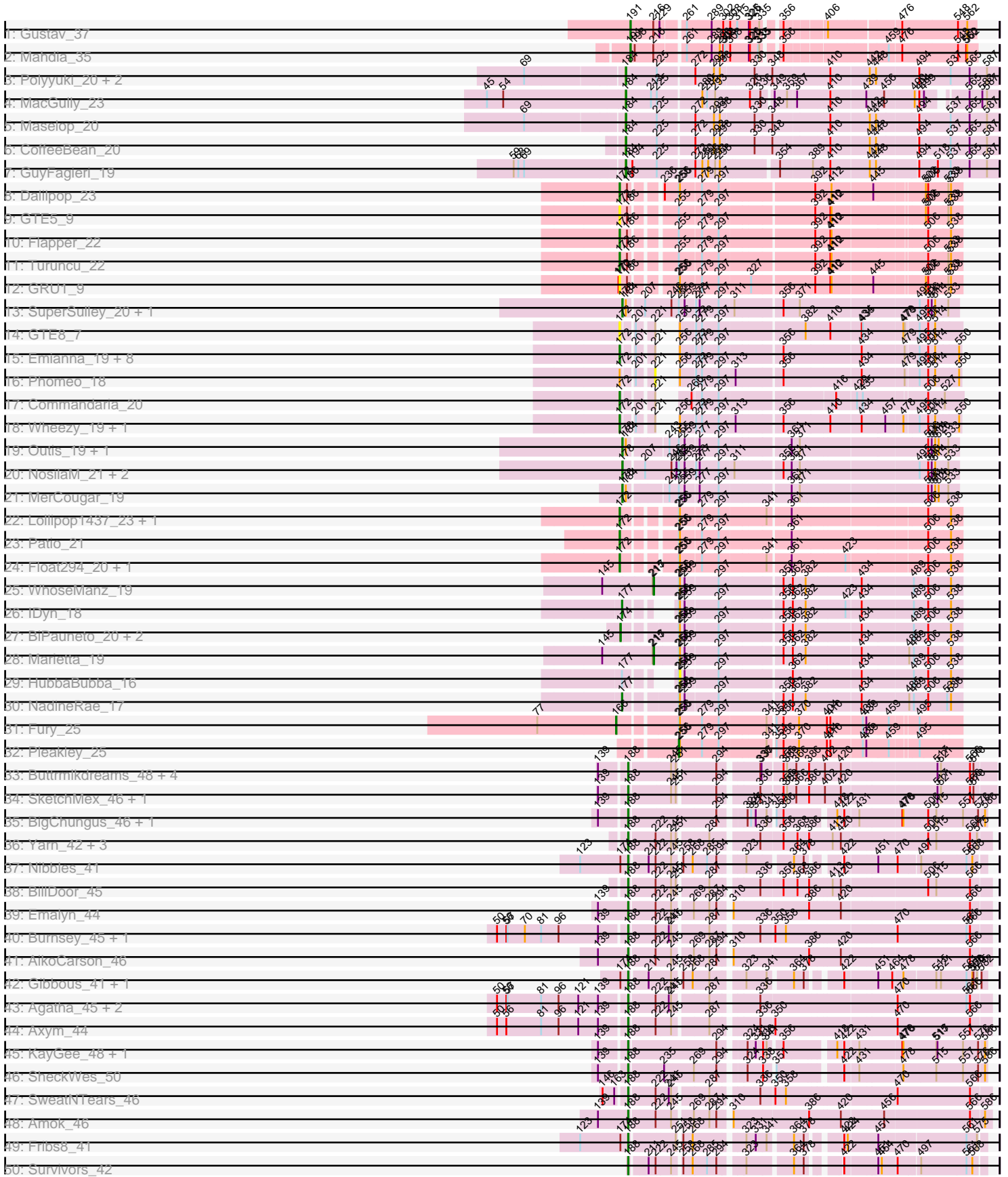
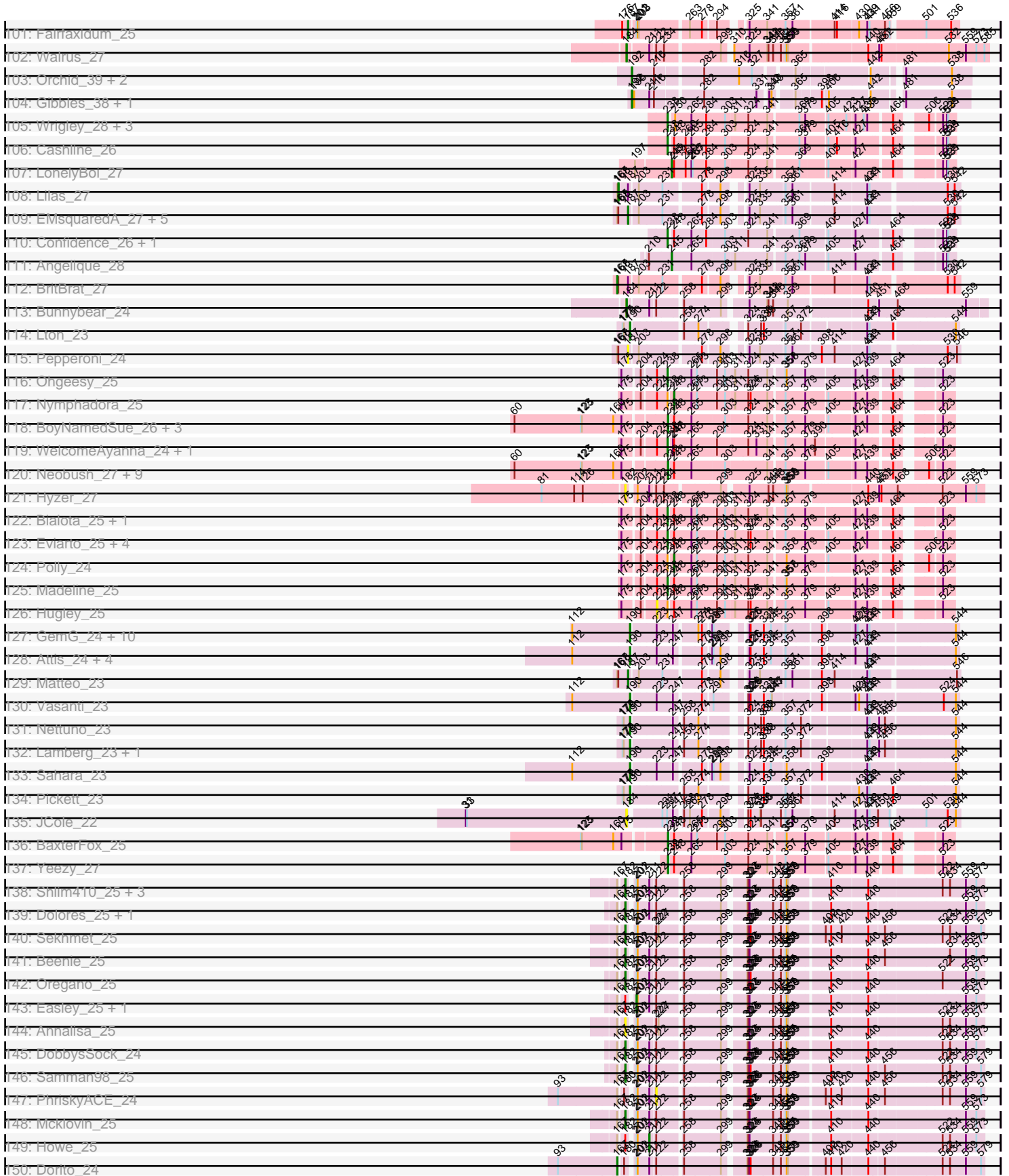


# Zoomed Pham 192181

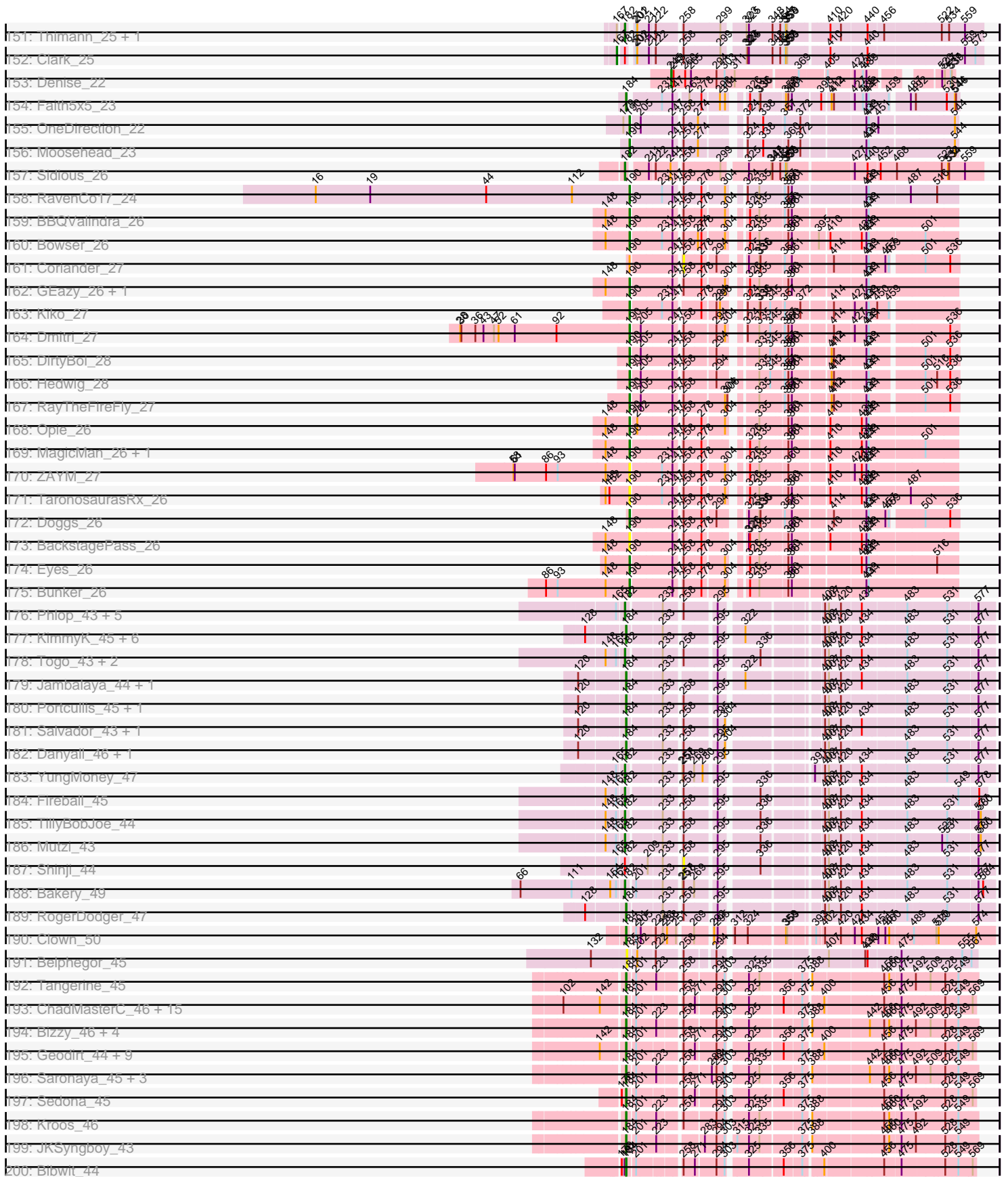




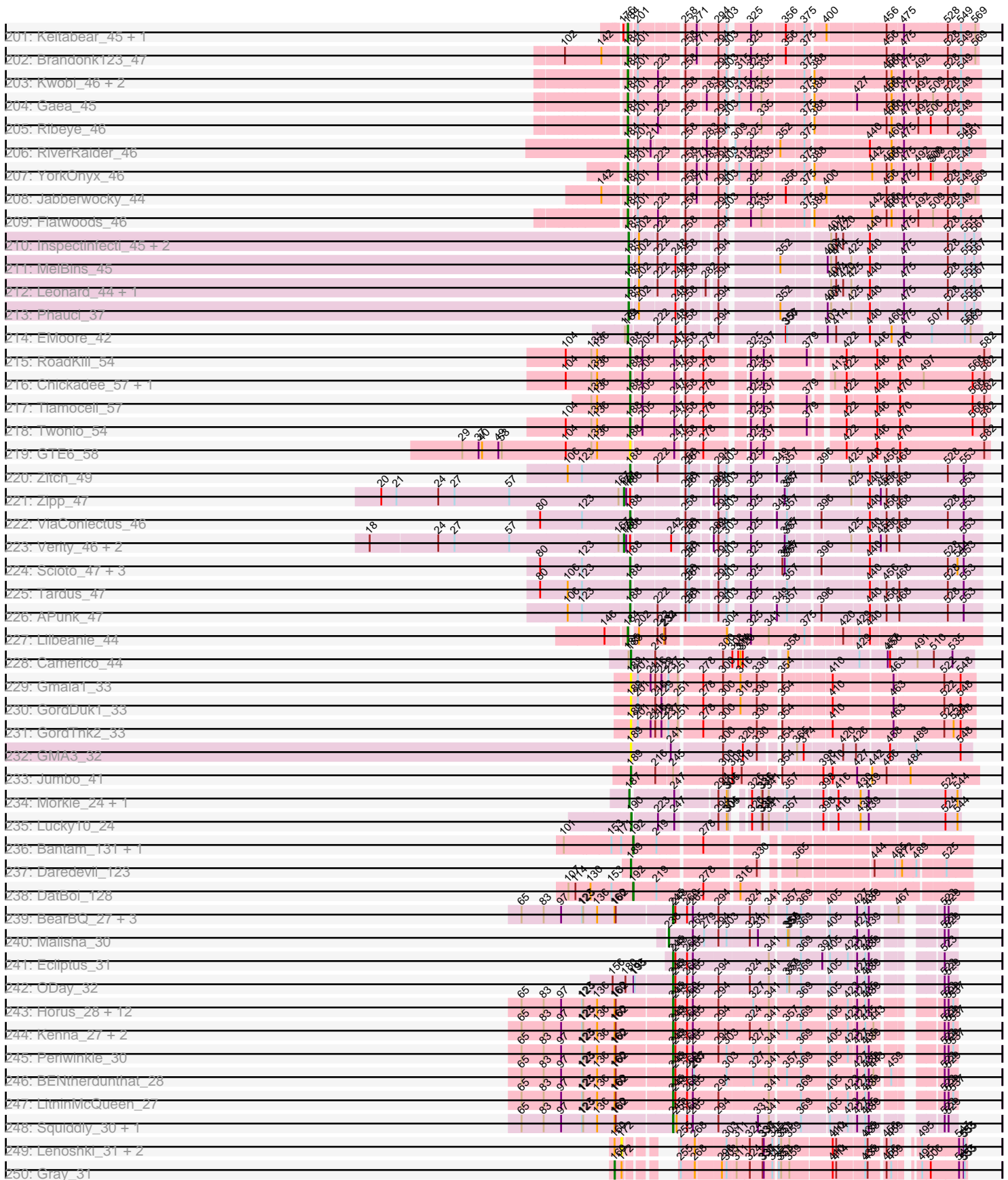
# Zoomed Pham 192181



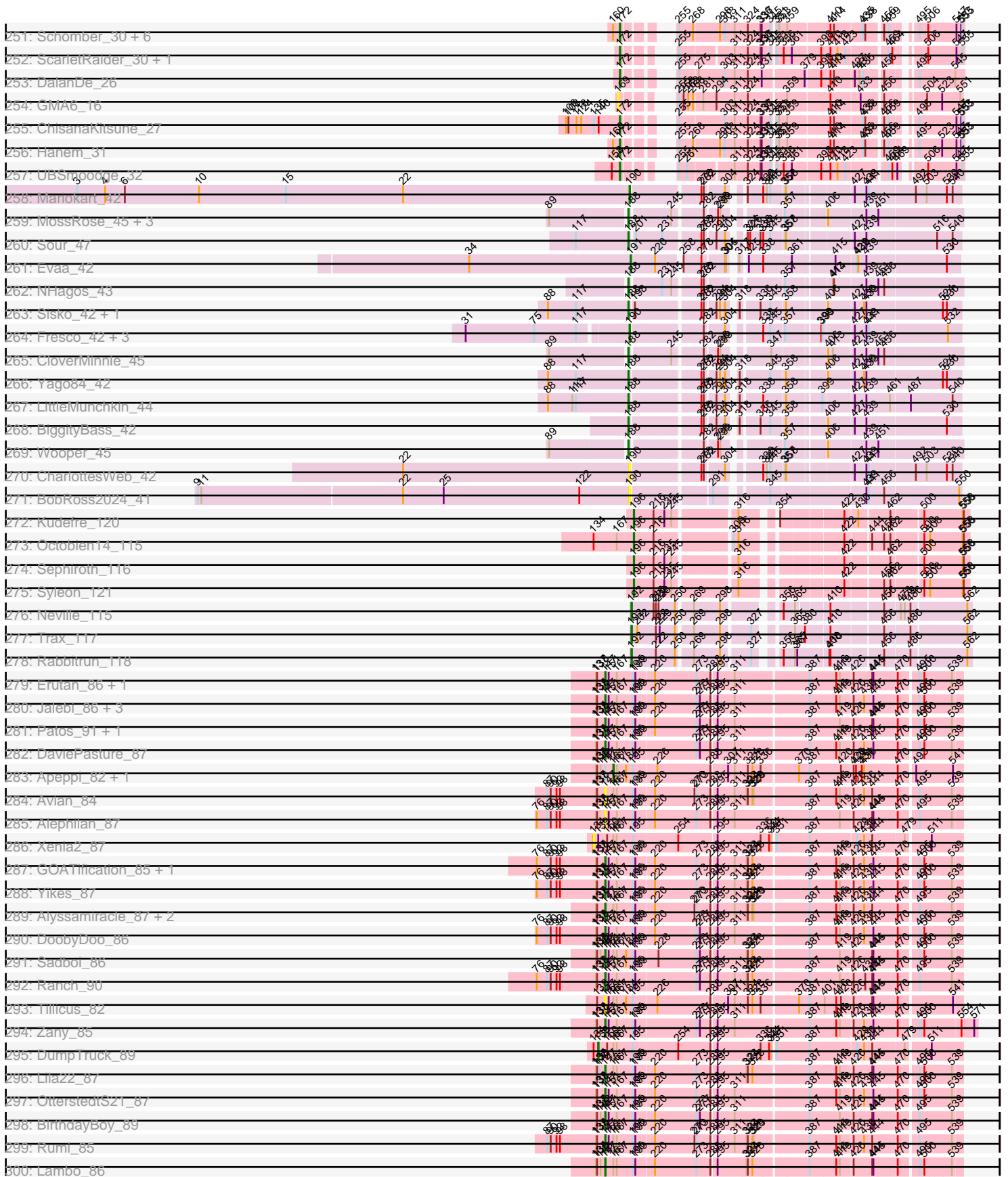
# Zoomed Pham 192181



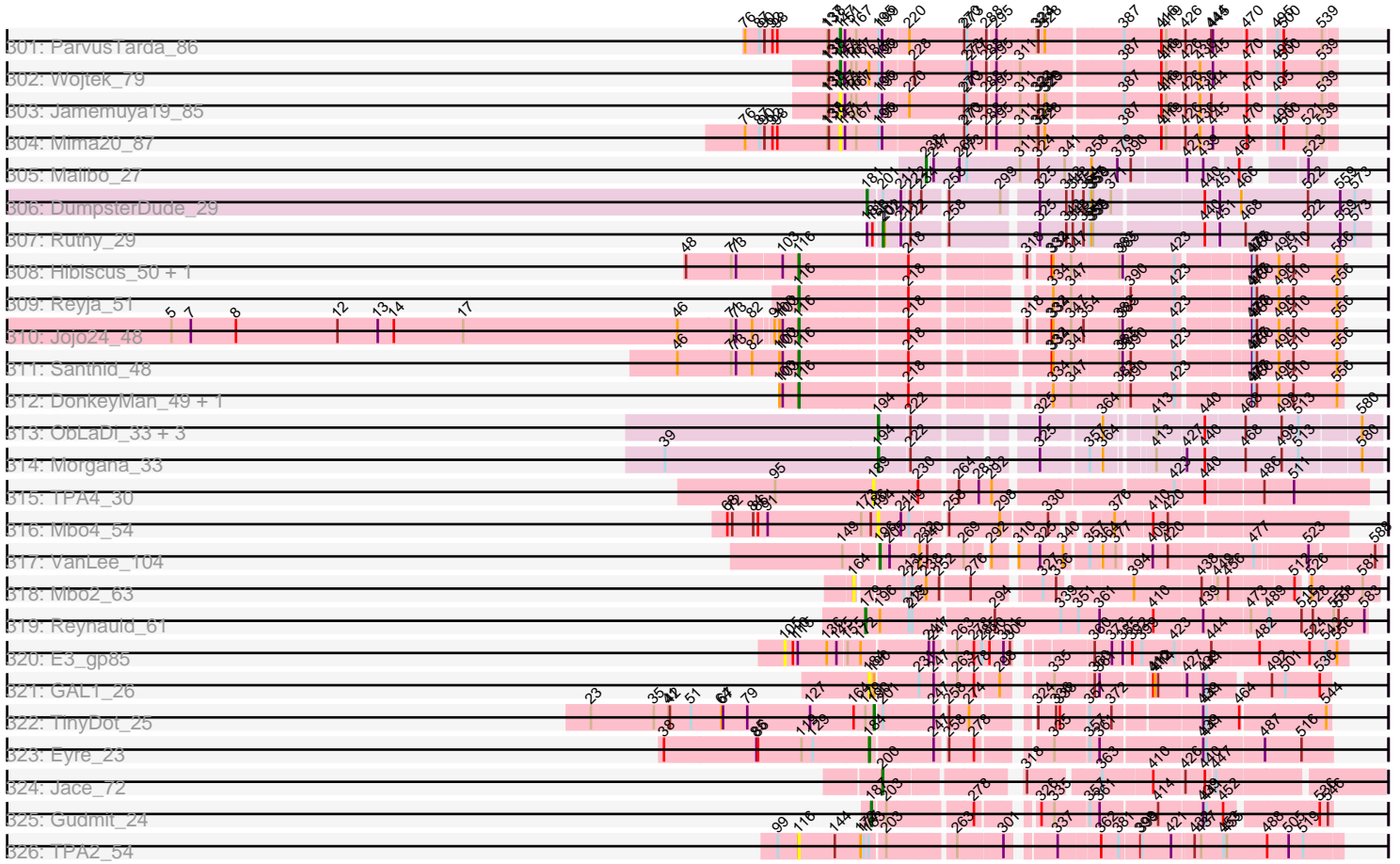
# Zoomed Pham 192181



# Zoomed Pham 192181



# Zoomed Pham 192181



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 192181 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192181 has 544 members, 73 are drafts.

