\_36, LilSpotty\_38, LindNT\_41, LitninMcQueen\_43, Llorens\_41, Lorde\_42, Lton\_34, Lucky10\_35, LunaBlu\_46, LunaStella\_42, Lunahalos\_41, Lutum\_50, MUWow\_39, MakCheese\_48, Mandlovu\_40, Marcoliusprime\_43, MarkPhew\_44, Marshawn\_44, Marteena\_36, MaterMagnus\_40, Mattes\_43, McMater\_43, Mcklovin\_36, MeaningOfLife\_42, Megsy\_42,

Melissauren88\_42, MichaelScott\_40, MidnightRain\_42, MilanaBonita\_37, MilleniumForce\_42, Milly\_43, MinionDave\_43, Minnie\_43, MooMoo\_41, Moonbeam\_41, Mova\_42, Mozy\_51, Ms6\_36, Mufasa8\_27, Mufasa\_44, Murucutumbu\_42, Mutaforma13\_45, Mynx\_42, NewHope4\_45, Nibb\_43, Nikao\_39, Niklas\_43, Nutello\_36, ODay\_52, Oregano\_39, Oscar\_45, Ovechkin\_41, Padfoot\_41, Padpat\_42, Peanam\_43, Peas\_35, Peel\_41, Periwinkle\_57, Persistence\_35, Phabuloso\_48, Phalconet\_41, Phanphagia\_37, PhesterPotato\_44, Philus\_43, Phistory\_51, Phrank15\_39, Phrappuccino\_38, Piatt\_41, Pippy\_38, Pokerus\_40, Pollux\_38, Polo2Bam\_48, Prithvi\_42, QuincyRose\_40, RadFad\_40, Ramen\_41, Raphaella\_40, Rapunzel97\_41, RavenCo17\_41, Renaud18\_46, Rialto\_46, Richie\_40, Richo\_43, Rita\_44, RootBeer\_29, Rosmarinus\_41, SG4\_40, Saal\_43, Sakai\_40, Samman98\_40, SamuelLPlaqson\_42, Sarge\_28, Sarma624\_38, Sashimi\_39, Scarlett\_45, Seahorse\_41, Sekhmet\_40, Settecandela\_38, SgtBeansprout\_36, Shaobing\_43, Shauna1\_38, ShawBrad\_51, ShiaSurprise\_42, Shlim410\_38, Shoya\_35, ShroomBoi\_42, Shukran\_42, SilverChicken\_53, SimranZ1\_43, Slimphazie\_41, Sonali\_29, Soul22\_46, Spartacus\_41, SpicyFrank\_39, Spock\_41, Squirty\_35, StAnnes\_42, Stinson\_42, Strobilo\_43, Strokeseat\_41, Sulley\_41, SuperGrey\_42, SwagPiggett\_45, TChen\_44, TClif\_45, Tachez\_41, TaiwanKao\_43, Taj\_45, ThayneTheZag\_40, Thimann\_36, Tiff81\_35, TiniBug\_42, Tiri\_42, Topper\_41, TreyKay\_42, TruffulaTree\_41, Twinkle\_39, Twitch\_41, Urkel\_42, VRedHorse\_42, Validus\_45, Veliki\_41, Velveteen\_37, Violac\_43, Vopal\_43, Wachhund\_44, Wee\_46, Whatsapiecost\_41, WillSterrel\_41, Windest\_40, WinkNick\_41, XFactor\_41, YoungHarleezy\_40, YoureAdopted\_40, Yunkel11\_44, Zavala\_42, Zizzle\_44, ZoeJ\_43, Zucker\_31,

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

- Jant\_44, Journey13\_31, Maruru\_31, Raqqa\_32, Spartoi\_37, Sunshine23\_31, TarsusIV\_33,

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

- ACFishhook\_35, AN3\_33, AN9\_36, ANI8\_36, AbbyPaige\_35, Abdiel\_32, Abidatro\_34, Abscondus\_83, Acolyte\_34, Adelaide\_25, Adzzy\_35, Agape74\_35, Aglet\_36, Agueybana\_38, Aleemily\_34, Altostratus\_43, AlumE\_39, Amelia\_36, AmiCi24\_35, Amochick\_29, Amymech\_29, Andrew\_37, Angelique\_39, Anselm\_35, Antonio\_39, Anubis\_38, Aphelion\_83, ArchiDore\_40, Arianna\_32, Ariel\_86, Atlantica\_36, Attis\_34, AugsMagnumOpus\_38, Ayotoya\_39, B1\_31, BAKA\_86, Babushka\_37, BabyJohn\_32, BabyRay\_33, Bachita\_85, Bactobuster\_35, Baehexic\_34, Bagrid\_82, BangNhom\_33, Banquo\_37, Basilisk\_34, BatStarr\_39, BaxterFox\_37, Beauxregard13\_36, Bedetta\_40, Beem\_81, BellusTerra\_33, BetterKatz\_39, Bialota\_37, BiancaTri92\_35, Bigflo\_36, Bjanes7\_34, BlueBird\_34, Bobby\_80, Bock\_39, Bombitas\_71, Bosnia\_39, BoyNamedSue\_39, Bradissa\_36, Bradman\_34, Bran\_28, BreSam8\_36, BrutonGaster\_67, Brylie\_39, Brynnie\_33, Bugatti\_33, Buggy\_36, Bunnybear\_33, C3\_31, Cafasso\_35, Calvinny\_36, Camara\_36, Caraxes\_33, Cardigan\_99, Catfish\_37, Centaur\_35, Cerulean\_34, ChampagnePapi\_34, Che12\_36, Che9c\_41, Chickaboom\_35, ChipMunk\_36, Chiqui\_32, Chop\_39, Clap\_37, ClubL\_83, Colbster\_36, Colin\_37, Colleen\_32, Colusalem\_39, Commander\_33, Confidence\_37, Constella\_68, Coral\_36, Cote\_38, Courthouse\_82, Crucio\_34, Cucurbita\_85, Cullens\_36, Culver\_85, Cygnet\_40, Cynthia\_37, D29\_33, D32\_37, DBQu4n\_37, DaHudson\_36, Daegal\_30, Dallas\_80, Dalmatian\_35, DanHam62\_36, Daob\_38, Daredevil\_54, DeepSoil15\_29, DelRio\_40, Dewey\_29, Dieselweasel\_36, Dignity\_35, DillyDally\_29, DinoDaryn\_38, DmpstrDiver\_82, Dori\_45, Dove\_67, Drake55\_36, DropBear\_33, DudeLittle\_33, Duke13\_85, DumpsterDude\_40, Duplo\_37, Dusty\_80, Eagle\_32, Easley\_35,

Ebert\_39, EdnaMode\_33, Eesa\_33, Ein37\_29, Ejimix\_81, EnalisNailo\_35, Engineer\_85, EpicPhail\_36, Equemioh13\_35, EricMillard\_80, Eudoria\_39, Eurydice\_33, Evanesce\_29, Eviarto\_39, EvilGenius\_36, Faith5x5\_30, Fameo\_34, Farber\_36, Farewell\_44, Fernando\_36, Finkle\_45, FiringLine\_34, Flare16\_34, Forge\_29, Francois\_38, Fred313\_33, FroggyToad\_38, GMA4\_29, GUPitcher\_34, Gaia\_52, Galaxy\_33, Gancho\_28, GaugeLDP\_35, Geeche\_82, GemG\_37, Gemma\_35, Georgie2\_35, Giles\_29, GingkoMaracino\_36, Giroux\_33, Gizermo\_37, Glotell\_38, Goib\_39, Gonephishing\_76, GrandSlam\_39, Gratitude\_34, Gravallia\_29, Gravel\_41, Grif\_36, Groupthink\_36, Grub\_36, Grum1\_36, Gspu1\_28, GtownJaz\_36, HH92\_29, Hadrien\_29, Hail\_29, Haley23\_37, Halley\_83, HamCheese\_35, Hamood\_39, Hannaconda\_75, HannahPhantana\_37, HarryHoudini\_36, HaveUMetTed\_36, Heathen\_33, Heffalump\_35, HelDan\_33, Heliosoles\_35, Hercules11\_36, Herod\_39, Hestia\_38, HokkenD\_73, Huffy\_38, Hughesyang\_81, Hugley\_36, Hum25\_34, Hyzer\_43, Idleandcovert\_33, IronMan\_36, Isca\_33, Iwokeuplikedis\_34, JCole\_37, JF2\_33, JF4\_33, JHC117\_36, Jaan\_37, Jablanski\_39, Jamun\_33, JenCasNa\_36, JeppNRM\_36, Jerm\_35, Jobu08\_35, JonJames\_97, JoshKayV\_35, Jsquared\_34, Juicebox\_26, JuicyJay\_79, Juno112\_35, KHumphrey\_36, Kachowdy\_33, Kalah2\_76, Kalb97\_36, Kalnoky\_36, Kalpine\_35, Kamy\_33, KashFlow\_76, KendraB23\_42, Kepler\_38, Kerberos\_37, Khuang\_45, Kimona\_30, Kinbote\_29, KingCyrus\_36, Kita\_40, Klein\_81, Koduck\_33, Kudrefre\_6, Kukla\_36, Kuleana\_37, Kumotta\_30, L5\_33, LBerry\_36, LHTSCC\_34, Lamberg\_33, Landor\_35, Larenn\_35, Lederberg\_27, LeoAvram\_33, Leogania\_35, Leona\_35, Leviathan\_35, LilHazelNut\_29, LilTurb\_34, Lilas\_38, Lilith\_36, LionsBait\_35, LittleE\_82, LittleTokyo\_36, LonelyBoi\_38, LordFarquaad\_35, Lowa\_36, Lozinak\_84, Lucky2013\_84, LugYA\_38, Luke\_29, Luna22\_29, Lunar\_38, MA5\_33, MK4\_33, MadMarie\_36, Madeline\_35, Mainiac\_36, MajorMajor\_34, Malec\_36, Malibo\_40, Malinsilva\_38, Manasvini\_39, Manu\_36, Mao1\_43, MarQuardt\_36, Marchesa\_33, MargaretKali\_30, Maridalia\_39, Marie\_36, Marius\_36, Marleymoo\_72, Mask\_46, Matteo\_30, Maxo\_33, Mbo4\_31, Medusa\_33, Melons\_38, Melvin\_33, MiaZeal\_87, Microwolf\_36, MiculUcigas\_34, Minerva\_84, Miskis\_80, MissWhite\_33, Mocha12\_37, ModicumRichard\_35, MoneyMay\_36, Moosehead\_35, Morgana\_35, Morkie\_33, Morrow\_33, MrSmee\_34, MuchMore\_38, Mulch\_39, NaSiaTalie\_34, Nadeem\_39, Naji\_37, NancyRae\_39, Nebkiss\_56, Nebs\_33, Nekros\_81, Neobush\_39, Nettuno\_33, Neville\_8, NicoleTera\_37, NihilNomen\_82, Norvs\_84, NothingSpecial\_35, Nymphadora\_39, OBUpride\_29, ObLaDi\_35, Obama12\_34, Octobien14\_6, Odette\_80, Odin\_33, Ohfah\_33, Ohgeesy\_38, OlanP\_35, Ollie\_36, Omega\_85, OneDirection\_30, OnionKnight\_30, Optimus\_79, Orcanus\_34, OtsoOtso\_40, P28Green\_36, PGHhamlin\_38, PantheRoc\_37, Parada\_39, Pawn\_35, Pelletreau\_41, Pembroke\_36, Penny1\_36, Pepperoni\_31, Ph8s\_35, Phaded\_37, Phantastic\_33, Pharaoh\_32, Phelipe\_33, PhinkBoden\_83, PhishRPhriends\_34, PhluffyCoco\_36, Phoebe\_36, Phoebus\_84, PhorbesPhlower\_33, Phranny\_36, PhriskyACE\_36, Pickett\_32, Pigu\_32, Pimento\_39, Piro94\_34, Pistachio\_34, Pitbull\_33, Polka\_36, Polly\_36, Polymorphads\_33, Pomar16\_37, Porcelain\_86, Posh\_42, PotatoSplit\_37, Pound\_82, Poushou\_32, Power\_33, Powerball\_37, Pukovnik\_35, Puppy\_34, PurpleHaze\_35, Pytheas\_39, QueenB2\_34, QueenBeesly\_34, Quokka\_33, REQ2\_38, REQ3\_01, Rabbitrun\_10, Rattail\_36, Rearden\_78, Reba\_36, RedFox\_36, Redno2\_78, Renna12\_35, Retro23\_35, Rockstar\_33, Ruchi\_33, Ruthy\_39, SPB78\_39, Sabia\_36, Sabinator\_36, Sahara\_36, SamW\_27, SaturnRing\_33, Savage\_37, Sbash\_40, Schatzie\_77, Schmidt\_32, Scout\_33, Sejanus\_42, SemperFi\_35, Sephiroth\_7, Serenity\_34, Shaboozey\_79, SheldonCooper\_34, Sidious\_37, Skitty\_35, Sknot\_35, Sleepyhead\_38, Smeagan\_36, Smoothie\_85, SnapTap\_34, Snickers\_36, SoYo\_36, SoilAssassin\_34, SoilDragon\_35, Sparky\_45, Sparxx\_33, Splinter\_37, Spooks\_10, Sproutie\_37,

Squint\_87, StAB\_26, Stagni\_36, StarStuff\_37, StepMih\_36, Stiles\_27, StuartMinion\_30, Stuck\_46, Success\_11, Suerte\_34, Superchunk\_33, Superphikiman\_84, Susceptit\_39, SweetiePie\_34, SwirlSquare\_35, Syleon\_7, TNguyen7\_33, TPA4\_37, TZGordon\_39, Taurus\_36, TaylorSipht\_34, Tayonia\_39, Terrific\_37, ThankyouJordi\_38, Thibault\_69, ThreeRngTarjay\_79, ThulaThula\_35, Tiffany\_36, TimTam\_39, TinaFeyge\_33, TinaLin\_36, TipsytheTRex\_33, Toad24\_36, Tomathan\_37, Toniann\_84, Tortellini\_32, TouchMeNot\_32, Towmatter\_55, Travvers\_37, Trax\_8, TripleJ\_37, Tristan\_35, Trixie\_35, Trooper\_35, TroyPia\_33, Troy\_27, Trumpet\_39, TuertoX\_37, Turbido\_34, TurkishDelight\_52, Ubuntu\_29, Updawg\_35, VA6\_33, VC3\_36, VWB\_31, VanLee\_32, Vasanti\_37, Vendetta\_37, Vix\_36, Vulpecula\_33, Wanda\_85, Watson\_36, Webster2\_29, WeiHuaDA\_38, WelcomeAyanna\_38, Westrich\_40, Whabigail7\_34, WheatThin\_39, Whiteclaw\_37, WideWale\_35, WilliamBoone\_83, Wishmaker\_29, Wooldri\_38, Wrigley\_43, Xavia\_34, XianYue\_35, Yecey3\_35, Yeet412\_34, Yeet\_76, Yeezy\_36, Yvonetastic\_95, Zameen\_39, Zelink\_79, Zetzy\_35, Zhuangyuan\_39, Zimmer\_35, Zirinka\_36, Zodiariah\_37,

### Summary by start number:

#### Start 47:

- Found in 1 of 878 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TurkishDelight\_52 (singleton),

#### Start 85:

- Found in 14 of 878 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Gonephishing\_76 (J), Rearden\_78 (J), Superphikiman\_84 (J),

#### Start 86:

- Found in 16 of 878 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 2 of 741
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Gizermo\_37 (CZ2), Sahara\_36 (CZ2),

#### Start 88:

- Found in 54 of 878 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 6 of 741
- Called 11.1% of time when present
- Phage (with cluster) where this start called: BatStarr\_39 (CZ1), Bjanes7\_34 (CZ2), Cynthia\_37 (CZ2), Herod\_39 (CZ1), Kita\_40 (CZ1), ThankyouJordi\_38 (CZ1),

#### Start 90:

- Found in 16 of 878 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 10 of 741
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Ariel\_86 (J), Courthouse\_82 (J), Gaia\_52 (X), Hannaconda\_75 (J), Lucky2013\_84 (J), MiaZeal\_87 (J), Nebkiss\_56 (X), Nekros\_81 (J), Omega\_85 (J), Porcelain\_86 (J), Shaboozey\_79 (J), Squint\_87 (J),



Start 101:

- Found in 1 of 878 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BrutonGaster\_67 (CQ2),

Start 104:

- Found in 33 of 878 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 29 of 741
- Called 93.9% of time when present
- Phage (with cluster) where this start called: BAKA\_86 (J), Bagrid\_82 (J), Beem\_81 (J), Bobby\_80 (J), Bombitas\_71 (J), Constella\_68 (J), Dallas\_80 (J), DmpstrDiver\_82 (J), Dove\_67 (J), Duke13\_85 (J), Ejimix\_81 (J), EricMillard\_80 (J), Halley\_83 (J), HokkenD\_73 (J), Hughesyang\_81 (J), JuicyJay\_79 (J), Kalah2\_76 (J), KashFlow\_76 (J), Klein\_81 (J), Marleymoo\_72 (J), Minerva\_84 (J), NihilNomen\_82 (J), Optimus\_79 (J), Phoebus\_84 (J), Pound\_82 (J), Redno2\_78 (J), Schatzie\_77 (J), Thibault\_69 (J), ThreeRngTarjay\_79 (J), Wanda\_85 (J), Yeet\_76 (J),

Start 105:

- Found in 3 of 878 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Faith5x5\_30 (CZ6),

Start 106:

- Found in 3 of 878 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Daredevil\_54 (DL), Towmatter\_55 (DL),

Start 109:

- Found in 4 of 878 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 741
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kumotta\_30 (FB), MargaretKali\_30 (FB),

Start 111:

- Found in 16 of 878 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 12 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus\_83 (CQ1), Aphelion\_83 (CQ1), Bachita\_85 (CQ1), ClubL\_83 (CQ1), Cucurbita\_85 (CQ1), Culver\_85 (CQ1), Dusty\_80 (CQ1), Engineer\_85 (CQ1), Geeche\_82 (CQ1), Lozinak\_84 (CQ1), Miskis\_80 (CQ1), Norvs\_84 (CQ1), PhinkBoden\_83 (CQ1), Smoothie\_85 (CQ1), Toniann\_84 (CQ1), WilliamBoone\_83 (CQ1),

Start 113:

- Found in 11 of 878 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 741
- Called 27.3% of time when present
- Phage (with cluster) where this start called: Cardigan\_99 (DD), JonJames\_97 (DD), Yvonnestic\_95 (DD),

Start 114:

- Found in 56 of 878 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 2 of 741
- Called 5.4% of time when present
- Phage (with cluster) where this start called: Hestia\_38 (AY), Pigu\_32 (FB), Zelink\_79 (J),

Start 126:

- Found in 7 of 878 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 2 of 741
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Altostratus\_43 (FS), Khuang\_45 (FS), MrSmeem\_34 (FQ), Pitbull\_33 (FQ), Skitty\_35 (FQ),

Start 127:

- Found in 88 of 878 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 61 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro\_34 (AS1), Aleemily\_34 (DZ), Amelia\_36 (AS2), AmiCi24\_35 (AS3), Andrew\_37 (AS3), ArchiDore\_40 (DW), Atlantica\_36 (AS3), Ayotoya\_39 (DI), Babushka\_37 (AS3), Basilisk\_34 (AS1), BaxterFox\_37 (CZ3), Bedetta\_40 (AS2), BetterKatz\_39 (DI), Bock\_39 (DI), Brylie\_39 (DI), Brynnie\_33 (AS1), Cafasso\_35 (DZ), Camara\_36 (AS3), Chickaboom\_35 (AS1), Chop\_39 (DI), Colusalem\_39 (AS2), Coral\_36 (AS2), Cote\_38 (AS2), Cygnet\_40 (AS2), DanHam62\_36 (AS3), Daob\_38 (AS2), DelRio\_40 (DI), DumpsterDude\_40 (DW), Easley\_35 (CZ4), Eesa\_33 (AS1), Francois\_38 (DI), FroggyToad\_38 (CZ2), GMA4\_29 (singleton), Galaxy\_33 (AS1), Glotell\_38 (AS3), GrandSlam\_39 (DI), Gravel\_41 (AS1), HamCheese\_35 (AS3), Hamood\_39 (DI), HannahPhantana\_37 (AS2), JCole\_37 (CZ2), Jamun\_33 (AS1), Juno112\_35 (AS3), KHumphrey\_36 (AS3), KendraB23\_42 (AS1), Kepler\_38 (AS2), Kuleana\_37 (AS2), Leona\_35 (AS3), LittleTokyo\_36 (AS2), Lunar\_38 (AS2), Madeline\_35 (CZ1), Malibo\_40 (DW), Melons\_38 (AS2), ModicumRichard\_35 (DZ), Morgana\_35 (DZ), Mulch\_39 (DI), Nadeem\_39 (DI), NancyRae\_39 (DI), ObLaDi\_35 (DZ), Ohgeesy\_38 (CZ), Orcanus\_34 (AS1), OtsoOtso\_40 (AS2), PantheRoc\_37 (CZ3), Parada\_39 (DI), Pelletreau\_41 (AS1), PhluffyCoco\_36 (AS3), PhriskyACE\_36 (CZ4), Pimento\_39 (DI), Polka\_36 (AS2), Powerball\_37 (CZ4), Rattail\_36 (AS3), RedFox\_36 (AS3), Renna12\_35 (AS3), Ruchi\_33 (AS1), Ruthy\_39 (DW), Sidious\_37 (CZ7), StuartMinion\_30 (AS3), Suerte\_34 (CZ4), TPA4\_37 (singleton), TaylorSipht\_34 (AS1), Toad24\_36 (AS1), Vasanti\_37 (CZ2), Vulpecula\_33 (AS1), Westrich\_40 (AS1), WheatThin\_39 (DI), Yeezy\_36 (CZ3), Zhuangyuan\_39 (AS2), Zodiariah\_37 (DW),

Start 128:

- Found in 4 of 878 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Mbo4\_31 (singleton), REQ3\_01 (singleton), VanLee\_32 (singleton),

Start 130:

- Found in 4 of 878 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 741
- Called 75.0% of time when present

- Phage (with cluster) where this start called: Lederberg\_27 (EP), SamW\_27 (EP), Troy\_27 (EP),

#### Start 133:

- Found in 24 of 878 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 4 of 741
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Gancho\_28 (Q), OBUpride\_29 (Q), Tortellini\_32 (P2), Xavia\_34 (P3),

#### Start 136:

- Found in 65 of 878 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 3.1% of time when present
- Phage (with cluster) where this start called: LittleE\_82 (J), Odette\_80 (J),

#### Start 137:

- Found in 3 of 878 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OnionKnight\_30 (singleton), SPB78\_39 (BA), VWB\_31 (BA),

#### Start 138:

- Found in 3 of 878 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Hum25\_34 (FQ),

#### Start 140:

- Found in 4 of 878 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Moosehead\_35 (CZ6),

#### Start 143:

- Found in 63 of 878 ( 7.2% ) of genes in pham
- Manual Annotations of this start: 52 of 741
- Called 87.3% of time when present
- Phage (with cluster) where this start called: Agueybana\_38 (CZ1), AlumE\_39 (CZ1), Angelique\_39 (CY1), Antonio\_39 (CZ1), Attis\_34 (CZ2), Bialota\_37 (CZ1), Bosnia\_39 (CZ1), BoyNamedSue\_39 (CZ1), Bradissa\_36 (CY1), Bunnybear\_33 (CZ), Clap\_37 (CZ2), Confidence\_37 (CY1), Ebert\_39 (CZ2), EdnaMode\_33 (CZ2), EnalisNailo\_35 (CY1), Eudoria\_39 (CZ1), Eviarto\_39 (CZ1), GemG\_37 (CZ2), Haley23\_37 (CZ2), Hugley\_36 (CZ1), Hyzer\_43 (CZ1), Jablanski\_39 (CY), Lamberg\_33 (CZ2), Lilas\_38 (CY1), LonelyBoi\_38 (CY), LordFarquaad\_35 (CZ2), Manasvini\_39 (CZ1), Maridalia\_39 (CZ1), Matteo\_30 (CZ2), Mocha12\_37 (CZ2), Morkie\_33 (DH), Neobush\_39 (CZ1), Nettuno\_33 (CZ2), Nymphadora\_39 (CZ1), OneDirection\_30 (CZ6), Pepperoni\_31 (CZ), PhorbesPhlower\_33 (DH), Pickett\_32 (CZ2), Polly\_36 (CZ1), Posh\_42 (CY), Pytheas\_39 (CY), Savage\_37 (CZ2), SoilAssassin\_34 (CZ2), Sproutie\_37 (CZ2), Suscepit\_39 (CZ1), Tayonia\_39 (CZ1), TimTam\_39 (CZ1), Trumpet\_39 (CZ1), TuertoX\_37 (CZ2), WelcomeAyanna\_38 (CZ1), Whiteclaw\_37 (CZ2), Wrigley\_43 (CY), Yeet412\_34 (CZ2), Zameen\_39 (CZ1), Zirinka\_36 (CZ1),

Start 144:

- Found in 33 of 878 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 3.0% of time when present
- Phage (with cluster) where this start called: GaugeLDP\_35 (A2),

Start 145:

- Found in 341 of 878 ( 38.8% ) of genes in pham
- Manual Annotations of this start: 284 of 741
- Called 97.9% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_36 (AY), ActinUp\_41 (K1), AdaS\_36 (AY), Adephagia\_41 (K1), Adonis\_41 (K1), Adora\_37 (CZ4), Ageofdapage\_43 (K1), Aikyam\_37 (AY), Akhila\_37 (F1), Alatato\_29 (FB), Alexphander\_45 (F1), AlishaPH\_41 (K1), Amelie\_36 (K1), Anaya\_43 (K1), Anekin\_37 (AY), Angelica\_41 (K1), Annalisa\_36 (CZ4), Apocalypse\_44 (K1), Apricot\_48 (DN3), ArV2\_29 (singleton), Ardmore\_36 (F1), Asapag\_47 (DN1), Asayake\_41 (K1), Atiba\_41 (K1), Auxilium\_38 (AY), BEEST\_41 (K1), BENtherdunthat\_50 (DN1), BGIlluviae\_41 (K1), BaghaKamala\_40 (K1), BarrelRoll\_41 (K1), Batiatus\_43 (F1), Bauer\_39 (FN), Beakin\_43 (F1), BeeGee\_42 (CY), Beenie\_33 (CZ4), Beezoo\_43 (K1), Bella96\_42 (K1), Belladonna\_41 (K1), BenchScraper\_39 (AY), Bhageatrice\_40 (AY), BigPhil\_38 (F1), Binglebops\_36 (K1), BillyTP\_42 (AY), Bipolar\_39 (F1), Birdsong\_47 (DN), BlackSpider\_36 (FN), Blarby\_54 (F), Blizzard\_41 (K1), BlueShadow\_40 (AY), BobaPhett\_43 (F1), Bobi\_46 (F1), Boiiii\_41 (K1), BoostSeason\_44 (K2), BotCity\_51 (DN), BrayBeast\_32 (FB), Bridgette\_38 (FA), Brocalys\_36 (F1), Brookers\_40 (F1), Brushbloom\_50 (F1), Budski\_49 (DN), Byougenkin\_40 (F1), CREW\_41 (K1), Capricorn\_41 (K1), CaptainTrips\_41 (F1), CaseJules\_42 (K1), Cashline\_38 (CY), Cerasum\_38 (F1), Chavito\_44 (K1), CheeseTouch\_54 (DN1), Cheesepuff\_48 (F1), CheetoDust\_40 (K1), Chris\_43 (K1), ChuckDuck\_39 (FA), Chymera\_32 (singleton), Clark\_39 (CZ4), Clifton\_35 (F1), Clipper\_45 (K1), Coco12\_40 (F1), Constance\_38 (FA), CookieBear\_41 (AY), Corium\_41 (F1), Cornucopia\_45 (F1), Crater\_49 (DN3), CrimD\_41 (K1), DLane\_41 (F1), DRBy19\_43 (F1), Dalmuri\_41 (K1), Dartin\_43 (K1), DeadP\_46 (F1), Deby\_41 (K1), Denise\_35 (CZ5), Devera\_45 (K1), DismalFunk\_43 (K2), DismalStressor\_43 (K2), DoRead\_44 (F1), DobbysSock\_31 (CZ4), Dole\_44 (K1), Dolores\_40 (CZ4), Donkeykong\_41 (F1), Dorito\_34 (CZ4), DosHalletts\_40 (F1), Doughnut\_44 (K2), DrHayes\_42 (K1), Durfee\_41 (K1), EMSquaredA\_37 (CY1), Ecliptus\_49 (DN), Efra2\_44 (K1), Eileen\_34 (FA), EleanorGeorge\_40 (F1), Emerson\_42 (K1), Emma\_44 (F1), Enby\_42 (F1), Enkosi\_39 (K1), Estave1\_43 (F1), EvePickles\_38 (AY), Faja\_39 (AY), Filuzino\_41 (F1), Findley\_43 (K2), Flathead\_44 (F1), Floral\_36 (CY1), Footloose\_31 (singleton), FosterFrank\_40 (FA), Frickyeah\_52 (DN1), Fruitloop\_40 (F1), GMA1\_30 (singleton), Galactic\_43 (F1), Ganymede\_42 (K1), Geraldini\_43 (K1), Getalong\_53 (DN1), Globfish\_39 (AY), GlobiWarming\_38 (FA), Gorge\_43 (F1), Gorpy\_41 (AY), Guanica15\_44 (K1), Guppsters\_43 (F1), Hades\_43 (F1), HedwigODU\_41 (K1), Hegedechwinu\_41 (F1), Hillester\_40 (AY), Hlubikazi\_41 (F1), Holliday\_48 (DN1), Homura\_41 (K1), Hortense\_40 (CZ4), Horus\_48 (DN1), Howe\_40 (CZ4), Hyperbowlee\_41 (K1), IMpilo\_40 (F1), Illumine\_44 (K1), Inky\_41 (K1), Invectra\_40 (CZ4), IrishSherpFalk\_41 (F1), Isolde\_41 (AY), JAWS\_41 (K1), James\_43 (F1), Jarvi\_41 (K1), Jayhawk\_42 (K1), Jeckyll\_41 (K1), JellyBread\_36 (AY), Joy99\_41 (K1), Judy\_39 (FA), Juice456\_44 (F1), Juniper1\_40 (F1), Kamaru\_44 (DN1), KayMoney\_38 (FA), Kenna\_49 (DN1), Kenuha5\_39 (F1), KiSi\_45 (K1), KingJulian\_41 (F1), Kingsley\_38 (F1), KristaRAM\_43 (F1), LastJedi\_34 (F1), LaterM\_42 (K1), Lawnathon\_40 (AY), LeMond\_45 (K1), Leroy\_50 (DN1),

LilPharaoh\_36 (K1), LilSpotty\_38 (singleton), LindNT\_41 (K1), LitninMcQueen\_43 (DN1), Llorens\_41 (K1), Lorde\_42 (F1), Lton\_34 (CZ), Lucky10\_35 (DH), LunaBlu\_46 (F1), LunaStella\_42 (F4), Lunahalos\_41 (K1), Lutum\_50 (DN1), MUWow\_39 (AY), MakCheese\_48 (DW), Mandlovu\_40 (F1), Marcoliusprime\_43 (K2), MarkPhew\_44 (K1), Marshawn\_44 (K6), Marteenaa\_36 (CY1), MaterMagnus\_40 (AY), Mattes\_43 (F1), McMater\_43 (K1), Mcklovin\_36 (CZ4), MeaningOfLife\_42 (K1), Megsy\_42 (K1), Melissauren88\_42 (F1), MichaelScott\_40 (CZ4), MidnightRain\_42 (AY), MilanaBonita\_37 (F1), MilleniumForce\_42 (F1), Milly\_43 (K2), MinionDave\_43 (F1), Minnie\_43 (F1), MooMoo\_41 (singleton), Moonbeam\_41 (F1), Mova\_42 (F1), Mozy\_51 (F1), Ms6\_36 (F1), Mufasa8\_27 (FG), Mufasa\_44 (K2), Murucutumbu\_42 (K1), Mutaforma13\_45 (F1), Mynx\_42 (K1), NewHope4\_45 (F1), Nibb\_43 (K1), Nikao\_39 (K1), Niklas\_43 (K1), Nutello\_36 (K1), ODay\_52 (DN), Oregano\_39 (CZ4), Oscar\_45 (K1), Ovechkin\_41 (F1), Padfoot\_41 (K1), Padpat\_42 (K1), Peanam\_43 (K1), Peas\_35 (FA), Peel\_41 (K1), Periwinkle\_57 (DN1), Persistence\_35 (AY), Phabuloso\_48 (DN1), Phalconet\_41 (F1), Phanphagia\_37 (F1), PhesterPhotato\_44 (F1), Philus\_43 (F1), Phistory\_51 (DN1), Phrank15\_39 (AY), Phrappuccino\_38 (AA), Piatt\_41 (K1), Pippy\_38 (F1), Pokerus\_40 (K1), Pollux\_38 (CY1), Polo2Bam\_48 (F1), Prithvi\_42 (K1), QuincyRose\_40 (K1), RadFad\_40 (AY), Ramen\_41 (K1), Raphaella\_40 (AY), Rapunzel97\_41 (K1), RavenCo17\_41 (CZ8), Renaud18\_46 (F4), Rialto\_46 (F1), Richie\_40 (AY), Richo\_43 (K1), Rita\_44 (F1), RootBeer\_29 (FA), Rosmarinus\_41 (K1), SG4\_40 (F1), Saal\_43 (F1), Sakai\_40 (AY), Samman98\_40 (CZ4), SamuelLPlaqson\_42 (K1), Sarge\_28 (FB), Sarma624\_38 (F1), Sashimi\_39 (AY), Scarlett\_45 (K1), Seahorse\_41 (AY), Sekhmet\_40 (CZ4), Settecandela\_38 (AA), SgtBeansprout\_36 (K1), Shaobing\_43 (K1), Shauna1\_38 (F1), ShawBrad\_51 (DN1), ShiaSurprise\_42 (K1), Shlim410\_38 (CZ4), Shoya\_35 (FB), ShroomBoi\_42 (F1), Shukran\_42 (AY), SilverChicken\_53 (F2), SimranZ1\_43 (F1), Slimphazie\_41 (K1), Sonali\_29 (FG), Soul22\_46 (F2), Spartacus\_41 (F1), SpicyFrank\_39 (AY), Spock\_41 (K1), Squirty\_35 (F3), StAnnes\_42 (F1), Stinson\_42 (K1), Strobilo\_43 (K2), Strokeseat\_41 (F1), Sulley\_41 (K1), SuperGrey\_42 (F1), SwagPigglett\_45 (F1), TChen\_44 (F4), TClif\_45 (K6), Tachez\_41 (K1), TaiwanKao\_43 (K1), Taj\_45 (F1), ThayneTheZag\_40 (AY), Thimann\_36 (CZ4), Tiff81\_35 (AY), TiniBug\_42 (K1), Tiri\_42 (K1), Topper\_41 (K1), TreyKay\_42 (K1), TruffulaTree\_41 (K1), Twinkle\_39 (CZ4), Twitch\_41 (K1), Urkel\_42 (K1), VRedHorse\_42 (F1), Validus\_45 (K1), Veliki\_41 (K1), Velveteen\_37 (F1), Violac\_43 (F1), Vopal\_43 (AY), Wachhund\_44 (F1), Wee\_46 (F1), Whatsapiecost\_41 (F1), WillSterrel\_41 (F1), Windest\_40 (AY), WinkNick\_41 (CZ4), XFactor\_41 (F1), YoungHarleezy\_40 (AY), YoureAdopted\_40 (K1), Yunkel11\_44 (K1), Zavala\_42 (K1), Zizzle\_44 (F1), ZoeJ\_43 (K2), Zucker\_31 (FN),

#### Start 146:

- Found in 9 of 878 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 7 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Che9c\_41 (I2), Dori\_45 (AD), Mao1\_43 (AD), Mask\_46 (AD), REQ2\_38 (singleton), Sbash\_40 (I2), Sejanus\_42 (AD), Stuck\_46 (I2), ThulaThula\_35 (P5),

#### Start 148:

- Found in 8 of 878 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 741
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Farewell\_44 (AF), Sparky\_45 (AF),

#### Start 151:

- Found in 57 of 878 ( 6.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Sunshine23\_31 (FG),

Start 156:

- Found in 25 of 878 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 3 of 741
- Called 12.0% of time when present
- Phage (with cluster) where this start called: Abdiel\_32 (A4), Phelipe\_33 (A4), TinaFeyge\_33 (A4),

Start 158:

- Found in 25 of 878 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 4.0% of time when present
- Phage (with cluster) where this start called: B1\_31 (A3),

Start 159:

- Found in 26 of 878 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 22 of 741
- Called 88.5% of time when present
- Phage (with cluster) where this start called: Amochick\_29 (Q), Amymech\_29 (Q), Daegal\_30 (Q), DeepSoil15\_29 (Q), Dewey\_29 (Q), Ein37\_29 (Q), Evanesce\_29 (Q), Finkle\_45 (singleton), Forge\_29 (Q), Giles\_29 (Q), Gravaillia\_29 (Q), Gspu1\_28 (CU2), HH92\_29 (Q), Hadrien\_29 (Q), Hail\_29 (Q), Kinbote\_29 (Q), LilHazelNut\_29 (Q), Luke\_29 (Q), Luna22\_29 (Q), Schmidt\_32 (CU4), Ubuntu\_29 (Q), Webster2\_29 (Q), Wishmaker\_29 (Q),

Start 162:

- Found in 16 of 878 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 7 of 741
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AbbyPaige\_35 (A2), Agape74\_35 (A2), ChipMunk\_36 (A2), Larenn\_35 (A2), Leviathan\_35 (A2), LilTurb\_34 (A2), Raqqa\_32 (AY), Whabigail7\_34 (A2),

Start 164:

- Found in 4 of 878 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 4 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arianna\_32 (EO), Colleen\_32 (EO), Poushou\_32 (EO), TouchMeNot\_32 (EO),

Start 167:

- Found in 3 of 878 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Spooks\_10 (BT), Success\_11 (BT),

Start 169:

- Found in 3 of 878 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 741

- Called 66.7% of time when present
- Phage (with cluster) where this start called: Phantastic\_33 (A3), TNguyen7\_33 (A3),

#### Start 171:

- Found in 18 of 878 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 7 of 741
- Called 38.9% of time when present
- Phage (with cluster) where this start called: Dignity\_35 (A2), IronMan\_36 (A2), Jerm\_35 (A2), KingCyrus\_36 (A2), Pharaoh\_32 (A12), Turbido\_34 (A2), Yecey3\_35 (A9),

#### Start 172:

- Found in 6 of 878 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Landor\_35 (A2),

#### Start 173:

- Found in 8 of 878 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 741
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BabyJohn\_32 (A3), BabyRay\_33 (A3), Chiqui\_32 (A3), Jaan\_37 (A2), Pukovnik\_35 (A2), Tristan\_35 (A2),

#### Start 177:

- Found in 177 of 878 ( 20.2% ) of genes in pham
- Manual Annotations of this start: 119 of 741
- Called 73.4% of time when present
- Phage (with cluster) where this start called: ACFishhook\_35 (A3), AN3\_33 (A2), AN9\_36 (A2), ANI8\_36 (A2), Aglet\_36 (A3), Anselm\_35 (A2), Anubis\_38 (A3), AugsMagnumOpus\_38 (A3), Baehexic\_34 (A2), BangNhom\_33 (A4), Beauxregard13\_36 (A3), BellusTerra\_33 (A4), Bigflo\_36 (A3), BlueBird\_34 (A3), Bradman\_34 (A2), BreSam8\_36 (A3), Bugatti\_33 (A3), Buggy\_36 (A2), Centaur\_35 (A2), Colbster\_36 (A3), Commander\_33 (A4), Cullens\_36 (A3), D29\_33 (A2), D32\_37 (A2), DBQu4n\_37 (A2), DaHudson\_36 (A3), Dalmatian\_35 (A2), Dieselweasel\_36 (A3), DropBear\_33 (A3), Duplo\_37 (A2), Eagle\_32 (A4), EpicPhail\_36 (A3), Equemioh13\_35 (A2), Eurydice\_33 (A4), Fred313\_33 (A3), Gemma\_35 (A3), Grif\_36 (A3), Groupthink\_36 (A3), Grub\_36 (A3), Grum1\_36 (A3), GtownJaz\_36 (A3), HaveUMetTed\_36 (A3), Heathen\_33 (A3), HelDan\_33 (A3), Heliosoles\_35 (A3), Hercules11\_36 (A3), Idleandcovert\_33 (A3), Isca\_33 (A3), Iwokeuplikedis\_34 (A2), JF2\_33 (A3), JF4\_33 (A3), JHC117\_36 (A3), JeppNRM\_36 (A3), Jobu08\_35 (A3), Journey13\_31 (A2), Jsquared\_34 (A2), Kalb97\_36 (A3), Kalnoky\_36 (A3), Kimona\_30 (A19), LBerry\_36 (A3), Leogania\_35 (A2), LionsBait\_35 (A2), Iowa\_36 (A3), LugYA\_38 (A3), MA5\_33 (A3), MK4\_33 (A3), MadMarie\_36 (A3), Mainiac\_36 (A3), MajorMajor\_34 (A2), Manu\_36 (A3), MarQuardt\_36 (A3), Marie\_36 (A3), Marius\_36 (A3), Maxo\_33 (A4), Melvin\_33 (A4), MiculUcigas\_34 (A2), MissWhite\_33 (A2), MoneyMay\_36 (A3), Morrow\_33 (A4), MuchMore\_38 (A3), Naji\_37 (A2), Nebs\_33 (A4), NicoleTera\_37 (A2), Ohfah\_33 (A4), OlanP\_35 (A3), P28Green\_36 (A3), PGHhamlin\_38 (A3), Pawn\_35 (A3), Pembroke\_36 (A3), Penny1\_36 (A3), Phaded\_37 (A2), PhishRPhriends\_34 (A3), Phoebe\_36 (A3), Phranny\_36 (A3), Piro94\_34 (A2), Pistachio\_34 (A3), Polymorphads\_33 (A4), PotatoSplit\_37 (A3), Puppy\_34 (A3), PurpleHaze\_35 (A3), QueenB2\_34 (A2), Quokka\_33 (A2), Reba\_36 (A3), Retro23\_35 (A2), Rockstar\_33 (A3), Sabia\_36 (A3), Sabinator\_36 (A3),

SaturnRing\_33 (A3), Scout\_33 (A3), Serenity\_34 (A2), Smeagan\_36 (A2), SoYo\_36 (A3), SoilDragon\_35 (A3), Sparxx\_33 (A4), Stagni\_36 (A3), StepMih\_36 (A3), TarsusIV\_33 (A2), Terrific\_37 (A2), Tiffany\_36 (A3), TipsytheTRex\_33 (A2), TroyPia\_33 (A4), Updawn\_35 (A2), VA6\_33 (A2), VC3\_36 (A2), Vix\_36 (A3), Watson\_36 (A3), WeiHuaDA\_38 (A2), WideWale\_35 (A2), Wooldri\_38 (A3), XianYue\_35 (A2),

Start 179:

- Found in 6 of 878 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 3 of 741
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Juicebox\_26 (singleton), Sleepyhead\_38 (singleton), StAB\_26 (EP),

Start 180:

- Found in 14 of 878 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 10 of 741
- Called 78.6% of time when present
- Phage (with cluster) where this start called: BiancaTri92\_35 (A2), Colin\_37 (A2), DudeLittle\_33 (A2), FiringLine\_34 (A2), Georgie2\_35 (A2), JoshKayV\_35 (A2), Kalpine\_35 (A2), Power\_33 (A2), QueenBeesly\_34 (A2), SemperFi\_35 (A2), Zimmer\_35 (A12),

Start 181:

- Found in 13 of 878 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 9 of 741
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Adelaide\_25 (EP), Adzzy\_35 (A2), Bran\_28 (EP), Caraxes\_33 (A2), Che12\_36 (A2), HarryHoudini\_36 (A2), Koduck\_33 (A2), L5\_33 (A2), Odin\_33 (A2), Stiles\_27 (EP), Superchunk\_33 (A2), SwirlSquare\_35 (A2),

Start 184:

- Found in 1 of 878 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Malec\_36 (A2),

Start 185:

- Found in 32 of 878 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 12 of 741
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Banquo\_37 (CU1), Catfish\_37 (CU5), DinoDaryn\_38 (CU1), Goib\_39 (CU1), Huffy\_38 (CU1), Neville\_8 (DU2), Rabbitrun\_10 (DU2), Splinter\_37 (CU1), TZGordon\_39 (CU1), TinaLin\_36 (CU1), Trax\_8 (DU2), Vendetta\_37 (CU1),

Start 196:

- Found in 3 of 878 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 741
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GUPitcher\_34 (FJ), Kukla\_36 (FJ), TripleJ\_37 (FJ),



Start 199:

- Found in 11 of 878 ( 1.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 9.1% of time when present
- Phage (with cluster) where this start called: DillyDally\_29 (singleton),

Start 201:

- Found in 5 of 878 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 4 of 741
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Kudrefre\_6 (DU1), Octobien14\_6 (DU1), Sefhiroth\_7 (DU1), Syleon\_7 (DU1),

Start 203:

- Found in 62 of 878 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 10 of 741
- Called 17.7% of time when present
- Phage (with cluster) where this start called: Farber\_36 (A3), Fernando\_36 (A3), GingkoMaracino\_36 (A3), JenCasNa\_36 (A3), Lilith\_36 (A3), Malinsilva\_38 (A3), Microwolf\_36 (A3), Ollie\_36 (A3), Snickers\_36 (A3), Taurus\_36 (A3), Zetzy\_35 (A3),

Start 209:

- Found in 68 of 878 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 14 of 741
- Called 26.5% of time when present
- Phage (with cluster) where this start called: Acolyte\_34 (A2), C3\_31 (A2), Calvinny\_36 (A3), Crucio\_34 (A2), Drake55\_36 (A2), Fameo\_34 (A2), Flare16\_34 (A2), Gratitude\_34 (A2), Kerberos\_37 (A2), Pomar16\_37 (A2), Sknot\_35 (A2), SnapTap\_34 (A2), StarStuff\_37 (A2), SweetiePie\_34 (A2), Tomathan\_37 (A2), Travvers\_37 (A2), Trixie\_35 (A2), Trooper\_35 (A2),

Start 212:

- Found in 7 of 878 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 741
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Spartoi\_37 (singleton),

Start 217:

- Found in 43 of 878 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 8 of 741
- Called 18.6% of time when present
- Phage (with cluster) where this start called: Cerulean\_34 (A4), ChampagnePapi\_34 (A4), Kamy\_33 (A4), LHTSCC\_34 (A4), LeoAvram\_33 (A4), NothingSpecial\_35 (A2), Obama12\_34 (A4), SheldonCooper\_34 (A4),

Start 228:

- Found in 66 of 878 ( 7.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Giroux\_33 (A3), Kachowdy\_33 (A3), Marchesa\_33 (A3),

Start 239:

- Found in 228 of 878 ( 26.0% ) of genes in pham
- Manual Annotations of this start: 6 of 741
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Bactobuster\_35 (A2), EvilGenius\_36 (A2), Heffalump\_35 (A2), Medusa\_33 (A4), NaSiaTalie\_34 (A2), Ph8s\_35 (A2),

Start 251:

- Found in 38 of 878 ( 4.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Maruru\_31 (FG),

Start 267:

- Found in 40 of 878 ( 4.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Jant\_44 (F1),

**Summary by clusters:**

There are 68 clusters represented in this pham: DN, AA, DL, FS, BA, DH, FQ, CZ2, CZ3, DD, CZ1, CZ6, singleton, CZ4, CZ5, BT, FA, K1, DZ, K6, CZ8, FG, DW, FJ, AS1, FN, CU5, CU4, CU2, CU1, A12, DU2, A19, A3, A2, DN1, A4, DN3, A9, CQ2, CQ1, P5, AS3, AS2, EO, AD, F, J, CZ7, Q, CZ, CY, DU1, AY, X, P3, AF, EP, CY1, F1, F2, F3, F4, K2, P2, FB, DI, I2,

Info for manual annotations of cluster A12:

- Start number 171 was manually annotated 1 time for cluster A12.
- Start number 180 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A19:

- Start number 177 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 144 was manually annotated 1 time for cluster A2.
- Start number 162 was manually annotated 7 times for cluster A2.
- Start number 171 was manually annotated 5 times for cluster A2.
- Start number 172 was manually annotated 1 time for cluster A2.
- Start number 173 was manually annotated 2 times for cluster A2.
- Start number 177 was manually annotated 34 times for cluster A2.
- Start number 180 was manually annotated 9 times for cluster A2.
- Start number 181 was manually annotated 6 times for cluster A2.
- Start number 184 was manually annotated 1 time for cluster A2.
- Start number 209 was manually annotated 14 times for cluster A2.
- Start number 217 was manually annotated 1 time for cluster A2.
- Start number 239 was manually annotated 5 times for cluster A2.

Info for manual annotations of cluster A3:

- Start number 158 was manually annotated 1 time for cluster A3.
- Start number 169 was manually annotated 2 times for cluster A3.
- Start number 173 was manually annotated 1 time for cluster A3.
- Start number 177 was manually annotated 71 times for cluster A3.

- Start number 203 was manually annotated 10 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 156 was manually annotated 3 times for cluster A4.
- Start number 177 was manually annotated 13 times for cluster A4.
- Start number 217 was manually annotated 7 times for cluster A4.
- Start number 239 was manually annotated 1 time for cluster A4.

Info for manual annotations of cluster A9:

- Start number 171 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster AA:

- Start number 145 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AD:

- Start number 146 was manually annotated 4 times for cluster AD.

Info for manual annotations of cluster AF:

- Start number 148 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AS1:

- Start number 127 was manually annotated 11 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 127 was manually annotated 11 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 127 was manually annotated 7 times for cluster AS3.

Info for manual annotations of cluster AY:

- Start number 114 was manually annotated 1 time for cluster AY.
- Start number 145 was manually annotated 18 times for cluster AY.

Info for manual annotations of cluster BT:

- Start number 167 was manually annotated 1 time for cluster BT.

Info for manual annotations of cluster CQ1:

- Start number 111 was manually annotated 12 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 101 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CU1:

- Start number 185 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU4:

- Start number 159 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 185 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CY:

- Start number 143 was manually annotated 5 times for cluster CY.
- Start number 145 was manually annotated 2 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 143 was manually annotated 5 times for cluster CY1.
- Start number 145 was manually annotated 4 times for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 127 was manually annotated 1 time for cluster CZ.
- Start number 143 was manually annotated 1 time for cluster CZ.
- Start number 145 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 88 was manually annotated 4 times for cluster CZ1.
- Start number 127 was manually annotated 1 time for cluster CZ1.
- Start number 143 was manually annotated 20 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 86 was manually annotated 2 times for cluster CZ2.
- Start number 88 was manually annotated 2 times for cluster CZ2.
- Start number 127 was manually annotated 1 time for cluster CZ2.
- Start number 143 was manually annotated 18 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 127 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 127 was manually annotated 3 times for cluster CZ4.
- Start number 145 was manually annotated 18 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 145 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 105 was manually annotated 1 time for cluster CZ6.
- Start number 140 was manually annotated 1 time for cluster CZ6.
- Start number 143 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 127 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 145 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DD:

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

Info for manual annotations of cluster DH:

- Start number 143 was manually annotated 2 times for cluster DH.
- Start number 145 was manually annotated 1 time for cluster DH.

Info for manual annotations of cluster DI:

- Start number 127 was manually annotated 15 times for cluster DI.

Info for manual annotations of cluster DL:

- Start number 106 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DN:

- Start number 145 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 145 was manually annotated 14 times for cluster DN1.

Info for manual annotations of cluster DN3:

- Start number 145 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DU1:

- Start number 201 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 185 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster DW:

- Start number 127 was manually annotated 3 times for cluster DW.

Info for manual annotations of cluster DZ:

- Start number 127 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EO:

- Start number 164 was manually annotated 4 times for cluster EO.

Info for manual annotations of cluster EP:

- Start number 130 was manually annotated 3 times for cluster EP.
- Start number 179 was manually annotated 1 time for cluster EP.
- Start number 181 was manually annotated 3 times for cluster EP.

Info for manual annotations of cluster F1:

- Start number 145 was manually annotated 82 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 145 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F3:

- Start number 145 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 145 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster FA:

- Start number 145 was manually annotated 8 times for cluster FA.

Info for manual annotations of cluster FB:

- Start number 109 was manually annotated 2 times for cluster FB.
- Start number 145 was manually annotated 3 times for cluster FB.

Info for manual annotations of cluster FG:

- Start number 145 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster FJ:

- Start number 196 was manually annotated 2 times for cluster FJ.

Info for manual annotations of cluster FN:

- Start number 145 was manually annotated 2 times for cluster FN.

Info for manual annotations of cluster FQ:

- Start number 126 was manually annotated 2 times for cluster FQ.
- Start number 138 was manually annotated 1 time for cluster FQ.

Info for manual annotations of cluster I2:

- Start number 146 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster J:

- Start number 85 was manually annotated 1 time for cluster J.
- Start number 90 was manually annotated 8 times for cluster J.
- Start number 104 was manually annotated 29 times for cluster J.
- Start number 114 was manually annotated 1 time for cluster J.
- Start number 136 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K1:

- Start number 145 was manually annotated 99 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 145 was manually annotated 9 times for cluster K2.

Info for manual annotations of cluster K6:

- Start number 145 was manually annotated 2 times for cluster K6.

Info for manual annotations of cluster P2:

- Start number 133 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 133 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P5:

- Start number 146 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster Q:

- Start number 133 was manually annotated 2 times for cluster Q.
- Start number 159 was manually annotated 20 times for cluster Q.

Info for manual annotations of cluster X:

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

**Gene Information:**

Gene: ACFishhook\_35 Start: 26718, Stop: 25579, Start Num: 177

Candidate Starts for ACFishhook\_35:

(Start: 144 @26781 has 1 MA's), (Start: 177 @26718 has 119 MA's), (Start: 209 @26664 has 14 MA's), (Start: 239 @26595 has 6 MA's), (363, 26376), (366, 26367), (383, 26331), (421, 26274), (465, 26196), (482, 26172), (487, 26163), (538, 26061), (552, 26043), (560, 26031), (596, 25956), (599, 25950), (608, 25929), (614, 25914), (623, 25896), (639, 25872), (714, 25713), (715, 25710), (721, 25680), (723, 25674), (726, 25662), (743, 25623),

Gene: AN3\_33 Start: 26414, Stop: 25290, Start Num: 177

Candidate Starts for AN3\_33:

(Start: 148 @26468 has 2 MA's), (Start: 177 @26414 has 119 MA's), (Start: 209 @26360 has 14 MA's), (Start: 239 @26291 has 6 MA's), (353, 26090), (366, 26063), (383, 26027), (420, 25973), (421, 25970), (434, 25943), (465, 25892), (487, 25859), (491, 25847), (502, 25829), (538, 25757), (552, 25739), (560, 25727), (584, 25688), (596, 25652), (599, 25646), (608, 25625), (614, 25610), (623, 25592), (641, 25565), (702, 25454), (715, 25406), (716, 25403), (721, 25376), (723, 25370), (726, 25358), (743, 25319),

Gene: AN9\_36 Start: 26399, Stop: 25275, Start Num: 177

Candidate Starts for AN9\_36:

(Start: 148 @26453 has 2 MA's), (Start: 177 @26399 has 119 MA's), (Start: 209 @26345 has 14 MA's), (Start: 239 @26276 has 6 MA's), (353, 26075), (366, 26048), (383, 26012), (420, 25958), (421, 25955), (434, 25928), (465, 25877), (487, 25844), (491, 25832), (502, 25814), (538, 25742), (552, 25724), (560, 25712), (584, 25673), (596, 25637), (599, 25631), (608, 25610), (614, 25595), (623, 25577), (641, 25550), (702, 25439), (715, 25391), (716, 25388), (721, 25361), (723, 25355), (726, 25343), (743, 25304),

Gene: ANI8\_36 Start: 26399, Stop: 25275, Start Num: 177

Candidate Starts for ANI8\_36:

(Start: 148 @26453 has 2 MA's), (Start: 177 @26399 has 119 MA's), (Start: 209 @26345 has 14 MA's), (Start: 239 @26276 has 6 MA's), (353, 26075), (366, 26048), (383, 26012), (420, 25958), (421, 25955), (434, 25928), (465, 25877), (487, 25844), (491, 25832), (502, 25814), (538, 25742), (552, 25724), (560, 25712), (584, 25673), (596, 25637), (599, 25631), (608, 25610), (614, 25595), (623, 25577), (641, 25550), (702, 25439), (715, 25391), (716, 25388), (721, 25361), (723, 25355), (726, 25343), (743, 25304),

Gene: AbbyDaisy\_36 Start: 27417, Stop: 26233, Start Num: 145

Candidate Starts for AbbyDaisy\_36:

(42, 27699), (44, 27690), (51, 27654), (69, 27579), (87, 27522), (Start: 105 @27483 has 1 MA's), (Start: 145 @27417 has 284 MA's), (174, 27366), (277, 27198), (287, 27180), (362, 27048), (422, 26970), (433, 26952), (448, 26919), (468, 26883), (473, 26874), (506, 26814), (543, 26739), (605, 26619), (673, 26505), (701, 26448), (706, 26427), (707, 26424), (710, 26409), (751, 26289),

Gene: AbbyPaige\_35 Start: 26720, Stop: 25575, Start Num: 162

Candidate Starts for AbbyPaige\_35:

(Start: 162 @26720 has 7 MA's), (Start: 171 @26702 has 7 MA's), (Start: 217 @26618 has 8 MA's), (Start: 239 @26570 has 6 MA's), (270, 26525), (366, 26342), (383, 26306), (421, 26249), (428, 26237), (487, 26138), (491, 26126), (502, 26108), (552, 26018), (560, 26006), (596, 25931), (599, 25925), (608, 25904), (614, 25889), (623, 25871), (641, 25844), (702, 25733), (715, 25685), (716, 25682), (721, 25655), (723, 25649), (726, 25637), (743, 25598),

Gene: Abdiel\_32 Start: 26295, Stop: 25129, Start Num: 156

Candidate Starts for Abdiel\_32:

(Start: 156 @26295 has 3 MA's), (170, 26268), (Start: 177 @26250 has 119 MA's), (Start: 217 @26181 has 8 MA's), (Start: 239 @26127 has 6 MA's), (363, 25908), (366, 25899), (383, 25863), (404, 25821), (420, 25809), (421, 25806), (465, 25728), (538, 25593), (552, 25575), (596, 25488), (599, 25482), (608, 25461), (614, 25446), (623, 25428), (702, 25290), (715, 25242), (721, 25212), (723, 25206), (726, 25194), (743, 25155),

Gene: Abidatro\_34 Start: 24278, Stop: 23067, Start Num: 127

Candidate Starts for Abidatro\_34:

(Start: 127 @24278 has 61 MA's), (245, 24059), (257, 24041), (326, 23924), (362, 23849), (368, 23834), (557, 23540), (567, 23519), (581, 23492), (605, 23426), (610, 23414), (618, 23396), (703, 23252), (706, 23243),

Gene: Abscondus\_83 Start: 51076, Stop: 52374, Start Num: 111

Candidate Starts for Abscondus\_83:

(Start: 111 @51076 has 12 MA's), (147, 51142), (197, 51244), (208, 51271), (214, 51283), (232, 51313), (259, 51352), (281, 51370), (319, 51436), (324, 51445), (368, 51529), (424, 51619), (507, 51778), (510, 51784), (511, 51787), (577, 51913), (603, 51982), (643, 52060), (670, 52111), (698, 52138), (706, 52174), (707, 52177), (708, 52180), (709, 52186), (711, 52198), (713, 52204), (714, 52207), (715, 52210), (721, 52240), (737, 52288), (742, 52297), (759, 52327),

Gene: Acolyte\_34 Start: 27024, Stop: 25957, Start Num: 209

Candidate Starts for Acolyte\_34:

(Start: 177 @27078 has 119 MA's), (Start: 209 @27024 has 14 MA's), (Start: 239 @26955 has 6 MA's), (366, 26727), (383, 26691), (421, 26634), (434, 26607), (465, 26556), (502, 26493), (552, 26403), (560, 26391), (577, 26370), (596, 26316), (599, 26310), (608, 26289), (614, 26274), (641, 26229), (702, 26118), (715, 26070), (721, 26040), (723, 26034), (726, 26022), (743, 25983),

Gene: ActinUp\_41 Start: 32479, Stop: 33567, Start Num: 145

Candidate Starts for ActinUp\_41:

(Start: 145 @32479 has 284 MA's), (174, 32530), (207, 32581), (221, 32605), (237, 32641), (323, 32779), (345, 32833), (429, 32917), (468, 32986), (470, 32989), (550, 33139), (594, 33217), (604, 33244), (667, 33331), (699, 33379),

Gene: AdaS\_36 Start: 25676, Stop: 24537, Start Num: 145

Candidate Starts for AdaS\_36:

(Start: 145 @25676 has 284 MA's), (174, 25625), (277, 25457), (287, 25439), (362, 25307), (422, 25229), (429, 25217), (468, 25142), (473, 25133), (506, 25073), (551, 24983), (605, 24878), (615, 24857), (636, 24830), (701, 24707), (707, 24683), (710, 24668), (728, 24593), (743, 24563),

Gene: Adelaide\_25 Start: 24090, Stop: 22960, Start Num: 181

Candidate Starts for Adelaide\_25:

(Start: 181 @24090 has 9 MA's), (192, 24075), (205, 24051), (276, 23937), (295, 23898), (317, 23856), (330, 23823), (333, 23814), (346, 23787), (357, 23769), (402, 23685), (414, 23670), (437, 23625), (474, 23565), (506, 23523), (511, 23511), (514, 23505), (527, 23484), (555, 23430), (557, 23427), (559, 23424), (568, 23403), (604, 23319), (610, 23313), (619, 23295), (637, 23265), (677, 23208), (702, 23166), (707, 23151), (710, 23136), (711, 23130), (714, 23121), (717, 23112), (723, 23082), (738, 23040), (750, 23019), (752, 23016), (757, 23007), (772, 22980), (778, 22965),

Gene: Adephagia\_41 Start: 32476, Stop: 33564, Start Num: 145

Candidate Starts for Adephagia\_41:

(Start: 145 @32476 has 284 MA's), (174, 32527), (207, 32578), (221, 32602), (237, 32638), (323, 32776), (345, 32830), (429, 32914), (468, 32983), (470, 32986), (550, 33136), (594, 33214), (604, 33241), (667, 33328), (699, 33376),



Gene: Adonis\_41 Start: 32777, Stop: 33865, Start Num: 145

Candidate Starts for Adonis\_41:

(Start: 145 @32777 has 284 MA's), (207, 32879), (221, 32903), (237, 32939), (309, 33053), (345, 33131), (429, 33215), (468, 33284), (470, 33287), (550, 33437), (604, 33542), (667, 33629), (699, 33677),

Gene: Adora\_37 Start: 31194, Stop: 32321, Start Num: 145

Candidate Starts for Adora\_37:

(121, 31155), (Start: 145 @31194 has 284 MA's), (174, 31248), (236, 31371), (258, 31404), (311, 31494), (327, 31527), (468, 31722), (470, 31725), (491, 31767), (511, 31803), (681, 32100), (707, 32178), (713, 32205), (718, 32220), (723, 32247), (749, 32310),

Gene: Adzzy\_35 Start: 25141, Stop: 24026, Start Num: 181

Candidate Starts for Adzzy\_35:

(Start: 181 @25141 has 9 MA's), (Start: 239 @25024 has 6 MA's), (270, 24979), (366, 24796), (383, 24760), (404, 24718), (420, 24706), (421, 24703), (432, 24679), (538, 24490), (552, 24472), (560, 24460), (577, 24439), (596, 24385), (608, 24358), (614, 24343), (623, 24325), (641, 24298), (715, 24139), (721, 24109), (723, 24103), (726, 24091), (743, 24052), (747, 24043),

Gene: Agape74\_35 Start: 26696, Stop: 25551, Start Num: 162

Candidate Starts for Agape74\_35:

(Start: 162 @26696 has 7 MA's), (Start: 171 @26678 has 7 MA's), (Start: 217 @26594 has 8 MA's), (Start: 239 @26546 has 6 MA's), (270, 26501), (366, 26318), (383, 26282), (421, 26225), (428, 26213), (487, 26114), (491, 26102), (502, 26084), (552, 25994), (560, 25982), (596, 25907), (599, 25901), (608, 25880), (614, 25865), (623, 25847), (641, 25820), (702, 25709), (715, 25661), (716, 25658), (721, 25631), (723, 25625), (726, 25613), (743, 25574),

Gene: Ageofdapage\_43 Start: 33453, Stop: 34541, Start Num: 145

Candidate Starts for Ageofdapage\_43:

(Start: 145 @33453 has 284 MA's), (207, 33555), (221, 33579), (237, 33615), (277, 33666), (309, 33729), (323, 33753), (345, 33807), (347, 33810), (429, 33891), (468, 33960), (470, 33963), (487, 33993), (550, 34113), (594, 34191), (604, 34218), (699, 34353),

Gene: Aglet\_36 Start: 26791, Stop: 25646, Start Num: 177

Candidate Starts for Aglet\_36:

(Start: 177 @26791 has 119 MA's), (Start: 203 @26752 has 10 MA's), (Start: 239 @26668 has 6 MA's), (270, 26623), (353, 26467), (366, 26440), (383, 26404), (421, 26347), (465, 26269), (482, 26245), (502, 26206), (538, 26134), (548, 26122), (552, 26116), (560, 26104), (596, 26029), (599, 26023), (608, 26002), (614, 25987), (623, 25969), (639, 25945), (702, 25831), (714, 25786), (715, 25783), (718, 25774), (721, 25753), (723, 25747), (726, 25735), (743, 25696),

Gene: Agueybana\_38 Start: 30381, Stop: 31463, Start Num: 143

Candidate Starts for Agueybana\_38:

(Start: 88 @30270 has 6 MA's), (Start: 143 @30381 has 52 MA's), (174, 30435), (242, 30555), (421, 30810), (438, 30840), (470, 30900), (506, 30966), (518, 30990), (707, 31320), (749, 31452),

Gene: Aikyam\_37 Start: 25607, Stop: 24468, Start Num: 145

Candidate Starts for Aikyam\_37:

(Start: 145 @25607 has 284 MA's), (174, 25556), (277, 25388), (287, 25370), (362, 25238), (422, 25160), (429, 25148), (433, 25142), (468, 25073), (473, 25064), (506, 25004), (551, 24914), (605, 24809), (615, 24788), (636, 24761), (701, 24638), (707, 24614), (710, 24599), (728, 24524), (743, 24494),

Gene: Akhila\_37 Start: 29110, Stop: 30237, Start Num: 145

Candidate Starts for Akhila\_37:

(91, 29008), (118, 29065), (Start: 145 @29110 has 284 MA's), (151, 29119), (237, 29281), (267, 29332), (277, 29350), (302, 29395), (345, 29491), (350, 29500), (438, 29605), (471, 29674), (491, 29713), (504, 29734), (510, 29746), (511, 29749), (518, 29761), (537, 29800), (540, 29806), (555, 29827), (583, 29863), (584, 29866), (596, 29902), (599, 29908), (604, 29920), (605, 29923), (611, 29938), (667, 30007), (676, 30022), (692, 30040), (701, 30064), (711, 30109), (714, 30118), (718, 30130), (723, 30157), (727, 30175), (736, 30196), (744, 30211), (749, 30220), (751, 30223),

Gene: Alatato\_29 Start: 23820, Stop: 22690, Start Num: 145

Candidate Starts for Alatato\_29:

(48, 24084), (Start: 145 @23820 has 284 MA's), (174, 23769), (175, 23766), (277, 23604), (309, 23541), (330, 23496), (337, 23475), (436, 23337), (438, 23334), (448, 23310), (459, 23295), (483, 23250), (571, 23091), (596, 23037), (614, 22995), (631, 22968), (667, 22914), (673, 22899), (681, 22890), (710, 22806), (711, 22800), (714, 22791), (725, 22746),

Gene: Aleemily\_34 Start: 29847, Stop: 28720, Start Num: 127

Candidate Starts for Aleemily\_34:

(11, 30327), (Start: 127 @29847 has 61 MA's), (Start: 158 @29793 has 1 MA's), (214, 29688), (310, 29517), (356, 29427), (373, 29391), (440, 29277), (496, 29238), (510, 29214), (569, 29118), (631, 28986), (658, 28941), (703, 28869), (743, 28743),

Gene: Alexphander\_45 Start: 32418, Stop: 33536, Start Num: 145

Candidate Starts for Alexphander\_45:

(Start: 145 @32418 has 284 MA's), (223, 32556), (237, 32589), (271, 32637), (345, 32790), (350, 32799), (422, 32880), (471, 32973), (491, 33012), (504, 33033), (510, 33045), (511, 33048), (518, 33060), (537, 33099), (540, 33105), (555, 33126), (583, 33162), (584, 33165), (596, 33201), (599, 33207), (605, 33222), (611, 33237), (667, 33306), (676, 33321), (692, 33339), (711, 33408), (714, 33417), (723, 33456), (727, 33474), (736, 33495), (744, 33510), (749, 33519), (751, 33522),

Gene: AlishaPH\_41 Start: 32751, Stop: 33839, Start Num: 145

Candidate Starts for AlishaPH\_41:

(Start: 145 @32751 has 284 MA's), (207, 32853), (221, 32877), (237, 32913), (323, 33051), (345, 33105), (429, 33189), (468, 33258), (470, 33261), (550, 33411), (604, 33516), (667, 33603), (699, 33651), (738, 33795),

Gene: Altostratus\_43 Start: 28384, Stop: 27227, Start Num: 126

Candidate Starts for Altostratus\_43:

(Start: 126 @28384 has 2 MA's), (153, 28333), (168, 28309), (Start: 185 @28264 has 12 MA's), (231, 28189), (261, 28126), (270, 28117), (330, 28012), (354, 27961), (362, 27949), (366, 27937), (371, 27928), (379, 27907), (422, 27838), (426, 27832), (430, 27823), (500, 27748), (523, 27706), (561, 27649), (569, 27637), (577, 27622), (598, 27568), (608, 27544), (615, 27526), (636, 27505), (648, 27481), (667, 27451), (698, 27400), (703, 27373), (713, 27337), (743, 27247),

Gene: AlumE\_39 Start: 31289, Stop: 32371, Start Num: 143

Candidate Starts for AlumE\_39:

(Start: 88 @31178 has 6 MA's), (Start: 143 @31289 has 52 MA's), (174, 31343), (242, 31463), (438, 31748), (470, 31808), (506, 31874), (518, 31898), (707, 32228), (725, 32303), (749, 32360),

Gene: Amelia\_36 Start: 24019, Stop: 22832, Start Num: 127

Candidate Starts for Amelia\_36:

(81, 24109), (Start: 127 @24019 has 61 MA's), (326, 23665), (362, 23590), (610, 23155), (698, 23020),

Gene: Amelie\_36 Start: 31976, Stop: 33070, Start Num: 145

Candidate Starts for Amelie\_36:

(32, 31625), (36, 31640), (51, 31733), (54, 31754), (83, 31847), (Start: 145 @31976 has 284 MA's), (174, 32027), (221, 32102), (237, 32138), (302, 32234), (309, 32252), (323, 32276), (342, 32324), (345, 32330), (453, 32462), (468, 32495), (491, 32540), (550, 32648), (604, 32753), (649, 32813), (699, 32888), (725, 32996), (738, 33032),

Gene: AmiCi24\_35 Start: 23912, Stop: 22719, Start Num: 127

Candidate Starts for AmiCi24\_35:

(Start: 127 @23912 has 61 MA's), (362, 23483), (388, 23426), (401, 23402), (557, 23174), (610, 23048), (615, 23036), (627, 23015), (706, 22877), (726, 22796), (749, 22748),

Gene: Amochick\_29 Start: 26484, Stop: 25291, Start Num: 159

Candidate Starts for Amochick\_29:

(Start: 133 @26526 has 4 MA's), (Start: 159 @26484 has 22 MA's), (188, 26418), (230, 26337), (242, 26298), (254, 26283), (260, 26277), (267, 26265), (283, 26238), (301, 26205), (334, 26148), (354, 26115), (357, 26112), (380, 26064), (408, 26022), (410, 26019), (428, 25995), (434, 25980), (444, 25956), (455, 25941), (481, 25902), (487, 25890), (507, 25851), (528, 25812), (549, 25764), (551, 25761), (590, 25689), (593, 25683), (595, 25671), (596, 25668), (599, 25662), (623, 25608), (633, 25590), (636, 25587), (650, 25560), (667, 25533), (699, 25491), (705, 25464), (707, 25458), (719, 25401), (743, 25338), (744, 25335),

Gene: Amymech\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Amymech\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Anaya\_43 Start: 33089, Stop: 34177, Start Num: 145

Candidate Starts for Anaya\_43:

(Start: 145 @33089 has 284 MA's), (207, 33191), (221, 33215), (237, 33251), (309, 33365), (345, 33443), (429, 33527), (468, 33596), (470, 33599), (550, 33749), (604, 33854), (667, 33941), (699, 33989),

Gene: Andrew\_37 Start: 23839, Stop: 22646, Start Num: 127

Candidate Starts for Andrew\_37:

(Start: 127 @23839 has 61 MA's), (151, 23794), (401, 23329), (557, 23101), (610, 22975), (615, 22963), (703, 22813), (749, 22675),

Gene: Anekin\_37 Start: 26993, Stop: 25815, Start Num: 145

Candidate Starts for Anekin\_37:

(132, 27011), (Start: 145 @26993 has 284 MA's), (174, 26942), (210, 26876), (287, 26756), (333, 26660), (362, 26624), (422, 26546), (468, 26459), (473, 26450), (506, 26390), (530, 26342), (551, 26300), (608, 26189), (636, 26147), (701, 26030), (706, 26009), (707, 26006), (710, 25991), (751, 25871),

Gene: Angelica\_41 Start: 32708, Stop: 33796, Start Num: 145

Candidate Starts for Angelica\_41:

(Start: 145 @32708 has 284 MA's), (207, 32810), (210, 32819), (221, 32834), (237, 32870), (345, 33062), (429, 33146), (468, 33215), (470, 33218), (550, 33368), (604, 33473), (667, 33560), (699, 33608), (738, 33752),

Gene: Angelique\_39 Start: 30954, Stop: 32036, Start Num: 143

Candidate Starts for Angelique\_39:

(Start: 88 @30843 has 6 MA's), (Start: 143 @30954 has 52 MA's), (174, 31008), (242, 31128), (421, 31383), (438, 31413), (470, 31473), (506, 31539), (518, 31563), (583, 31668), (707, 31893), (713, 31920), (725, 31968), (749, 32025),

Gene: Annalisa\_36 Start: 28551, Stop: 29678, Start Num: 145

Candidate Starts for Annalisa\_36:

(56, 28332), (67, 28368), (Start: 145 @28551 has 284 MA's), (174, 28605), (236, 28728), (258, 28761), (311, 28851), (327, 28884), (468, 29079), (470, 29082), (491, 29124), (511, 29160), (681, 29457), (718, 29577), (723, 29604), (749, 29667),

Gene: Anselm\_35 Start: 26782, Stop: 25661, Start Num: 177

Candidate Starts for Anselm\_35:

(Start: 144 @26845 has 1 MA's), (Start: 177 @26782 has 119 MA's), (Start: 209 @26728 has 14 MA's), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (383, 26395), (428, 26326), (446, 26284), (465, 26260), (502, 26197), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (641, 25933), (702, 25822), (714, 25777), (715, 25774), (716, 25771), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Antonio\_39 Start: 30563, Stop: 31645, Start Num: 143

Candidate Starts for Antonio\_39:

(Start: 88 @30452 has 6 MA's), (Start: 143 @30563 has 52 MA's), (174, 30617), (242, 30737), (421, 30992), (438, 31022), (470, 31082), (506, 31148), (518, 31172), (707, 31502), (713, 31529), (749, 31634),

Gene: Anubis\_38 Start: 26676, Stop: 25531, Start Num: 177

Candidate Starts for Anubis\_38:

(Start: 177 @26676 has 119 MA's), (Start: 203 @26637 has 10 MA's), (228, 26589), (Start: 239 @26553 has 6 MA's), (270, 26508), (353, 26352), (366, 26325), (383, 26289), (421, 26232), (465, 26154), (482, 26130), (502, 26091), (538, 26019), (548, 26007), (552, 26001), (560, 25989), (596, 25914), (599, 25908), (608, 25887), (614, 25872), (623, 25854), (639, 25830), (702, 25716), (714, 25671), (715, 25668), (718, 25659), (721, 25638), (723, 25632), (726, 25620), (743, 25581),

Gene: Aphelion\_83 Start: 51698, Stop: 52996, Start Num: 111

Candidate Starts for Aphelion\_83:

(Start: 111 @51698 has 12 MA's), (147, 51764), (197, 51866), (208, 51893), (214, 51905), (232, 51935), (259, 51974), (281, 51992), (319, 52058), (324, 52067), (368, 52151), (424, 52241), (507, 52400), (510, 52406), (511, 52409), (577, 52535), (603, 52604), (643, 52682), (670, 52733), (698, 52760), (706, 52796), (707, 52799), (709, 52808), (711, 52820), (713, 52826), (714, 52829), (715, 52832), (721, 52862), (737, 52910), (742, 52919), (759, 52949),

Gene: Apocalypse\_44 Start: 33493, Stop: 34581, Start Num: 145

Candidate Starts for Apocalypse\_44:

(Start: 145 @33493 has 284 MA's), (207, 33595), (221, 33619), (237, 33655), (323, 33793), (345, 33847), (429, 33931), (468, 34000), (470, 34003), (550, 34153), (604, 34258), (667, 34345), (699, 34393), (738, 34537),

Gene: Apricot\_48 Start: 31405, Stop: 32475, Start Num: 145

Candidate Starts for Apricot\_48:

(116, 31360), (Start: 145 @31405 has 284 MA's), (174, 31456), (206, 31504), (223, 31534), (236, 31561), (293, 31648), (327, 31714), (330, 31720), (345, 31756), (350, 31765), (414, 31816), (429, 31840), (440, 31858), (473, 31921), (491, 31957), (510, 31990), (511, 31993), (518, 32005), (530, 32029), (609, 32173), (629, 32200), (678, 32272), (707, 32332), (713, 32359), (719, 32389), (725, 32407), (749, 32464),

Gene: ArV2\_29 Start: 22829, Stop: 21699, Start Num: 145

Candidate Starts for ArV2\_29:

(Start: 145 @22829 has 284 MA's), (174, 22778), (271, 22625), (309, 22550), (338, 22481), (353, 22454), (438, 22343), (448, 22319), (483, 22259), (485, 22256), (491, 22241), (596, 22046), (609, 22016), (616, 21998), (618, 21995), (631, 21977), (667, 21923), (673, 21908), (691, 21881), (711, 21809), (714, 21800), (718, 21788),

Gene: ArchiDore\_40 Start: 34244, Stop: 33075, Start Num: 127

Candidate Starts for ArchiDore\_40:

(Start: 127 @34244 has 61 MA's), (216, 34082), (360, 33818), (366, 33803), (388, 33758), (422, 33710), (432, 33689), (434, 33686), (472, 33650), (498, 33623), (510, 33602), (561, 33521), (577, 33500), (599, 33443), (636, 33371), (651, 33341), (698, 33284), (700, 33272), (743, 33131), (763, 33092), (768, 33083),

Gene: Ardmore\_36 Start: 30890, Stop: 32008, Start Num: 145

Candidate Starts for Ardmore\_36:

(Start: 145 @30890 has 284 MA's), (151, 30899), (237, 31061), (330, 31226), (345, 31262), (350, 31271), (471, 31445), (502, 31502), (504, 31505), (510, 31517), (511, 31520), (518, 31532), (537, 31571), (555, 31598), (583, 31634), (584, 31637), (596, 31673), (599, 31679), (604, 31691), (605, 31694), (667, 31778), (676, 31793), (692, 31811), (711, 31880), (714, 31889), (723, 31928), (727, 31946), (736, 31967), (744, 31982), (749, 31991), (751, 31994),

Gene: Arianna\_32 Start: 30114, Stop: 28903, Start Num: 164

Candidate Starts for Arianna\_32:

(Start: 164 @30114 has 4 MA's), (256, 29940), (329, 29799), (405, 29640), (485, 29490), (531, 29400), (655, 29136), (676, 29100), (680, 29094), (738, 28929), (746, 28914), (748, 28911),

Gene: Ariel\_86 Start: 50063, Stop: 51337, Start Num: 90

Candidate Starts for Ariel\_86:

(70, 50006), (Start: 85 @50048 has 1 MA's), (Start: 90 @50063 has 10 MA's), (92, 50066), (Start: 114 @50111 has 2 MA's), (Start: 136 @50150 has 1 MA's), (330, 50531), (374, 50615), (378, 50627), (379, 50630), (451, 50759), (536, 50879), (580, 50942), (589, 50960), (597, 50984), (638, 51056), (720, 51233), (721, 51236), (723, 51242), (727, 51260), (732, 51275), (738, 51284), (740, 51287), (762, 51332),

Gene: Asapag\_47 Start: 32537, Stop: 33631, Start Num: 145

Candidate Starts for Asapag\_47:

(96, 32450), (Start: 114 @32486 has 2 MA's), (Start: 145 @32537 has 284 MA's), (174, 32588), (220, 32660), (223, 32666), (236, 32693), (293, 32780), (330, 32852), (345, 32888), (350, 32897), (429, 32972), (440, 32990), (491, 33089), (510, 33122), (511, 33125), (518, 33137), (584, 33239), (609, 33305), (629, 33332), (678, 33404), (707, 33464), (713, 33491), (751, 33599),

Gene: Asayake\_41 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for Asayake\_41:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: Atiba\_41 Start: 32439, Stop: 33527, Start Num: 145

Candidate Starts for Atiba\_41:

(Start: 145 @32439 has 284 MA's), (174, 32490), (207, 32541), (221, 32565), (237, 32601), (323, 32739), (345, 32793), (429, 32877), (468, 32946), (470, 32949), (550, 33099), (594, 33177), (604, 33204), (667, 33291), (699, 33339),

Gene: Atlantica\_36 Start: 23914, Stop: 22721, Start Num: 127

Candidate Starts for Atlantica\_36:

(Start: 127 @23914 has 61 MA's), (362, 23485), (388, 23428), (401, 23404), (557, 23176), (610, 23050), (615, 23038), (627, 23017), (706, 22879), (726, 22798), (749, 22750),

Gene: Attis\_34 Start: 27696, Stop: 28778, Start Num: 143

Candidate Starts for Attis\_34:

(Start: 88 @27585 has 6 MA's), (Start: 143 @27696 has 52 MA's), (174, 27750), (242, 27870), (421, 28125), (438, 28155), (470, 28215), (506, 28281), (518, 28305), (707, 28635), (713, 28662), (749, 28767),

Gene: AugsMagnumOpus\_38 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for AugsMagnumOpus\_38:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (228, 26695), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Auxilium\_38 Start: 25309, Stop: 24170, Start Num: 145

Candidate Starts for Auxilium\_38:

(Start: 145 @25309 has 284 MA's), (174, 25258), (277, 25090), (287, 25072), (362, 24940), (422, 24862), (429, 24850), (468, 24775), (473, 24766), (506, 24706), (551, 24616), (605, 24511), (615, 24490), (636, 24463), (701, 24340), (707, 24316), (710, 24301), (728, 24226), (743, 24196),

Gene: Ayotoya\_39 Start: 32055, Stop: 30784, Start Num: 127

Candidate Starts for Ayotoya\_39:

(Start: 127 @32055 has 61 MA's), (Start: 136 @32040 has 1 MA's), (Start: 185 @31938 has 12 MA's), (214, 31896), (222, 31884), (257, 31809), (299, 31734), (307, 31725), (316, 31707), (366, 31608), (368, 31605), (422, 31515), (508, 31410), (559, 31314), (562, 31308), (636, 31146), (700, 31005), (711, 30960), (724, 30909), (726, 30900), (730, 30885), (738, 30873), (744, 30861), (770, 30822),

Gene: B1\_31 Start: 25858, Stop: 24692, Start Num: 158

Candidate Starts for B1\_31:

(Start: 158 @25858 has 1 MA's), (Start: 177 @25816 has 119 MA's), (Start: 239 @25693 has 6 MA's), (270, 25648), (308, 25576), (330, 25528), (363, 25474), (366, 25465), (383, 25429), (421, 25372), (552, 25141), (560, 25129), (577, 25108), (596, 25054), (599, 25048), (608, 25027), (614, 25012), (623, 24994), (641, 24967), (702, 24856), (715, 24808), (716, 24805), (721, 24778), (723, 24772), (726, 24760), (732, 24739), (743, 24721),

Gene: BAKA\_86 Start: 53552, Stop: 54781, Start Num: 104

Candidate Starts for BAKA\_86:

(Start: 104 @53552 has 29 MA's), (Start: 114 @53570 has 2 MA's), (Start: 136 @53609 has 1 MA's), (251, 53846), (313, 53954), (374, 54074), (375, 54077), (378, 54086), (386, 54101), (407, 54140), (451, 54218), (520, 54323), (528, 54335), (536, 54338), (544, 54347), (579, 54398), (580, 54401), (589, 54419), (638, 54515), (672, 54572), (720, 54692), (721, 54695), (727, 54719), (738, 54743),

(740, 54746),

Gene: BEEST\_41 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for BEEST\_41:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: BENtherdunthat\_50 Start: 31782, Stop: 32852, Start Num: 145

Candidate Starts for BENtherdunthat\_50:

(117, 31740), (Start: 145 @31782 has 284 MA's), (174, 31833), (220, 31905), (223, 31911), (236, 31938), (345, 32133), (350, 32142), (414, 32193), (421, 32202), (422, 32205), (429, 32217), (454, 32262), (473, 32298), (491, 32334), (510, 32367), (511, 32370), (518, 32382), (609, 32550), (678, 32649), (707, 32709), (713, 32736), (714, 32739), (719, 32766), (721, 32772), (725, 32784), (749, 32841),

Gene: BGlluviae\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for BGlluviae\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: Babushka\_37 Start: 23843, Stop: 22650, Start Num: 127

Candidate Starts for Babushka\_37:

(Start: 127 @23843 has 61 MA's), (388, 23357), (401, 23333), (557, 23105), (610, 22979), (615, 22967), (627, 22946), (706, 22808), (749, 22679),

Gene: BabyJohn\_32 Start: 26607, Stop: 25474, Start Num: 173

Candidate Starts for BabyJohn\_32:

(Start: 173 @26607 has 3 MA's), (Start: 217 @26526 has 8 MA's), (Start: 239 @26472 has 6 MA's), (270, 26427), (364, 26250), (366, 26244), (383, 26208), (421, 26151), (465, 26073), (552, 25920), (560, 25908), (596, 25833), (599, 25827), (608, 25806), (614, 25791), (623, 25773), (639, 25749), (715, 25587), (721, 25557), (723, 25551), (726, 25539), (743, 25500),

Gene: BabyRay\_33 Start: 26385, Stop: 25249, Start Num: 173

Candidate Starts for BabyRay\_33:

(Start: 173 @26385 has 3 MA's), (Start: 239 @26250 has 6 MA's), (364, 26028), (366, 26022), (374, 26007), (383, 25986), (421, 25929), (465, 25851), (552, 25698), (560, 25686), (596, 25611), (599, 25605), (608, 25584), (614, 25569), (623, 25551), (715, 25365), (721, 25335), (723, 25329), (726, 25317), (732, 25296), (743, 25278),

Gene: Bachita\_85 Start: 52123, Stop: 53421, Start Num: 111

Candidate Starts for Bachita\_85:

(Start: 111 @52123 has 12 MA's), (147, 52189), (197, 52291), (208, 52318), (214, 52330), (232, 52360), (259, 52399), (281, 52417), (319, 52483), (324, 52492), (368, 52576), (424, 52666), (507, 52825), (510, 52831), (511, 52834), (577, 52960), (603, 53029), (643, 53107), (670, 53158), (698, 53185), (706, 53221), (707, 53224), (708, 53227), (709, 53233), (711, 53245), (713, 53251), (714, 53254), (715, 53257), (721, 53287), (737, 53335), (742, 53344), (759, 53374),

Gene: Bactobuster\_35 Start: 27867, Stop: 26860, Start Num: 239

Candidate Starts for Bactobuster\_35:

(Start: 177 @27987 has 119 MA's), (Start: 203 @27951 has 10 MA's), (Start: 239 @27867 has 6 MA's), (270, 27822), (360, 27654), (383, 27603), (446, 27492), (465, 27468), (487, 27435), (491, 27423), (518, 27375), (552, 27315), (554, 27312), (560, 27303), (596, 27228), (599, 27222), (608,

27201), (614, 27186), (623, 27168), (715, 26982), (721, 26952), (723, 26946), (726, 26934), (743, 26895), (758, 26871),

Gene: Baehexic\_34 Start: 26830, Stop: 25697, Start Num: 177

Candidate Starts for Baehexic\_34:

(Start: 177 @26830 has 119 MA's), (Start: 209 @26776 has 14 MA's), (Start: 239 @26707 has 6 MA's), (270, 26662), (353, 26506), (366, 26479), (383, 26443), (421, 26386), (491, 26263), (502, 26245), (552, 26155), (560, 26143), (596, 26068), (599, 26062), (608, 26041), (614, 26026), (623, 26008), (641, 25981), (645, 25972), (702, 25870), (715, 25822), (721, 25792), (723, 25786), (726, 25774), (743, 25735),

Gene: BaghaKamala\_40 Start: 31917, Stop: 33005, Start Num: 145

Candidate Starts for BaghaKamala\_40:

(54, 31695), (Start: 145 @31917 has 284 MA's), (174, 31968), (207, 32019), (221, 32043), (237, 32079), (323, 32217), (345, 32271), (429, 32355), (468, 32424), (470, 32427), (550, 32577), (604, 32682), (667, 32769), (699, 32817),

Gene: Bagrid\_82 Start: 52202, Stop: 53431, Start Num: 104

Candidate Starts for Bagrid\_82:

(Start: 104 @52202 has 29 MA's), (Start: 114 @52220 has 2 MA's), (Start: 136 @52259 has 1 MA's), (251, 52496), (313, 52604), (374, 52724), (375, 52727), (378, 52736), (386, 52751), (407, 52790), (451, 52868), (520, 52973), (528, 52985), (536, 52988), (544, 52997), (579, 53048), (580, 53051), (589, 53069), (638, 53165), (672, 53222), (720, 53342), (721, 53345), (727, 53369), (738, 53393), (740, 53396),

Gene: BangNhom\_33 Start: 26587, Stop: 25466, Start Num: 177

Candidate Starts for BangNhom\_33:

(Start: 156 @26632 has 3 MA's), (170, 26605), (Start: 177 @26587 has 119 MA's), (Start: 217 @26518 has 8 MA's), (Start: 239 @26464 has 6 MA's), (363, 26245), (366, 26236), (383, 26200), (404, 26158), (420, 26146), (421, 26143), (538, 25930), (552, 25912), (596, 25825), (599, 25819), (608, 25798), (614, 25783), (623, 25765), (702, 25627), (715, 25579), (721, 25549), (723, 25543), (726, 25531), (743, 25492),

Gene: Banquo\_37 Start: 27140, Stop: 26034, Start Num: 185

Candidate Starts for Banquo\_37:

(Start: 185 @27140 has 12 MA's), (365, 26819), (399, 26756), (408, 26744), (436, 26693), (517, 26531), (544, 26483), (607, 26354), (628, 26306), (682, 26210), (718, 26120), (723, 26093),

Gene: BarrelRoll\_41 Start: 32462, Stop: 33550, Start Num: 145

Candidate Starts for BarrelRoll\_41:

(Start: 145 @32462 has 284 MA's), (174, 32513), (207, 32564), (221, 32588), (237, 32624), (323, 32762), (345, 32816), (429, 32900), (468, 32969), (470, 32972), (550, 33122), (594, 33200), (604, 33227), (667, 33314), (699, 33362),

Gene: Basilisk\_34 Start: 24758, Stop: 23574, Start Num: 127

Candidate Starts for Basilisk\_34:

(Start: 127 @24758 has 61 MA's), (245, 24539), (326, 24404), (362, 24329), (368, 24314), (500, 24113), (605, 23906), (610, 23894), (618, 23876), (627, 23861), (698, 23759), (703, 23732), (706, 23723),

Gene: BatStarr\_39 Start: 31901, Stop: 33094, Start Num: 88

Candidate Starts for BatStarr\_39:



(Start: 88 @31901 has 6 MA's), (Start: 143 @32012 has 52 MA's), (174, 32066), (242, 32186), (414, 32432), (421, 32441), (438, 32471), (470, 32531), (506, 32597), (518, 32621), (707, 32951), (713, 32978), (749, 33083),

Gene: Batiatus\_43 Start: 33150, Stop: 34277, Start Num: 145

Candidate Starts for Batiatus\_43:

(91, 33048), (118, 33105), (Start: 145 @33150 has 284 MA's), (151, 33159), (237, 33321), (267, 33372), (277, 33390), (302, 33435), (345, 33531), (350, 33540), (422, 33621), (438, 33645), (471, 33714), (491, 33753), (502, 33771), (504, 33774), (510, 33786), (511, 33789), (518, 33801), (525, 33816), (537, 33840), (540, 33846), (555, 33867), (583, 33903), (584, 33906), (596, 33942), (599, 33948), (605, 33963), (611, 33978), (667, 34047), (676, 34062), (701, 34104), (711, 34149), (714, 34158), (723, 34197), (727, 34215), (736, 34236), (744, 34251), (749, 34260), (751, 34263),

Gene: Bauer\_39 Start: 26996, Stop: 28129, Start Num: 145

Candidate Starts for Bauer\_39:

(55, 26783), (65, 26819), (77, 26861), (134, 26984), (Start: 145 @26996 has 284 MA's), (202, 27089), (255, 27182), (362, 27359), (422, 27422), (429, 27434), (470, 27512), (476, 27524), (505, 27575), (545, 27656), (551, 27668), (571, 27695), (596, 27749), (665, 27869), (676, 27890), (707, 27962), (710, 27977), (727, 28049), (728, 28052), (743, 28082), (744, 28085), (762, 28118),

Gene: BaxterFox\_37 Start: 31379, Stop: 30117, Start Num: 127

Candidate Starts for BaxterFox\_37:

(Start: 127 @31379 has 61 MA's), (211, 31223), (310, 31040), (329, 31004), (362, 30944), (366, 30932), (388, 30887), (407, 30854), (434, 30812), (562, 30644), (563, 30641), (596, 30566), (604, 30548), (605, 30545), (636, 30488), (694, 30371), (698, 30359), (711, 30302), (726, 30242), (730, 30227), (738, 30215), (743, 30206), (763, 30167),

Gene: Beakin\_43 Start: 31583, Stop: 32701, Start Num: 145

Candidate Starts for Beakin\_43:

(Start: 145 @31583 has 284 MA's), (151, 31592), (237, 31754), (330, 31919), (345, 31955), (350, 31964), (438, 32069), (471, 32138), (491, 32177), (502, 32195), (504, 32198), (510, 32210), (511, 32213), (518, 32225), (525, 32240), (537, 32264), (540, 32270), (555, 32291), (583, 32327), (584, 32330), (596, 32366), (599, 32372), (605, 32387), (611, 32402), (667, 32471), (676, 32486), (701, 32528), (711, 32573), (714, 32582), (723, 32621), (727, 32639), (736, 32660), (744, 32675), (749, 32684), (751, 32687),

Gene: Beauxregard13\_36 Start: 26790, Stop: 25645, Start Num: 177

Candidate Starts for Beauxregard13\_36:

(Start: 177 @26790 has 119 MA's), (Start: 203 @26751 has 10 MA's), (228, 26703), (Start: 239 @26667 has 6 MA's), (270, 26622), (353, 26466), (366, 26439), (383, 26403), (421, 26346), (465, 26268), (482, 26244), (502, 26205), (538, 26133), (548, 26121), (552, 26115), (560, 26103), (596, 26028), (599, 26022), (608, 26001), (614, 25986), (623, 25968), (639, 25944), (702, 25830), (714, 25785), (715, 25782), (718, 25773), (721, 25752), (723, 25746), (726, 25734), (743, 25695),

Gene: Bedetta\_40 Start: 24167, Stop: 22980, Start Num: 127

Candidate Starts for Bedetta\_40:

(81, 24257), (Start: 127 @24167 has 61 MA's), (362, 23738), (610, 23303), (698, 23168),

Gene: BeeGee\_42 Start: 31829, Stop: 32935, Start Num: 145

Candidate Starts for BeeGee\_42:

(Start: 113 @31772 has 2 MA's), (Start: 145 @31829 has 284 MA's), (174, 31880), (236, 31985), (267, 32024), (426, 32258), (429, 32264), (468, 32333), (470, 32336), (487, 32366), (511, 32417), (518, 32429), (645, 32657), (683, 32717), (707, 32792), (714, 32822), (749, 32924),

Gene: Beem\_81 Start: 53063, Stop: 54292, Start Num: 104

Candidate Starts for Beem\_81:

(Start: 104 @53063 has 29 MA's), (Start: 114 @53081 has 2 MA's), (Start: 136 @53120 has 1 MA's), (251, 53357), (313, 53465), (374, 53585), (375, 53588), (378, 53597), (386, 53612), (407, 53651), (451, 53729), (520, 53834), (528, 53846), (536, 53849), (544, 53858), (579, 53909), (580, 53912), (589, 53930), (638, 54026), (672, 54083), (720, 54203), (721, 54206), (727, 54230), (738, 54254), (740, 54257),

Gene: Beenie\_33 Start: 29179, Stop: 30306, Start Num: 145

Candidate Starts for Beenie\_33:

(121, 29140), (Start: 145 @29179 has 284 MA's), (174, 29233), (236, 29356), (258, 29389), (311, 29479), (327, 29512), (468, 29707), (470, 29710), (491, 29752), (511, 29788), (681, 30085), (707, 30163), (713, 30190), (718, 30205), (723, 30232), (749, 30295),

Gene: Beezoo\_43 Start: 33442, Stop: 34530, Start Num: 145

Candidate Starts for Beezoo\_43:

(Start: 145 @33442 has 284 MA's), (207, 33544), (221, 33568), (237, 33604), (323, 33742), (345, 33796), (429, 33880), (468, 33949), (470, 33952), (550, 34102), (604, 34207), (667, 34294), (699, 34342), (738, 34486),

Gene: Bella96\_42 Start: 33333, Stop: 34421, Start Num: 145

Candidate Starts for Bella96\_42:

(Start: 145 @33333 has 284 MA's), (174, 33384), (207, 33435), (221, 33459), (237, 33495), (309, 33609), (323, 33633), (345, 33687), (429, 33771), (468, 33840), (550, 33993), (604, 34098), (667, 34185), (699, 34233), (738, 34377),

Gene: Belladonna\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Belladonna\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: BellusTerra\_33 Start: 26249, Stop: 25128, Start Num: 177

Candidate Starts for BellusTerra\_33:

(Start: 156 @26294 has 3 MA's), (170, 26267), (Start: 177 @26249 has 119 MA's), (Start: 217 @26180 has 8 MA's), (Start: 239 @26126 has 6 MA's), (363, 25907), (366, 25898), (383, 25862), (404, 25820), (420, 25808), (421, 25805), (465, 25727), (538, 25592), (552, 25574), (596, 25487), (608, 25460), (614, 25445), (623, 25427), (702, 25289), (715, 25241), (721, 25211), (723, 25205), (726, 25193), (743, 25154),

Gene: BenchScraper\_39 Start: 27267, Stop: 26128, Start Num: 145

Candidate Starts for BenchScraper\_39:

(Start: 145 @27267 has 284 MA's), (174, 27216), (277, 27048), (287, 27030), (362, 26898), (422, 26820), (429, 26808), (433, 26802), (468, 26733), (473, 26724), (506, 26664), (551, 26574), (605, 26469), (615, 26448), (636, 26421), (701, 26298), (707, 26274), (710, 26259), (728, 26184), (743, 26154),

Gene: BetterKatz\_39 Start: 31582, Stop: 30311, Start Num: 127

Candidate Starts for BetterKatz\_39:

(Start: 127 @31582 has 61 MA's), (Start: 136 @31567 has 1 MA's), (Start: 185 @31465 has 12 MA's), (214, 31423), (222, 31411), (257, 31336), (299, 31261), (307, 31252), (316, 31234), (366, 31135), (368, 31132), (422, 31042), (508, 30937), (562, 30835), (569, 30817), (636, 30673), (700, 30532),

(711, 30487), (724, 30436), (726, 30427), (738, 30400), (744, 30388), (770, 30349),

Gene: Bhageatrice\_40 Start: 29135, Stop: 27957, Start Num: 145

Candidate Starts for Bhageatrice\_40:

(119, 29174), (Start: 145 @29135 has 284 MA's), (210, 29018), (287, 28898), (362, 28766), (422, 28688), (468, 28601), (473, 28592), (506, 28532), (551, 28442), (605, 28337), (608, 28331), (636, 28289), (701, 28172), (707, 28148), (710, 28133), (751, 28013),

Gene: Bialota\_37 Start: 31315, Stop: 32397, Start Num: 143

Candidate Starts for Bialota\_37:

(Start: 88 @31204 has 6 MA's), (Start: 143 @31315 has 52 MA's), (174, 31369), (242, 31489), (421, 31744), (438, 31774), (470, 31834), (506, 31900), (518, 31924), (707, 32254), (713, 32281), (749, 32386),

Gene: BiancaTri92\_35 Start: 27662, Stop: 26547, Start Num: 180

Candidate Starts for BiancaTri92\_35:

(166, 27692), (Start: 180 @27662 has 10 MA's), (Start: 209 @27611 has 14 MA's), (Start: 239 @27542 has 6 MA's), (270, 27497), (353, 27341), (354, 27338), (366, 27314), (383, 27278), (421, 27221), (465, 27143), (502, 27080), (552, 26990), (560, 26978), (596, 26903), (599, 26897), (608, 26876), (614, 26861), (623, 26843), (715, 26657), (721, 26627), (723, 26621), (726, 26609), (743, 26570),

Gene: BigPhil\_38 Start: 27903, Stop: 29021, Start Num: 145

Candidate Starts for BigPhil\_38:

(Start: 145 @27903 has 284 MA's), (237, 28074), (330, 28239), (345, 28275), (350, 28284), (422, 28365), (438, 28389), (471, 28458), (491, 28497), (502, 28515), (504, 28518), (510, 28530), (511, 28533), (518, 28545), (525, 28560), (537, 28584), (540, 28590), (555, 28611), (583, 28647), (584, 28650), (596, 28686), (599, 28692), (604, 28704), (605, 28707), (611, 28722), (667, 28791), (676, 28806), (701, 28848), (711, 28893), (714, 28902), (723, 28941), (727, 28959), (736, 28980), (744, 28995), (749, 29004), (751, 29007),

Gene: Bigflo\_36 Start: 26789, Stop: 25644, Start Num: 177

Candidate Starts for Bigflo\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: Biglebops\_36 Start: 31976, Stop: 33070, Start Num: 145

Candidate Starts for Biglebops\_36:

(32, 31625), (36, 31640), (51, 31733), (54, 31754), (83, 31847), (Start: 145 @31976 has 284 MA's), (174, 32027), (221, 32102), (237, 32138), (302, 32234), (309, 32252), (323, 32276), (342, 32324), (345, 32330), (453, 32462), (468, 32495), (491, 32540), (550, 32648), (604, 32753), (649, 32813), (699, 32888), (725, 32996), (738, 33032),

Gene: BillyTP\_42 Start: 29080, Stop: 27908, Start Num: 145

Candidate Starts for BillyTP\_42:

(Start: 145 @29080 has 284 MA's), (210, 28963), (277, 28861), (287, 28843), (362, 28711), (422, 28633), (429, 28621), (468, 28546), (473, 28537), (506, 28477), (551, 28387), (605, 28282), (615, 28261), (631, 28237), (636, 28234), (675, 28165), (701, 28111), (707, 28087), (710, 28072), (754, 27952), (769, 27925),

Gene: Bipolar\_39 Start: 31381, Stop: 32499, Start Num: 145

Candidate Starts for Bipolar\_39:

(Start: 145 @31381 has 284 MA's), (223, 31519), (237, 31552), (271, 31600), (330, 31717), (345, 31753), (350, 31762), (438, 31867), (471, 31936), (491, 31975), (504, 31996), (510, 32008), (511, 32011), (518, 32023), (525, 32038), (537, 32062), (540, 32068), (555, 32089), (583, 32125), (584, 32128), (596, 32164), (599, 32170), (605, 32185), (667, 32269), (676, 32284), (692, 32302), (701, 32326), (711, 32371), (714, 32380), (723, 32419), (727, 32437), (736, 32458), (744, 32473), (749, 32482), (751, 32485),

Gene: Birdsong\_47 Start: 32758, Stop: 33852, Start Num: 145

Candidate Starts for Birdsong\_47:

(66, 32578), (76, 32617), (Start: 145 @32758 has 284 MA's), (174, 32809), (223, 32887), (236, 32914), (271, 32959), (293, 33001), (330, 33073), (345, 33109), (350, 33118), (421, 33178), (429, 33193), (440, 33211), (491, 33310), (504, 33331), (510, 33343), (511, 33346), (518, 33358), (530, 33382), (584, 33460), (629, 33553), (678, 33625), (707, 33685), (721, 33748), (725, 33760), (751, 33820),

Gene: Bjaner7\_34 Start: 27585, Stop: 28778, Start Num: 88

Candidate Starts for Bjaner7\_34:

(Start: 86 @27579 has 2 MA's), (Start: 88 @27585 has 6 MA's), (Start: 143 @27696 has 52 MA's), (174, 27750), (242, 27870), (421, 28125), (438, 28155), (470, 28215), (506, 28281), (518, 28305), (557, 28374), (583, 28410), (707, 28635), (713, 28662), (749, 28767),

Gene: BlackSpider\_36 Start: 26664, Stop: 27788, Start Num: 145

Candidate Starts for BlackSpider\_36:

(55, 26439), (65, 26475), (Start: 145 @26664 has 284 MA's), (255, 26850), (362, 27027), (422, 27090), (429, 27102), (470, 27180), (476, 27192), (505, 27243), (545, 27324), (551, 27336), (571, 27363), (596, 27417), (706, 27627), (707, 27630), (710, 27645), (720, 27690), (728, 27720), (743, 27750),

Gene: Blarby\_54 Start: 32907, Stop: 34010, Start Num: 145

Candidate Starts for Blarby\_54:

(Start: 145 @32907 has 284 MA's), (174, 32955), (223, 33036), (233, 33063), (345, 33276), (367, 33300), (422, 33348), (468, 33429), (506, 33498), (510, 33507), (537, 33561), (550, 33582), (594, 33660), (599, 33675), (645, 33735), (667, 33774), (676, 33789), (690, 33813), (701, 33840), (707, 33864), (711, 33885), (714, 33894), (725, 33939), (727, 33951),

Gene: Blizzard\_41 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for Blizzard\_41:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: BlueBird\_34 Start: 26297, Stop: 25170, Start Num: 177

Candidate Starts for BlueBird\_34:

(Start: 177 @26297 has 119 MA's), (228, 26210), (Start: 239 @26174 has 6 MA's), (270, 26129), (353, 25973), (360, 25961), (363, 25955), (383, 25910), (420, 25856), (421, 25853), (465, 25775), (552, 25622), (560, 25610), (584, 25571), (596, 25535), (599, 25529), (608, 25508), (614, 25493), (623, 25475), (641, 25448), (702, 25337), (715, 25289), (721, 25259), (723, 25253), (726, 25241), (743, 25202),

Gene: BlueShadow\_40 Start: 27645, Stop: 26479, Start Num: 145

Candidate Starts for BlueShadow\_40:

(Start: 145 @27645 has 284 MA's), (277, 27426), (287, 27408), (362, 27276), (422, 27198), (429, 27186), (468, 27111), (473, 27102), (506, 27042), (551, 26952), (605, 26847), (615, 26826), (631, 26802), (636, 26799), (701, 26676), (706, 26655), (707, 26652), (710, 26637), (769, 26490),

Gene: BobaPhett\_43 Start: 33216, Stop: 34334, Start Num: 145

Candidate Starts for BobaPhett\_43:

(Start: 145 @33216 has 284 MA's), (223, 33354), (237, 33387), (271, 33435), (330, 33552), (345, 33588), (350, 33597), (438, 33702), (471, 33771), (504, 33831), (510, 33843), (511, 33846), (518, 33858), (525, 33873), (537, 33897), (540, 33903), (555, 33924), (583, 33960), (584, 33963), (596, 33999), (599, 34005), (604, 34017), (605, 34020), (667, 34104), (676, 34119), (701, 34161), (711, 34206), (714, 34215), (723, 34254), (727, 34272), (736, 34293), (744, 34308), (749, 34317), (751, 34320),

Gene: Bobby\_80 Start: 53134, Stop: 54363, Start Num: 104

Candidate Starts for Bobby\_80:

(Start: 104 @53134 has 29 MA's), (Start: 114 @53152 has 2 MA's), (Start: 136 @53191 has 1 MA's), (251, 53428), (313, 53536), (374, 53656), (375, 53659), (378, 53668), (386, 53683), (451, 53800), (528, 53917), (536, 53920), (544, 53929), (579, 53980), (580, 53983), (589, 54001), (638, 54097), (720, 54274), (721, 54277), (727, 54301), (738, 54325), (740, 54328),

Gene: Bobi\_46 Start: 33890, Stop: 35017, Start Num: 145

Candidate Starts for Bobi\_46:

(91, 33788), (118, 33845), (Start: 145 @33890 has 284 MA's), (151, 33899), (237, 34061), (267, 34112), (277, 34130), (302, 34175), (345, 34271), (350, 34280), (438, 34385), (471, 34454), (504, 34514), (510, 34526), (511, 34529), (518, 34541), (525, 34556), (537, 34580), (540, 34586), (555, 34607), (583, 34643), (584, 34646), (596, 34682), (599, 34688), (604, 34700), (605, 34703), (667, 34787), (676, 34802), (701, 34844), (711, 34889), (714, 34898), (723, 34937), (727, 34955), (736, 34976), (744, 34991), (749, 35000), (751, 35003),

Gene: Bock\_39 Start: 31274, Stop: 30003, Start Num: 127

Candidate Starts for Bock\_39:

(Start: 127 @31274 has 61 MA's), (Start: 136 @31259 has 1 MA's), (Start: 185 @31157 has 12 MA's), (214, 31115), (222, 31103), (257, 31028), (299, 30953), (307, 30944), (316, 30926), (366, 30827), (368, 30824), (422, 30734), (503, 30638), (508, 30629), (549, 30548), (562, 30527), (569, 30509), (599, 30434), (636, 30365), (700, 30224), (711, 30179), (724, 30128), (726, 30119), (738, 30092), (744, 30080), (770, 30041),

Gene: Boiiii\_41 Start: 32794, Stop: 33882, Start Num: 145

Candidate Starts for Boiiii\_41:

(Start: 145 @32794 has 284 MA's), (207, 32896), (221, 32920), (237, 32956), (323, 33094), (429, 33232), (468, 33301), (470, 33304), (550, 33454), (604, 33559), (699, 33694),

Gene: Bombitas\_71 Start: 50226, Stop: 51455, Start Num: 104

Candidate Starts for Bombitas\_71:

(Start: 104 @50226 has 29 MA's), (Start: 114 @50244 has 2 MA's), (Start: 136 @50283 has 1 MA's), (251, 50520), (313, 50628), (374, 50748), (375, 50751), (378, 50760), (386, 50775), (407, 50814), (451, 50892), (520, 50997), (528, 51009), (536, 51012), (544, 51021), (579, 51072), (580, 51075), (589, 51093), (638, 51189), (672, 51246), (720, 51366), (721, 51369), (727, 51393), (738, 51417), (740, 51420),

Gene: BoostSeason\_44 Start: 34144, Stop: 35244, Start Num: 145

Candidate Starts for BoostSeason\_44:

(Start: 145 @34144 has 284 MA's), (Start: 158 @34162 has 1 MA's), (174, 34195), (221, 34270), (237, 34306), (309, 34420), (323, 34444), (345, 34498), (457, 34639), (468, 34663), (470, 34666), (491, 34708), (550, 34816), (604, 34921), (643, 34966), (649, 34981), (725, 35173),

Gene: Bosnia\_39 Start: 32012, Stop: 33094, Start Num: 143

Candidate Starts for Bosnia\_39:

(Start: 88 @31901 has 6 MA's), (Start: 143 @32012 has 52 MA's), (174, 32066), (242, 32186), (311, 32297), (414, 32432), (470, 32531), (506, 32597), (518, 32621), (583, 32726), (707, 32951), (713, 32978), (725, 33026), (749, 33083),

Gene: BotCity\_51 Start: 32558, Stop: 33655, Start Num: 145

Candidate Starts for BotCity\_51:

(Start: 145 @32558 has 284 MA's), (174, 32609), (206, 32657), (223, 32687), (236, 32714), (293, 32801), (327, 32867), (330, 32873), (345, 32909), (350, 32918), (421, 32978), (429, 32993), (440, 33011), (454, 33038), (491, 33110), (510, 33143), (511, 33146), (518, 33158), (530, 33182), (609, 33326), (678, 33425), (707, 33485), (713, 33512), (725, 33560), (727, 33572), (751, 33620),

Gene: BoyNamedSue\_39 Start: 31289, Stop: 32371, Start Num: 143

Candidate Starts for BoyNamedSue\_39:

(Start: 88 @31178 has 6 MA's), (Start: 143 @31289 has 52 MA's), (174, 31343), (242, 31463), (438, 31748), (470, 31808), (506, 31874), (518, 31898), (707, 32228), (725, 32303), (749, 32360),

Gene: Bradissa\_36 Start: 31469, Stop: 32551, Start Num: 143

Candidate Starts for Bradissa\_36:

(Start: 143 @31469 has 52 MA's), (Start: 212 @31586 has 1 MA's), (271, 31679), (421, 31901), (441, 31937), (470, 31991), (507, 32060), (511, 32069), (707, 32408), (713, 32435), (749, 32540),

Gene: Bradman\_34 Start: 25599, Stop: 24475, Start Num: 177

Candidate Starts for Bradman\_34:

(Start: 177 @25599 has 119 MA's), (223, 25521), (Start: 239 @25476 has 6 MA's), (270, 25431), (301, 25371), (366, 25248), (383, 25212), (420, 25158), (421, 25155), (491, 25032), (493, 25029), (502, 25014), (548, 24930), (552, 24924), (577, 24891), (583, 24876), (596, 24837), (608, 24810), (614, 24795), (623, 24777), (641, 24750), (702, 24639), (715, 24591), (716, 24588), (718, 24582), (721, 24561), (723, 24555), (726, 24543), (743, 24504),

Gene: Bran\_28 Start: 25552, Stop: 24428, Start Num: 181

Candidate Starts for Bran\_28:

(Start: 181 @25552 has 9 MA's), (192, 25537), (205, 25513), (276, 25399), (295, 25360), (317, 25318), (330, 25285), (333, 25276), (346, 25249), (357, 25231), (414, 25132), (427, 25111), (437, 25087), (474, 25027), (506, 24985), (511, 24973), (514, 24967), (527, 24946), (555, 24892), (557, 24889), (559, 24886), (568, 24865), (604, 24781), (610, 24775), (619, 24757), (637, 24727), (677, 24670), (707, 24613), (710, 24598), (711, 24592), (714, 24583), (717, 24574), (718, 24571), (721, 24550), (723, 24544), (727, 24526), (738, 24502), (750, 24481), (752, 24478), (757, 24469),

Gene: BrayBeast\_32 Start: 24672, Stop: 23518, Start Num: 145

Candidate Starts for BrayBeast\_32:

(Start: 145 @24672 has 284 MA's), (175, 24618), (309, 24369), (330, 24324), (337, 24303), (338, 24300), (352, 24276), (429, 24177), (438, 24162), (483, 24078), (571, 23919), (596, 23865), (607, 23841), (614, 23823), (631, 23796), (649, 23769), (667, 23742), (673, 23727), (681, 23718), (710, 23634), (711, 23628), (714, 23619), (725, 23574), (734, 23544),

Gene: BreSam8\_36 Start: 26783, Stop: 25638, Start Num: 177

Candidate Starts for BreSam8\_36:

(Start: 177 @26783 has 119 MA's), (Start: 203 @26744 has 10 MA's), (228, 26696), (Start: 239 @26660 has 6 MA's), (270, 26615), (353, 26459), (366, 26432), (383, 26396), (421, 26339), (465, 26261), (482, 26237), (502, 26198), (538, 26126), (548, 26114), (552, 26108), (560, 26096), (596, 26021), (599, 26015), (608, 25994), (614, 25979), (623, 25961), (639, 25937), (702, 25823), (714, 25778), (715, 25775), (718, 25766), (721, 25745), (723, 25739), (726, 25727), (743, 25688),

Gene: Bridgette\_38 Start: 26661, Stop: 27803, Start Num: 145

Candidate Starts for Bridgette\_38:

(Start: 138 @26646 has 1 MA's), (141, 26655), (Start: 145 @26661 has 284 MA's), (342, 27015), (345, 27021), (354, 27039), (438, 27147), (468, 27207), (518, 27300), (584, 27420), (602, 27468), (614, 27498), (673, 27594), (714, 27702), (734, 27777),

Gene: Brocalys\_36 Start: 27204, Stop: 28322, Start Num: 145

Candidate Starts for Brocalys\_36:

(Start: 145 @27204 has 284 MA's), (151, 27213), (237, 27375), (330, 27540), (345, 27576), (350, 27585), (422, 27666), (438, 27690), (471, 27759), (491, 27798), (502, 27816), (504, 27819), (510, 27831), (511, 27834), (518, 27846), (525, 27861), (537, 27885), (540, 27891), (555, 27912), (583, 27948), (584, 27951), (596, 27987), (599, 27993), (605, 28008), (611, 28023), (667, 28092), (676, 28107), (701, 28149), (711, 28194), (714, 28203), (723, 28242), (727, 28260), (736, 28281), (744, 28296), (749, 28305), (751, 28308),

Gene: Brookers\_40 Start: 30854, Stop: 31972, Start Num: 145

Candidate Starts for Brookers\_40:

(Start: 145 @30854 has 284 MA's), (237, 31025), (330, 31190), (345, 31226), (350, 31235), (422, 31316), (438, 31340), (471, 31409), (491, 31448), (502, 31466), (504, 31469), (510, 31481), (511, 31484), (518, 31496), (525, 31511), (537, 31535), (540, 31541), (555, 31562), (583, 31598), (584, 31601), (596, 31637), (599, 31643), (604, 31655), (605, 31658), (611, 31673), (667, 31742), (676, 31757), (701, 31799), (711, 31844), (714, 31853), (723, 31892), (727, 31910), (736, 31931), (744, 31946), (749, 31955), (751, 31958),

Gene: Brushbloom\_50 Start: 32847, Stop: 33965, Start Num: 145

Candidate Starts for Brushbloom\_50:

(Start: 145 @32847 has 284 MA's), (151, 32856), (223, 32985), (237, 33018), (271, 33066), (330, 33183), (345, 33219), (350, 33228), (438, 33333), (471, 33402), (504, 33462), (510, 33474), (511, 33477), (518, 33489), (525, 33504), (537, 33528), (540, 33534), (555, 33555), (583, 33591), (584, 33594), (596, 33630), (599, 33636), (604, 33648), (605, 33651), (667, 33735), (676, 33750), (701, 33792), (711, 33837), (714, 33846), (723, 33885), (727, 33903), (736, 33924), (744, 33939), (749, 33948), (751, 33951),

Gene: BrutonGaster\_67 Start: 47316, Stop: 48683, Start Num: 101

Candidate Starts for BrutonGaster\_67:

(Start: 101 @47316 has 1 MA's), (Start: 130 @47364 has 3 MA's), (141, 47388), (Start: 169 @47436 has 2 MA's), (193, 47496), (218, 47547), (274, 47655), (297, 47703), (298, 47706), (357, 47817), (394, 47886), (399, 47895), (458, 48006), (460, 48009), (478, 48042), (541, 48165), (585, 48255), (593, 48273), (599, 48294), (616, 48336), (650, 48396), (698, 48459), (707, 48498), (709, 48507), (759, 48636), (776, 48672),

Gene: Brylie\_39 Start: 31322, Stop: 30051, Start Num: 127

Candidate Starts for Brylie\_39:

(Start: 127 @31322 has 61 MA's), (Start: 136 @31307 has 1 MA's), (Start: 185 @31205 has 12 MA's), (214, 31163), (222, 31151), (257, 31076), (299, 31001), (307, 30992), (316, 30974), (366, 30875), (368, 30872), (422, 30782), (508, 30677), (559, 30581), (562, 30575), (636, 30413), (700, 30272), (711, 30227), (724, 30176), (726, 30167), (730, 30152), (738, 30140), (744, 30128), (770, 30089),

Gene: Brynnie\_33 Start: 24636, Stop: 23452, Start Num: 127

Candidate Starts for Brynnie\_33:

(Start: 127 @24636 has 61 MA's), (245, 24417), (326, 24282), (362, 24207), (368, 24192), (500, 23991), (506, 23982), (605, 23784), (610, 23772), (618, 23754), (627, 23739), (698, 23637), (703,

23610), (706, 23601),

Gene: Budski\_49 Start: 33439, Stop: 34533, Start Num: 145

Candidate Starts for Budski\_49:

(115, 33394), (Start: 145 @33439 has 284 MA's), (174, 33490), (236, 33595), (271, 33640), (293, 33682), (345, 33790), (350, 33799), (414, 33850), (429, 33874), (440, 33892), (491, 33991), (510, 34024), (511, 34027), (518, 34039), (530, 34063), (608, 34204), (629, 34234), (678, 34306), (684, 34315), (707, 34366), (708, 34369), (714, 34396), (718, 34408), (751, 34501),

Gene: Bugatti\_33 Start: 26297, Stop: 25170, Start Num: 177

Candidate Starts for Bugatti\_33:

(Start: 177 @26297 has 119 MA's), (228, 26210), (Start: 239 @26174 has 6 MA's), (270, 26129), (353, 25973), (360, 25961), (363, 25955), (383, 25910), (420, 25856), (421, 25853), (465, 25775), (552, 25622), (560, 25610), (584, 25571), (596, 25535), (599, 25529), (608, 25508), (614, 25493), (623, 25475), (641, 25448), (702, 25337), (715, 25289), (721, 25259), (723, 25253), (726, 25241), (743, 25202),

Gene: Buggy\_36 Start: 26995, Stop: 25874, Start Num: 177

Candidate Starts for Buggy\_36:

(Start: 144 @27058 has 1 MA's), (Start: 177 @26995 has 119 MA's), (Start: 209 @26941 has 14 MA's), (Start: 239 @26872 has 6 MA's), (270, 26827), (332, 26701), (366, 26644), (383, 26608), (420, 26554), (421, 26551), (491, 26428), (502, 26410), (552, 26320), (560, 26308), (596, 26233), (599, 26227), (608, 26206), (614, 26191), (623, 26173), (715, 25987), (721, 25957), (723, 25951), (726, 25939), (743, 25900),

Gene: Bunnybear\_33 Start: 29696, Stop: 30778, Start Num: 143

Candidate Starts for Bunnybear\_33:

(Start: 88 @29585 has 6 MA's), (Start: 143 @29696 has 52 MA's), (174, 29750), (242, 29870), (438, 30155), (470, 30215), (506, 30281), (518, 30305), (583, 30410), (707, 30635), (713, 30662), (749, 30767),

Gene: Byougenkin\_40 Start: 32001, Stop: 33119, Start Num: 145

Candidate Starts for Byougenkin\_40:

(Start: 145 @32001 has 284 MA's), (223, 32139), (237, 32172), (271, 32220), (345, 32373), (350, 32382), (422, 32463), (471, 32556), (504, 32616), (510, 32628), (511, 32631), (537, 32682), (555, 32709), (583, 32745), (584, 32748), (596, 32784), (667, 32889), (676, 32904), (701, 32946), (711, 32991), (714, 33000), (723, 33039), (727, 33057), (736, 33078), (744, 33093), (749, 33102), (751, 33105),

Gene: C3\_31 Start: 26345, Stop: 25275, Start Num: 209

Candidate Starts for C3\_31:

(Start: 148 @26453 has 2 MA's), (Start: 177 @26399 has 119 MA's), (Start: 209 @26345 has 14 MA's), (Start: 239 @26276 has 6 MA's), (353, 26075), (366, 26048), (383, 26012), (420, 25958), (421, 25955), (434, 25928), (465, 25877), (487, 25844), (491, 25832), (502, 25814), (538, 25742), (552, 25724), (560, 25712), (584, 25673), (596, 25637), (599, 25631), (608, 25610), (614, 25595), (623, 25577), (641, 25550), (702, 25439), (715, 25391), (716, 25388), (721, 25361), (723, 25355), (726, 25343), (743, 25304),

Gene: CREW\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for CREW\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),



Gene: Cafasso\_35 Start: 30421, Stop: 29294, Start Num: 127

Candidate Starts for Cafasso\_35:

(11, 30901), (Start: 127 @30421 has 61 MA's), (Start: 158 @30367 has 1 MA's), (214, 30262), (310, 30091), (356, 30001), (373, 29965), (440, 29851), (496, 29812), (510, 29788), (569, 29692), (631, 29560), (658, 29515), (703, 29443), (743, 29317),

Gene: Calvinny\_36 Start: 26589, Stop: 25498, Start Num: 209

Candidate Starts for Calvinny\_36:

(Start: 144 @26706 has 1 MA's), (Start: 177 @26643 has 119 MA's), (Start: 209 @26589 has 14 MA's), (Start: 239 @26520 has 6 MA's), (363, 26301), (366, 26292), (383, 26256), (421, 26199), (465, 26121), (487, 26088), (538, 25986), (552, 25968), (560, 25956), (596, 25881), (599, 25875), (608, 25854), (614, 25839), (623, 25821), (639, 25797), (714, 25638), (715, 25635), (721, 25605), (723, 25599), (726, 25587), (743, 25548),

Gene: Camara\_36 Start: 23916, Stop: 22723, Start Num: 127

Candidate Starts for Camara\_36:

(Start: 127 @23916 has 61 MA's), (362, 23487), (388, 23430), (401, 23406), (557, 23178), (610, 23052), (615, 23040), (627, 23019), (706, 22881), (726, 22800), (749, 22752),

Gene: Capricorn\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Capricorn\_41:

(15, 31974), (16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: CaptainTrips\_41 Start: 32330, Stop: 33448, Start Num: 145

Candidate Starts for CaptainTrips\_41:

(Start: 145 @32330 has 284 MA's), (151, 32339), (237, 32501), (271, 32549), (330, 32666), (345, 32702), (350, 32711), (438, 32816), (471, 32885), (491, 32924), (502, 32942), (504, 32945), (510, 32957), (511, 32960), (518, 32972), (537, 33011), (540, 33017), (555, 33038), (583, 33074), (584, 33077), (596, 33113), (599, 33119), (604, 33131), (605, 33134), (611, 33149), (667, 33218), (676, 33233), (692, 33251), (701, 33275), (711, 33320), (714, 33329), (723, 33368), (727, 33386), (736, 33407), (744, 33422), (749, 33431), (751, 33434),

Gene: Caraxes\_33 Start: 24997, Stop: 23882, Start Num: 181

Candidate Starts for Caraxes\_33:

(Start: 181 @24997 has 9 MA's), (Start: 209 @24949 has 14 MA's), (228, 24916), (Start: 239 @24880 has 6 MA's), (270, 24835), (360, 24667), (366, 24652), (383, 24616), (404, 24574), (420, 24562), (421, 24559), (473, 24472), (482, 24457), (552, 24328), (560, 24316), (577, 24295), (584, 24277), (596, 24241), (608, 24214), (614, 24199), (623, 24181), (641, 24154), (702, 24043), (715, 23995), (721, 23965), (723, 23959), (726, 23947), (743, 23908),

Gene: Cardigan\_99 Start: 58096, Stop: 59343, Start Num: 113

Candidate Starts for Cardigan\_99:

(66, 57970), (Start: 113 @58096 has 2 MA's), (197, 58261), (208, 58288), (214, 58300), (Start: 239 @58351 has 6 MA's), (281, 58387), (291, 58405), (324, 58456), (377, 58546), (386, 58567), (449, 58678), (460, 58702), (462, 58711), (471, 58726), (501, 58777), (552, 58861), (584, 58921), (588, 58930), (636, 59038), (656, 59080), (698, 59131), (709, 59179), (714, 59200), (721, 59233), (727, 59254), (740, 59281), (759, 59314),

Gene: CaseJules\_42 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for CaseJules\_42:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: Cashline\_38 Start: 32110, Stop: 33216, Start Num: 145

Candidate Starts for Cashline\_38:

(Start: 113 @32053 has 2 MA's), (Start: 145 @32110 has 284 MA's), (174, 32161), (236, 32266), (267, 32305), (429, 32545), (468, 32614), (470, 32617), (473, 32623), (487, 32647), (511, 32698), (518, 32710), (645, 32938), (683, 32998), (707, 33073), (714, 33103), (749, 33205),

Gene: Catfish\_37 Start: 28481, Stop: 27369, Start Num: 185

Candidate Starts for Catfish\_37:

(Start: 185 @28481 has 12 MA's), (207, 28439), (284, 28313), (388, 28112), (424, 28055), (436, 28028), (485, 27932), (502, 27899), (506, 27890), (567, 27782), (621, 27653), (714, 27467), (723, 27428), (738, 27389),

Gene: Centaur\_35 Start: 26808, Stop: 25675, Start Num: 177

Candidate Starts for Centaur\_35:

(Start: 177 @26808 has 119 MA's), (Start: 209 @26754 has 14 MA's), (Start: 239 @26685 has 6 MA's), (270, 26640), (353, 26484), (366, 26457), (383, 26421), (421, 26364), (491, 26241), (502, 26223), (552, 26133), (560, 26121), (596, 26046), (599, 26040), (608, 26019), (614, 26004), (623, 25986), (641, 25959), (645, 25950), (702, 25848), (715, 25800), (721, 25770), (723, 25764), (726, 25752), (743, 25713),

Gene: Cerasum\_38 Start: 27921, Stop: 29039, Start Num: 145

Candidate Starts for Cerasum\_38:

(Start: 145 @27921 has 284 MA's), (237, 28092), (330, 28257), (345, 28293), (350, 28302), (422, 28383), (438, 28407), (471, 28476), (491, 28515), (502, 28533), (504, 28536), (510, 28548), (511, 28551), (518, 28563), (525, 28578), (537, 28602), (540, 28608), (555, 28629), (583, 28665), (584, 28668), (596, 28704), (599, 28710), (604, 28722), (605, 28725), (611, 28740), (667, 28809), (676, 28824), (701, 28866), (711, 28911), (714, 28920), (723, 28959), (727, 28977), (736, 28998), (744, 29013), (749, 29022), (751, 29025),

Gene: Cerulean\_34 Start: 26519, Stop: 25467, Start Num: 217

Candidate Starts for Cerulean\_34:

(Start: 156 @26633 has 3 MA's), (170, 26606), (Start: 177 @26588 has 119 MA's), (Start: 217 @26519 has 8 MA's), (Start: 239 @26465 has 6 MA's), (363, 26246), (366, 26237), (383, 26201), (404, 26159), (420, 26147), (421, 26144), (538, 25931), (552, 25913), (596, 25826), (599, 25820), (608, 25799), (614, 25784), (623, 25766), (702, 25628), (715, 25580), (721, 25550), (723, 25544), (726, 25532), (743, 25493),

Gene: ChampagnePapi\_34 Start: 26518, Stop: 25466, Start Num: 217

Candidate Starts for ChampagnePapi\_34:

(170, 26605), (Start: 177 @26587 has 119 MA's), (Start: 217 @26518 has 8 MA's), (Start: 239 @26464 has 6 MA's), (363, 26245), (366, 26236), (383, 26200), (404, 26158), (420, 26146), (421, 26143), (538, 25930), (552, 25912), (596, 25825), (599, 25819), (608, 25798), (614, 25783), (623, 25765), (702, 25627), (715, 25579), (721, 25549), (723, 25543), (726, 25531), (743, 25492),