Phages represented in each track:

- Track 1 : Gustav\_37
- Track 2 : Mahdia\_35
- Track 3 : Polyuyki\_20, Braxoaddie\_20, Apiary\_20
- Track 4 : MacGully\_23
- Track 5 : Maselop\_20
- Track 6 : CoffeeBean\_20
- Track 7 : GuyFagieri\_19
- Track 8 : Dalilpop\_23
- Track 9 : GTE5\_9
- Track 10 : Flapper\_22
- Track 11 : Turuncu\_22
- Track 12 : GRU1\_9
- Track 13 : SuperSulley\_20, Buggaboo\_20
- Track 14 : GTE8\_7
- Track 15 : Emianna\_19, NatB6\_19, GrootJr\_21, Foxboro\_20, Kurt\_19, Jifall16\_18, Arti\_19, KidneyBean\_19, NovumRegina\_19
- Track 16 : Phomeo\_18
- Track 17 : Commandaria\_20
- Track 18 : Wheezy\_19, Tracker\_19
- Track 19 : Outis\_19, StarStruck\_19
- Track 20 : NosilaM\_21, Kabluna\_21, Bonum\_21
- Track 21 : MerCougar\_19
- Track 22 : Lollipop1437\_23, Ennea\_24
- Track 23 : Patio\_21
- Track 24 : Float294\_20, Skysand\_20
- Track 25 : WhoseManz\_19
- Track 26 : IDyn\_18
- Track 27 : BiPauneto\_20, Yndexa\_19, Sukkupi\_19
- Track 28 : Marietta\_19
- Track 29 : HubbaBubba\_16
- Track 30 : NadineRae\_17
- Track 31 : Fury\_25
- Track 32 : Pleakley\_25
- Track 33 : Buttrmlkdreams\_48, Yummy\_48, Troje\_48, Horseradish\_48, MScarn\_50
- Track 34 : SketchMex\_46, Biskit\_48
- Track 35 : BigChungus\_46, Feastonyeet\_46
- Track 36 : Yarn\_42, AndPeggy\_42, Tolls\_46, SteamedHams\_45



- Track 37 : Nibbles\_41
- Track 38 : BillDoor\_45
- Track 39 : Emalyn\_44
- Track 40 : Burnsey\_45, RedBaron\_47
- Track 41 : AikoCarson\_46
- Track 42 : Gibbous\_41, Dre3\_41
- Track 43 : Agatha\_45, GoldHunter\_46, Cozz\_43
- Track 44 : Axym\_44
- Track 45 : KayGee\_48, Elinal\_50
- Track 46 : SheckWes\_50
- Track 47 : SweatNTears\_46
- Track 48 : Amok\_46
- Track 49 : Fribs8\_41
- Track 50 : Survivors\_42
- Track 51 : GTE2\_37
- Track 52 : MaVan\_42
- Track 53 : Azira\_42
- Track 54 : Vine\_49
- Track 55 : CherryonLim\_48
- Track 56 : Nodigi\_53
- Track 57 : Elliott\_45, PsychoKiller\_44, Sopespian\_43
- Track 58 : Jamzy\_50
- Track 59 : Carsonalex\_48
- Track 60 : Zareef\_44
- Track 61 : HippoPololi\_43
- Track 62 : SummitAcademy\_46
- Track 63 : Yakult\_48
- Track 64 : Margaret\_51, RanchParmCat\_50
- Track 65 : Hexbug\_53
- Track 66 : Cleo\_40
- Track 67 : Mayweather\_51
- Track 68 : MAnor\_48
- Track 69 : PotPie\_46
- Track 70 : Button\_48
- Track 71 : Typhonomachy\_45
- Track 72 : Lauer\_43
- Track 73 : Quasar\_45
- Track 74 : Nina\_44
- Track 75 : GiKK\_50
- Track 76 : Pons\_48
- Track 77 : MunkgeeRoachy\_43
- Track 78 : Orla\_53
- Track 79 : KappaFarmDelta\_27
- Track 80 : William\_26
- Track 81 : Pipp\_25, Utz\_25
- Track 82 : Jalammah\_27
- Track 83 : JasperJr\_25, Guacamole\_25, MintFen\_25, Malachai\_26, CaptainKirk2\_25, Begonia\_26, Melba\_25, Delian\_25, Zarbodnamra\_25, Wisp\_24, PhrostedPhlake\_27, BlingBling\_25, Barco\_25
- Track 84 : Samba\_25, Hitter\_25
- Track 85 : Fenry\_24
- Track 86 : Wocket\_27
- Track 87 : Frokostdame\_25

- Track 88 : PrincePatrick\_25
- Track 89 : Gambino\_27
- Track 90 : Obliviate\_25, ZiggyZoo\_25
- Track 91 : Archis\_26
- Track 92 : JuJu\_26
- Track 93 : Murp\_26
- Track 94 : Petra\_27
- Track 95 : CarolAnn\_26, Blino\_26
- Track 96 : Lysidious\_26
- Track 97 : MissRona\_27, Azula\_27, Blueberry\_27
- Track 98 : Toast\_26, PCoral7\_26
- Track 99 : UmaThurman\_25
- Track 100 : Mellie\_24
- Track 101 : Fairfaxidum\_25
- Track 102 : Walrus\_27
- Track 103 : Orchid\_39, Kampe\_40, PatrickStar\_40
- Track 104 : Gibbles\_38, RobinSparkles\_42
- Track 105 : Wrigley\_28, Jablanski\_28, Posh\_28, Pytheas\_28
- Track 106 : Cashline\_26
- Track 107 : LonelyBoi\_27
- Track 108 : Lilas\_27
- Track 109 : EMSquaredA\_27, Pollux\_27, Bradissa\_27, EnalisNailo\_27, Marteena\_27, Floral\_27
- Track 110 : Confidence\_26, BeeGee\_26
- Track 111 : Angelique\_28
- Track 112 : BritBrat\_27
- Track 113 : Bunnybear\_24
- Track 114 : Lton\_23
- Track 115 : Pepperoni\_24
- Track 116 : Ohgeesy\_25
- Track 117 : Nymphadora\_25
- Track 118 : BoyNamedSue\_26, AlumE\_26, PantheRoc\_26, Agueybana\_26
- Track 119 : WelcomeAyanna\_24, ThankyouJordi\_24
- Track 120 : Neobush\_27, Manasvini\_27, Kita\_27, Suscepit\_27, Zameen\_27, Antonio\_27, Trumpet\_27, Eudoria\_27, Maridalia\_26, Tayonia\_27
- Track 121 : Hyzer\_27
- Track 122 : Bialota\_25, Zirinka\_25
- Track 123 : Eviarto\_25, BatStarr\_25, TimTam\_25, Bosnia\_25, Herod\_25
- Track 124 : Polly\_24
- Track 125 : Madeline\_25
- Track 126 : Hugley\_25
- Track 127 : GemG\_24, Ebert\_24, Gizermo\_24, Cynthia\_24, Whiteclaw\_24, Savage\_24, Sproutie\_24, Mocha12\_24, Clap\_24, Haley23\_24, TueritoX\_24
- Track 128 : Attis\_24, Yeet412\_24, LordFarquaad\_24, SoilAssassin\_24, Bjaner7\_24
- Track 129 : Matteo\_23
- Track 130 : Vasanti\_23
- Track 131 : Nettuno\_23
- Track 132 : Lamberg\_23, EdnaMode\_23
- Track 133 : Sahara\_23
- Track 134 : Pickett\_23
- Track 135 : JCole\_22
- Track 136 : BaxterFox\_25
- Track 137 : Yeezy\_27

- Track 138 : Shlim410\_25, Adora\_25, Hortense\_25, Twinkle\_25
- Track 139 : Dolores\_25, MichaelScott\_25
- Track 140 : Sekhmet\_25
- Track 141 : Beenie\_25
- Track 142 : Oregano\_25
- Track 143 : Easley\_25, WinkNick\_25
- Track 144 : Annalisa\_25
- Track 145 : DobbysSock\_24
- Track 146 : Samman98\_25
- Track 147 : PhriskyACE\_24
- Track 148 : Mcklovin\_25
- Track 149 : Howe\_25
- Track 150 : Dorito\_24
- Track 151 : Thimann\_25, Suerte\_23
- Track 152 : Clark\_25
- Track 153 : Denise\_22
- Track 154 : Faith5x5\_23
- Track 155 : OneDirection\_22
- Track 156 : Moosehead\_23
- Track 157 : Sidious\_26
- Track 158 : RavenCo17\_24
- Track 159 : BBQValindra\_26
- Track 160 : Bowser\_26
- Track 161 : Coriander\_27
- Track 162 : GEazy\_26, HannahD\_26
- Track 163 : Kiko\_27
- Track 164 : Dmitri\_27
- Track 165 : DirtyBoi\_28
- Track 166 : Hedwig\_28
- Track 167 : RayTheFireFly\_27
- Track 168 : Opie\_26
- Track 169 : MagicMan\_26, Schnabeltier\_26
- Track 170 : ZAYM\_27
- Track 171 : TaronosaurusRx\_26
- Track 172 : Doggs\_26
- Track 173 : BackstagePass\_26
- Track 174 : Eyes\_26
- Track 175 : Bunker\_26
- Track 176 : Phlop\_43, Fugax\_47, PullumCavea\_43, Barb\_46, ClamChowder\_46, PinkCoffee\_46
- Track 177 : KimmyK\_45, VanDeWege\_47, Wizard\_43, CoveyB\_47, Valary\_46, Arri\_47, Gezellig\_45
- Track 178 : Togo\_43, SmokingBunny\_44, Nubi\_44
- Track 179 : Jambalaya\_44, Savbucketdawg\_44
- Track 180 : Portcullis\_45, Halo3\_44
- Track 181 : Salvador\_43, Evamon\_43
- Track 182 : Danyall\_46, Twister6\_46
- Track 183 : YungMoney\_47
- Track 184 : Fireball\_45
- Track 185 : TillyBobJoe\_44
- Track 186 : Mutzi\_43
- Track 187 : Shinji\_44
- Track 188 : Bakery\_49

- Track 189 : RogerDodger\_47
- Track 190 : Clown\_50
- Track 191 : Belphegor\_45
- Track 192 : Tangerine\_45
- Track 193 : ChadMasterC\_46, Tangent\_46, Paries\_48, Nordenberg\_40, BobBob\_43, Vivi2\_48, Sanjuju\_44, MoontowerMania\_45, Fitzgerald\_44, McKinley\_47, Charming\_46, Barsten\_46, Rofo\_46, Shivanishola\_45, Galadriel\_45, Love\_49
- Track 194 : Bizzy\_46, Derg\_43, SchottB\_44, Baumdotcom\_44, LilHam\_43
- Track 195 : Geodirt\_44, Fosterous\_43, Kamashten\_43, Kewpiedoll\_45, Lennon\_45, Angelicage\_43, Sitar\_45, Thing3\_43, Stultus\_44, Affeca\_43
- Track 196 : Saronaya\_45, Baddon\_45, Ashertheman\_46, Gustavo\_45
- Track 197 : Sedona\_45
- Track 198 : Kroos\_46
- Track 199 : JKSyngboy\_43
- Track 200 : Bibwit\_44
- Track 201 : Keitabear\_45, Ailee\_42
- Track 202 : Brandonk123\_47
- Track 203 : Kwobi\_46, StorminNorm\_45, Tycho\_45
- Track 204 : Gaea\_45
- Track 205 : Ribeye\_46
- Track 206 : RiverRaider\_46
- Track 207 : YorkOnyx\_46
- Track 208 : Jabberwocky\_44
- Track 209 : Flatwoods\_46
- Track 210 : Inspectinfecti\_45, Ali17\_42, Hans\_46
- Track 211 : MelBins\_45
- Track 212 : Leonard\_44, Phinally\_44
- Track 213 : Phauci\_37
- Track 214 : EMoore\_42
- Track 215 : RoadKill\_54
- Track 216 : Chickadee\_57, Kwekel\_57
- Track 217 : Tiamoceli\_57
- Track 218 : Twonlo\_54
- Track 219 : GTE6\_58
- Track 220 : Zitch\_49
- Track 221 : Zipp\_47
- Track 222 : ViaConlectus\_46
- Track 223 : Verity\_46, Delrey21\_46, DoctorFroggo\_46
- Track 224 : Scioto\_47, Natkenzie\_46, Sampson\_46, Abblin\_46
- Track 225 : Tardus\_47
- Track 226 : APunk\_47
- Track 227 : Lilbeanie\_44
- Track 228 : Camerico\_44
- Track 229 : Gmala1\_33
- Track 230 : GordDuk1\_33
- Track 231 : GordTnk2\_33
- Track 232 : GMA3\_32
- Track 233 : Jumbo\_41
- Track 234 : Morkie\_24, PhorbesPhlower\_24
- Track 235 : Lucky10\_24
- Track 236 : Bantam\_131, SpeedDemon\_1340
- Track 237 : Daredevil\_123

- Track 238 : DatBoi\_128
- Track 239 : BearBQ\_27, MortyNRick\_27, Kuwabara\_27, Birdsong\_27
- Track 240 : Malisha\_30
- Track 241 : Ecliptus\_31
- Track 242 : ODay\_32
- Track 243 : Horus\_28, Kamaru\_28, Getalong\_29, Budski\_28, CheeseTouch\_28, Crater\_26, Holliday\_28, Leroy\_28, Phistory\_29, Phabuloso\_27, Frickyeah\_27, Apricot\_27, Whitney\_29
- Track 244 : Kenna\_27, Lutum\_28, Asapag\_28
- Track 245 : Periwinkle\_30
- Track 246 : BENtherdunthat\_28
- Track 247 : LitninMcQueen\_27
- Track 248 : Squiddly\_30, Spooky\_28
- Track 249 : Lenoshki\_31, Beted\_31, Oogie\_31
- Track 250 : Gray\_31
- Track 251 : Schomber\_30, Twin\_30, Chidiebere\_31, Kabocha\_32, Aloki\_30, Pakusa\_30, MintFritos\_30
- Track 252 : ScarletRaider\_30, FlyingTortilla\_30
- Track 253 : DalanDe\_26
- Track 254 : GMA6\_16
- Track 255 : ChisanaKitsune\_27
- Track 256 : Hanem\_31
- Track 257 : UBSmoodge\_32
- Track 258 : Mariokart\_42
- Track 259 : MossRose\_45, MakoManhole\_45, CaiB\_45, AnarQue\_45
- Track 260 : Sour\_47
- Track 261 : Evaa\_42
- Track 262 : NHagos\_43
- Track 263 : Sisko\_42, AnClar\_43
- Track 264 : Fresco\_42, Ligma\_42, Axumite\_42, Shatter\_42
- Track 265 : CloverMinnie\_45
- Track 266 : Yago84\_42
- Track 267 : LittleMunchkin\_44
- Track 268 : BiggityBass\_42
- Track 269 : Wooper\_45
- Track 270 : CharlottesWeb\_42
- Track 271 : BobRoss2024\_41
- Track 272 : Kudfre\_120
- Track 273 : Octobien14\_115
- Track 274 : Sephiroth\_116
- Track 275 : Syleon\_121
- Track 276 : Neville\_115
- Track 277 : Trax\_117
- Track 278 : Rabbitrun\_118
- Track 279 : Erutan\_86, Gretellyn\_86
- Track 280 : Jalebi\_86, MoiGyank\_89, Sampudon\_88, Gibbin\_88
- Track 281 : Patos\_91, NorManre\_91
- Track 282 : DaviePasture\_87
- Track 283 : Apeppi\_82, LuckyLeo\_84
- Track 284 : Avian\_84
- Track 285 : Alephilan\_87
- Track 286 : Xenia2\_87
- Track 287 : GOATification\_85, Fulcrum\_85

- Track 288 : Yikes\_87
- Track 289 : Alyssamiracle\_87, Genamy16\_87, NovaSharks\_86
- Track 290 : DoobyDoo\_86
- Track 291 : Sadboi\_86
- Track 292 : Ranch\_90
- Track 293 : Tillicus\_82
- Track 294 : Zany\_85
- Track 295 : DumpTruck\_89
- Track 296 : Lila22\_87
- Track 297 : OtterstedtS21\_87
- Track 298 : BirthdayBoy\_89
- Track 299 : Rumi\_85
- Track 300 : Lambo\_86
- Track 301 : ParvusTarda\_86
- Track 302 : Wojtek\_79
- Track 303 : Jamemuya19\_85
- Track 304 : Mima20\_87
- Track 305 : Malibo\_27
- Track 306 : DumpsterDude\_29
- Track 307 : Ruthy\_29
- Track 308 : Hibiscus\_50, Heinz\_50
- Track 309 : Reyja\_51
- Track 310 : Jojo24\_48
- Track 311 : Santhid\_48
- Track 312 : DonkeyMan\_49, Tarzan\_50
- Track 313 : ObLaDi\_33, ModicumRichard\_33, Aleemily\_32, Cafasso\_33
- Track 314 : Morgana\_33
- Track 315 : TPA4\_30
- Track 316 : Mbo4\_54
- Track 317 : VanLee\_104
- Track 318 : Mbo2\_63
- Track 319 : Reynauld\_61
- Track 320 : E3\_gp85
- Track 321 : GAL1\_26
- Track 322 : TinyDot\_25
- Track 323 : Eyre\_23
- Track 324 : Jace\_72
- Track 325 : Gudmit\_24
- Track 326 : TPA2\_54

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

The start number called the most often in the published annotations is 184, it was called in 99 of the 471 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Affeca\_43, Ailee\_42, Angelicage\_43, Apiary\_20, Archis\_26, Arri\_47, Ashertheman\_46, Azula\_27, Baddon\_45, Barco\_25, Barsten\_46, Baumdotcom\_44, Begonia\_26, Bibwit\_44, Bizzy\_46, BlingBling\_25, Blueberry\_27, BobBob\_43, Brandonk123\_47, Braxoaddie\_20, Bunnybear\_24, CaptainKirk2\_25,

ChadMasterC\_46, Charming\_46, Clown\_50, CoffeeBean\_20, CoveyB\_47, Danyall\_46, Delian\_25, Derg\_43, EMoore\_42, Evamon\_43, Eyre\_23, Faith5x5\_23, Ferry\_24, Fitzgerald\_44, Flatwoods\_46, Fosterous\_43, Frokostdame\_25, GAL1\_26, Gaea\_45, Galadriel\_45, Geodirt\_44, Gezellig\_45, Guacamole\_25, Gustavo\_45, GuyFagieri\_19, Halo3\_44, Hitter\_25, JCole\_22, JKSyngboy\_43, Jabbberwocky\_44, Jalammah\_27, Jambalaya\_44, JasperJr\_25, Kamashten\_43, Keitabear\_45, Kewpiedoll\_45, KimmyK\_45, Kroos\_46, Kwobi\_46, Lennon\_45, LilHam\_43, Lilbeanie\_44, Love\_49, Lysidious\_26, MacGully\_23, Malachai\_26, Maselop\_20, McKinley\_47, Melba\_25, Mellie\_24, MintFen\_25, MissRona\_27, MoontowerMania\_45, Murp\_26, Nordenberg\_40, Paries\_48, PhrostedPhlake\_27, Pipp\_25, Polyuyki\_20, Portcullis\_45, Ribeye\_46, RiverRaider\_46, Rofo\_46, RogerDodger\_47, Salvador\_43, Samba\_25, Sanjuju\_44, Saronaya\_45, Savbucketdawg\_44, SchottB\_44, Sedona\_45, Shivanishola\_45, Sitar\_45, StorminNorm\_45, Stultus\_44, Tangent\_46, Tangerine\_45, Thing3\_43, Twister6\_46, Tycho\_45, UmaThurman\_25, Utz\_25, Valary\_46, VanDeWege\_47, Vivi2\_48, Walrus\_27, Wisp\_24, Wizard\_43, YorkOnyx\_46, Zarbodnamra\_25,

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

- Apeppi\_82, Buggaboo\_20, Gambino\_27, LuckyLeo\_84, MerCougar\_19, Outis\_19, Sadboi\_86, StarStruck\_19, SuperSulley\_20, Tillicus\_82, Wojtek\_79,

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

- APunk\_47, Abblin\_46, Adora\_25, Agatha\_45, Agueybana\_26, AikoCarson\_46, Aleemily\_32, Alephilan\_87, Ali17\_42, Alok\_30, AlumE\_26, Alyssamiracle\_87, Amok\_46, AnClar\_43, AnarQue\_45, AndPeggy\_42, Angelique\_28, Annalisa\_25, Antonio\_27, Apricot\_27, Arti\_19, Asapag\_28, Attis\_24, Avian\_84, Axumite\_42, Axym\_44, Azira\_42, BBQValindra\_26, BENtherdunthat\_28, BackstagePass\_26, Bakery\_49, Bantam\_131, Barb\_46, BatStarr\_25, BaxterFox\_25, BearBQ\_27, BeeGee\_26, Beenie\_25, Belphegor\_45, Beted\_31, BiPauneto\_20, Bialota\_25, BigChungus\_46, BiggityBass\_42, BillDoor\_45, Birdsong\_27, BirthdayBoy\_89, Biskit\_48, Bjanes7\_24, Blino\_26, BobRoss2024\_41, Bonum\_21, Bosnia\_25, Bowser\_26, BoyNamedSue\_26, Bradissa\_27, BritBrat\_27, Budski\_28, Bunker\_26, Burnsey\_45, Button\_48, Buttrmilkdreams\_48, Cafasso\_33, CaiB\_45, Camerico\_44, CarolAnn\_26, Carsonalex\_48, Cashline\_26, CharlottesWeb\_42, CheeseTouch\_28, CherryonLim\_48, Chickadee\_57, Chidiebere\_31, ChisanaKitsune\_27, ClamChowder\_46, Clap\_24, Clark\_25, Cleo\_40, CloverMinnie\_45, Commandaria\_20, Confidence\_26, Coriander\_27, Cozz\_43, Crater\_26, Cynthia\_24, DalanDe\_26, Dalilpop\_23, Daredevil\_123, DatBoi\_128, DaviePasture\_87, Delrey21\_46, Denise\_22, DirtyBoi\_28, Dmitri\_27, DobbysSock\_24, DoctorFroggo\_46, Doggs\_26, Dolores\_25, DonkeyMan\_49, DoobyDoo\_86, Dorito\_24, Dre3\_41, DumpTruck\_89, DumpsterDude\_29, E3\_gp85, EMSquaredA\_27, Easley\_25, Ebert\_24, Ecliptus\_31, EdnaMode\_23, Elinal\_50, Elliott\_45, Emalyn\_44, Emianna\_19, EnalisNailo\_27, Ennea\_24, Erutan\_86, Eudoria\_27, Evaa\_42, Eviarto\_25, Eyes\_26, Fairfaxidum\_25, Feastonyeet\_46, Fireball\_45, Flapper\_22, Float294\_20, Floral\_27, FlyingTortilla\_30, Foxboro\_20, Fresco\_42, Fribs8\_41, Frickyeah\_27, Fugax\_47, Fulcrum\_85, Fury\_25, GEazy\_26, GMA3\_32, GMA6\_16, GOATification\_85, GRU1\_9, GTE2\_37, GTE5\_9, GTE6\_58, GTE8\_7, GemG\_24, Genamy16\_87, Getalong\_29, GiKK\_50, Gibbin\_88, Gibbles\_38, Gibbous\_41, Gizermo\_24, Gmala1\_33, GoldHunter\_46, GordDuk1\_33, GordTnk2\_33, Gray\_31, GretelLyn\_86, GrootJr\_21, Gudmit\_24, Gustav\_37, Haley23\_24, Hanem\_31, HannahD\_26, Hans\_46, Hedwig\_28, Heinz\_50, Herod\_25, Hexbug\_53, Hibiscus\_50, HippoPololi\_43, Holliday\_28, Horseradish\_48, Hortense\_25, Horus\_28, Howe\_25, HubbaBubba\_16, Hugley\_25, Hyzer\_27, IDyn\_18, Inspectinfecti\_45, Jablanski\_28, Jace\_72, Jalebi\_86, Jamemuya19\_85,