Gene: Chavito\_44 Start: 33649, Stop: 34740, Start Num: 145

Candidate Starts for Chavito\_44:

(37, 33316), (52, 33415), (53, 33424), (60, 33451), (73, 33499), (Start: 145 @33649 has 284 MA's), (174, 33700), (221, 33775), (237, 33811), (309, 33925), (323, 33949), (345, 34003), (429, 34087), (445, 34120), (468, 34156), (470, 34159), (491, 34201), (537, 34288), (550, 34309), (604, 34417), (649, 34477), (693, 34540), (699, 34552), (725, 34660), (738, 34696),

Gene: Che12\_36 Start: 25378, Stop: 24263, Start Num: 181

Candidate Starts for Che12\_36:

(Start: 181 @25378 has 9 MA's), (228, 25297), (Start: 239 @25261 has 6 MA's), (270, 25216), (315, 25129), (360, 25048), (383, 24997), (404, 24955), (420, 24943), (421, 24940), (465, 24862), (525, 24754), (538, 24727), (552, 24709), (560, 24697), (577, 24676), (596, 24622), (608, 24595), (614, 24580), (623, 24562), (641, 24535), (702, 24424), (715, 24376), (721, 24346), (723, 24340), (726, 24328), (743, 24289),

Gene: Che9c\_41 Start: 33550, Stop: 32348, Start Num: 146

Candidate Starts for Che9c\_41:

(Start: 146 @33550 has 7 MA's), (182, 33478), (183, 33475), (194, 33457), (199, 33445), (253, 33340), (321, 33229), (322, 33226), (357, 33163), (402, 33082), (435, 33028), (481, 32953), (521, 32878), (546, 32824), (549, 32818), (636, 32641), (639, 32638), (641, 32635), (650, 32614), (670, 32578), (707, 32512), (710, 32497), (726, 32431),

Gene: CheeseTouch\_54 Start: 30887, Stop: 31984, Start Num: 145

Candidate Starts for CheeseTouch\_54:

(63, 30722), (68, 30731), (124, 30857), (Start: 145 @30887 has 284 MA's), (174, 30938), (223, 31016), (236, 31043), (293, 31130), (327, 31196), (330, 31202), (421, 31307), (422, 31310), (429, 31322), (491, 31439), (504, 31460), (507, 31466), (518, 31487), (555, 31559), (599, 31643), (678, 31766), (704, 31817), (707, 31826), (713, 31853), (751, 31961), (761, 31976),

Gene: Cheesepuff\_48 Start: 33297, Stop: 34415, Start Num: 145

Candidate Starts for Cheesepuff\_48:

(Start: 145 @33297 has 284 MA's), (237, 33468), (330, 33633), (345, 33669), (350, 33678), (438, 33783), (471, 33852), (491, 33891), (504, 33912), (510, 33924), (511, 33927), (518, 33939), (537, 33978), (540, 33984), (555, 34005), (583, 34041), (584, 34044), (596, 34080), (599, 34086), (605, 34101), (611, 34116), (667, 34185), (676, 34200), (692, 34218), (701, 34242), (711, 34287), (714, 34296), (723, 34335), (727, 34353), (736, 34374), (744, 34389), (749, 34398), (751, 34401),

Gene: CheetoDust\_40 Start: 31967, Stop: 33055, Start Num: 145

Candidate Starts for CheetoDust\_40:

(54, 31745), (Start: 145 @31967 has 284 MA's), (174, 32018), (207, 32069), (221, 32093), (237, 32129), (323, 32267), (345, 32321), (429, 32405), (468, 32474), (470, 32477), (550, 32627), (604, 32732), (667, 32819), (699, 32867),

Gene: Chickaboom\_35 Start: 24249, Stop: 23065, Start Num: 127

Candidate Starts for Chickaboom\_35:

(Start: 127 @24249 has 61 MA's), (Start: 159 @24192 has 22 MA's), (245, 24030), (251, 24021), (326, 23895), (354, 23832), (362, 23820), (368, 23805), (422, 23715), (500, 23604), (557, 23511), (605, 23397), (610, 23385), (618, 23367), (703, 23223), (706, 23214),

Gene: ChipMunk\_36 Start: 28148, Stop: 27003, Start Num: 162

Candidate Starts for ChipMunk\_36:

(Start: 162 @28148 has 7 MA's), (Start: 171 @28130 has 7 MA's), (Start: 217 @28049 has 8 MA's), (Start: 239 @28001 has 6 MA's), (270, 27956), (353, 27800), (363, 27782), (366, 27773), (383, 27737), (404, 27695), (421, 27680), (428, 27668), (465, 27602), (487, 27569), (491, 27557), (502, 27539), (552, 27449), (560, 27437), (596, 27362), (599, 27356), (608, 27335), (614, 27320), (623, 27302), (641, 27275), (645, 27266), (702, 27164), (715, 27116), (716, 27113), (721, 27086), (723, 27080), (726, 27068), (743, 27029),

Gene: Chiqui\_32 Start: 26616, Stop: 25483, Start Num: 173

Candidate Starts for Chiqui\_32:

(Start: 173 @26616 has 3 MA's), (Start: 217 @26535 has 8 MA's), (Start: 239 @26481 has 6 MA's), (270, 26436), (364, 26259), (366, 26253), (383, 26217), (421, 26160), (465, 26082), (552, 25929), (560, 25917), (596, 25842), (599, 25836), (608, 25815), (614, 25800), (623, 25782), (639, 25758), (715, 25596), (721, 25566), (723, 25560), (726, 25548), (743, 25509),

Gene: Chop\_39 Start: 31803, Stop: 30532, Start Num: 127

Candidate Starts for Chop\_39:

(Start: 127 @31803 has 61 MA's), (Start: 136 @31788 has 1 MA's), (Start: 185 @31686 has 12 MA's), (214, 31644), (222, 31632), (257, 31557), (299, 31482), (307, 31473), (316, 31455), (366, 31356), (368, 31353), (422, 31263), (508, 31158), (559, 31062), (562, 31056), (636, 30894), (700, 30753), (711, 30708), (724, 30657), (726, 30648), (730, 30633), (738, 30621), (744, 30609), (770, 30570),

Gene: Chris\_43 Start: 33288, Stop: 34373, Start Num: 145

Candidate Starts for Chris\_43:

(Start: 145 @33288 has 284 MA's), (237, 33450), (275, 33495), (323, 33588), (338, 33630), (429, 33726), (438, 33741), (468, 33795), (470, 33798), (473, 33804), (491, 33840), (550, 33948), (604, 34053), (667, 34140), (693, 34176), (699, 34188), (725, 34296), (744, 34344),

Gene: ChuckDuck\_39 Start: 26485, Stop: 27627, Start Num: 145

Candidate Starts for ChuckDuck\_39:

(25, 26068), (28, 26098), (38, 26158), (41, 26188), (58, 26278), (69, 26314), (94, 26386), (98, 26395), (Start: 145 @26485 has 284 MA's), (342, 26839), (345, 26845), (354, 26863), (438, 26971), (468, 27031), (518, 27124), (584, 27244), (602, 27292), (614, 27322), (673, 27418), (714, 27526), (734, 27601),

Gene: Chymera\_32 Start: 24210, Stop: 22924, Start Num: 145

Candidate Starts for Chymera\_32:

(Start: 145 @24210 has 284 MA's), (151, 24201), (174, 24156), (315, 23862), (363, 23760), (389, 23730), (390, 23727), (482, 23547), (504, 23502), (506, 23499), (584, 23358), (587, 23352), (604, 23304), (714, 23067), (728, 23007), (740, 22983),

Gene: Clap\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for Clap\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (557, 28553), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: Clark\_39 Start: 28996, Stop: 30123, Start Num: 145

Candidate Starts for Clark\_39:

(121, 28957), (Start: 145 @28996 has 284 MA's), (174, 29050), (236, 29173), (258, 29206), (311, 29296), (327, 29329), (468, 29524), (470, 29527), (491, 29569), (511, 29605), (681, 29902), (707, 29980), (713, 30007), (718, 30022), (723, 30049), (749, 30112),

Gene: Clifton\_35 Start: 27555, Stop: 28673, Start Num: 145

Candidate Starts for Clifton\_35:

(Start: 145 @27555 has 284 MA's), (151, 27564), (237, 27726), (330, 27891), (345, 27927), (350, 27936), (422, 28017), (438, 28041), (471, 28110), (491, 28149), (502, 28167), (504, 28170), (510, 28182), (511, 28185), (518, 28197), (525, 28212), (537, 28236), (540, 28242), (555, 28263), (583, 28299), (584, 28302), (596, 28338), (599, 28344), (605, 28359), (611, 28374), (667, 28443), (676, 28458), (701, 28500), (711, 28545), (714, 28554), (723, 28593), (727, 28611), (736, 28632), (744, 28647), (749, 28656), (751, 28659),

Gene: Clipper\_45 Start: 33113, Stop: 34201, Start Num: 145

Candidate Starts for Clipper\_45:

(Start: 145 @33113 has 284 MA's), (174, 33164), (207, 33215), (221, 33239), (237, 33275), (323, 33413), (429, 33551), (468, 33620), (470, 33623), (550, 33773), (604, 33878), (699, 34013),

Gene: ClubL\_83 Start: 50811, Stop: 52109, Start Num: 111

Candidate Starts for ClubL\_83:

(Start: 111 @50811 has 12 MA's), (147, 50877), (197, 50979), (208, 51006), (214, 51018), (232, 51048), (259, 51087), (281, 51105), (319, 51171), (324, 51180), (368, 51264), (424, 51354), (507, 51513), (510, 51519), (511, 51522), (577, 51648), (603, 51717), (643, 51795), (670, 51846), (698, 51873), (706, 51909), (707, 51912), (708, 51915), (709, 51921), (711, 51933), (713, 51939), (714, 51942), (715, 51945), (721, 51975), (737, 52023), (742, 52032), (759, 52062),

Gene: Coco12\_40 Start: 31978, Stop: 33096, Start Num: 145

Candidate Starts for Coco12\_40:

(Start: 145 @31978 has 284 MA's), (237, 32149), (330, 32314), (345, 32350), (350, 32359), (422, 32440), (438, 32464), (471, 32533), (491, 32572), (502, 32590), (504, 32593), (510, 32605), (511, 32608), (518, 32620), (525, 32635), (537, 32659), (540, 32665), (555, 32686), (583, 32722), (584, 32725), (596, 32761), (599, 32767), (604, 32779), (605, 32782), (611, 32797), (667, 32866), (676, 32881), (701, 32923), (711, 32968), (714, 32977), (723, 33016), (727, 33034), (736, 33055), (744, 33070), (749, 33079), (751, 33082),

Gene: Colbster\_36 Start: 26790, Stop: 25645, Start Num: 177

Candidate Starts for Colbster\_36:

(Start: 177 @26790 has 119 MA's), (Start: 203 @26751 has 10 MA's), (228, 26703), (Start: 239 @26667 has 6 MA's), (270, 26622), (353, 26466), (366, 26439), (383, 26403), (421, 26346), (465, 26268), (482, 26244), (502, 26205), (538, 26133), (548, 26121), (552, 26115), (560, 26103), (596, 26028), (599, 26022), (608, 26001), (614, 25986), (623, 25968), (639, 25944), (702, 25830), (714, 25785), (715, 25782), (718, 25773), (721, 25752), (723, 25746), (726, 25734), (743, 25695),

Gene: Colin\_37 Start: 27841, Stop: 26711, Start Num: 180

Candidate Starts for Colin\_37:

(Start: 180 @27841 has 10 MA's), (Start: 239 @27721 has 6 MA's), (270, 27676), (363, 27502), (366, 27493), (383, 27457), (420, 27403), (421, 27400), (465, 27322), (487, 27289), (491, 27277), (552, 27169), (560, 27157), (596, 27082), (608, 27055), (614, 27040), (623, 27022), (641, 26995), (715, 26836), (721, 26806), (723, 26800), (726, 26788), (743, 26749),

Gene: Colleen\_32 Start: 30114, Stop: 28903, Start Num: 164

Candidate Starts for Colleen\_32:

(Start: 164 @30114 has 4 MA's), (256, 29940), (329, 29799), (405, 29640), (485, 29490), (531, 29400), (655, 29136), (676, 29100), (680, 29094), (738, 28929), (746, 28914), (748, 28911),

Gene: Colusalem\_39 Start: 23996, Stop: 22809, Start Num: 127

Candidate Starts for Colusalem\_39:

(81, 24086), (Start: 127 @23996 has 61 MA's), (326, 23642), (362, 23567), (610, 23132), (698, 22997),

Gene: Commander\_33 Start: 26250, Stop: 25129, Start Num: 177

Candidate Starts for Commander\_33:

(Start: 156 @26295 has 3 MA's), (170, 26268), (Start: 177 @26250 has 119 MA's), (Start: 217 @26181 has 8 MA's), (Start: 239 @26127 has 6 MA's), (363, 25908), (366, 25899), (383, 25863), (404, 25821), (420, 25809), (421, 25806), (465, 25728), (538, 25593), (552, 25575), (596, 25488), (608, 25461), (614, 25446), (623, 25428), (702, 25290), (715, 25242), (721, 25212), (723, 25206), (726, 25194), (743, 25155),

Gene: Confidence\_37 Start: 29321, Stop: 30403, Start Num: 143

Candidate Starts for Confidence\_37:

(Start: 143 @29321 has 52 MA's), (Start: 212 @29438 has 1 MA's), (271, 29531), (421, 29753), (441, 29789), (470, 29843), (507, 29912), (707, 30260), (713, 30287), (721, 30323), (749, 30392),

Gene: Constance\_38 Start: 26814, Stop: 27956, Start Num: 145

Candidate Starts for Constance\_38:

(75, 26667), (80, 26679), (84, 26688), (96, 26721), (120, 26769), (129, 26784), (Start: 145 @26814 has 284 MA's), (345, 27174), (354, 27192), (438, 27300), (468, 27360), (518, 27453), (584, 27573), (602, 27621), (614, 27651), (673, 27747), (714, 27855), (734, 27930),

Gene: Constella\_68 Start: 47200, Stop: 48429, Start Num: 104

Candidate Starts for Constella\_68:

(Start: 104 @47200 has 29 MA's), (Start: 114 @47218 has 2 MA's), (Start: 136 @47257 has 1 MA's), (251, 47494), (313, 47602), (374, 47722), (375, 47725), (378, 47734), (386, 47749), (407, 47788), (451, 47866), (528, 47983), (536, 47986), (544, 47995), (579, 48046), (580, 48049), (589, 48067), (638, 48163), (672, 48220), (720, 48340), (721, 48343), (727, 48367), (738, 48391), (740, 48394),

Gene: CookieBear\_41 Start: 27769, Stop: 26630, Start Num: 145

Candidate Starts for CookieBear\_41:

(Start: 145 @27769 has 284 MA's), (174, 27718), (277, 27550), (287, 27532), (362, 27400), (411, 27337), (422, 27322), (429, 27310), (433, 27304), (468, 27235), (473, 27226), (506, 27166), (551, 27076), (605, 26971), (615, 26950), (636, 26923), (701, 26800), (707, 26776), (710, 26761), (728, 26686), (743, 26656),

Gene: Coral\_36 Start: 23868, Stop: 22681, Start Num: 127

Candidate Starts for Coral\_36:

(81, 23958), (Start: 127 @23868 has 61 MA's), (362, 23439), (610, 23004), (698, 22869),

Gene: Corium\_41 Start: 32428, Stop: 33546, Start Num: 145

Candidate Starts for Corium\_41:

(Start: 145 @32428 has 284 MA's), (151, 32437), (237, 32599), (330, 32764), (345, 32800), (350, 32809), (438, 32914), (471, 32983), (491, 33022), (502, 33040), (504, 33043), (510, 33055), (511, 33058), (518, 33070), (525, 33085), (537, 33109), (540, 33115), (555, 33136), (583, 33172), (584, 33175), (596, 33211), (599, 33217), (605, 33232), (611, 33247), (667, 33316), (676, 33331), (701, 33373), (711, 33418), (714, 33427), (718, 33439), (723, 33466), (727, 33484), (736, 33505), (744, 33520), (749, 33529), (751, 33532),

Gene: Cornucopia\_45 Start: 32843, Stop: 33970, Start Num: 145

Candidate Starts for Cornucopia\_45:

(91, 32741), (118, 32798), (Start: 145 @32843 has 284 MA's), (151, 32852), (237, 33014), (267, 33065), (277, 33083), (302, 33128), (345, 33224), (350, 33233), (422, 33314), (438, 33338), (471, 33407), (491, 33446), (504, 33467), (510, 33479), (511, 33482), (518, 33494), (525, 33509), (537, 33533), (555, 33560), (583, 33596), (584, 33599), (596, 33635), (611, 33671), (667, 33740), (676, 33755), (692, 33773), (701, 33797), (711, 33842), (714, 33851), (718, 33863), (723, 33890), (727, 33908), (736, 33929), (744, 33944), (749, 33953), (751, 33956),

Gene: Cote\_38 Start: 24345, Stop: 23158, Start Num: 127

Candidate Starts for Cote\_38:

(81, 24435), (Start: 127 @24345 has 61 MA's), (362, 23916), (610, 23481), (698, 23346),

Gene: Courthouse\_82 Start: 49663, Stop: 50937, Start Num: 90

Candidate Starts for Courthouse\_82:

(70, 49606), (Start: 85 @49648 has 1 MA's), (Start: 90 @49663 has 10 MA's), (92, 49666), (Start: 114 @49711 has 2 MA's), (Start: 136 @49750 has 1 MA's), (330, 50131), (374, 50215), (378, 50227), (379, 50230), (451, 50359), (536, 50479), (580, 50542), (589, 50560), (597, 50584), (638, 50656), (720, 50833), (721, 50836), (723, 50842), (727, 50860), (732, 50875), (738, 50884), (740, 50887), (762, 50932),

Gene: Crater\_49 Start: 32565, Stop: 33662, Start Num: 145

Candidate Starts for Crater\_49:

(66, 32385), (76, 32424), (Start: 145 @32565 has 284 MA's), (174, 32616), (223, 32694), (236, 32721), (271, 32766), (290, 32799), (293, 32808), (421, 32985), (422, 32988), (473, 33081), (491, 33117), (510, 33150), (511, 33153), (518, 33165), (608, 33330), (629, 33360), (678, 33432), (701, 33468), (707, 33492), (713, 33519), (725, 33567), (727, 33579), (751, 33627),

Gene: CrimD\_41 Start: 32723, Stop: 33811, Start Num: 145

Candidate Starts for CrimD\_41:

(Start: 145 @32723 has 284 MA's), (207, 32825), (221, 32849), (237, 32885), (323, 33023), (345, 33077), (429, 33161), (468, 33230), (470, 33233), (550, 33383), (594, 33461), (604, 33488), (699, 33623), (738, 33767),

Gene: Crucio\_34 Start: 26336, Stop: 25269, Start Num: 209

Candidate Starts for Crucio\_34:

(Start: 144 @26453 has 1 MA's), (Start: 177 @26390 has 119 MA's), (Start: 209 @26336 has 14 MA's), (Start: 239 @26267 has 6 MA's), (270, 26222), (332, 26096), (363, 26048), (366, 26039), (383, 26003), (420, 25949), (421, 25946), (491, 25823), (502, 25805), (518, 25775), (548, 25721), (552, 25715), (560, 25703), (596, 25628), (599, 25622), (608, 25601), (614, 25586), (623, 25568), (641, 25541), (702, 25430), (715, 25382), (721, 25352), (723, 25346), (726, 25334), (743, 25295),

Gene: Cucurbita\_85 Start: 52630, Stop: 53928, Start Num: 111

Candidate Starts for Cucurbita\_85:

(Start: 111 @52630 has 12 MA's), (147, 52696), (197, 52798), (208, 52825), (214, 52837), (232, 52867), (259, 52906), (281, 52924), (319, 52990), (324, 52999), (368, 53083), (424, 53173), (507, 53332), (510, 53338), (511, 53341), (577, 53467), (603, 53536), (643, 53614), (670, 53665), (698, 53692), (706, 53728), (707, 53731), (708, 53734), (709, 53740), (711, 53752), (713, 53758), (714, 53761), (715, 53764), (721, 53794), (737, 53842), (742, 53851), (759, 53881),

Gene: Cullens\_36 Start: 26789, Stop: 25644, Start Num: 177

Candidate Starts for Cullens\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: Culver\_85 Start: 50733, Stop: 52031, Start Num: 111

Candidate Starts for Culver\_85:

(76, 50664), (Start: 111 @50733 has 12 MA's), (191, 50892), (214, 50940), (232, 50970), (259, 51009), (281, 51027), (283, 51033), (324, 51102), (462, 51357), (507, 51435), (510, 51441), (511, 51444), (595, 51621), (603, 51639), (636, 51705), (656, 51744), (670, 51768), (698, 51795), (706, 51831), (707, 51834), (708, 51837), (709, 51843), (711, 51855), (713, 51861), (714, 51864), (715, 51867), (721, 51897), (737, 51945), (742, 51954), (757, 51981), (759, 51984), (765, 51999),

Gene: Cygnet\_40 Start: 24788, Stop: 23595, Start Num: 127

Candidate Starts for Cygnet\_40:

(Start: 127 @24788 has 61 MA's), (567, 24026), (598, 23951), (610, 23921), (615, 23909),

Gene: Cynthia\_37 Start: 27764, Stop: 28957, Start Num: 88

Candidate Starts for Cynthia\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: D29\_33 Start: 26474, Stop: 25350, Start Num: 177

Candidate Starts for D29\_33:

(Start: 177 @26474 has 119 MA's), (Start: 209 @26420 has 14 MA's), (Start: 239 @26351 has 6 MA's), (353, 26150), (354, 26147), (366, 26123), (383, 26087), (421, 26030), (434, 26003), (465, 25952), (487, 25919), (491, 25907), (502, 25889), (538, 25817), (552, 25799), (560, 25787), (596, 25712), (599, 25706), (608, 25685), (614, 25670), (623, 25652), (641, 25625), (702, 25514), (715, 25466), (716, 25463), (721, 25436), (723, 25430), (726, 25418), (743, 25379),

Gene: D32\_37 Start: 26474, Stop: 25350, Start Num: 177

Candidate Starts for D32\_37:

(Start: 177 @26474 has 119 MA's), (Start: 209 @26420 has 14 MA's), (Start: 239 @26351 has 6 MA's), (353, 26150), (354, 26147), (366, 26123), (383, 26087), (421, 26030), (434, 26003), (465, 25952), (487, 25919), (491, 25907), (502, 25889), (538, 25817), (552, 25799), (560, 25787), (596, 25712), (599, 25706), (608, 25685), (614, 25670), (623, 25652), (641, 25625), (702, 25514), (715, 25466), (716, 25463), (721, 25436), (723, 25430), (726, 25418), (743, 25379),

Gene: DBQu4n\_37 Start: 26474, Stop: 25350, Start Num: 177

Candidate Starts for DBQu4n\_37:

(Start: 177 @26474 has 119 MA's), (Start: 209 @26420 has 14 MA's), (Start: 239 @26351 has 6 MA's), (353, 26150), (366, 26123), (383, 26087), (421, 26030), (434, 26003), (465, 25952), (487, 25919), (491, 25907), (502, 25889), (538, 25817), (552, 25799), (560, 25787), (584, 25748), (596, 25712), (599, 25706), (608, 25685), (614, 25670), (623, 25652), (641, 25625), (702, 25514), (715, 25466), (716, 25463), (721, 25436), (723, 25430), (726, 25418), (743, 25379),

Gene: DLane\_41 Start: 32255, Stop: 33373, Start Num: 145

Candidate Starts for DLane\_41:

(Start: 145 @32255 has 284 MA's), (237, 32426), (330, 32591), (345, 32627), (350, 32636), (471, 32810), (491, 32849), (504, 32870), (510, 32882), (511, 32885), (518, 32897), (537, 32936), (540, 32942), (555, 32963), (583, 32999), (584, 33002), (596, 33038), (599, 33044), (605, 33059), (667, 33143), (676, 33158), (701, 33200), (711, 33245), (714, 33254), (723, 33293), (727, 33311), (736, 33332), (744, 33347), (749, 33356), (751, 33359),

Gene: DRBy19\_43 Start: 32003, Stop: 33121, Start Num: 145

Candidate Starts for DRBy19\_43:

(Start: 145 @32003 has 284 MA's), (223, 32141), (237, 32174), (271, 32222), (330, 32339), (345, 32375), (350, 32384), (438, 32489), (471, 32558), (504, 32618), (510, 32630), (511, 32633), (518, 32645), (525, 32660), (537, 32684), (540, 32690), (555, 32711), (583, 32747), (584, 32750), (596, 32786), (599, 32792), (604, 32804), (605, 32807), (667, 32891), (676, 32906), (701, 32948), (711, 32993), (714, 33002), (723, 33041), (727, 33059), (736, 33080), (744, 33095), (749, 33104), (751, 33107),

Gene: DaHudson\_36 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for DaHudson\_36:



(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Daegal\_30 Start: 26772, Stop: 25579, Start Num: 159

Candidate Starts for Daegal\_30:

(Start: 133 @26814 has 4 MA's), (Start: 159 @26772 has 22 MA's), (188, 26706), (230, 26625), (242, 26586), (254, 26571), (260, 26565), (267, 26553), (283, 26526), (301, 26493), (334, 26436), (354, 26403), (357, 26400), (380, 26352), (408, 26310), (410, 26307), (428, 26283), (434, 26268), (444, 26244), (455, 26229), (481, 26190), (487, 26178), (507, 26139), (528, 26100), (549, 26052), (551, 26049), (590, 25977), (593, 25971), (595, 25959), (596, 25956), (599, 25950), (623, 25896), (633, 25878), (636, 25875), (650, 25848), (667, 25821), (699, 25779), (705, 25752), (707, 25746), (719, 25689), (743, 25626), (744, 25623),

Gene: Dallas\_80 Start: 51984, Stop: 53213, Start Num: 104

Candidate Starts for Dallas\_80:

(Start: 104 @51984 has 29 MA's), (Start: 114 @52002 has 2 MA's), (Start: 136 @52041 has 1 MA's), (251, 52278), (313, 52386), (374, 52506), (375, 52509), (378, 52518), (386, 52533), (407, 52572), (451, 52650), (520, 52755), (528, 52767), (536, 52770), (544, 52779), (579, 52830), (580, 52833), (589, 52851), (638, 52947), (672, 53004), (720, 53124), (721, 53127), (727, 53151), (738, 53175), (740, 53178),

Gene: Dalmatian\_35 Start: 26758, Stop: 25637, Start Num: 177

Candidate Starts for Dalmatian\_35:

(Start: 144 @26821 has 1 MA's), (Start: 177 @26758 has 119 MA's), (Start: 209 @26704 has 14 MA's), (Start: 239 @26635 has 6 MA's), (270, 26590), (353, 26434), (383, 26371), (428, 26302), (446, 26260), (465, 26236), (502, 26173), (552, 26083), (560, 26071), (596, 25996), (599, 25990), (608, 25969), (614, 25954), (623, 25936), (641, 25909), (702, 25798), (714, 25753), (715, 25750), (716, 25747), (721, 25720), (723, 25714), (726, 25702), (743, 25663),

Gene: Dalmuri\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Dalmuri\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: DanHam62\_36 Start: 23913, Stop: 22720, Start Num: 127

Candidate Starts for DanHam62\_36:

(Start: 127 @23913 has 61 MA's), (362, 23484), (388, 23427), (401, 23403), (557, 23175), (610, 23049), (615, 23037), (627, 23016), (706, 22878), (726, 22797), (749, 22749),

Gene: Daob\_38 Start: 24353, Stop: 23166, Start Num: 127

Candidate Starts for Daob\_38:

(81, 24443), (Start: 127 @24353 has 61 MA's), (326, 23999), (362, 23924), (610, 23489), (698, 23354),

Gene: Daredevil\_54 Start: 42698, Stop: 44056, Start Num: 106

Candidate Starts for Daredevil\_54:

(26, 42389), (39, 42473), (59, 42575), (93, 42677), (Start: 106 @42698 has 1 MA's), (244, 42977), (292, 43061), (298, 43070), (312, 43085), (378, 43208), (386, 43223), (394, 43241), (415, 43271), (497, 43433), (571, 43580), (574, 43586), (593, 43628), (599, 43649), (600, 43652), (604, 43661), (623, 43703), (636, 43724), (707, 43853), (709, 43862), (713, 43880), (727, 43937), (753, 43988),

Gene: Dartin\_43 Start: 33014, Stop: 34105, Start Num: 145

Candidate Starts for Dartin\_43:

(12, 32333), (21, 32477), (37, 32681), (52, 32780), (53, 32789), (60, 32816), (73, 32864), (Start: 145 @33014 has 284 MA's), (174, 33065), (221, 33140), (237, 33176), (309, 33290), (323, 33314), (345, 33368), (429, 33452), (445, 33485), (468, 33521), (470, 33524), (491, 33566), (537, 33653), (550, 33674), (604, 33782), (649, 33842), (693, 33905), (699, 33917), (725, 34025), (738, 34061),

Gene: DeadP\_46 Start: 32604, Stop: 33707, Start Num: 145

Candidate Starts for DeadP\_46:

(Start: 145 @32604 has 284 MA's), (174, 32652), (223, 32733), (233, 32760), (345, 32973), (367, 32997), (422, 33045), (468, 33126), (506, 33195), (510, 33204), (525, 33234), (537, 33258), (550, 33279), (594, 33357), (599, 33372), (645, 33432), (667, 33471), (676, 33486), (690, 33510), (701, 33537), (707, 33561), (711, 33582), (714, 33591), (725, 33636), (727, 33648),

Gene: Deby\_41 Start: 32726, Stop: 33811, Start Num: 145

Candidate Starts for Deby\_41:

(Start: 145 @32726 has 284 MA's), (207, 32828), (210, 32837), (221, 32852), (237, 32888), (323, 33026), (345, 33080), (429, 33164), (468, 33233), (470, 33236), (550, 33386), (604, 33491), (667, 33578), (699, 33626), (738, 33770),

Gene: DeepSoil15\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for DeepSoil15\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: DelRio\_40 Start: 32511, Stop: 31240, Start Num: 127

Candidate Starts for DelRio\_40:

(112, 32535), (Start: 127 @32511 has 61 MA's), (Start: 136 @32496 has 1 MA's), (Start: 185 @32394 has 12 MA's), (214, 32352), (222, 32340), (257, 32265), (299, 32190), (307, 32181), (316, 32163), (366, 32064), (368, 32061), (422, 31971), (503, 31875), (508, 31866), (559, 31770), (569, 31746), (636, 31602), (700, 31461), (711, 31416), (724, 31365), (726, 31356), (730, 31341), (738, 31329), (744, 31317), (770, 31278),

Gene: Denise\_35 Start: 27272, Stop: 28351, Start Num: 145

Candidate Starts for Denise\_35:

(Start: 145 @27272 has 284 MA's), (236, 27428), (337, 27608), (491, 27821), (512, 27860), (518, 27869), (599, 28025), (678, 28148), (707, 28208), (749, 28340),

Gene: Devera\_45 Start: 33261, Stop: 34349, Start Num: 145

Candidate Starts for Devera\_45:

(Start: 145 @33261 has 284 MA's), (207, 33363), (221, 33387), (237, 33423), (277, 33474), (309, 33537), (323, 33561), (345, 33615), (347, 33618), (429, 33699), (468, 33768), (470, 33771), (550, 33921), (594, 33999), (604, 34026), (699, 34161),

Gene: Dewey\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Dewey\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Dieselweasel\_36 Start: 26792, Stop: 25647, Start Num: 177

Candidate Starts for Dieselweasel\_36:

(Start: 177 @26792 has 119 MA's), (Start: 203 @26753 has 10 MA's), (228, 26705), (Start: 239 @26669 has 6 MA's), (270, 26624), (353, 26468), (366, 26441), (383, 26405), (421, 26348), (465, 26270), (482, 26246), (502, 26207), (538, 26135), (548, 26123), (552, 26117), (560, 26105), (596, 26030), (599, 26024), (608, 26003), (614, 25988), (623, 25970), (639, 25946), (702, 25832), (714, 25787), (715, 25784), (718, 25775), (721, 25754), (723, 25748), (726, 25736), (743, 25697),

Gene: Dignity\_35 Start: 26759, Stop: 25632, Start Num: 171

Candidate Starts for Dignity\_35:

(Start: 162 @26777 has 7 MA's), (Start: 171 @26759 has 7 MA's), (Start: 217 @26675 has 8 MA's), (Start: 239 @26627 has 6 MA's), (270, 26582), (366, 26399), (383, 26363), (421, 26306), (428, 26294), (487, 26195), (491, 26183), (502, 26165), (552, 26075), (596, 25988), (599, 25982), (608, 25961), (614, 25946), (623, 25928), (641, 25901), (702, 25790), (715, 25742), (716, 25739), (721, 25712), (723, 25706), (726, 25694), (743, 25655),

Gene: DillyDally\_29 Start: 24117, Stop: 22978, Start Num: 199

Candidate Starts for DillyDally\_29:

(99, 24321), (199, 24117), (240, 24021), (305, 23913), (308, 23907), (320, 23883), (343, 23829), (374, 23766), (378, 23754), (383, 23745), (391, 23724), (426, 23679), (443, 23640), (475, 23595), (482, 23586), (490, 23571), (558, 23451), (570, 23439), (607, 23361), (670, 23247), (711, 23160), (717, 23142), (744, 23058), (779, 22986),

Gene: DinoDaryn\_38 Start: 27370, Stop: 26255, Start Num: 185

Candidate Starts for DinoDaryn\_38:

(Start: 185 @27370 has 12 MA's), (370, 27031), (388, 26998), (544, 26704), (557, 26692), (640, 26512), (718, 26341), (723, 26314),

Gene: DismalFunk\_43 Start: 34317, Stop: 35417, Start Num: 145

Candidate Starts for DismalFunk\_43:

(Start: 145 @34317 has 284 MA's), (Start: 158 @34335 has 1 MA's), (221, 34443), (237, 34479), (309, 34593), (323, 34617), (345, 34671), (457, 34812), (468, 34836), (470, 34839), (491, 34881), (550, 34989), (604, 35094), (643, 35139), (649, 35154), (725, 35346),

Gene: DismalStressor\_43 Start: 34317, Stop: 35417, Start Num: 145

Candidate Starts for DismalStressor\_43:

(Start: 145 @34317 has 284 MA's), (Start: 158 @34335 has 1 MA's), (221, 34443), (237, 34479), (309, 34593), (323, 34617), (345, 34671), (457, 34812), (468, 34836), (470, 34839), (491, 34881), (550, 34989), (604, 35094), (643, 35139), (649, 35154), (725, 35346),

Gene: DmpstrDiver\_82 Start: 52410, Stop: 53639, Start Num: 104

Candidate Starts for DmpstrDiver\_82:

(Start: 104 @52410 has 29 MA's), (Start: 114 @52428 has 2 MA's), (Start: 136 @52467 has 1 MA's), (251, 52704), (313, 52812), (374, 52932), (375, 52935), (378, 52944), (386, 52959), (407, 52998), (451, 53076), (520, 53181), (528, 53193), (536, 53196), (544, 53205), (579, 53256), (580, 53259),

(589, 53277), (638, 53373), (672, 53430), (720, 53550), (721, 53553), (727, 53577), (738, 53601), (740, 53604),

Gene: DoRead\_44 Start: 32140, Stop: 33258, Start Num: 145

Candidate Starts for DoRead\_44:

(Start: 145 @32140 has 284 MA's), (223, 32278), (237, 32311), (271, 32359), (345, 32512), (350, 32521), (422, 32602), (471, 32695), (504, 32755), (510, 32767), (511, 32770), (525, 32797), (537, 32821), (555, 32848), (583, 32884), (584, 32887), (596, 32923), (611, 32959), (667, 33028), (676, 33043), (711, 33130), (714, 33139), (718, 33151), (723, 33178), (727, 33196), (736, 33217), (744, 33232), (749, 33241), (751, 33244),

Gene: DobbysSock\_31 Start: 27501, Stop: 28628, Start Num: 145

Candidate Starts for DobbysSock\_31:

(56, 27282), (67, 27318), (Start: 145 @27501 has 284 MA's), (174, 27555), (258, 27711), (311, 27801), (327, 27834), (468, 28029), (470, 28032), (491, 28074), (511, 28110), (681, 28407), (707, 28485), (718, 28527), (723, 28554), (749, 28617),

Gene: Dole\_44 Start: 33263, Stop: 34351, Start Num: 145

Candidate Starts for Dole\_44:

(Start: 145 @33263 has 284 MA's), (207, 33365), (221, 33389), (237, 33425), (277, 33476), (309, 33539), (323, 33563), (345, 33617), (347, 33620), (429, 33701), (468, 33770), (470, 33773), (550, 33923), (594, 34001), (604, 34028), (699, 34163),

Gene: Dolores\_40 Start: 29868, Stop: 30995, Start Num: 145

Candidate Starts for Dolores\_40:

(121, 29829), (Start: 145 @29868 has 284 MA's), (174, 29922), (236, 30045), (258, 30078), (311, 30168), (327, 30201), (468, 30396), (470, 30399), (491, 30441), (511, 30477), (681, 30774), (707, 30852), (713, 30879), (718, 30894), (723, 30921), (749, 30984),

Gene: Donkeykong\_41 Start: 32106, Stop: 33224, Start Num: 145

Candidate Starts for Donkeykong\_41:

(Start: 145 @32106 has 284 MA's), (151, 32115), (223, 32244), (237, 32277), (271, 32325), (330, 32442), (345, 32478), (350, 32487), (422, 32568), (438, 32592), (471, 32661), (491, 32700), (504, 32721), (510, 32733), (511, 32736), (518, 32748), (537, 32787), (540, 32793), (555, 32814), (583, 32850), (584, 32853), (596, 32889), (599, 32895), (604, 32907), (605, 32910), (667, 32994), (676, 33009), (692, 33027), (711, 33096), (714, 33105), (723, 33144), (727, 33162), (736, 33183), (744, 33198), (749, 33207), (751, 33210),

Gene: Dori\_45 Start: 42022, Stop: 40820, Start Num: 146

Candidate Starts for Dori\_45:

(Start: 146 @42022 has 7 MA's), (183, 41947), (197, 41923), (199, 41917), (253, 41812), (321, 41701), (322, 41698), (357, 41635), (435, 41500), (444, 41479), (481, 41425), (546, 41296), (549, 41290), (636, 41113), (639, 41110), (641, 41107), (650, 41086), (670, 41050), (707, 40984), (710, 40969), (726, 40903), (733, 40879), (749, 40849),

Gene: Dorito\_34 Start: 27145, Stop: 28272, Start Num: 145

Candidate Starts for Dorito\_34:

(56, 26926), (67, 26962), (Start: 145 @27145 has 284 MA's), (174, 27199), (236, 27322), (258, 27355), (311, 27445), (327, 27478), (468, 27673), (470, 27676), (491, 27718), (511, 27754), (681, 28051), (707, 28129), (718, 28171), (723, 28198), (749, 28261),

Gene: DosHalletts\_40 Start: 31274, Stop: 32392, Start Num: 145

Candidate Starts for DosHalletts\_40:

(Start: 145 @31274 has 284 MA's), (237, 31445), (271, 31493), (345, 31646), (350, 31655), (422, 31736), (438, 31760), (471, 31829), (504, 31889), (510, 31901), (511, 31904), (518, 31916), (525, 31931), (537, 31955), (540, 31961), (555, 31982), (583, 32018), (584, 32021), (596, 32057), (599, 32063), (604, 32075), (605, 32078), (611, 32093), (667, 32162), (676, 32177), (701, 32219), (711, 32264), (714, 32273), (723, 32312), (727, 32330), (736, 32351), (744, 32366), (749, 32375), (751, 32378),

Gene: Doughnut\_44 Start: 34142, Stop: 35242, Start Num: 145

Candidate Starts for Doughnut\_44:

(Start: 145 @34142 has 284 MA's), (Start: 158 @34160 has 1 MA's), (174, 34193), (221, 34268), (237, 34304), (309, 34418), (323, 34442), (345, 34496), (457, 34637), (468, 34661), (470, 34664), (491, 34706), (550, 34814), (604, 34919), (643, 34964), (649, 34979), (725, 35171),

Gene: Dove\_67 Start: 48492, Stop: 49721, Start Num: 104

Candidate Starts for Dove\_67:

(Start: 104 @48492 has 29 MA's), (Start: 114 @48510 has 2 MA's), (Start: 136 @48549 has 1 MA's), (251, 48786), (313, 48894), (374, 49014), (375, 49017), (378, 49026), (386, 49041), (407, 49080), (451, 49158), (520, 49263), (528, 49275), (536, 49278), (544, 49287), (579, 49338), (580, 49341), (589, 49359), (638, 49455), (672, 49512), (720, 49632), (721, 49635), (727, 49659), (738, 49683), (740, 49686),

Gene: DrHayes\_42 Start: 33376, Stop: 34464, Start Num: 145

Candidate Starts for DrHayes\_42:

(54, 33154), (Start: 145 @33376 has 284 MA's), (174, 33427), (207, 33478), (221, 33502), (237, 33538), (309, 33652), (345, 33730), (429, 33814), (468, 33883), (470, 33886), (550, 34036), (604, 34141), (699, 34276), (738, 34420),

Gene: Drake55\_36 Start: 26836, Stop: 25769, Start Num: 209

Candidate Starts for Drake55\_36:

(Start: 144 @26953 has 1 MA's), (Start: 177 @26890 has 119 MA's), (Start: 209 @26836 has 14 MA's), (Start: 239 @26767 has 6 MA's), (270, 26722), (273, 26716), (308, 26650), (333, 26593), (383, 26503), (446, 26392), (465, 26368), (487, 26335), (491, 26323), (552, 26215), (554, 26212), (596, 26128), (599, 26122), (608, 26101), (614, 26086), (623, 26068), (715, 25882), (721, 25852), (723, 25846), (726, 25834), (743, 25795),

Gene: DropBear\_33 Start: 26364, Stop: 25237, Start Num: 177

Candidate Starts for DropBear\_33:

(Start: 177 @26364 has 119 MA's), (228, 26277), (Start: 239 @26241 has 6 MA's), (270, 26196), (301, 26136), (353, 26040), (360, 26028), (363, 26022), (383, 25977), (420, 25923), (421, 25920), (432, 25896), (538, 25707), (552, 25689), (560, 25677), (584, 25638), (596, 25602), (599, 25596), (608, 25575), (614, 25560), (623, 25542), (702, 25404), (715, 25356), (721, 25326), (723, 25320), (726, 25308), (743, 25269),

Gene: DudeLittle\_33 Start: 26423, Stop: 25302, Start Num: 180

Candidate Starts for DudeLittle\_33:

(166, 26453), (Start: 180 @26423 has 10 MA's), (Start: 209 @26372 has 14 MA's), (Start: 239 @26303 has 6 MA's), (270, 26258), (353, 26102), (366, 26075), (383, 26039), (404, 25997), (421, 25982), (465, 25904), (487, 25871), (491, 25859), (502, 25841), (552, 25751), (560, 25739), (596, 25664), (599, 25658), (608, 25637), (614, 25622), (623, 25604), (641, 25577), (645, 25568), (715, 25418), (716, 25415), (721, 25388), (723, 25382), (726, 25370), (743, 25331),

Gene: Duke13\_85 Start: 52764, Stop: 53993, Start Num: 104

Candidate Starts for Duke13\_85:

(Start: 104 @52764 has 29 MA's), (Start: 114 @52782 has 2 MA's), (Start: 136 @52821 has 1 MA's), (251, 53058), (313, 53166), (374, 53286), (375, 53289), (378, 53298), (386, 53313), (407, 53352), (451, 53430), (520, 53535), (528, 53547), (536, 53550), (544, 53559), (579, 53610), (580, 53613), (589, 53631), (638, 53727), (672, 53784), (720, 53904), (721, 53907), (727, 53931), (738, 53955), (740, 53958),

Gene: DumpsterDude\_40 Start: 35157, Stop: 33988, Start Num: 127

Candidate Starts for DumpsterDude\_40:

(Start: 127 @35157 has 61 MA's), (211, 35001), (257, 34914), (306, 34833), (324, 34797), (352, 34743), (354, 34737), (362, 34725), (366, 34713), (422, 34620), (426, 34614), (440, 34584), (508, 34515), (510, 34512), (525, 34482), (528, 34479), (561, 34431), (596, 34359), (698, 34197), (700, 34185), (707, 34158), (721, 34098), (724, 34089), (743, 34044), (763, 34005),

Gene: Duplo\_37 Start: 26512, Stop: 25388, Start Num: 177

Candidate Starts for Duplo\_37:

(Start: 177 @26512 has 119 MA's), (Start: 209 @26458 has 14 MA's), (Start: 239 @26389 has 6 MA's), (353, 26188), (366, 26161), (383, 26125), (420, 26071), (421, 26068), (434, 26041), (465, 25990), (487, 25957), (491, 25945), (502, 25927), (538, 25855), (552, 25837), (560, 25825), (584, 25786), (596, 25750), (599, 25744), (608, 25723), (614, 25708), (623, 25690), (641, 25663), (702, 25552), (715, 25504), (716, 25501), (721, 25474), (723, 25468), (726, 25456), (743, 25417),

Gene: Durfee\_41 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for Durfee\_41:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: Dusty\_80 Start: 50323, Stop: 51621, Start Num: 111

Candidate Starts for Dusty\_80:

(Start: 111 @50323 has 12 MA's), (147, 50389), (197, 50491), (208, 50518), (214, 50530), (232, 50560), (259, 50599), (281, 50617), (319, 50683), (324, 50692), (368, 50776), (424, 50866), (507, 51025), (510, 51031), (511, 51034), (577, 51160), (603, 51229), (643, 51307), (670, 51358), (698, 51385), (706, 51421), (707, 51424), (708, 51427), (709, 51433), (711, 51445), (713, 51451), (714, 51454), (715, 51457), (721, 51487), (737, 51535), (742, 51544), (759, 51574),

Gene: EMSquaredA\_37 Start: 30030, Stop: 31136, Start Num: 145

Candidate Starts for EMSquaredA\_37:

(Start: 113 @29973 has 2 MA's), (Start: 145 @30030 has 284 MA's), (174, 30081), (236, 30186), (238, 30195), (267, 30225), (426, 30459), (429, 30465), (468, 30534), (470, 30537), (487, 30567), (511, 30618), (518, 30630), (645, 30858), (683, 30918), (707, 30993), (714, 31023), (749, 31125),

Gene: Eagle\_32 Start: 26273, Stop: 25152, Start Num: 177

Candidate Starts for Eagle\_32:

(Start: 156 @26318 has 3 MA's), (170, 26291), (Start: 177 @26273 has 119 MA's), (Start: 217 @26204 has 8 MA's), (Start: 239 @26150 has 6 MA's), (363, 25931), (366, 25922), (383, 25886), (404, 25844), (420, 25832), (421, 25829), (465, 25751), (538, 25616), (552, 25598), (596, 25511), (599, 25505), (608, 25484), (614, 25469), (623, 25451), (702, 25313), (715, 25265), (721, 25235), (723, 25229), (726, 25217), (743, 25178),

Gene: Easley\_35 Start: 28370, Stop: 27201, Start Num: 127

Candidate Starts for Easley\_35:

(Start: 127 @28370 has 61 MA's), (257, 28127), (307, 28043), (324, 28010), (362, 27938), (366, 27926), (388, 27881), (422, 27833), (508, 27728), (510, 27725), (525, 27695), (530, 27686), (596, 27572), (633, 27500), (636, 27497), (648, 27473), (651, 27467), (658, 27455), (698, 27410), (700,

27398), (707, 27371), (730, 27278), (743, 27257), (763, 27218),

Gene: Ebert\_39 Start: 27799, Stop: 28881, Start Num: 143

Candidate Starts for Ebert\_39:

(Start: 86 @27682 has 2 MA's), (Start: 88 @27688 has 6 MA's), (Start: 143 @27799 has 52 MA's), (174, 27853), (242, 27973), (421, 28228), (438, 28258), (470, 28318), (506, 28384), (518, 28408), (557, 28477), (583, 28513), (707, 28738), (713, 28765), (749, 28870),

Gene: Ecliptus\_49 Start: 33668, Stop: 34762, Start Num: 145

Candidate Starts for Ecliptus\_49:

(Start: 113 @33623 has 2 MA's), (Start: 145 @33668 has 284 MA's), (174, 33719), (223, 33797), (236, 33824), (330, 33983), (345, 34019), (414, 34079), (421, 34088), (422, 34091), (429, 34103), (438, 34118), (440, 34121), (473, 34184), (491, 34220), (510, 34253), (511, 34256), (518, 34268), (537, 34307), (629, 34463), (678, 34535), (707, 34595), (721, 34658), (725, 34670), (751, 34730),

Gene: EdnaMode\_33 Start: 26384, Stop: 27466, Start Num: 143

Candidate Starts for EdnaMode\_33:

(Start: 88 @26273 has 6 MA's), (Start: 143 @26384 has 52 MA's), (174, 26438), (242, 26558), (421, 26813), (438, 26843), (470, 26903), (506, 26969), (518, 26993), (707, 27323), (713, 27350), (749, 27455),

Gene: Eesa\_33 Start: 25111, Stop: 23927, Start Num: 127

Candidate Starts for Eesa\_33:

(Start: 127 @25111 has 61 MA's), (245, 24892), (257, 24874), (326, 24757), (368, 24667), (567, 24352), (605, 24259), (610, 24247), (618, 24229), (698, 24112), (706, 24076),

Gene: Efra2\_44 Start: 32569, Stop: 33669, Start Num: 145

Candidate Starts for Efra2\_44:

(Start: 145 @32569 has 284 MA's), (174, 32620), (221, 32695), (237, 32731), (238, 32734), (309, 32845), (457, 33064), (468, 33088), (470, 33091), (537, 33220), (550, 33241), (604, 33346), (667, 33433), (699, 33481), (710, 33529),

Gene: Eileen\_34 Start: 24892, Stop: 26034, Start Num: 145

Candidate Starts for Eileen\_34:

(Start: 145 @24892 has 284 MA's), (342, 25246), (345, 25252), (353, 25267), (400, 25321), (438, 25378), (468, 25438), (470, 25441), (485, 25468), (518, 25531), (584, 25651), (602, 25699), (673, 25825), (683, 25837), (714, 25933), (734, 26008),

Gene: Ein37\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Ein37\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Ejimix\_81 Start: 53852, Stop: 55081, Start Num: 104

Candidate Starts for Ejimix\_81:

(Start: 104 @53852 has 29 MA's), (Start: 114 @53870 has 2 MA's), (Start: 136 @53909 has 1 MA's), (251, 54146), (313, 54254), (374, 54374), (375, 54377), (378, 54386), (386, 54401), (407, 54440), (451, 54518), (528, 54635), (536, 54638), (544, 54647), (579, 54698), (580, 54701), (589, 54719),

(638, 54815), (672, 54872), (720, 54992), (721, 54995), (727, 55019), (738, 55043), (740, 55046),

Gene: EleanorGeorge\_40 Start: 31639, Stop: 32757, Start Num: 145

Candidate Starts for EleanorGeorge\_40:

(Start: 145 @31639 has 284 MA's), (151, 31648), (237, 31810), (330, 31975), (345, 32011), (350, 32020), (438, 32125), (471, 32194), (491, 32233), (502, 32251), (504, 32254), (510, 32266), (511, 32269), (518, 32281), (525, 32296), (537, 32320), (540, 32326), (555, 32347), (583, 32383), (584, 32386), (596, 32422), (599, 32428), (605, 32443), (611, 32458), (667, 32527), (676, 32542), (701, 32584), (711, 32629), (714, 32638), (723, 32677), (727, 32695), (736, 32716), (744, 32731), (749, 32740), (751, 32743),

Gene: Emerson\_42 Start: 32470, Stop: 33558, Start Num: 145

Candidate Starts for Emerson\_42:

(Start: 145 @32470 has 284 MA's), (174, 32521), (207, 32572), (221, 32596), (237, 32632), (323, 32770), (345, 32824), (429, 32908), (468, 32977), (470, 32980), (550, 33130), (594, 33208), (604, 33235), (667, 33322), (699, 33370),

Gene: Emma\_44 Start: 32666, Stop: 33784, Start Num: 145

Candidate Starts for Emma\_44:

(Start: 145 @32666 has 284 MA's), (151, 32675), (237, 32837), (271, 32885), (330, 33002), (345, 33038), (350, 33047), (438, 33152), (471, 33221), (491, 33260), (502, 33278), (504, 33281), (510, 33293), (511, 33296), (518, 33308), (525, 33323), (537, 33347), (540, 33353), (555, 33374), (583, 33410), (584, 33413), (596, 33449), (599, 33455), (604, 33467), (605, 33470), (611, 33485), (667, 33554), (676, 33569), (692, 33587), (701, 33611), (711, 33656), (714, 33665), (723, 33704), (727, 33722), (736, 33743), (744, 33758), (749, 33767), (751, 33770),

Gene: EnalisNailo\_35 Start: 31003, Stop: 32085, Start Num: 143

Candidate Starts for EnalisNailo\_35:

(Start: 143 @31003 has 52 MA's), (Start: 212 @31120 has 1 MA's), (271, 31213), (421, 31435), (441, 31471), (470, 31525), (507, 31594), (511, 31603), (707, 31942), (713, 31969), (749, 32074),

Gene: Enby\_42 Start: 31168, Stop: 32286, Start Num: 145

Candidate Starts for Enby\_42:

(Start: 145 @31168 has 284 MA's), (151, 31177), (237, 31339), (330, 31504), (345, 31540), (350, 31549), (422, 31630), (438, 31654), (471, 31723), (491, 31762), (502, 31780), (504, 31783), (510, 31795), (511, 31798), (518, 31810), (537, 31849), (540, 31855), (555, 31876), (583, 31912), (584, 31915), (596, 31951), (599, 31957), (605, 31972), (667, 32056), (676, 32071), (692, 32089), (711, 32158), (714, 32167), (723, 32206), (727, 32224), (736, 32245), (744, 32260), (749, 32269), (751, 32272),

Gene: Engineer\_85 Start: 52096, Stop: 53394, Start Num: 111

Candidate Starts for Engineer\_85:

(Start: 111 @52096 has 12 MA's), (147, 52162), (197, 52264), (208, 52291), (214, 52303), (232, 52333), (259, 52372), (281, 52390), (319, 52456), (324, 52465), (368, 52549), (424, 52639), (507, 52798), (510, 52804), (511, 52807), (577, 52933), (603, 53002), (643, 53080), (670, 53131), (698, 53158), (706, 53194), (707, 53197), (708, 53200), (709, 53206), (711, 53218), (713, 53224), (714, 53227), (715, 53230), (721, 53260), (737, 53308), (742, 53317), (759, 53347),

Gene: Enkosi\_39 Start: 34589, Stop: 35683, Start Num: 145

Candidate Starts for Enkosi\_39:

(32, 34238), (36, 34253), (51, 34346), (54, 34367), (83, 34460), (Start: 145 @34589 has 284 MA's), (174, 34640), (221, 34715), (237, 34751), (302, 34847), (309, 34865), (323, 34889), (342, 34937), (345, 34943), (453, 35075), (468, 35108), (491, 35153), (550, 35261), (604, 35366), (649, 35426),



(699, 35501), (725, 35609), (738, 35645),

Gene: EpicPhail\_36 Start: 26790, Stop: 25645, Start Num: 177

Candidate Starts for EpicPhail\_36:

(Start: 177 @26790 has 119 MA's), (Start: 203 @26751 has 10 MA's), (228, 26703), (Start: 239 @26667 has 6 MA's), (270, 26622), (353, 26466), (366, 26439), (383, 26403), (421, 26346), (465, 26268), (482, 26244), (502, 26205), (538, 26133), (548, 26121), (552, 26115), (560, 26103), (596, 26028), (599, 26022), (608, 26001), (614, 25986), (623, 25968), (639, 25944), (702, 25830), (714, 25785), (715, 25782), (718, 25773), (721, 25752), (723, 25746), (726, 25734), (743, 25695),

Gene: Equemioh13\_35 Start: 26811, Stop: 25678, Start Num: 177

Candidate Starts for Equemioh13\_35:

(Start: 177 @26811 has 119 MA's), (Start: 209 @26757 has 14 MA's), (Start: 239 @26688 has 6 MA's), (270, 26643), (353, 26487), (366, 26460), (383, 26424), (421, 26367), (491, 26244), (502, 26226), (552, 26136), (560, 26124), (596, 26049), (599, 26043), (608, 26022), (614, 26007), (623, 25989), (641, 25962), (645, 25953), (702, 25851), (715, 25803), (721, 25773), (723, 25767), (726, 25755), (743, 25716),

Gene: EricMillard\_80 Start: 53055, Stop: 54284, Start Num: 104

Candidate Starts for EricMillard\_80:

(Start: 104 @53055 has 29 MA's), (Start: 114 @53073 has 2 MA's), (Start: 136 @53112 has 1 MA's), (251, 53349), (313, 53457), (374, 53577), (375, 53580), (378, 53589), (386, 53604), (407, 53643), (451, 53721), (520, 53826), (528, 53838), (536, 53841), (544, 53850), (579, 53901), (580, 53904), (589, 53922), (638, 54018), (672, 54075), (720, 54195), (721, 54198), (727, 54222), (738, 54246), (740, 54249),

Gene: Estave1\_43 Start: 31907, Stop: 33010, Start Num: 145

Candidate Starts for Estave1\_43:

(Start: 145 @31907 has 284 MA's), (174, 31955), (223, 32036), (233, 32063), (345, 32276), (367, 32300), (422, 32348), (468, 32429), (506, 32498), (510, 32507), (525, 32537), (537, 32561), (550, 32582), (594, 32660), (599, 32675), (645, 32735), (667, 32774), (676, 32789), (690, 32813), (701, 32840), (707, 32864), (711, 32885), (714, 32894), (725, 32939), (727, 32951),

Gene: Eudoria\_39 Start: 30563, Stop: 31645, Start Num: 143

Candidate Starts for Eudoria\_39:

(Start: 88 @30452 has 6 MA's), (Start: 143 @30563 has 52 MA's), (174, 30617), (242, 30737), (421, 30992), (438, 31022), (470, 31082), (506, 31148), (518, 31172), (707, 31502), (713, 31529), (749, 31634),

Gene: Eurydice\_33 Start: 26248, Stop: 25127, Start Num: 177

Candidate Starts for Eurydice\_33:

(Start: 156 @26293 has 3 MA's), (170, 26266), (Start: 177 @26248 has 119 MA's), (Start: 217 @26179 has 8 MA's), (Start: 239 @26125 has 6 MA's), (363, 25906), (366, 25897), (383, 25861), (404, 25819), (420, 25807), (421, 25804), (465, 25726), (538, 25591), (552, 25573), (596, 25486), (599, 25480), (608, 25459), (614, 25444), (623, 25426), (702, 25288), (715, 25240), (721, 25210), (723, 25204), (726, 25192), (743, 25153),

Gene: Evanesce\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Evanesce\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551,

25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: EvePickles\_38 Start: 28599, Stop: 27466, Start Num: 145

Candidate Starts for EvePickles\_38:

(62, 28782), (71, 28752), (Start: 145 @28599 has 284 MA's), (174, 28548), (237, 28434), (271, 28392), (277, 28380), (287, 28362), (340, 28248), (362, 28230), (411, 28167), (422, 28152), (429, 28140), (468, 28065), (473, 28056), (506, 27996), (543, 27921), (551, 27906), (631, 27756), (636, 27753), (701, 27636), (707, 27612), (710, 27597), (723, 27543), (728, 27522), (743, 27492),

Gene: Eviarto\_39 Start: 31988, Stop: 33070, Start Num: 143

Candidate Starts for Eviarto\_39:

(Start: 88 @31877 has 6 MA's), (Start: 143 @31988 has 52 MA's), (174, 32042), (242, 32162), (414, 32408), (421, 32417), (438, 32447), (470, 32507), (506, 32573), (518, 32597), (707, 32927), (713, 32954), (749, 33059),

Gene: EvilGenius\_36 Start: 28005, Stop: 27007, Start Num: 239

Candidate Starts for EvilGenius\_36:

(Start: 162 @28152 has 7 MA's), (Start: 171 @28134 has 7 MA's), (Start: 217 @28053 has 8 MA's), (Start: 239 @28005 has 6 MA's), (270, 27960), (353, 27804), (366, 27777), (383, 27741), (421, 27684), (465, 27606), (487, 27573), (491, 27561), (502, 27543), (552, 27453), (560, 27441), (596, 27366), (599, 27360), (608, 27339), (614, 27324), (623, 27306), (641, 27279), (645, 27270), (702, 27168), (715, 27120), (716, 27117), (721, 27090), (723, 27084), (726, 27072), (743, 27033),

Gene: Faith5x5\_30 Start: 24997, Stop: 26145, Start Num: 105

Candidate Starts for Faith5x5\_30:

(Start: 105 @24997 has 1 MA's), (121, 25027), (Start: 140 @25060 has 1 MA's), (195, 25147), (236, 25219), (491, 25615), (511, 25651), (512, 25654), (518, 25663), (584, 25777), (678, 25942), (707, 26002), (725, 26077), (749, 26134),

Gene: Faja\_39 Start: 29043, Stop: 27904, Start Num: 145

Candidate Starts for Faja\_39:

(Start: 145 @29043 has 284 MA's), (174, 28992), (277, 28824), (287, 28806), (362, 28674), (422, 28596), (429, 28584), (433, 28578), (468, 28509), (473, 28500), (506, 28440), (551, 28350), (605, 28245), (615, 28224), (636, 28197), (701, 28074), (707, 28050), (710, 28035), (743, 27930),

Gene: Fameo\_34 Start: 26494, Stop: 25430, Start Num: 209

Candidate Starts for Fameo\_34:

(166, 26575), (Start: 180 @26545 has 10 MA's), (Start: 209 @26494 has 14 MA's), (Start: 239 @26425 has 6 MA's), (270, 26380), (353, 26224), (366, 26197), (383, 26161), (421, 26104), (465, 26026), (487, 25993), (491, 25981), (502, 25963), (552, 25873), (560, 25861), (599, 25780), (608, 25759), (614, 25744), (623, 25726), (641, 25699), (702, 25588), (714, 25543), (715, 25540), (716, 25537), (721, 25510), (723, 25504), (726, 25492), (743, 25453),

Gene: Farber\_36 Start: 26744, Stop: 25638, Start Num: 203

Candidate Starts for Farber\_36:

(Start: 177 @26783 has 119 MA's), (Start: 203 @26744 has 10 MA's), (Start: 239 @26660 has 6 MA's), (270, 26615), (353, 26459), (366, 26432), (383, 26396), (421, 26339), (465, 26261), (482, 26237), (502, 26198), (538, 26126), (548, 26114), (552, 26108), (560, 26096), (596, 26021), (599, 26015), (608, 25994), (614, 25979), (623, 25961), (639, 25937), (702, 25823), (714, 25778), (715, 25775), (718, 25766), (721, 25745), (723, 25739), (726, 25727), (743, 25688),

Gene: Farewell\_44 Start: 33396, Stop: 34574, Start Num: 148

Candidate Starts for Farewell\_44:

(Start: 148 @33396 has 2 MA's), (174, 33444), (215, 33510), (237, 33555), (327, 33705), (345, 33747), (429, 33861), (441, 33888), (468, 33936), (470, 33939), (511, 34020), (518, 34032), (582, 34137), (596, 34179), (603, 34194), (609, 34209), (631, 34233), (699, 34344), (713, 34404), (736, 34485), (743, 34497), (762, 34536),

Gene: Fernando\_36 Start: 26750, Stop: 25644, Start Num: 203

Candidate Starts for Fernando\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: Filuzino\_41 Start: 31324, Stop: 32442, Start Num: 145

Candidate Starts for Filuzino\_41:

(Start: 145 @31324 has 284 MA's), (237, 31495), (330, 31660), (345, 31696), (350, 31705), (438, 31810), (471, 31879), (491, 31918), (504, 31939), (510, 31951), (511, 31954), (518, 31966), (525, 31981), (537, 32005), (540, 32011), (555, 32032), (583, 32068), (584, 32071), (596, 32107), (599, 32113), (605, 32128), (611, 32143), (667, 32212), (676, 32227), (692, 32245), (701, 32269), (711, 32314), (714, 32323), (723, 32362), (727, 32380), (736, 32401), (744, 32416), (749, 32425), (751, 32428),

Gene: Findley\_43 Start: 34310, Stop: 35410, Start Num: 145

Candidate Starts for Findley\_43:

(Start: 145 @34310 has 284 MA's), (Start: 158 @34328 has 1 MA's), (174, 34361), (221, 34436), (237, 34472), (309, 34586), (323, 34610), (345, 34664), (457, 34805), (468, 34829), (470, 34832), (491, 34874), (550, 34982), (604, 35087), (643, 35132), (649, 35147), (725, 35339),

Gene: Finkle\_45 Start: 32773, Stop: 31643, Start Num: 159

Candidate Starts for Finkle\_45:

(Start: 126 @32830 has 2 MA's), (Start: 159 @32773 has 22 MA's), (Start: 171 @32749 has 7 MA's), (Start: 185 @32716 has 12 MA's), (265, 32554), (333, 32419), (335, 32416), (366, 32350), (407, 32266), (415, 32257), (431, 32230), (451, 32188), (471, 32161), (529, 32056), (586, 31972), (630, 31870), (669, 31846), (708, 31795), (711, 31777), (717, 31759), (721, 31735), (725, 31723),

Gene: FiringLine\_34 Start: 26370, Stop: 25255, Start Num: 180

Candidate Starts for FiringLine\_34:

(166, 26400), (Start: 180 @26370 has 10 MA's), (Start: 239 @26250 has 6 MA's), (270, 26205), (353, 26049), (366, 26022), (383, 25986), (404, 25944), (421, 25929), (487, 25818), (491, 25806), (502, 25788), (552, 25698), (560, 25686), (596, 25611), (599, 25605), (608, 25584), (614, 25569), (623, 25551), (641, 25524), (645, 25515), (702, 25413), (714, 25368), (715, 25365), (716, 25362), (721, 25335), (723, 25329), (726, 25317), (743, 25278),

Gene: Flare16\_34 Start: 26449, Stop: 25382, Start Num: 209

Candidate Starts for Flare16\_34:

(Start: 144 @26566 has 1 MA's), (Start: 177 @26503 has 119 MA's), (Start: 209 @26449 has 14 MA's), (Start: 239 @26380 has 6 MA's), (270, 26335), (332, 26209), (366, 26152), (383, 26116), (420, 26062), (421, 26059), (491, 25936), (502, 25918), (552, 25828), (560, 25816), (596, 25741), (599, 25735), (608, 25714), (614, 25699), (623, 25681), (641, 25654), (715, 25495), (721, 25465), (723, 25459), (726, 25447), (743, 25408),

Gene: Flathead\_44 Start: 33580, Stop: 34698, Start Num: 145

Candidate Starts for Flathead\_44:

(Start: 145 @33580 has 284 MA's), (151, 33589), (237, 33751), (330, 33916), (345, 33952), (350, 33961), (438, 34066), (471, 34135), (491, 34174), (502, 34192), (504, 34195), (510, 34207), (511, 34210), (518, 34222), (525, 34237), (537, 34261), (540, 34267), (555, 34288), (583, 34324), (584, 34327), (596, 34363), (599, 34369), (604, 34381), (605, 34384), (667, 34468), (676, 34483), (692, 34501), (701, 34525), (711, 34570), (714, 34579), (723, 34618), (727, 34636), (736, 34657), (744, 34672), (749, 34681), (751, 34684),

Gene: Floral\_36 Start: 32103, Stop: 33209, Start Num: 145

Candidate Starts for Floral\_36:

(Start: 113 @32046 has 2 MA's), (Start: 145 @32103 has 284 MA's), (174, 32154), (236, 32259), (267, 32298), (429, 32538), (468, 32607), (470, 32610), (487, 32640), (511, 32691), (518, 32703), (645, 32931), (683, 32991), (707, 33066), (714, 33096), (749, 33198),

Gene: Footloose\_31 Start: 22512, Stop: 21292, Start Num: 145

Candidate Starts for Footloose\_31:

(Start: 145 @22512 has 284 MA's), (168, 22473), (176, 22455), (182, 22437), (219, 22386), (234, 22350), (293, 22254), (333, 22170), (345, 22143), (362, 22119), (390, 22077), (398, 22062), (429, 22017), (448, 21978), (468, 21945), (506, 21879), (507, 21876), (518, 21855), (551, 21789), (605, 21687), (609, 21678), (626, 21648), (644, 21621), (657, 21594), (671, 21567), (678, 21555), (689, 21537), (701, 21501), (707, 21477), (723, 21408), (727, 21390), (738, 21366), (751, 21342),

Gene: Forge\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Forge\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: FosterFrank\_40 Start: 26544, Stop: 27686, Start Num: 145

Candidate Starts for FosterFrank\_40:

(75, 26397), (80, 26409), (84, 26418), (96, 26451), (120, 26499), (129, 26514), (Start: 145 @26544 has 284 MA's), (342, 26898), (345, 26904), (354, 26922), (438, 27030), (468, 27090), (518, 27183), (584, 27303), (602, 27351), (614, 27381), (673, 27477), (714, 27585), (734, 27660),

Gene: Francois\_38 Start: 31405, Stop: 30134, Start Num: 127

Candidate Starts for Francois\_38:

(Start: 127 @31405 has 61 MA's), (Start: 136 @31390 has 1 MA's), (Start: 185 @31288 has 12 MA's), (214, 31246), (257, 31159), (299, 31084), (307, 31075), (316, 31057), (366, 30958), (368, 30955), (422, 30865), (503, 30769), (559, 30664), (562, 30658), (636, 30496), (700, 30355), (711, 30310), (724, 30259), (730, 30235), (738, 30223), (744, 30211), (770, 30172),

Gene: Fred313\_33 Start: 26049, Stop: 24922, Start Num: 177

Candidate Starts for Fred313\_33:

(Start: 177 @26049 has 119 MA's), (228, 25962), (Start: 239 @25926 has 6 MA's), (270, 25881), (301, 25821), (353, 25725), (360, 25713), (363, 25707), (383, 25662), (420, 25608), (421, 25605), (432, 25581), (538, 25392), (552, 25374), (560, 25362), (584, 25323), (596, 25287), (599, 25281), (608, 25260), (614, 25245), (623, 25227), (702, 25089), (715, 25041), (721, 25011), (723, 25005), (726, 24993), (743, 24954),

Gene: Frickyeah\_52 Start: 32012, Stop: 33106, Start Num: 145

Candidate Starts for Frickyeah\_52:

(96, 31925), (Start: 114 @31961 has 2 MA's), (Start: 145 @32012 has 284 MA's), (174, 32063), (220, 32135), (223, 32141), (236, 32168), (293, 32255), (330, 32327), (345, 32363), (350, 32372), (429, 32447), (440, 32465), (491, 32564), (510, 32597), (511, 32600), (518, 32612), (584, 32714), (609, 32780), (629, 32807), (678, 32879), (707, 32939), (713, 32966), (751, 33074),

Gene: FroggyToad\_38 Start: 30081, Stop: 28912, Start Num: 127

Candidate Starts for FroggyToad\_38:

(Start: 127 @30081 has 61 MA's), (257, 29838), (306, 29757), (324, 29721), (335, 29694), (352, 29667), (354, 29661), (362, 29649), (366, 29637), (412, 29553), (422, 29544), (426, 29538), (508, 29439), (510, 29436), (525, 29406), (561, 29355), (596, 29283), (609, 29253), (698, 29121), (700, 29109), (721, 29022), (724, 29013), (743, 28968), (763, 28929),

Gene: Fruitloop\_40 Start: 32560, Stop: 33678, Start Num: 145

Candidate Starts for Fruitloop\_40:

(Start: 145 @32560 has 284 MA's), (237, 32731), (330, 32896), (345, 32932), (350, 32941), (422, 33022), (438, 33046), (471, 33115), (491, 33154), (504, 33175), (510, 33187), (511, 33190), (518, 33202), (525, 33217), (537, 33241), (540, 33247), (555, 33268), (583, 33304), (584, 33307), (596, 33343), (599, 33349), (605, 33364), (611, 33379), (667, 33448), (676, 33463), (701, 33505), (711, 33550), (714, 33559), (723, 33598), (727, 33616), (736, 33637), (744, 33652), (749, 33661), (751, 33664),

Gene: GMA1\_30 Start: 24152, Stop: 23064, Start Num: 145

Candidate Starts for GMA1\_30:

(Start: 145 @24152 has 284 MA's), (325, 23858), (350, 23798), (422, 23723), (429, 23711), (458, 23663), (468, 23642), (471, 23636), (507, 23567), (511, 23558), (518, 23546), (542, 23498), (594, 23414), (614, 23363), (639, 23336), (649, 23315), (683, 23267), (697, 23249), (707, 23207), (710, 23192), (712, 23183), (713, 23180), (714, 23177), (727, 23120), (749, 23075),

Gene: GMA4\_29 Start: 26449, Stop: 25217, Start Num: 127

Candidate Starts for GMA4\_29:

(Start: 127 @26449 has 61 MA's), (240, 26212), (244, 26203), (247, 26197), (366, 25981), (392, 25924), (444, 25837), (508, 25753), (511, 25747), (530, 25711), (596, 25570), (633, 25498), (703, 25381), (721, 25309), (730, 25276), (731, 25273),

Gene: GUPitcher\_34 Start: 28767, Stop: 27628, Start Num: 196

Candidate Starts for GUPitcher\_34:

(Start: 196 @28767 has 2 MA's), (231, 28701), (270, 28626), (282, 28605), (304, 28560), (343, 28476), (372, 28419), (378, 28401), (396, 28365), (420, 28335), (428, 28320), (432, 28308), (442, 28287), (467, 28251), (469, 28248), (482, 28227), (504, 28185), (506, 28182), (518, 28158), (538, 28119), (552, 28101), (608, 27993), (638, 27942), (685, 27870), (710, 27801), (711, 27795), (712, 27792), (762, 27660), (766, 27654),

Gene: Gaia\_52 Start: 37562, Stop: 38833, Start Num: 90

Candidate Starts for Gaia\_52:

(Start: 90 @37562 has 10 MA's), (Start: 114 @37610 has 2 MA's), (Start: 136 @37649 has 1 MA's), (280, 37928), (340, 38045), (374, 38114), (375, 38117), (378, 38126), (392, 38156), (434, 38222), (451, 38258), (474, 38285), (477, 38288), (486, 38303), (489, 38309), (509, 38342), (517, 38357), (519, 38360), (520, 38363), (528, 38375), (536, 38393), (544, 38402), (573, 38444), (577, 38450), (579, 38453), (597, 38498), (638, 38570), (685, 38636), (701, 38663), (720, 38747), (721, 38750), (728, 38777), (738, 38798),

Gene: Galactic\_43 Start: 32779, Stop: 33897, Start Num: 145

Candidate Starts for Galactic\_43:

(Start: 145 @32779 has 284 MA's), (151, 32788), (237, 32950), (330, 33115), (345, 33151), (350, 33160), (438, 33265), (471, 33334), (491, 33373), (502, 33391), (504, 33394), (510, 33406), (511, 33409), (518, 33421), (525, 33436), (537, 33460), (540, 33466), (555, 33487), (583, 33523), (584, 33526), (596, 33562), (599, 33568), (605, 33583), (611, 33598), (667, 33667), (676, 33682), (701, 33724), (711, 33769), (714, 33778), (723, 33817), (727, 33835), (736, 33856), (744, 33871), (749, 33880), (751, 33883),

Gene: Galaxy\_33 Start: 24046, Stop: 22862, Start Num: 127

Candidate Starts for Galaxy\_33:

(Start: 127 @24046 has 61 MA's), (326, 23692), (362, 23617), (368, 23602), (557, 23308), (567, 23287), (581, 23260), (605, 23194), (610, 23182), (618, 23164), (703, 23020), (706, 23011),

Gene: Gancho\_28 Start: 26243, Stop: 25008, Start Num: 133

Candidate Starts for Gancho\_28:

(Start: 133 @26243 has 4 MA's), (Start: 159 @26201 has 22 MA's), (188, 26135), (225, 26066), (230, 26054), (242, 26015), (254, 26000), (260, 25994), (267, 25982), (301, 25922), (334, 25865), (354, 25832), (357, 25829), (358, 25826), (428, 25712), (434, 25697), (444, 25673), (455, 25658), (461, 25643), (481, 25619), (487, 25607), (507, 25568), (508, 25565), (528, 25529), (549, 25481), (551, 25478), (590, 25406), (593, 25400), (595, 25388), (596, 25385), (599, 25379), (623, 25325), (636, 25304), (650, 25277), (660, 25259), (664, 25253), (699, 25208), (705, 25181), (707, 25175), (714, 25145), (719, 25118), (743, 25055),

Gene: Ganymede\_42 Start: 32781, Stop: 33869, Start Num: 145

Candidate Starts for Ganymede\_42:

(Start: 145 @32781 has 284 MA's), (207, 32883), (221, 32907), (237, 32943), (323, 33081), (345, 33135), (429, 33219), (468, 33288), (470, 33291), (550, 33441), (604, 33546), (667, 33633), (686, 33663), (699, 33681), (738, 33825),

Gene: GaugeLDP\_35 Start: 27254, Stop: 26070, Start Num: 144

Candidate Starts for GaugeLDP\_35:

(Start: 144 @27254 has 1 MA's), (Start: 177 @27191 has 119 MA's), (Start: 209 @27137 has 14 MA's), (Start: 239 @27068 has 6 MA's), (270, 27023), (333, 26894), (383, 26804), (446, 26693), (552, 26516), (560, 26504), (596, 26429), (599, 26423), (608, 26402), (614, 26387), (623, 26369), (702, 26231), (715, 26183), (716, 26180), (721, 26153), (723, 26147), (726, 26135), (743, 26096),

Gene: Geeche\_82 Start: 51160, Stop: 52458, Start Num: 111

Candidate Starts for Geeche\_82:

(Start: 111 @51160 has 12 MA's), (147, 51226), (197, 51328), (208, 51355), (214, 51367), (227, 51385), (232, 51397), (259, 51436), (281, 51454), (319, 51520), (324, 51529), (368, 51613), (424, 51703), (507, 51862), (510, 51868), (511, 51871), (577, 51997), (603, 52066), (643, 52144), (670, 52195), (698, 52222), (706, 52258), (707, 52261), (708, 52264), (709, 52270), (711, 52282), (713, 52288), (714, 52291), (715, 52294), (721, 52324), (737, 52372), (742, 52381), (759, 52411),

Gene: GemG\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for GemG\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (557, 28553), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: Gemma\_35 Start: 26639, Stop: 25494, Start Num: 177

Candidate Starts for Gemma\_35:

(Start: 144 @26702 has 1 MA's), (Start: 177 @26639 has 119 MA's), (Start: 209 @26585 has 14 MA's), (Start: 239 @26516 has 6 MA's), (363, 26297), (366, 26288), (383, 26252), (421, 26195), (465, 26117), (487, 26084), (538, 25982), (552, 25964), (560, 25952), (596, 25877), (599, 25871), (608, 25850), (614, 25835), (623, 25817), (639, 25793), (714, 25634), (715, 25631), (721, 25601), (723, 25595), (726, 25583), (743, 25544),

Gene: Georgie2\_35 Start: 26415, Stop: 25300, Start Num: 180

Candidate Starts for Georgie2\_35:

(166, 26445), (Start: 180 @26415 has 10 MA's), (Start: 239 @26295 has 6 MA's), (270, 26250), (353, 26094), (366, 26067), (383, 26031), (404, 25989), (421, 25974), (465, 25896), (487, 25863), (491, 25851), (502, 25833), (552, 25743), (560, 25731), (596, 25656), (599, 25650), (608, 25629), (614, 25614), (623, 25596), (641, 25569), (702, 25458), (714, 25413), (715, 25410), (716, 25407), (721, 25380), (723, 25374), (726, 25362), (743, 25323),

Gene: Geraldini\_43 Start: 33527, Stop: 34615, Start Num: 145

Candidate Starts for Geraldini\_43:

(Start: 145 @33527 has 284 MA's), (207, 33629), (221, 33653), (237, 33689), (323, 33827), (345, 33881), (429, 33965), (468, 34034), (470, 34037), (550, 34187), (604, 34292), (667, 34379), (699, 34427), (738, 34571),

Gene: Getalong\_53 Start: 34783, Stop: 35853, Start Num: 145

Candidate Starts for Getalong\_53:

(Start: 145 @34783 has 284 MA's), (174, 34834), (223, 34912), (236, 34939), (345, 35134), (350, 35143), (414, 35194), (421, 35203), (422, 35206), (429, 35218), (454, 35263), (473, 35299), (491, 35335), (510, 35368), (511, 35371), (518, 35383), (609, 35551), (678, 35650), (707, 35710), (713, 35737), (714, 35740), (719, 35767), (721, 35773), (725, 35785), (749, 35842),

Gene: Giles\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Giles\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: GingkoMaracino\_36 Start: 26637, Stop: 25531, Start Num: 203

Candidate Starts for GingkoMaracino\_36:

(Start: 177 @26676 has 119 MA's), (Start: 203 @26637 has 10 MA's), (228, 26589), (Start: 239 @26553 has 6 MA's), (270, 26508), (353, 26352), (366, 26325), (383, 26289), (421, 26232), (465, 26154), (482, 26130), (502, 26091), (538, 26019), (548, 26007), (552, 26001), (560, 25989), (596, 25914), (599, 25908), (608, 25887), (614, 25872), (623, 25854), (639, 25830), (702, 25716), (714, 25671), (715, 25668), (718, 25659), (721, 25638), (723, 25632), (726, 25620), (743, 25581),

Gene: Giroux\_33 Start: 26209, Stop: 25169, Start Num: 228

Candidate Starts for Giroux\_33:

(Start: 177 @26296 has 119 MA's), (228, 26209), (Start: 239 @26173 has 6 MA's), (270, 26128), (353, 25972), (360, 25960), (363, 25954), (383, 25909), (420, 25855), (421, 25852), (432, 25828), (552, 25621), (560, 25609), (584, 25570), (596, 25534), (599, 25528), (608, 25507), (614, 25492), (623, 25474), (702, 25336), (715, 25288), (721, 25258), (723, 25252), (726, 25240), (743, 25201),

Gene: Gizermo\_37 Start: 27758, Stop: 28957, Start Num: 86

Candidate Starts for Gizermo\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (557, 28553), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: Globfish\_39 Start: 27492, Stop: 26353, Start Num: 145

Candidate Starts for Globfish\_39:

(Start: 145 @27492 has 284 MA's), (174, 27441), (237, 27327), (277, 27273), (287, 27255), (340, 27141), (362, 27123), (422, 27045), (429, 27033), (468, 26958), (473, 26949), (506, 26889), (551, 26799), (604, 26697), (608, 26688), (615, 26673), (631, 26649), (636, 26646), (701, 26529), (707, 26505), (710, 26490), (727, 26418), (728, 26415), (751, 26370),

Gene: GlobiWarming\_38 Start: 26068, Stop: 27210, Start Num: 145

Candidate Starts for GlobiWarming\_38:

(Start: 145 @26068 has 284 MA's), (342, 26422), (345, 26428), (354, 26446), (438, 26554), (468, 26614), (518, 26707), (584, 26827), (602, 26875), (614, 26905), (673, 27001), (714, 27109), (734, 27184),

Gene: Glotell\_38 Start: 24072, Stop: 22879, Start Num: 127

Candidate Starts for Glotell\_38:

(Start: 127 @24072 has 61 MA's), (362, 23643), (388, 23586), (401, 23562), (557, 23334), (610, 23208), (615, 23196), (627, 23175), (706, 23037), (726, 22956), (749, 22908),

Gene: Goib\_39 Start: 28036, Stop: 26921, Start Num: 185

Candidate Starts for Goib\_39:

(Start: 156 @28105 has 3 MA's), (Start: 185 @28036 has 12 MA's), (370, 27697), (388, 27664), (544, 27370), (557, 27358), (640, 27178), (723, 26980),

Gene: Gonephishing\_76 Start: 48662, Stop: 49951, Start Num: 85

Candidate Starts for Gonephishing\_76:

(70, 48620), (Start: 85 @48662 has 1 MA's), (Start: 90 @48677 has 10 MA's), (92, 48680), (Start: 114 @48725 has 2 MA's), (Start: 136 @48764 has 1 MA's), (330, 49145), (374, 49229), (379, 49244), (451, 49373), (536, 49493), (580, 49556), (589, 49574), (597, 49598), (638, 49670), (720, 49847), (721, 49850), (723, 49856), (727, 49874), (732, 49889), (738, 49898), (740, 49901), (762, 49946),

Gene: Gorge\_43 Start: 32137, Stop: 33255, Start Num: 145

Candidate Starts for Gorge\_43:

(Start: 145 @32137 has 284 MA's), (223, 32275), (237, 32308), (271, 32356), (330, 32473), (345, 32509), (350, 32518), (438, 32623), (471, 32692), (504, 32752), (510, 32764), (511, 32767), (518, 32779), (525, 32794), (537, 32818), (540, 32824), (555, 32845), (583, 32881), (584, 32884), (596, 32920), (599, 32926), (604, 32938), (605, 32941), (667, 33025), (676, 33040), (701, 33082), (711, 33127), (714, 33136), (723, 33175), (727, 33193), (736, 33214), (744, 33229), (749, 33238), (751, 33241),

Gene: Gorpy\_41 Start: 29001, Stop: 27862, Start Num: 145

Candidate Starts for Gorpy\_41:

(Start: 145 @29001 has 284 MA's), (174, 28950), (277, 28782), (287, 28764), (362, 28632), (422, 28554), (429, 28542), (433, 28536), (468, 28467), (473, 28458), (506, 28398), (551, 28308), (605, 28203), (615, 28182), (636, 28155), (701, 28032), (707, 28008), (710, 27993), (728, 27918), (743, 27888),

Gene: GrandSlam\_39 Start: 31803, Stop: 30532, Start Num: 127



Candidate Starts for GrandSlam\_39:

(Start: 127 @31803 has 61 MA's), (Start: 136 @31788 has 1 MA's), (Start: 185 @31686 has 12 MA's), (214, 31644), (222, 31632), (257, 31557), (299, 31482), (307, 31473), (316, 31455), (366, 31356), (368, 31353), (422, 31263), (508, 31158), (559, 31062), (562, 31056), (636, 30894), (700, 30753), (711, 30708), (724, 30657), (726, 30648), (730, 30633), (738, 30621), (744, 30609), (770, 30570),

Gene: Gratitude\_34 Start: 26757, Stop: 25678, Start Num: 209

Candidate Starts for Gratitude\_34:

(Start: 177 @26811 has 119 MA's), (Start: 209 @26757 has 14 MA's), (Start: 239 @26688 has 6 MA's), (270, 26643), (353, 26487), (366, 26460), (383, 26424), (421, 26367), (491, 26244), (502, 26226), (552, 26136), (560, 26124), (596, 26049), (599, 26043), (608, 26022), (614, 26007), (623, 25989), (641, 25962), (645, 25953), (702, 25851), (715, 25803), (721, 25773), (723, 25767), (726, 25755), (743, 25716),

Gene: Gravaillia\_29 Start: 26207, Stop: 25014, Start Num: 159

Candidate Starts for Gravaillia\_29:

(Start: 133 @26249 has 4 MA's), (Start: 159 @26207 has 22 MA's), (188, 26141), (225, 26072), (230, 26060), (242, 26021), (254, 26006), (260, 26000), (267, 25988), (301, 25928), (334, 25871), (354, 25838), (357, 25835), (358, 25832), (428, 25718), (434, 25703), (444, 25679), (455, 25664), (461, 25649), (481, 25625), (487, 25613), (507, 25574), (508, 25571), (528, 25535), (549, 25487), (551, 25484), (590, 25412), (593, 25406), (595, 25394), (596, 25391), (599, 25385), (623, 25331), (636, 25310), (650, 25283), (660, 25265), (664, 25259), (699, 25214), (705, 25187), (707, 25181), (714, 25151), (719, 25124), (743, 25061),

Gene: Gravel\_41 Start: 25089, Stop: 23905, Start Num: 127

Candidate Starts for Gravel\_41:

(Start: 127 @25089 has 61 MA's), (245, 24870), (257, 24852), (326, 24735), (362, 24660), (567, 24330), (605, 24237), (610, 24225), (618, 24207), (698, 24090), (706, 24054),

Gene: Grif\_36 Start: 26864, Stop: 25719, Start Num: 177

Candidate Starts for Grif\_36:

(Start: 177 @26864 has 119 MA's), (Start: 203 @26825 has 10 MA's), (228, 26777), (Start: 239 @26741 has 6 MA's), (270, 26696), (353, 26540), (366, 26513), (383, 26477), (421, 26420), (465, 26342), (482, 26318), (502, 26279), (538, 26207), (548, 26195), (552, 26189), (560, 26177), (596, 26102), (599, 26096), (608, 26075), (614, 26060), (623, 26042), (639, 26018), (702, 25904), (714, 25859), (715, 25856), (718, 25847), (721, 25826), (723, 25820), (726, 25808), (743, 25769),

Gene: Groupthink\_36 Start: 26643, Stop: 25498, Start Num: 177

Candidate Starts for Groupthink\_36:

(Start: 144 @26706 has 1 MA's), (Start: 177 @26643 has 119 MA's), (Start: 209 @26589 has 14 MA's), (Start: 239 @26520 has 6 MA's), (363, 26301), (366, 26292), (383, 26256), (421, 26199), (465, 26121), (487, 26088), (538, 25986), (552, 25968), (560, 25956), (596, 25881), (599, 25875), (608, 25854), (614, 25839), (623, 25821), (639, 25797), (714, 25638), (715, 25635), (721, 25605), (723, 25599), (726, 25587), (743, 25548),

Gene: Grub\_36 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for Grub\_36:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Grum1\_36 Start: 26789, Stop: 25644, Start Num: 177

Candidate Starts for Grum1\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: Gspu1\_28 Start: 24542, Stop: 23361, Start Num: 159

Candidate Starts for Gspu1\_28:

(118, 24608), (Start: 128 @24593 has 1 MA's), (139, 24572), (Start: 159 @24542 has 22 MA's), (176, 24506), (178, 24497), (Start: 180 @24494 has 10 MA's), (190, 24470), (241, 24359), (386, 24110), (407, 24071), (474, 23969), (517, 23891), (532, 23867), (538, 23852), (570, 23813), (580, 23795), (586, 23786), (601, 23744), (613, 23717), (638, 23675), (701, 23570), (711, 23525), (714, 23516), (717, 23507), (721, 23483), (767, 23387),

Gene: GtownJaz\_36 Start: 26791, Stop: 25646, Start Num: 177

Candidate Starts for GtownJaz\_36:

(Start: 177 @26791 has 119 MA's), (Start: 203 @26752 has 10 MA's), (Start: 239 @26668 has 6 MA's), (270, 26623), (353, 26467), (366, 26440), (383, 26404), (421, 26347), (465, 26269), (482, 26245), (502, 26206), (538, 26134), (548, 26122), (552, 26116), (560, 26104), (596, 26029), (599, 26023), (608, 26002), (614, 25987), (623, 25969), (639, 25945), (702, 25831), (714, 25786), (715, 25783), (718, 25774), (721, 25753), (723, 25747), (726, 25735), (743, 25696),

Gene: Guanica15\_44 Start: 32526, Stop: 33626, Start Num: 145

Candidate Starts for Guanica15\_44:

(72, 32376), (Start: 145 @32526 has 284 MA's), (174, 32577), (221, 32652), (237, 32688), (238, 32691), (309, 32802), (457, 33021), (468, 33045), (470, 33048), (537, 33177), (550, 33198), (604, 33303), (667, 33390), (699, 33438),

Gene: Guppsters\_43 Start: 32537, Stop: 33664, Start Num: 145

Candidate Starts for Guppsters\_43:

(91, 32435), (118, 32492), (Start: 145 @32537 has 284 MA's), (151, 32546), (237, 32708), (267, 32759), (277, 32777), (302, 32822), (345, 32918), (350, 32927), (422, 33008), (438, 33032), (471, 33101), (504, 33161), (510, 33173), (511, 33176), (518, 33188), (525, 33203), (537, 33227), (540, 33233), (555, 33254), (583, 33290), (584, 33293), (596, 33329), (599, 33335), (605, 33350), (667, 33434), (676, 33449), (701, 33491), (711, 33536), (714, 33545), (723, 33584), (727, 33602), (736, 33623), (744, 33638), (749, 33647), (751, 33650),

Gene: HH92\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for HH92\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Hades\_43 Start: 31946, Stop: 33073, Start Num: 145

Candidate Starts for Hades\_43:

(91, 31844), (118, 31901), (Start: 145 @31946 has 284 MA's), (151, 31955), (237, 32117), (267, 32168), (277, 32186), (302, 32231), (345, 32327), (350, 32336), (422, 32417), (438, 32441), (471,

32510), (491, 32549), (504, 32570), (510, 32582), (511, 32585), (518, 32597), (525, 32612), (537, 32636), (540, 32642), (555, 32663), (583, 32699), (584, 32702), (596, 32738), (599, 32744), (604, 32756), (605, 32759), (611, 32774), (667, 32843), (676, 32858), (701, 32900), (711, 32945), (714, 32954), (718, 32966), (723, 32993), (727, 33011), (736, 33032), (744, 33047), (749, 33056), (751, 33059),

Gene: Hadrien\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Hadrien\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Hail\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Hail\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Haley23\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for Haley23\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (557, 28553), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: Halley\_83 Start: 53063, Stop: 54292, Start Num: 104

Candidate Starts for Halley\_83:

(Start: 104 @53063 has 29 MA's), (Start: 114 @53081 has 2 MA's), (Start: 136 @53120 has 1 MA's), (251, 53357), (313, 53465), (374, 53585), (375, 53588), (378, 53597), (386, 53612), (407, 53651), (451, 53729), (520, 53834), (528, 53846), (536, 53849), (544, 53858), (579, 53909), (580, 53912), (589, 53930), (638, 54026), (672, 54083), (720, 54203), (721, 54206), (727, 54230), (738, 54254), (740, 54257),

Gene: HamCheese\_35 Start: 23900, Stop: 22707, Start Num: 127

Candidate Starts for HamCheese\_35:

(Start: 127 @23900 has 61 MA's), (362, 23471), (388, 23414), (401, 23390), (557, 23162), (610, 23036), (615, 23024), (627, 23003), (706, 22865), (726, 22784), (749, 22736),

Gene: Hamood\_39 Start: 31803, Stop: 30532, Start Num: 127

Candidate Starts for Hamood\_39:

(Start: 127 @31803 has 61 MA's), (Start: 136 @31788 has 1 MA's), (Start: 185 @31686 has 12 MA's), (214, 31644), (222, 31632), (257, 31557), (299, 31482), (307, 31473), (316, 31455), (366, 31356), (368, 31353), (422, 31263), (508, 31158), (559, 31062), (562, 31056), (636, 30894), (700, 30753), (711, 30708), (724, 30657), (726, 30648), (730, 30633), (738, 30621), (744, 30609), (770, 30570),

Gene: Hannaconda\_75 Start: 47285, Stop: 48559, Start Num: 90

Candidate Starts for Hannaconda\_75:

(70, 47228), (Start: 85 @47270 has 1 MA's), (Start: 90 @47285 has 10 MA's), (92, 47288), (Start: 114 @47333 has 2 MA's), (Start: 136 @47372 has 1 MA's), (330, 47753), (374, 47837), (378, 47849), (379, 47852), (451, 47981), (536, 48101), (580, 48164), (589, 48182), (597, 48206), (638, 48278), (720, 48455), (721, 48458), (723, 48464), (727, 48482), (732, 48497), (738, 48506), (740, 48509), (762, 48554),

Gene: HannahPhantana\_37 Start: 24015, Stop: 22828, Start Num: 127

Candidate Starts for HannahPhantana\_37:

(81, 24105), (Start: 127 @24015 has 61 MA's), (362, 23586), (610, 23151), (698, 23016),

Gene: HarryHoudini\_36 Start: 26909, Stop: 25782, Start Num: 181

Candidate Starts for HarryHoudini\_36:

(153, 26963), (Start: 181 @26909 has 9 MA's), (Start: 203 @26876 has 10 MA's), (Start: 217 @26846 has 8 MA's), (Start: 239 @26792 has 6 MA's), (270, 26747), (366, 26564), (383, 26528), (421, 26471), (465, 26393), (491, 26348), (502, 26330), (552, 26240), (560, 26228), (577, 26207), (596, 26153), (599, 26147), (608, 26126), (614, 26111), (623, 26093), (641, 26066), (702, 25955), (714, 25910), (715, 25907), (716, 25904), (721, 25877), (723, 25871), (726, 25859), (743, 25820),

Gene: HaveUMetTed\_36 Start: 26636, Stop: 25491, Start Num: 177

Candidate Starts for HaveUMetTed\_36:

(Start: 144 @26699 has 1 MA's), (Start: 177 @26636 has 119 MA's), (Start: 209 @26582 has 14 MA's), (Start: 239 @26513 has 6 MA's), (363, 26294), (366, 26285), (383, 26249), (421, 26192), (465, 26114), (487, 26081), (538, 25979), (552, 25961), (560, 25949), (596, 25874), (599, 25868), (608, 25847), (614, 25832), (623, 25814), (714, 25631), (715, 25628), (721, 25598), (723, 25592), (726, 25580), (743, 25541),

Gene: Heathen\_33 Start: 26105, Stop: 24978, Start Num: 177

Candidate Starts for Heathen\_33:

(Start: 177 @26105 has 119 MA's), (228, 26018), (Start: 239 @25982 has 6 MA's), (270, 25937), (353, 25781), (360, 25769), (363, 25763), (383, 25718), (420, 25664), (421, 25661), (432, 25637), (538, 25448), (552, 25430), (560, 25418), (584, 25379), (596, 25343), (599, 25337), (608, 25316), (614, 25301), (623, 25283), (702, 25145), (715, 25097), (721, 25067), (723, 25061), (726, 25049), (743, 25010),

Gene: HedwigODU\_41 Start: 32479, Stop: 33567, Start Num: 145

Candidate Starts for HedwigODU\_41:

(Start: 145 @32479 has 284 MA's), (174, 32530), (207, 32581), (221, 32605), (237, 32641), (323, 32779), (345, 32833), (429, 32917), (468, 32986), (470, 32989), (550, 33139), (594, 33217), (604, 33244), (667, 33331), (699, 33379),

Gene: Heffalump\_35 Start: 27571, Stop: 26564, Start Num: 239

Candidate Starts for Heffalump\_35:

(Start: 172 @27706 has 1 MA's), (Start: 239 @27571 has 6 MA's), (261, 27535), (270, 27526), (333, 27397), (383, 27307), (446, 27196), (465, 27172), (487, 27139), (491, 27127), (552, 27019), (554, 27016), (596, 26932), (599, 26926), (608, 26905), (614, 26890), (623, 26872), (715, 26686), (721, 26656), (723, 26650), (726, 26638), (743, 26599), (758, 26575),

Gene: Hegedechwinu\_41 Start: 30918, Stop: 32036, Start Num: 145

Candidate Starts for Hegedechwinu\_41:

(Start: 145 @30918 has 284 MA's), (223, 31056), (237, 31089), (271, 31137), (330, 31254), (345, 31290), (350, 31299), (438, 31404), (471, 31473), (491, 31512), (502, 31530), (504, 31533), (510, 31545), (511, 31548), (518, 31560), (525, 31575), (537, 31599), (540, 31605), (555, 31626), (583,

31662), (584, 31665), (596, 31701), (599, 31707), (604, 31719), (605, 31722), (611, 31737), (667, 31806), (676, 31821), (701, 31863), (711, 31908), (714, 31917), (723, 31956), (727, 31974), (736, 31995), (744, 32010), (749, 32019), (751, 32022),

Gene: HelDan\_33 Start: 26357, Stop: 25230, Start Num: 177

Candidate Starts for HelDan\_33:

(Start: 177 @26357 has 119 MA's), (228, 26270), (Start: 239 @26234 has 6 MA's), (270, 26189), (353, 26033), (360, 26021), (363, 26015), (383, 25970), (420, 25916), (421, 25913), (432, 25889), (538, 25700), (552, 25682), (560, 25670), (584, 25631), (596, 25595), (599, 25589), (608, 25568), (614, 25553), (623, 25535), (702, 25397), (715, 25349), (721, 25319), (723, 25313), (726, 25301), (743, 25262),

Gene: Heliosoles\_35 Start: 26643, Stop: 25498, Start Num: 177

Candidate Starts for Heliosoles\_35:

(Start: 144 @26706 has 1 MA's), (Start: 177 @26643 has 119 MA's), (Start: 209 @26589 has 14 MA's), (Start: 239 @26520 has 6 MA's), (363, 26301), (366, 26292), (383, 26256), (421, 26199), (465, 26121), (487, 26088), (538, 25986), (552, 25968), (560, 25956), (596, 25881), (599, 25875), (608, 25854), (614, 25839), (623, 25821), (639, 25797), (714, 25638), (715, 25635), (721, 25605), (723, 25599), (726, 25587), (743, 25548),

Gene: Hercules11\_36 Start: 26798, Stop: 25653, Start Num: 177

Candidate Starts for Hercules11\_36:

(Start: 177 @26798 has 119 MA's), (Start: 203 @26759 has 10 MA's), (228, 26711), (Start: 239 @26675 has 6 MA's), (270, 26630), (353, 26474), (366, 26447), (383, 26411), (421, 26354), (465, 26276), (482, 26252), (502, 26213), (538, 26141), (548, 26129), (552, 26123), (560, 26111), (596, 26036), (599, 26030), (608, 26009), (614, 25994), (623, 25976), (639, 25952), (702, 25838), (714, 25793), (715, 25790), (718, 25781), (721, 25760), (723, 25754), (726, 25742), (743, 25703),

Gene: Herod\_39 Start: 31901, Stop: 33094, Start Num: 88

Candidate Starts for Herod\_39:

(Start: 88 @31901 has 6 MA's), (Start: 143 @32012 has 52 MA's), (174, 32066), (242, 32186), (414, 32432), (421, 32441), (438, 32471), (470, 32531), (506, 32597), (518, 32621), (707, 32951), (713, 32978), (749, 33083),

Gene: Hestia\_38 Start: 27099, Stop: 25888, Start Num: 114

Candidate Starts for Hestia\_38:

(Start: 109 @27108 has 2 MA's), (Start: 114 @27099 has 2 MA's), (141, 27051), (188, 26958), (316, 26742), (376, 26661), (428, 26598), (444, 26562), (457, 26535), (600, 26247), (614, 26214), (633, 26193), (718, 26019), (721, 25998), (731, 25968), (756, 25929),

Gene: Hillester\_40 Start: 27831, Stop: 26659, Start Num: 145

Candidate Starts for Hillester\_40:

(Start: 145 @27831 has 284 MA's), (174, 27780), (237, 27666), (277, 27612), (287, 27594), (325, 27522), (340, 27480), (362, 27462), (422, 27384), (429, 27372), (468, 27297), (473, 27288), (506, 27228), (551, 27138), (605, 27033), (615, 27012), (631, 26988), (636, 26985), (675, 26916), (701, 26862), (707, 26838), (710, 26823), (754, 26703), (769, 26676),

Gene: Hlubikazi\_41 Start: 31787, Stop: 32905, Start Num: 145

Candidate Starts for Hlubikazi\_41:

(Start: 145 @31787 has 284 MA's), (237, 31958), (330, 32123), (345, 32159), (350, 32168), (438, 32273), (471, 32342), (491, 32381), (504, 32402), (510, 32414), (511, 32417), (518, 32429), (537, 32468), (540, 32474), (555, 32495), (583, 32531), (584, 32534), (596, 32570), (599, 32576), (604, 32588), (605, 32591), (611, 32606), (667, 32675), (676, 32690), (692, 32708), (711, 32777), (714,

32786), (723, 32825), (727, 32843), (736, 32864), (744, 32879), (749, 32888), (751, 32891),

Gene: HokkenD\_73 Start: 51332, Stop: 52561, Start Num: 104

Candidate Starts for HokkenD\_73:

(Start: 104 @51332 has 29 MA's), (Start: 114 @51350 has 2 MA's), (Start: 136 @51389 has 1 MA's), (251, 51626), (313, 51734), (374, 51854), (375, 51857), (378, 51866), (386, 51881), (407, 51920), (451, 51998), (520, 52103), (528, 52115), (536, 52118), (544, 52127), (579, 52178), (580, 52181), (589, 52199), (638, 52295), (672, 52352), (720, 52472), (721, 52475), (727, 52499), (738, 52523), (740, 52526),

Gene: Holliday\_48 Start: 32014, Stop: 33084, Start Num: 145

Candidate Starts for Holliday\_48:

(132, 31993), (Start: 145 @32014 has 284 MA's), (174, 32065), (206, 32113), (236, 32170), (271, 32215), (429, 32449), (440, 32467), (491, 32566), (510, 32599), (511, 32602), (518, 32614), (609, 32782), (678, 32881), (684, 32890), (707, 32941), (713, 32968), (719, 32998), (721, 33004), (725, 33016), (749, 33073),

Gene: Homura\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Homura\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: Hortense\_40 Start: 32549, Stop: 33676, Start Num: 145

Candidate Starts for Hortense\_40:

(121, 32510), (Start: 145 @32549 has 284 MA's), (174, 32603), (236, 32726), (258, 32759), (311, 32849), (327, 32882), (468, 33077), (470, 33080), (491, 33122), (511, 33158), (681, 33455), (707, 33533), (713, 33560), (718, 33575), (723, 33602), (749, 33665),

Gene: Horus\_48 Start: 33163, Stop: 34260, Start Num: 145

Candidate Starts for Horus\_48:

(66, 32983), (76, 33022), (Start: 145 @33163 has 284 MA's), (174, 33214), (223, 33292), (236, 33319), (271, 33364), (290, 33397), (293, 33406), (421, 33583), (422, 33586), (473, 33679), (491, 33715), (510, 33748), (511, 33751), (518, 33763), (608, 33928), (629, 33958), (678, 34030), (701, 34066), (707, 34090), (713, 34117), (725, 34165), (727, 34177), (751, 34225),

Gene: Howe\_40 Start: 32549, Stop: 33676, Start Num: 145

Candidate Starts for Howe\_40:

(121, 32510), (Start: 145 @32549 has 284 MA's), (174, 32603), (236, 32726), (258, 32759), (311, 32849), (327, 32882), (468, 33077), (470, 33080), (491, 33122), (511, 33158), (681, 33455), (707, 33533), (713, 33560), (718, 33575), (723, 33602), (749, 33665),

Gene: Huffy\_38 Start: 27370, Stop: 26255, Start Num: 185

Candidate Starts for Huffy\_38:

(Start: 185 @27370 has 12 MA's), (370, 27031), (388, 26998), (544, 26704), (557, 26692), (640, 26512), (718, 26341), (723, 26314),

Gene: Hughesyang\_81 Start: 53021, Stop: 54250, Start Num: 104

Candidate Starts for Hughesyang\_81:

(Start: 104 @53021 has 29 MA's), (Start: 114 @53039 has 2 MA's), (Start: 136 @53078 has 1 MA's), (251, 53315), (313, 53423), (374, 53543), (375, 53546), (378, 53555), (386, 53570), (407, 53609), (451, 53687), (520, 53792), (528, 53804), (536, 53807), (544, 53816), (579, 53867), (580, 53870), (589, 53888), (638, 53984), (672, 54041), (720, 54161), (721, 54164), (727, 54188), (738, 54212),

(740, 54215),

Gene: Hugley\_36 Start: 32011, Stop: 33093, Start Num: 143

Candidate Starts for Hugley\_36:

(Start: 88 @31900 has 6 MA's), (Start: 143 @32011 has 52 MA's), (174, 32065), (242, 32185), (414, 32431), (421, 32440), (438, 32470), (470, 32530), (506, 32596), (518, 32620), (707, 32950), (713, 32977), (749, 33082),

Gene: Hum25\_34 Start: 25182, Stop: 24091, Start Num: 138

Candidate Starts for Hum25\_34:

(Start: 126 @25206 has 2 MA's), (Start: 138 @25182 has 1 MA's), (235, 25011), (244, 24984), (278, 24945), (316, 24876), (326, 24855), (330, 24846), (360, 24789), (365, 24777), (366, 24774), (371, 24765), (377, 24753), (409, 24693), (416, 24684), (430, 24669), (500, 24603), (518, 24570), (532, 24543), (570, 24489), (581, 24468), (598, 24420), (599, 24417), (604, 24405), (608, 24396), (615, 24378), (616, 24375), (625, 24369), (636, 24357), (653, 24324), (698, 24270), (703, 24243), (721, 24171), (743, 24117),

Gene: Hyperbowlee\_41 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for Hyperbowlee\_41:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: Hyzer\_43 Start: 33426, Stop: 34508, Start Num: 143

Candidate Starts for Hyzer\_43:

(Start: 143 @33426 has 52 MA's), (174, 33480), (242, 33600), (421, 33855), (438, 33885), (470, 33945), (506, 34011), (518, 34035), (707, 34365), (725, 34440), (749, 34497),

Gene: IMpilo\_40 Start: 31720, Stop: 32838, Start Num: 145

Candidate Starts for IMpilo\_40:

(Start: 145 @31720 has 284 MA's), (151, 31729), (237, 31891), (330, 32056), (345, 32092), (350, 32101), (438, 32206), (471, 32275), (491, 32314), (504, 32335), (510, 32347), (511, 32350), (518, 32362), (525, 32377), (537, 32401), (540, 32407), (555, 32428), (583, 32464), (584, 32467), (596, 32503), (599, 32509), (604, 32521), (605, 32524), (611, 32539), (667, 32608), (676, 32623), (711, 32710), (714, 32719), (723, 32758), (727, 32776), (736, 32797), (744, 32812), (749, 32821), (751, 32824),

Gene: Idleandcovert\_33 Start: 26297, Stop: 25170, Start Num: 177

Candidate Starts for Idleandcovert\_33:

(Start: 177 @26297 has 119 MA's), (228, 26210), (Start: 239 @26174 has 6 MA's), (270, 26129), (353, 25973), (360, 25961), (363, 25955), (383, 25910), (420, 25856), (421, 25853), (465, 25775), (552, 25622), (560, 25610), (584, 25571), (596, 25535), (599, 25529), (608, 25508), (614, 25493), (623, 25475), (641, 25448), (702, 25337), (715, 25289), (721, 25259), (723, 25253), (726, 25241), (743, 25202),

Gene: Illumine\_44 Start: 33263, Stop: 34351, Start Num: 145

Candidate Starts for Illumine\_44:

(Start: 145 @33263 has 284 MA's), (207, 33365), (221, 33389), (237, 33425), (277, 33476), (309, 33539), (323, 33563), (345, 33617), (347, 33620), (429, 33701), (468, 33770), (470, 33773), (550, 33923), (594, 34001), (604, 34028), (699, 34163),

Gene: Inky\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Inky\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: Invectra\_40 Start: 30570, Stop: 31697, Start Num: 145

Candidate Starts for Invectra\_40:

(93, 30474), (125, 30537), (Start: 145 @30570 has 284 MA's), (174, 30624), (311, 30870), (327, 30903), (468, 31098), (470, 31101), (491, 31143), (511, 31179), (681, 31476), (707, 31554), (713, 31581), (718, 31596), (723, 31623), (749, 31686),

Gene: IrishSherpFalk\_41 Start: 32488, Stop: 33606, Start Num: 145

Candidate Starts for IrishSherpFalk\_41:

(Start: 145 @32488 has 284 MA's), (151, 32497), (237, 32659), (350, 32869), (422, 32950), (438, 32974), (471, 33043), (504, 33103), (510, 33115), (511, 33118), (518, 33130), (525, 33145), (537, 33169), (540, 33175), (555, 33196), (583, 33232), (584, 33235), (596, 33271), (599, 33277), (605, 33292), (667, 33376), (676, 33391), (701, 33433), (711, 33478), (714, 33487), (723, 33526), (727, 33544), (736, 33565), (744, 33580), (749, 33589), (751, 33592),

Gene: IronMan\_36 Start: 28052, Stop: 26925, Start Num: 171

Candidate Starts for IronMan\_36:

(Start: 162 @28070 has 7 MA's), (Start: 171 @28052 has 7 MA's), (Start: 239 @27923 has 6 MA's), (270, 27878), (366, 27695), (383, 27659), (421, 27602), (428, 27590), (502, 27461), (552, 27371), (560, 27359), (596, 27284), (608, 27257), (614, 27242), (623, 27224), (636, 27203), (702, 27086), (714, 27041), (715, 27038), (716, 27035), (721, 27008), (723, 27002), (726, 26990), (743, 26951),

Gene: Isca\_33 Start: 26066, Stop: 24942, Start Num: 177

Candidate Starts for Isca\_33:

(Start: 158 @26108 has 1 MA's), (Start: 177 @26066 has 119 MA's), (Start: 203 @26027 has 10 MA's), (228, 25979), (Start: 239 @25943 has 6 MA's), (270, 25898), (285, 25868), (333, 25769), (383, 25679), (446, 25568), (465, 25544), (491, 25499), (552, 25391), (560, 25379), (577, 25358), (596, 25304), (599, 25298), (608, 25277), (614, 25262), (623, 25244), (641, 25217), (702, 25106), (715, 25058), (716, 25055), (721, 25028), (723, 25022), (726, 25010), (732, 24989), (743, 24971),

Gene: Isolde\_41 Start: 27878, Stop: 26739, Start Num: 145

Candidate Starts for Isolde\_41:

(Start: 145 @27878 has 284 MA's), (174, 27827), (277, 27659), (287, 27641), (362, 27509), (422, 27431), (429, 27419), (468, 27344), (473, 27335), (506, 27275), (551, 27185), (605, 27080), (615, 27059), (636, 27032), (701, 26909), (707, 26885), (710, 26870), (743, 26765),

Gene: Iwokeuplikedis\_34 Start: 26178, Stop: 25060, Start Num: 177

Candidate Starts for Iwokeuplikedis\_34:

(Start: 177 @26178 has 119 MA's), (Start: 239 @26055 has 6 MA's), (270, 26010), (354, 25851), (366, 25827), (383, 25791), (421, 25734), (465, 25656), (491, 25611), (502, 25593), (552, 25503), (560, 25491), (596, 25416), (608, 25389), (614, 25374), (623, 25356), (641, 25329), (702, 25218), (714, 25173), (715, 25170), (716, 25167), (721, 25140), (723, 25134), (726, 25122), (743, 25083),

Gene: JAWS\_41 Start: 32469, Stop: 33557, Start Num: 145

Candidate Starts for JAWS\_41:

(Start: 145 @32469 has 284 MA's), (207, 32571), (221, 32595), (237, 32631), (323, 32769), (429, 32907), (468, 32976), (470, 32979), (550, 33129), (604, 33234), (667, 33321), (699, 33369),

Gene: JCole\_37 Start: 29060, Stop: 27801, Start Num: 127

Candidate Starts for JCole\_37:



(Start: 127 @29060 has 61 MA's), (307, 28730), (329, 28685), (362, 28625), (366, 28613), (388, 28568), (434, 28496), (562, 28328), (563, 28325), (604, 28232), (636, 28172), (694, 28055), (698, 28043), (703, 28016), (711, 27986), (726, 27926), (730, 27911), (738, 27899), (743, 27890), (763, 27851),

Gene: JF2\_33 Start: 25816, Stop: 24692, Start Num: 177

Candidate Starts for JF2\_33:

(Start: 158 @25858 has 1 MA's), (Start: 177 @25816 has 119 MA's), (Start: 239 @25693 has 6 MA's), (270, 25648), (308, 25576), (330, 25528), (363, 25474), (366, 25465), (383, 25429), (421, 25372), (552, 25141), (560, 25129), (577, 25108), (596, 25054), (599, 25048), (608, 25027), (614, 25012), (623, 24994), (641, 24967), (702, 24856), (715, 24808), (716, 24805), (721, 24778), (723, 24772), (726, 24760), (732, 24739), (743, 24721),

Gene: JF4\_33 Start: 25816, Stop: 24692, Start Num: 177

Candidate Starts for JF4\_33:

(Start: 158 @25858 has 1 MA's), (Start: 177 @25816 has 119 MA's), (Start: 239 @25693 has 6 MA's), (270, 25648), (308, 25576), (330, 25528), (363, 25474), (366, 25465), (383, 25429), (421, 25372), (552, 25141), (560, 25129), (577, 25108), (596, 25054), (599, 25048), (608, 25027), (614, 25012), (623, 24994), (641, 24967), (702, 24856), (715, 24808), (716, 24805), (721, 24778), (723, 24772), (726, 24760), (732, 24739), (743, 24721),

Gene: JHC117\_36 Start: 26788, Stop: 25643, Start Num: 177

Candidate Starts for JHC117\_36:

(Start: 177 @26788 has 119 MA's), (Start: 203 @26749 has 10 MA's), (228, 26701), (Start: 239 @26665 has 6 MA's), (270, 26620), (353, 26464), (366, 26437), (383, 26401), (421, 26344), (465, 26266), (482, 26242), (502, 26203), (538, 26131), (548, 26119), (552, 26113), (560, 26101), (596, 26026), (599, 26020), (608, 25999), (614, 25984), (623, 25966), (639, 25942), (702, 25828), (714, 25783), (715, 25780), (718, 25771), (721, 25750), (723, 25744), (726, 25732), (743, 25693),

Gene: Jaan\_37 Start: 28459, Stop: 27326, Start Num: 173

Candidate Starts for Jaan\_37:

(Start: 173 @28459 has 3 MA's), (Start: 239 @28324 has 6 MA's), (270, 28279), (273, 28273), (292, 28234), (353, 28123), (366, 28096), (383, 28060), (404, 28018), (420, 28006), (421, 28003), (482, 27901), (552, 27772), (560, 27760), (596, 27685), (599, 27679), (608, 27658), (614, 27643), (623, 27625), (650, 27574), (702, 27487), (715, 27439), (721, 27409), (723, 27403), (726, 27391), (743, 27352),

Gene: Jablanski\_39 Start: 31311, Stop: 32393, Start Num: 143

Candidate Starts for Jablanski\_39:

(Start: 88 @31200 has 6 MA's), (Start: 143 @31311 has 52 MA's), (174, 31365), (242, 31485), (438, 31770), (470, 31830), (506, 31896), (518, 31920), (707, 32250), (713, 32277), (749, 32382),

Gene: James\_43 Start: 32094, Stop: 33212, Start Num: 145

Candidate Starts for James\_43:

(Start: 145 @32094 has 284 MA's), (223, 32232), (237, 32265), (271, 32313), (330, 32430), (345, 32466), (350, 32475), (438, 32580), (471, 32649), (504, 32709), (510, 32721), (511, 32724), (518, 32736), (525, 32751), (537, 32775), (540, 32781), (555, 32802), (583, 32838), (584, 32841), (596, 32877), (599, 32883), (604, 32895), (605, 32898), (667, 32982), (676, 32997), (701, 33039), (711, 33084), (714, 33093), (723, 33132), (727, 33150), (736, 33171), (744, 33186), (749, 33195), (751, 33198),

Gene: Jamun\_33 Start: 24299, Stop: 23115, Start Num: 127

Candidate Starts for Jamun\_33:

(Start: 127 @24299 has 61 MA's), (245, 24080), (251, 24071), (326, 23945), (368, 23855), (605, 23447), (610, 23435), (618, 23417), (703, 23273), (706, 23264),

Gene: Jant\_44 Start: 33079, Stop: 33984, Start Num: 267

Candidate Starts for Jant\_44:

(91, 32755), (118, 32812), (Start: 145 @32857 has 284 MA's), (151, 32866), (237, 33028), (267, 33079), (277, 33097), (302, 33142), (345, 33238), (350, 33247), (438, 33352), (471, 33421), (504, 33481), (510, 33493), (511, 33496), (518, 33508), (525, 33523), (537, 33547), (540, 33553), (555, 33574), (583, 33610), (584, 33613), (596, 33649), (599, 33655), (605, 33670), (667, 33754), (676, 33769), (692, 33787), (701, 33811), (711, 33856), (714, 33865), (723, 33904), (727, 33922), (736, 33943), (744, 33958), (749, 33967), (751, 33970),

Gene: Jarvi\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Jarvi\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: Jayhawk\_42 Start: 32477, Stop: 33565, Start Num: 145

Candidate Starts for Jayhawk\_42:

(Start: 145 @32477 has 284 MA's), (174, 32528), (207, 32579), (221, 32603), (237, 32639), (323, 32777), (345, 32831), (429, 32915), (468, 32984), (470, 32987), (550, 33137), (594, 33215), (604, 33242), (667, 33329), (699, 33377),

Gene: Jeckyll\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Jeckyll\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: JellyBread\_36 Start: 26251, Stop: 25067, Start Num: 145

Candidate Starts for JellyBread\_36:

(93, 26341), (103, 26320), (Start: 145 @26251 has 284 MA's), (174, 26200), (277, 26032), (287, 26014), (362, 25882), (414, 25816), (422, 25804), (429, 25792), (468, 25717), (473, 25708), (506, 25648), (551, 25558), (615, 25432), (631, 25408), (636, 25405), (701, 25282), (707, 25258), (710, 25243), (754, 25123),

Gene: JenCasNa\_36 Start: 26750, Stop: 25644, Start Num: 203

Candidate Starts for JenCasNa\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: JeppNRM\_36 Start: 26642, Stop: 25497, Start Num: 177

Candidate Starts for JeppNRM\_36:

(Start: 144 @26705 has 1 MA's), (Start: 177 @26642 has 119 MA's), (Start: 209 @26588 has 14 MA's), (Start: 239 @26519 has 6 MA's), (363, 26300), (366, 26291), (383, 26255), (421, 26198), (465, 26120), (482, 26096), (487, 26087), (538, 25985), (552, 25967), (560, 25955), (596, 25880), (599, 25874), (608, 25853), (614, 25838), (623, 25820), (639, 25796), (714, 25637), (715, 25634), (721, 25604), (723, 25598), (726, 25586), (743, 25547),

Gene: Jerm\_35 Start: 26752, Stop: 25625, Start Num: 171

Candidate Starts for Jerm\_35:

(Start: 162 @26770 has 7 MA's), (Start: 171 @26752 has 7 MA's), (Start: 217 @26668 has 8 MA's), (Start: 239 @26620 has 6 MA's), (270, 26575), (366, 26392), (383, 26356), (421, 26299), (428, 26287), (487, 26188), (491, 26176), (502, 26158), (552, 26068), (596, 25981), (599, 25975), (608, 25954), (614, 25939), (623, 25921), (641, 25894), (702, 25783), (715, 25735), (716, 25732), (721, 25705), (723, 25699), (726, 25687), (743, 25648),

Gene: Jobu08\_35 Start: 26620, Stop: 25475, Start Num: 177

Candidate Starts for Jobu08\_35:

(Start: 177 @26620 has 119 MA's), (Start: 203 @26581 has 10 MA's), (228, 26533), (Start: 239 @26497 has 6 MA's), (270, 26452), (353, 26296), (366, 26269), (383, 26233), (421, 26176), (465, 26098), (482, 26074), (502, 26035), (538, 25963), (548, 25951), (552, 25945), (560, 25933), (596, 25858), (599, 25852), (608, 25831), (614, 25816), (623, 25798), (702, 25660), (714, 25615), (715, 25612), (718, 25603), (721, 25582), (723, 25576), (726, 25564), (743, 25525),

Gene: JonJames\_97 Start: 58289, Stop: 59536, Start Num: 113

Candidate Starts for JonJames\_97:

(66, 58163), (Start: 113 @58289 has 2 MA's), (197, 58454), (214, 58493), (Start: 239 @58544 has 6 MA's), (281, 58580), (291, 58598), (324, 58649), (339, 58685), (377, 58739), (386, 58760), (449, 58871), (460, 58895), (462, 58904), (471, 58919), (501, 58970), (552, 59054), (588, 59123), (636, 59231), (656, 59273), (698, 59324), (709, 59372), (714, 59393), (721, 59426), (727, 59447), (740, 59474), (759, 59507),

Gene: JoshKayV\_35 Start: 26714, Stop: 25599, Start Num: 180

Candidate Starts for JoshKayV\_35:

(Start: 180 @26714 has 10 MA's), (Start: 239 @26594 has 6 MA's), (270, 26549), (353, 26393), (366, 26366), (383, 26330), (421, 26273), (428, 26261), (465, 26195), (502, 26132), (552, 26042), (596, 25955), (599, 25949), (608, 25928), (614, 25913), (623, 25895), (650, 25844), (702, 25757), (715, 25709), (721, 25679), (723, 25673), (726, 25661), (743, 25622),

Gene: Journey13\_31 Start: 25582, Stop: 24464, Start Num: 177

Candidate Starts for Journey13\_31:

(100, 25732), (Start: 145 @25642 has 284 MA's), (Start: 177 @25582 has 119 MA's), (Start: 209 @25528 has 14 MA's), (Start: 239 @25459 has 6 MA's), (248, 25441), (294, 25366), (297, 25360), (353, 25258), (360, 25246), (383, 25195), (421, 25138), (434, 25111), (525, 24952), (552, 24907), (560, 24895), (596, 24820), (599, 24814), (608, 24793), (614, 24778), (623, 24760), (641, 24733), (702, 24622), (715, 24574), (716, 24571), (721, 24544), (723, 24538), (726, 24526), (743, 24487),

Gene: Joy99\_41 Start: 32524, Stop: 33612, Start Num: 145

Candidate Starts for Joy99\_41:

(16, 31921), (24, 32098), (45, 32263), (54, 32302), (Start: 145 @32524 has 284 MA's), (174, 32575), (207, 32626), (221, 32650), (237, 32686), (242, 32695), (323, 32824), (429, 32962), (468, 33031), (470, 33034), (550, 33184), (604, 33289), (699, 33424),

Gene: Jsquared\_34 Start: 25672, Stop: 24548, Start Num: 177

Candidate Starts for Jsquared\_34:

(Start: 177 @25672 has 119 MA's), (223, 25594), (Start: 239 @25549 has 6 MA's), (270, 25504), (301, 25444), (366, 25321), (383, 25285), (420, 25231), (421, 25228), (465, 25150), (491, 25105), (493, 25102), (502, 25087), (518, 25057), (548, 25003), (552, 24997), (577, 24964), (596, 24910), (608, 24883), (614, 24868), (623, 24850), (641, 24823), (702, 24712), (715, 24664), (716, 24661), (718, 24655), (721, 24634), (723, 24628), (726, 24616), (743, 24577),

Gene: Judy\_39 Start: 26980, Stop: 28122, Start Num: 145

Candidate Starts for Judy\_39:

(Start: 145 @26980 has 284 MA's), (342, 27334), (345, 27340), (353, 27355), (400, 27409), (438, 27466), (468, 27526), (470, 27529), (485, 27556), (518, 27619), (584, 27739), (602, 27787), (673, 27913), (683, 27925), (714, 28021), (734, 28096),

Gene: Juice456\_44 Start: 33520, Stop: 34638, Start Num: 145

Candidate Starts for Juice456\_44:

(Start: 145 @33520 has 284 MA's), (223, 33658), (237, 33691), (271, 33739), (330, 33856), (345, 33892), (350, 33901), (438, 34006), (471, 34075), (491, 34114), (502, 34132), (504, 34135), (510, 34147), (511, 34150), (518, 34162), (525, 34177), (537, 34201), (540, 34207), (555, 34228), (583, 34264), (584, 34267), (596, 34303), (599, 34309), (604, 34321), (605, 34324), (611, 34339), (667, 34408), (676, 34423), (701, 34465), (711, 34510), (714, 34519), (723, 34558), (727, 34576), (736, 34597), (744, 34612), (749, 34621), (751, 34624),

Gene: Juicebox\_26 Start: 25055, Stop: 23880, Start Num: 179

Candidate Starts for Juicebox\_26:

(Start: 179 @25055 has 3 MA's), (Start: 201 @25028 has 4 MA's), (263, 24917), (308, 24833), (333, 24773), (344, 24749), (388, 24671), (399, 24650), (405, 24641), (456, 24545), (468, 24518), (489, 24485), (516, 24428), (522, 24419), (526, 24410), (531, 24401), (532, 24398), (535, 24392), (539, 24380), (574, 24314), (599, 24266), (612, 24242), (637, 24200), (640, 24197), (642, 24194), (654, 24173), (683, 24125), (701, 24092), (710, 24053), (714, 24038), (721, 24005), (759, 23921), (771, 23897),

Gene: JuicyJay\_79 Start: 54197, Stop: 55426, Start Num: 104

Candidate Starts for JuicyJay\_79:

(Start: 104 @54197 has 29 MA's), (Start: 114 @54215 has 2 MA's), (Start: 136 @54254 has 1 MA's), (251, 54491), (313, 54599), (374, 54719), (375, 54722), (378, 54731), (386, 54746), (407, 54785), (451, 54863), (520, 54968), (528, 54980), (536, 54983), (544, 54992), (579, 55043), (580, 55046), (589, 55064), (638, 55160), (672, 55217), (720, 55337), (721, 55340), (727, 55364), (738, 55388), (740, 55391),

Gene: Juniper1\_40 Start: 31679, Stop: 32797, Start Num: 145

Candidate Starts for Juniper1\_40:

(Start: 145 @31679 has 284 MA's), (237, 31850), (271, 31898), (345, 32051), (350, 32060), (422, 32141), (471, 32234), (504, 32294), (510, 32306), (511, 32309), (525, 32336), (537, 32360), (555, 32387), (583, 32423), (584, 32426), (596, 32462), (611, 32498), (667, 32567), (676, 32582), (692, 32600), (711, 32669), (714, 32678), (723, 32717), (727, 32735), (744, 32771), (749, 32780), (751, 32783),

Gene: Juno112\_35 Start: 23916, Stop: 22723, Start Num: 127

Candidate Starts for Juno112\_35:

(Start: 127 @23916 has 61 MA's), (362, 23487), (388, 23430), (401, 23406), (557, 23178), (610, 23052), (615, 23040), (627, 23019), (706, 22881), (726, 22800), (749, 22752),

Gene: KHumphrey\_36 Start: 23915, Stop: 22722, Start Num: 127

Candidate Starts for KHumphrey\_36:

(Start: 127 @23915 has 61 MA's), (362, 23486), (388, 23429), (401, 23405), (557, 23177), (610, 23051), (615, 23039), (627, 23018), (706, 22880), (726, 22799), (749, 22751),

Gene: Kachowdy\_33 Start: 26270, Stop: 25230, Start Num: 228

Candidate Starts for Kachowdy\_33:

(Start: 177 @26357 has 119 MA's), (228, 26270), (Start: 239 @26234 has 6 MA's), (270, 26189), (353, 26033), (360, 26021), (363, 26015), (383, 25970), (420, 25916), (421, 25913), (432, 25889), (538, 25700), (552, 25682), (560, 25670), (584, 25631), (596, 25595), (599, 25589), (608, 25568), (614, 25553), (623, 25535), (702, 25397), (715, 25349), (721, 25319), (723, 25313), (726, 25301), (743, 25262),

Gene: Kalah2\_76 Start: 52356, Stop: 53585, Start Num: 104

Candidate Starts for Kalah2\_76:

(Start: 104 @52356 has 29 MA's), (Start: 114 @52374 has 2 MA's), (Start: 136 @52413 has 1 MA's), (251, 52650), (313, 52758), (374, 52878), (375, 52881), (378, 52890), (386, 52905), (407, 52944), (451, 53022), (520, 53127), (528, 53139), (536, 53142), (544, 53151), (579, 53202), (580, 53205), (589, 53223), (638, 53319), (672, 53376), (720, 53496), (721, 53499), (727, 53523), (738, 53547), (740, 53550),

Gene: Kalb97\_36 Start: 26642, Stop: 25497, Start Num: 177

Candidate Starts for Kalb97\_36:

(Start: 144 @26705 has 1 MA's), (Start: 177 @26642 has 119 MA's), (Start: 209 @26588 has 14 MA's), (Start: 239 @26519 has 6 MA's), (363, 26300), (366, 26291), (383, 26255), (421, 26198), (465, 26120), (487, 26087), (538, 25985), (552, 25967), (560, 25955), (596, 25880), (599, 25874), (608, 25853), (614, 25838), (623, 25820), (639, 25796), (714, 25637), (715, 25634), (721, 25604), (723, 25598), (726, 25586), (743, 25547),