Jamzy\_50, Jifall16\_18, Jojo24\_48, JuJu\_26, Jumbo\_41, Kabluna\_21, Kabocha\_32, Kamaru\_28, Kampe\_40, KappaFarmDelta\_27, KayGee\_48, Kenna\_27, KidneyBean\_19, Kiko\_27, Kita\_27, Kudrefre\_120, Kurt\_19, Kuwabara\_27, Kwekel\_57, Lamberg\_23, Lambo\_86, Lauer\_43, Lenoshki\_31, Leonard\_44, Leroy\_28, Ligma\_42, Lila22\_87, Lilas\_27, LitninMcQueen\_27, LittleMunchkin\_44, Lollipop1437\_23, LonelyBoi\_27, LordFarquaad\_24, Lton\_23, Lucky10\_24, Lutum\_28, MAnor\_48, MScarn\_50, MaVan\_42, Madeline\_25, MagicMan\_26, Mahdia\_35, MakoManhole\_45, Malibo\_27, Malisha\_30, Manasvini\_27, Margaret\_51, Maridalia\_26, Marietta\_19, Mariokart\_42, Martena\_27, Matteo\_23, Mayweather\_51, Mbo2\_63, Mbo4\_54, Mcklovin\_25, MelBins\_45, MichaelScott\_25, Mima20\_87, MintFritos\_30, Mocha12\_24, ModicumRichard\_33, MoiGyank\_89, Moosehead\_23, Morgana\_33, Morkie\_24, MortyNRick\_27, MossRose\_45, MunkgeeRoachy\_43, Mutzi\_43, NHagos\_43, NadineRae\_17, NatB6\_19, Natkenzie\_46, Neobush\_27, Nettuno\_23, Neville\_115, Nibbles\_41, Nina\_44, Nodigi\_53, NorManre\_91, NosilaM\_21, NovaSharks\_86, NovumRegina\_19, Nubi\_44, Nymphadora\_25, ODay\_32, ObLaDi\_33, Obliviate\_25, Octobien14\_115, Ohgeesy\_25, OneDirection\_22, Oogie\_31, Opie\_26, Orchid\_39, Oregano\_25, Orla\_53, OtterstedtS21\_87, PCoral7\_26, Pakusa\_30, PantheRoc\_26, ParvusTarda\_86, Patio\_21, Patos\_91, PatrickStar\_40, Pepperoni\_24, Periwinkle\_30, Petra\_27, Phabuloso\_27, Phauci\_37, Phinally\_44, Phistory\_29, Phlop\_43, Phomeo\_18, PhorbesPhlower\_24, PhriskyACE\_24, Pickett\_23, PinkCoffee\_46, Pleakley\_25, Pollux\_27, Polly\_24, Pons\_48, Posh\_28, PotPie\_46, PrincePatrick\_25, PsychoKiller\_44, PullumCavea\_43, Pytheas\_28, Quasar\_45, Rabbitrun\_118, RanchParmCat\_50, Ranch\_90, RavenCo17\_24, RayTheFireFly\_27, RedBaron\_47, Reyja\_51, Reynauld\_61, RoadKill\_54, RobinSparkles\_42, Rumi\_85, Ruthy\_29, Sahara\_23, Samman98\_25, Sampson\_46, Sampudon\_88, Santhid\_48, Savage\_24, ScarletRaider\_30, Schnabeltier\_26, Schomber\_30, Scioto\_47, Sekhmet\_25, Sephiroth\_116, Shatter\_42, SheckWes\_50, Shinji\_44, Shlim410\_25, Sidious\_26, Sisko\_42, SketchMex\_46, Skysand\_20, SmokingBunny\_44, SoilAssassin\_24, Sopespian\_43, Sour\_47, SpeedDemon\_1340, Spooky\_28, Sproutie\_24, Squiddly\_30, SteamedHams\_45, Suerte\_23, Sukkupi\_19, SummitAcademy\_46, Survivors\_42, Suscepit\_27, SweatNTears\_46, Syleon\_121, TPA2\_54, TPA4\_30, Tardus\_47, TaronosaurusRx\_26, Tarzan\_50, Tayonia\_27, ThankyouJordi\_24, Thimann\_25, Tiamoceli\_57, TillyBobJoe\_44, TimTam\_25, TinyDot\_25, Toast\_26, Togo\_43, Tolls\_46, Tracker\_19, Trax\_117, Troje\_48, Trumpet\_27, TuertoX\_24, Turuncu\_22, Twin\_30, Twinkle\_25, Twonlo\_54, Typhonmarchy\_45, UBSmoodge\_32, VanLee\_104, Vasanti\_23, Verity\_46, ViaConlectus\_46, Vine\_49, WelcomeAyanna\_24, Wheezy\_19, Whiteclaw\_24, Whitney\_29, WhoseManz\_19, William\_26, WinkNick\_25, Wocket\_27, Wooper\_45, Wrigley\_28, Xenia2\_87, Yago84\_42, Yakult\_48, Yarn\_42, Yeet412\_24, Yeezy\_27, Yikes\_87, Yndexa\_19, Yummy\_48, YungMoney\_47, ZAYM\_27, Zameen\_27, Zany\_85, Zareef\_44, ZiggyZoo\_25, Zipp\_47, Zirinka\_25, Zitch\_49,

### Summary by start number:

#### Start 105:

- Found in 1 of 544 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: E3\_gp85 (singleton),

#### Start 116:

- Found in 8 of 544 ( 1.5% ) of genes in pham



- Manual Annotations of this start: 5 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan\_49 (DY), Heinz\_50 (DY), Hibiscus\_50 (DY), Jojo24\_48 (DY), Reyja\_51 (DY), Santhid\_48 (DY), TPA2\_54 (singleton), Tarzan\_50 (DY),

#### Start 134:

- Found in 3 of 544 ( 0.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Xenia2\_87 (DV),

#### Start 139:

- Found in 40 of 544 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 2.5% of time when present
- Phage (with cluster) where this start called: DumpTruck\_89 (DV),

#### Start 147:

- Found in 33 of 544 ( 6.1% ) of genes in pham
- Manual Annotations of this start: 26 of 471
- Called 93.9% of time when present
- Phage (with cluster) where this start called: Alephilan\_87 (DV), Alyssamiracle\_87 (DV), Avian\_84 (DV), BirthdayBoy\_89 (DV), DaviePasture\_87 (DV), DoobyDoo\_86 (DV), Erutan\_86 (DV), Fulcrum\_85 (DV), GOATification\_85 (DV), Genamy16\_87 (DV), Gibbin\_88 (DV), GretelLyn\_86 (DV), Jalebi\_86 (DV), Jamemuya19\_85 (DV), Lambo\_86 (DV), Lila22\_87 (DV), Mima20\_87 (DV), MoiGyank\_89 (DV), NorManre\_91 (DV), NovaSharks\_86 (DV), OtterstedtS21\_87 (DV), ParvusTarda\_86 (DV), Patos\_91 (DV), Ranch\_90 (DV), Rumi\_85 (DV), Sadboi\_86 (DV), Sampudon\_88 (DV), Tillicus\_82 (DV), Wojtek\_79 (DV), Yikes\_87 (DV), Zany\_85 (DV),

#### Start 148:

- Found in 27 of 544 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 8 of 471
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Button\_48 (CT), GiKK\_50 (CT), Hexbug\_53 (CT), Jamzy\_50 (CT), Margaret\_51 (CT), Nodigi\_53 (CT), Orla\_53 (CT), RanchParmCat\_50 (CT), Yakult\_48 (CT),

#### Start 160:

- Found in 52 of 544 ( 9.6% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 1.9% of time when present
- Phage (with cluster) where this start called: Gray\_31 (DQ),

#### Start 161:

- Found in 15 of 544 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 2 of 471
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Apeppi\_82 (DV), LuckyLeo\_84 (DV),

#### Start 164:

- Found in 5 of 544 ( 0.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Mbo2\_63 (singleton),

Start 166:

- Found in 1 of 544 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury\_25 (CR5),

Start 167:

- Found in 71 of 544 ( 13.1% ) of genes in pham
- Manual Annotations of this start: 3 of 471
- Called 4.2% of time when present
- Phage (with cluster) where this start called: BritBrat\_27 (CY2), Clark\_25 (CZ4), Dorito\_24 (CZ4),

Start 168:

- Found in 10 of 544 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Lilas\_27 (CY1),

Start 169:

- Found in 1 of 544 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA6\_16 (DQ),

Start 172:

- Found in 43 of 544 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 29 of 471
- Called 90.7% of time when present
- Phage (with cluster) where this start called: Aloki\_30 (DQ), Arti\_19 (CR2), Beted\_31 (DQ), Chidiebere\_31 (DQ), ChisanaKitsune\_27 (DQ), Commandaria\_20 (CR2), DalanDe\_26 (DQ), Dalipop\_23 (CR1), Emianna\_19 (CR2), Ennea\_24 (CR3), Flapper\_22 (CR1), Float294\_20 (CR3), FlyingTortilla\_30 (DQ), Foxboro\_20 (CR2), GRU1\_9 (CR1), GTE5\_9 (CR1), GTE8\_7 (CR2), GrootJr\_21 (CR2), Hanem\_31 (DQ), Jifall16\_18 (CR2), Kabocha\_32 (DQ), KidneyBean\_19 (CR2), Kurt\_19 (CR2), Lenoshki\_31 (DQ), Lollipop1437\_23 (CR3), MintFritos\_30 (DQ), NatB6\_19 (CR2), NovumRegina\_19 (CR2), Oogie\_31 (DQ), Pakusa\_30 (DQ), Patio\_21 (CR3), ScarletRaider\_30 (DQ), Schomber\_30 (DQ), Skysand\_20 (CR3), Tracker\_19 (CR2), Turuncu\_22 (CR1), Twin\_30 (DQ), UBSmoodge\_32 (DQ), Wheezy\_19 (CR2),

Start 174:

- Found in 9 of 544 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 3 of 471
- Called 33.3% of time when present
- Phage (with cluster) where this start called: BiPauneto\_20 (CR4), Sukkupi\_19 (CR4), Yndexa\_19 (CR4),

Start 177:

- Found in 13 of 544 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 6 of 471
- Called 46.2% of time when present
- Phage (with cluster) where this start called: Delrey21\_46 (DE4), DoctorFroggo\_46 (DE4), IDyn\_18 (CR4), NadineRae\_17 (CR4), Verity\_46 (DE4), Zipp\_47 (DE4),

#### Start 178:

- Found in 8 of 544 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 8 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bonum\_21 (CR2), Buggaboo\_20 (CR2), Kabluna\_21 (CR2), MerCougar\_19 (CR2), NosilaM\_21 (CR2), Outis\_19 (CR2), StarStruck\_19 (CR2), SuperSulley\_20 (CR2),

#### Start 179:

- Found in 9 of 544 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Reynauld\_61 (singleton),

#### Start 181:

- Found in 7 of 544 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 14.3% of time when present
- Phage (with cluster) where this start called: DumpsterDude\_29 (DW),

#### Start 182:

- Found in 43 of 544 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 36 of 471
- Called 88.4% of time when present
- Phage (with cluster) where this start called: Adora\_25 (CZ4), Annalisa\_25 (CZ4), Bakery\_49 (DC1), Barb\_46 (DC1), Beenie\_25 (CZ4), Blino\_26 (CV), CarolAnn\_26 (CV), ClamChowder\_46 (DC1), DobbysSock\_24 (CZ4), Dolores\_25 (CZ4), Fireball\_45 (DC1), Fugax\_47 (DC1), Hortense\_25 (CZ4), Hyzer\_27 (CZ1), JuJu\_26 (CV), KappaFarmDelta\_27 (CV), Mcklovin\_25 (CZ4), MichaelScott\_25 (CZ4), Mutzi\_43 (DC1), Nubi\_44 (DC1), Obliviate\_25 (CV), Oregano\_25 (CZ4), Petra\_27 (CV), Phlop\_43 (DC1), PinkCoffee\_46 (DC1), PullumCavea\_43 (DC1), Samman98\_25 (CZ4), Sekhmet\_25 (CZ4), Shlim410\_25 (CZ4), Sidious\_26 (CZ7), SmokingBunny\_44 (DC1), Suerte\_23 (CZ4), Thimann\_25 (CZ4), TillyBobJoe\_44 (DC1), Togo\_43 (DC1), Twinkle\_25 (CZ4), YungMoney\_47 (DC1), ZiggyZoo\_25 (CV),

#### Start 184:

- Found in 123 of 544 ( 22.6% ) of genes in pham
- Manual Annotations of this start: 99 of 471
- Called 91.1% of time when present
- Phage (with cluster) where this start called: Affeca\_43 (DE1), Ailee\_42 (DE1), Angelicage\_43 (DE1), Apiary\_20 (CR), Archis\_26 (CV), Arri\_47 (DC1), Ashertheman\_46 (DE1), Azula\_27 (CV), Baddon\_45 (DE1), Barco\_25 (CV), Barsten\_46 (DE1), Baumdotcom\_44 (DE1), Begonia\_26 (CV), Bibwit\_44 (DE1), Bizzy\_46 (DE1), BlingBling\_25 (CV), Blueberry\_27 (CV), BobBob\_43 (DE1), Brandonk123\_47 (DE1), Braxoaddie\_20 (CR), Bunnybear\_24 (CZ), CaptainKirk2\_25 (CV), ChadMasterC\_46 (DE1), Charming\_46 (DE1), Clown\_50 (DC2),

CoffeeBean\_20 (CR), CoveyB\_47 (DC1), Danyall\_46 (DC1), Delian\_25 (CV), Derg\_43 (DE1), EMoore\_42 (DE2), Evamon\_43 (DC1), Eyre\_23 (singleton), Faith5x5\_23 (CZ6), Fenry\_24 (CV), Fitzgerald\_44 (DE1), Flatwoods\_46 (DE1), Fosterous\_43 (DE1), Frokostdame\_25 (CV), GAL1\_26 (singleton), Gaea\_45 (DE1), Galadriel\_45 (DE1), Geodirt\_44 (DE1), Gezellig\_45 (DC1), Guacamole\_25 (CV), Gustavo\_45 (DE1), GuyFagieri\_19 (CR), Halo3\_44 (DC1), Hitter\_25 (CV), JCOle\_22 (CZ2), JKSyngboy\_43 (DE1), Jabberwocky\_44 (DE1), Jalammah\_27 (CV), Jambalaya\_44 (DC1), JasperJr\_25 (CV), Kamashten\_43 (DE1), Keitabear\_45 (DE1), Kewpiedoll\_45 (DE1), KimmyK\_45 (DC1), Kroos\_46 (DE1), Kwobi\_46 (DE1), Lennon\_45 (DE1), LilHam\_43 (DE1), Lilbeanie\_44 (DE5), Love\_49 (DE1), Lysidious\_26 (CV), MacGully\_23 (CR), Malachai\_26 (CV), Maselop\_20 (CR), McKinley\_47 (DE1), Melba\_25 (CV), Mellie\_24 (CV), MintFen\_25 (CV), MissRona\_27 (CV), MoontowerMania\_45 (DE1), Murp\_26 (CV), Nordenberg\_40 (DE1), Paries\_48 (DE1), PhrostedPhlake\_27 (CV), Pipp\_25 (CV), Polyuyuki\_20 (CR), Portcullis\_45 (DC1), Ribeye\_46 (DE1), RiverRaider\_46 (DE1), Rofo\_46 (DE1), RogerDodger\_47 (DC1), Salvador\_43 (DC1), Samba\_25 (CV), Sanjuju\_44 (DE1), Saronaya\_45 (DE1), Savbucketdawg\_44 (DC1), SchottB\_44 (DE1), Sedona\_45 (DE1), Shivanishola\_45 (DE1), Sitar\_45 (DE1), StorminNorm\_45 (DE1), Stultus\_44 (DE1), Tangent\_46 (DE1), Tangerine\_45 (DE1), Thing3\_43 (DE1), Twister6\_46 (DC1), Tycho\_45 (DE1), UmaThurman\_25 (CV), Utz\_25 (CV), Valary\_46 (DC1), VanDeWege\_47 (DC1), Vivi2\_48 (DE1), Walrus\_27 (CV), Wisp\_24 (CV), Wizard\_43 (DC1), YorkOnyx\_46 (DE1), Zarbodnamra\_25 (CV),

#### Start 185:

- Found in 9 of 544 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 7 of 471
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Ali17\_42 (DE2), Belphegor\_45 (DE), Hans\_46 (DE2), Inspectinfecti\_45 (DE2), Leonard\_44 (DE2), MelBins\_45 (DE2), Phauci\_37 (DE2), Phinally\_44 (DE2),

#### Start 187:

- Found in 18 of 544 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 15 of 471
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Bradissa\_27 (CY1), EMSquaredA\_27 (CY1), EnalisNailo\_27 (CY1), Fairfaxidum\_25 (CV), Floral\_27 (CY1), Gudmit\_24 (singleton), Marteena\_27 (CY1), Matteo\_23 (CZ2), Morkie\_24 (DH), PCoral7\_26 (CV), Pepperoni\_24 (CZ), PhorbesPhlower\_24 (DH), Pollux\_27 (CY1), PrincePatrick\_25 (CV), Toast\_26 (CV), William\_26 (CV),

#### Start 188:

- Found in 87 of 544 ( 16.0% ) of genes in pham
- Manual Annotations of this start: 69 of 471
- Called 94.3% of time when present
- Phage (with cluster) where this start called: APunk\_47 (DE4), Abblin\_46 (DE4), Agatha\_45 (CT), AikoCarson\_46 (CT), Amok\_46 (CT), AnClar\_43 (DR), AnarQue\_45 (DR), AndPeggy\_42 (CT), Axym\_44 (CT), Azira\_42 (CT), BigChungus\_46 (CT), BiggityBass\_42 (DR), BillDoor\_45 (CT), Biskit\_48 (CT), Burnsey\_45 (CT), Buttrmlkdreams\_48 (CT), CaiB\_45 (DR), Carsonalex\_48 (CT), CherryonLim\_48 (CT), Chickadee\_57 (DE3), Cleo\_40 (CT), CloverMinnie\_45 (DR), Cozz\_43 (CT), Dre3\_41 (CT), Elinal\_50 (CT), Elliott\_45 (CT), Emalyn\_44 (CT), Feastonyeet\_46 (CT), Fribs8\_41 (CT), GTE2\_37 (CT), GTE6\_58 (DE3), Gibbous\_41 (CT), GoldHunter\_46

(CT), HippoPololi\_43 (CT), Horseradish\_48 (CT), KayGee\_48 (CT), Kwekel\_57 (DE3), Lauer\_43 (CT), LittleMunchkin\_44 (DR), MAnor\_48 (CT), MScarn\_50 (CT), MaVan\_42 (CT), MakoManhole\_45 (DR), Mayweather\_51 (CT), MossRose\_45 (DR), MunkgeeRoachy\_43 (CT), NHagos\_43 (DR), Natkenzie\_46 (DE4), Nibbles\_41 (CT), Nina\_44 (CT), Pons\_48 (CT), PotPie\_46 (CT), PsychoKiller\_44 (CT), Quasar\_45 (CT), RedBaron\_47 (CT), RoadKill\_54 (DE3), Sampson\_46 (DE4), Scioto\_47 (DE4), SheckWes\_50 (CT), Sisko\_42 (DR), SketchMex\_46 (CT), Sopespian\_43 (CT), Sour\_47 (DR), SteamedHams\_45 (CT), SummitAcademy\_46 (CT), Survivors\_42 (CT), SweatNTears\_46 (CT), Tardus\_47 (DE4), Tiamoceli\_57 (DE3), Tolls\_46 (CT), Troje\_48 (CT), Twonlo\_54 (DE3), Typhonmacy\_45 (CT), ViaConlectus\_46 (DE4), Vine\_49 (CT), Wocket\_27 (CV), Wooper\_45 (DR), Yago84\_42 (DR), Yarn\_42 (CT), Yummy\_48 (CT), Zareef\_44 (CT), Zitch\_49 (DE4),

Start 189:

- Found in 8 of 544 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 3 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camerico\_44 (DF), Daredevil\_123 (DL), GMA3\_32 (DF2), Gmala1\_33 (DF1), GordDuk1\_33 (DF1), GordTnk2\_33 (DF1), Jumbo\_41 (DF3), TPA4\_30 (singleton),

Start 190:

- Found in 55 of 544 ( 10.1% ) of genes in pham
- Manual Annotations of this start: 48 of 471
- Called 96.4% of time when present
- Phage (with cluster) where this start called: Attis\_24 (CZ2), Axumite\_42 (DR), BBQValindra\_26 (DB), BackstagePass\_26 (DB), Bjaner7\_24 (CZ2), BobRoss2024\_41 (DR), Bowser\_26 (DB), Bunker\_26 (DB), CharlottesWeb\_42 (DR), Clap\_24 (CZ2), Cynthia\_24 (CZ2), DirtyBoi\_28 (DB), Dmitri\_27 (DB), Doggs\_26 (DB), Ebert\_24 (CZ2), EdnaMode\_23 (CZ2), Eyes\_26 (DB), Fresco\_42 (DR), GEazy\_26 (DB), GemG\_24 (CZ2), Gizermo\_24 (CZ2), Haley23\_24 (CZ2), HannahD\_26 (DB), Hedwig\_28 (DB), Kiko\_27 (DB), Lamberg\_23 (CZ2), Ligma\_42 (DR), LordFarquaad\_24 (CZ2), Lton\_23 (CZ), Lucky10\_24 (DH), MagicMan\_26 (DB), Mariokart\_42 (DR), Mocha12\_24 (CZ2), Moosehead\_23 (CZ6), Nettuno\_23 (CZ2), OneDirection\_22 (CZ6), Opie\_26 (DB), Pickett\_23 (CZ2), RavenCo17\_24 (CZ8), RayTheFireFly\_27 (DB), Sahara\_23 (CZ2), Savage\_24 (CZ2), Schnabeltier\_26 (DB), Shatter\_42 (DR), SoilAssassin\_24 (CZ2), Sproutie\_24 (CZ2), TaronosaurusRx\_26 (DB), TinyDot\_25 (singleton), TuertoX\_24 (CZ2), Vasanti\_23 (CZ2), Whiteclaw\_24 (CZ2), Yeet412\_24 (CZ2), ZAYM\_27 (DB),

Start 191:

- Found in 3 of 544 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 3 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Evaa\_42 (DR), Gustav\_37 (CD), Mahdia\_35 (CD),

Start 192:

- Found in 11 of 544 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 11 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam\_131 (DL), DatBoi\_128 (DL), Gibbles\_38 (CX), Kampe\_40 (CX), Neville\_115 (DU2), Orchid\_39 (CX),

PatrickStar\_40 (CX), Rabbitrun\_118 (DU2), RobinSparkles\_42 (CX), SpeedDemon\_1340 (DL), Trax\_117 (DU2),

Start 194:

- Found in 7 of 544 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 4 of 471
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Aleemily\_32 (DZ), Cafasso\_33 (DZ), Mbo4\_54 (singleton), ModicumRichard\_33 (DZ), Morgana\_33 (DZ), ObLaDi\_33 (DZ),

Start 196:

- Found in 8 of 544 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 5 of 471
- Called 62.5% of time when present
- Phage (with cluster) where this start called: Kudrefre\_120 (DU1), Octobien14\_115 (DU1), Sephiroth\_116 (DU1), Syleon\_121 (DU1), VanLee\_104 (singleton),

Start 200:

- Found in 1 of 544 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace\_72 (singleton),

Start 201:

- Found in 101 of 544 ( 18.6% ) of genes in pham
- Manual Annotations of this start: 3 of 471
- Called 3.0% of time when present
- Phage (with cluster) where this start called: Easley\_25 (CZ4), Ruthy\_29 (DW), WinkNick\_25 (CZ4),

Start 211:

- Found in 74 of 544 ( 13.6% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 1.4% of time when present
- Phage (with cluster) where this start called: Howe\_25 (CZ4),

Start 217:

- Found in 2 of 544 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marietta\_19 (CR4), WhoseManz\_19 (CR4),

Start 221:

- Found in 14 of 544 ( 2.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Phomeo\_18 (CR2),

Start 222:

- Found in 114 of 544 ( 21.0% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 1.8% of time when present

- Phage (with cluster) where this start called: Gambino\_27 (CV), PhriskyACE\_24 (CZ4),

#### Start 224:

- Found in 14 of 544 ( 2.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Hugley\_25 (CZ1),

#### Start 238:

- Found in 25 of 544 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 20 of 471
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BatStarr\_25 (CZ1), BeeGee\_26 (CY), Bialota\_25 (CZ1), Bosnia\_25 (CZ1), Cashline\_26 (CY), Confidence\_26 (CY1), Eviarto\_25 (CZ1), Herod\_25 (CZ1), Jablanski\_28 (CY), Madeline\_25 (CZ1), Malibo\_27 (DW), Malisha\_30 (DN), Ohgeesy\_25 (CZ), Posh\_28 (CY), Pytheas\_28 (CY), ThankyouJordi\_24 (CZ1), TimTam\_25 (CZ1), WelcomeAyanna\_24 (CZ1), Wrigley\_28 (CY), Zirinka\_25 (CZ1),

#### Start 239:

- Found in 16 of 544 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 16 of 471
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agueybana\_26 (CZ1), AlumE\_26 (CZ1), Antonio\_27 (CZ1), BaxterFox\_25 (CZ3), BoyNamedSue\_26 (CZ1), Eudoria\_27 (CZ1), Kita\_27 (CZ1), Manasvini\_27 (CZ1), Maridalia\_26 (CZ1), Neobush\_27 (CZ1), PantheRoc\_26 (CZ3), Suscepit\_27 (CZ1), Tayonia\_27 (CZ1), Trumpet\_27 (CZ1), Yeezy\_27 (CZ3), Zameen\_27 (CZ1),

#### Start 245:

- Found in 83 of 544 ( 15.3% ) of genes in pham
- Manual Annotations of this start: 28 of 471
- Called 36.1% of time when present
- Phage (with cluster) where this start called: Angelique\_28 (CY1), Apricot\_27 (DN3), Asapag\_28 (DN1), BENtherdunthat\_28 (DN1), BearBQ\_27 (DN), Birdsong\_27 (DN), Budski\_28 (DN), CheeseTouch\_28 (DN1), Crater\_26 (DN3), Denise\_22 (CZ5), Ecliptus\_31 (DN), Frickyeah\_27 (DN1), Getalong\_29 (DN1), Holliday\_28 (DN1), Horus\_28 (DN1), Kamaru\_28 (DN1), Kenna\_27 (DN1), Kuwabara\_27 (DN4), Leroy\_28 (DN1), LitninMcQueen\_27 (DN1), LonelyBoi\_27 (CY), Lutum\_28 (DN1), MortyNRick\_27 (DN), ODay\_32 (DN), Periwinkle\_30 (DN1), Phabuloso\_27 (DN1), Phistory\_29 (DN1), Spooky\_28 (DN2), Squiddly\_30 (DN2), Whitney\_29 (DN1),

#### Start 248:

- Found in 65 of 544 ( 11.9% ) of genes in pham
- Manual Annotations of this start: 2 of 471
- Called 3.1% of time when present
- Phage (with cluster) where this start called: Nymphadora\_25 (CZ1), Polly\_24 (CZ1),

#### Start 255:

- Found in 46 of 544 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 1 of 471
- Called 2.2% of time when present

- Phage (with cluster) where this start called: Pleakley\_25 (CR5),

Start 256:

- Found in 30 of 544 ( 5.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 3.3% of time when present
- Phage (with cluster) where this start called: HubbaBubba\_16 (CR4),

Start 258:

- Found in 208 of 544 ( 38.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.0% of time when present
- Phage (with cluster) where this start called: Coriander\_27 (DB), Shinji\_44 (DC1),

### **Summary by clusters:**

There are 51 clusters represented in this pham: DN, DL, DH, CZ2, CZ3, CZ1, CZ6, singleton, CZ4, CZ5, DZ, CZ8, DY, DV, DW, DR, DQ, CZ7, DN4, DF1, DF3, DF2, DF, DN1, DN3, DN2, DU1, DU2, CT, CY2, CY1, DE, DB, CD, CZ, CY, CX, CR, DC2, CV, DC1, CR2, CR3, CR1, CR4, CR5, DE1, DE2, DE3, DE4, DE5,

Info for manual annotations of cluster CD:

- Start number 191 was manually annotated 2 times for cluster CD.