Gene: Kalnoky\_36 Start: 26643, Stop: 25498, Start Num: 177

Candidate Starts for Kalnoky\_36:

(Start: 144 @26706 has 1 MA's), (Start: 177 @26643 has 119 MA's), (Start: 209 @26589 has 14 MA's), (Start: 239 @26520 has 6 MA's), (363, 26301), (366, 26292), (383, 26256), (421, 26199), (465, 26121), (487, 26088), (538, 25986), (552, 25968), (560, 25956), (596, 25881), (599, 25875), (608, 25854), (614, 25839), (623, 25821), (639, 25797), (714, 25638), (715, 25635), (721, 25605), (723, 25599), (726, 25587), (743, 25548),

Gene: Kalpine\_35 Start: 27525, Stop: 26410, Start Num: 180

Candidate Starts for Kalpine\_35:

(Start: 180 @27525 has 10 MA's), (Start: 239 @27405 has 6 MA's), (270, 27360), (308, 27288), (363, 27186), (366, 27177), (383, 27141), (406, 27096), (420, 27087), (421, 27084), (487, 26973), (491, 26961), (552, 26853), (560, 26841), (592, 26784), (596, 26766), (599, 26760), (608, 26739), (614, 26724), (623, 26706), (641, 26679), (702, 26568), (715, 26520), (721, 26490), (723, 26484), (726, 26472), (743, 26433),

Gene: Kamaru\_44 Start: 31555, Stop: 32652, Start Num: 145

Candidate Starts for Kamaru\_44:

(34, 31219), (50, 31315), (110, 31498), (Start: 145 @31555 has 284 MA's), (174, 31606), (220, 31678), (223, 31684), (236, 31711), (271, 31756), (293, 31798), (345, 31906), (421, 31975), (429, 31990), (470, 32065), (491, 32107), (510, 32140), (511, 32143), (518, 32155), (584, 32257), (629, 32350), (678, 32422), (701, 32458), (707, 32482), (713, 32509), (725, 32557), (751, 32617),

Gene: Kampy\_33 Start: 26181, Stop: 25129, Start Num: 217

Candidate Starts for Kampy\_33:

(Start: 156 @26295 has 3 MA's), (170, 26268), (Start: 177 @26250 has 119 MA's), (Start: 217 @26181 has 8 MA's), (Start: 239 @26127 has 6 MA's), (363, 25908), (366, 25899), (383, 25863), (404, 25821), (420, 25809), (421, 25806), (465, 25728), (538, 25593), (552, 25575), (596, 25488), (599, 25482), (608, 25461), (614, 25446), (623, 25428), (702, 25290), (715, 25242), (721, 25212), (723, 25206), (726, 25194), (743, 25155),

Gene: KashFlow\_76 Start: 48091, Stop: 49320, Start Num: 104

Candidate Starts for KashFlow\_76:

(Start: 104 @48091 has 29 MA's), (Start: 114 @48109 has 2 MA's), (Start: 136 @48148 has 1 MA's), (251, 48385), (313, 48493), (374, 48613), (375, 48616), (378, 48625), (386, 48640), (407, 48679), (451, 48757), (528, 48874), (536, 48877), (544, 48886), (579, 48937), (580, 48940), (589, 48958), (638, 49054), (672, 49111), (720, 49231), (721, 49234), (727, 49258), (738, 49282), (740, 49285),

Gene: KayMoney\_38 Start: 26157, Stop: 27299, Start Num: 145

Candidate Starts for KayMoney\_38:

(Start: 140 @26148 has 1 MA's), (Start: 145 @26157 has 284 MA's), (345, 26517), (354, 26535), (438, 26643), (468, 26703), (518, 26796), (584, 26916), (602, 26964), (614, 26994), (673, 27090), (714, 27198), (734, 27273),

Gene: KendraB23\_42 Start: 25277, Stop: 24093, Start Num: 127

Candidate Starts for KendraB23\_42:

(Start: 127 @25277 has 61 MA's), (245, 25058), (257, 25040), (326, 24923), (362, 24848), (363, 24845), (567, 24518), (605, 24425), (610, 24413), (618, 24395), (698, 24278), (706, 24242),

Gene: Kenna\_49 Start: 32526, Stop: 33596, Start Num: 145

Candidate Starts for Kenna\_49:

(Start: 145 @32526 has 284 MA's), (174, 32577), (223, 32655), (236, 32682), (345, 32877), (350, 32886), (414, 32937), (421, 32946), (422, 32949), (429, 32961), (454, 33006), (473, 33042), (491, 33078), (510, 33111), (511, 33114), (518, 33126), (609, 33294), (678, 33393), (707, 33453), (713, 33480), (714, 33483), (719, 33510), (721, 33516), (725, 33528), (749, 33585),

Gene: Kenuha5\_39 Start: 31177, Stop: 32295, Start Num: 145

Candidate Starts for Kenuha5\_39:

(Start: 145 @31177 has 284 MA's), (237, 31348), (330, 31513), (345, 31549), (350, 31558), (438, 31663), (471, 31732), (491, 31771), (504, 31792), (510, 31804), (511, 31807), (518, 31819), (525, 31834), (537, 31858), (540, 31864), (555, 31885), (583, 31921), (584, 31924), (596, 31960), (599, 31966), (605, 31981), (611, 31996), (667, 32065), (676, 32080), (701, 32122), (711, 32167), (714, 32176), (723, 32215), (727, 32233), (736, 32254), (744, 32269), (749, 32278), (751, 32281),

Gene: Kepler\_38 Start: 24761, Stop: 23574, Start Num: 127

Candidate Starts for Kepler\_38:

(81, 24851), (Start: 127 @24761 has 61 MA's), (326, 24407), (362, 24332), (610, 23897), (698, 23762), (741, 23612),

Gene: Kerberos\_37 Start: 26420, Stop: 25350, Start Num: 209

Candidate Starts for Kerberos\_37:

(Start: 177 @26474 has 119 MA's), (Start: 209 @26420 has 14 MA's), (Start: 239 @26351 has 6 MA's), (353, 26150), (366, 26123), (383, 26087), (421, 26030), (434, 26003), (465, 25952), (487, 25919), (491, 25907), (502, 25889), (538, 25817), (552, 25799), (560, 25787), (584, 25748), (596, 25712), (599, 25706), (608, 25685), (614, 25670), (623, 25652), (641, 25625), (702, 25514), (715, 25466), (716, 25463), (721, 25436), (723, 25430), (726, 25418), (743, 25379),

Gene: Khuang\_45 Start: 28583, Stop: 27426, Start Num: 126

Candidate Starts for Khuang\_45:

(Start: 126 @28583 has 2 MA's), (153, 28532), (168, 28508), (231, 28388), (244, 28349), (257, 28331), (261, 28325), (270, 28316), (307, 28259), (354, 28160), (366, 28136), (371, 28127), (422, 28037), (426, 28031), (430, 28022), (523, 27905), (569, 27836), (598, 27767), (615, 27725), (633, 27707), (636, 27704), (648, 27680), (667, 27650), (698, 27599), (712, 27539), (713, 27536), (743, 27446),

Gene: KiSi\_45 Start: 33691, Stop: 34776, Start Num: 145

Candidate Starts for KiSi\_45:

(1, 32323), (2, 32353), (3, 32512), (4, 32560), (5, 32629), (6, 32653), (7, 32734), (8, 32743), (9, 32767), (10, 32887), (17, 33088), (19, 33106), (22, 33184), (35, 33355), (46, 33430), (54, 33469), (69, 33523), (Start: 145 @33691 has 284 MA's), (226, 33826), (237, 33853), (323, 33991), (338, 34033), (345, 34045), (429, 34129), (468, 34198), (470, 34201), (491, 34243), (550, 34351), (604, 34456), (667, 34543), (699, 34591), (725, 34699), (744, 34747),

Gene: Kimona\_30 Start: 24408, Stop: 23293, Start Num: 177

Candidate Starts for Kimona\_30:

(165, 24435), (170, 24426), (Start: 177 @24408 has 119 MA's), (223, 24330), (Start: 239 @24285 has 6 MA's), (363, 24066), (366, 24057), (383, 24021), (420, 23967), (421, 23964), (465, 23886), (552, 23733), (554, 23730), (596, 23646), (608, 23619), (614, 23604), (623, 23586), (641, 23559), (702, 23448), (715, 23400), (721, 23370), (723, 23364), (726, 23352), (732, 23331), (743, 23313),

Gene: Kinbote\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Kinbote\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: KingCyrus\_36 Start: 28129, Stop: 27002, Start Num: 171

Candidate Starts for KingCyrus\_36:

(Start: 162 @28147 has 7 MA's), (Start: 171 @28129 has 7 MA's), (Start: 217 @28048 has 8 MA's), (Start: 239 @28000 has 6 MA's), (270, 27955), (353, 27799), (366, 27772), (383, 27736), (421, 27679), (428, 27667), (465, 27601), (487, 27568), (491, 27556), (502, 27538), (552, 27448), (560, 27436), (596, 27361), (599, 27355), (608, 27334), (614, 27319), (623, 27301), (639, 27277), (641, 27274), (645, 27265), (702, 27163), (715, 27115), (716, 27112), (721, 27085), (723, 27079), (726, 27067), (743, 27028),

Gene: KingJulian\_41 Start: 32428, Stop: 33546, Start Num: 145

Candidate Starts for KingJulian\_41:

(Start: 145 @32428 has 284 MA's), (151, 32437), (237, 32599), (330, 32764), (345, 32800), (350, 32809), (438, 32914), (471, 32983), (491, 33022), (502, 33040), (504, 33043), (510, 33055), (511, 33058), (518, 33070), (525, 33085), (537, 33109), (540, 33115), (555, 33136), (583, 33172), (584, 33175), (596, 33211), (599, 33217), (605, 33232), (611, 33247), (667, 33316), (676, 33331), (701, 33373), (711, 33418), (714, 33427), (718, 33439), (723, 33466), (727, 33484), (736, 33505), (744, 33520), (749, 33529), (751, 33532),

Gene: Kingsley\_38 Start: 30711, Stop: 31829, Start Num: 145

Candidate Starts for Kingsley\_38:

(Start: 145 @30711 has 284 MA's), (237, 30882), (330, 31047), (345, 31083), (350, 31092), (422, 31173), (438, 31197), (471, 31266), (491, 31305), (502, 31323), (504, 31326), (510, 31338), (511, 31341), (518, 31353), (525, 31368), (537, 31392), (540, 31398), (555, 31419), (583, 31455), (584, 31458), (596, 31494), (599, 31500), (604, 31512), (605, 31515), (611, 31530), (667, 31599), (676, 31614), (701, 31656), (711, 31701), (714, 31710), (723, 31749), (727, 31767), (736, 31788), (744, 31803), (749, 31812), (751, 31815),

Gene: Kita\_40 Start: 30461, Stop: 31654, Start Num: 88

Candidate Starts for Kita\_40:

(Start: 88 @30461 has 6 MA's), (Start: 143 @30572 has 52 MA's), (174, 30626), (242, 30746), (421, 31001), (438, 31031), (470, 31091), (506, 31157), (518, 31181), (707, 31511), (713, 31538), (749, 31643),

Gene: Klein\_81 Start: 51782, Stop: 53011, Start Num: 104

Candidate Starts for Klein\_81:

(Start: 104 @51782 has 29 MA's), (Start: 114 @51800 has 2 MA's), (Start: 136 @51839 has 1 MA's), (251, 52076), (313, 52184), (374, 52304), (375, 52307), (378, 52316), (386, 52331), (407, 52370), (451, 52448), (520, 52553), (528, 52565), (536, 52568), (544, 52577), (579, 52628), (580, 52631), (589, 52649), (638, 52745), (672, 52802), (720, 52922), (721, 52925), (727, 52949), (738, 52973), (740, 52976),

Gene: Koduck\_33 Start: 25409, Stop: 24294, Start Num: 181

Candidate Starts for Koduck\_33:

(Start: 181 @25409 has 9 MA's), (228, 25328), (Start: 239 @25292 has 6 MA's), (270, 25247), (315, 25160), (353, 25091), (360, 25079), (366, 25064), (374, 25049), (383, 25028), (420, 24974), (421, 24971), (538, 24758), (548, 24746), (552, 24740), (560, 24728), (577, 24707), (596, 24653), (608, 24626), (614, 24611), (623, 24593), (641, 24566), (715, 24407), (721, 24377), (723, 24371), (726, 24359), (743, 24320),

Gene: KristaRAM\_43 Start: 33503, Stop: 34630, Start Num: 145

Candidate Starts for KristaRAM\_43:

(91, 33401), (118, 33458), (Start: 145 @33503 has 284 MA's), (151, 33512), (237, 33674), (267, 33725), (277, 33743), (302, 33788), (345, 33884), (350, 33893), (422, 33974), (438, 33998), (471, 34067), (491, 34106), (504, 34127), (510, 34139), (511, 34142), (518, 34154), (525, 34169), (537, 34193), (540, 34199), (555, 34220), (583, 34256), (584, 34259), (596, 34295), (599, 34301), (604, 34313), (605, 34316), (611, 34331), (667, 34400), (676, 34415), (701, 34457), (711, 34502), (714, 34511), (723, 34550), (727, 34568), (736, 34589), (744, 34604), (749, 34613), (751, 34616),

Gene: Kudetre\_6 Start: 2520, Stop: 1432, Start Num: 201

Candidate Starts for Kudetre\_6:

(149, 2625), (187, 2541), (Start: 201 @2520 has 4 MA's), (286, 2349), (330, 2259), (338, 2235), (488, 1983), (511, 1950), (534, 1908), (542, 1893), (553, 1872), (559, 1863), (562, 1857), (599, 1773), (609, 1758), (655, 1671), (673, 1638), (713, 1545), (720, 1512), (723, 1503), (725, 1497),

Gene: Kukla\_36 Start: 28255, Stop: 27116, Start Num: 196

Candidate Starts for Kukla\_36:

(Start: 196 @28255 has 2 MA's), (231, 28189), (270, 28114), (282, 28093), (304, 28048), (343, 27964), (372, 27907), (378, 27889), (396, 27853), (420, 27823), (428, 27808), (432, 27796), (442, 27775), (467, 27739), (469, 27736), (482, 27715), (504, 27673), (506, 27670), (518, 27646), (552, 27589), (608, 27481), (638, 27430), (685, 27358), (710, 27289), (712, 27280), (762, 27148), (766, 27142),

Gene: Kuleana\_37 Start: 24189, Stop: 23008, Start Num: 127

Candidate Starts for Kuleana\_37:

(Start: 127 @24189 has 61 MA's), (319, 23850), (610, 23325),

Gene: Kumotta\_30 Start: 23663, Stop: 24967, Start Num: 109

Candidate Starts for Kumotta\_30:

(Start: 109 @23663 has 2 MA's), (141, 23720), (183, 23807), (188, 23816), (199, 23837), (256, 23939), (292, 23993), (296, 23999), (322, 24044), (326, 24053), (341, 24092), (462, 24338), (600, 24611), (636, 24668), (698, 24764), (703, 24791), (716, 24839), (721, 24866), (731, 24896), (739, 24911), (745, 24923),



Gene: L5\_33 Start: 25369, Stop: 24254, Start Num: 181

Candidate Starts for L5\_33:

(Start: 181 @25369 has 9 MA's), (228, 25288), (Start: 239 @25252 has 6 MA's), (270, 25207), (315, 25120), (353, 25051), (360, 25039), (366, 25024), (374, 25009), (383, 24988), (420, 24934), (421, 24931), (538, 24718), (548, 24706), (552, 24700), (560, 24688), (577, 24667), (596, 24613), (608, 24586), (614, 24571), (623, 24553), (641, 24526), (715, 24367), (721, 24337), (723, 24331), (726, 24319), (743, 24280),

Gene: LBerry\_36 Start: 26790, Stop: 25645, Start Num: 177

Candidate Starts for LBerry\_36:

(Start: 177 @26790 has 119 MA's), (Start: 203 @26751 has 10 MA's), (228, 26703), (Start: 239 @26667 has 6 MA's), (270, 26622), (353, 26466), (366, 26439), (383, 26403), (421, 26346), (465, 26268), (482, 26244), (502, 26205), (538, 26133), (548, 26121), (552, 26115), (560, 26103), (596, 26028), (599, 26022), (608, 26001), (614, 25986), (623, 25968), (639, 25944), (702, 25830), (714, 25785), (715, 25782), (718, 25773), (721, 25752), (723, 25746), (726, 25734), (743, 25695),

Gene: LHTSCC\_34 Start: 26518, Stop: 25466, Start Num: 217

Candidate Starts for LHTSCC\_34:

(170, 26605), (Start: 177 @26587 has 119 MA's), (Start: 217 @26518 has 8 MA's), (Start: 239 @26464 has 6 MA's), (363, 26245), (366, 26236), (383, 26200), (404, 26158), (420, 26146), (421, 26143), (538, 25930), (552, 25912), (596, 25825), (599, 25819), (608, 25798), (614, 25783), (623, 25765), (702, 25627), (715, 25579), (721, 25549), (723, 25543), (726, 25531), (743, 25492),

Gene: Lamberg\_33 Start: 26384, Stop: 27466, Start Num: 143

Candidate Starts for Lamberg\_33:

(Start: 86 @26267 has 2 MA's), (Start: 88 @26273 has 6 MA's), (Start: 143 @26384 has 52 MA's), (174, 26438), (242, 26558), (421, 26813), (438, 26843), (470, 26903), (506, 26969), (518, 26993), (557, 27062), (583, 27098), (707, 27323), (713, 27350), (749, 27455),

Gene: Landor\_35 Start: 28009, Stop: 26867, Start Num: 172

Candidate Starts for Landor\_35:

(Start: 172 @28009 has 1 MA's), (Start: 239 @27874 has 6 MA's), (270, 27829), (273, 27823), (292, 27784), (333, 27700), (360, 27661), (383, 27610), (446, 27499), (487, 27442), (491, 27430), (518, 27382), (552, 27322), (554, 27319), (596, 27235), (599, 27229), (608, 27208), (614, 27193), (623, 27175), (715, 26989), (721, 26959), (723, 26953), (726, 26941), (743, 26902), (758, 26878),

Gene: Larenn\_35 Start: 26836, Stop: 25694, Start Num: 162

Candidate Starts for Larenn\_35:

(Start: 162 @26836 has 7 MA's), (Start: 171 @26818 has 7 MA's), (Start: 239 @26689 has 6 MA's), (270, 26644), (363, 26470), (366, 26461), (383, 26425), (421, 26368), (465, 26290), (487, 26257), (491, 26245), (502, 26227), (552, 26137), (560, 26125), (596, 26050), (599, 26044), (608, 26023), (614, 26008), (623, 25990), (641, 25963), (702, 25852), (715, 25804), (716, 25801), (721, 25774), (723, 25768), (726, 25756), (743, 25717),

Gene: LastJedi\_34 Start: 27598, Stop: 28716, Start Num: 145

Candidate Starts for LastJedi\_34:

(Start: 145 @27598 has 284 MA's), (151, 27607), (237, 27769), (330, 27934), (345, 27970), (350, 27979), (422, 28060), (438, 28084), (471, 28153), (491, 28192), (502, 28210), (504, 28213), (510, 28225), (511, 28228), (518, 28240), (525, 28255), (537, 28279), (540, 28285), (555, 28306), (583, 28342), (584, 28345), (596, 28381), (599, 28387), (605, 28402), (611, 28417), (667, 28486), (676, 28501), (701, 28543), (711, 28588), (714, 28597), (723, 28636), (727, 28654), (736, 28675), (744, 28690), (749, 28699), (751, 28702),

Gene: LaterM\_42 Start: 33376, Stop: 34464, Start Num: 145

Candidate Starts for LaterM\_42:

(Start: 145 @33376 has 284 MA's), (207, 33478), (221, 33502), (237, 33538), (277, 33589), (309, 33652), (323, 33676), (345, 33730), (347, 33733), (429, 33814), (468, 33883), (470, 33886), (487, 33916), (550, 34036), (594, 34114), (604, 34141), (699, 34276),

Gene: Lawnathon\_40 Start: 27623, Stop: 26484, Start Num: 145

Candidate Starts for Lawnathon\_40:

(Start: 145 @27623 has 284 MA's), (174, 27572), (277, 27404), (287, 27386), (362, 27254), (422, 27176), (429, 27164), (433, 27158), (468, 27089), (473, 27080), (506, 27020), (551, 26930), (605, 26825), (615, 26804), (636, 26777), (701, 26654), (707, 26630), (710, 26615), (728, 26540), (743, 26510),

Gene: LeMond\_45 Start: 33694, Stop: 34779, Start Num: 145

Candidate Starts for LeMond\_45:

(69, 33526), (Start: 145 @33694 has 284 MA's), (226, 33829), (237, 33856), (323, 33994), (338, 34036), (345, 34048), (429, 34132), (468, 34201), (470, 34204), (491, 34246), (550, 34354), (604, 34459), (667, 34546), (699, 34594), (725, 34702), (744, 34750),

Gene: Lederberg\_27 Start: 25613, Stop: 24285, Start Num: 130

Candidate Starts for Lederberg\_27:

(Start: 130 @25613 has 3 MA's), (147, 25577), (154, 25568), (Start: 179 @25511 has 3 MA's), (302, 25301), (303, 25298), (349, 25199), (361, 25181), (395, 25115), (399, 25109), (408, 25097), (491, 24932), (515, 24887), (526, 24866), (532, 24854), (542, 24830), (555, 24806), (559, 24800), (576, 24764), (615, 24668), (647, 24611), (668, 24566), (684, 24542), (698, 24527), (713, 24461), (714, 24458), (719, 24431), (725, 24413), (752, 24353), (778, 24299),

Gene: LeoAvram\_33 Start: 26179, Stop: 25127, Start Num: 217

Candidate Starts for LeoAvram\_33:

(Start: 156 @26293 has 3 MA's), (170, 26266), (Start: 177 @26248 has 119 MA's), (Start: 217 @26179 has 8 MA's), (Start: 239 @26125 has 6 MA's), (363, 25906), (366, 25897), (383, 25861), (404, 25819), (420, 25807), (421, 25804), (465, 25726), (538, 25591), (552, 25573), (596, 25486), (599, 25480), (608, 25459), (614, 25444), (623, 25426), (702, 25288), (715, 25240), (721, 25210), (723, 25204), (726, 25192), (743, 25153),

Gene: Leogania\_35 Start: 28027, Stop: 26906, Start Num: 177

Candidate Starts for Leogania\_35:

(Start: 144 @28090 has 1 MA's), (Start: 177 @28027 has 119 MA's), (Start: 209 @27973 has 14 MA's), (Start: 239 @27904 has 6 MA's), (270, 27859), (383, 27640), (446, 27529), (491, 27460), (552, 27352), (554, 27349), (560, 27340), (596, 27265), (599, 27259), (608, 27238), (614, 27223), (623, 27205), (702, 27067), (715, 27019), (716, 27016), (721, 26989), (723, 26983), (726, 26971), (743, 26932),

Gene: Leona\_35 Start: 23984, Stop: 22791, Start Num: 127

Candidate Starts for Leona\_35:

(Start: 127 @23984 has 61 MA's), (Start: 185 @23870 has 12 MA's), (362, 23555), (557, 23246), (610, 23120), (615, 23108), (627, 23087), (749, 22820),

Gene: Leroy\_50 Start: 33450, Stop: 34544, Start Num: 145

Candidate Starts for Leroy\_50:

(Start: 145 @33450 has 284 MA's), (174, 33501), (220, 33573), (223, 33579), (236, 33606), (271, 33651), (293, 33693), (330, 33765), (421, 33870), (429, 33885), (454, 33930), (491, 34002), (510,

34035), (511, 34038), (518, 34050), (608, 34215), (707, 34377), (708, 34380), (714, 34407), (718, 34419), (751, 34512),

Gene: Leviathan\_35 Start: 26826, Stop: 25681, Start Num: 162

Candidate Starts for Leviathan\_35:

(Start: 162 @26826 has 7 MA's), (Start: 171 @26808 has 7 MA's), (Start: 217 @26724 has 8 MA's), (Start: 239 @26676 has 6 MA's), (270, 26631), (366, 26448), (383, 26412), (421, 26355), (428, 26343), (487, 26244), (502, 26214), (552, 26124), (560, 26112), (596, 26037), (599, 26031), (608, 26010), (614, 25995), (623, 25977), (641, 25950), (702, 25839), (715, 25791), (716, 25788), (721, 25761), (723, 25755), (726, 25743), (743, 25704),

Gene: LilHazelnut\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for LilHazelnut\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: LilPharaoh\_36 Start: 31976, Stop: 33070, Start Num: 145

Candidate Starts for LilPharaoh\_36:

(32, 31625), (36, 31640), (51, 31733), (54, 31754), (83, 31847), (Start: 145 @31976 has 284 MA's), (174, 32027), (221, 32102), (237, 32138), (302, 32234), (309, 32252), (323, 32276), (342, 32324), (345, 32330), (453, 32462), (468, 32495), (491, 32540), (550, 32648), (604, 32753), (649, 32813), (699, 32888), (725, 32996), (738, 33032),

Gene: LilSpotty\_38 Start: 27607, Stop: 28713, Start Num: 145

Candidate Starts for LilSpotty\_38:

(Start: 145 @27607 has 284 MA's), (233, 27766), (249, 27802), (345, 27979), (429, 28063), (454, 28108), (468, 28132), (485, 28162), (487, 28165), (506, 28201), (510, 28210), (511, 28213), (537, 28264), (550, 28285), (594, 28363), (599, 28378), (645, 28438), (667, 28477), (676, 28492), (701, 28543), (707, 28567), (711, 28588),

Gene: LilTurb\_34 Start: 26659, Stop: 25508, Start Num: 162

Candidate Starts for LilTurb\_34:

(Start: 162 @26659 has 7 MA's), (Start: 171 @26641 has 7 MA's), (Start: 217 @26557 has 8 MA's), (Start: 239 @26509 has 6 MA's), (270, 26464), (366, 26281), (383, 26245), (421, 26188), (428, 26176), (434, 26161), (487, 26077), (491, 26065), (502, 26047), (552, 25957), (560, 25945), (596, 25870), (599, 25864), (608, 25843), (614, 25828), (623, 25810), (641, 25783), (702, 25672), (715, 25624), (716, 25621), (721, 25594), (723, 25588), (726, 25576), (743, 25537),

Gene: Lilas\_38 Start: 32714, Stop: 33796, Start Num: 143

Candidate Starts for Lilas\_38:

(Start: 143 @32714 has 52 MA's), (Start: 212 @32831 has 1 MA's), (271, 32924), (421, 33146), (441, 33182), (470, 33236), (507, 33305), (511, 33314), (707, 33653), (713, 33680), (749, 33785),

Gene: Lilit\_36 Start: 26744, Stop: 25638, Start Num: 203

Candidate Starts for Lilit\_36:

(Start: 177 @26783 has 119 MA's), (Start: 203 @26744 has 10 MA's), (Start: 239 @26660 has 6 MA's), (270, 26615), (353, 26459), (366, 26432), (383, 26396), (421, 26339), (465, 26261), (482, 26237), (502, 26198), (538, 26126), (548, 26114), (552, 26108), (560, 26096), (596, 26021), (599,

26015), (608, 25994), (614, 25979), (623, 25961), (639, 25937), (702, 25823), (714, 25778), (715, 25775), (718, 25766), (721, 25745), (723, 25739), (726, 25727), (743, 25688),

Gene: LindNT\_41 Start: 32665, Stop: 33753, Start Num: 145

Candidate Starts for LindNT\_41:

(74, 32518), (Start: 145 @32665 has 284 MA's), (207, 32767), (221, 32791), (237, 32827), (323, 32965), (345, 33019), (429, 33103), (468, 33172), (470, 33175), (550, 33325), (604, 33430), (667, 33517), (699, 33565), (738, 33709),

Gene: LionsBait\_35 Start: 27714, Stop: 26557, Start Num: 177

Candidate Starts for LionsBait\_35:

(Start: 177 @27714 has 119 MA's), (Start: 239 @27591 has 6 MA's), (248, 27573), (270, 27546), (366, 27363), (383, 27327), (421, 27270), (465, 27192), (552, 27039), (560, 27027), (596, 26952), (599, 26946), (608, 26925), (614, 26910), (623, 26892), (636, 26871), (702, 26754), (715, 26706), (716, 26703), (721, 26676), (723, 26670), (726, 26658), (743, 26619), (760, 26589),

Gene: LitninMcQueen\_43 Start: 31304, Stop: 32401, Start Num: 145

Candidate Starts for LitninMcQueen\_43:

(34, 30968), (50, 31064), (110, 31247), (Start: 145 @31304 has 284 MA's), (174, 31355), (220, 31427), (223, 31433), (236, 31460), (271, 31505), (293, 31547), (345, 31655), (421, 31724), (429, 31739), (470, 31814), (491, 31856), (510, 31889), (511, 31892), (518, 31904), (584, 32006), (629, 32099), (678, 32171), (701, 32207), (707, 32231), (713, 32258), (725, 32306), (751, 32366),

Gene: LittleE\_82 Start: 51604, Stop: 52791, Start Num: 136

Candidate Starts for LittleE\_82:

(70, 51460), (Start: 85 @51502 has 1 MA's), (Start: 90 @51517 has 10 MA's), (92, 51520), (Start: 114 @51565 has 2 MA's), (Start: 136 @51604 has 1 MA's), (330, 51985), (374, 52069), (378, 52081), (379, 52084), (451, 52213), (536, 52333), (580, 52396), (589, 52414), (597, 52438), (638, 52510), (720, 52687), (721, 52690), (723, 52696), (727, 52714), (732, 52729), (738, 52738), (740, 52741), (762, 52786),

Gene: LittleTokyo\_36 Start: 23859, Stop: 22669, Start Num: 127

Candidate Starts for LittleTokyo\_36:

(Start: 127 @23859 has 61 MA's), (362, 23427), (557, 23118), (610, 22992), (615, 22980), (744, 22701),

Gene: Llorens\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Llorens\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: LonelyBoi\_38 Start: 32508, Stop: 33590, Start Num: 143

Candidate Starts for LonelyBoi\_38:

(Start: 143 @32508 has 52 MA's), (174, 32562), (242, 32682), (438, 32967), (470, 33027), (518, 33117), (583, 33222), (707, 33447), (713, 33474), (749, 33579),

Gene: LordFarquaad\_35 Start: 27696, Stop: 28778, Start Num: 143

Candidate Starts for LordFarquaad\_35:

(Start: 88 @27585 has 6 MA's), (Start: 143 @27696 has 52 MA's), (174, 27750), (242, 27870), (421, 28125), (438, 28155), (470, 28215), (506, 28281), (518, 28305), (707, 28635), (713, 28662), (749, 28767),

Gene: Lorde\_42 Start: 31143, Stop: 32261, Start Num: 145

Candidate Starts for Lorde\_42:

(Start: 145 @31143 has 284 MA's), (151, 31152), (237, 31314), (330, 31479), (345, 31515), (350, 31524), (422, 31605), (438, 31629), (471, 31698), (491, 31737), (502, 31755), (504, 31758), (510, 31770), (511, 31773), (518, 31785), (537, 31824), (540, 31830), (555, 31851), (583, 31887), (584, 31890), (596, 31926), (599, 31932), (605, 31947), (667, 32031), (676, 32046), (692, 32064), (711, 32133), (714, 32142), (723, 32181), (727, 32199), (736, 32220), (744, 32235), (749, 32244), (751, 32247),

Gene: Lowa\_36 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for Lowa\_36:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Lozinak\_84 Start: 51934, Stop: 53232, Start Num: 111

Candidate Starts for Lozinak\_84:

(Start: 111 @51934 has 12 MA's), (147, 52000), (197, 52102), (208, 52129), (214, 52141), (232, 52171), (259, 52210), (281, 52228), (319, 52294), (324, 52303), (368, 52387), (424, 52477), (507, 52636), (510, 52642), (511, 52645), (577, 52771), (603, 52840), (643, 52918), (670, 52969), (698, 52996), (706, 53032), (707, 53035), (708, 53038), (709, 53044), (711, 53056), (713, 53062), (714, 53065), (715, 53068), (721, 53098), (737, 53146), (742, 53155), (759, 53185),

Gene: Lton\_34 Start: 25220, Stop: 26299, Start Num: 145

Candidate Starts for Lton\_34:

(Start: 145 @25220 has 284 MA's), (236, 25376), (337, 25556), (470, 25727), (491, 25769), (512, 25808), (518, 25817), (599, 25973), (678, 26096), (707, 26156), (713, 26183), (721, 26219), (725, 26231), (749, 26288),

Gene: Lucky10\_35 Start: 28235, Stop: 29314, Start Num: 145

Candidate Starts for Lucky10\_35:

(23, 27794), (43, 27947), (49, 27989), (97, 28145), (125, 28199), (Start: 145 @28235 has 284 MA's), (236, 28391), (470, 28742), (491, 28784), (512, 28823), (518, 28832), (599, 28988), (678, 29111), (707, 29171), (725, 29246), (749, 29303),

Gene: Lucky2013\_84 Start: 50079, Stop: 51353, Start Num: 90

Candidate Starts for Lucky2013\_84:

(70, 50022), (Start: 85 @50064 has 1 MA's), (Start: 90 @50079 has 10 MA's), (92, 50082), (Start: 114 @50127 has 2 MA's), (Start: 136 @50166 has 1 MA's), (330, 50547), (374, 50631), (378, 50643), (379, 50646), (451, 50775), (536, 50895), (580, 50958), (589, 50976), (597, 51000), (638, 51072), (720, 51249), (721, 51252), (723, 51258), (727, 51276), (732, 51291), (738, 51300), (740, 51303), (762, 51348),

Gene: LugYA\_38 Start: 26790, Stop: 25645, Start Num: 177

Candidate Starts for LugYA\_38:

(Start: 177 @26790 has 119 MA's), (Start: 203 @26751 has 10 MA's), (228, 26703), (Start: 239 @26667 has 6 MA's), (270, 26622), (353, 26466), (366, 26439), (383, 26403), (421, 26346), (465, 26268), (482, 26244), (502, 26205), (538, 26133), (548, 26121), (552, 26115), (560, 26103), (596, 26028), (599, 26022), (608, 26001), (614, 25986), (623, 25968), (639, 25944), (702, 25830), (714, 25785), (715, 25782), (718, 25773), (721, 25752), (723, 25746), (726, 25734), (743, 25695),

Gene: Luke\_29 Start: 26433, Stop: 25240, Start Num: 159

Candidate Starts for Luke\_29:

(Start: 133 @26475 has 4 MA's), (Start: 159 @26433 has 22 MA's), (188, 26367), (230, 26286), (242, 26247), (254, 26232), (260, 26226), (267, 26214), (283, 26187), (301, 26154), (334, 26097), (354, 26064), (357, 26061), (380, 26013), (408, 25971), (410, 25968), (428, 25944), (434, 25929), (444, 25905), (455, 25890), (481, 25851), (487, 25839), (507, 25800), (528, 25761), (549, 25713), (551, 25710), (590, 25638), (593, 25632), (595, 25620), (596, 25617), (599, 25611), (623, 25557), (633, 25539), (636, 25536), (650, 25509), (660, 25491), (664, 25485), (667, 25482), (699, 25440), (705, 25413), (707, 25407), (719, 25350), (743, 25287), (744, 25284),

Gene: Luna22\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Luna22\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: LunaBlu\_46 Start: 33438, Stop: 34556, Start Num: 145

Candidate Starts for LunaBlu\_46:

(Start: 145 @33438 has 284 MA's), (151, 33447), (237, 33609), (330, 33774), (345, 33810), (350, 33819), (438, 33924), (471, 33993), (491, 34032), (502, 34050), (504, 34053), (510, 34065), (511, 34068), (518, 34080), (525, 34095), (537, 34119), (540, 34125), (555, 34146), (583, 34182), (584, 34185), (596, 34221), (599, 34227), (605, 34242), (611, 34257), (667, 34326), (676, 34341), (701, 34383), (711, 34428), (714, 34437), (723, 34476), (727, 34494), (736, 34515), (744, 34530), (749, 34539), (751, 34542),

Gene: LunaStella\_42 Start: 31631, Stop: 32749, Start Num: 145

Candidate Starts for LunaStella\_42:

(Start: 145 @31631 has 284 MA's), (151, 31640), (223, 31769), (237, 31802), (271, 31850), (345, 32003), (350, 32012), (422, 32093), (471, 32186), (504, 32246), (510, 32258), (511, 32261), (525, 32288), (537, 32312), (555, 32339), (583, 32375), (584, 32378), (596, 32414), (611, 32450), (667, 32519), (676, 32534), (692, 32552), (711, 32621), (714, 32630), (723, 32669), (727, 32687), (736, 32708), (744, 32723),

Gene: Lunahalos\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Lunahalos\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: Lunar\_38 Start: 24679, Stop: 23492, Start Num: 127

Candidate Starts for Lunar\_38:

(81, 24769), (Start: 127 @24679 has 61 MA's), (610, 23815), (698, 23680), (751, 23512),

Gene: Lutum\_50 Start: 32526, Stop: 33596, Start Num: 145

Candidate Starts for Lutum\_50:

(Start: 145 @32526 has 284 MA's), (174, 32577), (223, 32655), (236, 32682), (345, 32877), (350, 32886), (414, 32937), (421, 32946), (422, 32949), (429, 32961), (454, 33006), (473, 33042), (491, 33078), (510, 33111), (511, 33114), (518, 33126), (609, 33294), (678, 33393), (707, 33453), (713, 33480), (714, 33483), (719, 33510), (721, 33516), (725, 33528), (749, 33585),

Gene: MA5\_33 Start: 25943, Stop: 24819, Start Num: 177

Candidate Starts for MA5\_33:

(Start: 177 @25943 has 119 MA's), (Start: 239 @25820 has 6 MA's), (270, 25775), (308, 25703), (363, 25601), (366, 25592), (383, 25556), (421, 25499), (465, 25421), (552, 25268), (560, 25256), (592, 25199), (596, 25181), (599, 25175), (608, 25154), (614, 25139), (623, 25121), (715, 24935), (721, 24905), (723, 24899), (726, 24887), (743, 24848),

Gene: MK4\_33 Start: 26050, Stop: 24926, Start Num: 177

Candidate Starts for MK4\_33:

(Start: 158 @26092 has 1 MA's), (Start: 177 @26050 has 119 MA's), (Start: 239 @25927 has 6 MA's), (270, 25882), (308, 25810), (330, 25762), (363, 25708), (366, 25699), (383, 25663), (421, 25606), (552, 25375), (560, 25363), (577, 25342), (596, 25288), (599, 25282), (608, 25261), (614, 25246), (623, 25228), (641, 25201), (702, 25090), (715, 25042), (716, 25039), (721, 25012), (723, 25006), (726, 24994), (732, 24973), (743, 24955),

Gene: MUWow\_39 Start: 27853, Stop: 26681, Start Num: 145

Candidate Starts for MUWow\_39:

(Start: 145 @27853 has 284 MA's), (210, 27736), (221, 27721), (287, 27616), (333, 27520), (362, 27484), (422, 27406), (468, 27319), (473, 27310), (506, 27250), (615, 27034), (631, 27010), (636, 27007), (701, 26884), (707, 26860), (710, 26845), (754, 26725), (769, 26698),

Gene: MadMarie\_36 Start: 26792, Stop: 25647, Start Num: 177

Candidate Starts for MadMarie\_36:

(Start: 177 @26792 has 119 MA's), (Start: 203 @26753 has 10 MA's), (228, 26705), (Start: 239 @26669 has 6 MA's), (270, 26624), (353, 26468), (366, 26441), (383, 26405), (421, 26348), (465, 26270), (482, 26246), (502, 26207), (538, 26135), (548, 26123), (552, 26117), (560, 26105), (596, 26030), (599, 26024), (608, 26003), (614, 25988), (623, 25970), (639, 25946), (702, 25832), (714, 25787), (715, 25784), (718, 25775), (721, 25754), (723, 25748), (726, 25736), (743, 25697),

Gene: Madeline\_35 Start: 31541, Stop: 30279, Start Num: 127

Candidate Starts for Madeline\_35:

(Start: 127 @31541 has 61 MA's), (211, 31385), (310, 31202), (329, 31166), (362, 31106), (366, 31094), (388, 31049), (407, 31016), (434, 30974), (525, 30860), (562, 30806), (563, 30803), (596, 30728), (604, 30710), (605, 30707), (636, 30650), (694, 30533), (698, 30521), (707, 30482), (711, 30464), (726, 30404), (730, 30389), (738, 30377), (743, 30368), (763, 30329), (777, 30299),

Gene: Mainiac\_36 Start: 26783, Stop: 25638, Start Num: 177

Candidate Starts for Mainiac\_36:

(Start: 177 @26783 has 119 MA's), (Start: 203 @26744 has 10 MA's), (228, 26696), (Start: 239 @26660 has 6 MA's), (270, 26615), (353, 26459), (366, 26432), (383, 26396), (421, 26339), (465, 26261), (482, 26237), (502, 26198), (538, 26126), (548, 26114), (552, 26108), (560, 26096), (596, 26021), (599, 26015), (608, 25994), (614, 25979), (623, 25961), (639, 25937), (702, 25823), (714, 25778), (715, 25775), (718, 25766), (721, 25745), (723, 25739), (726, 25727), (743, 25688),

Gene: MajorMajor\_34 Start: 25599, Stop: 24475, Start Num: 177

Candidate Starts for MajorMajor\_34:

(Start: 177 @25599 has 119 MA's), (223, 25521), (Start: 239 @25476 has 6 MA's), (270, 25431), (301, 25371), (366, 25248), (383, 25212), (420, 25158), (421, 25155), (491, 25032), (493, 25029), (502, 25014), (548, 24930), (552, 24924), (577, 24891), (583, 24876), (596, 24837), (608, 24810), (614, 24795), (623, 24777), (641, 24750), (702, 24639), (715, 24591), (716, 24588), (718, 24582), (721, 24561), (723, 24555), (726, 24543), (743, 24504),

Gene: MakCheese\_48 Start: 36086, Stop: 34929, Start Num: 145

Candidate Starts for MakCheese\_48:

(Start: 145 @36086 has 284 MA's), (303, 35825), (333, 35759), (338, 35744), (345, 35732), (362, 35702), (421, 35588), (438, 35558), (470, 35498), (518, 35408), (537, 35369), (605, 35243), (608, 35237), (609, 35234), (631, 35204), (639, 35198), (649, 35174), (707, 35072), (725, 34997), (749, 34940),

Gene: Malec\_36 Start: 27350, Stop: 26235, Start Num: 184

Candidate Starts for Malec\_36:

(100, 27515), (Start: 167 @27389 has 1 MA's), (Start: 184 @27350 has 1 MA's), (Start: 203 @27317 has 10 MA's), (228, 27269), (Start: 239 @27233 has 6 MA's), (270, 27188), (291, 27146), (292, 27143), (353, 27032), (366, 27005), (383, 26969), (428, 26900), (446, 26858), (491, 26789), (502, 26771), (552, 26681), (596, 26594), (599, 26588), (608, 26567), (614, 26552), (623, 26534), (641, 26507), (702, 26396), (714, 26351), (715, 26348), (716, 26345), (718, 26339), (721, 26318), (723, 26312), (726, 26300), (743, 26261),

Gene: Malibo\_40 Start: 32774, Stop: 31605, Start Num: 127

Candidate Starts for Malibo\_40:

(Start: 127 @32774 has 61 MA's), (307, 32450), (316, 32432), (362, 32345), (366, 32333), (388, 32288), (422, 32240), (426, 32234), (432, 32219), (434, 32216), (440, 32204), (510, 32132), (561, 32051), (636, 31901), (651, 31871), (698, 31814), (700, 31802), (707, 31775), (730, 31682), (743, 31661), (763, 31622), (768, 31613),

Gene: Malinsilva\_38 Start: 26743, Stop: 25637, Start Num: 203

Candidate Starts for Malinsilva\_38:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Manasvini\_39 Start: 30564, Stop: 31646, Start Num: 143

Candidate Starts for Manasvini\_39:

(Start: 88 @30453 has 6 MA's), (Start: 143 @30564 has 52 MA's), (174, 30618), (242, 30738), (421, 30993), (438, 31023), (470, 31083), (506, 31149), (518, 31173), (707, 31503), (713, 31530), (749, 31635),

Gene: Mandlovu\_40 Start: 31729, Stop: 32847, Start Num: 145

Candidate Starts for Mandlovu\_40:

(Start: 145 @31729 has 284 MA's), (237, 31900), (330, 32065), (345, 32101), (350, 32110), (438, 32215), (471, 32284), (491, 32323), (504, 32344), (510, 32356), (511, 32359), (518, 32371), (537, 32410), (540, 32416), (555, 32437), (583, 32473), (584, 32476), (596, 32512), (599, 32518), (604, 32530), (605, 32533), (611, 32548), (667, 32617), (676, 32632), (692, 32650), (711, 32719), (714, 32728), (723, 32767), (727, 32785), (736, 32806), (744, 32821), (749, 32830), (751, 32833),

Gene: Manu\_36 Start: 26643, Stop: 25498, Start Num: 177

Candidate Starts for Manu\_36:

(Start: 144 @26706 has 1 MA's), (Start: 177 @26643 has 119 MA's), (Start: 209 @26589 has 14 MA's), (Start: 239 @26520 has 6 MA's), (363, 26301), (366, 26292), (383, 26256), (421, 26199), (465, 26121), (487, 26088), (538, 25986), (552, 25968), (560, 25956), (596, 25881), (599, 25875), (608, 25854), (614, 25839), (623, 25821), (639, 25797), (714, 25638), (715, 25635), (721, 25605), (723, 25599), (726, 25587), (743, 25548),



Gene: Mao1\_43 Start: 40085, Stop: 38883, Start Num: 146

Candidate Starts for Mao1\_43:

(Start: 146 @40085 has 7 MA's), (183, 40010), (197, 39986), (199, 39980), (253, 39875), (321, 39764), (322, 39761), (357, 39698), (435, 39563), (444, 39542), (481, 39488), (521, 39413), (549, 39353), (639, 39173), (641, 39170), (650, 39149), (707, 39047), (710, 39032), (726, 38966), (733, 38942), (749, 38912),

Gene: MarQuardt\_36 Start: 26791, Stop: 25646, Start Num: 177

Candidate Starts for MarQuardt\_36:

(Start: 177 @26791 has 119 MA's), (Start: 203 @26752 has 10 MA's), (228, 26704), (Start: 239 @26668 has 6 MA's), (270, 26623), (353, 26467), (366, 26440), (383, 26404), (421, 26347), (465, 26269), (482, 26245), (502, 26206), (538, 26134), (548, 26122), (552, 26116), (560, 26104), (596, 26029), (599, 26023), (608, 26002), (614, 25987), (623, 25969), (639, 25945), (702, 25831), (714, 25786), (715, 25783), (718, 25774), (721, 25753), (723, 25747), (726, 25735), (743, 25696),

Gene: Marchesa\_33 Start: 26268, Stop: 25228, Start Num: 228

Candidate Starts for Marchesa\_33:

(Start: 177 @26355 has 119 MA's), (228, 26268), (Start: 239 @26232 has 6 MA's), (270, 26187), (301, 26127), (353, 26031), (360, 26019), (363, 26013), (383, 25968), (420, 25914), (421, 25911), (432, 25887), (538, 25698), (552, 25680), (560, 25668), (584, 25629), (596, 25593), (599, 25587), (608, 25566), (614, 25551), (623, 25533), (702, 25395), (715, 25347), (721, 25317), (723, 25311), (726, 25299), (743, 25260),

Gene: Marcoliusprime\_43 Start: 34317, Stop: 35417, Start Num: 145

Candidate Starts for Marcoliusprime\_43:

(Start: 145 @34317 has 284 MA's), (Start: 158 @34335 has 1 MA's), (221, 34443), (237, 34479), (309, 34593), (323, 34617), (345, 34671), (457, 34812), (468, 34836), (470, 34839), (491, 34881), (550, 34989), (604, 35094), (643, 35139), (649, 35154), (725, 35346),

Gene: MargaretKali\_30 Start: 23298, Stop: 24602, Start Num: 109

Candidate Starts for MargaretKali\_30:

(Start: 109 @23298 has 2 MA's), (141, 23355), (183, 23442), (188, 23451), (199, 23472), (256, 23574), (292, 23628), (296, 23634), (322, 23679), (326, 23688), (341, 23727), (462, 23973), (600, 24246), (636, 24303), (698, 24399), (703, 24426), (716, 24474), (721, 24501), (731, 24531), (739, 24546), (745, 24558),

Gene: Maridalia\_39 Start: 30563, Stop: 31645, Start Num: 143

Candidate Starts for Maridalia\_39:

(Start: 88 @30452 has 6 MA's), (Start: 143 @30563 has 52 MA's), (174, 30617), (242, 30737), (470, 31082), (518, 31172), (583, 31277), (707, 31502), (713, 31529), (725, 31577), (749, 31634), (751, 31637),

Gene: Marie\_36 Start: 26789, Stop: 25644, Start Num: 177

Candidate Starts for Marie\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: Marius\_36 Start: 26643, Stop: 25498, Start Num: 177

Candidate Starts for Marius\_36:

(Start: 144 @26706 has 1 MA's), (Start: 177 @26643 has 119 MA's), (Start: 209 @26589 has 14 MA's), (Start: 239 @26520 has 6 MA's), (363, 26301), (366, 26292), (383, 26256), (421, 26199), (465, 26121), (487, 26088), (538, 25986), (552, 25968), (560, 25956), (596, 25881), (599, 25875), (608, 25854), (614, 25839), (623, 25821), (639, 25797), (714, 25638), (715, 25635), (721, 25605), (723, 25599), (726, 25587), (743, 25548),

Gene: MarkPhew\_44 Start: 33135, Stop: 34214, Start Num: 145

Candidate Starts for MarkPhew\_44:

(17, 32601), (19, 32619), (20, 32631), (22, 32697), (54, 32913), (69, 32967), (77, 32994), (Start: 145 @33135 has 284 MA's), (237, 33297), (242, 33306), (275, 33339), (323, 33432), (338, 33474), (345, 33486), (429, 33570), (438, 33585), (468, 33639), (470, 33642), (491, 33684), (550, 33792), (604, 33897), (667, 33984), (699, 34032), (725, 34140), (744, 34188),

Gene: Marleymoo\_72 Start: 50924, Stop: 52153, Start Num: 104

Candidate Starts for Marleymoo\_72:

(Start: 104 @50924 has 29 MA's), (Start: 114 @50942 has 2 MA's), (Start: 136 @50981 has 1 MA's), (251, 51218), (313, 51326), (374, 51446), (375, 51449), (378, 51458), (386, 51473), (451, 51590), (528, 51707), (536, 51710), (544, 51719), (579, 51770), (580, 51773), (589, 51791), (638, 51887), (720, 52064), (721, 52067), (727, 52091), (738, 52115), (740, 52118),

Gene: Marshawn\_44 Start: 33433, Stop: 34515, Start Num: 145

Candidate Starts for Marshawn\_44:

(Start: 145 @33433 has 284 MA's), (174, 33484), (221, 33559), (237, 33595), (342, 33781), (345, 33787), (429, 33871), (468, 33940), (470, 33943), (491, 33985), (550, 34093), (604, 34198), (667, 34285), (699, 34333), (744, 34489), (759, 34510),

Gene: Marteena\_36 Start: 30030, Stop: 31136, Start Num: 145

Candidate Starts for Marteena\_36:

(Start: 113 @29973 has 2 MA's), (Start: 145 @30030 has 284 MA's), (174, 30081), (236, 30186), (238, 30195), (267, 30225), (426, 30459), (429, 30465), (468, 30534), (470, 30537), (487, 30567), (511, 30618), (518, 30630), (645, 30858), (683, 30918), (707, 30993), (714, 31023), (749, 31125),

Gene: Maruru\_31 Start: 28515, Stop: 29489, Start Num: 251

Candidate Starts for Maruru\_31:

(18, 27732), (61, 28143), (123, 28296), (Start: 145 @28338 has 284 MA's), (151, 28347), (210, 28449), (251, 28515), (277, 28551), (364, 28692), (422, 28764), (525, 28959), (681, 29247), (710, 29343), (713, 29355), (714, 29358),

Gene: Mask\_46 Start: 43255, Stop: 42053, Start Num: 146

Candidate Starts for Mask\_46:

(Start: 146 @43255 has 7 MA's), (183, 43180), (197, 43156), (199, 43150), (253, 43045), (321, 42934), (322, 42931), (357, 42868), (435, 42733), (444, 42712), (481, 42658), (546, 42529), (549, 42523), (636, 42346), (639, 42343), (641, 42340), (650, 42319), (670, 42283), (707, 42217), (710, 42202), (726, 42136), (733, 42112), (749, 42082),

Gene: MaterMagnus\_40 Start: 27779, Stop: 26640, Start Num: 145

Candidate Starts for MaterMagnus\_40:

(Start: 145 @27779 has 284 MA's), (174, 27728), (277, 27560), (287, 27542), (362, 27410), (422, 27332), (429, 27320), (433, 27314), (468, 27245), (473, 27236), (506, 27176), (551, 27086), (605, 26981), (615, 26960), (636, 26933), (701, 26810), (707, 26786), (710, 26771), (728, 26696), (743, 26666),

Gene: Matteo\_30 Start: 25426, Stop: 26508, Start Num: 143

Candidate Starts for Matteo\_30:

(Start: 86 @25309 has 2 MA's), (Start: 88 @25315 has 6 MA's), (Start: 143 @25426 has 52 MA's), (174, 25480), (242, 25600), (421, 25855), (438, 25885), (470, 25945), (506, 26011), (518, 26035), (583, 26140), (707, 26365), (713, 26392), (749, 26497),

Gene: Mattes\_43 Start: 32094, Stop: 33212, Start Num: 145

Candidate Starts for Mattes\_43:

(Start: 145 @32094 has 284 MA's), (223, 32232), (237, 32265), (271, 32313), (330, 32430), (345, 32466), (350, 32475), (438, 32580), (471, 32649), (504, 32709), (510, 32721), (511, 32724), (518, 32736), (525, 32751), (537, 32775), (540, 32781), (555, 32802), (583, 32838), (584, 32841), (596, 32877), (599, 32883), (604, 32895), (605, 32898), (667, 32982), (676, 32997), (701, 33039), (711, 33084), (714, 33093), (723, 33132), (727, 33150), (736, 33171), (744, 33186), (749, 33195), (751, 33198),

Gene: Maxo\_33 Start: 26250, Stop: 25129, Start Num: 177

Candidate Starts for Maxo\_33:

(Start: 156 @26295 has 3 MA's), (170, 26268), (Start: 177 @26250 has 119 MA's), (Start: 217 @26181 has 8 MA's), (Start: 239 @26127 has 6 MA's), (363, 25908), (366, 25899), (383, 25863), (404, 25821), (420, 25809), (421, 25806), (465, 25728), (538, 25593), (552, 25575), (596, 25488), (599, 25482), (608, 25461), (614, 25446), (623, 25428), (702, 25290), (715, 25242), (721, 25212), (723, 25206), (726, 25194), (743, 25155),

Gene: Mbo4\_31 Start: 29712, Stop: 28447, Start Num: 128

Candidate Starts for Mbo4\_31:

(Start: 128 @29712 has 1 MA's), (Start: 136 @29697 has 1 MA's), (Start: 158 @29658 has 1 MA's), (Start: 185 @29595 has 12 MA's), (211, 29538), (222, 29523), (262, 29448), (268, 29439), (284, 29412), (324, 29346), (337, 29310), (342, 29301), (362, 29265), (363, 29262), (366, 29253), (371, 29244), (378, 29226), (379, 29223), (388, 29208), (430, 29142), (436, 29127), (440, 29121), (465, 29076), (479, 29052), (484, 29043), (494, 29022), (503, 29007), (508, 28998), (521, 28974), (525, 28965), (530, 28956), (569, 28893), (579, 28875), (580, 28872), (596, 28830), (599, 28824), (605, 28809), (608, 28803), (619, 28779), (632, 28758), (662, 28707), (670, 28692), (695, 28674), (703, 28638), (707, 28626), (710, 28611), (721, 28563), (723, 28557), (726, 28545), (730, 28530), (738, 28518), (751, 28494), (755, 28488),

Gene: McMater\_43 Start: 33014, Stop: 34105, Start Num: 145

Candidate Starts for McMater\_43:

(12, 32333), (21, 32477), (37, 32681), (52, 32780), (53, 32789), (60, 32816), (73, 32864), (Start: 145 @33014 has 284 MA's), (174, 33065), (221, 33140), (237, 33176), (309, 33290), (323, 33314), (345, 33368), (429, 33452), (445, 33485), (468, 33521), (470, 33524), (491, 33566), (537, 33653), (550, 33674), (604, 33782), (649, 33842), (693, 33905), (699, 33917), (725, 34025), (738, 34061),

Gene: Mcklovin\_36 Start: 33917, Stop: 35044, Start Num: 145

Candidate Starts for Mcklovin\_36:

(56, 33698), (67, 33734), (Start: 145 @33917 has 284 MA's), (174, 33971), (258, 34127), (311, 34217), (327, 34250), (468, 34445), (470, 34448), (491, 34490), (511, 34526), (681, 34823), (707, 34901), (718, 34943), (723, 34970), (749, 35033),

Gene: MeaningOfLife\_42 Start: 33409, Stop: 34497, Start Num: 145

Candidate Starts for MeaningOfLife\_42:

(Start: 145 @33409 has 284 MA's), (207, 33511), (221, 33535), (237, 33571), (323, 33709), (345, 33763), (429, 33847), (468, 33916), (470, 33919), (495, 33967), (550, 34069), (604, 34174), (667, 34261), (699, 34309), (738, 34453),

Gene: Medusa\_33 Start: 26128, Stop: 25130, Start Num: 239

Candidate Starts for Medusa\_33:

(Start: 156 @26296 has 3 MA's), (170, 26269), (Start: 177 @26251 has 119 MA's), (Start: 217 @26182 has 8 MA's), (Start: 239 @26128 has 6 MA's), (363, 25909), (366, 25900), (383, 25864), (404, 25822), (420, 25810), (421, 25807), (465, 25729), (538, 25594), (552, 25576), (596, 25489), (608, 25462), (614, 25447), (623, 25429), (702, 25291), (715, 25243), (721, 25213), (723, 25207), (726, 25195), (743, 25156),

Gene: Megsy\_42 Start: 32724, Stop: 33812, Start Num: 145

Candidate Starts for Megsy\_42:

(Start: 145 @32724 has 284 MA's), (207, 32826), (221, 32850), (237, 32886), (323, 33024), (345, 33078), (429, 33162), (468, 33231), (470, 33234), (550, 33384), (594, 33462), (604, 33489), (699, 33624), (738, 33768),

Gene: Melissauren88\_42 Start: 32565, Stop: 33683, Start Num: 145

Candidate Starts for Melissauren88\_42:

(Start: 145 @32565 has 284 MA's), (151, 32574), (237, 32736), (330, 32901), (345, 32937), (350, 32946), (438, 33051), (471, 33120), (491, 33159), (504, 33180), (510, 33192), (511, 33195), (518, 33207), (537, 33246), (540, 33252), (555, 33273), (583, 33309), (584, 33312), (596, 33348), (599, 33354), (605, 33369), (611, 33384), (667, 33453), (676, 33468), (701, 33510), (711, 33555), (714, 33564), (723, 33603), (727, 33621), (736, 33642), (744, 33657), (749, 33666), (751, 33669),

Gene: Melons\_38 Start: 24495, Stop: 23308, Start Num: 127

Candidate Starts for Melons\_38:

(81, 24585), (Start: 127 @24495 has 61 MA's), (326, 24141), (354, 24078), (362, 24066), (610, 23631), (698, 23496), (700, 23484), (751, 23328),

Gene: Melvin\_33 Start: 26249, Stop: 25128, Start Num: 177

Candidate Starts for Melvin\_33:

(Start: 156 @26294 has 3 MA's), (170, 26267), (Start: 177 @26249 has 119 MA's), (Start: 217 @26180 has 8 MA's), (Start: 239 @26126 has 6 MA's), (363, 25907), (366, 25898), (383, 25862), (404, 25820), (420, 25808), (421, 25805), (465, 25727), (538, 25592), (552, 25574), (596, 25487), (608, 25460), (614, 25445), (623, 25427), (702, 25289), (715, 25241), (721, 25211), (723, 25205), (726, 25193), (743, 25154),

Gene: MiaZeal\_87 Start: 50735, Stop: 52009, Start Num: 90

Candidate Starts for MiaZeal\_87:

(70, 50678), (Start: 85 @50720 has 1 MA's), (Start: 90 @50735 has 10 MA's), (92, 50738), (Start: 114 @50783 has 2 MA's), (Start: 136 @50822 has 1 MA's), (330, 51203), (374, 51287), (378, 51299), (379, 51302), (451, 51431), (536, 51551), (580, 51614), (589, 51632), (597, 51656), (638, 51728), (720, 51905), (721, 51908), (723, 51914), (727, 51932), (732, 51947), (738, 51956), (740, 51959), (762, 52004),

Gene: MichaelScott\_40 Start: 30472, Stop: 31599, Start Num: 145

Candidate Starts for MichaelScott\_40:

(121, 30433), (Start: 145 @30472 has 284 MA's), (174, 30526), (236, 30649), (258, 30682), (311, 30772), (327, 30805), (468, 31000), (470, 31003), (491, 31045), (511, 31081), (681, 31378), (707, 31456), (713, 31483), (718, 31498), (723, 31525), (749, 31588),

Gene: Microwolf\_36 Start: 26752, Stop: 25646, Start Num: 203

Candidate Starts for Microwolf\_36:

(Start: 177 @26791 has 119 MA's), (Start: 203 @26752 has 10 MA's), (Start: 239 @26668 has 6 MA's), (270, 26623), (353, 26467), (366, 26440), (383, 26404), (421, 26347), (465, 26269), (482,

26245), (502, 26206), (538, 26134), (548, 26122), (552, 26116), (560, 26104), (596, 26029), (599, 26023), (608, 26002), (614, 25987), (623, 25969), (639, 25945), (702, 25831), (714, 25786), (715, 25783), (718, 25774), (721, 25753), (723, 25747), (726, 25735), (743, 25696),

Gene: MiculUcigas\_34 Start: 26502, Stop: 25381, Start Num: 177

Candidate Starts for MiculUcigas\_34:

(Start: 144 @26565 has 1 MA's), (Start: 177 @26502 has 119 MA's), (Start: 209 @26448 has 14 MA's), (Start: 239 @26379 has 6 MA's), (270, 26334), (332, 26208), (366, 26151), (383, 26115), (420, 26061), (421, 26058), (491, 25935), (502, 25917), (552, 25827), (560, 25815), (596, 25740), (599, 25734), (608, 25713), (614, 25698), (623, 25680), (641, 25653), (715, 25494), (721, 25464), (723, 25458), (726, 25446), (743, 25407),

Gene: MidnightRain\_42 Start: 28565, Stop: 27426, Start Num: 145

Candidate Starts for MidnightRain\_42:

(Start: 145 @28565 has 284 MA's), (174, 28514), (277, 28346), (287, 28328), (362, 28196), (422, 28118), (429, 28106), (468, 28031), (473, 28022), (506, 27962), (551, 27872), (605, 27767), (615, 27746), (636, 27719), (701, 27596), (707, 27572), (710, 27557), (728, 27482), (743, 27452),

Gene: MilanaBonita\_37 Start: 29110, Stop: 30237, Start Num: 145

Candidate Starts for MilanaBonita\_37:

(91, 29008), (118, 29065), (Start: 145 @29110 has 284 MA's), (151, 29119), (237, 29281), (267, 29332), (277, 29350), (302, 29395), (345, 29491), (350, 29500), (438, 29605), (471, 29674), (491, 29713), (504, 29734), (510, 29746), (511, 29749), (518, 29761), (537, 29800), (540, 29806), (555, 29827), (583, 29863), (584, 29866), (596, 29902), (599, 29908), (604, 29920), (605, 29923), (611, 29938), (667, 30007), (676, 30022), (692, 30040), (701, 30064), (711, 30109), (714, 30118), (718, 30130), (723, 30157), (727, 30175), (736, 30196), (744, 30211), (749, 30220), (751, 30223),

Gene: MilleniumForce\_42 Start: 32868, Stop: 33986, Start Num: 145

Candidate Starts for MilleniumForce\_42:

(Start: 145 @32868 has 284 MA's), (151, 32877), (237, 33039), (330, 33204), (345, 33240), (350, 33249), (422, 33330), (438, 33354), (471, 33423), (502, 33480), (504, 33483), (510, 33495), (511, 33498), (518, 33510), (537, 33549), (555, 33576), (583, 33612), (584, 33615), (596, 33651), (599, 33657), (605, 33672), (667, 33756), (676, 33771), (701, 33813), (711, 33858), (714, 33867), (723, 33906), (727, 33924), (736, 33945), (744, 33960), (749, 33969), (751, 33972),

Gene: Milly\_43 Start: 34290, Stop: 35390, Start Num: 145

Candidate Starts for Milly\_43:

(Start: 145 @34290 has 284 MA's), (Start: 158 @34308 has 1 MA's), (174, 34341), (221, 34416), (237, 34452), (309, 34566), (323, 34590), (345, 34644), (457, 34785), (468, 34809), (470, 34812), (491, 34854), (550, 34962), (604, 35067), (643, 35112), (649, 35127), (725, 35319),

Gene: Minerva\_84 Start: 53196, Stop: 54425, Start Num: 104

Candidate Starts for Minerva\_84:

(Start: 104 @53196 has 29 MA's), (Start: 114 @53214 has 2 MA's), (Start: 136 @53253 has 1 MA's), (251, 53490), (313, 53598), (374, 53718), (375, 53721), (378, 53730), (386, 53745), (407, 53784), (451, 53862), (520, 53967), (528, 53979), (536, 53982), (544, 53991), (579, 54042), (580, 54045), (589, 54063), (638, 54159), (672, 54216), (720, 54336), (721, 54339), (727, 54363), (738, 54387), (740, 54390),

Gene: MinionDave\_43 Start: 33105, Stop: 34223, Start Num: 145

Candidate Starts for MinionDave\_43:

(Start: 145 @33105 has 284 MA's), (151, 33114), (237, 33276), (271, 33324), (330, 33441), (345, 33477), (350, 33486), (438, 33591), (471, 33660), (491, 33699), (502, 33717), (504, 33720), (510,

33732), (511, 33735), (518, 33747), (537, 33786), (540, 33792), (555, 33813), (583, 33849), (584, 33852), (596, 33888), (599, 33894), (604, 33906), (605, 33909), (611, 33924), (667, 33993), (676, 34008), (692, 34026), (701, 34050), (711, 34095), (714, 34104), (723, 34143), (727, 34161), (736, 34182), (744, 34197), (749, 34206), (751, 34209),

Gene: Minnie\_43 Start: 32650, Stop: 33768, Start Num: 145

Candidate Starts for Minnie\_43:

(Start: 145 @32650 has 284 MA's), (223, 32788), (237, 32821), (271, 32869), (345, 33022), (350, 33031), (422, 33112), (471, 33205), (491, 33244), (502, 33262), (504, 33265), (510, 33277), (511, 33280), (518, 33292), (525, 33307), (537, 33331), (540, 33337), (555, 33358), (583, 33394), (584, 33397), (596, 33433), (599, 33439), (605, 33454), (611, 33469), (667, 33538), (676, 33553), (701, 33595), (711, 33640), (714, 33649), (723, 33688), (727, 33706), (736, 33727), (744, 33742), (749, 33751), (751, 33754),

Gene: Miskis\_80 Start: 49839, Stop: 51137, Start Num: 111

Candidate Starts for Miskis\_80:

(Start: 111 @49839 has 12 MA's), (147, 49905), (197, 50007), (208, 50034), (214, 50046), (232, 50076), (259, 50115), (281, 50133), (319, 50199), (324, 50208), (368, 50292), (424, 50382), (507, 50541), (510, 50547), (511, 50550), (577, 50676), (603, 50745), (643, 50823), (670, 50874), (698, 50901), (706, 50937), (707, 50940), (708, 50943), (709, 50949), (711, 50961), (713, 50967), (714, 50970), (715, 50973), (721, 51003), (737, 51051), (742, 51060), (759, 51090),

Gene: MissWhite\_33 Start: 25561, Stop: 24443, Start Num: 177

Candidate Starts for MissWhite\_33:

(Start: 177 @25561 has 119 MA's), (198, 25525), (Start: 209 @25507 has 14 MA's), (Start: 239 @25438 has 6 MA's), (248, 25420), (294, 25345), (297, 25339), (353, 25237), (360, 25225), (366, 25210), (383, 25174), (420, 25120), (552, 24886), (560, 24874), (596, 24799), (599, 24793), (608, 24772), (614, 24757), (623, 24739), (641, 24712), (715, 24553), (716, 24550), (721, 24523), (723, 24517), (726, 24505), (743, 24466), (749, 24454),

Gene: Mocha12\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for Mocha12\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (557, 28553), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: ModicumRichard\_35 Start: 30420, Stop: 29293, Start Num: 127

Candidate Starts for ModicumRichard\_35:

(11, 30900), (Start: 127 @30420 has 61 MA's), (Start: 158 @30366 has 1 MA's), (214, 30261), (310, 30090), (356, 30000), (373, 29964), (440, 29850), (496, 29811), (510, 29787), (569, 29691), (631, 29559), (658, 29514), (703, 29442), (743, 29316),

Gene: MoneyMay\_36 Start: 26789, Stop: 25644, Start Num: 177

Candidate Starts for MoneyMay\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: MooMoo\_41 Start: 31904, Stop: 33025, Start Num: 145

Candidate Starts for MooMoo\_41:

(Start: 145 @31904 has 284 MA's), (Start: 217 @32033 has 8 MA's), (237, 32075), (277, 32135), (302, 32180), (345, 32276), (350, 32285), (471, 32462), (504, 32522), (510, 32534), (511, 32537), (512, 32540), (518, 32549), (537, 32588), (540, 32594), (555, 32615), (583, 32651), (584, 32654), (596, 32690), (611, 32726), (631, 32741), (667, 32795), (676, 32810), (686, 32825), (711, 32897), (714, 32906), (718, 32918), (723, 32945), (727, 32963), (736, 32984), (744, 32999),

Gene: Moonbeam\_41 Start: 32622, Stop: 33740, Start Num: 145

Candidate Starts for Moonbeam\_41:

(Start: 145 @32622 has 284 MA's), (151, 32631), (237, 32793), (271, 32841), (330, 32958), (345, 32994), (350, 33003), (438, 33108), (471, 33177), (491, 33216), (502, 33234), (504, 33237), (510, 33249), (511, 33252), (518, 33264), (525, 33279), (537, 33303), (540, 33309), (555, 33330), (583, 33366), (584, 33369), (596, 33405), (599, 33411), (604, 33423), (605, 33426), (611, 33441), (667, 33510), (676, 33525), (692, 33543), (701, 33567), (711, 33612), (714, 33621), (723, 33660), (727, 33678), (736, 33699), (744, 33714), (749, 33723), (751, 33726),

Gene: Moosehead\_35 Start: 25354, Stop: 26436, Start Num: 140

Candidate Starts for Moosehead\_35:

(Start: 140 @25354 has 1 MA's), (236, 25513), (271, 25558), (290, 25591), (470, 25864), (491, 25906), (511, 25942), (512, 25945), (518, 25954), (678, 26233), (707, 26293), (749, 26425),

Gene: Morgana\_35 Start: 30175, Stop: 29048, Start Num: 127

Candidate Starts for Morgana\_35:

(11, 30832), (14, 30778), (Start: 127 @30175 has 61 MA's), (Start: 158 @30121 has 1 MA's), (310, 29845), (356, 29755), (373, 29719), (440, 29605), (496, 29566), (510, 29542), (569, 29446), (631, 29314), (658, 29269), (703, 29197), (743, 29071),

Gene: Morkie\_33 Start: 26172, Stop: 27254, Start Num: 143

Candidate Starts for Morkie\_33:

(Start: 143 @26172 has 52 MA's), (174, 26226), (242, 26346), (421, 26601), (470, 26691), (506, 26757), (518, 26781), (608, 26952), (707, 27111), (713, 27138), (725, 27186), (749, 27243),

Gene: Morrow\_33 Start: 26255, Stop: 25116, Start Num: 177

Candidate Starts for Morrow\_33:

(Start: 156 @26300 has 3 MA's), (170, 26273), (Start: 177 @26255 has 119 MA's), (Start: 217 @26186 has 8 MA's), (Start: 239 @26132 has 6 MA's), (363, 25913), (366, 25904), (383, 25868), (404, 25826), (420, 25814), (421, 25811), (465, 25733), (538, 25598), (552, 25580), (596, 25493), (599, 25487), (608, 25466), (614, 25451), (623, 25433), (702, 25295), (715, 25247), (721, 25217), (723, 25211), (726, 25199), (743, 25160), (756, 25136), (759, 25130),

Gene: Mova\_42 Start: 31760, Stop: 32878, Start Num: 145

Candidate Starts for Mova\_42:

(Start: 145 @31760 has 284 MA's), (223, 31898), (237, 31931), (271, 31979), (345, 32132), (350, 32141), (422, 32222), (471, 32315), (491, 32354), (504, 32375), (510, 32387), (511, 32390), (518, 32402), (525, 32417), (537, 32441), (540, 32447), (555, 32468), (583, 32504), (584, 32507), (596, 32543), (605, 32564), (611, 32579), (667, 32648), (676, 32663), (692, 32681), (701, 32705), (711, 32750), (714, 32759), (718, 32771), (723, 32798), (727, 32816), (736, 32837), (744, 32852), (749, 32861), (751, 32864),

Gene: Mozy\_51 Start: 34630, Stop: 35748, Start Num: 145

Candidate Starts for Mozy\_51:

(Start: 145 @34630 has 284 MA's), (151, 34639), (237, 34801), (330, 34966), (345, 35002), (350, 35011), (438, 35116), (471, 35185), (491, 35224), (504, 35245), (510, 35257), (511, 35260), (518, 35272), (537, 35311), (540, 35317), (555, 35338), (583, 35374), (584, 35377), (596, 35413), (599,

35419), (605, 35434), (667, 35518), (676, 35533), (701, 35575), (711, 35620), (714, 35629), (723, 35668), (727, 35686), (736, 35707), (744, 35722), (749, 35731), (751, 35734),

Gene: MrSmee\_34 Start: 25508, Stop: 24390, Start Num: 126

Candidate Starts for MrSmee\_34:

(Start: 126 @25508 has 2 MA's), (235, 25313), (246, 25283), (250, 25277), (278, 25247), (295, 25211), (316, 25178), (319, 25172), (326, 25157), (330, 25148), (360, 25091), (365, 25079), (366, 25076), (371, 25067), (377, 25055), (379, 25046), (416, 24986), (430, 24971), (500, 24905), (508, 24890), (518, 24872), (530, 24848), (532, 24845), (569, 24794), (581, 24770), (598, 24722), (604, 24707), (612, 24686), (615, 24680), (636, 24659), (743, 24419),

Gene: Ms6\_36 Start: 27630, Stop: 28748, Start Num: 145

Candidate Starts for Ms6\_36:

(Start: 145 @27630 has 284 MA's), (151, 27639), (237, 27801), (330, 27966), (345, 28002), (350, 28011), (438, 28116), (471, 28185), (491, 28224), (504, 28245), (510, 28257), (511, 28260), (518, 28272), (537, 28311), (540, 28317), (555, 28338), (583, 28374), (584, 28377), (596, 28413), (599, 28419), (604, 28431), (605, 28434), (611, 28449), (667, 28518), (676, 28533), (711, 28620), (714, 28629), (723, 28668), (727, 28686), (736, 28707), (744, 28722), (749, 28731), (751, 28734),

Gene: MuchMore\_38 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for MuchMore\_38:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (228, 26695), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Mufasa\_44 Start: 34136, Stop: 35236, Start Num: 145

Candidate Starts for Mufasa\_44:

(Start: 145 @34136 has 284 MA's), (Start: 158 @34154 has 1 MA's), (174, 34187), (221, 34262), (237, 34298), (309, 34412), (323, 34436), (345, 34490), (367, 34514), (457, 34631), (468, 34655), (470, 34658), (491, 34700), (550, 34808), (604, 34913), (643, 34958), (649, 34973), (725, 35165),

Gene: Mufasa8\_27 Start: 25316, Stop: 26536, Start Num: 145

Candidate Starts for Mufasa8\_27:

(Start: 145 @25316 has 284 MA's), (223, 25445), (271, 25517), (277, 25529), (336, 25634), (347, 25658), (364, 25670), (400, 25712), (470, 25832), (476, 25844), (485, 25859), (504, 25895), (506, 25898), (518, 25922), (533, 25952), (545, 25976), (546, 25979), (551, 25988), (553, 25991), (594, 26063), (596, 26072), (599, 26078), (615, 26114), (636, 26144), (649, 26171), (673, 26213), (681, 26225),

Gene: Mulch\_39 Start: 31322, Stop: 30051, Start Num: 127

Candidate Starts for Mulch\_39:

(Start: 127 @31322 has 61 MA's), (Start: 136 @31307 has 1 MA's), (Start: 185 @31205 has 12 MA's), (214, 31163), (222, 31151), (257, 31076), (299, 31001), (307, 30992), (316, 30974), (366, 30875), (368, 30872), (422, 30782), (508, 30677), (559, 30581), (562, 30575), (636, 30413), (700, 30272), (711, 30227), (724, 30176), (726, 30167), (730, 30152), (738, 30140), (744, 30128), (770, 30089),

Gene: Murucutumbu\_42 Start: 33469, Stop: 34557, Start Num: 145

Candidate Starts for Murucutumbu\_42:

(Start: 145 @33469 has 284 MA's), (207, 33571), (221, 33595), (237, 33631), (277, 33682), (309, 33745), (323, 33769), (345, 33823), (347, 33826), (429, 33907), (468, 33976), (470, 33979), (487, 34009), (550, 34129), (594, 34207), (604, 34234), (699, 34369),



Gene: Mutaforma13\_45 Start: 33170, Stop: 34288, Start Num: 145

Candidate Starts for Mutaforma13\_45:

(Start: 145 @33170 has 284 MA's), (151, 33179), (223, 33308), (237, 33341), (271, 33389), (330, 33506), (345, 33542), (350, 33551), (438, 33656), (471, 33725), (504, 33785), (510, 33797), (511, 33800), (518, 33812), (525, 33827), (537, 33851), (540, 33857), (555, 33878), (583, 33914), (584, 33917), (596, 33953), (599, 33959), (604, 33971), (605, 33974), (667, 34058), (676, 34073), (701, 34115), (711, 34160), (714, 34169), (723, 34208), (727, 34226), (736, 34247), (744, 34262), (749, 34271), (751, 34274),

Gene: Mynx\_42 Start: 32799, Stop: 33887, Start Num: 145

Candidate Starts for Mynx\_42:

(Start: 145 @32799 has 284 MA's), (207, 32901), (221, 32925), (237, 32961), (323, 33099), (345, 33153), (429, 33237), (468, 33306), (470, 33309), (495, 33357), (550, 33459), (604, 33564), (667, 33651), (699, 33699), (738, 33843),

Gene: NaSiaTalie\_34 Start: 26377, Stop: 25379, Start Num: 239

Candidate Starts for NaSiaTalie\_34:

(Start: 144 @26563 has 1 MA's), (Start: 177 @26500 has 119 MA's), (Start: 209 @26446 has 14 MA's), (Start: 239 @26377 has 6 MA's), (270, 26332), (332, 26206), (366, 26149), (383, 26113), (420, 26059), (421, 26056), (491, 25933), (502, 25915), (552, 25825), (560, 25813), (596, 25738), (599, 25732), (608, 25711), (614, 25696), (623, 25678), (641, 25651), (715, 25492), (721, 25462), (723, 25456), (726, 25444), (743, 25405),

Gene: Nadeem\_39 Start: 31322, Stop: 30051, Start Num: 127

Candidate Starts for Nadeem\_39:

(Start: 127 @31322 has 61 MA's), (Start: 136 @31307 has 1 MA's), (Start: 185 @31205 has 12 MA's), (214, 31163), (222, 31151), (257, 31076), (299, 31001), (307, 30992), (316, 30974), (366, 30875), (368, 30872), (422, 30782), (508, 30677), (559, 30581), (562, 30575), (636, 30413), (700, 30272), (711, 30227), (724, 30176), (726, 30167), (730, 30152), (738, 30140), (744, 30128), (770, 30089),

Gene: Naji\_37 Start: 26474, Stop: 25350, Start Num: 177

Candidate Starts for Naji\_37:

(Start: 177 @26474 has 119 MA's), (Start: 209 @26420 has 14 MA's), (Start: 239 @26351 has 6 MA's), (353, 26150), (354, 26147), (366, 26123), (383, 26087), (421, 26030), (434, 26003), (465, 25952), (487, 25919), (491, 25907), (502, 25889), (538, 25817), (552, 25799), (560, 25787), (596, 25712), (599, 25706), (608, 25685), (614, 25670), (623, 25652), (641, 25625), (702, 25514), (715, 25466), (716, 25463), (721, 25436), (723, 25430), (726, 25418), (743, 25379),

Gene: NancyRae\_39 Start: 31331, Stop: 30060, Start Num: 127

Candidate Starts for NancyRae\_39:

(Start: 127 @31331 has 61 MA's), (Start: 136 @31316 has 1 MA's), (Start: 185 @31214 has 12 MA's), (214, 31172), (222, 31160), (257, 31085), (299, 31010), (307, 31001), (316, 30983), (366, 30884), (368, 30881), (422, 30791), (508, 30686), (562, 30584), (569, 30566), (636, 30422), (700, 30281), (711, 30236), (724, 30185), (726, 30176), (738, 30149), (744, 30137), (770, 30098),

Gene: Nebkiss\_56 Start: 37263, Stop: 38534, Start Num: 90

Candidate Starts for Nebkiss\_56:

(Start: 90 @37263 has 10 MA's), (Start: 114 @37311 has 2 MA's), (Start: 136 @37350 has 1 MA's), (280, 37629), (340, 37746), (374, 37815), (375, 37818), (378, 37827), (392, 37857), (434, 37923), (451, 37959), (474, 37986), (477, 37989), (486, 38004), (489, 38010), (509, 38043), (517, 38058), (519, 38061), (520, 38064), (528, 38076), (536, 38094), (544, 38103), (573, 38145), (577, 38151), (579, 38154), (597, 38199), (638, 38271), (685, 38337), (701, 38364), (720, 38448), (721, 38451),

(728, 38478), (738, 38499),

Gene: Nebs\_33 Start: 26248, Stop: 25127, Start Num: 177

Candidate Starts for Nebs\_33:

(Start: 156 @26293 has 3 MA's), (170, 26266), (Start: 177 @26248 has 119 MA's), (Start: 217 @26179 has 8 MA's), (Start: 239 @26125 has 6 MA's), (363, 25906), (366, 25897), (383, 25861), (404, 25819), (420, 25807), (421, 25804), (465, 25726), (538, 25591), (552, 25573), (596, 25486), (599, 25480), (608, 25459), (614, 25444), (623, 25426), (702, 25288), (715, 25240), (721, 25210), (723, 25204), (726, 25192), (743, 25153),

Gene: Nekros\_81 Start: 51195, Stop: 52469, Start Num: 90

Candidate Starts for Nekros\_81:

(70, 51138), (Start: 85 @51180 has 1 MA's), (Start: 90 @51195 has 10 MA's), (92, 51198), (Start: 114 @51243 has 2 MA's), (Start: 136 @51282 has 1 MA's), (330, 51663), (374, 51747), (378, 51759), (379, 51762), (451, 51891), (536, 52011), (580, 52074), (589, 52092), (597, 52116), (638, 52188), (720, 52365), (721, 52368), (723, 52374), (727, 52392), (732, 52407), (738, 52416), (740, 52419), (762, 52464),

Gene: Neobush\_39 Start: 30557, Stop: 31639, Start Num: 143

Candidate Starts for Neobush\_39:

(Start: 88 @30446 has 6 MA's), (Start: 143 @30557 has 52 MA's), (174, 30611), (242, 30731), (421, 30986), (438, 31016), (470, 31076), (506, 31142), (518, 31166), (707, 31496), (713, 31523), (749, 31628),

Gene: Nettuno\_33 Start: 26384, Stop: 27466, Start Num: 143

Candidate Starts for Nettuno\_33:

(Start: 86 @26267 has 2 MA's), (Start: 88 @26273 has 6 MA's), (Start: 143 @26384 has 52 MA's), (174, 26438), (242, 26558), (421, 26813), (438, 26843), (470, 26903), (506, 26969), (518, 26993), (583, 27098), (707, 27323), (713, 27350), (749, 27455),

Gene: Neville\_8 Start: 3425, Stop: 2322, Start Num: 185

Candidate Starts for Neville\_8:

(175, 3452), (Start: 185 @3425 has 12 MA's), (189, 3413), (224, 3359), (236, 3344), (244, 3320), (264, 3293), (331, 3167), (372, 3095), (408, 3032), (417, 3020), (436, 2981), (478, 2897), (490, 2876), (533, 2789), (575, 2720), (582, 2708), (620, 2612), (634, 2588), (667, 2528), (688, 2492), (701, 2477), (710, 2438), (719, 2396),

Gene: NewHope4\_45 Start: 32740, Stop: 33858, Start Num: 145

Candidate Starts for NewHope4\_45:

(Start: 145 @32740 has 284 MA's), (223, 32878), (237, 32911), (271, 32959), (345, 33112), (350, 33121), (438, 33226), (471, 33295), (504, 33355), (510, 33367), (511, 33370), (525, 33397), (537, 33421), (555, 33448), (583, 33484), (584, 33487), (596, 33523), (599, 33529), (604, 33541), (605, 33544), (667, 33628), (676, 33643), (701, 33685), (711, 33730), (714, 33739), (723, 33778), (727, 33796), (736, 33817), (744, 33832), (749, 33841), (751, 33844),

Gene: Nibb\_43 Start: 32855, Stop: 33940, Start Num: 145

Candidate Starts for Nibb\_43:

(Start: 145 @32855 has 284 MA's), (226, 32990), (237, 33017), (338, 33197), (345, 33209), (429, 33293), (468, 33362), (470, 33365), (550, 33515), (604, 33620), (667, 33707), (699, 33755), (725, 33863), (744, 33911),

Gene: NicoleTera\_37 Start: 27751, Stop: 26633, Start Num: 177

Candidate Starts for NicoleTera\_37:

(Start: 177 @27751 has 119 MA's), (Start: 209 @27697 has 14 MA's), (Start: 239 @27628 has 6 MA's), (353, 27427), (366, 27400), (383, 27364), (404, 27322), (421, 27307), (465, 27229), (491, 27184), (552, 27076), (560, 27064), (584, 27025), (596, 26989), (599, 26983), (608, 26962), (614, 26947), (623, 26929), (641, 26902), (702, 26791), (715, 26743), (716, 26740), (721, 26713), (723, 26707), (726, 26695), (743, 26656),

Gene: NihilNomen\_82 Start: 53150, Stop: 54379, Start Num: 104

Candidate Starts for NihilNomen\_82:

(Start: 104 @53150 has 29 MA's), (Start: 114 @53168 has 2 MA's), (Start: 136 @53207 has 1 MA's), (251, 53444), (313, 53552), (374, 53672), (375, 53675), (378, 53684), (386, 53699), (407, 53738), (451, 53816), (520, 53921), (528, 53933), (536, 53936), (544, 53945), (579, 53996), (580, 53999), (589, 54017), (638, 54113), (672, 54170), (720, 54290), (721, 54293), (727, 54317), (738, 54341), (740, 54344),

Gene: Nikao\_39 Start: 34589, Stop: 35683, Start Num: 145

Candidate Starts for Nikao\_39:

(32, 34238), (36, 34253), (51, 34346), (54, 34367), (83, 34460), (Start: 145 @34589 has 284 MA's), (174, 34640), (221, 34715), (237, 34751), (302, 34847), (309, 34865), (323, 34889), (342, 34937), (345, 34943), (453, 35075), (468, 35108), (491, 35153), (550, 35261), (604, 35366), (649, 35426), (699, 35501), (725, 35609), (738, 35645),

Gene: Niklas\_43 Start: 33040, Stop: 34131, Start Num: 145

Candidate Starts for Niklas\_43:

(37, 32707), (52, 32806), (53, 32815), (60, 32842), (73, 32890), (Start: 145 @33040 has 284 MA's), (221, 33166), (237, 33202), (309, 33316), (323, 33340), (345, 33394), (429, 33478), (445, 33511), (468, 33547), (470, 33550), (491, 33592), (537, 33679), (550, 33700), (604, 33808), (649, 33868), (693, 33931), (699, 33943), (725, 34051), (738, 34087),

Gene: Norvs\_84 Start: 51343, Stop: 52641, Start Num: 111

Candidate Starts for Norvs\_84:

(Start: 111 @51343 has 12 MA's), (147, 51409), (197, 51511), (208, 51538), (214, 51550), (232, 51580), (259, 51619), (281, 51637), (319, 51703), (324, 51712), (368, 51796), (424, 51886), (507, 52045), (510, 52051), (511, 52054), (577, 52180), (603, 52249), (643, 52327), (670, 52378), (698, 52405), (706, 52441), (707, 52444), (708, 52447), (709, 52453), (711, 52465), (713, 52471), (714, 52474), (715, 52477), (721, 52507), (737, 52555), (742, 52564), (759, 52594),

Gene: NothingSpecial\_35 Start: 27853, Stop: 26801, Start Num: 217

Candidate Starts for NothingSpecial\_35:

(170, 27940), (Start: 177 @27922 has 119 MA's), (Start: 217 @27853 has 8 MA's), (223, 27844), (Start: 239 @27799 has 6 MA's), (248, 27781), (270, 27754), (329, 27637), (353, 27598), (363, 27580), (366, 27571), (383, 27535), (404, 27493), (411, 27484), (421, 27478), (465, 27400), (491, 27355), (552, 27247), (560, 27235), (596, 27160), (599, 27154), (608, 27133), (614, 27118), (623, 27100), (702, 26962), (715, 26914), (721, 26884), (723, 26878), (726, 26866), (743, 26827),

Gene: Nutello\_36 Start: 31976, Stop: 33070, Start Num: 145

Candidate Starts for Nutello\_36:

(32, 31625), (36, 31640), (51, 31733), (54, 31754), (83, 31847), (Start: 145 @31976 has 284 MA's), (174, 32027), (221, 32102), (237, 32138), (302, 32234), (309, 32252), (323, 32276), (342, 32324), (345, 32330), (453, 32462), (468, 32495), (491, 32540), (550, 32648), (604, 32753), (649, 32813), (699, 32888), (725, 32996), (738, 33032),

Gene: Nymphadora\_39 Start: 32012, Stop: 33094, Start Num: 143

Candidate Starts for Nymphadora\_39:

(Start: 88 @31901 has 6 MA's), (Start: 143 @32012 has 52 MA's), (174, 32066), (242, 32186), (414, 32432), (421, 32441), (438, 32471), (470, 32531), (506, 32597), (518, 32621), (707, 32951), (713, 32978), (749, 33083),

Gene: OBUpride\_29 Start: 26514, Stop: 25279, Start Num: 133

Candidate Starts for OBUpride\_29:

(Start: 133 @26514 has 4 MA's), (Start: 159 @26472 has 22 MA's), (188, 26406), (230, 26325), (242, 26286), (254, 26271), (260, 26265), (267, 26253), (283, 26226), (301, 26193), (334, 26136), (354, 26103), (357, 26100), (380, 26052), (408, 26010), (410, 26007), (428, 25983), (434, 25968), (444, 25944), (455, 25929), (481, 25890), (487, 25878), (507, 25839), (528, 25800), (549, 25752), (551, 25749), (590, 25677), (593, 25671), (595, 25659), (596, 25656), (599, 25650), (623, 25596), (633, 25578), (636, 25575), (650, 25548), (660, 25530), (664, 25524), (667, 25521), (699, 25479), (705, 25452), (707, 25446), (719, 25389), (743, 25326), (744, 25323),

Gene: ODay\_52 Start: 33934, Stop: 35028, Start Num: 145

Candidate Starts for ODay\_52:

(Start: 145 @33934 has 284 MA's), (174, 33985), (206, 34033), (223, 34063), (236, 34090), (290, 34168), (293, 34177), (429, 34369), (440, 34387), (491, 34486), (510, 34519), (511, 34522), (518, 34534), (584, 34636), (609, 34702), (629, 34729), (631, 34732), (678, 34801), (684, 34810), (707, 34861), (708, 34864), (714, 34891), (718, 34903), (751, 34996),

Gene: ObLaDi\_35 Start: 30398, Stop: 29271, Start Num: 127

Candidate Starts for ObLaDi\_35:

(Start: 127 @30398 has 61 MA's), (Start: 158 @30344 has 1 MA's), (214, 30239), (310, 30068), (356, 29978), (373, 29942), (496, 29789), (510, 29765), (569, 29669), (631, 29537), (658, 29492), (703, 29420), (743, 29294),

Gene: Obama12\_34 Start: 26520, Stop: 25468, Start Num: 217

Candidate Starts for Obama12\_34:

(Start: 156 @26634 has 3 MA's), (170, 26607), (Start: 177 @26589 has 119 MA's), (Start: 217 @26520 has 8 MA's), (Start: 239 @26466 has 6 MA's), (363, 26247), (366, 26238), (383, 26202), (404, 26160), (420, 26148), (421, 26145), (538, 25932), (552, 25914), (596, 25827), (599, 25821), (608, 25800), (614, 25785), (623, 25767), (702, 25629), (715, 25581), (721, 25551), (723, 25545), (726, 25533), (743, 25494),

Gene: Octobien14\_6 Start: 2858, Stop: 1764, Start Num: 201

Candidate Starts for Octobien14\_6:

(115, 3011), (Start: 201 @2858 has 4 MA's), (333, 2582), (382, 2495), (511, 2282), (521, 2264), (542, 2225), (587, 2141), (599, 2105), (611, 2084), (614, 2078), (655, 2003), (686, 1952), (711, 1883), (714, 1874), (720, 1844), (721, 1841),

Gene: Odette\_80 Start: 52249, Stop: 53421, Start Num: 136

Candidate Starts for Odette\_80:

(Start: 104 @52192 has 29 MA's), (Start: 114 @52210 has 2 MA's), (Start: 136 @52249 has 1 MA's), (251, 52486), (313, 52594), (374, 52714), (375, 52717), (378, 52726), (386, 52741), (407, 52780), (451, 52858), (520, 52963), (528, 52975), (536, 52978), (544, 52987), (579, 53038), (580, 53041), (589, 53059), (638, 53155), (672, 53212), (720, 53332), (721, 53335), (727, 53359), (738, 53383), (740, 53386),

Gene: Odin\_33 Start: 25191, Stop: 24076, Start Num: 181

Candidate Starts for Odin\_33:

(Start: 181 @25191 has 9 MA's), (Start: 209 @25143 has 14 MA's), (228, 25110), (Start: 239 @25074 has 6 MA's), (270, 25029), (360, 24861), (366, 24846), (383, 24810), (404, 24768), (420, 24756), (421,

24753), (487, 24642), (552, 24522), (560, 24510), (577, 24489), (596, 24435), (608, 24408), (614, 24393), (623, 24375), (641, 24348), (715, 24189), (721, 24159), (723, 24153), (726, 24141), (743, 24102), (747, 24093),

Gene: Ohfah\_33 Start: 26248, Stop: 25127, Start Num: 177

Candidate Starts for Ohfah\_33:

(Start: 156 @26293 has 3 MA's), (170, 26266), (Start: 177 @26248 has 119 MA's), (Start: 217 @26179 has 8 MA's), (Start: 239 @26125 has 6 MA's), (363, 25906), (366, 25897), (383, 25861), (404, 25819), (420, 25807), (421, 25804), (465, 25726), (538, 25591), (552, 25573), (596, 25486), (599, 25480), (608, 25459), (614, 25444), (623, 25426), (702, 25288), (715, 25240), (721, 25210), (723, 25204), (726, 25192), (743, 25153),

Gene: Ohgeesy\_38 Start: 32336, Stop: 31074, Start Num: 127

Candidate Starts for Ohgeesy\_38:

(Start: 127 @32336 has 61 MA's), (211, 32180), (310, 31997), (329, 31961), (362, 31901), (366, 31889), (388, 31844), (407, 31811), (434, 31769), (562, 31601), (563, 31598), (596, 31523), (604, 31505), (605, 31502), (636, 31445), (694, 31328), (698, 31316), (711, 31259), (726, 31199), (730, 31184), (738, 31172), (743, 31163), (763, 31124),

Gene: OlanP\_35 Start: 26824, Stop: 25679, Start Num: 177

Candidate Starts for OlanP\_35:

(Start: 144 @26887 has 1 MA's), (Start: 177 @26824 has 119 MA's), (Start: 209 @26770 has 14 MA's), (Start: 239 @26701 has 6 MA's), (313, 26572), (330, 26536), (363, 26482), (366, 26473), (383, 26437), (421, 26380), (465, 26302), (487, 26269), (538, 26167), (552, 26149), (560, 26137), (596, 26062), (599, 26056), (608, 26035), (614, 26020), (623, 26002), (650, 25951), (714, 25819), (715, 25816), (721, 25786), (723, 25780), (726, 25768), (743, 25729),

Gene: Ollie\_36 Start: 26621, Stop: 25515, Start Num: 203

Candidate Starts for Ollie\_36:

(Start: 177 @26660 has 119 MA's), (Start: 203 @26621 has 10 MA's), (Start: 239 @26537 has 6 MA's), (270, 26492), (353, 26336), (366, 26309), (383, 26273), (421, 26216), (465, 26138), (482, 26114), (502, 26075), (538, 26003), (548, 25991), (552, 25985), (560, 25973), (596, 25898), (599, 25892), (608, 25871), (614, 25856), (623, 25838), (702, 25700), (714, 25655), (715, 25652), (718, 25643), (721, 25622), (723, 25616), (726, 25604), (743, 25565),

Gene: Omega\_85 Start: 53296, Stop: 54570, Start Num: 90

Candidate Starts for Omega\_85:

(70, 53239), (Start: 85 @53281 has 1 MA's), (Start: 90 @53296 has 10 MA's), (92, 53299), (Start: 114 @53344 has 2 MA's), (Start: 136 @53383 has 1 MA's), (330, 53764), (374, 53848), (378, 53860), (379, 53863), (451, 53992), (536, 54112), (580, 54175), (589, 54193), (597, 54217), (638, 54289), (720, 54466), (721, 54469), (723, 54475), (727, 54493), (732, 54508), (738, 54517), (740, 54520), (762, 54565),

Gene: OneDirection\_30 Start: 24794, Stop: 25876, Start Num: 143

Candidate Starts for OneDirection\_30:

(Start: 88 @24683 has 6 MA's), (Start: 143 @24794 has 52 MA's), (160, 24821), (174, 24848), (242, 24968), (421, 25223), (470, 25313), (506, 25379), (518, 25403), (707, 25733), (710, 25748), (713, 25760), (725, 25808), (749, 25865),

Gene: OnionKnight\_30 Start: 24231, Stop: 22948, Start Num: 137

Candidate Starts for OnionKnight\_30:

(Start: 137 @24231 has 1 MA's), (Start: 172 @24165 has 1 MA's), (256, 24003), (313, 23898), (369, 23781), (381, 23754), (393, 23733), (403, 23718), (476, 23586), (499, 23544), (532, 23478), (536,

23469), (564, 23418), (572, 23400), (587, 23370), (591, 23361), (600, 23331), (621, 23286), (671, 23193), (699, 23151), (702, 23133), (707, 23118), (714, 23088), (718, 23076), (722, 23052), (731, 23019), (738, 23007), (743, 22998), (744, 22995), (765, 22953),

Gene: Optimus\_79 Start: 51901, Stop: 53130, Start Num: 104

Candidate Starts for Optimus\_79:

(Start: 104 @51901 has 29 MA's), (Start: 114 @51919 has 2 MA's), (Start: 136 @51958 has 1 MA's), (251, 52195), (313, 52303), (374, 52423), (375, 52426), (378, 52435), (386, 52450), (407, 52489), (451, 52567), (520, 52672), (528, 52684), (536, 52687), (544, 52696), (579, 52747), (580, 52750), (589, 52768), (638, 52864), (672, 52921), (720, 53041), (721, 53044), (727, 53068), (738, 53092), (740, 53095),

Gene: Orcanus\_34 Start: 24639, Stop: 23455, Start Num: 127

Candidate Starts for Orcanus\_34:

(Start: 127 @24639 has 61 MA's), (245, 24420), (257, 24402), (326, 24285), (362, 24210), (366, 24198), (567, 23880), (605, 23787), (610, 23775), (618, 23757), (698, 23640), (706, 23604),

Gene: Oregano\_39 Start: 29184, Stop: 30311, Start Num: 145

Candidate Starts for Oregano\_39:

(56, 28965), (67, 29001), (Start: 145 @29184 has 284 MA's), (174, 29238), (236, 29361), (258, 29394), (311, 29484), (327, 29517), (468, 29712), (470, 29715), (491, 29757), (511, 29793), (681, 30090), (718, 30210), (723, 30237), (749, 30300),

Gene: Oscar\_45 Start: 33597, Stop: 34682, Start Num: 145

Candidate Starts for Oscar\_45:

(17, 32994), (19, 33012), (22, 33090), (35, 33261), (46, 33336), (54, 33375), (69, 33429), (Start: 145 @33597 has 284 MA's), (226, 33732), (237, 33759), (323, 33897), (338, 33939), (345, 33951), (429, 34035), (468, 34104), (470, 34107), (491, 34149), (550, 34257), (604, 34362), (667, 34449), (699, 34497), (725, 34605), (744, 34653),

Gene: OtsoOtso\_40 Start: 23869, Stop: 22682, Start Num: 127

Candidate Starts for OtsoOtso\_40:

(81, 23959), (Start: 127 @23869 has 61 MA's), (362, 23440), (610, 23005), (698, 22870),

Gene: Ovechkin\_41 Start: 32949, Stop: 34067, Start Num: 145

Candidate Starts for Ovechkin\_41:

(Start: 145 @32949 has 284 MA's), (151, 32958), (237, 33120), (330, 33285), (345, 33321), (350, 33330), (438, 33435), (471, 33504), (502, 33561), (504, 33564), (510, 33576), (511, 33579), (518, 33591), (537, 33630), (555, 33657), (583, 33693), (584, 33696), (596, 33732), (599, 33738), (605, 33753), (611, 33768), (667, 33837), (676, 33852), (701, 33894), (711, 33939), (714, 33948), (723, 33987), (727, 34005), (736, 34026), (744, 34041), (749, 34050), (751, 34053),

Gene: P28Green\_36 Start: 26792, Stop: 25647, Start Num: 177

Candidate Starts for P28Green\_36:

(Start: 177 @26792 has 119 MA's), (Start: 203 @26753 has 10 MA's), (228, 26705), (Start: 239 @26669 has 6 MA's), (270, 26624), (353, 26468), (366, 26441), (383, 26405), (421, 26348), (465, 26270), (482, 26246), (502, 26207), (538, 26135), (548, 26123), (552, 26117), (560, 26105), (596, 26030), (599, 26024), (608, 26003), (614, 25988), (623, 25970), (639, 25946), (702, 25832), (714, 25787), (715, 25784), (718, 25775), (721, 25754), (723, 25748), (726, 25736), (743, 25697),

Gene: PGHhamlin\_38 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for PGHhamlin\_38:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Padfoot\_41 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for Padfoot\_41:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: Padpat\_42 Start: 32470, Stop: 33558, Start Num: 145

Candidate Starts for Padpat\_42:

(Start: 145 @32470 has 284 MA's), (174, 32521), (207, 32572), (221, 32596), (237, 32632), (323, 32770), (345, 32824), (429, 32908), (468, 32977), (470, 32980), (550, 33130), (594, 33208), (604, 33235), (667, 33322), (699, 33370),

Gene: PantheRoc\_37 Start: 30354, Stop: 29092, Start Num: 127

Candidate Starts for PantheRoc\_37:

(Start: 127 @30354 has 61 MA's), (211, 30198), (310, 30015), (329, 29979), (362, 29919), (366, 29907), (388, 29862), (407, 29829), (434, 29787), (562, 29619), (563, 29616), (596, 29541), (604, 29523), (605, 29520), (636, 29463), (694, 29346), (698, 29334), (711, 29277), (726, 29217), (730, 29202), (738, 29190), (743, 29181), (763, 29142),

Gene: Parada\_39 Start: 31322, Stop: 30051, Start Num: 127

Candidate Starts for Parada\_39:

(Start: 127 @31322 has 61 MA's), (Start: 136 @31307 has 1 MA's), (Start: 185 @31205 has 12 MA's), (214, 31163), (222, 31151), (257, 31076), (299, 31001), (307, 30992), (316, 30974), (366, 30875), (368, 30872), (422, 30782), (508, 30677), (559, 30581), (562, 30575), (636, 30413), (700, 30272), (711, 30227), (724, 30176), (726, 30167), (730, 30152), (738, 30140), (744, 30128), (770, 30089),

Gene: Pawn\_35 Start: 26644, Stop: 25499, Start Num: 177

Candidate Starts for Pawn\_35:

(Start: 144 @26707 has 1 MA's), (Start: 177 @26644 has 119 MA's), (Start: 209 @26590 has 14 MA's), (Start: 239 @26521 has 6 MA's), (363, 26302), (366, 26293), (383, 26257), (421, 26200), (465, 26122), (487, 26089), (538, 25987), (552, 25969), (560, 25957), (596, 25882), (599, 25876), (608, 25855), (614, 25840), (623, 25822), (639, 25798), (714, 25639), (715, 25636), (721, 25606), (723, 25600), (726, 25588), (743, 25549),

Gene: Peanam\_43 Start: 33014, Stop: 34105, Start Num: 145

Candidate Starts for Peanam\_43:

(12, 32333), (21, 32477), (37, 32681), (52, 32780), (53, 32789), (60, 32816), (73, 32864), (Start: 145 @33014 has 284 MA's), (221, 33140), (237, 33176), (309, 33290), (323, 33314), (345, 33368), (429, 33452), (445, 33485), (468, 33521), (470, 33524), (491, 33566), (537, 33653), (550, 33674), (604, 33782), (649, 33842), (693, 33905), (699, 33917), (725, 34025), (738, 34061),

Gene: Peas\_35 Start: 27040, Stop: 28182, Start Num: 145

Candidate Starts for Peas\_35:

(Start: 145 @27040 has 284 MA's), (342, 27394), (345, 27400), (353, 27415), (400, 27469), (438, 27526), (468, 27586), (485, 27616), (518, 27679), (584, 27799), (602, 27847), (673, 27973), (683, 27985), (714, 28081), (734, 28156),

Gene: Peel\_41 Start: 32597, Stop: 33685, Start Num: 145

Candidate Starts for Peel\_41:

(16, 31994), (24, 32171), (45, 32336), (54, 32375), (Start: 145 @32597 has 284 MA's), (174, 32648), (207, 32699), (221, 32723), (237, 32759), (323, 32897), (429, 33035), (468, 33104), (470, 33107), (550, 33257), (604, 33362), (699, 33497),

Gene: Pelletreau\_41 Start: 25089, Stop: 23905, Start Num: 127

Candidate Starts for Pelletreau\_41:

(Start: 127 @25089 has 61 MA's), (245, 24870), (257, 24852), (326, 24735), (362, 24660), (567, 24330), (605, 24237), (610, 24225), (618, 24207), (698, 24090), (706, 24054),

Gene: Pembroke\_36 Start: 26791, Stop: 25646, Start Num: 177

Candidate Starts for Pembroke\_36:

(Start: 177 @26791 has 119 MA's), (Start: 203 @26752 has 10 MA's), (Start: 239 @26668 has 6 MA's), (270, 26623), (353, 26467), (366, 26440), (383, 26404), (421, 26347), (465, 26269), (482, 26245), (502, 26206), (538, 26134), (548, 26122), (552, 26116), (560, 26104), (596, 26029), (599, 26023), (608, 26002), (614, 25987), (623, 25969), (639, 25945), (702, 25831), (714, 25786), (715, 25783), (718, 25774), (721, 25753), (723, 25747), (726, 25735), (743, 25696),

Gene: Penny1\_36 Start: 26790, Stop: 25645, Start Num: 177

Candidate Starts for Penny1\_36:

(Start: 177 @26790 has 119 MA's), (Start: 203 @26751 has 10 MA's), (228, 26703), (Start: 239 @26667 has 6 MA's), (270, 26622), (353, 26466), (366, 26439), (383, 26403), (421, 26346), (465, 26268), (482, 26244), (502, 26205), (538, 26133), (548, 26121), (552, 26115), (560, 26103), (596, 26028), (599, 26022), (608, 26001), (614, 25986), (623, 25968), (639, 25944), (702, 25830), (714, 25785), (715, 25782), (718, 25773), (721, 25752), (723, 25746), (726, 25734), (743, 25695),

Gene: Pepperoni\_31 Start: 25939, Stop: 27021, Start Num: 143

Candidate Starts for Pepperoni\_31:

(Start: 143 @25939 has 52 MA's), (174, 25993), (242, 26113), (438, 26398), (470, 26458), (506, 26524), (518, 26548), (583, 26653), (608, 26719), (707, 26878), (713, 26905), (725, 26953), (749, 27010),

Gene: Periwinkle\_57 Start: 34837, Stop: 35922, Start Num: 145

Candidate Starts for Periwinkle\_57:

(96, 34750), (Start: 114 @34786 has 2 MA's), (Start: 145 @34837 has 284 MA's), (174, 34888), (206, 34936), (223, 34966), (236, 34993), (293, 35080), (330, 35152), (345, 35188), (350, 35197), (429, 35272), (440, 35290), (491, 35389), (510, 35422), (511, 35425), (518, 35437), (547, 35488), (584, 35539), (609, 35605), (678, 35704), (707, 35764), (713, 35791), (723, 35833), (751, 35899),

Gene: Persistence\_35 Start: 26237, Stop: 25068, Start Num: 145

Candidate Starts for Persistence\_35:

(87, 26342), (Start: 105 @26303 has 1 MA's), (Start: 145 @26237 has 284 MA's), (174, 26186), (277, 26018), (287, 26000), (333, 25904), (362, 25868), (422, 25790), (468, 25703), (473, 25694), (506, 25634), (551, 25544), (605, 25439), (608, 25433), (636, 25391), (701, 25274), (706, 25253), (707, 25250), (710, 25235), (723, 25181), (769, 25085),

Gene: Ph8s\_35 Start: 25309, Stop: 24314, Start Num: 239

Candidate Starts for Ph8s\_35:

(Start: 181 @25426 has 9 MA's), (228, 25345), (Start: 239 @25309 has 6 MA's), (270, 25264), (360, 25096), (366, 25081), (383, 25045), (404, 25003), (420, 24991), (421, 24988), (432, 24964), (485, 24880), (538, 24775), (552, 24757), (560, 24745), (577, 24724), (596, 24670), (608, 24643), (614, 24628), (623, 24610), (641, 24583), (702, 24472), (715, 24424), (721, 24394), (723, 24388), (726, 24376), (743, 24337),



Gene: Phabuloso\_48 Start: 32389, Stop: 33486, Start Num: 145

Candidate Starts for Phabuloso\_48:

(Start: 145 @32389 has 284 MA's), (174, 32440), (223, 32518), (236, 32545), (293, 32632), (330, 32704), (345, 32740), (350, 32749), (429, 32824), (440, 32842), (454, 32869), (491, 32941), (510, 32974), (511, 32977), (518, 32989), (678, 33256), (707, 33316), (713, 33343), (725, 33391), (727, 33403), (751, 33451),

Gene: Phaded\_37 Start: 28341, Stop: 27214, Start Num: 177

Candidate Starts for Phaded\_37:

(Start: 177 @28341 has 119 MA's), (Start: 203 @28305 has 10 MA's), (Start: 239 @28221 has 6 MA's), (270, 28176), (333, 28047), (360, 28008), (383, 27957), (446, 27846), (465, 27822), (487, 27789), (491, 27777), (552, 27669), (554, 27666), (596, 27582), (599, 27576), (608, 27555), (614, 27540), (623, 27522), (715, 27336), (721, 27306), (723, 27300), (726, 27288), (743, 27249), (758, 27225),

Gene: Phalconet\_41 Start: 31939, Stop: 33057, Start Num: 145

Candidate Starts for Phalconet\_41:

(Start: 145 @31939 has 284 MA's), (151, 31948), (237, 32110), (330, 32275), (345, 32311), (350, 32320), (471, 32494), (491, 32533), (504, 32554), (510, 32566), (511, 32569), (518, 32581), (537, 32620), (540, 32626), (555, 32647), (583, 32683), (584, 32686), (596, 32722), (599, 32728), (605, 32743), (667, 32827), (676, 32842), (692, 32860), (711, 32929), (714, 32938), (723, 32977), (727, 32995), (736, 33016), (744, 33031), (749, 33040), (751, 33043),

Gene: Phanphagia\_37 Start: 31053, Stop: 32171, Start Num: 145

Candidate Starts for Phanphagia\_37:

(Start: 145 @31053 has 284 MA's), (151, 31062), (237, 31224), (330, 31389), (345, 31425), (350, 31434), (438, 31539), (471, 31608), (491, 31647), (502, 31665), (504, 31668), (510, 31680), (511, 31683), (518, 31695), (525, 31710), (537, 31734), (540, 31740), (555, 31761), (583, 31797), (584, 31800), (596, 31836), (599, 31842), (605, 31857), (611, 31872), (667, 31941), (676, 31956), (701, 31998), (711, 32043), (714, 32052), (718, 32064), (723, 32091), (727, 32109), (736, 32130), (744, 32145), (749, 32154), (751, 32157),

Gene: Phantastic\_33 Start: 26109, Stop: 24964, Start Num: 169

Candidate Starts for Phantastic\_33:

(Start: 169 @26109 has 2 MA's), (Start: 173 @26100 has 3 MA's), (Start: 239 @25965 has 6 MA's), (270, 25920), (364, 25743), (366, 25737), (374, 25722), (383, 25701), (421, 25644), (465, 25566), (502, 25503), (552, 25413), (560, 25401), (596, 25326), (608, 25299), (614, 25284), (623, 25266), (639, 25242), (702, 25128), (715, 25080), (721, 25050), (723, 25044), (726, 25032), (732, 25011), (743, 24993),

Gene: Pharaoh\_32 Start: 27018, Stop: 25882, Start Num: 171

Candidate Starts for Pharaoh\_32:

(150, 27054), (152, 27051), (Start: 171 @27018 has 7 MA's), (Start: 217 @26937 has 8 MA's), (Start: 239 @26883 has 6 MA's), (270, 26838), (366, 26655), (383, 26619), (420, 26565), (421, 26562), (428, 26550), (465, 26484), (485, 26454), (491, 26439), (538, 26349), (552, 26331), (560, 26319), (596, 26244), (599, 26238), (608, 26217), (614, 26202), (623, 26184), (636, 26163), (641, 26157), (702, 26046), (715, 25998), (721, 25968), (723, 25962), (726, 25950), (743, 25911),

Gene: Phelipe\_33 Start: 26296, Stop: 25130, Start Num: 156

Candidate Starts for Phelipe\_33:

(Start: 156 @26296 has 3 MA's), (170, 26269), (Start: 177 @26251 has 119 MA's), (Start: 217 @26182 has 8 MA's), (223, 26173), (Start: 239 @26128 has 6 MA's), (363, 25909), (366, 25900), (383, 25864),

(404, 25822), (420, 25810), (421, 25807), (465, 25729), (538, 25594), (552, 25576), (596, 25489), (608, 25462), (614, 25447), (623, 25429), (702, 25291), (715, 25243), (721, 25213), (723, 25207), (726, 25195), (743, 25156),

Gene: PhesterPhotato\_44 Start: 32894, Stop: 34012, Start Num: 145

Candidate Starts for PhesterPhotato\_44:

(Start: 145 @32894 has 284 MA's), (151, 32903), (237, 33065), (330, 33230), (345, 33266), (350, 33275), (471, 33449), (491, 33488), (504, 33509), (510, 33521), (511, 33524), (518, 33536), (537, 33575), (540, 33581), (555, 33602), (583, 33638), (584, 33641), (596, 33677), (599, 33683), (605, 33698), (667, 33782), (676, 33797), (692, 33815), (711, 33884), (714, 33893), (723, 33932), (727, 33950), (736, 33971), (744, 33986), (749, 33995), (751, 33998),

Gene: Philus\_43 Start: 31979, Stop: 33097, Start Num: 145

Candidate Starts for Philus\_43:

(Start: 145 @31979 has 284 MA's), (223, 32117), (237, 32150), (271, 32198), (330, 32315), (345, 32351), (350, 32360), (438, 32465), (471, 32534), (504, 32594), (510, 32606), (511, 32609), (518, 32621), (525, 32636), (537, 32660), (540, 32666), (555, 32687), (583, 32723), (584, 32726), (596, 32762), (599, 32768), (604, 32780), (605, 32783), (667, 32867), (676, 32882), (701, 32924), (711, 32969), (714, 32978), (723, 33017), (727, 33035), (736, 33056), (744, 33071), (749, 33080), (751, 33083),

Gene: PhinkBoden\_83 Start: 51724, Stop: 53022, Start Num: 111

Candidate Starts for PhinkBoden\_83:

(Start: 111 @51724 has 12 MA's), (147, 51790), (197, 51892), (208, 51919), (214, 51931), (232, 51961), (259, 52000), (281, 52018), (319, 52084), (324, 52093), (368, 52177), (424, 52267), (507, 52426), (510, 52432), (511, 52435), (577, 52561), (603, 52630), (643, 52708), (670, 52759), (698, 52786), (706, 52822), (707, 52825), (708, 52828), (709, 52834), (711, 52846), (713, 52852), (714, 52855), (715, 52858), (721, 52888), (737, 52936), (742, 52945), (759, 52975),

Gene: PhishRPhriends\_34 Start: 25821, Stop: 24682, Start Num: 177

Candidate Starts for PhishRPhriends\_34:

(Start: 144 @25884 has 1 MA's), (Start: 177 @25821 has 119 MA's), (Start: 209 @25767 has 14 MA's), (Start: 239 @25698 has 6 MA's), (363, 25479), (366, 25470), (383, 25434), (421, 25377), (465, 25299), (487, 25266), (538, 25164), (552, 25146), (560, 25134), (596, 25059), (599, 25053), (608, 25032), (614, 25017), (623, 24999), (639, 24975), (714, 24816), (715, 24813), (721, 24783), (723, 24777), (726, 24765), (743, 24726),

Gene: Phistory\_51 Start: 33096, Stop: 34193, Start Num: 145

Candidate Starts for Phistory\_51:

(96, 33009), (Start: 114 @33045 has 2 MA's), (Start: 145 @33096 has 284 MA's), (174, 33147), (223, 33225), (236, 33252), (271, 33297), (293, 33339), (429, 33531), (440, 33549), (454, 33576), (491, 33648), (504, 33669), (507, 33675), (518, 33696), (555, 33768), (599, 33852), (678, 33975), (704, 34026), (707, 34035), (713, 34062), (751, 34170), (761, 34185),

Gene: PhluffyCoco\_36 Start: 23912, Stop: 22719, Start Num: 127

Candidate Starts for PhluffyCoco\_36:

(Start: 127 @23912 has 61 MA's), (362, 23483), (388, 23426), (557, 23174), (610, 23048), (615, 23036), (706, 22877), (726, 22796), (749, 22748),

Gene: Phoebe\_36 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for Phoebe\_36:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (228, 26695), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465,

26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Phoebus\_84 Start: 54332, Stop: 55561, Start Num: 104

Candidate Starts for Phoebus\_84:

(Start: 104 @54332 has 29 MA's), (Start: 114 @54350 has 2 MA's), (Start: 136 @54389 has 1 MA's), (251, 54626), (313, 54734), (374, 54854), (375, 54857), (378, 54866), (386, 54881), (407, 54920), (451, 54998), (520, 55103), (528, 55115), (536, 55118), (544, 55127), (579, 55178), (580, 55181), (589, 55199), (638, 55295), (672, 55352), (720, 55472), (721, 55475), (727, 55499), (738, 55523), (740, 55526),

Gene: PhorbesPhlower\_33 Start: 25600, Stop: 26682, Start Num: 143

Candidate Starts for PhorbesPhlower\_33:

(Start: 88 @25489 has 6 MA's), (Start: 143 @25600 has 52 MA's), (174, 25654), (242, 25774), (330, 25921), (470, 26119), (506, 26185), (518, 26209), (707, 26539), (713, 26566), (749, 26671), (751, 26674),

Gene: Phrank15\_39 Start: 27192, Stop: 26020, Start Num: 145

Candidate Starts for Phrank15\_39:

(108, 27249), (Start: 145 @27192 has 284 MA's), (174, 27141), (277, 26973), (287, 26955), (362, 26823), (422, 26745), (429, 26733), (433, 26727), (468, 26658), (473, 26649), (506, 26589), (551, 26499), (605, 26394), (615, 26373), (636, 26346), (701, 26223), (707, 26199), (710, 26184), (754, 26064), (769, 26037),

Gene: Phranny\_36 Start: 26629, Stop: 25490, Start Num: 177

Candidate Starts for Phranny\_36:

(Start: 144 @26692 has 1 MA's), (Start: 177 @26629 has 119 MA's), (Start: 209 @26575 has 14 MA's), (Start: 239 @26506 has 6 MA's), (363, 26287), (366, 26278), (383, 26242), (421, 26185), (465, 26107), (487, 26074), (538, 25972), (552, 25954), (560, 25942), (596, 25867), (599, 25861), (608, 25840), (614, 25825), (623, 25807), (639, 25783), (714, 25624), (715, 25621), (721, 25591), (723, 25585), (726, 25573), (743, 25534),

Gene: Phrappuccino\_38 Start: 20588, Stop: 21727, Start Num: 145

Candidate Starts for Phrappuccino\_38:

(Start: 145 @20588 has 284 MA's), (175, 20642), (Start: 212 @20714 has 1 MA's), (345, 20966), (350, 20975), (421, 21065), (429, 21080), (468, 21158), (506, 21227), (511, 21239), (550, 21311), (587, 21362), (588, 21365), (599, 21401), (639, 21452), (667, 21500), (668, 21506), (676, 21515), (710, 21596), (735, 21689), (743, 21701), (749, 21713),

Gene: PhriskyACE\_36 Start: 30974, Stop: 29805, Start Num: 127

Candidate Starts for PhriskyACE\_36:

(Start: 127 @30974 has 61 MA's), (216, 30812), (307, 30650), (316, 30632), (350, 30566), (360, 30548), (362, 30545), (366, 30533), (388, 30488), (412, 30449), (422, 30440), (432, 30419), (434, 30416), (510, 30332), (511, 30329), (544, 30272), (614, 30137), (636, 30101), (651, 30071), (698, 30014), (700, 30002), (703, 29987), (726, 29897), (730, 29882), (743, 29861), (763, 29822), (768, 29813),

Gene: Piatt\_41 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for Piatt\_41:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: Pickett\_32 Start: 24860, Stop: 25942, Start Num: 143

Candidate Starts for Pickett\_32:

(Start: 143 @24860 has 52 MA's), (174, 24914), (242, 25034), (438, 25319), (470, 25379), (506, 25445), (518, 25469), (707, 25799), (713, 25826), (749, 25931),

Gene: Pigu\_32 Start: 23069, Stop: 24265, Start Num: 114

Candidate Starts for Pigu\_32:

(29, 22745), (30, 22754), (33, 22775), (57, 22910), (82, 22994), (Start: 114 @23069 has 2 MA's), (141, 23120), (Start: 162 @23153 has 7 MA's), (188, 23216), (232, 23300), (283, 23372), (294, 23396), (310, 23423), (322, 23444), (376, 23507), (419, 23555), (428, 23570), (444, 23606), (457, 23633), (539, 23786), (600, 23921), (671, 24041), (704, 24098), (721, 24170), (745, 24221),

Gene: Pimento\_39 Start: 30980, Stop: 29709, Start Num: 127

Candidate Starts for Pimento\_39:

(112, 31004), (Start: 127 @30980 has 61 MA's), (Start: 136 @30965 has 1 MA's), (Start: 185 @30863 has 12 MA's), (214, 30821), (222, 30809), (257, 30734), (299, 30659), (307, 30650), (316, 30632), (366, 30533), (368, 30530), (422, 30440), (503, 30344), (508, 30335), (559, 30239), (569, 30215), (636, 30071), (700, 29930), (711, 29885), (724, 29834), (726, 29825), (730, 29810), (738, 29798), (744, 29786), (770, 29747),

Gene: Pippy\_38 Start: 29161, Stop: 30279, Start Num: 145

Candidate Starts for Pippy\_38:

(Start: 145 @29161 has 284 MA's), (151, 29170), (237, 29332), (330, 29497), (345, 29533), (350, 29542), (422, 29623), (438, 29647), (471, 29716), (491, 29755), (502, 29773), (504, 29776), (510, 29788), (511, 29791), (518, 29803), (525, 29818), (537, 29842), (540, 29848), (555, 29869), (583, 29905), (584, 29908), (596, 29944), (599, 29950), (605, 29965), (611, 29980), (667, 30049), (676, 30064), (701, 30106), (711, 30151), (714, 30160), (723, 30199), (727, 30217), (736, 30238), (744, 30253), (749, 30262), (751, 30265),

Gene: Piro94\_34 Start: 26723, Stop: 25590, Start Num: 177

Candidate Starts for Piro94\_34:

(Start: 172 @26741 has 1 MA's), (Start: 177 @26723 has 119 MA's), (Start: 203 @26684 has 10 MA's), (Start: 209 @26669 has 14 MA's), (Start: 239 @26600 has 6 MA's), (270, 26555), (297, 26501), (364, 26378), (383, 26336), (400, 26300), (420, 26282), (482, 26177), (538, 26066), (552, 26048), (560, 26036), (596, 25961), (608, 25934), (614, 25919), (623, 25901), (641, 25874), (702, 25763), (714, 25718), (715, 25715), (721, 25685), (723, 25679), (726, 25667), (743, 25628),

Gene: Pistachio\_34 Start: 25844, Stop: 24717, Start Num: 177

Candidate Starts for Pistachio\_34:

(Start: 177 @25844 has 119 MA's), (228, 25757), (Start: 239 @25721 has 6 MA's), (270, 25676), (353, 25520), (360, 25508), (363, 25502), (383, 25457), (420, 25403), (421, 25400), (465, 25322), (552, 25169), (560, 25157), (584, 25118), (596, 25082), (599, 25076), (608, 25055), (614, 25040), (623, 25022), (641, 24995), (702, 24884), (715, 24836), (721, 24806), (723, 24800), (726, 24788), (743, 24749),

Gene: Pitbull\_33 Start: 24636, Stop: 23518, Start Num: 126

Candidate Starts for Pitbull\_33:

(Start: 109 @24666 has 2 MA's), (124, 24639), (Start: 126 @24636 has 2 MA's), (Start: 138 @24612 has 1 MA's), (235, 24441), (244, 24414), (316, 24306), (326, 24285), (330, 24276), (350, 24237), (360, 24219), (365, 24207), (366, 24204), (377, 24183), (409, 24123), (430, 24099), (500, 24033), (508, 24018), (530, 23976), (581, 23898), (598, 23850), (604, 23835), (612, 23814), (615, 23808), (636, 23787), (721, 23601), (743, 23547),

Gene: Pokerus\_40 Start: 32516, Stop: 33604, Start Num: 145

Candidate Starts for Pokerus\_40:

(Start: 145 @32516 has 284 MA's), (207, 32618), (221, 32642), (237, 32678), (323, 32816), (345, 32870), (429, 32954), (468, 33023), (470, 33026), (550, 33176), (604, 33281), (667, 33368), (699, 33416), (738, 33560),

Gene: Polka\_36 Start: 23869, Stop: 22682, Start Num: 127

Candidate Starts for Polka\_36:

(81, 23959), (Start: 127 @23869 has 61 MA's), (362, 23440), (610, 23005), (698, 22870),

Gene: Pollux\_38 Start: 32103, Stop: 33209, Start Num: 145

Candidate Starts for Pollux\_38:

(Start: 113 @32046 has 2 MA's), (Start: 145 @32103 has 284 MA's), (174, 32154), (236, 32259), (267, 32298), (429, 32538), (468, 32607), (470, 32610), (487, 32640), (511, 32691), (518, 32703), (645, 32931), (683, 32991), (707, 33066), (714, 33096), (749, 33198),

Gene: Polly\_36 Start: 30006, Stop: 31088, Start Num: 143

Candidate Starts for Polly\_36:

(Start: 88 @29895 has 6 MA's), (Start: 143 @30006 has 52 MA's), (174, 30060), (242, 30180), (421, 30435), (438, 30465), (470, 30525), (506, 30591), (518, 30615), (707, 30945), (713, 30972), (749, 31077),

Gene: Polo2Bam\_48 Start: 32594, Stop: 33712, Start Num: 145

Candidate Starts for Polo2Bam\_48:

(Start: 145 @32594 has 284 MA's), (223, 32732), (237, 32765), (271, 32813), (345, 32966), (350, 32975), (438, 33080), (471, 33149), (504, 33209), (510, 33221), (511, 33224), (525, 33251), (537, 33275), (555, 33302), (583, 33338), (584, 33341), (596, 33377), (599, 33383), (604, 33395), (605, 33398), (667, 33482), (676, 33497), (701, 33539), (711, 33584), (714, 33593), (723, 33632), (727, 33650), (736, 33671), (744, 33686), (749, 33695), (751, 33698),

Gene: Polymorphads\_33 Start: 26248, Stop: 25127, Start Num: 177

Candidate Starts for Polymorphads\_33:

(Start: 156 @26293 has 3 MA's), (170, 26266), (Start: 177 @26248 has 119 MA's), (Start: 217 @26179 has 8 MA's), (Start: 239 @26125 has 6 MA's), (363, 25906), (366, 25897), (383, 25861), (404, 25819), (420, 25807), (421, 25804), (465, 25726), (538, 25591), (552, 25573), (596, 25486), (599, 25480), (608, 25459), (614, 25444), (623, 25426), (702, 25288), (715, 25240), (721, 25210), (723, 25204), (726, 25192), (743, 25153),

Gene: Pomar16\_37 Start: 26461, Stop: 25391, Start Num: 209

Candidate Starts for Pomar16\_37:

(Start: 177 @26515 has 119 MA's), (Start: 209 @26461 has 14 MA's), (Start: 239 @26392 has 6 MA's), (353, 26191), (366, 26164), (383, 26128), (421, 26071), (434, 26044), (465, 25993), (487, 25960), (491, 25948), (502, 25930), (552, 25840), (560, 25828), (584, 25789), (596, 25753), (599, 25747), (608, 25726), (614, 25711), (623, 25693), (641, 25666), (702, 25555), (715, 25507), (716, 25504), (721, 25477), (723, 25471), (726, 25459), (743, 25420),

Gene: Porcelain\_86 Start: 50735, Stop: 52009, Start Num: 90

Candidate Starts for Porcelain\_86:

(70, 50678), (Start: 85 @50720 has 1 MA's), (Start: 90 @50735 has 10 MA's), (92, 50738), (Start: 114 @50783 has 2 MA's), (Start: 136 @50822 has 1 MA's), (330, 51203), (374, 51287), (378, 51299), (379, 51302), (451, 51431), (536, 51551), (580, 51614), (589, 51632), (597, 51656), (638, 51728), (720, 51905), (721, 51908), (723, 51914), (727, 51932), (732, 51947), (738, 51956), (740, 51959), (762, 52004),

Gene: Posh\_42 Start: 32975, Stop: 34057, Start Num: 143

Candidate Starts for Posh\_42:

(Start: 88 @32864 has 6 MA's), (Start: 143 @32975 has 52 MA's), (174, 33029), (242, 33149), (470, 33494), (518, 33584), (583, 33689), (707, 33914), (713, 33941), (749, 34046),

Gene: PotatoSplit\_37 Start: 26790, Stop: 25645, Start Num: 177

Candidate Starts for PotatoSplit\_37:

(Start: 177 @26790 has 119 MA's), (Start: 203 @26751 has 10 MA's), (228, 26703), (Start: 239 @26667 has 6 MA's), (270, 26622), (353, 26466), (366, 26439), (383, 26403), (421, 26346), (465, 26268), (482, 26244), (502, 26205), (538, 26133), (548, 26121), (552, 26115), (560, 26103), (596, 26028), (599, 26022), (608, 26001), (614, 25986), (623, 25968), (639, 25944), (702, 25830), (714, 25785), (715, 25782), (718, 25773), (721, 25752), (723, 25746), (726, 25734), (743, 25695),

Gene: Pound\_82 Start: 54468, Stop: 55697, Start Num: 104

Candidate Starts for Pound\_82:

(Start: 104 @54468 has 29 MA's), (Start: 114 @54486 has 2 MA's), (Start: 136 @54525 has 1 MA's), (251, 54762), (313, 54870), (374, 54990), (375, 54993), (378, 55002), (386, 55017), (407, 55056), (451, 55134), (520, 55239), (528, 55251), (536, 55254), (544, 55263), (579, 55314), (580, 55317), (589, 55335), (638, 55431), (672, 55488), (720, 55608), (721, 55611), (727, 55635), (738, 55659), (740, 55662),

Gene: Poushou\_32 Start: 29943, Stop: 28732, Start Num: 164

Candidate Starts for Poushou\_32:

(Start: 164 @29943 has 4 MA's), (256, 29769), (329, 29628), (405, 29469), (485, 29319), (531, 29229), (655, 28965), (676, 28929), (680, 28923), (738, 28758), (746, 28743), (748, 28740),

Gene: Power\_33 Start: 26423, Stop: 25227, Start Num: 180

Candidate Starts for Power\_33:

(166, 26453), (Start: 180 @26423 has 10 MA's), (Start: 239 @26303 has 6 MA's), (270, 26258), (353, 26102), (366, 26075), (383, 26039), (404, 25997), (421, 25982), (465, 25904), (487, 25871), (491, 25859), (502, 25841), (552, 25751), (560, 25739), (596, 25664), (599, 25658), (608, 25637), (614, 25622), (623, 25604), (641, 25577), (702, 25466), (715, 25418), (716, 25415), (721, 25388), (723, 25382), (726, 25370), (743, 25331), (772, 25277),

Gene: Powerball\_37 Start: 30563, Stop: 29394, Start Num: 127

Candidate Starts for Powerball\_37:

(Start: 127 @30563 has 61 MA's), (257, 30320), (324, 30203), (352, 30149), (354, 30143), (362, 30131), (366, 30119), (422, 30026), (426, 30020), (440, 29990), (508, 29921), (510, 29918), (525, 29888), (561, 29837), (596, 29765), (698, 29603), (700, 29591), (721, 29504), (724, 29495), (743, 29450), (763, 29411),

Gene: Prithvi\_42 Start: 32665, Stop: 33753, Start Num: 145

Candidate Starts for Prithvi\_42:

(74, 32518), (Start: 145 @32665 has 284 MA's), (207, 32767), (221, 32791), (237, 32827), (323, 32965), (345, 33019), (429, 33103), (468, 33172), (470, 33175), (550, 33325), (604, 33430), (667, 33517), (699, 33565), (738, 33709),

Gene: Pukovnik\_35 Start: 27554, Stop: 26421, Start Num: 173

Candidate Starts for Pukovnik\_35:

(Start: 173 @27554 has 3 MA's), (Start: 239 @27419 has 6 MA's), (270, 27374), (273, 27368), (292, 27329), (353, 27218), (366, 27191), (383, 27155), (404, 27113), (420, 27101), (421, 27098), (552, 26867), (560, 26855), (596, 26780), (599, 26774), (608, 26753), (614, 26738), (623, 26720), (650,

26669), (702, 26582), (715, 26534), (721, 26504), (723, 26498), (726, 26486), (732, 26465), (743, 26447),

Gene: Puppy\_34 Start: 25914, Stop: 24787, Start Num: 177

Candidate Starts for Puppy\_34:

(Start: 177 @25914 has 119 MA's), (228, 25827), (Start: 239 @25791 has 6 MA's), (270, 25746), (353, 25590), (360, 25578), (363, 25572), (383, 25527), (420, 25473), (421, 25470), (432, 25446), (538, 25257), (552, 25239), (560, 25227), (584, 25188), (596, 25152), (599, 25146), (608, 25125), (614, 25110), (623, 25092), (702, 24954), (715, 24906), (721, 24876), (723, 24870), (726, 24858), (743, 24819),

Gene: PurpleHaze\_35 Start: 26642, Stop: 25497, Start Num: 177

Candidate Starts for PurpleHaze\_35:

(Start: 144 @26705 has 1 MA's), (Start: 177 @26642 has 119 MA's), (Start: 209 @26588 has 14 MA's), (Start: 239 @26519 has 6 MA's), (363, 26300), (366, 26291), (383, 26255), (421, 26198), (465, 26120), (487, 26087), (538, 25985), (552, 25967), (560, 25955), (596, 25880), (599, 25874), (608, 25853), (614, 25838), (623, 25820), (639, 25796), (714, 25637), (715, 25634), (721, 25604), (723, 25598), (726, 25586), (743, 25547),

Gene: Pytheas\_39 Start: 31310, Stop: 32392, Start Num: 143

Candidate Starts for Pytheas\_39:

(Start: 88 @31199 has 6 MA's), (Start: 143 @31310 has 52 MA's), (174, 31364), (242, 31484), (438, 31769), (470, 31829), (506, 31895), (518, 31919), (707, 32249), (713, 32276), (749, 32381),

Gene: QueenB2\_34 Start: 26488, Stop: 25370, Start Num: 177

Candidate Starts for QueenB2\_34:

(Start: 144 @26551 has 1 MA's), (Start: 177 @26488 has 119 MA's), (Start: 209 @26434 has 14 MA's), (Start: 239 @26365 has 6 MA's), (270, 26320), (353, 26164), (354, 26161), (366, 26137), (383, 26101), (421, 26044), (465, 25966), (487, 25933), (491, 25921), (502, 25903), (552, 25813), (560, 25801), (599, 25720), (608, 25699), (614, 25684), (623, 25666), (641, 25639), (702, 25528), (715, 25480), (716, 25477), (721, 25450), (723, 25444), (726, 25432), (743, 25393),

Gene: QueenBeesly\_34 Start: 26370, Stop: 25255, Start Num: 180

Candidate Starts for QueenBeesly\_34:

(166, 26400), (Start: 180 @26370 has 10 MA's), (Start: 239 @26250 has 6 MA's), (270, 26205), (353, 26049), (366, 26022), (383, 25986), (404, 25944), (421, 25929), (487, 25818), (491, 25806), (502, 25788), (552, 25698), (560, 25686), (596, 25611), (599, 25605), (608, 25584), (614, 25569), (623, 25551), (641, 25524), (645, 25515), (702, 25413), (714, 25368), (715, 25365), (716, 25362), (721, 25335), (723, 25329), (726, 25317), (743, 25278),

Gene: QuincyRose\_40 Start: 32781, Stop: 33869, Start Num: 145

Candidate Starts for QuincyRose\_40:

(Start: 145 @32781 has 284 MA's), (207, 32883), (221, 32907), (237, 32943), (323, 33081), (345, 33135), (429, 33219), (468, 33288), (470, 33291), (550, 33441), (604, 33546), (667, 33633), (686, 33663), (699, 33681), (738, 33825),

Gene: Quokka\_33 Start: 25599, Stop: 24475, Start Num: 177

Candidate Starts for Quokka\_33:

(Start: 177 @25599 has 119 MA's), (223, 25521), (Start: 239 @25476 has 6 MA's), (270, 25431), (301, 25371), (366, 25248), (383, 25212), (420, 25158), (421, 25155), (491, 25032), (493, 25029), (502, 25014), (548, 24930), (552, 24924), (577, 24891), (583, 24876), (596, 24837), (608, 24810), (614, 24795), (623, 24777), (641, 24750), (702, 24639), (715, 24591), (716, 24588), (718, 24582), (721, 24561), (723, 24555), (726, 24543), (743, 24504),

Gene: REQ2\_38 Start: 31529, Stop: 30324, Start Num: 146

Candidate Starts for REQ2\_38:

(142, 31535), (Start: 146 @31529 has 7 MA's), (183, 31454), (221, 31382), (269, 31292), (314, 31220), (334, 31178), (358, 31139), (396, 31070), (402, 31061), (408, 31052), (428, 31025), (435, 31007), (444, 30986), (463, 30950), (530, 30833), (559, 30776), (590, 30716), (593, 30710), (596, 30695), (636, 30614), (707, 30485), (718, 30443), (749, 30353), (761, 30335),

Gene: REQ3\_01 Start: 1320, Stop: 82, Start Num: 128

Candidate Starts for REQ3\_01:

(89, 1395), (Start: 128 @1320 has 1 MA's), (Start: 185 @1203 has 12 MA's), (216, 1137), (242, 1083), (249, 1074), (252, 1068), (293, 1002), (335, 927), (366, 861), (379, 831), (388, 816), (392, 807), (422, 765), (431, 747), (452, 702), (454, 699), (465, 669), (479, 642), (484, 633), (507, 591), (508, 588), (525, 555), (565, 492), (579, 465), (596, 423), (599, 417), (605, 402), (608, 396), (619, 378), (632, 360), (636, 357), (645, 342), (658, 315), (670, 294), (703, 240), (719, 171), (721, 165), (744, 108), (751, 96),

Gene: Rabbitrun\_10 Start: 3920, Stop: 2817, Start Num: 185

Candidate Starts for Rabbitrun\_10:

(Start: 185 @3920 has 12 MA's), (189, 3908), (224, 3854), (231, 3845), (236, 3839), (244, 3815), (331, 3662), (372, 3590), (394, 3548), (408, 3527), (417, 3515), (434, 3482), (478, 3392), (490, 3371), (533, 3284), (555, 3257), (582, 3203), (634, 3083), (688, 2987), (701, 2972), (710, 2933), (719, 2891),

Gene: RadFad\_40 Start: 27831, Stop: 26659, Start Num: 145

Candidate Starts for RadFad\_40:

(Start: 145 @27831 has 284 MA's), (174, 27780), (237, 27666), (277, 27612), (287, 27594), (325, 27522), (340, 27480), (362, 27462), (422, 27384), (429, 27372), (468, 27297), (473, 27288), (506, 27228), (551, 27138), (605, 27033), (615, 27012), (631, 26988), (636, 26985), (675, 26916), (701, 26862), (707, 26838), (710, 26823), (754, 26703), (769, 26676),

Gene: Ramen\_41 Start: 32481, Stop: 33569, Start Num: 145

Candidate Starts for Ramen\_41:

(Start: 145 @32481 has 284 MA's), (207, 32583), (221, 32607), (237, 32643), (323, 32781), (345, 32835), (429, 32919), (468, 32988), (470, 32991), (550, 33141), (594, 33219), (604, 33246), (667, 33333), (699, 33381),

Gene: Raphaella\_40 Start: 27703, Stop: 26564, Start Num: 145

Candidate Starts for Raphaella\_40:

(Start: 145 @27703 has 284 MA's), (174, 27652), (277, 27484), (287, 27466), (362, 27334), (422, 27256), (429, 27244), (433, 27238), (468, 27169), (473, 27160), (506, 27100), (551, 27010), (605, 26905), (615, 26884), (636, 26857), (701, 26734), (707, 26710), (710, 26695), (728, 26620), (743, 26590),

Gene: Rapunzel97\_41 Start: 32477, Stop: 33565, Start Num: 145

Candidate Starts for Rapunzel97\_41:

(Start: 145 @32477 has 284 MA's), (174, 32528), (207, 32579), (221, 32603), (237, 32639), (323, 32777), (345, 32831), (429, 32915), (468, 32984), (470, 32987), (550, 33137), (594, 33215), (604, 33242), (667, 33329), (699, 33377),

Gene: Raqqa\_32 Start: 24809, Stop: 23658, Start Num: 162

Candidate Starts for Raqqa\_32:

(Start: 145 @24836 has 284 MA's), (Start: 162 @24809 has 7 MA's), (174, 24785), (287, 24599), (333, 24503), (362, 24467), (422, 24389), (468, 24302), (473, 24293), (506, 24233), (551, 24143), (605, 24038), (608, 24032), (673, 23924), (701, 23873), (707, 23849), (710, 23834), (728, 23759), (751,



23714),

Gene: Rattail\_36 Start: 23998, Stop: 22805, Start Num: 127

Candidate Starts for Rattail\_36:

(Start: 127 @23998 has 61 MA's), (362, 23569), (388, 23512), (557, 23260), (610, 23134), (615, 23122), (706, 22963), (726, 22882), (749, 22834),

Gene: RavenCo17\_41 Start: 31793, Stop: 32899, Start Num: 145

Candidate Starts for RavenCo17\_41:

(Start: 113 @31736 has 2 MA's), (Start: 145 @31793 has 284 MA's), (174, 31844), (236, 31949), (267, 31988), (429, 32228), (468, 32297), (470, 32300), (487, 32330), (511, 32381), (518, 32393), (645, 32621), (683, 32681), (684, 32684), (707, 32756), (714, 32786), (749, 32888),

Gene: Rearden\_78 Start: 49030, Stop: 50319, Start Num: 85

Candidate Starts for Rearden\_78:

(70, 48988), (Start: 85 @49030 has 1 MA's), (Start: 90 @49045 has 10 MA's), (92, 49048), (Start: 114 @49093 has 2 MA's), (Start: 136 @49132 has 1 MA's), (330, 49513), (374, 49597), (378, 49609), (379, 49612), (451, 49741), (536, 49861), (580, 49924), (589, 49942), (597, 49966), (638, 50038), (720, 50215), (721, 50218), (723, 50224), (727, 50242), (732, 50257), (738, 50266), (740, 50269), (762, 50314),

Gene: Reba\_36 Start: 26302, Stop: 25163, Start Num: 177

Candidate Starts for Reba\_36:

(Start: 144 @26365 has 1 MA's), (Start: 177 @26302 has 119 MA's), (Start: 209 @26248 has 14 MA's), (Start: 239 @26179 has 6 MA's), (363, 25960), (366, 25951), (383, 25915), (421, 25858), (465, 25780), (487, 25747), (538, 25645), (552, 25627), (560, 25615), (596, 25540), (599, 25534), (608, 25513), (614, 25498), (623, 25480), (639, 25456), (714, 25297), (715, 25294), (721, 25264), (723, 25258), (726, 25246), (743, 25207),

Gene: RedFox\_36 Start: 23911, Stop: 22718, Start Num: 127

Candidate Starts for RedFox\_36:

(Start: 127 @23911 has 61 MA's), (362, 23482), (388, 23425), (401, 23401), (557, 23173), (610, 23047), (615, 23035), (627, 23014), (706, 22876), (726, 22795), (749, 22747),

Gene: Redno2\_78 Start: 49946, Stop: 51175, Start Num: 104

Candidate Starts for Redno2\_78:

(Start: 104 @49946 has 29 MA's), (Start: 114 @49964 has 2 MA's), (Start: 136 @50003 has 1 MA's), (251, 50240), (313, 50348), (374, 50468), (375, 50471), (378, 50480), (386, 50495), (407, 50534), (451, 50612), (520, 50717), (528, 50729), (536, 50732), (544, 50741), (579, 50792), (580, 50795), (589, 50813), (638, 50909), (672, 50966), (720, 51086), (721, 51089), (727, 51113), (738, 51137), (740, 51140),

Gene: Renaud18\_46 Start: 32683, Stop: 33786, Start Num: 145

Candidate Starts for Renaud18\_46:

(Start: 145 @32683 has 284 MA's), (174, 32731), (223, 32812), (233, 32839), (345, 33052), (367, 33076), (422, 33124), (468, 33205), (506, 33274), (510, 33283), (525, 33313), (537, 33337), (550, 33358), (594, 33436), (599, 33451), (645, 33511), (667, 33550), (676, 33565), (690, 33589), (701, 33616), (707, 33640), (711, 33661), (714, 33670), (725, 33715), (727, 33727),

Gene: Renna12\_35 Start: 23953, Stop: 22760, Start Num: 127

Candidate Starts for Renna12\_35:

(Start: 127 @23953 has 61 MA's), (261, 23710), (362, 23524), (388, 23467), (401, 23443), (557, 23215), (610, 23089), (615, 23077), (749, 22789),

Gene: Retro23\_35 Start: 26753, Stop: 25632, Start Num: 177

Candidate Starts for Retro23\_35:

(Start: 144 @26816 has 1 MA's), (Start: 177 @26753 has 119 MA's), (Start: 209 @26699 has 14 MA's), (Start: 239 @26630 has 6 MA's), (270, 26585), (353, 26429), (383, 26366), (428, 26297), (446, 26255), (465, 26231), (502, 26168), (552, 26078), (560, 26066), (596, 25991), (599, 25985), (608, 25964), (614, 25949), (623, 25931), (641, 25904), (702, 25793), (714, 25748), (715, 25745), (716, 25742), (721, 25715), (723, 25709), (726, 25697), (743, 25658),

Gene: Rialto\_46 Start: 34385, Stop: 35503, Start Num: 145

Candidate Starts for Rialto\_46:

(Start: 145 @34385 has 284 MA's), (237, 34556), (330, 34721), (345, 34757), (350, 34766), (438, 34871), (471, 34940), (491, 34979), (504, 35000), (510, 35012), (511, 35015), (518, 35027), (537, 35066), (540, 35072), (555, 35093), (583, 35129), (584, 35132), (596, 35168), (599, 35174), (605, 35189), (611, 35204), (667, 35273), (676, 35288), (711, 35375), (714, 35384), (723, 35423), (727, 35441), (736, 35462), (744, 35477), (749, 35486), (751, 35489),

Gene: Richie\_40 Start: 27784, Stop: 26645, Start Num: 145

Candidate Starts for Richie\_40:

(Start: 145 @27784 has 284 MA's), (174, 27733), (277, 27565), (287, 27547), (345, 27424), (362, 27415), (422, 27337), (429, 27325), (433, 27319), (468, 27250), (473, 27241), (506, 27181), (551, 27091), (605, 26986), (615, 26965), (636, 26938), (701, 26815), (707, 26791), (710, 26776), (728, 26701), (743, 26671),

Gene: Richo\_43 Start: 33014, Stop: 34105, Start Num: 145

Candidate Starts for Richo\_43:

(12, 32333), (21, 32477), (37, 32681), (52, 32780), (53, 32789), (60, 32816), (73, 32864), (Start: 145 @33014 has 284 MA's), (174, 33065), (221, 33140), (237, 33176), (309, 33290), (323, 33314), (345, 33368), (429, 33452), (445, 33485), (468, 33521), (470, 33524), (491, 33566), (537, 33653), (550, 33674), (604, 33782), (649, 33842), (693, 33905), (699, 33917), (725, 34025), (738, 34061),

Gene: Rita\_44 Start: 31945, Stop: 33063, Start Num: 145

Candidate Starts for Rita\_44:

(Start: 145 @31945 has 284 MA's), (223, 32083), (237, 32116), (271, 32164), (345, 32317), (350, 32326), (422, 32407), (471, 32500), (504, 32560), (510, 32572), (511, 32575), (525, 32602), (537, 32626), (555, 32653), (583, 32689), (584, 32692), (596, 32728), (611, 32764), (667, 32833), (676, 32848), (692, 32866), (711, 32935), (714, 32944), (718, 32956), (723, 32983), (727, 33001), (736, 33022), (744, 33037), (749, 33046), (751, 33049),

Gene: Rockstar\_33 Start: 26058, Stop: 24934, Start Num: 177

Candidate Starts for Rockstar\_33:

(Start: 158 @26100 has 1 MA's), (Start: 177 @26058 has 119 MA's), (Start: 203 @26019 has 10 MA's), (228, 25971), (Start: 239 @25935 has 6 MA's), (270, 25890), (363, 25716), (383, 25671), (404, 25629), (428, 25602), (465, 25536), (491, 25491), (552, 25383), (560, 25371), (577, 25350), (596, 25296), (599, 25290), (608, 25269), (614, 25254), (623, 25236), (641, 25209), (702, 25098), (715, 25050), (716, 25047), (721, 25020), (723, 25014), (726, 25002), (732, 24981), (743, 24963),

Gene: RootBeer\_29 Start: 22941, Stop: 24083, Start Num: 145

Candidate Starts for RootBeer\_29:

(Start: 145 @22941 has 284 MA's), (174, 22992), (186, 23019), (342, 23295), (345, 23301), (354, 23319), (438, 23427), (468, 23487), (518, 23580), (584, 23700), (602, 23748), (614, 23778), (673, 23874), (714, 23982), (734, 24057),

Gene: Rosmarinus\_41 Start: 32583, Stop: 33671, Start Num: 145

Candidate Starts for Rosmarinus\_41:

(16, 31980), (24, 32157), (45, 32322), (54, 32361), (Start: 145 @32583 has 284 MA's), (174, 32634), (207, 32685), (221, 32709), (237, 32745), (323, 32883), (429, 33021), (468, 33090), (470, 33093), (550, 33243), (604, 33348), (699, 33483),

Gene: Ruchi\_33 Start: 24704, Stop: 23520, Start Num: 127

Candidate Starts for Ruchi\_33:

(Start: 127 @24704 has 61 MA's), (245, 24485), (326, 24350), (362, 24275), (368, 24260), (500, 24059), (605, 23852), (610, 23840), (618, 23822), (627, 23807), (698, 23705), (703, 23678), (706, 23669),

Gene: Ruthy\_39 Start: 33142, Stop: 31883, Start Num: 127

Candidate Starts for Ruthy\_39:

(Start: 127 @33142 has 61 MA's), (299, 32821), (362, 32707), (366, 32695), (422, 32602), (434, 32578), (562, 32410), (563, 32407), (604, 32314), (605, 32311), (636, 32254), (694, 32137), (698, 32125), (711, 32068), (730, 31993), (738, 31981), (763, 31933),

Gene: SG4\_40 Start: 31653, Stop: 32771, Start Num: 145

Candidate Starts for SG4\_40:

(Start: 145 @31653 has 284 MA's), (151, 31662), (237, 31824), (330, 31989), (345, 32025), (350, 32034), (422, 32115), (438, 32139), (471, 32208), (491, 32247), (502, 32265), (504, 32268), (510, 32280), (511, 32283), (518, 32295), (537, 32334), (540, 32340), (555, 32361), (583, 32397), (584, 32400), (596, 32436), (599, 32442), (605, 32457), (667, 32541), (676, 32556), (692, 32574), (711, 32643), (714, 32652), (723, 32691), (727, 32709), (736, 32730), (744, 32745), (749, 32754), (751, 32757),

Gene: SPB78\_39 Start: 30658, Stop: 29387, Start Num: 137

Candidate Starts for SPB78\_39:

(Start: 137 @30658 has 1 MA's), (Start: 172 @30592 has 1 MA's), (281, 30403), (342, 30268), (355, 30244), (369, 30220), (383, 30190), (387, 30181), (389, 30175), (393, 30172), (476, 30025), (487, 30007), (532, 29917), (536, 29908), (591, 29800), (600, 29770), (621, 29722), (652, 29665), (671, 29629), (699, 29587), (702, 29569), (718, 29512), (722, 29488), (744, 29431), (761, 29404),

Gene: Saal\_43 Start: 31957, Stop: 33075, Start Num: 145

Candidate Starts for Saal\_43:

(Start: 145 @31957 has 284 MA's), (223, 32095), (237, 32128), (271, 32176), (330, 32293), (345, 32329), (350, 32338), (438, 32443), (471, 32512), (504, 32572), (510, 32584), (511, 32587), (518, 32599), (525, 32614), (537, 32638), (540, 32644), (555, 32665), (583, 32701), (584, 32704), (596, 32740), (599, 32746), (604, 32758), (605, 32761), (667, 32845), (676, 32860), (701, 32902), (711, 32947), (714, 32956), (723, 32995), (727, 33013), (736, 33034), (744, 33049), (749, 33058), (751, 33061),

Gene: Sabia\_36 Start: 26783, Stop: 25638, Start Num: 177

Candidate Starts for Sabia\_36:

(Start: 177 @26783 has 119 MA's), (Start: 203 @26744 has 10 MA's), (228, 26696), (Start: 239 @26660 has 6 MA's), (270, 26615), (353, 26459), (366, 26432), (383, 26396), (421, 26339), (465, 26261), (482, 26237), (502, 26198), (538, 26126), (548, 26114), (552, 26108), (560, 26096), (596, 26021), (599, 26015), (608, 25994), (614, 25979), (623, 25961), (639, 25937), (702, 25823), (714, 25778), (715, 25775), (718, 25766), (721, 25745), (723, 25739), (726, 25727), (743, 25688),

Gene: Sabinator\_36 Start: 26788, Stop: 25643, Start Num: 177

Candidate Starts for Sabinator\_36:

(Start: 177 @26788 has 119 MA's), (Start: 203 @26749 has 10 MA's), (228, 26701), (Start: 239 @26665 has 6 MA's), (270, 26620), (353, 26464), (366, 26437), (383, 26401), (421, 26344), (465, 26266), (482, 26242), (502, 26203), (538, 26131), (548, 26119), (552, 26113), (560, 26101), (596, 26026), (599, 26020), (608, 25999), (614, 25984), (623, 25966), (639, 25942), (702, 25828), (714, 25783), (715, 25780), (718, 25771), (721, 25750), (723, 25744), (726, 25732), (743, 25693),

Gene: Sahara\_36 Start: 27505, Stop: 28704, Start Num: 86

Candidate Starts for Sahara\_36:

(Start: 86 @27505 has 2 MA's), (Start: 88 @27511 has 6 MA's), (Start: 143 @27622 has 52 MA's), (174, 27676), (242, 27796), (421, 28051), (438, 28081), (470, 28141), (506, 28207), (518, 28231), (583, 28336), (707, 28561), (713, 28588), (749, 28693),

Gene: Sakai\_40 Start: 27712, Stop: 26573, Start Num: 145

Candidate Starts for Sakai\_40:

(Start: 145 @27712 has 284 MA's), (174, 27661), (277, 27493), (287, 27475), (362, 27343), (422, 27265), (429, 27253), (433, 27247), (468, 27178), (473, 27169), (506, 27109), (551, 27019), (605, 26914), (615, 26893), (636, 26866), (701, 26743), (707, 26719), (710, 26704), (728, 26629), (743, 26599),

Gene: SamW\_27 Start: 25228, Stop: 23900, Start Num: 130

Candidate Starts for SamW\_27:

(Start: 130 @25228 has 3 MA's), (147, 25192), (154, 25183), (Start: 179 @25126 has 3 MA's), (302, 24916), (303, 24913), (349, 24814), (361, 24796), (395, 24730), (399, 24724), (408, 24712), (491, 24547), (515, 24502), (526, 24481), (532, 24469), (542, 24445), (555, 24421), (559, 24415), (576, 24379), (615, 24283), (647, 24226), (668, 24181), (684, 24157), (698, 24142), (713, 24076), (714, 24073), (719, 24046), (725, 24028), (752, 23968), (778, 23914),

Gene: Samman98\_40 Start: 29099, Stop: 30226, Start Num: 145

Candidate Starts for Samman98\_40:

(121, 29060), (Start: 145 @29099 has 284 MA's), (174, 29153), (236, 29276), (258, 29309), (311, 29399), (327, 29432), (468, 29627), (470, 29630), (491, 29672), (511, 29708), (681, 30005), (707, 30083), (713, 30110), (718, 30125), (723, 30152), (749, 30215),

Gene: SamuelLPlaqson\_42 Start: 33376, Stop: 34464, Start Num: 145

Candidate Starts for SamuelLPlaqson\_42:

(54, 33154), (Start: 145 @33376 has 284 MA's), (174, 33427), (207, 33478), (221, 33502), (237, 33538), (309, 33652), (345, 33730), (429, 33814), (468, 33883), (470, 33886), (550, 34036), (604, 34141), (699, 34276), (738, 34420),

Gene: Sarge\_28 Start: 22501, Stop: 21347, Start Num: 145

Candidate Starts for Sarge\_28:

(Start: 106 @22564 has 1 MA's), (Start: 145 @22501 has 284 MA's), (174, 22450), (175, 22447), (186, 22423), (309, 22198), (330, 22153), (337, 22132), (338, 22129), (352, 22105), (429, 22006), (438, 21991), (482, 21910), (530, 21817), (571, 21748), (596, 21694), (607, 21670), (614, 21652), (631, 21625), (667, 21571), (673, 21556), (681, 21547), (710, 21463), (711, 21457), (714, 21448), (725, 21403), (734, 21373),

Gene: Sarma624\_38 Start: 27903, Stop: 29021, Start Num: 145

Candidate Starts for Sarma624\_38:

(Start: 145 @27903 has 284 MA's), (237, 28074), (330, 28239), (345, 28275), (350, 28284), (422, 28365), (438, 28389), (471, 28458), (491, 28497), (502, 28515), (504, 28518), (510, 28530), (511, 28533), (518, 28545), (525, 28560), (537, 28584), (540, 28590), (555, 28611), (583, 28647), (584, 28650), (596, 28686), (599, 28692), (604, 28704), (605, 28707), (611, 28722), (667, 28791), (676,

28806), (701, 28848), (711, 28893), (714, 28902), (723, 28941), (727, 28959), (736, 28980), (744, 28995), (749, 29004), (751, 29007),

Gene: Sashimi\_39 Start: 28789, Stop: 27602, Start Num: 145

Candidate Starts for Sashimi\_39:

(Start: 145 @28789 has 284 MA's), (174, 28738), (210, 28672), (287, 28552), (327, 28471), (333, 28456), (362, 28420), (422, 28342), (468, 28255), (473, 28246), (490, 28216), (506, 28186), (551, 28096), (605, 27991), (701, 27820), (707, 27796), (710, 27781), (751, 27661),

Gene: SaturnRing\_33 Start: 26297, Stop: 25170, Start Num: 177

Candidate Starts for SaturnRing\_33:

(Start: 177 @26297 has 119 MA's), (228, 26210), (Start: 239 @26174 has 6 MA's), (270, 26129), (353, 25973), (360, 25961), (363, 25955), (383, 25910), (420, 25856), (421, 25853), (465, 25775), (552, 25622), (560, 25610), (584, 25571), (596, 25535), (599, 25529), (608, 25508), (614, 25493), (623, 25475), (641, 25448), (702, 25337), (715, 25289), (721, 25259), (723, 25253), (726, 25241), (743, 25202),

Gene: Savage\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for Savage\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: Sbash\_40 Start: 34462, Stop: 33260, Start Num: 146

Candidate Starts for Sbash\_40:

(Start: 146 @34462 has 7 MA's), (183, 34387), (199, 34357), (202, 34354), (321, 34141), (322, 34138), (357, 34075), (413, 33979), (435, 33940), (444, 33919), (481, 33865), (549, 33730), (636, 33553), (639, 33550), (641, 33547), (650, 33526), (707, 33424), (710, 33409), (726, 33343), (732, 33322),

Gene: Scarlett\_45 Start: 33589, Stop: 34674, Start Num: 145

Candidate Starts for Scarlett\_45:

(17, 32986), (19, 33004), (22, 33082), (35, 33253), (46, 33328), (54, 33367), (69, 33421), (Start: 145 @33589 has 284 MA's), (226, 33724), (237, 33751), (323, 33889), (338, 33931), (345, 33943), (429, 34027), (468, 34096), (470, 34099), (491, 34141), (550, 34249), (604, 34354), (667, 34441), (699, 34489), (725, 34597), (744, 34645),

Gene: Schatzie\_77 Start: 51939, Stop: 53168, Start Num: 104

Candidate Starts for Schatzie\_77:

(Start: 104 @51939 has 29 MA's), (Start: 114 @51957 has 2 MA's), (Start: 136 @51996 has 1 MA's), (251, 52233), (313, 52341), (374, 52461), (375, 52464), (378, 52473), (386, 52488), (407, 52527), (451, 52605), (520, 52710), (528, 52722), (536, 52725), (544, 52734), (579, 52785), (580, 52788), (589, 52806), (638, 52902), (672, 52959), (720, 53079), (721, 53082), (727, 53106), (738, 53130), (740, 53133),

Gene: Schmidt\_32 Start: 24660, Stop: 23548, Start Num: 159

Candidate Starts for Schmidt\_32:

(Start: 159 @24660 has 22 MA's), (178, 24615), (318, 24354), (328, 24330), (384, 24249), (386, 24243), (441, 24150), (471, 24108), (473, 24105), (492, 24069), (533, 23997), (570, 23946), (573, 23940), (586, 23919), (697, 23772), (707, 23733), (714, 23703), (721, 23670), (746, 23610), (767, 23571), (773, 23556),

Gene: Scout\_33 Start: 25604, Stop: 24477, Start Num: 177

Candidate Starts for Scout\_33:

(Start: 177 @25604 has 119 MA's), (228, 25517), (Start: 239 @25481 has 6 MA's), (270, 25436), (301, 25376), (353, 25280), (360, 25268), (363, 25262), (383, 25217), (420, 25163), (421, 25160), (432, 25136), (538, 24947), (552, 24929), (560, 24917), (584, 24878), (596, 24842), (599, 24836), (608, 24815), (614, 24800), (623, 24782), (702, 24644), (715, 24596), (721, 24566), (723, 24560), (726, 24548), (743, 24509),

Gene: Seahorse\_41 Start: 29287, Stop: 28109, Start Num: 145

Candidate Starts for Seahorse\_41:

(Start: 145 @29287 has 284 MA's), (210, 29170), (287, 29050), (362, 28918), (422, 28840), (468, 28753), (473, 28744), (506, 28684), (551, 28594), (605, 28489), (608, 28483), (636, 28441), (701, 28324), (706, 28303), (707, 28300), (710, 28285), (751, 28165),

Gene: Sejanus\_42 Start: 40492, Stop: 39290, Start Num: 146

Candidate Starts for Sejanus\_42:

(Start: 146 @40492 has 7 MA's), (183, 40417), (197, 40393), (199, 40387), (253, 40282), (321, 40171), (322, 40168), (357, 40105), (435, 39970), (444, 39949), (481, 39895), (546, 39766), (549, 39760), (639, 39580), (641, 39577), (650, 39556), (670, 39520), (707, 39454), (710, 39439), (726, 39373), (733, 39349), (749, 39319),

Gene: Sekhmet\_40 Start: 29999, Stop: 31126, Start Num: 145

Candidate Starts for Sekhmet\_40:

(121, 29960), (Start: 145 @29999 has 284 MA's), (174, 30053), (236, 30176), (258, 30209), (311, 30299), (327, 30332), (468, 30527), (470, 30530), (491, 30572), (511, 30608), (681, 30905), (707, 30983), (713, 31010), (718, 31025), (723, 31052), (749, 31115),

Gene: SemperFi\_35 Start: 26638, Stop: 25517, Start Num: 180

Candidate Starts for SemperFi\_35:

(166, 26668), (Start: 180 @26638 has 10 MA's), (Start: 239 @26518 has 6 MA's), (270, 26473), (353, 26317), (366, 26290), (383, 26254), (421, 26197), (428, 26185), (465, 26119), (491, 26074), (502, 26056), (552, 25966), (560, 25954), (592, 25897), (596, 25879), (599, 25873), (608, 25852), (614, 25837), (623, 25819), (641, 25792), (702, 25681), (715, 25633), (716, 25630), (721, 25603), (723, 25597), (726, 25585), (743, 25546),

Gene: Sephiroth\_7 Start: 2692, Stop: 1604, Start Num: 201

Candidate Starts for Sephiroth\_7:

(149, 2797), (187, 2713), (Start: 201 @2692 has 4 MA's), (286, 2521), (330, 2431), (338, 2407), (351, 2386), (488, 2155), (511, 2122), (534, 2080), (542, 2065), (553, 2044), (559, 2035), (562, 2029), (599, 1945), (609, 1930), (655, 1843), (673, 1810), (711, 1723), (713, 1717), (720, 1684), (723, 1675), (725, 1669),

Gene: Serenity\_34 Start: 25724, Stop: 24600, Start Num: 177

Candidate Starts for Serenity\_34:

(Start: 177 @25724 has 119 MA's), (223, 25646), (Start: 239 @25601 has 6 MA's), (270, 25556), (291, 25514), (301, 25496), (366, 25373), (383, 25337), (420, 25283), (421, 25280), (465, 25202), (491, 25157), (493, 25154), (502, 25139), (548, 25055), (552, 25049), (577, 25016), (596, 24962), (608, 24935), (614, 24920), (623, 24902), (641, 24875), (702, 24764), (715, 24716), (716, 24713), (718, 24707), (721, 24686), (723, 24680), (726, 24668), (743, 24629),

Gene: Settecandela\_38 Start: 20588, Stop: 21727, Start Num: 145

Candidate Starts for Settecandela\_38:

(Start: 145 @20588 has 284 MA's), (175, 20642), (Start: 212 @20714 has 1 MA's), (345, 20966), (350, 20975), (421, 21065), (429, 21080), (468, 21158), (506, 21227), (511, 21239), (550, 21311), (587, 21362), (588, 21365), (599, 21401), (639, 21452), (667, 21500), (668, 21506), (676, 21515), (710,

21596), (735, 21689), (743, 21701), (749, 21713),

Gene: SgtBeansprout\_36 Start: 31976, Stop: 33070, Start Num: 145

Candidate Starts for SgtBeansprout\_36:

(32, 31625), (36, 31640), (51, 31733), (54, 31754), (83, 31847), (Start: 145 @31976 has 284 MA's), (174, 32027), (221, 32102), (237, 32138), (302, 32234), (309, 32252), (323, 32276), (342, 32324), (345, 32330), (453, 32462), (468, 32495), (491, 32540), (550, 32648), (604, 32753), (649, 32813), (699, 32888), (725, 32996), (738, 33032),

Gene: Shaboozey\_79 Start: 48487, Stop: 49761, Start Num: 90

Candidate Starts for Shaboozey\_79:

(70, 48430), (Start: 85 @48472 has 1 MA's), (Start: 90 @48487 has 10 MA's), (92, 48490), (Start: 114 @48535 has 2 MA's), (Start: 136 @48574 has 1 MA's), (330, 48955), (374, 49039), (378, 49051), (379, 49054), (451, 49183), (536, 49303), (580, 49366), (589, 49384), (597, 49408), (638, 49480), (720, 49657), (721, 49660), (723, 49666), (727, 49684), (732, 49699), (738, 49708), (740, 49711), (762, 49756),

Gene: Shaobing\_43 Start: 33037, Stop: 34128, Start Num: 145

Candidate Starts for Shaobing\_43:

(37, 32704), (52, 32803), (53, 32812), (60, 32839), (73, 32887), (Start: 145 @33037 has 284 MA's), (Start: 171 @33082 has 7 MA's), (174, 33088), (221, 33163), (237, 33199), (309, 33313), (323, 33337), (345, 33391), (429, 33475), (445, 33508), (468, 33544), (470, 33547), (491, 33589), (537, 33676), (550, 33697), (604, 33805), (649, 33865), (693, 33928), (699, 33940), (725, 34048), (738, 34084),

Gene: Shauna1\_38 Start: 31056, Stop: 32174, Start Num: 145

Candidate Starts for Shauna1\_38:

(Start: 145 @31056 has 284 MA's), (237, 31227), (330, 31392), (345, 31428), (350, 31437), (422, 31518), (471, 31611), (504, 31671), (510, 31683), (511, 31686), (525, 31713), (537, 31737), (555, 31764), (583, 31800), (584, 31803), (596, 31839), (611, 31875), (667, 31944), (676, 31959), (692, 31977), (711, 32046), (714, 32055), (718, 32067), (723, 32094), (727, 32112), (736, 32133), (744, 32148), (749, 32157), (751, 32160),

Gene: ShawBrad\_51 Start: 32319, Stop: 33413, Start Num: 145

Candidate Starts for ShawBrad\_51:

(96, 32232), (Start: 114 @32268 has 2 MA's), (Start: 145 @32319 has 284 MA's), (174, 32370), (223, 32448), (236, 32475), (271, 32520), (293, 32562), (345, 32670), (350, 32679), (429, 32754), (440, 32772), (491, 32871), (510, 32904), (511, 32907), (518, 32919), (584, 33021), (629, 33114), (678, 33186), (707, 33246), (721, 33309), (725, 33321), (751, 33381),

Gene: SheldonCooper\_34 Start: 26519, Stop: 25467, Start Num: 217

Candidate Starts for SheldonCooper\_34:

(Start: 156 @26633 has 3 MA's), (170, 26606), (Start: 177 @26588 has 119 MA's), (Start: 217 @26519 has 8 MA's), (Start: 239 @26465 has 6 MA's), (363, 26246), (366, 26237), (383, 26201), (404, 26159), (420, 26147), (421, 26144), (538, 25931), (552, 25913), (596, 25826), (599, 25820), (608, 25799), (614, 25784), (623, 25766), (702, 25628), (715, 25580), (721, 25550), (723, 25544), (726, 25532), (743, 25493),

Gene: ShiaSurprise\_42 Start: 32792, Stop: 33880, Start Num: 145

Candidate Starts for ShiaSurprise\_42:

(Start: 145 @32792 has 284 MA's), (207, 32894), (221, 32918), (237, 32954), (323, 33092), (429, 33230), (468, 33299), (470, 33302), (550, 33452), (604, 33557), (699, 33692),

Gene: Shlim410\_38 Start: 32549, Stop: 33676, Start Num: 145

Candidate Starts for Shlim410\_38:

(121, 32510), (Start: 145 @32549 has 284 MA's), (174, 32603), (236, 32726), (258, 32759), (311, 32849), (327, 32882), (468, 33077), (470, 33080), (491, 33122), (511, 33158), (681, 33455), (707, 33533), (713, 33560), (718, 33575), (723, 33602), (749, 33665),

Gene: Shoya\_35 Start: 24881, Stop: 23751, Start Num: 145

Candidate Starts for Shoya\_35:

(Start: 145 @24881 has 284 MA's), (174, 24830), (175, 24827), (309, 24602), (330, 24557), (337, 24536), (338, 24533), (350, 24512), (352, 24509), (438, 24395), (483, 24311), (596, 24098), (607, 24074), (614, 24056), (631, 24029), (649, 24002), (667, 23975), (673, 23960), (681, 23951), (711, 23861), (725, 23807), (734, 23777),

Gene: ShroomBoi\_42 Start: 32032, Stop: 33150, Start Num: 145

Candidate Starts for ShroomBoi\_42:

(Start: 145 @32032 has 284 MA's), (151, 32041), (223, 32170), (237, 32203), (271, 32251), (330, 32368), (345, 32404), (350, 32413), (422, 32494), (438, 32518), (471, 32587), (491, 32626), (502, 32644), (504, 32647), (510, 32659), (511, 32662), (518, 32674), (525, 32689), (537, 32713), (540, 32719), (555, 32740), (583, 32776), (584, 32779), (596, 32815), (599, 32821), (605, 32836), (611, 32851), (667, 32920), (676, 32935), (701, 32977), (711, 33022), (714, 33031), (723, 33070), (727, 33088), (736, 33109), (744, 33124), (749, 33133), (751, 33136),

Gene: Shukran\_42 Start: 28423, Stop: 27284, Start Num: 145

Candidate Starts for Shukran\_42:

(64, 28612), (78, 28567), (102, 28507), (Start: 145 @28423 has 284 MA's), (174, 28375), (243, 28249), (277, 28210), (345, 28066), (352, 28054), (354, 28048), (429, 27955), (438, 27940), (468, 27880), (482, 27856), (485, 27850), (518, 27787), (602, 27619), (614, 27589), (673, 27493), (714, 27385), (718, 27373), (734, 27310),

Gene: Sidious\_37 Start: 31771, Stop: 30602, Start Num: 127

Candidate Starts for Sidious\_37:

(Start: 127 @31771 has 61 MA's), (306, 31447), (324, 31411), (352, 31357), (354, 31351), (362, 31339), (366, 31327), (422, 31234), (426, 31228), (440, 31198), (508, 31129), (510, 31126), (525, 31096), (561, 31045), (596, 30973), (636, 30898), (698, 30811), (700, 30799), (721, 30712), (724, 30703), (743, 30658), (763, 30619),

Gene: SilverChicken\_53 Start: 32857, Stop: 33975, Start Num: 145

Candidate Starts for SilverChicken\_53:

(Start: 145 @32857 has 284 MA's), (151, 32866), (237, 33028), (271, 33076), (330, 33193), (345, 33229), (350, 33238), (438, 33343), (471, 33412), (491, 33451), (502, 33469), (504, 33472), (510, 33484), (511, 33487), (518, 33499), (537, 33538), (540, 33544), (555, 33565), (583, 33601), (584, 33604), (596, 33640), (599, 33646), (604, 33658), (605, 33661), (611, 33676), (667, 33745), (676, 33760), (701, 33802), (711, 33847), (714, 33856), (723, 33895), (727, 33913), (736, 33934), (744, 33949), (749, 33958), (751, 33961),

Gene: SimranZ1\_43 Start: 31600, Stop: 32718, Start Num: 145

Candidate Starts for SimranZ1\_43:

(Start: 145 @31600 has 284 MA's), (223, 31738), (237, 31771), (271, 31819), (345, 31972), (350, 31981), (422, 32062), (471, 32155), (504, 32215), (510, 32227), (511, 32230), (525, 32257), (537, 32281), (555, 32308), (583, 32344), (584, 32347), (596, 32383), (611, 32419), (667, 32488), (676, 32503), (692, 32521), (711, 32590), (714, 32599), (723, 32638), (727, 32656), (736, 32677), (744, 32692), (749, 32701), (751, 32704),

Gene: Skitty\_35 Start: 24174, Stop: 23056, Start Num: 126



Candidate Starts for Skitty\_35:

(Start: 126 @24174 has 2 MA's), (235, 23979), (244, 23952), (278, 23913), (326, 23823), (330, 23814), (360, 23757), (365, 23745), (366, 23742), (371, 23733), (377, 23721), (409, 23661), (416, 23652), (430, 23637), (500, 23571), (508, 23556), (518, 23538), (530, 23514), (532, 23511), (581, 23436), (598, 23388), (604, 23373), (612, 23352), (636, 23325), (721, 23139), (743, 23085),

Gene: Sknot\_35 Start: 26449, Stop: 25382, Start Num: 209

Candidate Starts for Sknot\_35:

(Start: 144 @26566 has 1 MA's), (Start: 177 @26503 has 119 MA's), (Start: 209 @26449 has 14 MA's), (Start: 239 @26380 has 6 MA's), (270, 26335), (332, 26209), (366, 26152), (383, 26116), (420, 26062), (421, 26059), (491, 25936), (502, 25918), (552, 25828), (560, 25816), (596, 25741), (599, 25735), (608, 25714), (614, 25699), (623, 25681), (641, 25654), (715, 25495), (721, 25465), (723, 25459), (726, 25447), (743, 25408),

Gene: Sleepyhead\_38 Start: 29423, Stop: 28182, Start Num: 179

Candidate Starts for Sleepyhead\_38:

(161, 29465), (Start: 179 @29423 has 3 MA's), (263, 29285), (302, 29213), (388, 29036), (414, 28997), (425, 28979), (511, 28808), (527, 28781), (546, 28742), (562, 28715), (588, 28667), (599, 28634), (612, 28610), (635, 28568), (652, 28538), (663, 28520), (673, 28499), (698, 28469), (711, 28409), (714, 28400), (744, 28307), (780, 28229), (781, 28205),

Gene: Slimphazie\_41 Start: 32477, Stop: 33565, Start Num: 145

Candidate Starts for Slimphazie\_41:

(Start: 145 @32477 has 284 MA's), (174, 32528), (207, 32579), (221, 32603), (237, 32639), (323, 32777), (345, 32831), (429, 32915), (468, 32984), (470, 32987), (550, 33137), (594, 33215), (604, 33242), (667, 33329), (699, 33377),

Gene: Smeagan\_36 Start: 26880, Stop: 25771, Start Num: 177

Candidate Starts for Smeagan\_36:

(Start: 162 @26913 has 7 MA's), (Start: 171 @26895 has 7 MA's), (Start: 177 @26880 has 119 MA's), (Start: 217 @26814 has 8 MA's), (Start: 239 @26766 has 6 MA's), (270, 26721), (353, 26565), (363, 26547), (366, 26538), (383, 26502), (421, 26445), (465, 26367), (482, 26343), (487, 26334), (491, 26322), (502, 26304), (552, 26214), (560, 26202), (592, 26145), (596, 26127), (608, 26100), (614, 26085), (623, 26067), (641, 26040), (645, 26031), (702, 25929), (715, 25881), (716, 25878), (721, 25851), (723, 25845), (726, 25833), (743, 25794),

Gene: Smoothie\_85 Start: 51934, Stop: 53232, Start Num: 111

Candidate Starts for Smoothie\_85:

(Start: 111 @51934 has 12 MA's), (147, 52000), (197, 52102), (208, 52129), (214, 52141), (232, 52171), (259, 52210), (281, 52228), (319, 52294), (324, 52303), (368, 52387), (424, 52477), (507, 52636), (510, 52642), (511, 52645), (577, 52771), (603, 52840), (643, 52918), (670, 52969), (698, 52996), (706, 53032), (707, 53035), (708, 53038), (709, 53044), (711, 53056), (713, 53062), (714, 53065), (715, 53068), (721, 53098), (737, 53146), (742, 53155), (759, 53185),

Gene: SnapTap\_34 Start: 26396, Stop: 25329, Start Num: 209

Candidate Starts for SnapTap\_34:

(Start: 144 @26513 has 1 MA's), (Start: 177 @26450 has 119 MA's), (Start: 209 @26396 has 14 MA's), (Start: 239 @26327 has 6 MA's), (270, 26282), (332, 26156), (363, 26108), (366, 26099), (383, 26063), (420, 26009), (421, 26006), (491, 25883), (502, 25865), (518, 25835), (548, 25781), (552, 25775), (560, 25763), (596, 25688), (599, 25682), (608, 25661), (614, 25646), (623, 25628), (641, 25601), (702, 25490), (715, 25442), (721, 25412), (723, 25406), (726, 25394), (743, 25355),

Gene: Snickers\_36 Start: 26724, Stop: 25618, Start Num: 203

Candidate Starts for Snickers\_36:

(Start: 177 @26763 has 119 MA's), (Start: 203 @26724 has 10 MA's), (228, 26676), (Start: 239 @26640 has 6 MA's), (270, 26595), (353, 26439), (366, 26412), (383, 26376), (421, 26319), (465, 26241), (482, 26217), (502, 26178), (538, 26106), (548, 26094), (552, 26088), (560, 26076), (596, 26001), (599, 25995), (608, 25974), (614, 25959), (623, 25941), (639, 25917), (702, 25803), (714, 25758), (715, 25755), (718, 25746), (721, 25725), (723, 25719), (726, 25707), (743, 25668),

Gene: SoYo\_36 Start: 26701, Stop: 25556, Start Num: 177

Candidate Starts for SoYo\_36:

(Start: 177 @26701 has 119 MA's), (Start: 203 @26662 has 10 MA's), (228, 26614), (Start: 239 @26578 has 6 MA's), (270, 26533), (353, 26377), (366, 26350), (383, 26314), (421, 26257), (465, 26179), (482, 26155), (502, 26116), (538, 26044), (548, 26032), (552, 26026), (560, 26014), (596, 25939), (599, 25933), (608, 25912), (614, 25897), (623, 25879), (639, 25855), (702, 25741), (714, 25696), (715, 25693), (718, 25684), (721, 25663), (723, 25657), (726, 25645), (743, 25606),

Gene: SoilAssassin\_34 Start: 27695, Stop: 28777, Start Num: 143

Candidate Starts for SoilAssassin\_34:

(Start: 88 @27584 has 6 MA's), (Start: 143 @27695 has 52 MA's), (174, 27749), (242, 27869), (421, 28124), (438, 28154), (470, 28214), (506, 28280), (518, 28304), (707, 28634), (713, 28661), (749, 28766),

Gene: SoilDragon\_35 Start: 26236, Stop: 25091, Start Num: 177

Candidate Starts for SoilDragon\_35:

(Start: 177 @26236 has 119 MA's), (Start: 203 @26197 has 10 MA's), (228, 26149), (Start: 239 @26113 has 6 MA's), (270, 26068), (353, 25912), (366, 25885), (383, 25849), (421, 25792), (465, 25714), (482, 25690), (502, 25651), (538, 25579), (548, 25567), (552, 25561), (560, 25549), (596, 25474), (599, 25468), (608, 25447), (614, 25432), (623, 25414), (702, 25276), (714, 25231), (715, 25228), (718, 25219), (721, 25198), (723, 25192), (726, 25180), (743, 25141),

Gene: Sonali\_29 Start: 28564, Stop: 29715, Start Num: 145

Candidate Starts for Sonali\_29:

(123, 28522), (Start: 145 @28564 has 284 MA's), (151, 28573), (251, 28741), (364, 28918), (422, 28990), (525, 29185), (681, 29473), (710, 29569), (713, 29581), (714, 29584),

Gene: Soul22\_46 Start: 32314, Stop: 33432, Start Num: 145

Candidate Starts for Soul22\_46:

(Start: 145 @32314 has 284 MA's), (237, 32485), (345, 32686), (350, 32695), (422, 32776), (471, 32869), (504, 32929), (510, 32941), (511, 32944), (525, 32971), (537, 32995), (555, 33022), (583, 33058), (584, 33061), (596, 33097), (611, 33133), (667, 33202), (676, 33217), (692, 33235), (711, 33304), (714, 33313), (723, 33352), (727, 33370), (736, 33391), (744, 33406), (749, 33415), (751, 33418),

Gene: Sparky\_45 Start: 33811, Stop: 34989, Start Num: 148

Candidate Starts for Sparky\_45:

(Start: 148 @33811 has 2 MA's), (174, 33859), (215, 33925), (237, 33970), (327, 34120), (345, 34162), (429, 34276), (441, 34303), (468, 34351), (470, 34354), (511, 34435), (518, 34447), (582, 34552), (596, 34594), (603, 34609), (609, 34624), (631, 34648), (699, 34759), (713, 34819), (736, 34900), (743, 34912), (762, 34951),

Gene: Spartacus\_41 Start: 31407, Stop: 32525, Start Num: 145

Candidate Starts for Spartacus\_41:

(Start: 145 @31407 has 284 MA's), (151, 31416), (237, 31578), (350, 31788), (422, 31869), (471, 31962), (491, 32001), (504, 32022), (510, 32034), (511, 32037), (530, 32073), (537, 32088), (540,

32094), (555, 32115), (583, 32151), (584, 32154), (596, 32190), (599, 32196), (611, 32226), (639, 32247), (667, 32295), (676, 32310), (701, 32352), (711, 32397), (714, 32406), (723, 32445), (727, 32463), (736, 32484), (744, 32499), (749, 32508), (751, 32511),

Gene: Spartoi\_37 Start: 25898, Stop: 24921, Start Num: 212

Candidate Starts for Spartoi\_37:

(Start: 145 @26012 has 284 MA's), (168, 25973), (174, 25961), (Start: 212 @25898 has 1 MA's), (223, 25883), (320, 25718), (338, 25670), (340, 25667), (390, 25643), (429, 25583), (485, 25481), (506, 25442), (599, 25262), (609, 25238), (614, 25226), (649, 25166), (666, 25139), (674, 25124), (679, 25115), (699, 25085), (701, 25076), (711, 25031), (713, 25025), (727, 24965), (734, 24947),

Gene: Sparxx\_33 Start: 26249, Stop: 25128, Start Num: 177

Candidate Starts for Sparxx\_33:

(Start: 156 @26294 has 3 MA's), (170, 26267), (Start: 177 @26249 has 119 MA's), (Start: 217 @26180 has 8 MA's), (Start: 239 @26126 has 6 MA's), (363, 25907), (366, 25898), (383, 25862), (404, 25820), (420, 25808), (421, 25805), (465, 25727), (538, 25592), (552, 25574), (596, 25487), (599, 25481), (608, 25460), (614, 25445), (623, 25427), (702, 25289), (715, 25241), (721, 25211), (723, 25205), (726, 25193), (743, 25154),

Gene: SpicyFrank\_39 Start: 27481, Stop: 26348, Start Num: 145

Candidate Starts for SpicyFrank\_39:

(93, 27571), (103, 27550), (Start: 145 @27481 has 284 MA's), (174, 27430), (277, 27262), (287, 27244), (340, 27130), (362, 27112), (422, 27034), (468, 26947), (473, 26938), (506, 26878), (530, 26830), (551, 26788), (605, 26683), (631, 26638), (636, 26635), (701, 26518), (707, 26494), (710, 26479), (728, 26404), (743, 26374),

Gene: Splinter\_37 Start: 27965, Stop: 26850, Start Num: 185

Candidate Starts for Splinter\_37:

(Start: 156 @28034 has 3 MA's), (Start: 185 @27965 has 12 MA's), (370, 27626), (388, 27593), (544, 27299), (557, 27287), (572, 27254), (640, 27107), (718, 26936), (723, 26909),

Gene: Spock\_41 Start: 32596, Stop: 33684, Start Num: 145

Candidate Starts for Spock\_41:

(27, 32212), (40, 32299), (54, 32374), (Start: 145 @32596 has 284 MA's), (174, 32647), (207, 32698), (221, 32722), (237, 32758), (323, 32896), (429, 33034), (468, 33103), (470, 33106), (550, 33256), (604, 33361), (699, 33496),

Gene: Spooks\_10 Start: 8825, Stop: 7629, Start Num: 167

Candidate Starts for Spooks\_10:

(Start: 167 @8825 has 1 MA's), (Start: 180 @8792 has 10 MA's), (204, 8759), (272, 8645), (276, 8639), (300, 8588), (335, 8516), (397, 8405), (470, 8264), (481, 8246), (537, 8153), (578, 8075), (599, 8030), (604, 8018), (676, 7886), (706, 7820), (710, 7802), (714, 7787), (718, 7775), (728, 7727), (774, 7652), (775, 7649),

Gene: Sproutie\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for Sproutie\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: Squint\_87 Start: 50854, Stop: 52128, Start Num: 90

Candidate Starts for Squint\_87:

(70, 50797), (Start: 85 @50839 has 1 MA's), (Start: 90 @50854 has 10 MA's), (92, 50857), (Start: 114 @50902 has 2 MA's), (Start: 136 @50941 has 1 MA's), (330, 51322), (374, 51406), (378, 51418), (379, 51421), (451, 51550), (536, 51670), (580, 51733), (589, 51751), (597, 51775), (638, 51847), (720, 52024), (721, 52027), (723, 52033), (727, 52051), (732, 52066), (738, 52075), (740, 52078), (762, 52123),

Gene: Squirry\_35 Start: 28972, Stop: 30078, Start Num: 145

Candidate Starts for Squirry\_35:

(135, 28951), (Start: 145 @28972 has 284 MA's), (233, 29131), (249, 29167), (338, 29332), (429, 29428), (436, 29440), (454, 29473), (468, 29497), (506, 29566), (510, 29575), (511, 29578), (537, 29629), (550, 29650), (594, 29728), (599, 29743), (645, 29803), (667, 29842), (676, 29857), (690, 29881), (701, 29908), (707, 29932), (711, 29953), (714, 29962), (727, 30019),

Gene: StAB\_26 Start: 25588, Stop: 24371, Start Num: 179

Candidate Starts for StAB\_26:

(149, 25651), (Start: 179 @25588 has 3 MA's), (266, 25408), (285, 25375), (346, 25243), (394, 25153), (405, 25135), (418, 25120), (425, 25108), (437, 25081), (451, 25054), (464, 25021), (473, 25012), (513, 24949), (524, 24931), (532, 24916), (542, 24895), (574, 24829), (606, 24751), (617, 24730), (622, 24718), (624, 24715), (646, 24685), (683, 24616), (687, 24610), (698, 24598), (701, 24583), (707, 24559), (708, 24556), (710, 24544), (714, 24529), (718, 24517), (721, 24496), (725, 24484), (735, 24451), (752, 24424), (764, 24406), (774, 24385), (778, 24376),

Gene: StAnnes\_42 Start: 33543, Stop: 34661, Start Num: 145

Candidate Starts for StAnnes\_42:

(Start: 145 @33543 has 284 MA's), (151, 33552), (237, 33714), (330, 33879), (345, 33915), (350, 33924), (438, 34029), (471, 34098), (491, 34137), (504, 34158), (510, 34170), (511, 34173), (518, 34185), (537, 34224), (540, 34230), (555, 34251), (583, 34287), (584, 34290), (596, 34326), (599, 34332), (605, 34347), (667, 34431), (676, 34446), (701, 34488), (711, 34533), (714, 34542), (723, 34581), (727, 34599), (736, 34620), (744, 34635), (749, 34644), (751, 34647),

Gene: Stagni\_36 Start: 26792, Stop: 25647, Start Num: 177

Candidate Starts for Stagni\_36:

(Start: 177 @26792 has 119 MA's), (Start: 203 @26753 has 10 MA's), (228, 26705), (Start: 239 @26669 has 6 MA's), (270, 26624), (353, 26468), (366, 26441), (383, 26405), (421, 26348), (465, 26270), (482, 26246), (502, 26207), (538, 26135), (548, 26123), (552, 26117), (560, 26105), (596, 26030), (599, 26024), (608, 26003), (614, 25988), (623, 25970), (639, 25946), (702, 25832), (714, 25787), (715, 25784), (718, 25775), (721, 25754), (723, 25748), (726, 25736), (743, 25697),

Gene: StarStuff\_37 Start: 26423, Stop: 25353, Start Num: 209

Candidate Starts for StarStuff\_37:

(Start: 177 @26477 has 119 MA's), (Start: 209 @26423 has 14 MA's), (Start: 239 @26354 has 6 MA's), (353, 26153), (366, 26126), (383, 26090), (421, 26033), (434, 26006), (465, 25955), (487, 25922), (491, 25910), (502, 25892), (538, 25820), (552, 25802), (560, 25790), (584, 25751), (596, 25715), (599, 25709), (608, 25688), (614, 25673), (623, 25655), (641, 25628), (702, 25517), (715, 25469), (716, 25466), (721, 25439), (723, 25433), (726, 25421), (743, 25382),

Gene: StepMih\_36 Start: 26783, Stop: 25638, Start Num: 177

Candidate Starts for StepMih\_36:

(Start: 177 @26783 has 119 MA's), (Start: 203 @26744 has 10 MA's), (228, 26696), (Start: 239 @26660 has 6 MA's), (270, 26615), (353, 26459), (366, 26432), (383, 26396), (421, 26339), (465, 26261), (482, 26237), (502, 26198), (538, 26126), (548, 26114), (552, 26108), (560, 26096), (596, 26021), (599, 26015), (608, 25994), (614, 25979), (623, 25961), (639, 25937), (702, 25823), (714, 25778), (715, 25775), (718, 25766), (721, 25745), (723, 25739), (726, 25727), (743, 25688),

Gene: Stiles\_27 Start: 25121, Stop: 23991, Start Num: 181

Candidate Starts for Stiles\_27:

(Start: 181 @25121 has 9 MA's), (192, 25106), (205, 25082), (276, 24968), (295, 24929), (317, 24887), (330, 24854), (333, 24845), (346, 24818), (357, 24800), (402, 24716), (414, 24701), (437, 24656), (474, 24596), (506, 24554), (511, 24542), (514, 24536), (527, 24515), (549, 24470), (555, 24461), (557, 24458), (559, 24455), (568, 24434), (604, 24350), (610, 24344), (619, 24326), (637, 24296), (677, 24239), (702, 24197), (707, 24182), (710, 24167), (711, 24161), (714, 24152), (717, 24143), (723, 24113), (738, 24071), (750, 24050), (752, 24047), (757, 24038), (772, 24011), (778, 23996),

Gene: Stinson\_42 Start: 32990, Stop: 34078, Start Num: 145

Candidate Starts for Stinson\_42:

(Start: 145 @32990 has 284 MA's), (207, 33092), (221, 33116), (237, 33152), (277, 33203), (309, 33266), (323, 33290), (345, 33344), (347, 33347), (429, 33428), (468, 33497), (470, 33500), (550, 33650), (594, 33728), (604, 33755), (699, 33890),

Gene: Strobilo\_43 Start: 34292, Stop: 35392, Start Num: 145

Candidate Starts for Strobilo\_43:

(Start: 145 @34292 has 284 MA's), (Start: 158 @34310 has 1 MA's), (174, 34343), (221, 34418), (237, 34454), (309, 34568), (323, 34592), (345, 34646), (457, 34787), (468, 34811), (470, 34814), (491, 34856), (550, 34964), (604, 35069), (643, 35114), (649, 35129), (725, 35321),

Gene: Strokeseat\_41 Start: 31786, Stop: 32904, Start Num: 145

Candidate Starts for Strokeseat\_41:

(Start: 145 @31786 has 284 MA's), (237, 31957), (330, 32122), (345, 32158), (350, 32167), (438, 32272), (471, 32341), (491, 32380), (504, 32401), (510, 32413), (511, 32416), (518, 32428), (537, 32467), (540, 32473), (555, 32494), (583, 32530), (584, 32533), (596, 32569), (599, 32575), (604, 32587), (605, 32590), (611, 32605), (667, 32674), (676, 32689), (692, 32707), (711, 32776), (714, 32785), (723, 32824), (727, 32842), (736, 32863), (744, 32878), (749, 32887), (751, 32890),

Gene: StuartMinion\_30 Start: 20996, Stop: 19803, Start Num: 127

Candidate Starts for StuartMinion\_30:

(Start: 127 @20996 has 61 MA's), (362, 20567), (508, 20336), (567, 20237), (610, 20132), (615, 20120), (706, 19961), (749, 19832),

Gene: Stuck\_46 Start: 36731, Stop: 35529, Start Num: 146

Candidate Starts for Stuck\_46:

(Start: 146 @36731 has 7 MA's), (183, 36656), (199, 36626), (213, 36602), (321, 36410), (322, 36407), (357, 36344), (435, 36209), (444, 36188), (481, 36134), (483, 36128), (546, 36005), (636, 35822), (639, 35819), (641, 35816), (650, 35795), (670, 35759), (698, 35732), (699, 35726), (707, 35693), (710, 35678), (726, 35612), (732, 35591),

Gene: Success\_11 Start: 8095, Stop: 6848, Start Num: 167

Candidate Starts for Success\_11:

(Start: 167 @8095 has 1 MA's), (229, 7975), (451, 7570), (464, 7537), (468, 7528), (507, 7474), (535, 7420), (542, 7402), (553, 7381), (578, 7336), (599, 7285), (663, 7162), (732, 6976), (744, 6955), (771, 6907),