Info for manual annotations of cluster CR:

- Start number 184 was manually annotated 7 times for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 172 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 172 was manually annotated 12 times for cluster CR2.
- Start number 178 was manually annotated 8 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 172 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 174 was manually annotated 3 times for cluster CR4.
- Start number 177 was manually annotated 2 times for cluster CR4.
- Start number 217 was manually annotated 2 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 166 was manually annotated 1 time for cluster CR5.
- Start number 255 was manually annotated 1 time for cluster CR5.

Info for manual annotations of cluster CT:

- Start number 148 was manually annotated 8 times for cluster CT.
- Start number 188 was manually annotated 45 times for cluster CT.

Info for manual annotations of cluster CV:

- Start number 182 was manually annotated 7 times for cluster CV.
- Start number 184 was manually annotated 28 times for cluster CV.



- Start number 187 was manually annotated 5 times for cluster CV.
- Start number 188 was manually annotated 1 time for cluster CV.
- Start number 222 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CX:

- Start number 192 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster CY:

- Start number 238 was manually annotated 6 times for cluster CY.
- Start number 245 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 168 was manually annotated 1 time for cluster CY1.
- Start number 187 was manually annotated 6 times for cluster CY1.
- Start number 238 was manually annotated 1 time for cluster CY1.
- Start number 245 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 167 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CZ:

- Start number 184 was manually annotated 1 time for cluster CZ.
- Start number 190 was manually annotated 1 time for cluster CZ.
- Start number 238 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 238 was manually annotated 10 times for cluster CZ1.
- Start number 239 was manually annotated 13 times for cluster CZ1.
- Start number 248 was manually annotated 2 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 187 was manually annotated 1 time for cluster CZ2.
- Start number 190 was manually annotated 22 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 239 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 167 was manually annotated 2 times for cluster CZ4.
- Start number 182 was manually annotated 14 times for cluster CZ4.
- Start number 201 was manually annotated 2 times for cluster CZ4.
- Start number 211 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 245 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 184 was manually annotated 1 time for cluster CZ6.
- Start number 190 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 182 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 190 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DB:

- Start number 190 was manually annotated 15 times for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 182 was manually annotated 14 times for cluster DC1.
- Start number 184 was manually annotated 14 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 184 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:

- Start number 184 was manually annotated 44 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 184 was manually annotated 1 time for cluster DE2.
- Start number 185 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 188 was manually annotated 5 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 177 was manually annotated 4 times for cluster DE4.
- Start number 188 was manually annotated 5 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 184 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DF:

- Start number 189 was manually annotated 1 time for cluster DF.

Info for manual annotations of cluster DF3:

- Start number 189 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DH:

- Start number 187 was manually annotated 2 times for cluster DH.
- Start number 190 was manually annotated 1 time for cluster DH.

Info for manual annotations of cluster DL:

- Start number 189 was manually annotated 1 time for cluster DL.
- Start number 192 was manually annotated 3 times for cluster DL.

Info for manual annotations of cluster DN:

- Start number 238 was manually annotated 1 time for cluster DN.
- Start number 245 was manually annotated 5 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 245 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 245 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 245 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 245 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DQ:

- Start number 160 was manually annotated 1 time for cluster DQ.
- Start number 172 was manually annotated 9 times for cluster DQ.

Info for manual annotations of cluster DR:

- Start number 188 was manually annotated 13 times for cluster DR.
- Start number 190 was manually annotated 5 times for cluster DR.
- Start number 191 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DU1:

- Start number 196 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 192 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster DV:

- Start number 139 was manually annotated 1 time for cluster DV.
- Start number 147 was manually annotated 26 times for cluster DV.
- Start number 161 was manually annotated 2 times for cluster DV.

Info for manual annotations of cluster DW:

- Start number 181 was manually annotated 1 time for cluster DW.
- Start number 201 was manually annotated 1 time for cluster DW.
- Start number 238 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster DY:

- Start number 116 was manually annotated 5 times for cluster DY.

Info for manual annotations of cluster DZ:

- Start number 194 was manually annotated 4 times for cluster DZ.

**Gene Information:**

Gene: APunk\_47 Start: 40146, Stop: 40871, Start Num: 188

Candidate Starts for APunk\_47:

(106, 39999), (123, 40035), (Start: 188 @40146 has 69 MA's), (Start: 222 @40200 has 1 MA's), (258, 40251), (261, 40260), (294, 40311), (303, 40329), (325, 40371), (349, 40428), (357, 40452), (396, 40518), (440, 40617), (456, 40653), (468, 40680), (528, 40791), (553, 40827),

Gene: Abblin\_46 Start: 40683, Stop: 41405, Start Num: 188

Candidate Starts for Abblin\_46:

(80, 40467), (123, 40572), (Start: 188 @40683 has 69 MA's), (258, 40788), (261, 40797), (294, 40848), (303, 40866), (325, 40908), (354, 40974), (355, 40980), (357, 40986), (396, 41052), (440, 41151), (528, 41325), (544, 41346), (553, 41361),

Gene: Adora\_25 Start: 21784, Stop: 22572, Start Num: 182

Candidate Starts for Adora\_25:

(Start: 167 @21772 has 3 MA's), (Start: 182 @21784 has 36 MA's), (Start: 201 @21796 has 3 MA's), (202, 21799), (Start: 211 @21826 has 1 MA's), (Start: 222 @21838 has 1 MA's), (258, 21889), (299, 21982), (323, 22027), (324, 22030), (325, 22033), (348, 22093), (354, 22111), (357, 22123), (358, 22126), (359, 22129), (410, 22219), (440, 22306), (522, 22474), (534, 22492), (559, 22528), (573, 22552),

Gene: Affeca\_43 Start: 39450, Stop: 40184, Start Num: 184

Candidate Starts for Affeca\_43:

(142, 39393), (Start: 184 @39450 has 99 MA's), (Start: 201 @39468 has 3 MA's), (258, 39555), (271, 39582), (294, 39630), (303, 39648), (325, 39690), (356, 39768), (375, 39810), (400, 39843), (456, 39978), (475, 40017), (528, 40116), (549, 40143), (569, 40176),

Gene: Agatha\_45 Start: 33907, Stop: 33068, Start Num: 188

Candidate Starts for Agatha\_45:

(50, 34228), (56, 34204), (57, 34201), (81, 34114), (96, 34069), (121, 34018), (Start: 139 @33967 has 1 MA's), (Start: 188 @33907 has 69 MA's), (Start: 222 @33847 has 1 MA's), (241, 33817), (Start: 245 @33811 has 28 MA's), (287, 33730), (336, 33622), (470, 33298), (561, 33127), (566, 33118),

Gene: Agueybana\_26 Start: 22183, Stop: 22803, Start Num: 239

Candidate Starts for Agueybana\_26:

(60, 21808), (123, 21979), (125, 21982), (Start: 160 @22063 has 1 MA's), (175, 22084), (Start: 239 @22183 has 16 MA's), (Start: 248 @22192 has 2 MA's), (265, 22237), (303, 22318), (324, 22372), (341, 22417), (357, 22453), (379, 22504), (405, 22552), (427, 22615), (439, 22645), (464, 22696), (523, 22774),

Gene: AikoCarson\_46 Start: 34085, Stop: 33246, Start Num: 188

Candidate Starts for AikoCarson\_46:

(Start: 139 @34160 has 1 MA's), (Start: 188 @34085 has 69 MA's), (Start: 222 @34025 has 1 MA's), (Start: 245 @33989 has 28 MA's), (269, 33947), (287, 33908), (294, 33890), (310, 33866), (386, 33680), (420, 33608), (566, 33296),

Gene: Ailee\_42 Start: 39043, Stop: 39777, Start Num: 184

Candidate Starts for Ailee\_42:

(176, 39037), (Start: 184 @39043 has 99 MA's), (Start: 201 @39061 has 3 MA's), (258, 39148), (271, 39175), (294, 39223), (303, 39241), (325, 39283), (356, 39361), (375, 39403), (400, 39436), (456, 39571), (475, 39610), (528, 39709), (549, 39736), (569, 39769),

Gene: Aleemily\_32 Start: 27271, Stop: 28023, Start Num: 194

Candidate Starts for Aleemily\_32:

(Start: 194 @27271 has 4 MA's), (Start: 222 @27322 has 1 MA's), (325, 27499), (364, 27598), (413, 27658), (440, 27736), (468, 27799), (498, 27862), (513, 27889), (580, 27991),

Gene: Alephilan\_87 Start: 59241, Stop: 60092, Start Num: 147

Candidate Starts for Alephilan\_87:

(76, 59064), (87, 59091), (90, 59100), (92, 59115), (98, 59124), (137, 59217), (138, 59220), (Start: 147 @59241 has 26 MA's), (151, 59250), (Start: 167 @59271 has 3 MA's), (195, 59313), (199, 59319), (220, 59364), (273, 59469), (288, 59505), (295, 59517), (311, 59556), (387, 59736), (419, 59811),

(426, 59841), (444, 59889), (445, 59892), (470, 59946), (495, 59991), (539, 60069),

Gene: Ali17\_42 Start: 38338, Stop: 39057, Start Num: 185

Candidate Starts for Ali17\_42:

(Start: 185 @38338 has 7 MA's), (202, 38353), (Start: 222 @38392 has 1 MA's), (258, 38443), (294, 38503), (407, 38722), (414, 38731), (420, 38749), (440, 38809), (475, 38884), (528, 38983), (555, 39022), (567, 39043),

Gene: Alok\_i\_30 Start: 21568, Stop: 22266, Start Num: 172

Candidate Starts for Alok\_i\_30:

(Start: 160 @21550 has 1 MA's), (Start: 172 @21568 has 29 MA's), (Start: 255 @21631 has 1 MA's), (268, 21667), (298, 21727), (303, 21739), (311, 21760), (324, 21793), (336, 21823), (337, 21826), (345, 21847), (351, 21853), (353, 21859), (359, 21880), (410, 21985), (414, 21994), (435, 22063), (438, 22069), (456, 22105), (459, 22117), (495, 22156), (506, 22177), (547, 22246), (553, 22258), (555, 22261),

Gene: AlumE\_26 Start: 22182, Stop: 22802, Start Num: 239

Candidate Starts for AlumE\_26:

(60, 21807), (123, 21978), (125, 21981), (Start: 160 @22062 has 1 MA's), (175, 22083), (Start: 239 @22182 has 16 MA's), (Start: 248 @22191 has 2 MA's), (265, 22236), (303, 22317), (324, 22371), (341, 22416), (357, 22452), (379, 22503), (405, 22551), (427, 22614), (439, 22644), (464, 22695), (523, 22773),

Gene: Alyssamiracle\_87 Start: 57197, Stop: 58048, Start Num: 147

Candidate Starts for Alyssamiracle\_87:

(137, 57173), (138, 57176), (Start: 147 @57197 has 26 MA's), (Start: 161 @57218 has 2 MA's), (Start: 167 @57227 has 3 MA's), (195, 57269), (199, 57275), (220, 57320), (270, 57422), (273, 57425), (288, 57461), (295, 57473), (311, 57512), (323, 57542), (324, 57545), (328, 57557), (329, 57560), (387, 57692), (416, 57758), (419, 57767), (426, 57797), (436, 57824), (444, 57845), (470, 57902), (495, 57947), (539, 58025),

Gene: Amok\_46 Start: 34109, Stop: 33270, Start Num: 188

Candidate Starts for Amok\_46:

(Start: 139 @34184 has 1 MA's), (Start: 188 @34109 has 69 MA's), (Start: 222 @34049 has 1 MA's), (Start: 245 @34013 has 28 MA's), (269, 33971), (287, 33932), (294, 33914), (310, 33890), (386, 33704), (420, 33632), (456, 33530), (566, 33320), (586, 33287),

Gene: AnClar\_43 Start: 38069, Stop: 38794, Start Num: 188

Candidate Starts for AnClar\_43:

(88, 37871), (117, 37943), (Start: 188 @38069 has 69 MA's), (198, 38078), (278, 38228), (282, 38234), (294, 38258), (298, 38267), (304, 38279), (318, 38294), (336, 38336), (345, 38360), (358, 38390), (406, 38474), (427, 38537), (436, 38561), (439, 38567), (524, 38750), (530, 38759),

Gene: AnarQue\_45 Start: 37567, Stop: 38289, Start Num: 188

Candidate Starts for AnarQue\_45:

(89, 37381), (Start: 188 @37567 has 69 MA's), (Start: 245 @37660 has 28 MA's), (282, 37729), (296, 37756), (299, 37762), (357, 37876), (406, 37960), (439, 38053), (451, 38083),

Gene: AndPeggy\_42 Start: 33440, Stop: 32601, Start Num: 188

Candidate Starts for AndPeggy\_42:

(Start: 188 @33440 has 69 MA's), (Start: 222 @33380 has 1 MA's), (Start: 245 @33344 has 28 MA's), (251, 33335), (287, 33263), (336, 33155), (356, 33101), (368, 33065), (386, 33035), (413, 32984), (420, 32963), (506, 32759), (515, 32738), (566, 32651), (575, 32633),

Gene: Angelicage\_43 Start: 39868, Stop: 40602, Start Num: 184

Candidate Starts for Angelicage\_43:

(142, 39811), (Start: 184 @39868 has 99 MA's), (Start: 201 @39886 has 3 MA's), (258, 39973), (271, 40000), (294, 40048), (303, 40066), (325, 40108), (356, 40186), (375, 40228), (400, 40261), (456, 40396), (475, 40435), (528, 40534), (549, 40561), (569, 40594),

Gene: Angelique\_28 Start: 22797, Stop: 23417, Start Num: 245

Candidate Starts for Angelique\_28:

(210, 22740), (Start: 245 @22797 has 28 MA's), (265, 22848), (303, 22929), (311, 22950), (341, 23028), (357, 23064), (369, 23100), (379, 23115), (405, 23163), (427, 23226), (464, 23307), (523, 23385), (529, 23394), (531, 23397),

Gene: Annalisa\_25 Start: 21246, Stop: 22034, Start Num: 182

Candidate Starts for Annalisa\_25:

(Start: 167 @21234 has 3 MA's), (Start: 182 @21246 has 36 MA's), (Start: 201 @21258 has 3 MA's), (202, 21261), (Start: 222 @21300 has 1 MA's), (227, 21303), (258, 21351), (299, 21444), (323, 21489), (324, 21492), (325, 21495), (348, 21555), (354, 21573), (357, 21585), (358, 21588), (359, 21591), (410, 21681), (440, 21768), (522, 21936), (534, 21954), (559, 21990), (573, 22014),

Gene: Antonio\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Antonio\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: Apeppi\_82 Start: 58457, Stop: 59287, Start Num: 161

Candidate Starts for Apeppi\_82:

(137, 58415), (138, 58418), (143, 58427), (Start: 147 @58439 has 26 MA's), (Start: 161 @58457 has 2 MA's), (Start: 167 @58466 has 3 MA's), (Start: 184 @58490 has 99 MA's), (195, 58508), (226, 58565), (288, 58700), (307, 58739), (311, 58751), (324, 58784), (328, 58796), (336, 58817), (370, 58904), (387, 58931), (420, 59009), (426, 59036), (428, 59042), (434, 59057), (436, 59063), (470, 59141), (493, 59177), (541, 59267),

Gene: Apiary\_20 Start: 9988, Stop: 10884, Start Num: 184

Candidate Starts for Apiary\_20:

(69, 9751), (Start: 184 @9988 has 99 MA's), (225, 10066), (272, 10153), (292, 10201), (298, 10216), (330, 10294), (348, 10339), (410, 10471), (442, 10564), (448, 10579), (494, 10678), (537, 10759), (565, 10807), (587, 10852),

Gene: Apricot\_27 Start: 21059, Stop: 21682, Start Num: 245

Candidate Starts for Apricot\_27:

(65, 20684), (83, 20741), (97, 20786), (123, 20840), (125, 20843), (136, 20879), (Start: 160 @20924 has 1 MA's), (162, 20927), (Start: 245 @21059 has 28 MA's), (Start: 248 @21065 has 2 MA's), (260, 21095), (265, 21110), (294, 21170), (327, 21251), (341, 21290), (369, 21362), (405, 21425), (423, 21470), (427, 21488), (435, 21509), (439, 21518), (523, 21650), (529, 21659), (537, 21671),

Gene: Archis\_26 Start: 21363, Stop: 22166, Start Num: 184

Candidate Starts for Archis\_26:

(Start: 184 @21363 has 99 MA's), (Start: 211 @21411 has 1 MA's), (Start: 222 @21423 has 1 MA's), (234, 21438), (258, 21474), (299, 21567), (325, 21618), (342, 21666), (348, 21678), (354, 21696), (357, 21708), (358, 21711), (359, 21714), (418, 21822), (440, 21891), (451, 21912), (452, 21918),

(532, 22074), (559, 22110), (573, 22134), (585, 22155),

Gene: Arri\_47 Start: 36352, Stop: 37107, Start Num: 184

Candidate Starts for Arri\_47:

(128, 36274), (Start: 184 @36352 has 99 MA's), (233, 36424), (295, 36532), (322, 36577), (402, 36727), (407, 36733), (420, 36760), (434, 36808), (483, 36910), (531, 36994), (577, 37066),

Gene: Arti\_19 Start: 9412, Stop: 10137, Start Num: 172

Candidate Starts for Arti\_19:

(Start: 172 @9412 has 29 MA's), (Start: 201 @9436 has 3 MA's), (221, 9469), (256, 9472), (273, 9508), (279, 9523), (297, 9565), (356, 9712), (434, 9904), (479, 10006), (495, 10036), (506, 10057), (514, 10072), (550, 10132),

Gene: Asapag\_28 Start: 21501, Stop: 22124, Start Num: 245

Candidate Starts for Asapag\_28:

(65, 21126), (83, 21183), (97, 21228), (123, 21282), (125, 21285), (136, 21321), (Start: 160 @21366 has 1 MA's), (162, 21369), (Start: 245 @21501 has 28 MA's), (Start: 248 @21507 has 2 MA's), (260, 21537), (265, 21552), (294, 21612), (324, 21687), (341, 21732), (357, 21768), (369, 21804), (405, 21867), (423, 21912), (427, 21930), (435, 21951), (443, 21972), (523, 22092), (529, 22101), (537, 22113),

Gene: Ashertheman\_46 Start: 39868, Stop: 40611, Start Num: 184

Candidate Starts for Ashertheman\_46:

(Start: 184 @39868 has 99 MA's), (Start: 201 @39886 has 3 MA's), (223, 39931), (258, 39976), (289, 40039), (294, 40051), (303, 40069), (325, 40111), (335, 40138), (375, 40231), (388, 40243), (442, 40363), (456, 40399), (460, 40411), (475, 40438), (492, 40471), (509, 40504), (528, 40537), (549, 40564),

Gene: Attis\_24 Start: 19791, Stop: 20498, Start Num: 190

Candidate Starts for Attis\_24:

(112, 19647), (Start: 190 @19791 has 48 MA's), (223, 19848), (247, 19887), (278, 19947), (289, 19965), (291, 19968), (298, 19986), (325, 20022), (326, 20025), (338, 20058), (345, 20076), (357, 20103), (398, 20181), (427, 20250), (439, 20280), (441, 20286), (544, 20490),

Gene: Avian\_84 Start: 56928, Stop: 57779, Start Num: 147

Candidate Starts for Avian\_84:

(87, 56778), (90, 56787), (92, 56802), (98, 56811), (137, 56904), (138, 56907), (Start: 147 @56928 has 26 MA's), (Start: 161 @56949 has 2 MA's), (Start: 167 @56958 has 3 MA's), (195, 57000), (199, 57006), (220, 57051), (270, 57153), (273, 57156), (288, 57192), (295, 57204), (311, 57243), (323, 57273), (324, 57276), (328, 57288), (329, 57291), (387, 57423), (416, 57489), (419, 57498), (426, 57528), (436, 57555), (444, 57576), (470, 57633), (495, 57678), (539, 57756),

Gene: Axumite\_42 Start: 35273, Stop: 35995, Start Num: 190

Candidate Starts for Axumite\_42:

(31, 34883), (75, 35060), (117, 35168), (Start: 190 @35273 has 48 MA's), (282, 35435), (304, 35480), (338, 35543), (345, 35561), (357, 35588), (398, 35666), (399, 35669), (427, 35738), (439, 35768), (441, 35774), (532, 35963),

Gene: Axym\_44 Start: 33804, Stop: 32965, Start Num: 188

Candidate Starts for Axym\_44:

(50, 34125), (56, 34101), (81, 34011), (96, 33966), (121, 33915), (Start: 139 @33864 has 1 MA's), (Start: 188 @33804 has 69 MA's), (Start: 222 @33744 has 1 MA's), (Start: 245 @33708 has 28 MA's), (287, 33627), (336, 33519), (350, 33486), (470, 33195), (566, 33015),

Gene: Azira\_42 Start: 33186, Stop: 32428, Start Num: 188

Candidate Starts for Azira\_42:

(Start: 188 @33186 has 69 MA's), (Start: 211 @33147 has 1 MA's), (Start: 222 @33129 has 1 MA's), (Start: 245 @33093 has 28 MA's), (258, 33078), (268, 33054), (285, 33018), (294, 32994), (323, 32940), (335, 32907), (364, 32835), (378, 32814), (422, 32754), (451, 32676), (470, 32631), (497, 32586), (561, 32472), (568, 32457),

Gene: Azula\_27 Start: 21464, Stop: 22264, Start Num: 184

Candidate Starts for Azula\_27:

(102, 21314), (Start: 184 @21464 has 99 MA's), (Start: 211 @21512 has 1 MA's), (Start: 222 @21524 has 1 MA's), (258, 21575), (299, 21668), (325, 21719), (347, 21776), (348, 21779), (354, 21797), (357, 21809), (358, 21812), (359, 21815), (440, 21992), (451, 22013), (452, 22019), (468, 22055), (522, 22160), (532, 22175), (534, 22178), (559, 22211), (573, 22235),

Gene: BBQValindra\_26 Start: 21429, Stop: 22148, Start Num: 190

Candidate Starts for BBQValindra\_26:

(Start: 148 @21372 has 8 MA's), (Start: 190 @21429 has 48 MA's), (247, 21522), (258, 21537), (278, 21582), (304, 21633), (326, 21660), (335, 21684), (357, 21738), (360, 21747), (361, 21756), (439, 21918), (441, 21924),

Gene: BENtherdunthat\_28 Start: 21498, Stop: 22121, Start Num: 245

Candidate Starts for BENtherdunthat\_28:

(65, 21123), (83, 21180), (97, 21225), (123, 21279), (125, 21282), (136, 21318), (Start: 160 @21363 has 1 MA's), (162, 21366), (Start: 245 @21498 has 28 MA's), (Start: 248 @21504 has 2 MA's), (260, 21534), (265, 21549), (267, 21552), (303, 21630), (327, 21690), (341, 21729), (357, 21765), (369, 21801), (405, 21864), (427, 21927), (435, 21948), (439, 21957), (443, 21969), (459, 22002), (523, 22089), (529, 22098),

Gene: BackstagePass\_26 Start: 21561, Stop: 22274, Start Num: 190

Candidate Starts for BackstagePass\_26:

(Start: 148 @21504 has 8 MA's), (Start: 190 @21561 has 48 MA's), (247, 21654), (258, 21669), (278, 21714), (325, 21789), (326, 21792), (335, 21816), (360, 21879), (361, 21888), (410, 21963), (434, 22038), (439, 22050), (441, 22056),

Gene: Baddon\_45 Start: 40406, Stop: 41149, Start Num: 184

Candidate Starts for Baddon\_45:

(Start: 184 @40406 has 99 MA's), (Start: 201 @40424 has 3 MA's), (223, 40469), (258, 40514), (289, 40577), (294, 40589), (303, 40607), (325, 40649), (335, 40676), (375, 40769), (388, 40781), (442, 40901), (456, 40937), (460, 40949), (475, 40976), (492, 41009), (509, 41042), (528, 41075), (549, 41102),

Gene: Bakery\_49 Start: 37499, Stop: 38254, Start Num: 182

Candidate Starts for Bakery\_49:

(66, 37256), (111, 37388), (154, 37472), (165, 37484), (Start: 182 @37499 has 36 MA's), (Start: 201 @37517 has 3 MA's), (233, 37571), (257, 37604), (258, 37607), (269, 37634), (295, 37679), (402, 37874), (407, 37880), (420, 37907), (434, 37955), (483, 38057), (531, 38141), (577, 38213), (584, 38225),

Gene: Bantam\_131 Start: 78134, Stop: 78856, Start Num: 192

Candidate Starts for Bantam\_131:

(101, 77963), (153, 78083), (171, 78107), (Start: 192 @78134 has 11 MA's), (219, 78191), (278, 78287),



Gene: Barb\_46 Start: 36471, Stop: 37226, Start Num: 182

Candidate Starts for Barb\_46:

(165, 36456), (Start: 182 @36471 has 36 MA's), (233, 36543), (258, 36579), (295, 36651), (402, 36846), (407, 36852), (420, 36879), (434, 36927), (483, 37029), (531, 37113), (577, 37185),

Gene: Barco\_25 Start: 21152, Stop: 21955, Start Num: 184

Candidate Starts for Barco\_25:

(Start: 184 @21152 has 99 MA's), (Start: 211 @21200 has 1 MA's), (Start: 222 @21212 has 1 MA's), (234, 21227), (258, 21263), (299, 21356), (325, 21407), (347, 21464), (348, 21467), (354, 21485), (357, 21497), (358, 21500), (359, 21503), (440, 21680), (451, 21701), (452, 21707), (532, 21863), (559, 21899), (573, 21923), (585, 21944),

Gene: Barsten\_46 Start: 40023, Stop: 40757, Start Num: 184

Candidate Starts for Barsten\_46:

(102, 39876), (142, 39966), (Start: 184 @40023 has 99 MA's), (Start: 201 @40041 has 3 MA's), (258, 40128), (271, 40155), (294, 40203), (303, 40221), (325, 40263), (356, 40341), (375, 40383), (400, 40416), (456, 40551), (475, 40590), (528, 40689), (549, 40716), (569, 40749),

Gene: BatStarr\_25 Start: 22309, Stop: 22926, Start Num: 238

Candidate Starts for BatStarr\_25:

(175, 22210), (204, 22249), (224, 22282), (Start: 238 @22309 has 20 MA's), (Start: 248 @22318 has 2 MA's), (265, 22360), (273, 22372), (294, 22420), (303, 22441), (311, 22462), (324, 22495), (326, 22498), (341, 22540), (357, 22576), (379, 22627), (405, 22675), (427, 22738), (439, 22768), (464, 22819), (523, 22897),

Gene: Baumdotcom\_44 Start: 39257, Stop: 40000, Start Num: 184

Candidate Starts for Baumdotcom\_44:

(Start: 184 @39257 has 99 MA's), (Start: 201 @39275 has 3 MA's), (223, 39320), (258, 39365), (294, 39440), (303, 39458), (325, 39500), (375, 39620), (388, 39632), (442, 39752), (456, 39788), (460, 39800), (475, 39827), (492, 39860), (509, 39893), (528, 39926), (549, 39953),

Gene: BaxterFox\_25 Start: 21503, Stop: 22126, Start Num: 239

Candidate Starts for BaxterFox\_25:

(123, 21299), (125, 21302), (Start: 160 @21383 has 1 MA's), (175, 21404), (Start: 239 @21503 has 16 MA's), (Start: 248 @21512 has 2 MA's), (265, 21557), (273, 21569), (294, 21617), (303, 21638), (324, 21692), (341, 21737), (357, 21773), (358, 21776), (379, 21824), (405, 21872), (427, 21935), (439, 21965), (464, 22019), (523, 22097),

Gene: BearBQ\_27 Start: 22338, Stop: 22961, Start Num: 245

Candidate Starts for BearBQ\_27:

(65, 21963), (83, 22020), (97, 22065), (123, 22119), (125, 22122), (136, 22158), (Start: 160 @22203 has 1 MA's), (162, 22206), (Start: 245 @22338 has 28 MA's), (Start: 248 @22344 has 2 MA's), (260, 22374), (265, 22389), (294, 22449), (324, 22524), (341, 22569), (357, 22605), (369, 22641), (405, 22704), (427, 22767), (435, 22788), (439, 22797), (467, 22854), (523, 22929), (529, 22938),

Gene: BeeGee\_26 Start: 21791, Stop: 22411, Start Num: 238

Candidate Starts for BeeGee\_26:

(Start: 238 @21791 has 20 MA's), (Start: 248 @21797 has 2 MA's), (265, 21842), (284, 21878), (303, 21923), (324, 21977), (341, 22022), (369, 22094), (405, 22157), (427, 22220), (464, 22301), (523, 22379), (529, 22388), (531, 22391),

Gene: Beenie\_25 Start: 21603, Stop: 22391, Start Num: 182

Candidate Starts for Beenie\_25:

(Start: 167 @21591 has 3 MA's), (Start: 182 @21603 has 36 MA's), (Start: 201 @21615 has 3 MA's), (202, 21618), (Start: 211 @21645 has 1 MA's), (Start: 222 @21657 has 1 MA's), (258, 21708), (299, 21801), (323, 21846), (324, 21849), (325, 21852), (348, 21912), (354, 21930), (357, 21942), (358, 21945), (359, 21948), (410, 22038), (440, 22125), (456, 22161), (534, 22311), (559, 22347), (573, 22371),

Gene: Begonia\_26 Start: 21633, Stop: 22436, Start Num: 184

Candidate Starts for Begonia\_26:

(Start: 184 @21633 has 99 MA's), (Start: 211 @21681 has 1 MA's), (Start: 222 @21693 has 1 MA's), (234, 21708), (258, 21744), (299, 21837), (325, 21888), (347, 21945), (348, 21948), (354, 21966), (357, 21978), (358, 21981), (359, 21984), (440, 22161), (451, 22182), (452, 22188), (532, 22344), (559, 22380), (573, 22404), (585, 22425),

Gene: Belphegor\_45 Start: 40390, Stop: 41112, Start Num: 185

Candidate Starts for Belphegor\_45:

(132, 40306), (Start: 185 @40390 has 7 MA's), (202, 40405), (Start: 222 @40444 has 1 MA's), (258, 40495), (294, 40558), (407, 40777), (438, 40861), (440, 40864), (475, 40939), (555, 41077), (567, 41098),

Gene: Beted\_31 Start: 23245, Stop: 23943, Start Num: 172

Candidate Starts for Beted\_31:

(Start: 160 @23227 has 1 MA's), (Start: 172 @23245 has 29 MA's), (Start: 255 @23308 has 1 MA's), (268, 23344), (303, 23416), (311, 23437), (324, 23470), (336, 23500), (337, 23503), (345, 23524), (351, 23530), (353, 23536), (359, 23557), (410, 23662), (414, 23671), (435, 23740), (438, 23746), (456, 23782), (459, 23794), (495, 23833), (547, 23923), (553, 23935), (555, 23938),

Gene: BiPauneto\_20 Start: 7795, Stop: 8589, Start Num: 174

Candidate Starts for BiPauneto\_20:

(Start: 174 @7795 has 3 MA's), (Start: 255 @7909 has 1 MA's), (256, 7912), (259, 7924), (297, 8005), (356, 8155), (362, 8179), (382, 8212), (434, 8344), (489, 8470), (506, 8506), (538, 8560),

Gene: Bialota\_25 Start: 22321, Stop: 22938, Start Num: 238

Candidate Starts for Bialota\_25:

(175, 22222), (204, 22261), (224, 22294), (Start: 238 @22321 has 20 MA's), (Start: 248 @22330 has 2 MA's), (265, 22372), (273, 22384), (294, 22432), (303, 22453), (311, 22474), (324, 22507), (341, 22552), (357, 22588), (379, 22639), (427, 22750), (439, 22780), (464, 22831), (523, 22909),

Gene: Bibwit\_44 Start: 38980, Stop: 39714, Start Num: 184

Candidate Starts for Bibwit\_44:

(176, 38971), (Start: 181 @38977 has 1 MA's), (Start: 184 @38980 has 99 MA's), (Start: 201 @38998 has 3 MA's), (258, 39085), (271, 39112), (294, 39160), (303, 39178), (325, 39220), (356, 39298), (375, 39340), (400, 39373), (456, 39508), (475, 39547), (528, 39646), (549, 39673), (569, 39706),

Gene: BigChungus\_46 Start: 35108, Stop: 34305, Start Num: 188

Candidate Starts for BigChungus\_46:

(Start: 139 @35168 has 1 MA's), (Start: 188 @35108 has 69 MA's), (294, 34901), (324, 34847), (327, 34838), (331, 34826), (341, 34799), (351, 34787), (356, 34772), (418, 34661), (422, 34643), (431, 34610), (476, 34508), (478, 34505), (506, 34448), (515, 34427), (557, 34358), (576, 34319), (586, 34310),

Gene: BiggityBass\_42 Start: 37537, Stop: 38262, Start Num: 188

Candidate Starts for BiggityBass\_42:

(Start: 188 @37537 has 69 MA's), (278, 37696), (282, 37702), (294, 37726), (304, 37747), (318, 37762), (336, 37804), (345, 37828), (358, 37858), (406, 37942), (427, 38005), (439, 38035), (530, 38227),

Gene: BillDoor\_45 Start: 33112, Stop: 32273, Start Num: 188

Candidate Starts for BillDoor\_45:

(Start: 188 @33112 has 69 MA's), (Start: 222 @33052 has 1 MA's), (Start: 245 @33016 has 28 MA's), (251, 33007), (287, 32935), (336, 32827), (356, 32773), (368, 32737), (386, 32707), (413, 32656), (420, 32635), (506, 32431), (515, 32410), (566, 32323),

Gene: Birdsong\_27 Start: 21231, Stop: 21854, Start Num: 245

Candidate Starts for Birdsong\_27:

(65, 20856), (83, 20913), (97, 20958), (123, 21012), (125, 21015), (136, 21051), (Start: 160 @21096 has 1 MA's), (162, 21099), (Start: 245 @21231 has 28 MA's), (Start: 248 @21237 has 2 MA's), (260, 21267), (265, 21282), (294, 21342), (324, 21417), (341, 21462), (357, 21498), (369, 21534), (405, 21597), (427, 21660), (435, 21681), (439, 21690), (467, 21747), (523, 21822), (529, 21831),

Gene: BirthdayBoy\_89 Start: 59230, Stop: 60081, Start Num: 147

Candidate Starts for BirthdayBoy\_89:

(137, 59206), (138, 59209), (143, 59218), (Start: 147 @59230 has 26 MA's), (151, 59239), (Start: 167 @59260 has 3 MA's), (195, 59302), (199, 59308), (220, 59353), (273, 59458), (277, 59467), (288, 59494), (295, 59506), (311, 59545), (387, 59725), (419, 59800), (426, 59830), (444, 59878), (445, 59881), (470, 59935), (495, 59980), (539, 60058),

Gene: Biskit\_48 Start: 34069, Stop: 33221, Start Num: 188

Candidate Starts for Biskit\_48:

(Start: 139 @34129 has 1 MA's), (Start: 188 @34069 has 69 MA's), (Start: 245 @33973 has 28 MA's), (251, 33964), (294, 33874), (336, 33784), (356, 33733), (359, 33724), (366, 33700), (386, 33667), (402, 33634), (420, 33595), (517, 33367), (521, 33358), (566, 33283), (570, 33274),

Gene: Bizzy\_46 Start: 39563, Stop: 40306, Start Num: 184

Candidate Starts for Bizzy\_46:

(Start: 184 @39563 has 99 MA's), (Start: 201 @39581 has 3 MA's), (223, 39626), (258, 39671), (294, 39746), (303, 39764), (325, 39806), (375, 39926), (388, 39938), (442, 40058), (456, 40094), (460, 40106), (475, 40133), (492, 40166), (509, 40199), (528, 40232), (549, 40259),

Gene: Bjaner7\_24 Start: 19791, Stop: 20498, Start Num: 190

Candidate Starts for Bjaner7\_24:

(112, 19647), (Start: 190 @19791 has 48 MA's), (223, 19848), (247, 19887), (278, 19947), (289, 19965), (291, 19968), (298, 19986), (325, 20022), (326, 20025), (338, 20058), (345, 20076), (357, 20103), (398, 20181), (427, 20250), (439, 20280), (441, 20286), (544, 20490),

Gene: BlingBling\_25 Start: 21152, Stop: 21955, Start Num: 184

Candidate Starts for BlingBling\_25:

(Start: 184 @21152 has 99 MA's), (Start: 211 @21200 has 1 MA's), (Start: 222 @21212 has 1 MA's), (234, 21227), (258, 21263), (299, 21356), (325, 21407), (347, 21464), (348, 21467), (354, 21485), (357, 21497), (358, 21500), (359, 21503), (440, 21680), (451, 21701), (452, 21707), (532, 21863), (559, 21899), (573, 21923), (585, 21944),

Gene: Blino\_26 Start: 21252, Stop: 22046, Start Num: 182

Candidate Starts for Blino\_26:

(32, 20859), (62, 20988), (96, 21099), (109, 21126), (127, 21162), (Start: 182 @21252 has 36 MA's), (Start: 211 @21294 has 1 MA's), (Start: 222 @21306 has 1 MA's), (258, 21357), (299, 21450), (310,

21462), (324, 21498), (325, 21501), (342, 21549), (347, 21558), (348, 21561), (354, 21579), (357, 21591), (358, 21594), (359, 21597), (440, 21774), (451, 21795), (452, 21801), (468, 21837), (559, 21993), (573, 22017), (585, 22035),

Gene: Blueberry\_27 Start: 21464, Stop: 22264, Start Num: 184

Candidate Starts for Blueberry\_27:

(102, 21314), (Start: 184 @21464 has 99 MA's), (Start: 211 @21512 has 1 MA's), (Start: 222 @21524 has 1 MA's), (258, 21575), (299, 21668), (325, 21719), (347, 21776), (348, 21779), (354, 21797), (357, 21809), (358, 21812), (359, 21815), (440, 21992), (451, 22013), (452, 22019), (468, 22055), (522, 22160), (532, 22175), (534, 22178), (559, 22211), (573, 22235),

Gene: BobBob\_43 Start: 39142, Stop: 39876, Start Num: 184

Candidate Starts for BobBob\_43:

(102, 38995), (142, 39085), (Start: 184 @39142 has 99 MA's), (Start: 201 @39160 has 3 MA's), (258, 39247), (271, 39274), (294, 39322), (303, 39340), (325, 39382), (356, 39460), (375, 39502), (400, 39535), (456, 39670), (475, 39709), (528, 39808), (549, 39835), (569, 39868),

Gene: BobRoss2024\_41 Start: 35281, Stop: 36009, Start Num: 190

Candidate Starts for BobRoss2024\_41:

(9, 34177), (11, 34186), (22, 34699), (25, 34804), (122, 35155), (Start: 190 @35281 has 48 MA's), (291, 35455), (345, 35560), (439, 35779), (441, 35785), (456, 35824), (550, 36004),

Gene: Bonum\_21 Start: 9448, Stop: 10239, Start Num: 178

Candidate Starts for Bonum\_21:

(Start: 178 @9448 has 8 MA's), (207, 9493), (246, 9556), (253, 9568), (Start: 255 @9574 has 1 MA's), (259, 9589), (273, 9613), (277, 9622), (297, 9670), (311, 9706), (356, 9817), (361, 9838), (371, 9859), (495, 10144), (506, 10165), (511, 10174), (514, 10180), (533, 10213),

Gene: Bosnia\_25 Start: 22309, Stop: 22926, Start Num: 238

Candidate Starts for Bosnia\_25:

(175, 22210), (204, 22249), (224, 22282), (Start: 238 @22309 has 20 MA's), (Start: 248 @22318 has 2 MA's), (265, 22360), (273, 22372), (294, 22420), (303, 22441), (311, 22462), (324, 22495), (326, 22498), (341, 22540), (357, 22576), (379, 22627), (405, 22675), (427, 22738), (439, 22768), (464, 22819), (523, 22897),

Gene: Bowser\_26 Start: 21340, Stop: 22053, Start Num: 190

Candidate Starts for Bowser\_26:

(Start: 148 @21283 has 8 MA's), (Start: 190 @21340 has 48 MA's), (231, 21406), (247, 21433), (258, 21448), (274, 21484), (278, 21493), (304, 21544), (326, 21571), (335, 21595), (360, 21658), (361, 21667), (395, 21724), (410, 21742), (434, 21817), (439, 21829), (441, 21835), (501, 21970),

Gene: BoyNamedSue\_26 Start: 22182, Stop: 22802, Start Num: 239

Candidate Starts for BoyNamedSue\_26:

(60, 21807), (123, 21978), (125, 21981), (Start: 160 @22062 has 1 MA's), (175, 22083), (Start: 239 @22182 has 16 MA's), (Start: 248 @22191 has 2 MA's), (265, 22236), (303, 22317), (324, 22371), (341, 22416), (357, 22452), (379, 22503), (405, 22551), (427, 22614), (439, 22644), (464, 22695), (523, 22773),

Gene: Bradissa\_27 Start: 22057, Stop: 22773, Start Num: 187

Candidate Starts for Bradissa\_27:

(Start: 167 @22030 has 3 MA's), (Start: 168 @22033 has 1 MA's), (Start: 187 @22057 has 15 MA's), (203, 22075), (231, 22129), (278, 22213), (298, 22252), (325, 22288), (335, 22315), (357, 22369), (361, 22387), (414, 22480), (439, 22558), (441, 22564), (530, 22741), (542, 22759),

Gene: Brandonk123\_47 Start: 40277, Stop: 41011, Start Num: 184

Candidate Starts for Brandonk123\_47:

(102, 40130), (142, 40220), (Start: 184 @40277 has 99 MA's), (Start: 201 @40295 has 3 MA's), (258, 40382), (271, 40409), (294, 40457), (303, 40475), (325, 40517), (356, 40595), (375, 40637), (456, 40805), (475, 40844), (528, 40943), (549, 40970), (569, 41003),

Gene: Braxoaddie\_20 Start: 9976, Stop: 10872, Start Num: 184

Candidate Starts for Braxoaddie\_20:

(69, 9739), (Start: 184 @9976 has 99 MA's), (225, 10054), (272, 10141), (292, 10189), (298, 10204), (330, 10282), (348, 10327), (410, 10459), (442, 10552), (448, 10567), (494, 10666), (537, 10747), (565, 10795), (587, 10840),

Gene: BritBrat\_27 Start: 21883, Stop: 22626, Start Num: 167

Candidate Starts for BritBrat\_27:

(Start: 167 @21883 has 3 MA's), (Start: 168 @21886 has 1 MA's), (Start: 187 @21910 has 15 MA's), (203, 21928), (231, 21982), (278, 22066), (298, 22105), (325, 22141), (335, 22168), (357, 22222), (361, 22240), (414, 22333), (439, 22411), (441, 22417), (530, 22594), (542, 22612),

Gene: Budski\_28 Start: 21606, Stop: 22229, Start Num: 245

Candidate Starts for Budski\_28:

(65, 21231), (83, 21288), (97, 21333), (123, 21387), (125, 21390), (136, 21426), (Start: 160 @21471 has 1 MA's), (162, 21474), (Start: 245 @21606 has 28 MA's), (Start: 248 @21612 has 2 MA's), (260, 21642), (265, 21657), (294, 21717), (327, 21798), (341, 21837), (369, 21909), (405, 21972), (423, 22017), (427, 22035), (435, 22056), (439, 22065), (523, 22197), (529, 22206), (537, 22218),

Gene: Buggaboo\_20 Start: 8964, Stop: 9755, Start Num: 178

Candidate Starts for Buggaboo\_20:

(Start: 178 @8964 has 8 MA's), (Start: 184 @8973 has 99 MA's), (207, 9009), (246, 9072), (Start: 255 @9090 has 1 MA's), (259, 9105), (273, 9129), (277, 9138), (297, 9186), (311, 9222), (356, 9333), (371, 9375), (495, 9660), (506, 9681), (511, 9690), (514, 9696), (533, 9729),

Gene: Bunker\_26 Start: 21542, Stop: 22261, Start Num: 190

Candidate Starts for Bunker\_26:

(86, 21332), (93, 21362), (Start: 148 @21485 has 8 MA's), (Start: 190 @21542 has 48 MA's), (247, 21635), (258, 21650), (278, 21695), (304, 21746), (326, 21773), (335, 21797), (360, 21860), (361, 21869), (439, 22031), (441, 22037),

Gene: Bunnybear\_24 Start: 22229, Stop: 23020, Start Num: 184

Candidate Starts for Bunnybear\_24:

(Start: 184 @22229 has 99 MA's), (Start: 211 @22277 has 1 MA's), (Start: 222 @22289 has 1 MA's), (258, 22340), (299, 22433), (325, 22484), (341, 22529), (342, 22532), (348, 22544), (359, 22580), (440, 22757), (451, 22778), (468, 22820), (559, 22976),

Gene: Burnsey\_45 Start: 33898, Stop: 33059, Start Num: 188

Candidate Starts for Burnsey\_45:

(50, 34219), (56, 34195), (57, 34192), (70, 34147), (81, 34105), (96, 34060), (Start: 139 @33958 has 1 MA's), (Start: 188 @33898 has 69 MA's), (Start: 222 @33838 has 1 MA's), (241, 33808), (Start: 245 @33802 has 28 MA's), (287, 33721), (336, 33613), (350, 33580), (358, 33553), (470, 33289), (561, 33118), (566, 33109),

Gene: Button\_48 Start: 34069, Stop: 33221, Start Num: 148

Candidate Starts for Button\_48:

(142, 34084), (Start: 148 @34069 has 8 MA's), (157, 34054), (206, 34000), (208, 33994), (214, 33979), (Start: 245 @33934 has 28 MA's), (251, 33925), (258, 33919), (269, 33892), (314, 33805), (320, 33793), (321, 33790), (327, 33766), (345, 33718), (354, 33697), (366, 33655), (374, 33643), (386, 33625), (411, 33586), (446, 33484), (471, 33430), (478, 33418), (552, 33280),