Gene: Suerte\_34 Start: 29564, Stop: 28395, Start Num: 127

Candidate Starts for Suerte\_34:

(Start: 127 @29564 has 61 MA's), (216, 29402), (307, 29240), (316, 29222), (350, 29156), (360, 29138), (366, 29123), (388, 29078), (412, 29039), (422, 29030), (432, 29009), (434, 29006), (510, 28922), (609, 28739), (614, 28727), (636, 28691), (651, 28661), (698, 28604), (700, 28592), (703,

28577), (726, 28487), (743, 28451), (763, 28412), (768, 28403),

Gene: Sulley\_41 Start: 32725, Stop: 33810, Start Num: 145

Candidate Starts for Sulley\_41:

(Start: 145 @32725 has 284 MA's), (207, 32827), (210, 32836), (221, 32851), (237, 32887), (323, 33025), (345, 33079), (429, 33163), (468, 33232), (470, 33235), (550, 33385), (604, 33490), (667, 33577), (699, 33625), (738, 33769),

Gene: Sunshine23\_31 Start: 28591, Stop: 29733, Start Num: 151

Candidate Starts for Sunshine23\_31:

(123, 28540), (Start: 145 @28582 has 284 MA's), (151, 28591), (251, 28759), (364, 28936), (422, 29008), (525, 29203), (681, 29491), (710, 29587), (713, 29599), (714, 29602),

Gene: SuperGrey\_42 Start: 32615, Stop: 33742, Start Num: 145

Candidate Starts for SuperGrey\_42:

(91, 32513), (118, 32570), (Start: 145 @32615 has 284 MA's), (151, 32624), (237, 32786), (267, 32837), (277, 32855), (302, 32900), (345, 32996), (350, 33005), (422, 33086), (438, 33110), (471, 33179), (491, 33218), (504, 33239), (510, 33251), (511, 33254), (525, 33281), (537, 33305), (540, 33311), (555, 33332), (583, 33368), (584, 33371), (596, 33407), (599, 33413), (604, 33425), (605, 33428), (611, 33443), (667, 33512), (676, 33527), (701, 33569), (711, 33614), (714, 33623), (723, 33662), (727, 33680), (736, 33701), (744, 33716), (749, 33725), (751, 33728),

Gene: Superchunk\_33 Start: 24997, Stop: 23882, Start Num: 181

Candidate Starts for Superchunk\_33:

(Start: 181 @24997 has 9 MA's), (Start: 209 @24949 has 14 MA's), (228, 24916), (Start: 239 @24880 has 6 MA's), (270, 24835), (360, 24667), (366, 24652), (383, 24616), (404, 24574), (420, 24562), (421, 24559), (473, 24472), (482, 24457), (552, 24328), (560, 24316), (577, 24295), (584, 24277), (596, 24241), (608, 24214), (614, 24199), (623, 24181), (641, 24154), (702, 24043), (715, 23995), (721, 23965), (723, 23959), (726, 23947), (743, 23908),

Gene: Superphikiman\_84 Start: 49930, Stop: 51219, Start Num: 85

Candidate Starts for Superphikiman\_84:

(70, 49888), (Start: 85 @49930 has 1 MA's), (Start: 90 @49945 has 10 MA's), (92, 49948), (Start: 114 @49993 has 2 MA's), (Start: 136 @50032 has 1 MA's), (330, 50413), (374, 50497), (378, 50509), (379, 50512), (451, 50641), (536, 50761), (580, 50824), (589, 50842), (597, 50866), (638, 50938), (720, 51115), (721, 51118), (723, 51124), (727, 51142), (732, 51157), (738, 51166), (740, 51169), (762, 51214),

Gene: Suscepit\_39 Start: 30564, Stop: 31646, Start Num: 143

Candidate Starts for Suscepit\_39:

(Start: 88 @30453 has 6 MA's), (Start: 143 @30564 has 52 MA's), (174, 30618), (242, 30738), (421, 30993), (438, 31023), (470, 31083), (506, 31149), (518, 31173), (707, 31503), (713, 31530), (749, 31635),

Gene: SwagPiggett\_45 Start: 33012, Stop: 34130, Start Num: 145

Candidate Starts for SwagPiggett\_45:

(Start: 145 @33012 has 284 MA's), (223, 33150), (237, 33183), (271, 33231), (330, 33348), (345, 33384), (350, 33393), (438, 33498), (471, 33567), (504, 33627), (510, 33639), (511, 33642), (518, 33654), (525, 33669), (537, 33693), (540, 33699), (555, 33720), (583, 33756), (584, 33759), (596, 33795), (599, 33801), (604, 33813), (605, 33816), (667, 33900), (676, 33915), (701, 33957), (711, 34002), (714, 34011), (723, 34050), (727, 34068), (736, 34089), (744, 34104), (749, 34113), (751, 34116),

Gene: SweetiePie\_34 Start: 26396, Stop: 25329, Start Num: 209

Candidate Starts for SweetiePie\_34:

(Start: 144 @26513 has 1 MA's), (Start: 177 @26450 has 119 MA's), (Start: 209 @26396 has 14 MA's), (Start: 239 @26327 has 6 MA's), (270, 26282), (332, 26156), (363, 26108), (366, 26099), (383, 26063), (420, 26009), (421, 26006), (491, 25883), (502, 25865), (518, 25835), (548, 25781), (552, 25775), (560, 25763), (596, 25688), (599, 25682), (608, 25661), (614, 25646), (623, 25628), (641, 25601), (702, 25490), (715, 25442), (721, 25412), (723, 25406), (726, 25394), (743, 25355),

Gene: SwirlSquare\_35 Start: 25021, Stop: 23906, Start Num: 181

Candidate Starts for SwirlSquare\_35:

(Start: 181 @25021 has 9 MA's), (228, 24940), (Start: 239 @24904 has 6 MA's), (270, 24859), (315, 24772), (353, 24703), (360, 24691), (363, 24685), (383, 24640), (390, 24622), (404, 24598), (420, 24586), (421, 24583), (552, 24352), (560, 24340), (596, 24265), (608, 24238), (614, 24223), (623, 24205), (641, 24178), (715, 24019), (721, 23989), (723, 23983), (726, 23971), (743, 23932),

Gene: Syleon\_7 Start: 2611, Stop: 1523, Start Num: 201

Candidate Starts for Syleon\_7:

(149, 2716), (187, 2632), (Start: 201 @2611 has 4 MA's), (286, 2440), (330, 2350), (338, 2326), (351, 2305), (488, 2074), (511, 2041), (534, 1999), (542, 1984), (553, 1963), (559, 1954), (562, 1948), (599, 1864), (609, 1849), (655, 1762), (673, 1729), (713, 1636), (720, 1603), (723, 1594), (725, 1588),

Gene: TChen\_44 Start: 33582, Stop: 34700, Start Num: 145

Candidate Starts for TChen\_44:

(Start: 145 @33582 has 284 MA's), (151, 33591), (223, 33720), (237, 33753), (271, 33801), (345, 33954), (350, 33963), (422, 34044), (471, 34137), (504, 34197), (510, 34209), (511, 34212), (525, 34239), (537, 34263), (555, 34290), (583, 34326), (584, 34329), (596, 34365), (611, 34401), (667, 34470), (676, 34485), (692, 34503), (711, 34572), (714, 34581), (723, 34620), (727, 34638), (736, 34659), (744, 34674),

Gene: TClif\_45 Start: 33489, Stop: 34589, Start Num: 145

Candidate Starts for TClif\_45:

(Start: 145 @33489 has 284 MA's), (221, 33615), (237, 33651), (323, 33789), (345, 33843), (429, 33927), (457, 33984), (468, 34008), (470, 34011), (491, 34053), (550, 34161), (584, 34212), (603, 34263), (604, 34266), (643, 34311), (649, 34326), (699, 34401), (710, 34449), (738, 34545),

Gene: TNguyen7\_33 Start: 26286, Stop: 25138, Start Num: 169

Candidate Starts for TNguyen7\_33:

(Start: 169 @26286 has 2 MA's), (Start: 173 @26277 has 3 MA's), (Start: 239 @26142 has 6 MA's), (270, 26097), (353, 25941), (364, 25920), (366, 25914), (383, 25878), (421, 25821), (465, 25743), (538, 25608), (552, 25590), (560, 25578), (584, 25539), (596, 25503), (599, 25497), (608, 25476), (614, 25461), (623, 25443), (641, 25416), (702, 25305), (715, 25257), (721, 25227), (723, 25221), (726, 25209), (743, 25170),

Gene: TPA4\_37 Start: 32608, Stop: 31376, Start Num: 127

Candidate Starts for TPA4\_37:

(123, 32614), (Start: 127 @32608 has 61 MA's), (366, 32161), (388, 32116), (480, 32005), (510, 31960), (549, 31879), (563, 31855), (566, 31849), (574, 31831), (610, 31741), (658, 31654), (688, 31603), (694, 31582), (698, 31570), (721, 31471), (726, 31453), (738, 31426),

Gene: TZGordon\_39 Start: 27285, Stop: 26170, Start Num: 185

Candidate Starts for TZGordon\_39:

(Start: 185 @27285 has 12 MA's), (370, 26946), (388, 26913), (544, 26619), (557, 26607), (640, 26427), (718, 26256), (723, 26229),

Gene: Tachez\_41 Start: 32439, Stop: 33527, Start Num: 145

Candidate Starts for Tachez\_41:

(Start: 145 @32439 has 284 MA's), (174, 32490), (207, 32541), (221, 32565), (237, 32601), (323, 32739), (345, 32793), (429, 32877), (468, 32946), (470, 32949), (550, 33099), (594, 33177), (604, 33204), (667, 33291), (699, 33339),

Gene: TaiwanKao\_43 Start: 32721, Stop: 33809, Start Num: 145

Candidate Starts for TaiwanKao\_43:

(Start: 145 @32721 has 284 MA's), (207, 32823), (221, 32847), (237, 32883), (345, 33075), (429, 33159), (468, 33228), (470, 33231), (550, 33381), (594, 33459), (604, 33486), (699, 33621), (738, 33765),

Gene: Taj\_45 Start: 32606, Stop: 33709, Start Num: 145

Candidate Starts for Taj\_45:

(Start: 145 @32606 has 284 MA's), (174, 32654), (223, 32735), (233, 32762), (345, 32975), (367, 32999), (422, 33047), (468, 33128), (506, 33197), (510, 33206), (525, 33236), (537, 33260), (550, 33281), (594, 33359), (599, 33374), (645, 33434), (667, 33473), (676, 33488), (690, 33512), (701, 33539), (707, 33563), (711, 33584), (714, 33593), (725, 33638), (727, 33650),

Gene: TarsusIV\_33 Start: 26409, Stop: 25285, Start Num: 177

Candidate Starts for TarsusIV\_33:

(Start: 145 @26469 has 284 MA's), (Start: 158 @26451 has 1 MA's), (Start: 177 @26409 has 119 MA's), (Start: 239 @26286 has 6 MA's), (270, 26241), (353, 26085), (366, 26058), (383, 26022), (421, 25965), (465, 25887), (487, 25854), (491, 25842), (502, 25824), (552, 25734), (554, 25731), (560, 25722), (596, 25647), (608, 25620), (614, 25605), (623, 25587), (702, 25449), (715, 25401), (716, 25398), (721, 25371), (723, 25365), (726, 25353), (743, 25314),

Gene: Taurus\_36 Start: 26750, Stop: 25644, Start Num: 203

Candidate Starts for Taurus\_36:

(Start: 177 @26789 has 119 MA's), (Start: 203 @26750 has 10 MA's), (228, 26702), (Start: 239 @26666 has 6 MA's), (270, 26621), (353, 26465), (366, 26438), (383, 26402), (421, 26345), (465, 26267), (482, 26243), (502, 26204), (538, 26132), (548, 26120), (552, 26114), (560, 26102), (596, 26027), (599, 26021), (608, 26000), (614, 25985), (623, 25967), (639, 25943), (702, 25829), (714, 25784), (715, 25781), (718, 25772), (721, 25751), (723, 25745), (726, 25733), (743, 25694),

Gene: TaylorSipht\_34 Start: 24061, Stop: 22877, Start Num: 127

Candidate Starts for TaylorSipht\_34:

(Start: 127 @24061 has 61 MA's), (326, 23707), (354, 23644), (362, 23632), (368, 23617), (468, 23464), (557, 23323), (567, 23302), (605, 23209), (610, 23197), (703, 23035), (706, 23026),

Gene: Tayonia\_39 Start: 30563, Stop: 31645, Start Num: 143

Candidate Starts for Tayonia\_39:

(Start: 88 @30452 has 6 MA's), (Start: 143 @30563 has 52 MA's), (174, 30617), (242, 30737), (421, 30992), (438, 31022), (470, 31082), (506, 31148), (518, 31172), (707, 31502), (713, 31529), (749, 31634),

Gene: Terrific\_37 Start: 26823, Stop: 25690, Start Num: 177

Candidate Starts for Terrific\_37:

(Start: 177 @26823 has 119 MA's), (Start: 209 @26769 has 14 MA's), (Start: 239 @26700 has 6 MA's), (270, 26655), (353, 26499), (366, 26472), (383, 26436), (421, 26379), (491, 26256), (502, 26238), (552, 26148), (560, 26136), (596, 26061), (599, 26055), (608, 26034), (614, 26019), (623, 26001), (641, 25974), (645, 25965), (702, 25863), (715, 25815), (721, 25785), (723, 25779), (726,



25767), (743, 25728),

Gene: ThankyouJordi\_38 Start: 31428, Stop: 32621, Start Num: 88

Candidate Starts for ThankyouJordi\_38:

(Start: 88 @31428 has 6 MA's), (Start: 143 @31539 has 52 MA's), (174, 31593), (242, 31713), (438, 31998), (470, 32058), (506, 32124), (518, 32148), (707, 32478), (713, 32505), (749, 32610),

Gene: ThayneTheZag\_40 Start: 27570, Stop: 26437, Start Num: 145

Candidate Starts for ThayneTheZag\_40:

(Start: 145 @27570 has 284 MA's), (174, 27519), (277, 27351), (287, 27333), (340, 27219), (362, 27201), (422, 27123), (468, 27036), (473, 27027), (506, 26967), (540, 26898), (551, 26877), (631, 26727), (636, 26724), (673, 26658), (701, 26607), (707, 26583), (710, 26568), (723, 26514), (728, 26493), (743, 26463),

Gene: Thibault\_69 Start: 48145, Stop: 49374, Start Num: 104

Candidate Starts for Thibault\_69:

(Start: 104 @48145 has 29 MA's), (Start: 114 @48163 has 2 MA's), (Start: 136 @48202 has 1 MA's), (251, 48439), (313, 48547), (374, 48667), (375, 48670), (378, 48679), (386, 48694), (407, 48733), (451, 48811), (528, 48928), (536, 48931), (544, 48940), (579, 48991), (580, 48994), (589, 49012), (638, 49108), (672, 49165), (720, 49285), (721, 49288), (727, 49312), (738, 49336), (740, 49339),

Gene: Thimann\_36 Start: 28027, Stop: 29154, Start Num: 145

Candidate Starts for Thimann\_36:

(56, 27808), (67, 27844), (Start: 145 @28027 has 284 MA's), (174, 28081), (258, 28237), (311, 28327), (327, 28360), (468, 28555), (470, 28558), (491, 28600), (511, 28636), (681, 28933), (707, 29011), (718, 29053), (723, 29080), (749, 29143),

Gene: ThreeRngTarjay\_79 Start: 53224, Stop: 54453, Start Num: 104

Candidate Starts for ThreeRngTarjay\_79:

(Start: 104 @53224 has 29 MA's), (Start: 114 @53242 has 2 MA's), (Start: 136 @53281 has 1 MA's), (251, 53518), (313, 53626), (374, 53746), (375, 53749), (378, 53758), (386, 53773), (407, 53812), (451, 53890), (520, 53995), (528, 54007), (536, 54010), (544, 54019), (579, 54070), (580, 54073), (589, 54091), (638, 54187), (672, 54244), (720, 54364), (721, 54367), (727, 54391), (738, 54415), (740, 54418),

Gene: ThulaThula\_35 Start: 29873, Stop: 28671, Start Num: 146

Candidate Starts for ThulaThula\_35:

(Start: 146 @29873 has 7 MA's), (183, 29798), (199, 29768), (213, 29744), (253, 29663), (322, 29549), (357, 29486), (435, 29351), (483, 29270), (518, 29207), (549, 29141), (636, 28964), (639, 28961), (641, 28958), (650, 28937), (670, 28901), (671, 28898), (699, 28868), (707, 28835), (710, 28820), (726, 28754), (732, 28733),

Gene: Tiff81\_35 Start: 24880, Stop: 23702, Start Num: 145

Candidate Starts for Tiff81\_35:

(Start: 145 @24880 has 284 MA's), (210, 24763), (237, 24715), (287, 24643), (333, 24547), (362, 24511), (411, 24448), (422, 24433), (468, 24346), (473, 24337), (506, 24277), (530, 24229), (605, 24082), (608, 24076), (636, 24034), (701, 23917), (706, 23896), (707, 23893), (710, 23878), (751, 23758),

Gene: Tiffany\_36 Start: 26675, Stop: 25530, Start Num: 177

Candidate Starts for Tiffany\_36:

(Start: 177 @26675 has 119 MA's), (Start: 203 @26636 has 10 MA's), (228, 26588), (Start: 239 @26552 has 6 MA's), (270, 26507), (353, 26351), (366, 26324), (383, 26288), (421, 26231), (465,

26153), (482, 26129), (502, 26090), (538, 26018), (548, 26006), (552, 26000), (560, 25988), (596, 25913), (599, 25907), (608, 25886), (614, 25871), (623, 25853), (639, 25829), (702, 25715), (714, 25670), (715, 25667), (718, 25658), (721, 25637), (723, 25631), (726, 25619), (743, 25580),

Gene: TimTam\_39 Start: 32012, Stop: 33094, Start Num: 143

Candidate Starts for TimTam\_39:

(Start: 88 @31901 has 6 MA's), (Start: 143 @32012 has 52 MA's), (174, 32066), (242, 32186), (414, 32432), (421, 32441), (438, 32471), (470, 32531), (506, 32597), (518, 32621), (707, 32951), (713, 32978), (749, 33083),

Gene: TinaFeyge\_33 Start: 26292, Stop: 25126, Start Num: 156

Candidate Starts for TinaFeyge\_33:

(Start: 156 @26292 has 3 MA's), (170, 26265), (Start: 177 @26247 has 119 MA's), (Start: 217 @26178 has 8 MA's), (Start: 239 @26124 has 6 MA's), (363, 25905), (366, 25896), (383, 25860), (404, 25818), (420, 25806), (421, 25803), (465, 25725), (538, 25590), (552, 25572), (596, 25485), (608, 25458), (614, 25443), (623, 25425), (702, 25287), (715, 25239), (721, 25209), (723, 25203), (726, 25191), (743, 25152),

Gene: TinaLin\_36 Start: 26813, Stop: 25707, Start Num: 185

Candidate Starts for TinaLin\_36:

(Start: 185 @26813 has 12 MA's), (237, 26726), (365, 26492), (399, 26429), (408, 26417), (436, 26366), (517, 26204), (544, 26156), (607, 26027), (628, 25979), (682, 25883), (718, 25793), (723, 25766),

Gene: TiniBug\_42 Start: 33372, Stop: 34460, Start Num: 145

Candidate Starts for TiniBug\_42:

(54, 33150), (Start: 145 @33372 has 284 MA's), (174, 33423), (207, 33474), (221, 33498), (237, 33534), (309, 33648), (345, 33726), (429, 33810), (468, 33879), (470, 33882), (550, 34032), (604, 34137), (699, 34272), (738, 34416),

Gene: TopsytheTRex\_33 Start: 25948, Stop: 24836, Start Num: 177

Candidate Starts for TopsytheTRex\_33:

(Start: 177 @25948 has 119 MA's), (223, 25870), (Start: 239 @25825 has 6 MA's), (270, 25780), (301, 25720), (366, 25597), (383, 25561), (420, 25507), (421, 25504), (491, 25381), (493, 25378), (502, 25363), (548, 25279), (552, 25273), (596, 25198), (608, 25171), (614, 25156), (623, 25138), (641, 25111), (702, 25000), (715, 24952), (716, 24949), (718, 24943), (721, 24922), (723, 24916), (726, 24904), (743, 24865), (747, 24856),

Gene: Tiri\_42 Start: 32775, Stop: 33863, Start Num: 145

Candidate Starts for Tiri\_42:

(Start: 145 @32775 has 284 MA's), (207, 32877), (221, 32901), (237, 32937), (323, 33075), (345, 33129), (429, 33213), (468, 33282), (470, 33285), (550, 33435), (604, 33540), (667, 33627), (699, 33675), (738, 33819),

Gene: Toad24\_36 Start: 25330, Stop: 24146, Start Num: 127

Candidate Starts for Toad24\_36:

(Start: 127 @25330 has 61 MA's), (245, 25111), (257, 25093), (326, 24976), (362, 24901), (567, 24571), (605, 24478), (610, 24466), (618, 24448), (698, 24331), (706, 24295),

Gene: Tomathan\_37 Start: 26420, Stop: 25350, Start Num: 209

Candidate Starts for Tomathan\_37:

(Start: 177 @26474 has 119 MA's), (Start: 209 @26420 has 14 MA's), (Start: 239 @26351 has 6 MA's), (353, 26150), (366, 26123), (383, 26087), (420, 26033), (421, 26030), (434, 26003), (465,

25952), (487, 25919), (491, 25907), (502, 25889), (552, 25799), (560, 25787), (584, 25748), (596, 25712), (599, 25706), (608, 25685), (614, 25670), (623, 25652), (641, 25625), (702, 25514), (715, 25466), (716, 25463), (721, 25436), (723, 25430), (726, 25418), (743, 25379),

Gene: Toniann\_84 Start: 51286, Stop: 52584, Start Num: 111

Candidate Starts for Toniann\_84:

(Start: 111 @51286 has 12 MA's), (147, 51352), (197, 51454), (208, 51481), (214, 51493), (232, 51523), (259, 51562), (281, 51580), (319, 51646), (324, 51655), (368, 51739), (424, 51829), (507, 51988), (510, 51994), (511, 51997), (577, 52123), (603, 52192), (643, 52270), (670, 52321), (698, 52348), (706, 52384), (707, 52387), (708, 52390), (709, 52396), (711, 52408), (713, 52414), (714, 52417), (715, 52420), (721, 52450), (737, 52498), (742, 52507), (759, 52537),

Gene: Topper\_41 Start: 32595, Stop: 33683, Start Num: 145

Candidate Starts for Topper\_41:

(16, 31992), (24, 32169), (45, 32334), (54, 32373), (Start: 145 @32595 has 284 MA's), (174, 32646), (207, 32697), (221, 32721), (237, 32757), (323, 32895), (429, 33033), (468, 33102), (470, 33105), (550, 33255), (604, 33360), (699, 33495),

Gene: Tortellini\_32 Start: 30878, Stop: 29682, Start Num: 133

Candidate Starts for Tortellini\_32:

(Start: 133 @30878 has 4 MA's), (257, 30632), (278, 30599), (347, 30461), (350, 30455), (359, 30446), (366, 30434), (379, 30404), (440, 30305), (497, 30233), (508, 30212), (525, 30179), (552, 30128), (556, 30122), (598, 30029), (641, 29954), (650, 29933), (695, 29876), (698, 29867), (703, 29840), (707, 29828), (718, 29789), (730, 29735), (743, 29714),

Gene: TouchMeNot\_32 Start: 30114, Stop: 28903, Start Num: 164

Candidate Starts for TouchMeNot\_32:

(Start: 164 @30114 has 4 MA's), (256, 29940), (329, 29799), (405, 29640), (485, 29490), (531, 29400), (655, 29136), (676, 29100), (680, 29094), (738, 28929), (746, 28914), (748, 28911),

Gene: Towmatter\_55 Start: 42777, Stop: 44135, Start Num: 106

Candidate Starts for Towmatter\_55:

(26, 42468), (39, 42552), (59, 42654), (93, 42756), (Start: 106 @42777 has 1 MA's), (244, 43056), (292, 43140), (298, 43149), (312, 43164), (378, 43287), (386, 43302), (394, 43320), (415, 43350), (497, 43512), (571, 43659), (574, 43665), (593, 43707), (599, 43728), (600, 43731), (604, 43740), (623, 43782), (636, 43803), (707, 43932), (709, 43941), (713, 43959), (727, 44016), (753, 44067),

Gene: Travvers\_37 Start: 26420, Stop: 25350, Start Num: 209

Candidate Starts for Travvers\_37:

(Start: 177 @26474 has 119 MA's), (Start: 209 @26420 has 14 MA's), (Start: 239 @26351 has 6 MA's), (353, 26150), (354, 26147), (366, 26123), (383, 26087), (421, 26030), (434, 26003), (465, 25952), (487, 25919), (491, 25907), (502, 25889), (538, 25817), (552, 25799), (560, 25787), (596, 25712), (599, 25706), (608, 25685), (614, 25670), (623, 25652), (641, 25625), (702, 25514), (715, 25466), (716, 25463), (721, 25436), (723, 25430), (726, 25418), (743, 25379),

Gene: Trax\_8 Start: 3425, Stop: 2322, Start Num: 185

Candidate Starts for Trax\_8:

(175, 3452), (Start: 185 @3425 has 12 MA's), (189, 3413), (224, 3359), (236, 3344), (244, 3320), (264, 3293), (331, 3167), (372, 3095), (408, 3032), (417, 3020), (436, 2981), (478, 2897), (490, 2876), (533, 2789), (575, 2720), (582, 2708), (620, 2612), (634, 2588), (667, 2528), (688, 2492), (701, 2477), (710, 2438), (719, 2396),

Gene: TreyKay\_42 Start: 32665, Stop: 33753, Start Num: 145

Candidate Starts for TreyKay\_42:

(74, 32518), (Start: 145 @32665 has 284 MA's), (207, 32767), (221, 32791), (237, 32827), (323, 32965), (345, 33019), (429, 33103), (468, 33172), (470, 33175), (550, 33325), (604, 33430), (667, 33517), (699, 33565), (738, 33709),

Gene: TripleJ\_37 Start: 28096, Stop: 26960, Start Num: 196

Candidate Starts for TripleJ\_37:

(Start: 196 @28096 has 2 MA's), (231, 28030), (270, 27955), (282, 27934), (285, 27925), (304, 27889), (315, 27868), (343, 27805), (372, 27748), (378, 27730), (396, 27694), (420, 27664), (428, 27649), (432, 27637), (442, 27616), (467, 27580), (469, 27577), (482, 27556), (504, 27514), (506, 27511), (518, 27487), (538, 27448), (552, 27430), (608, 27322), (638, 27271), (710, 27130), (712, 27121), (727, 27058), (762, 26989), (766, 26983),

Gene: Tristan\_35 Start: 28130, Stop: 26997, Start Num: 173

Candidate Starts for Tristan\_35:

(Start: 173 @28130 has 3 MA's), (Start: 239 @27995 has 6 MA's), (270, 27950), (273, 27944), (292, 27905), (353, 27794), (366, 27767), (383, 27731), (404, 27689), (421, 27674), (465, 27596), (552, 27443), (560, 27431), (596, 27356), (599, 27350), (608, 27329), (614, 27314), (623, 27296), (650, 27245), (702, 27158), (715, 27110), (721, 27080), (723, 27074), (726, 27062), (743, 27023),

Gene: Trixie\_35 Start: 27323, Stop: 26259, Start Num: 209

Candidate Starts for Trixie\_35:

(Start: 177 @27377 has 119 MA's), (Start: 209 @27323 has 14 MA's), (Start: 239 @27254 has 6 MA's), (270, 27209), (353, 27053), (360, 27041), (366, 27026), (383, 26990), (404, 26948), (420, 26936), (421, 26933), (428, 26921), (465, 26855), (487, 26822), (502, 26792), (552, 26702), (554, 26699), (560, 26690), (577, 26669), (596, 26615), (608, 26588), (614, 26573), (623, 26555), (702, 26417), (715, 26369), (716, 26366), (721, 26339), (723, 26333), (726, 26321), (743, 26282),

Gene: Trooper\_35 Start: 26605, Stop: 25538, Start Num: 209

Candidate Starts for Trooper\_35:

(Start: 144 @26722 has 1 MA's), (Start: 177 @26659 has 119 MA's), (Start: 209 @26605 has 14 MA's), (Start: 239 @26536 has 6 MA's), (270, 26491), (353, 26335), (383, 26272), (428, 26203), (446, 26161), (465, 26137), (502, 26074), (552, 25984), (560, 25972), (596, 25897), (599, 25891), (608, 25870), (614, 25855), (623, 25837), (641, 25810), (702, 25699), (714, 25654), (715, 25651), (716, 25648), (721, 25621), (723, 25615), (726, 25603), (743, 25564),

Gene: Troy\_27 Start: 25228, Stop: 23900, Start Num: 130

Candidate Starts for Troy\_27:

(Start: 130 @25228 has 3 MA's), (147, 25192), (154, 25183), (Start: 179 @25126 has 3 MA's), (302, 24916), (303, 24913), (349, 24814), (361, 24796), (395, 24730), (399, 24724), (408, 24712), (491, 24547), (515, 24502), (526, 24481), (532, 24469), (542, 24445), (555, 24421), (559, 24415), (576, 24379), (615, 24283), (647, 24226), (668, 24181), (684, 24157), (698, 24142), (713, 24076), (714, 24073), (719, 24046), (725, 24028), (752, 23968), (778, 23914),

Gene: TroyPia\_33 Start: 26250, Stop: 25129, Start Num: 177

Candidate Starts for TroyPia\_33:

(Start: 156 @26295 has 3 MA's), (170, 26268), (Start: 177 @26250 has 119 MA's), (Start: 217 @26181 has 8 MA's), (Start: 239 @26127 has 6 MA's), (363, 25908), (366, 25899), (383, 25863), (404, 25821), (420, 25809), (421, 25806), (465, 25728), (538, 25593), (552, 25575), (596, 25488), (608, 25461), (614, 25446), (623, 25428), (702, 25290), (715, 25242), (721, 25212), (723, 25206), (726, 25194), (743, 25155),

Gene: TruffulaTree\_41 Start: 32473, Stop: 33561, Start Num: 145

Candidate Starts for TruffulaTree\_41:

(Start: 145 @32473 has 284 MA's), (174, 32524), (207, 32575), (221, 32599), (237, 32635), (323, 32773), (345, 32827), (429, 32911), (468, 32980), (470, 32983), (550, 33133), (594, 33211), (604, 33238), (667, 33325), (699, 33373),

Gene: Trumpet\_39 Start: 30564, Stop: 31646, Start Num: 143

Candidate Starts for Trumpet\_39:

(Start: 88 @30453 has 6 MA's), (Start: 143 @30564 has 52 MA's), (174, 30618), (242, 30738), (421, 30993), (438, 31023), (470, 31083), (506, 31149), (518, 31173), (707, 31503), (713, 31530), (749, 31635),

Gene: TuertoX\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for TuertoX\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: Turbido\_34 Start: 26644, Stop: 25511, Start Num: 171

Candidate Starts for Turbido\_34:

(Start: 162 @26662 has 7 MA's), (Start: 171 @26644 has 7 MA's), (Start: 217 @26560 has 8 MA's), (Start: 239 @26512 has 6 MA's), (270, 26467), (366, 26284), (383, 26248), (421, 26191), (428, 26179), (434, 26164), (487, 26080), (491, 26068), (502, 26050), (552, 25960), (560, 25948), (596, 25873), (599, 25867), (608, 25846), (614, 25831), (623, 25813), (641, 25786), (702, 25675), (715, 25627), (716, 25624), (721, 25597), (723, 25591), (726, 25579), (743, 25540),

Gene: TurkishDelight\_52 Start: 44050, Stop: 45588, Start Num: 47

Candidate Starts for TurkishDelight\_52:

(13, 43657), (31, 43954), (Start: 47 @44050 has 1 MA's), (79, 44173), (150, 44323), (163, 44344), (200, 44425), (279, 44578), (294, 44611), (297, 44614), (357, 44731), (423, 44851), (439, 44884), (447, 44905), (466, 44947), (528, 45058), (549, 45106), (561, 45124), (572, 45142), (587, 45172), (658, 45325), (684, 45358), (702, 45400), (718, 45457), (731, 45514), (749, 45550), (760, 45568),

Gene: Twinkle\_39 Start: 33608, Stop: 34735, Start Num: 145

Candidate Starts for Twinkle\_39:

(121, 33569), (Start: 145 @33608 has 284 MA's), (174, 33662), (236, 33785), (258, 33818), (311, 33908), (327, 33941), (468, 34136), (470, 34139), (491, 34181), (511, 34217), (681, 34514), (707, 34592), (713, 34619), (718, 34634), (723, 34661), (749, 34724),

Gene: Twitch\_41 Start: 32597, Stop: 33685, Start Num: 145

Candidate Starts for Twitch\_41:

(16, 31994), (24, 32171), (45, 32336), (54, 32375), (Start: 145 @32597 has 284 MA's), (174, 32648), (207, 32699), (221, 32723), (237, 32759), (323, 32897), (429, 33035), (468, 33104), (470, 33107), (550, 33257), (604, 33362), (699, 33497),

Gene: Ubuntu\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Ubuntu\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Updawg\_35 Start: 26811, Stop: 25678, Start Num: 177

Candidate Starts for Updawg\_35:

(Start: 177 @26811 has 119 MA's), (Start: 209 @26757 has 14 MA's), (Start: 239 @26688 has 6 MA's), (270, 26643), (353, 26487), (366, 26460), (383, 26424), (421, 26367), (491, 26244), (502, 26226), (552, 26136), (560, 26124), (596, 26049), (599, 26043), (608, 26022), (614, 26007), (623, 25989), (641, 25962), (645, 25953), (702, 25851), (715, 25803), (721, 25773), (723, 25767), (726, 25755), (743, 25716),

Gene: Urkel\_42 Start: 33376, Stop: 34464, Start Num: 145

Candidate Starts for Urkel\_42:

(54, 33154), (Start: 145 @33376 has 284 MA's), (174, 33427), (207, 33478), (221, 33502), (237, 33538), (309, 33652), (345, 33730), (429, 33814), (468, 33883), (470, 33886), (550, 34036), (604, 34141), (699, 34276), (738, 34420),

Gene: VA6\_33 Start: 26411, Stop: 25287, Start Num: 177

Candidate Starts for VA6\_33:

(Start: 148 @26465 has 2 MA's), (Start: 177 @26411 has 119 MA's), (Start: 209 @26357 has 14 MA's), (Start: 239 @26288 has 6 MA's), (353, 26087), (366, 26060), (383, 26024), (420, 25970), (421, 25967), (434, 25940), (465, 25889), (487, 25856), (491, 25844), (502, 25826), (538, 25754), (552, 25736), (560, 25724), (584, 25685), (596, 25649), (599, 25643), (608, 25622), (614, 25607), (623, 25589), (641, 25562), (702, 25451), (715, 25403), (716, 25400), (721, 25373), (723, 25367), (726, 25355), (743, 25316),

Gene: VC3\_36 Start: 26399, Stop: 25275, Start Num: 177

Candidate Starts for VC3\_36:

(Start: 148 @26453 has 2 MA's), (Start: 177 @26399 has 119 MA's), (Start: 209 @26345 has 14 MA's), (Start: 239 @26276 has 6 MA's), (353, 26075), (366, 26048), (383, 26012), (420, 25958), (421, 25955), (434, 25928), (465, 25877), (487, 25844), (491, 25832), (502, 25814), (538, 25742), (552, 25724), (560, 25712), (584, 25673), (596, 25637), (599, 25631), (608, 25610), (614, 25595), (623, 25577), (641, 25550), (702, 25439), (715, 25391), (716, 25388), (721, 25361), (723, 25355), (726, 25343), (743, 25304),

Gene: VRedHorse\_42 Start: 32159, Stop: 33286, Start Num: 145

Candidate Starts for VRedHorse\_42:

(91, 32057), (118, 32114), (Start: 145 @32159 has 284 MA's), (151, 32168), (237, 32330), (267, 32381), (277, 32399), (302, 32444), (330, 32504), (345, 32540), (350, 32549), (438, 32654), (471, 32723), (504, 32783), (510, 32795), (511, 32798), (518, 32810), (525, 32825), (537, 32849), (540, 32855), (555, 32876), (583, 32912), (584, 32915), (596, 32951), (599, 32957), (605, 32972), (611, 32987), (667, 33056), (676, 33071), (701, 33113), (711, 33158), (714, 33167), (723, 33206), (727, 33224), (736, 33245), (744, 33260), (749, 33269), (751, 33272),

Gene: VWB\_31 Start: 27412, Stop: 26129, Start Num: 137

Candidate Starts for VWB\_31:

(Start: 137 @27412 has 1 MA's), (154, 27379), (Start: 172 @27346 has 1 MA's), (348, 27001), (369, 26962), (385, 26926), (393, 26914), (450, 26815), (476, 26767), (532, 26659), (536, 26650), (591, 26542), (621, 26464), (671, 26371), (688, 26347), (699, 26329), (702, 26311), (709, 26287), (717, 26257), (718, 26254), (722, 26230), (725, 26221), (731, 26197), (738, 26185), (744, 26173), (765, 26134),

Gene: Validus\_45 Start: 33099, Stop: 34196, Start Num: 145

Candidate Starts for Validus\_45:

(Start: 145 @33099 has 284 MA's), (221, 33225), (237, 33261), (309, 33375), (345, 33453), (429, 33537), (468, 33618), (470, 33621), (491, 33663), (537, 33750), (550, 33771), (604, 33876), (649, 33936), (693, 33999), (738, 34155),

Gene: VanLee\_32 Start: 27924, Stop: 26788, Start Num: 128

Candidate Starts for VanLee\_32:

(Start: 128 @27924 has 1 MA's), (Start: 158 @27870 has 1 MA's), (168, 27852), (245, 27702), (289, 27630), (362, 27489), (366, 27477), (368, 27474), (373, 27462), (412, 27393), (508, 27291), (510, 27288), (525, 27258), (659, 27015), (661, 27012), (696, 26976), (701, 26955), (747, 26808),

Gene: Vasanti\_37 Start: 29057, Stop: 27888, Start Num: 127

Candidate Starts for Vasanti\_37:

(Start: 127 @29057 has 61 MA's), (257, 28814), (306, 28733), (324, 28697), (329, 28685), (352, 28643), (354, 28637), (362, 28625), (366, 28613), (412, 28529), (422, 28520), (426, 28514), (440, 28484), (508, 28415), (510, 28412), (525, 28382), (561, 28331), (596, 28259), (609, 28229), (698, 28097), (700, 28085), (721, 27998), (724, 27989), (743, 27944), (763, 27905),

Gene: Veliki\_41 Start: 32513, Stop: 33601, Start Num: 145

Candidate Starts for Veliki\_41:

(Start: 145 @32513 has 284 MA's), (174, 32564), (207, 32615), (221, 32639), (237, 32675), (323, 32813), (345, 32867), (429, 32951), (468, 33020), (470, 33023), (550, 33173), (594, 33251), (604, 33278), (667, 33365), (699, 33413),

Gene: Velveteen\_37 Start: 27903, Stop: 29021, Start Num: 145

Candidate Starts for Velveteen\_37:

(Start: 145 @27903 has 284 MA's), (237, 28074), (330, 28239), (345, 28275), (350, 28284), (422, 28365), (438, 28389), (471, 28458), (491, 28497), (502, 28515), (504, 28518), (510, 28530), (511, 28533), (518, 28545), (525, 28560), (537, 28584), (540, 28590), (555, 28611), (583, 28647), (584, 28650), (596, 28686), (599, 28692), (604, 28704), (605, 28707), (611, 28722), (667, 28791), (676, 28806), (701, 28848), (711, 28893), (714, 28902), (723, 28941), (727, 28959), (736, 28980), (744, 28995), (749, 29004), (751, 29007),

Gene: Vendetta\_37 Start: 27965, Stop: 26850, Start Num: 185

Candidate Starts for Vendetta\_37:

(Start: 156 @28034 has 3 MA's), (Start: 185 @27965 has 12 MA's), (370, 27626), (388, 27593), (544, 27299), (557, 27287), (572, 27254), (640, 27107), (718, 26936), (723, 26909),

Gene: Violac\_43 Start: 32601, Stop: 33719, Start Num: 145

Candidate Starts for Violac\_43:

(Start: 145 @32601 has 284 MA's), (151, 32610), (237, 32772), (330, 32937), (345, 32973), (350, 32982), (438, 33087), (471, 33156), (487, 33183), (491, 33195), (504, 33216), (510, 33228), (511, 33231), (518, 33243), (525, 33258), (537, 33282), (540, 33288), (555, 33309), (583, 33345), (584, 33348), (596, 33384), (599, 33390), (605, 33405), (611, 33420), (667, 33489), (676, 33504), (711, 33591), (714, 33600), (723, 33639), (727, 33657), (736, 33678), (744, 33693), (749, 33702), (751, 33705),

Gene: Vix\_36 Start: 26872, Stop: 25727, Start Num: 177

Candidate Starts for Vix\_36:

(Start: 177 @26872 has 119 MA's), (Start: 203 @26833 has 10 MA's), (228, 26785), (Start: 239 @26749 has 6 MA's), (270, 26704), (353, 26548), (366, 26521), (383, 26485), (421, 26428), (465, 26350), (482, 26326), (502, 26287), (538, 26215), (548, 26203), (552, 26197), (560, 26185), (596, 26110), (599, 26104), (608, 26083), (614, 26068), (623, 26050), (639, 26026), (702, 25912), (714, 25867), (715, 25864), (718, 25855), (721, 25834), (723, 25828), (726, 25816), (743, 25777),

Gene: Vopal\_43 Start: 30649, Stop: 29477, Start Num: 145

Candidate Starts for Vopal\_43:

(Start: 145 @30649 has 284 MA's), (174, 30598), (277, 30430), (287, 30412), (313, 30361), (362, 30280), (422, 30202), (429, 30190), (468, 30115), (473, 30106), (506, 30046), (551, 29956), (605, 29851), (615, 29830), (631, 29806), (636, 29803), (675, 29734), (701, 29680), (707, 29656), (710, 29641), (754, 29521), (769, 29494),

Gene: Vulpecula\_33 Start: 24379, Stop: 23195, Start Num: 127

Candidate Starts for Vulpecula\_33:

(Start: 127 @24379 has 61 MA's), (245, 24160), (326, 24025), (362, 23950), (368, 23935), (500, 23734), (605, 23527), (610, 23515), (618, 23497), (627, 23482), (698, 23380), (703, 23353), (706, 23344),

Gene: Wachhund\_44 Start: 32077, Stop: 33195, Start Num: 145

Candidate Starts for Wachhund\_44:

(Start: 145 @32077 has 284 MA's), (151, 32086), (237, 32248), (330, 32413), (345, 32449), (350, 32458), (438, 32563), (471, 32632), (491, 32671), (504, 32692), (510, 32704), (511, 32707), (518, 32719), (537, 32758), (540, 32764), (555, 32785), (583, 32821), (584, 32824), (596, 32860), (599, 32866), (604, 32878), (605, 32881), (667, 32965), (676, 32980), (701, 33022), (711, 33067), (714, 33076), (723, 33115), (727, 33133), (736, 33154), (744, 33169), (749, 33178), (751, 33181),

Gene: Wanda\_85 Start: 52091, Stop: 53320, Start Num: 104

Candidate Starts for Wanda\_85:

(Start: 104 @52091 has 29 MA's), (Start: 114 @52109 has 2 MA's), (Start: 136 @52148 has 1 MA's), (251, 52385), (313, 52493), (374, 52613), (375, 52616), (378, 52625), (386, 52640), (407, 52679), (451, 52757), (520, 52862), (528, 52874), (536, 52877), (544, 52886), (579, 52937), (580, 52940), (589, 52958), (638, 53054), (672, 53111), (720, 53231), (721, 53234), (727, 53258), (738, 53282), (740, 53285),

Gene: Watson\_36 Start: 26782, Stop: 25637, Start Num: 177

Candidate Starts for Watson\_36:

(Start: 177 @26782 has 119 MA's), (Start: 203 @26743 has 10 MA's), (Start: 239 @26659 has 6 MA's), (270, 26614), (353, 26458), (366, 26431), (383, 26395), (421, 26338), (465, 26260), (482, 26236), (502, 26197), (538, 26125), (548, 26113), (552, 26107), (560, 26095), (596, 26020), (599, 26014), (608, 25993), (614, 25978), (623, 25960), (639, 25936), (702, 25822), (714, 25777), (715, 25774), (718, 25765), (721, 25744), (723, 25738), (726, 25726), (743, 25687),

Gene: Webster2\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Webster2\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Wee\_46 Start: 33180, Stop: 34283, Start Num: 145

Candidate Starts for Wee\_46:

(Start: 145 @33180 has 284 MA's), (174, 33228), (223, 33309), (233, 33336), (345, 33549), (367, 33573), (422, 33621), (468, 33702), (506, 33771), (510, 33780), (525, 33810), (537, 33834), (550, 33855), (594, 33933), (599, 33948), (645, 34008), (667, 34047), (676, 34062), (690, 34086), (701,



34113), (707, 34137), (711, 34158), (714, 34167), (725, 34212), (727, 34224),

Gene: WeiHuaDA\_38 Start: 28048, Stop: 26930, Start Num: 177

Candidate Starts for WeiHuaDA\_38:

(Start: 177 @28048 has 119 MA's), (Start: 239 @27925 has 6 MA's), (270, 27880), (353, 27724), (366, 27697), (383, 27661), (421, 27604), (465, 27526), (487, 27493), (502, 27463), (552, 27373), (560, 27361), (582, 27328), (596, 27286), (608, 27259), (614, 27244), (623, 27226), (702, 27088), (715, 27040), (716, 27037), (721, 27010), (723, 27004), (726, 26992), (743, 26953),

Gene: WelcomeAyanna\_38 Start: 31686, Stop: 32768, Start Num: 143

Candidate Starts for WelcomeAyanna\_38:

(Start: 88 @31575 has 6 MA's), (Start: 143 @31686 has 52 MA's), (174, 31740), (242, 31860), (438, 32145), (470, 32205), (506, 32271), (518, 32295), (707, 32625), (713, 32652), (749, 32757),

Gene: Westrich\_40 Start: 25013, Stop: 23829, Start Num: 127

Candidate Starts for Westrich\_40:

(Start: 127 @25013 has 61 MA's), (245, 24794), (257, 24776), (326, 24659), (362, 24584), (567, 24254), (605, 24161), (610, 24149), (618, 24131), (698, 24014), (706, 23978),

Gene: Whabigail7\_34 Start: 26650, Stop: 25499, Start Num: 162

Candidate Starts for Whabigail7\_34:

(Start: 162 @26650 has 7 MA's), (Start: 171 @26632 has 7 MA's), (Start: 217 @26548 has 8 MA's), (Start: 239 @26500 has 6 MA's), (270, 26455), (366, 26272), (383, 26236), (421, 26179), (428, 26167), (434, 26152), (487, 26068), (491, 26056), (502, 26038), (552, 25948), (560, 25936), (596, 25861), (599, 25855), (608, 25834), (614, 25819), (623, 25801), (641, 25774), (702, 25663), (715, 25615), (716, 25612), (721, 25585), (723, 25579), (726, 25567), (743, 25528),

Gene: Whatsapiecost\_41 Start: 31324, Stop: 32442, Start Num: 145

Candidate Starts for Whatsapiecost\_41:

(Start: 145 @31324 has 284 MA's), (223, 31462), (237, 31495), (271, 31543), (330, 31660), (345, 31696), (350, 31705), (438, 31810), (471, 31879), (504, 31939), (510, 31951), (511, 31954), (518, 31966), (525, 31981), (537, 32005), (540, 32011), (555, 32032), (583, 32068), (584, 32071), (596, 32107), (599, 32113), (604, 32125), (605, 32128), (667, 32212), (676, 32227), (701, 32269), (711, 32314), (714, 32323), (723, 32362), (727, 32380), (736, 32401), (744, 32416), (749, 32425), (751, 32428),

Gene: WheatThin\_39 Start: 31322, Stop: 30051, Start Num: 127

Candidate Starts for WheatThin\_39:

(Start: 127 @31322 has 61 MA's), (Start: 136 @31307 has 1 MA's), (Start: 185 @31205 has 12 MA's), (214, 31163), (222, 31151), (257, 31076), (299, 31001), (307, 30992), (316, 30974), (366, 30875), (368, 30872), (422, 30782), (508, 30677), (559, 30581), (562, 30575), (636, 30413), (700, 30272), (711, 30227), (724, 30176), (726, 30167), (730, 30152), (738, 30140), (744, 30128), (770, 30089),

Gene: Whiteclaw\_37 Start: 27875, Stop: 28957, Start Num: 143

Candidate Starts for Whiteclaw\_37:

(Start: 86 @27758 has 2 MA's), (Start: 88 @27764 has 6 MA's), (Start: 143 @27875 has 52 MA's), (174, 27929), (242, 28049), (421, 28304), (438, 28334), (470, 28394), (506, 28460), (518, 28484), (583, 28589), (707, 28814), (713, 28841), (749, 28946),

Gene: WideWale\_35 Start: 26811, Stop: 25678, Start Num: 177

Candidate Starts for WideWale\_35:

(Start: 177 @26811 has 119 MA's), (Start: 209 @26757 has 14 MA's), (Start: 239 @26688 has 6 MA's), (270, 26643), (353, 26487), (366, 26460), (383, 26424), (421, 26367), (491, 26244), (502,

26226), (552, 26136), (560, 26124), (596, 26049), (599, 26043), (608, 26022), (614, 26007), (623, 25989), (641, 25962), (645, 25953), (702, 25851), (715, 25803), (721, 25773), (723, 25767), (726, 25755), (743, 25716),

Gene: WillSterrel\_41 Start: 32521, Stop: 33639, Start Num: 145

Candidate Starts for WillSterrel\_41:

(Start: 145 @32521 has 284 MA's), (151, 32530), (237, 32692), (350, 32902), (422, 32983), (438, 33007), (471, 33076), (504, 33136), (510, 33148), (511, 33151), (518, 33163), (525, 33178), (537, 33202), (540, 33208), (555, 33229), (583, 33265), (584, 33268), (596, 33304), (599, 33310), (605, 33325), (667, 33409), (676, 33424), (701, 33466), (711, 33511), (714, 33520), (723, 33559), (727, 33577), (736, 33598), (744, 33613), (749, 33622), (751, 33625),

Gene: WilliamBoone\_83 Start: 50036, Stop: 51334, Start Num: 111

Candidate Starts for WilliamBoone\_83:

(Start: 111 @50036 has 12 MA's), (191, 50195), (214, 50243), (232, 50273), (259, 50312), (281, 50330), (283, 50336), (324, 50405), (424, 50579), (462, 50660), (507, 50738), (510, 50744), (511, 50747), (603, 50942), (636, 51008), (656, 51047), (670, 51071), (698, 51098), (706, 51134), (707, 51137), (708, 51140), (709, 51146), (711, 51158), (713, 51164), (714, 51167), (715, 51170), (721, 51200), (737, 51248), (742, 51257), (757, 51284), (759, 51287),

Gene: Windest\_40 Start: 26669, Stop: 25497, Start Num: 145

Candidate Starts for Windest\_40:

(Start: 145 @26669 has 284 MA's), (174, 26618), (277, 26450), (287, 26432), (362, 26300), (422, 26222), (429, 26210), (433, 26204), (468, 26135), (473, 26126), (506, 26066), (551, 25976), (615, 25850), (631, 25826), (636, 25823), (701, 25700), (707, 25676), (710, 25661), (754, 25541), (769, 25514),

Gene: WinkNick\_41 Start: 29791, Stop: 30918, Start Num: 145

Candidate Starts for WinkNick\_41:

(121, 29752), (Start: 145 @29791 has 284 MA's), (174, 29845), (236, 29968), (258, 30001), (311, 30091), (327, 30124), (468, 30319), (470, 30322), (491, 30364), (511, 30400), (681, 30697), (707, 30775), (713, 30802), (718, 30817), (723, 30844), (749, 30907),

Gene: Wishmaker\_29 Start: 26478, Stop: 25285, Start Num: 159

Candidate Starts for Wishmaker\_29:

(Start: 133 @26520 has 4 MA's), (Start: 159 @26478 has 22 MA's), (188, 26412), (230, 26331), (242, 26292), (254, 26277), (260, 26271), (267, 26259), (283, 26232), (301, 26199), (334, 26142), (354, 26109), (357, 26106), (380, 26058), (408, 26016), (410, 26013), (428, 25989), (434, 25974), (444, 25950), (455, 25935), (481, 25896), (487, 25884), (507, 25845), (528, 25806), (549, 25758), (551, 25755), (590, 25683), (593, 25677), (595, 25665), (596, 25662), (599, 25656), (623, 25602), (633, 25584), (636, 25581), (650, 25554), (660, 25536), (664, 25530), (667, 25527), (699, 25485), (705, 25458), (707, 25452), (719, 25395), (743, 25332), (744, 25329),

Gene: Wooldri\_38 Start: 26701, Stop: 25556, Start Num: 177

Candidate Starts for Wooldri\_38:

(Start: 177 @26701 has 119 MA's), (Start: 203 @26662 has 10 MA's), (Start: 239 @26578 has 6 MA's), (270, 26533), (353, 26377), (366, 26350), (383, 26314), (421, 26257), (465, 26179), (482, 26155), (502, 26116), (538, 26044), (548, 26032), (552, 26026), (560, 26014), (596, 25939), (599, 25933), (608, 25912), (614, 25897), (623, 25879), (639, 25855), (702, 25741), (714, 25696), (715, 25693), (718, 25684), (721, 25663), (723, 25657), (726, 25645), (743, 25606),

Gene: Wrigley\_43 Start: 31922, Stop: 33004, Start Num: 143

Candidate Starts for Wrigley\_43:

(Start: 88 @31811 has 6 MA's), (95, 31826), (Start: 143 @31922 has 52 MA's), (174, 31976), (242, 32096), (438, 32381), (470, 32441), (506, 32507), (518, 32531), (583, 32636), (608, 32702), (721, 32924), (725, 32936), (749, 32993),

Gene: XFactor\_41 Start: 32278, Stop: 33396, Start Num: 145

Candidate Starts for XFactor\_41:

(Start: 145 @32278 has 284 MA's), (237, 32449), (330, 32614), (345, 32650), (350, 32659), (438, 32764), (471, 32833), (491, 32872), (502, 32890), (504, 32893), (510, 32905), (511, 32908), (518, 32920), (525, 32935), (537, 32959), (540, 32965), (555, 32986), (583, 33022), (584, 33025), (596, 33061), (599, 33067), (605, 33082), (611, 33097), (667, 33166), (676, 33181), (701, 33223), (711, 33268), (714, 33277), (723, 33316), (727, 33334), (736, 33355), (744, 33370), (749, 33379), (751, 33382),

Gene: Xavia\_34 Start: 31565, Stop: 30369, Start Num: 133

Candidate Starts for Xavia\_34:

(Start: 133 @31565 has 4 MA's), (257, 31319), (278, 31286), (347, 31148), (350, 31142), (359, 31133), (366, 31121), (379, 31091), (440, 30992), (497, 30920), (525, 30866), (552, 30815), (556, 30809), (598, 30716), (608, 30692), (641, 30641), (650, 30620), (695, 30563), (698, 30554), (703, 30527), (707, 30515), (718, 30476), (730, 30422), (743, 30401),

Gene: XianYue\_35 Start: 26639, Stop: 25515, Start Num: 177

Candidate Starts for XianYue\_35:

(161, 26681), (Start: 177 @26639 has 119 MA's), (Start: 203 @26600 has 10 MA's), (228, 26552), (Start: 239 @26516 has 6 MA's), (270, 26471), (360, 26303), (383, 26252), (465, 26117), (482, 26093), (552, 25964), (560, 25952), (596, 25877), (599, 25871), (608, 25850), (614, 25835), (623, 25817), (702, 25679), (715, 25631), (721, 25601), (723, 25595), (726, 25583), (732, 25562), (743, 25544),

Gene: Yecey3\_35 Start: 26339, Stop: 25209, Start Num: 171

Candidate Starts for Yecey3\_35:

(107, 26456), (110, 26450), (131, 26414), (150, 26375), (152, 26372), (Start: 171 @26339 has 7 MA's), (Start: 217 @26258 has 8 MA's), (Start: 239 @26204 has 6 MA's), (270, 26159), (301, 26099), (366, 25976), (420, 25886), (421, 25883), (465, 25805), (482, 25781), (491, 25760), (502, 25742), (550, 25655), (552, 25652), (560, 25640), (596, 25565), (599, 25559), (608, 25538), (614, 25523), (623, 25505), (702, 25367), (715, 25319), (721, 25289), (723, 25283), (726, 25271), (743, 25232),

Gene: Yeet\_76 Start: 51441, Stop: 52670, Start Num: 104

Candidate Starts for Yeet\_76:

(Start: 104 @51441 has 29 MA's), (Start: 114 @51459 has 2 MA's), (Start: 136 @51498 has 1 MA's), (251, 51735), (313, 51843), (374, 51963), (375, 51966), (378, 51975), (386, 51990), (407, 52029), (451, 52107), (520, 52212), (528, 52224), (536, 52227), (544, 52236), (579, 52287), (580, 52290), (589, 52308), (638, 52404), (672, 52461), (720, 52581), (721, 52584), (727, 52608), (738, 52632), (740, 52635),

Gene: Yeet412\_34 Start: 27696, Stop: 28778, Start Num: 143

Candidate Starts for Yeet412\_34:

(Start: 88 @27585 has 6 MA's), (Start: 143 @27696 has 52 MA's), (174, 27750), (242, 27870), (421, 28125), (438, 28155), (470, 28215), (506, 28281), (518, 28305), (707, 28635), (713, 28662), (749, 28767),

Gene: Yeezy\_36 Start: 30168, Stop: 28906, Start Num: 127

Candidate Starts for Yeezy\_36:

(Start: 127 @30168 has 61 MA's), (211, 30012), (310, 29829), (329, 29793), (362, 29733), (366, 29721), (388, 29676), (407, 29643), (434, 29601), (562, 29433), (563, 29430), (566, 29424), (596,

29355), (604, 29337), (605, 29334), (636, 29277), (694, 29160), (698, 29148), (711, 29091), (726, 29031), (730, 29016), (738, 29004), (743, 28995), (763, 28956), (777, 28926),

Gene: YoungHarleezy\_40 Start: 27782, Stop: 26643, Start Num: 145

Candidate Starts for YoungHarleezy\_40:

(122, 27815), (Start: 145 @27782 has 284 MA's), (174, 27731), (277, 27563), (287, 27545), (362, 27413), (422, 27335), (429, 27323), (433, 27317), (468, 27248), (473, 27239), (506, 27179), (551, 27089), (605, 26984), (615, 26963), (636, 26936), (701, 26813), (707, 26789), (710, 26774), (728, 26699), (743, 26669),

Gene: YoureAdopted\_40 Start: 32682, Stop: 33770, Start Num: 145

Candidate Starts for YoureAdopted\_40:

(Start: 145 @32682 has 284 MA's), (207, 32784), (221, 32808), (237, 32844), (323, 32982), (345, 33036), (429, 33120), (468, 33189), (470, 33192), (550, 33342), (604, 33447), (667, 33534), (699, 33582), (711, 33636), (738, 33726),

Gene: Yunkel11\_44 Start: 32525, Stop: 33625, Start Num: 145

Candidate Starts for Yunkel11\_44:

(72, 32375), (Start: 145 @32525 has 284 MA's), (174, 32576), (221, 32651), (237, 32687), (238, 32690), (309, 32801), (457, 33020), (468, 33044), (470, 33047), (537, 33176), (550, 33197), (604, 33302), (667, 33389), (699, 33437),

Gene: Yvonnetastic\_95 Start: 55831, Stop: 57078, Start Num: 113

Candidate Starts for Yvonnetastic\_95:

(66, 55705), (Start: 113 @55831 has 2 MA's), (197, 55996), (214, 56035), (Start: 239 @56086 has 6 MA's), (281, 56122), (291, 56140), (324, 56191), (339, 56227), (377, 56281), (386, 56302), (449, 56413), (460, 56437), (462, 56446), (471, 56461), (501, 56512), (552, 56596), (588, 56665), (636, 56773), (656, 56815), (698, 56866), (709, 56914), (714, 56935), (721, 56968), (727, 56989), (740, 57016), (759, 57049),

Gene: Zameen\_39 Start: 30563, Stop: 31645, Start Num: 143

Candidate Starts for Zameen\_39:

(Start: 88 @30452 has 6 MA's), (Start: 143 @30563 has 52 MA's), (174, 30617), (242, 30737), (421, 30992), (438, 31022), (470, 31082), (506, 31148), (518, 31172), (707, 31502), (713, 31529), (749, 31634),

Gene: Zavala\_42 Start: 32759, Stop: 33847, Start Num: 145

Candidate Starts for Zavala\_42:

(Start: 145 @32759 has 284 MA's), (207, 32861), (221, 32885), (237, 32921), (323, 33059), (345, 33113), (429, 33197), (468, 33266), (470, 33269), (495, 33317), (550, 33419), (604, 33524), (667, 33611), (699, 33659), (738, 33803),

Gene: Zelink\_79 Start: 53554, Stop: 54765, Start Num: 114

Candidate Starts for Zelink\_79:

(Start: 104 @53536 has 29 MA's), (Start: 114 @53554 has 2 MA's), (Start: 136 @53593 has 1 MA's), (251, 53830), (313, 53938), (374, 54058), (375, 54061), (378, 54070), (386, 54085), (407, 54124), (451, 54202), (520, 54307), (528, 54319), (536, 54322), (544, 54331), (579, 54382), (580, 54385), (589, 54403), (638, 54499), (672, 54556), (720, 54676), (721, 54679), (727, 54703), (738, 54727), (740, 54730),

Gene: Zetzy\_35 Start: 26308, Stop: 25202, Start Num: 203

Candidate Starts for Zetzy\_35:

(Start: 158 @26389 has 1 MA's), (Start: 177 @26347 has 119 MA's), (Start: 203 @26308 has 10 MA's), (228, 26260), (Start: 239 @26224 has 6 MA's), (270, 26179), (366, 25996), (383, 25960), (421, 25903), (465, 25825), (491, 25780), (552, 25672), (560, 25660), (596, 25585), (599, 25579), (608, 25558), (614, 25543), (639, 25501), (702, 25387), (714, 25342), (715, 25339), (721, 25309), (723, 25303), (726, 25291), (743, 25252),

Gene: Zhuangyuan\_39 Start: 24716, Stop: 23526, Start Num: 127  
Candidate Starts for Zhuangyuan\_39:  
(Start: 127 @24716 has 61 MA's), (610, 23849), (615, 23837),

Gene: Zimmer\_35 Start: 28186, Stop: 27065, Start Num: 180  
Candidate Starts for Zimmer\_35:  
(155, 28237), (157, 28234), (166, 28216), (Start: 180 @28186 has 10 MA's), (Start: 239 @28066 has 6 MA's), (270, 28021), (288, 27985), (354, 27862), (366, 27838), (374, 27823), (421, 27745), (465, 27667), (482, 27643), (491, 27622), (502, 27604), (525, 27559), (538, 27532), (552, 27514), (560, 27502), (596, 27427), (599, 27421), (608, 27400), (614, 27385), (623, 27367), (641, 27340), (702, 27229), (715, 27181), (721, 27151), (723, 27145), (726, 27133), (743, 27094),

Gene: Zirinka\_36 Start: 31303, Stop: 32385, Start Num: 143  
Candidate Starts for Zirinka\_36:  
(Start: 88 @31192 has 6 MA's), (Start: 143 @31303 has 52 MA's), (174, 31357), (242, 31477), (421, 31732), (438, 31762), (470, 31822), (506, 31888), (518, 31912), (707, 32242), (713, 32269), (749, 32374),

Gene: Zizzle\_44 Start: 32003, Stop: 33121, Start Num: 145  
Candidate Starts for Zizzle\_44:  
(Start: 145 @32003 has 284 MA's), (223, 32141), (237, 32174), (271, 32222), (330, 32339), (345, 32375), (350, 32384), (438, 32489), (471, 32558), (504, 32618), (510, 32630), (511, 32633), (518, 32645), (525, 32660), (537, 32684), (540, 32690), (555, 32711), (583, 32747), (584, 32750), (596, 32786), (599, 32792), (604, 32804), (605, 32807), (667, 32891), (676, 32906), (701, 32948), (711, 32993), (714, 33002), (723, 33041), (727, 33059), (736, 33080), (744, 33095), (749, 33104), (751, 33107),

Gene: Zodiariah\_37 Start: 32793, Stop: 31624, Start Num: 127  
Candidate Starts for Zodiariah\_37:  
(Start: 127 @32793 has 61 MA's), (284, 32505), (307, 32469), (326, 32430), (329, 32424), (350, 32385), (362, 32364), (366, 32352), (388, 32307), (412, 32268), (422, 32259), (430, 32244), (434, 32235), (472, 32199), (510, 32151), (614, 31956), (636, 31920), (698, 31833), (700, 31821), (726, 31716), (729, 31704), (763, 31641), (768, 31632),

Gene: ZoeJ\_43 Start: 33972, Stop: 35072, Start Num: 145  
Candidate Starts for ZoeJ\_43:  
(Start: 145 @33972 has 284 MA's), (Start: 158 @33990 has 1 MA's), (174, 34023), (221, 34098), (237, 34134), (309, 34248), (323, 34272), (345, 34326), (457, 34467), (468, 34491), (470, 34494), (491, 34536), (550, 34644), (604, 34749), (643, 34794), (649, 34809), (725, 35001),

Gene: Zucker\_31 Start: 26379, Stop: 25240, Start Num: 145  
Candidate Starts for Zucker\_31:  
(Start: 140 @26388 has 1 MA's), (Start: 145 @26379 has 284 MA's), (271, 26178), (330, 26058), (345, 26022), (352, 26010), (354, 26004), (429, 25911), (438, 25896), (468, 25836), (485, 25806), (518, 25743), (602, 25575), (614, 25545), (673, 25449), (711, 25350), (714, 25341), (718, 25329), (734, 25266),