Gene: Buttrmlkdreams\_48 Start: 34516, Stop: 33668, Start Num: 188

Candidate Starts for Buttrmlkdreams\_48:

(Start: 139 @34576 has 1 MA's), (Start: 188 @34516 has 69 MA's), (Start: 245 @34420 has 28 MA's), (251, 34411), (294, 34321), (336, 34231), (337, 34228), (356, 34180), (359, 34171), (366, 34147), (386, 34114), (402, 34081), (420, 34042), (517, 33814), (521, 33805), (566, 33730), (570, 33721),

Gene: Cafasso\_33 Start: 27845, Stop: 28597, Start Num: 194

Candidate Starts for Cafasso\_33:

(Start: 194 @27845 has 4 MA's), (Start: 222 @27896 has 1 MA's), (325, 28073), (364, 28172), (413, 28232), (440, 28310), (468, 28373), (498, 28436), (513, 28463), (580, 28565),

Gene: CaiB\_45 Start: 37553, Stop: 38275, Start Num: 188

Candidate Starts for CaiB\_45:

(89, 37367), (Start: 188 @37553 has 69 MA's), (Start: 245 @37646 has 28 MA's), (282, 37715), (296, 37742), (299, 37748), (357, 37862), (406, 37946), (439, 38039), (451, 38069),

Gene: Camerico\_44 Start: 44895, Stop: 45653, Start Num: 189

Candidate Starts for Camerico\_44:

(Start: 185 @44889 has 7 MA's), (Start: 189 @44895 has 3 MA's), (216, 44952), (300, 45090), (308, 45111), (314, 45126), (316, 45132), (320, 45138), (358, 45228), (429, 45387), (457, 45450), (458, 45456), (491, 45513), (510, 45555), (535, 45603),

Gene: CaptainKirk2\_25 Start: 21173, Stop: 21976, Start Num: 184

Candidate Starts for CaptainKirk2\_25:

(Start: 184 @21173 has 99 MA's), (Start: 211 @21221 has 1 MA's), (Start: 222 @21233 has 1 MA's), (234, 21248), (258, 21284), (299, 21377), (325, 21428), (347, 21485), (348, 21488), (354, 21506), (357, 21518), (358, 21521), (359, 21524), (440, 21701), (451, 21722), (452, 21728), (532, 21884), (559, 21920), (573, 21944), (585, 21965),

Gene: CarolAnn\_26 Start: 21251, Stop: 22045, Start Num: 182

Candidate Starts for CarolAnn\_26:

(32, 20858), (62, 20987), (96, 21098), (109, 21125), (127, 21161), (Start: 182 @21251 has 36 MA's), (Start: 211 @21293 has 1 MA's), (Start: 222 @21305 has 1 MA's), (258, 21356), (299, 21449), (310, 21461), (324, 21497), (325, 21500), (342, 21548), (347, 21557), (348, 21560), (354, 21578), (357, 21590), (358, 21593), (359, 21596), (440, 21773), (451, 21794), (452, 21800), (468, 21836), (559, 21992), (573, 22016), (585, 22034),

Gene: Carsonalex\_48 Start: 33866, Stop: 33027, Start Num: 188

Candidate Starts for Carsonalex\_48:

(50, 34187), (56, 34163), (57, 34160), (81, 34073), (96, 34028), (Start: 139 @33926 has 1 MA's), (Start: 188 @33866 has 69 MA's), (Start: 222 @33806 has 1 MA's), (Start: 245 @33770 has 28 MA's), (287, 33689), (336, 33581), (350, 33548), (470, 33257), (561, 33086), (566, 33077),

Gene: Cashline\_26 Start: 21658, Stop: 22278, Start Num: 238

Candidate Starts for Cashline\_26:

(Start: 238 @21658 has 20 MA's), (Start: 248 @21664 has 2 MA's), (260, 21694), (265, 21709), (284, 21745), (303, 21790), (324, 21844), (341, 21889), (369, 21961), (379, 21976), (405, 22024), (416, 22045), (427, 22087), (464, 22168), (523, 22246), (529, 22255), (531, 22258),

Gene: ChadMasterC\_46 Start: 41422, Stop: 42156, Start Num: 184

Candidate Starts for ChadMasterC\_46:

(102, 41275), (142, 41365), (Start: 184 @41422 has 99 MA's), (Start: 201 @41440 has 3 MA's), (258, 41527), (271, 41554), (294, 41602), (303, 41620), (325, 41662), (356, 41740), (375, 41782), (400, 41815), (456, 41950), (475, 41989), (528, 42088), (549, 42115), (569, 42148),

Gene: CharlottesWeb\_42 Start: 35092, Stop: 35814, Start Num: 190

Candidate Starts for CharlottesWeb\_42:

(22, 34510), (Start: 190 @35092 has 48 MA's), (278, 35248), (282, 35254), (304, 35299), (338, 35362), (341, 35371), (345, 35380), (357, 35407), (358, 35410), (427, 35557), (439, 35587), (441, 35593), (492, 35704), (503, 35728), (530, 35779), (540, 35794),

Gene: Charming\_46 Start: 39778, Stop: 40512, Start Num: 184

Candidate Starts for Charming\_46:

(102, 39631), (142, 39721), (Start: 184 @39778 has 99 MA's), (Start: 201 @39796 has 3 MA's), (258, 39883), (271, 39910), (294, 39958), (303, 39976), (325, 40018), (356, 40096), (375, 40138), (400, 40171), (456, 40306), (475, 40345), (528, 40444), (549, 40471), (569, 40504),

Gene: CheeseTouch\_28 Start: 21492, Stop: 22115, Start Num: 245

Candidate Starts for CheeseTouch\_28:

(65, 21117), (83, 21174), (97, 21219), (123, 21273), (125, 21276), (136, 21312), (Start: 160 @21357 has 1 MA's), (162, 21360), (Start: 245 @21492 has 28 MA's), (Start: 248 @21498 has 2 MA's), (260, 21528), (265, 21543), (294, 21603), (327, 21684), (341, 21723), (369, 21795), (405, 21858), (423, 21903), (427, 21921), (435, 21942), (439, 21951), (523, 22083), (529, 22092), (537, 22104),

Gene: CherryonLim\_48 Start: 36692, Stop: 35889, Start Num: 188

Candidate Starts for CherryonLim\_48:

(Start: 139 @36752 has 1 MA's), (Start: 188 @36692 has 69 MA's), (235, 36614), (294, 36485), (324, 36431), (338, 36392), (351, 36371), (422, 36227), (431, 36194), (478, 36089), (515, 36011), (557, 35942), (561, 35933), (576, 35903), (586, 35894),

Gene: Chickadee\_57 Start: 43696, Stop: 44475, Start Num: 188

Candidate Starts for Chickadee\_57:

(104, 43534), (131, 43600), (136, 43615), (Start: 188 @43696 has 69 MA's), (205, 43717), (247, 43795), (258, 43810), (278, 43855), (325, 43945), (337, 43978), (413, 44110), (422, 44137), (446, 44206), (470, 44260), (497, 44308), (566, 44431), (582, 44461),

Gene: Chidiebere\_31 Start: 21568, Stop: 22266, Start Num: 172

Candidate Starts for Chidiebere\_31:

(Start: 160 @21550 has 1 MA's), (Start: 172 @21568 has 29 MA's), (Start: 255 @21631 has 1 MA's), (268, 21667), (298, 21727), (303, 21739), (311, 21760), (324, 21793), (336, 21823), (337, 21826), (345, 21847), (351, 21853), (353, 21859), (359, 21880), (410, 21985), (414, 21994), (435, 22063), (438, 22069), (456, 22105), (459, 22117), (495, 22156), (506, 22177), (547, 22246), (553, 22258), (555, 22261),

Gene: ChisanaKitsune\_27 Start: 20220, Stop: 20918, Start Num: 172

Candidate Starts for ChisanaKitsune\_27:

(106, 20082), (108, 20088), (118, 20109), (124, 20121), (135, 20154), (140, 20166), (Start: 172 @20220 has 29 MA's), (Start: 255 @20283 has 1 MA's), (303, 20391), (311, 20412), (324, 20445), (336, 20475), (337, 20478), (345, 20499), (351, 20505), (353, 20511), (359, 20532), (410, 20637), (414, 20646), (435, 20715), (438, 20721), (456, 20757), (459, 20769), (495, 20808), (547, 20898), (553, 20910), (555, 20913),

Gene: ClamChowder\_46 Start: 36471, Stop: 37226, Start Num: 182

Candidate Starts for ClamChowder\_46:

(165, 36456), (Start: 182 @36471 has 36 MA's), (233, 36543), (258, 36579), (295, 36651), (402, 36846), (407, 36852), (420, 36879), (434, 36927), (483, 37029), (531, 37113), (577, 37185),

Gene: Clap\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Clap\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Clark\_25 Start: 21234, Stop: 22034, Start Num: 167

Candidate Starts for Clark\_25:

(Start: 167 @21234 has 3 MA's), (Start: 182 @21246 has 36 MA's), (Start: 201 @21258 has 3 MA's), (202, 21261), (Start: 211 @21288 has 1 MA's), (Start: 222 @21300 has 1 MA's), (258, 21351), (299, 21444), (323, 21489), (324, 21492), (325, 21495), (348, 21555), (354, 21573), (357, 21585), (358, 21588), (359, 21591), (410, 21681), (440, 21768), (559, 21990), (573, 22014),

Gene: Cleo\_40 Start: 32906, Stop: 32142, Start Num: 188

Candidate Starts for Cleo\_40:

(Start: 174 @32921 has 3 MA's), (Start: 188 @32906 has 69 MA's), (Start: 211 @32867 has 1 MA's), (Start: 245 @32813 has 28 MA's), (258, 32795), (268, 32771), (323, 32657), (341, 32606), (364, 32552), (378, 32531), (451, 32390), (464, 32354), (478, 32333), (515, 32261), (521, 32249), (561, 32186), (568, 32171), (570, 32168), (575, 32159), (582, 32156),

Gene: CloverMinnie\_45 Start: 37493, Stop: 38215, Start Num: 188

Candidate Starts for CloverMinnie\_45:

(89, 37307), (Start: 188 @37493 has 69 MA's), (Start: 245 @37586 has 28 MA's), (282, 37655), (296, 37682), (299, 37688), (347, 37778), (406, 37886), (413, 37898), (427, 37949), (439, 37979), (451, 38009), (456, 38024),

Gene: Clown\_50 Start: 38569, Stop: 39336, Start Num: 184

Candidate Starts for Clown\_50:

(Start: 184 @38569 has 99 MA's), (Start: 201 @38584 has 3 MA's), (205, 38593), (Start: 222 @38626 has 1 MA's), (233, 38638), (Start: 238 @38647 has 20 MA's), (251, 38668), (269, 38701), (292, 38737), (295, 38746), (312, 38767), (324, 38800), (358, 38881), (359, 38884), (393, 38932), (402, 38941), (420, 38974), (427, 39004), (434, 39022), (451, 39055), (457, 39073), (460, 39082), (489, 39139), (515, 39187), (520, 39193), (574, 39289),

Gene: CoffeeBean\_20 Start: 9913, Stop: 10809, Start Num: 184

Candidate Starts for CoffeeBean\_20:

(Start: 184 @9913 has 99 MA's), (225, 9991), (272, 10078), (292, 10126), (298, 10141), (330, 10219), (348, 10264), (410, 10396), (442, 10489), (448, 10504), (494, 10603), (537, 10684), (565, 10732), (587, 10777),

Gene: Commandaria\_20 Start: 9068, Stop: 9796, Start Num: 172

Candidate Starts for Commandaria\_20:

(Start: 172 @9068 has 29 MA's), (221, 9125), (266, 9158), (279, 9179), (297, 9221), (416, 9497), (429, 9545), (435, 9560), (506, 9707), (527, 9749),

Gene: Confidence\_26 Start: 21821, Stop: 22441, Start Num: 238

Candidate Starts for Confidence\_26:



(Start: 238 @21821 has 20 MA's), (Start: 248 @21827 has 2 MA's), (265, 21872), (284, 21908), (303, 21953), (324, 22007), (341, 22052), (369, 22124), (405, 22187), (427, 22250), (464, 22331), (523, 22409), (529, 22418), (531, 22421),

Gene: Coriander\_27 Start: 22642, Stop: 23235, Start Num: 258

Candidate Starts for Coriander\_27:

(Start: 190 @22534 has 48 MA's), (247, 22627), (258, 22642), (278, 22687), (294, 22717), (325, 22762), (335, 22789), (336, 22792), (357, 22843), (361, 22861), (414, 22942), (439, 23020), (441, 23026), (457, 23068), (459, 23077), (501, 23149), (536, 23212),

Gene: CoveyB\_47 Start: 36170, Stop: 36925, Start Num: 184

Candidate Starts for CoveyB\_47:

(128, 36092), (Start: 184 @36170 has 99 MA's), (233, 36242), (295, 36350), (322, 36395), (402, 36545), (407, 36551), (420, 36578), (434, 36626), (483, 36728), (531, 36812), (577, 36884),

Gene: Cozz\_43 Start: 33495, Stop: 32656, Start Num: 188

Candidate Starts for Cozz\_43:

(50, 33816), (56, 33792), (57, 33789), (81, 33702), (96, 33657), (121, 33606), (Start: 139 @33555 has 1 MA's), (Start: 188 @33495 has 69 MA's), (Start: 222 @33435 has 1 MA's), (241, 33405), (Start: 245 @33399 has 28 MA's), (287, 33318), (336, 33210), (470, 32886), (561, 32715), (566, 32706),

Gene: Crater\_26 Start: 21059, Stop: 21682, Start Num: 245

Candidate Starts for Crater\_26:

(65, 20684), (83, 20741), (97, 20786), (123, 20840), (125, 20843), (136, 20879), (Start: 160 @20924 has 1 MA's), (162, 20927), (Start: 245 @21059 has 28 MA's), (Start: 248 @21065 has 2 MA's), (260, 21095), (265, 21110), (294, 21170), (327, 21251), (341, 21290), (369, 21362), (405, 21425), (423, 21470), (427, 21488), (435, 21509), (439, 21518), (523, 21650), (529, 21659), (537, 21671),

Gene: Cynthia\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Cynthia\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: DalanDe\_26 Start: 21686, Stop: 22381, Start Num: 172

Candidate Starts for DalanDe\_26:

(Start: 172 @21686 has 29 MA's), (Start: 255 @21746 has 1 MA's), (275, 21791), (303, 21854), (311, 21875), (324, 21908), (337, 21941), (379, 22040), (398, 22076), (410, 22100), (414, 22109), (427, 22157), (431, 22169), (435, 22178), (456, 22220), (495, 22271), (545, 22358),

Gene: Dalilpop\_23 Start: 10164, Stop: 10931, Start Num: 172

Candidate Starts for Dalilpop\_23:

(Start: 172 @10164 has 29 MA's), (186, 10179), (236, 10233), (Start: 255 @10269 has 1 MA's), (256, 10272), (279, 10323), (297, 10365), (392, 10593), (412, 10629), (445, 10731), (502, 10842), (506, 10848), (533, 10896), (538, 10902),

Gene: Danyall\_46 Start: 36172, Stop: 36927, Start Num: 184

Candidate Starts for Danyall\_46:

(120, 36076), (Start: 184 @36172 has 99 MA's), (233, 36244), (258, 36280), (295, 36352), (304, 36367), (402, 36547), (407, 36553), (420, 36580), (483, 36730), (531, 36814), (577, 36886),

Gene: Daredevil\_123 Start: 74384, Stop: 75109, Start Num: 189

Candidate Starts for Daredevil\_123:

(Start: 189 @74384 has 3 MA's), (330, 74663), (365, 74720), (444, 74885), (465, 74936), (472, 74948), (489, 74984), (525, 75047),

Gene: DatBoi\_128 Start: 77112, Stop: 77834, Start Num: 192

Candidate Starts for DatBoi\_128:

(107, 76950), (114, 76968), (130, 77007), (153, 77061), (Start: 192 @77112 has 11 MA's), (219, 77169), (278, 77268), (316, 77346),

Gene: DaviePasture\_87 Start: 58761, Stop: 59612, Start Num: 147

Candidate Starts for DaviePasture\_87:

(137, 58737), (138, 58740), (Start: 147 @58761 has 26 MA's), (151, 58770), (Start: 167 @58791 has 3 MA's), (195, 58833), (199, 58839), (273, 58989), (277, 58998), (288, 59025), (295, 59037), (311, 59076), (387, 59256), (416, 59322), (419, 59331), (426, 59361), (436, 59388), (445, 59412), (470, 59466), (495, 59511), (500, 59523), (539, 59589),

Gene: Delian\_25 Start: 21173, Stop: 21976, Start Num: 184

Candidate Starts for Delian\_25:

(Start: 184 @21173 has 99 MA's), (Start: 211 @21221 has 1 MA's), (Start: 222 @21233 has 1 MA's), (234, 21248), (258, 21284), (299, 21377), (325, 21428), (347, 21485), (348, 21488), (354, 21506), (357, 21518), (358, 21521), (359, 21524), (440, 21701), (451, 21722), (452, 21728), (532, 21884), (559, 21920), (573, 21944), (585, 21965),

Gene: Delrey21\_46 Start: 41437, Stop: 42174, Start Num: 177

Candidate Starts for Delrey21\_46:

(18, 40798), (24, 40969), (27, 41011), (57, 41152), (Start: 167 @41428 has 3 MA's), (Start: 177 @41437 has 6 MA's), (Start: 181 @41443 has 1 MA's), (Start: 188 @41452 has 69 MA's), (242, 41536), (258, 41557), (261, 41566), (289, 41605), (294, 41617), (303, 41635), (325, 41677), (355, 41749), (357, 41755), (425, 41881), (440, 41920), (451, 41941), (456, 41956), (468, 41983), (553, 42130),

Gene: Denise\_22 Start: 18886, Stop: 19509, Start Num: 245

Candidate Starts for Denise\_22:

(Start: 245 @18886 has 28 MA's), (Start: 248 @18892 has 2 MA's), (260, 18922), (265, 18937), (294, 18997), (303, 19018), (311, 19039), (369, 19189), (405, 19252), (427, 19315), (435, 19336), (439, 19345), (523, 19477), (527, 19483), (537, 19498), (539, 19501),

Gene: Derg\_43 Start: 39155, Stop: 39898, Start Num: 184

Candidate Starts for Derg\_43:

(Start: 184 @39155 has 99 MA's), (Start: 201 @39173 has 3 MA's), (223, 39218), (258, 39263), (294, 39338), (303, 39356), (325, 39398), (375, 39518), (388, 39530), (442, 39650), (456, 39686), (460, 39698), (475, 39725), (492, 39758), (509, 39791), (528, 39824), (549, 39851),

Gene: DirtyBoi\_28 Start: 22441, Stop: 23142, Start Num: 190

Candidate Starts for DirtyBoi\_28:

(Start: 190 @22441 has 48 MA's), (205, 22459), (247, 22534), (258, 22549), (294, 22624), (335, 22696), (345, 22723), (357, 22750), (360, 22759), (361, 22768), (412, 22843), (414, 22849), (439, 22927), (441, 22933), (501, 23056), (536, 23119),

Gene: Dmitri\_27 Start: 22590, Stop: 23291, Start Num: 190

Candidate Starts for Dmitri\_27:

(28, 22158), (30, 22161), (36, 22197), (43, 22218), (47, 22245), (52, 22257), (61, 22299), (92, 22407), (Start: 190 @22590 has 48 MA's), (205, 22608), (247, 22683), (258, 22698), (294, 22773), (304, 22794), (324, 22815), (335, 22845), (345, 22872), (357, 22899), (360, 22908), (361, 22917), (414,

22998), (427, 23046), (439, 23076), (441, 23082), (536, 23268),

Gene: DobbysSock\_24 Start: 20720, Stop: 21508, Start Num: 182

Candidate Starts for DobbysSock\_24:

(Start: 167 @20708 has 3 MA's), (Start: 182 @20720 has 36 MA's), (Start: 201 @20732 has 3 MA's), (202, 20735), (Start: 211 @20762 has 1 MA's), (Start: 222 @20774 has 1 MA's), (258, 20825), (299, 20918), (323, 20963), (324, 20966), (325, 20969), (348, 21029), (354, 21047), (357, 21059), (358, 21062), (359, 21065), (410, 21155), (440, 21242), (522, 21410), (534, 21428), (559, 21464), (573, 21488),

Gene: DoctorFroggo\_46 Start: 41437, Stop: 42174, Start Num: 177

Candidate Starts for DoctorFroggo\_46:

(18, 40798), (24, 40969), (27, 41011), (57, 41152), (Start: 167 @41428 has 3 MA's), (Start: 177 @41437 has 6 MA's), (Start: 181 @41443 has 1 MA's), (Start: 188 @41452 has 69 MA's), (242, 41536), (258, 41557), (261, 41566), (289, 41605), (294, 41617), (303, 41635), (325, 41677), (355, 41749), (357, 41755), (425, 41881), (440, 41920), (451, 41941), (456, 41956), (468, 41983), (553, 42130),

Gene: Doggs\_26 Start: 22233, Stop: 22934, Start Num: 190

Candidate Starts for Doggs\_26:

(Start: 190 @22233 has 48 MA's), (247, 22326), (258, 22341), (278, 22386), (294, 22416), (325, 22461), (335, 22488), (336, 22491), (357, 22542), (361, 22560), (414, 22641), (439, 22719), (441, 22725), (457, 22767), (459, 22776), (501, 22848), (536, 22911),

Gene: Dolores\_25 Start: 21222, Stop: 22010, Start Num: 182

Candidate Starts for Dolores\_25:

(Start: 167 @21210 has 3 MA's), (Start: 182 @21222 has 36 MA's), (Start: 201 @21234 has 3 MA's), (202, 21237), (Start: 211 @21264 has 1 MA's), (Start: 222 @21276 has 1 MA's), (258, 21327), (299, 21420), (323, 21465), (324, 21468), (325, 21471), (348, 21531), (354, 21549), (357, 21561), (358, 21564), (359, 21567), (410, 21657), (440, 21744), (559, 21966), (573, 21990),

Gene: DonkeyMan\_49 Start: 33281, Stop: 34132, Start Num: 116

Candidate Starts for DonkeyMan\_49:

(100, 33245), (103, 33251), (Start: 116 @33281 has 5 MA's), (218, 33464), (334, 33662), (347, 33695), (383, 33770), (390, 33785), (423, 33863), (475, 33974), (477, 33977), (480, 33983), (496, 34019), (510, 34046), (556, 34121),

Gene: DoobyDoo\_86 Start: 57557, Stop: 58408, Start Num: 147

Candidate Starts for DoobyDoo\_86:

(76, 57380), (87, 57407), (90, 57416), (92, 57431), (98, 57440), (137, 57533), (138, 57536), (Start: 147 @57557 has 26 MA's), (151, 57566), (Start: 167 @57587 has 3 MA's), (195, 57629), (199, 57635), (220, 57680), (273, 57785), (277, 57794), (288, 57821), (295, 57833), (311, 57872), (387, 58052), (416, 58118), (419, 58127), (426, 58157), (436, 58184), (445, 58208), (470, 58262), (495, 58307), (500, 58319), (539, 58385),

Gene: Dorito\_24 Start: 20676, Stop: 21473, Start Num: 167

Candidate Starts for Dorito\_24:

(93, 20526), (Start: 167 @20676 has 3 MA's), (180, 20685), (Start: 201 @20697 has 3 MA's), (202, 20700), (Start: 211 @20727 has 1 MA's), (Start: 222 @20739 has 1 MA's), (258, 20790), (299, 20883), (323, 20928), (324, 20931), (325, 20934), (326, 20937), (348, 20994), (354, 21012), (358, 21027), (359, 21030), (402, 21108), (410, 21120), (420, 21147), (440, 21207), (456, 21243), (522, 21375), (534, 21393), (559, 21429), (579, 21465),

Gene: Dre3\_41 Start: 32649, Stop: 31885, Start Num: 188

Candidate Starts for Dre3\_41:

(Start: 174 @32664 has 3 MA's), (Start: 188 @32649 has 69 MA's), (Start: 211 @32610 has 1 MA's), (Start: 245 @32556 has 28 MA's), (258, 32538), (268, 32514), (287, 32472), (323, 32400), (341, 32349), (364, 32295), (378, 32274), (422, 32211), (451, 32133), (464, 32097), (478, 32076), (515, 32004), (521, 31992), (561, 31929), (568, 31914), (570, 31911), (575, 31902), (582, 31899),

Gene: DumpTruck\_89 Start: 58754, Stop: 59617, Start Num: 139

Candidate Starts for DumpTruck\_89:

(134, 58742), (Start: 139 @58754 has 1 MA's), (150, 58772), (Start: 161 @58784 has 2 MA's), (Start: 167 @58793 has 3 MA's), (195, 58835), (254, 58943), (288, 59024), (295, 59036), (336, 59141), (344, 59162), (347, 59168), (351, 59171), (387, 59255), (429, 59369), (436, 59387), (444, 59408), (479, 59483), (511, 59540),

Gene: DumpsterDude\_29 Start: 25886, Stop: 26689, Start Num: 181

Candidate Starts for DumpsterDude\_29:

(Start: 181 @25886 has 1 MA's), (Start: 201 @25907 has 3 MA's), (Start: 211 @25937 has 1 MA's), (Start: 222 @25949 has 1 MA's), (234, 25964), (258, 26000), (299, 26093), (325, 26144), (342, 26192), (348, 26204), (354, 26222), (357, 26234), (358, 26237), (359, 26240), (371, 26273), (440, 26417), (451, 26438), (466, 26477), (522, 26585), (559, 26636), (573, 26660),

Gene: E3\_gp85 Start: 47322, Stop: 46429, Start Num: 105

Candidate Starts for E3\_gp85:

(105, 47322), (110, 47307), (115, 47298), (136, 47247), (145, 47229), (155, 47214), (Start: 172 @47193 has 29 MA's), (241, 47088), (247, 47079), (263, 47052), (278, 47022), (285, 47007), (290, 46998), (301, 46974), (306, 46962), (360, 46857), (373, 46830), (385, 46815), (392, 46803), (399, 46785), (423, 46728), (444, 46668), (482, 46587), (524, 46500), (543, 46470), (556, 46449),

Gene: EMoore\_42 Start: 39517, Stop: 40245, Start Num: 184

Candidate Starts for EMoore\_42:

(Start: 179 @39511 has 1 MA's), (Start: 184 @39517 has 99 MA's), (Start: 222 @39574 has 1 MA's), (Start: 248 @39613 has 2 MA's), (258, 39625), (294, 39685), (356, 39820), (357, 39823), (403, 39898), (414, 39913), (440, 39991), (460, 40039), (475, 40066), (507, 40129), (555, 40204), (563, 40219),

Gene: EMSquaredA\_27 Start: 21910, Stop: 22626, Start Num: 187

Candidate Starts for EMSquaredA\_27:

(Start: 167 @21883 has 3 MA's), (Start: 168 @21886 has 1 MA's), (Start: 187 @21910 has 15 MA's), (203, 21928), (231, 21982), (278, 22066), (298, 22105), (325, 22141), (335, 22168), (357, 22222), (361, 22240), (414, 22333), (439, 22411), (441, 22417), (530, 22594), (542, 22612),

Gene: Easley\_25 Start: 21244, Stop: 22020, Start Num: 201

Candidate Starts for Easley\_25:

(Start: 167 @21220 has 3 MA's), (Start: 182 @21232 has 36 MA's), (Start: 201 @21244 has 3 MA's), (202, 21247), (Start: 211 @21274 has 1 MA's), (Start: 222 @21286 has 1 MA's), (258, 21337), (299, 21430), (323, 21475), (324, 21478), (325, 21481), (348, 21541), (354, 21559), (357, 21571), (358, 21574), (359, 21577), (410, 21667), (440, 21754), (559, 21976), (573, 22000),

Gene: Ebert\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Ebert\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Ecliptus\_31 Start: 23080, Stop: 23703, Start Num: 245

Candidate Starts for Ecliptus\_31:

(Start: 245 @23080 has 28 MA's), (Start: 248 @23086 has 2 MA's), (260, 23116), (265, 23131), (341, 23311), (369, 23383), (397, 23434), (405, 23446), (423, 23491), (427, 23509), (435, 23530), (439, 23539), (523, 23671),

Gene: EdnaMode\_23 Start: 18707, Stop: 19408, Start Num: 190

Candidate Starts for EdnaMode\_23:

(Start: 177 @18689 has 6 MA's), (Start: 179 @18692 has 1 MA's), (Start: 190 @18707 has 48 MA's), (247, 18800), (258, 18815), (274, 18851), (324, 18932), (336, 18965), (338, 18971), (357, 19016), (372, 19055), (439, 19193), (441, 19199), (451, 19223), (456, 19238), (544, 19400),

Gene: Elinal\_50 Start: 35490, Stop: 34687, Start Num: 188

Candidate Starts for Elinal\_50:

(Start: 139 @35550 has 1 MA's), (Start: 188 @35490 has 69 MA's), (294, 35283), (324, 35229), (331, 35208), (338, 35190), (341, 35181), (356, 35154), (418, 35043), (422, 35025), (431, 34992), (476, 34890), (478, 34887), (515, 34809), (517, 34806), (557, 34740), (576, 34701), (586, 34692),

Gene: Elliott\_45 Start: 33793, Stop: 32954, Start Num: 188

Candidate Starts for Elliott\_45:

(50, 34114), (56, 34090), (57, 34087), (81, 34000), (96, 33955), (Start: 139 @33853 has 1 MA's), (Start: 188 @33793 has 69 MA's), (Start: 222 @33733 has 1 MA's), (241, 33703), (Start: 245 @33697 has 28 MA's), (287, 33616), (336, 33508), (350, 33475), (358, 33448), (470, 33184), (561, 33013), (566, 33004),

Gene: Emalyn\_44 Start: 32901, Stop: 32062, Start Num: 188

Candidate Starts for Emalyn\_44:

(Start: 139 @32976 has 1 MA's), (Start: 188 @32901 has 69 MA's), (Start: 222 @32841 has 1 MA's), (Start: 245 @32805 has 28 MA's), (269, 32763), (287, 32724), (294, 32706), (310, 32682), (386, 32496), (420, 32424), (566, 32112),

Gene: Emianna\_19 Start: 9384, Stop: 10109, Start Num: 172

Candidate Starts for Emianna\_19:

(Start: 172 @9384 has 29 MA's), (Start: 201 @9408 has 3 MA's), (221, 9441), (256, 9444), (273, 9480), (279, 9495), (297, 9537), (356, 9684), (434, 9876), (479, 9978), (495, 10008), (506, 10029), (514, 10044), (550, 10104),

Gene: EnalisNailo\_27 Start: 22059, Stop: 22775, Start Num: 187

Candidate Starts for EnalisNailo\_27:

(Start: 167 @22032 has 3 MA's), (Start: 168 @22035 has 1 MA's), (Start: 187 @22059 has 15 MA's), (203, 22077), (231, 22131), (278, 22215), (298, 22254), (325, 22290), (335, 22317), (357, 22371), (361, 22389), (414, 22482), (439, 22560), (441, 22566), (530, 22743), (542, 22761),

Gene: Ennea\_24 Start: 10528, Stop: 11301, Start Num: 172

Candidate Starts for Ennea\_24:

(Start: 172 @10528 has 29 MA's), (Start: 255 @10636 has 1 MA's), (256, 10639), (279, 10690), (297, 10732), (341, 10846), (361, 10900), (506, 11221), (538, 11275),

Gene: Erutan\_86 Start: 58695, Stop: 59546, Start Num: 147

Candidate Starts for Erutan\_86:

(137, 58671), (138, 58674), (Start: 147 @58695 has 26 MA's), (151, 58704), (Start: 167 @58725 has 3 MA's), (195, 58767), (199, 58773), (220, 58818), (273, 58923), (288, 58959), (295, 58971), (311,

59010), (387, 59190), (416, 59256), (419, 59265), (426, 59295), (444, 59343), (445, 59346), (470, 59400), (495, 59445), (500, 59457), (539, 59523),

Gene: Eudoria\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Eudoria\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: Evaa\_42 Start: 36118, Stop: 36834, Start Num: 191

Candidate Starts for Evaa\_42:

(34, 35704), (Start: 191 @36118 has 3 MA's), (220, 36172), (258, 36226), (278, 36271), (304, 36322), (305, 36325), (317, 36334), (325, 36346), (338, 36382), (361, 36454), (415, 36547), (429, 36595), (430, 36598), (439, 36619), (530, 36802),

Gene: Evamon\_43 Start: 36191, Stop: 36946, Start Num: 184

Candidate Starts for Evamon\_43:

(120, 36095), (Start: 184 @36191 has 99 MA's), (233, 36263), (258, 36299), (295, 36371), (304, 36386), (402, 36566), (407, 36572), (420, 36599), (434, 36647), (483, 36749), (531, 36833), (577, 36905),

Gene: Eviarto\_25 Start: 22309, Stop: 22926, Start Num: 238

Candidate Starts for Eviarto\_25:

(175, 22210), (204, 22249), (224, 22282), (Start: 238 @22309 has 20 MA's), (Start: 248 @22318 has 2 MA's), (265, 22360), (273, 22372), (294, 22420), (303, 22441), (311, 22462), (324, 22495), (326, 22498), (341, 22540), (357, 22576), (379, 22627), (405, 22675), (427, 22738), (439, 22768), (464, 22819), (523, 22897),

Gene: Eyes\_26 Start: 21433, Stop: 22146, Start Num: 190

Candidate Starts for Eyes\_26:

(Start: 148 @21376 has 8 MA's), (Start: 190 @21433 has 48 MA's), (247, 21526), (258, 21541), (278, 21586), (304, 21637), (326, 21664), (335, 21688), (360, 21751), (361, 21760), (434, 21910), (439, 21922), (441, 21928), (516, 22093),

Gene: Eyre\_23 Start: 19537, Stop: 20265, Start Num: 184

Candidate Starts for Eyre\_23:

(38, 19162), (85, 19333), (86, 19336), (119, 19417), (129, 19438), (Start: 184 @19537 has 99 MA's), (247, 19636), (258, 19651), (278, 19696), (335, 19798), (357, 19852), (361, 19870), (439, 20038), (441, 20044), (487, 20146), (516, 20209),

Gene: Fairfaxidum\_25 Start: 21557, Stop: 22270, Start Num: 187

Candidate Starts for Fairfaxidum\_25:

(176, 21542), (Start: 187 @21557 has 15 MA's), (Start: 201 @21569 has 3 MA's), (202, 21572), (203, 21575), (263, 21683), (278, 21713), (294, 21743), (325, 21788), (341, 21833), (357, 21875), (361, 21893), (414, 21980), (416, 21986), (430, 22037), (439, 22058), (441, 22064), (456, 22103), (459, 22115), (501, 22187), (536, 22250),

Gene: Faith5x5\_23 Start: 18643, Stop: 19344, Start Num: 184

Candidate Starts for Faith5x5\_23:

(Start: 184 @18643 has 99 MA's), (231, 18709), (247, 18733), (263, 18763), (278, 18793), (298, 18832), (304, 18844), (326, 18871), (335, 18895), (336, 18898), (358, 18952), (360, 18958), (361, 18967), (398, 19030), (412, 19045), (414, 19051), (427, 19099), (435, 19120), (439, 19129), (441,

19135), (459, 19186), (487, 19225), (492, 19237), (530, 19312), (544, 19333), (546, 19336),

Gene: Feastonyeet\_46 Start: 35108, Stop: 34305, Start Num: 188

Candidate Starts for Feastonyeet\_46:

(Start: 139 @35168 has 1 MA's), (Start: 188 @35108 has 69 MA's), (294, 34901), (324, 34847), (327, 34838), (331, 34826), (341, 34799), (351, 34787), (356, 34772), (418, 34661), (422, 34643), (431, 34610), (476, 34508), (478, 34505), (506, 34448), (515, 34427), (557, 34358), (576, 34319), (586, 34310),

Gene: Fenry\_24 Start: 20871, Stop: 21674, Start Num: 184

Candidate Starts for Fenry\_24:

(Start: 184 @20871 has 99 MA's), (Start: 211 @20919 has 1 MA's), (Start: 222 @20931 has 1 MA's), (234, 20946), (258, 20982), (299, 21075), (310, 21087), (324, 21123), (325, 21126), (341, 21171), (342, 21174), (348, 21186), (354, 21204), (357, 21216), (358, 21219), (359, 21222), (440, 21399), (451, 21420), (452, 21426), (532, 21582), (559, 21618), (573, 21642), (585, 21663),

Gene: Fireball\_45 Start: 36416, Stop: 37156, Start Num: 182

Candidate Starts for Fireball\_45:

(Start: 148 @36380 has 8 MA's), (165, 36401), (Start: 182 @36416 has 36 MA's), (233, 36488), (258, 36524), (295, 36596), (336, 36677), (402, 36791), (407, 36797), (420, 36824), (434, 36872), (483, 36974), (549, 37088), (578, 37136),

Gene: Fitzgerald\_44 Start: 40680, Stop: 41414, Start Num: 184

Candidate Starts for Fitzgerald\_44:

(102, 40533), (142, 40623), (Start: 184 @40680 has 99 MA's), (Start: 201 @40698 has 3 MA's), (258, 40785), (271, 40812), (294, 40860), (303, 40878), (325, 40920), (356, 40998), (375, 41040), (400, 41073), (456, 41208), (475, 41247), (528, 41346), (549, 41373), (569, 41406),

Gene: Flapper\_22 Start: 9234, Stop: 10004, Start Num: 172

Candidate Starts for Flapper\_22:

(Start: 172 @9234 has 29 MA's), (186, 9252), (Start: 255 @9342 has 1 MA's), (279, 9396), (297, 9438), (392, 9666), (410, 9699), (412, 9702), (506, 9921), (538, 9975),

Gene: Flatwoods\_46 Start: 39507, Stop: 40250, Start Num: 184

Candidate Starts for Flatwoods\_46:

(Start: 184 @39507 has 99 MA's), (Start: 201 @39525 has 3 MA's), (223, 39570), (258, 39615), (294, 39690), (303, 39708), (325, 39750), (335, 39777), (375, 39870), (388, 39882), (442, 40002), (456, 40038), (460, 40050), (475, 40077), (492, 40110), (509, 40143), (528, 40176), (549, 40203),

Gene: Float294\_20 Start: 9077, Stop: 9850, Start Num: 172

Candidate Starts for Float294\_20:

(Start: 172 @9077 has 29 MA's), (Start: 255 @9185 has 1 MA's), (256, 9188), (279, 9239), (297, 9281), (341, 9395), (361, 9449), (423, 9581), (506, 9770), (538, 9824),

Gene: Floral\_27 Start: 21910, Stop: 22626, Start Num: 187

Candidate Starts for Floral\_27:

(Start: 167 @21883 has 3 MA's), (Start: 168 @21886 has 1 MA's), (Start: 187 @21910 has 15 MA's), (203, 21928), (231, 21982), (278, 22066), (298, 22105), (325, 22141), (335, 22168), (357, 22222), (361, 22240), (414, 22333), (439, 22411), (441, 22417), (530, 22594), (542, 22612),

Gene: FlyingTortilla\_30 Start: 24461, Stop: 25141, Start Num: 172

Candidate Starts for FlyingTortilla\_30:

(Start: 172 @24461 has 29 MA's), (Start: 255 @24518 has 1 MA's), (311, 24635), (324, 24668), (336, 24698), (337, 24701), (345, 24722), (351, 24728), (356, 24746), (361, 24767), (398, 24836), (410, 24860), (418, 24878), (423, 24899), (459, 24992), (464, 25001), (506, 25052), (547, 25121), (555, 25136),

Gene: Fosterous\_43 Start: 39239, Stop: 39973, Start Num: 184

Candidate Starts for Fosterous\_43:

(142, 39182), (Start: 184 @39239 has 99 MA's), (Start: 201 @39257 has 3 MA's), (258, 39344), (271, 39371), (294, 39419), (303, 39437), (325, 39479), (356, 39557), (375, 39599), (400, 39632), (456, 39767), (475, 39806), (528, 39905), (549, 39932), (569, 39965),

Gene: Foxboro\_20 Start: 9744, Stop: 10469, Start Num: 172

Candidate Starts for Foxboro\_20:

(Start: 172 @9744 has 29 MA's), (Start: 201 @9768 has 3 MA's), (221, 9801), (256, 9804), (273, 9840), (279, 9855), (297, 9897), (356, 10044), (434, 10236), (479, 10338), (495, 10368), (506, 10389), (514, 10404), (550, 10464),

Gene: Fresco\_42 Start: 35273, Stop: 35995, Start Num: 190

Candidate Starts for Fresco\_42:

(31, 34883), (75, 35060), (117, 35168), (Start: 190 @35273 has 48 MA's), (282, 35435), (304, 35480), (338, 35543), (345, 35561), (357, 35588), (398, 35666), (399, 35669), (427, 35738), (439, 35768), (441, 35774), (532, 35963),

Gene: Fribs8\_41 Start: 32917, Stop: 32156, Start Num: 188

Candidate Starts for Fribs8\_41:

(123, 33031), (Start: 174 @32932 has 3 MA's), (Start: 188 @32917 has 69 MA's), (251, 32815), (258, 32809), (268, 32785), (323, 32671), (331, 32647), (341, 32620), (364, 32566), (378, 32545), (422, 32482), (424, 32473), (451, 32404), (561, 32200), (575, 32173),

Gene: Frickyeah\_27 Start: 21264, Stop: 21887, Start Num: 245

Candidate Starts for Frickyeah\_27:

(65, 20889), (83, 20946), (97, 20991), (123, 21045), (125, 21048), (136, 21084), (Start: 160 @21129 has 1 MA's), (162, 21132), (Start: 245 @21264 has 28 MA's), (Start: 248 @21270 has 2 MA's), (260, 21300), (265, 21315), (294, 21375), (327, 21456), (341, 21495), (369, 21567), (405, 21630), (423, 21675), (427, 21693), (435, 21714), (439, 21723), (523, 21855), (529, 21864), (537, 21876),

Gene: Frokostdame\_25 Start: 21118, Stop: 21918, Start Num: 184

Candidate Starts for Frokostdame\_25:

(102, 20968), (Start: 184 @21118 has 99 MA's), (Start: 211 @21166 has 1 MA's), (Start: 222 @21178 has 1 MA's), (234, 21193), (258, 21229), (299, 21322), (324, 21370), (325, 21373), (347, 21430), (348, 21433), (354, 21451), (357, 21463), (358, 21466), (359, 21469), (440, 21646), (451, 21667), (468, 21709), (522, 21814), (532, 21829), (534, 21832), (559, 21865), (573, 21889),

Gene: Fugax\_47 Start: 36463, Stop: 37218, Start Num: 182

Candidate Starts for Fugax\_47:

(165, 36448), (Start: 182 @36463 has 36 MA's), (233, 36535), (258, 36571), (295, 36643), (402, 36838), (407, 36844), (420, 36871), (434, 36919), (483, 37021), (531, 37105), (577, 37177),

Gene: Fulcrum\_85 Start: 58384, Stop: 59235, Start Num: 147

Candidate Starts for Fulcrum\_85:

(76, 58207), (87, 58234), (90, 58243), (92, 58258), (98, 58267), (137, 58360), (138, 58363), (Start: 147 @58384 has 26 MA's), (151, 58393), (Start: 167 @58414 has 3 MA's), (195, 58456), (199, 58462), (220, 58507), (273, 58612), (288, 58648), (295, 58660), (311, 58699), (323, 58729), (324, 58732),



(328, 58744), (387, 58879), (416, 58945), (419, 58954), (426, 58984), (436, 59011), (445, 59035), (470, 59089), (495, 59134), (500, 59146), (539, 59212),

Gene: Fury\_25 Start: 9669, Stop: 10463, Start Num: 166

Candidate Starts for Fury\_25:

(77, 9471), (Start: 166 @9669 has 1 MA's), (Start: 255 @9798 has 1 MA's), (256, 9801), (279, 9858), (297, 9900), (341, 10014), (351, 10029), (356, 10047), (370, 10083), (404, 10152), (410, 10158), (435, 10236), (439, 10245), (459, 10299), (495, 10359),

Gene: GAL1\_26 Start: 21339, Stop: 22043, Start Num: 184

Candidate Starts for GAL1\_26:

(Start: 184 @21339 has 99 MA's), (Start: 190 @21345 has 48 MA's), (231, 21411), (247, 21435), (263, 21465), (278, 21495), (298, 21534), (335, 21597), (360, 21660), (361, 21669), (410, 21744), (412, 21747), (414, 21753), (427, 21801), (439, 21831), (441, 21837), (492, 21939), (501, 21960), (536, 22023),

Gene: GEazy\_26 Start: 21448, Stop: 22167, Start Num: 190

Candidate Starts for GEazy\_26:

(Start: 148 @21391 has 8 MA's), (Start: 190 @21448 has 48 MA's), (247, 21541), (258, 21556), (278, 21601), (304, 21652), (326, 21679), (335, 21703), (360, 21766), (361, 21775), (439, 21937), (441, 21943),

Gene: GMA3\_32 Start: 38590, Stop: 39348, Start Num: 189

Candidate Starts for GMA3\_32:

(Start: 189 @38590 has 3 MA's), (241, 38677), (300, 38785), (320, 38833), (330, 38869), (354, 38905), (365, 38938), (374, 38950), (420, 39040), (426, 39073), (458, 39151), (489, 39208), (548, 39319),

Gene: GMA6\_16 Start: 13599, Stop: 14291, Start Num: 169

Candidate Starts for GMA6\_16:

(169, 13599), (Start: 255 @13659 has 1 MA's), (258, 13671), (262, 13683), (268, 13695), (281, 13716), (294, 13749), (311, 13791), (324, 13824), (359, 13911), (410, 14013), (433, 14085), (456, 14133), (504, 14205), (523, 14241), (551, 14286),

Gene: GOATification\_85 Start: 58384, Stop: 59235, Start Num: 147

Candidate Starts for GOATification\_85:

(76, 58207), (87, 58234), (90, 58243), (92, 58258), (98, 58267), (137, 58360), (138, 58363), (Start: 147 @58384 has 26 MA's), (151, 58393), (Start: 167 @58414 has 3 MA's), (195, 58456), (199, 58462), (220, 58507), (273, 58612), (288, 58648), (295, 58660), (311, 58699), (323, 58729), (324, 58732), (328, 58744), (387, 58879), (416, 58945), (419, 58954), (426, 58984), (436, 59011), (445, 59035), (470, 59089), (495, 59134), (500, 59146), (539, 59212),

Gene: GRU1\_9 Start: 2330, Stop: 3097, Start Num: 172

Candidate Starts for GRU1\_9:

(170, 2327), (Start: 172 @2330 has 29 MA's), (186, 2345), (Start: 255 @2435 has 1 MA's), (256, 2438), (279, 2489), (297, 2531), (327, 2606), (392, 2759), (410, 2792), (412, 2795), (445, 2897), (502, 3008), (506, 3014), (533, 3062), (538, 3068),

Gene: GTE2\_37 Start: 33497, Stop: 32658, Start Num: 188

Candidate Starts for GTE2\_37:

(Start: 139 @33557 has 1 MA's), (Start: 188 @33497 has 69 MA's), (Start: 222 @33437 has 1 MA's), (Start: 245 @33401 has 28 MA's), (251, 33392), (287, 33320), (336, 33212), (356, 33158), (386, 33092), (402, 33059), (420, 33020), (506, 32816), (515, 32795), (566, 32708),

Gene: GTE5\_9 Start: 2331, Stop: 3101, Start Num: 172

Candidate Starts for GTE5\_9:

(Start: 172 @2331 has 29 MA's), (186, 2349), (Start: 255 @2439 has 1 MA's), (279, 2493), (297, 2535), (392, 2763), (410, 2796), (412, 2799), (502, 3012), (506, 3018), (533, 3066), (538, 3072),

Gene: GTE6\_58 Start: 44409, Stop: 45188, Start Num: 188

Candidate Starts for GTE6\_58:

(29, 43980), (37, 44022), (40, 44031), (49, 44073), (53, 44082), (104, 44247), (131, 44313), (136, 44328), (Start: 188 @44409 has 69 MA's), (247, 44508), (258, 44523), (278, 44568), (325, 44658), (337, 44691), (422, 44850), (446, 44919), (470, 44973), (582, 45174),

Gene: GTE8\_7 Start: 2259, Stop: 2990, Start Num: 172

Candidate Starts for GTE8\_7:

(Start: 172 @2259 has 29 MA's), (Start: 201 @2283 has 3 MA's), (221, 2316), (256, 2319), (273, 2355), (279, 2370), (297, 2412), (382, 2616), (410, 2676), (434, 2751), (435, 2754), (478, 2853), (479, 2856), (495, 2886), (506, 2907), (514, 2922),

Gene: Gaea\_45 Start: 39151, Stop: 39894, Start Num: 184

Candidate Starts for Gaea\_45:

(Start: 184 @39151 has 99 MA's), (Start: 201 @39169 has 3 MA's), (223, 39214), (258, 39259), (283, 39304), (294, 39334), (303, 39352), (315, 39364), (325, 39394), (335, 39421), (375, 39514), (388, 39526), (427, 39610), (456, 39682), (460, 39694), (475, 39721), (492, 39754), (509, 39787), (528, 39820), (549, 39847),

Gene: Galadriel\_45 Start: 40046, Stop: 40780, Start Num: 184

Candidate Starts for Galadriel\_45:

(102, 39899), (142, 39989), (Start: 184 @40046 has 99 MA's), (Start: 201 @40064 has 3 MA's), (258, 40151), (271, 40178), (294, 40226), (303, 40244), (325, 40286), (356, 40364), (375, 40406), (400, 40439), (456, 40574), (475, 40613), (528, 40712), (549, 40739), (569, 40772),

Gene: Gambino\_27 Start: 21524, Stop: 22264, Start Num: 222

Candidate Starts for Gambino\_27:

(102, 21314), (Start: 184 @21464 has 99 MA's), (Start: 211 @21512 has 1 MA's), (Start: 222 @21524 has 1 MA's), (258, 21575), (299, 21668), (325, 21719), (347, 21776), (348, 21779), (354, 21797), (357, 21809), (358, 21812), (359, 21815), (440, 21992), (451, 22013), (452, 22019), (468, 22055), (522, 22160), (532, 22175), (534, 22178), (559, 22211), (573, 22235),

Gene: GemG\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for GemG\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Genamy16\_87 Start: 57186, Stop: 58037, Start Num: 147

Candidate Starts for Genamy16\_87:

(137, 57162), (138, 57165), (Start: 147 @57186 has 26 MA's), (Start: 161 @57207 has 2 MA's), (Start: 167 @57216 has 3 MA's), (195, 57258), (199, 57264), (220, 57309), (270, 57411), (273, 57414), (288, 57450), (295, 57462), (311, 57501), (323, 57531), (324, 57534), (328, 57546), (329, 57549), (387, 57681), (416, 57747), (419, 57756), (426, 57786), (436, 57813), (444, 57834), (470, 57891), (495, 57936), (539, 58014),

Gene: Geodirt\_44 Start: 40658, Stop: 41392, Start Num: 184

Candidate Starts for Geodirt\_44:

(142, 40601), (Start: 184 @40658 has 99 MA's), (Start: 201 @40676 has 3 MA's), (258, 40763), (271, 40790), (294, 40838), (303, 40856), (325, 40898), (356, 40976), (375, 41018), (400, 41051), (456, 41186), (475, 41225), (528, 41324), (549, 41351), (569, 41384),

Gene: Getalong\_29 Start: 22301, Stop: 22924, Start Num: 245

Candidate Starts for Getalong\_29:

(65, 21926), (83, 21983), (97, 22028), (123, 22082), (125, 22085), (136, 22121), (Start: 160 @22166 has 1 MA's), (162, 22169), (Start: 245 @22301 has 28 MA's), (Start: 248 @22307 has 2 MA's), (260, 22337), (265, 22352), (294, 22412), (327, 22493), (341, 22532), (369, 22604), (405, 22667), (423, 22712), (427, 22730), (435, 22751), (439, 22760), (523, 22892), (529, 22901), (537, 22913),

Gene: Gezellig\_45 Start: 36323, Stop: 37078, Start Num: 184

Candidate Starts for Gezellig\_45:

(128, 36245), (Start: 184 @36323 has 99 MA's), (233, 36395), (295, 36503), (322, 36548), (402, 36698), (407, 36704), (420, 36731), (434, 36779), (483, 36881), (531, 36965), (577, 37037),

Gene: GiKK\_50 Start: 34402, Stop: 33551, Start Num: 148

Candidate Starts for GiKK\_50:

(142, 34417), (Start: 148 @34402 has 8 MA's), (157, 34387), (206, 34330), (208, 34324), (214, 34309), (Start: 245 @34264 has 28 MA's), (251, 34255), (258, 34249), (269, 34222), (314, 34135), (320, 34123), (321, 34120), (327, 34096), (345, 34048), (354, 34027), (366, 33985), (374, 33973), (386, 33955), (411, 33916), (471, 33760), (478, 33748), (552, 33610),

Gene: Gibbin\_88 Start: 59024, Stop: 59875, Start Num: 147

Candidate Starts for Gibbin\_88:

(137, 59000), (138, 59003), (Start: 147 @59024 has 26 MA's), (151, 59033), (Start: 167 @59054 has 3 MA's), (195, 59096), (199, 59102), (220, 59147), (273, 59252), (277, 59261), (288, 59288), (295, 59300), (311, 59339), (387, 59519), (416, 59585), (419, 59594), (426, 59624), (436, 59651), (445, 59675), (470, 59729), (495, 59774), (500, 59786), (539, 59852),

Gene: Gibbles\_38 Start: 40989, Stop: 41708, Start Num: 192

Candidate Starts for Gibbles\_38:

(Start: 192 @40989 has 11 MA's), (Start: 196 @40995 has 5 MA's), (Start: 211 @41031 has 1 MA's), (216, 41043), (282, 41136), (331, 41262), (343, 41280), (346, 41286), (365, 41328), (398, 41382), (406, 41394), (442, 41490), (481, 41550), (538, 41664),

Gene: Gibbous\_41 Start: 32649, Stop: 31885, Start Num: 188

Candidate Starts for Gibbous\_41:

(Start: 174 @32664 has 3 MA's), (Start: 188 @32649 has 69 MA's), (Start: 211 @32610 has 1 MA's), (Start: 245 @32556 has 28 MA's), (258, 32538), (268, 32514), (287, 32472), (323, 32400), (341, 32349), (364, 32295), (378, 32274), (422, 32211), (451, 32133), (464, 32097), (478, 32076), (515, 32004), (521, 31992), (561, 31929), (568, 31914), (570, 31911), (575, 31902), (582, 31899),

Gene: Gizermo\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Gizermo\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Gmala1\_33 Start: 37223, Stop: 38008, Start Num: 189

Candidate Starts for Gmala1\_33:

(Start: 189 @37223 has 3 MA's), (Start: 201 @37238 has 3 MA's), (Start: 211 @37268 has 1 MA's), (216, 37280), (229, 37292), (237, 37304), (251, 37328), (278, 37370), (300, 37418), (316, 37460), (330, 37502), (354, 37553), (410, 37661), (463, 37805), (522, 37928), (548, 37970),

Gene: GoldHunter\_46 Start: 33907, Stop: 33068, Start Num: 188

Candidate Starts for GoldHunter\_46:

(50, 34228), (56, 34204), (57, 34201), (81, 34114), (96, 34069), (121, 34018), (Start: 139 @33967 has 1 MA's), (Start: 188 @33907 has 69 MA's), (Start: 222 @33847 has 1 MA's), (241, 33817), (Start: 245 @33811 has 28 MA's), (287, 33730), (336, 33622), (470, 33298), (561, 33127), (566, 33118),

Gene: GordDuk1\_33 Start: 37164, Stop: 37949, Start Num: 189

Candidate Starts for GordDuk1\_33:

(Start: 189 @37164 has 3 MA's), (Start: 201 @37179 has 3 MA's), (216, 37221), (229, 37233), (251, 37269), (278, 37311), (300, 37359), (316, 37401), (330, 37443), (354, 37494), (410, 37602), (463, 37746), (522, 37869), (548, 37911),

Gene: GordTnk2\_33 Start: 37130, Stop: 37915, Start Num: 189

Candidate Starts for GordTnk2\_33:

(Start: 189 @37130 has 3 MA's), (Start: 201 @37145 has 3 MA's), (Start: 211 @37175 has 1 MA's), (216, 37187), (229, 37199), (237, 37211), (251, 37235), (278, 37277), (300, 37325), (330, 37409), (354, 37460), (410, 37568), (463, 37712), (522, 37835), (538, 37859), (548, 37877),

Gene: Gray\_31 Start: 21550, Stop: 22266, Start Num: 160

Candidate Starts for Gray\_31:

(Start: 160 @21550 has 1 MA's), (Start: 172 @21568 has 29 MA's), (Start: 255 @21631 has 1 MA's), (268, 21667), (298, 21727), (303, 21739), (311, 21760), (324, 21793), (336, 21823), (337, 21826), (345, 21847), (351, 21853), (353, 21859), (359, 21880), (410, 21985), (414, 21994), (435, 22063), (438, 22069), (456, 22105), (459, 22117), (495, 22156), (506, 22177), (547, 22246), (553, 22258), (555, 22261),

Gene: GretellLyn\_86 Start: 58751, Stop: 59602, Start Num: 147

Candidate Starts for GretellLyn\_86:

(137, 58727), (138, 58730), (Start: 147 @58751 has 26 MA's), (151, 58760), (Start: 167 @58781 has 3 MA's), (195, 58823), (199, 58829), (220, 58874), (273, 58979), (288, 59015), (295, 59027), (311, 59066), (387, 59246), (416, 59312), (419, 59321), (426, 59351), (444, 59399), (445, 59402), (470, 59456), (495, 59501), (500, 59513), (539, 59579),

Gene: GrootJr\_21 Start: 9807, Stop: 10532, Start Num: 172

Candidate Starts for GrootJr\_21:

(Start: 172 @9807 has 29 MA's), (Start: 201 @9831 has 3 MA's), (221, 9864), (256, 9867), (273, 9903), (279, 9918), (297, 9960), (356, 10107), (434, 10299), (479, 10401), (495, 10431), (506, 10452), (514, 10467), (550, 10527),

Gene: Guacamole\_25 Start: 21156, Stop: 21959, Start Num: 184

Candidate Starts for Guacamole\_25:

(Start: 184 @21156 has 99 MA's), (Start: 211 @21204 has 1 MA's), (Start: 222 @21216 has 1 MA's), (234, 21231), (258, 21267), (299, 21360), (325, 21411), (347, 21468), (348, 21471), (354, 21489), (357, 21501), (358, 21504), (359, 21507), (440, 21684), (451, 21705), (452, 21711), (532, 21867), (559, 21903), (573, 21927), (585, 21948),

Gene: Gudmit\_24 Start: 19608, Stop: 20321, Start Num: 187

Candidate Starts for Gudmit\_24:

(Start: 187 @19608 has 15 MA's), (203, 19626), (278, 19764), (326, 19842), (335, 19866), (357, 19920), (361, 19938), (414, 20031), (439, 20109), (441, 20115), (452, 20145), (536, 20301), (546, 20313),

Gene: Gustav\_37 Start: 28213, Stop: 28986, Start Num: 191

Candidate Starts for Gustav\_37:

(Start: 191 @28213 has 3 MA's), (216, 28267), (229, 28279), (261, 28330), (289, 28387), (302, 28417), (308, 28432), (315, 28450), (325, 28480), (326, 28483), (335, 28507), (356, 28540), (406, 28630), (476, 28798), (548, 28939), (562, 28963),

Gene: Gustavo\_45 Start: 39323, Stop: 40066, Start Num: 184

Candidate Starts for Gustavo\_45:

(Start: 184 @39323 has 99 MA's), (Start: 201 @39341 has 3 MA's), (223, 39386), (258, 39431), (289, 39494), (294, 39506), (303, 39524), (325, 39566), (335, 39593), (375, 39686), (388, 39698), (442, 39818), (456, 39854), (460, 39866), (475, 39893), (492, 39926), (509, 39959), (528, 39992), (549, 40019),

Gene: GuyFagieri\_19 Start: 9542, Stop: 10426, Start Num: 184

Candidate Starts for GuyFagieri\_19:

(59, 9272), (63, 9284), (69, 9299), (Start: 184 @9542 has 99 MA's), (Start: 194 @9557 has 4 MA's), (225, 9620), (272, 9707), (280, 9725), (286, 9740), (293, 9758), (298, 9770), (354, 9899), (389, 9977), (410, 10013), (442, 10106), (448, 10121), (494, 10220), (518, 10268), (537, 10301), (565, 10349), (587, 10394),

Gene: Haley23\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Haley23\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Halo3\_44 Start: 36616, Stop: 37371, Start Num: 184

Candidate Starts for Halo3\_44:

(120, 36520), (Start: 184 @36616 has 99 MA's), (233, 36688), (258, 36724), (295, 36796), (402, 36991), (407, 36997), (420, 37024), (483, 37174), (531, 37258), (577, 37330),

Gene: Hanem\_31 Start: 21568, Stop: 22266, Start Num: 172

Candidate Starts for Hanem\_31:

(Start: 160 @21550 has 1 MA's), (Start: 172 @21568 has 29 MA's), (Start: 255 @21631 has 1 MA's), (268, 21667), (298, 21727), (303, 21739), (311, 21760), (324, 21793), (336, 21823), (337, 21826), (345, 21847), (351, 21853), (353, 21859), (359, 21880), (410, 21985), (414, 21994), (435, 22063), (438, 22069), (456, 22105), (459, 22117), (495, 22156), (523, 22210), (547, 22246), (553, 22258), (555, 22261),

Gene: HannahD\_26 Start: 21448, Stop: 22167, Start Num: 190

Candidate Starts for HannahD\_26:

(Start: 148 @21391 has 8 MA's), (Start: 190 @21448 has 48 MA's), (247, 21541), (258, 21556), (278, 21601), (304, 21652), (326, 21679), (335, 21703), (360, 21766), (361, 21775), (439, 21937), (441, 21943),

Gene: Hans\_46 Start: 38978, Stop: 39697, Start Num: 185

Candidate Starts for Hans\_46:

(Start: 185 @38978 has 7 MA's), (202, 38993), (Start: 222 @39032 has 1 MA's), (258, 39083), (294, 39143), (407, 39362), (414, 39371), (420, 39389), (440, 39449), (475, 39524), (528, 39623), (555,

39662), (567, 39683),

Gene: Hedwig\_28 Start: 22437, Stop: 23138, Start Num: 190

Candidate Starts for Hedwig\_28:

(Start: 190 @22437 has 48 MA's), (205, 22455), (247, 22530), (258, 22545), (294, 22620), (335, 22692), (345, 22719), (357, 22746), (360, 22755), (361, 22764), (412, 22839), (414, 22845), (439, 22923), (441, 22929), (501, 23052), (516, 23082), (536, 23115),

Gene: Heinz\_50 Start: 31743, Stop: 32606, Start Num: 116

Candidate Starts for Heinz\_50:

(48, 31539), (71, 31623), (73, 31632), (103, 31713), (Start: 116 @31743 has 5 MA's), (218, 31926), (318, 32100), (332, 32133), (334, 32136), (347, 32169), (383, 32244), (385, 32250), (423, 32337), (475, 32448), (477, 32451), (480, 32457), (496, 32493), (510, 32520), (556, 32595),

Gene: Herod\_25 Start: 22309, Stop: 22926, Start Num: 238

Candidate Starts for Herod\_25:

(175, 22210), (204, 22249), (224, 22282), (Start: 238 @22309 has 20 MA's), (Start: 248 @22318 has 2 MA's), (265, 22360), (273, 22372), (294, 22420), (303, 22441), (311, 22462), (324, 22495), (326, 22498), (341, 22540), (357, 22576), (379, 22627), (405, 22675), (427, 22738), (439, 22768), (464, 22819), (523, 22897),

Gene: Hexbug\_53 Start: 36488, Stop: 35637, Start Num: 148

Candidate Starts for Hexbug\_53:

(26, 36890), (142, 36503), (Start: 148 @36488 has 8 MA's), (164, 36464), (208, 36410), (212, 36398), (251, 36341), (258, 36335), (269, 36308), (320, 36209), (321, 36206), (326, 36185), (327, 36182), (336, 36158), (354, 36113), (358, 36098), (359, 36095), (366, 36071), (384, 36044), (411, 35999), (442, 35909), (446, 35897), (474, 35837), (484, 35819), (572, 35660), (576, 35651),

Gene: Hibiscus\_50 Start: 31692, Stop: 32555, Start Num: 116

Candidate Starts for Hibiscus\_50:

(48, 31488), (71, 31572), (73, 31581), (103, 31662), (Start: 116 @31692 has 5 MA's), (218, 31875), (318, 32049), (332, 32082), (334, 32085), (347, 32118), (383, 32193), (385, 32199), (423, 32286), (475, 32397), (477, 32400), (480, 32406), (496, 32442), (510, 32469), (556, 32544),

Gene: HippoPololi\_43 Start: 33061, Stop: 32297, Start Num: 188

Candidate Starts for HippoPololi\_43:

(Start: 174 @33076 has 3 MA's), (Start: 188 @33061 has 69 MA's), (Start: 211 @33019 has 1 MA's), (251, 32956), (258, 32950), (268, 32926), (319, 32827), (323, 32812), (327, 32800), (341, 32761), (364, 32707), (378, 32686), (422, 32623), (451, 32545), (478, 32488), (515, 32416), (521, 32404), (582, 32311),

Gene: Hitter\_25 Start: 21152, Stop: 21955, Start Num: 184

Candidate Starts for Hitter\_25:

(Start: 184 @21152 has 99 MA's), (Start: 211 @21200 has 1 MA's), (Start: 222 @21212 has 1 MA's), (234, 21227), (299, 21356), (310, 21368), (325, 21407), (342, 21455), (348, 21467), (354, 21485), (357, 21497), (358, 21500), (359, 21503), (440, 21680), (451, 21701), (452, 21707), (532, 21863), (559, 21899), (573, 21923), (585, 21944),

Gene: Holliday\_28 Start: 21606, Stop: 22229, Start Num: 245

Candidate Starts for Holliday\_28:

(65, 21231), (83, 21288), (97, 21333), (123, 21387), (125, 21390), (136, 21426), (Start: 160 @21471 has 1 MA's), (162, 21474), (Start: 245 @21606 has 28 MA's), (Start: 248 @21612 has 2 MA's), (260, 21642), (265, 21657), (294, 21717), (327, 21798), (341, 21837), (369, 21909), (405, 21972), (423,

22017), (427, 22035), (435, 22056), (439, 22065), (523, 22197), (529, 22206), (537, 22218),

Gene: Horseradish\_48 Start: 34002, Stop: 33154, Start Num: 188

Candidate Starts for Horseradish\_48:

(Start: 139 @34062 has 1 MA's), (Start: 188 @34002 has 69 MA's), (Start: 245 @33906 has 28 MA's), (251, 33897), (294, 33807), (336, 33717), (337, 33714), (356, 33666), (359, 33657), (366, 33633), (386, 33600), (402, 33567), (420, 33528), (517, 33300), (521, 33291), (566, 33216), (570, 33207),

Gene: Hortense\_25 Start: 21831, Stop: 22619, Start Num: 182

Candidate Starts for Hortense\_25:

(Start: 167 @21819 has 3 MA's), (Start: 182 @21831 has 36 MA's), (Start: 201 @21843 has 3 MA's), (202, 21846), (Start: 211 @21873 has 1 MA's), (Start: 222 @21885 has 1 MA's), (258, 21936), (299, 22029), (323, 22074), (324, 22077), (325, 22080), (348, 22140), (354, 22158), (357, 22170), (358, 22173), (359, 22176), (410, 22266), (440, 22353), (522, 22521), (534, 22539), (559, 22575), (573, 22599),

Gene: Horus\_28 Start: 21523, Stop: 22146, Start Num: 245

Candidate Starts for Horus\_28:

(65, 21148), (83, 21205), (97, 21250), (123, 21304), (125, 21307), (136, 21343), (Start: 160 @21388 has 1 MA's), (162, 21391), (Start: 245 @21523 has 28 MA's), (Start: 248 @21529 has 2 MA's), (260, 21559), (265, 21574), (294, 21634), (327, 21715), (341, 21754), (369, 21826), (405, 21889), (423, 21934), (427, 21952), (435, 21973), (439, 21982), (523, 22114), (529, 22123), (537, 22135),

Gene: Howe\_25 Start: 21873, Stop: 22619, Start Num: 211

Candidate Starts for Howe\_25:

(Start: 167 @21819 has 3 MA's), (Start: 182 @21831 has 36 MA's), (Start: 201 @21843 has 3 MA's), (202, 21846), (Start: 211 @21873 has 1 MA's), (Start: 222 @21885 has 1 MA's), (258, 21936), (299, 22029), (323, 22074), (324, 22077), (325, 22080), (348, 22140), (354, 22158), (357, 22170), (358, 22173), (359, 22176), (410, 22266), (440, 22353), (522, 22521), (534, 22539), (559, 22575), (573, 22599),

Gene: HubbaBubba\_16 Start: 6438, Stop: 7115, Start Num: 256

Candidate Starts for HubbaBubba\_16:

(Start: 177 @6375 has 6 MA's), (Start: 255 @6435 has 1 MA's), (256, 6438), (259, 6450), (297, 6531), (362, 6705), (434, 6870), (489, 6996), (506, 7032), (538, 7086),

Gene: Hugley\_25 Start: 22282, Stop: 22926, Start Num: 224

Candidate Starts for Hugley\_25:

(175, 22210), (204, 22249), (224, 22282), (Start: 238 @22309 has 20 MA's), (Start: 248 @22318 has 2 MA's), (265, 22360), (273, 22372), (294, 22420), (303, 22441), (311, 22462), (324, 22495), (326, 22498), (341, 22540), (357, 22576), (379, 22627), (405, 22675), (427, 22738), (439, 22768), (464, 22819), (523, 22897),

Gene: Hyzer\_27 Start: 22843, Stop: 23631, Start Num: 182

Candidate Starts for Hyzer\_27:

(81, 22639), (114, 22723), (126, 22744), (Start: 182 @22843 has 36 MA's), (202, 22858), (Start: 211 @22885 has 1 MA's), (Start: 222 @22897 has 1 MA's), (234, 22912), (299, 23041), (325, 23092), (342, 23140), (348, 23152), (357, 23182), (358, 23185), (359, 23188), (440, 23365), (451, 23386), (452, 23392), (468, 23428), (522, 23533), (559, 23587), (573, 23611),

Gene: IDyn\_18 Start: 7766, Stop: 8506, Start Num: 177

Candidate Starts for IDyn\_18:

(Start: 177 @7766 has 6 MA's), (Start: 255 @7826 has 1 MA's), (256, 7829), (259, 7841), (297, 7922), (356, 8072), (362, 8096), (382, 8129), (423, 8225), (434, 8261), (489, 8387), (506, 8423), (538, 8477),

Gene: Inspectinfecti\_45 Start: 39424, Stop: 40143, Start Num: 185

Candidate Starts for Inspectinfecti\_45:

(Start: 185 @39424 has 7 MA's), (202, 39439), (Start: 222 @39478 has 1 MA's), (258, 39529), (294, 39589), (407, 39808), (414, 39817), (420, 39835), (440, 39895), (475, 39970), (528, 40069), (555, 40108), (567, 40129),

Gene: JCole\_22 Start: 18663, Stop: 19364, Start Num: 184

Candidate Starts for JCole\_22:

(31, 18249), (33, 18252), (Start: 184 @18663 has 99 MA's), (231, 18729), (237, 18741), (247, 18753), (258, 18768), (263, 18783), (278, 18813), (298, 18852), (324, 18885), (326, 18891), (335, 18915), (336, 18918), (354, 18963), (357, 18969), (361, 18987), (414, 19071), (427, 19119), (439, 19149), (441, 19155), (450, 19176), (459, 19206), (501, 19278), (530, 19332), (544, 19353),

Gene: JKSyngboy\_43 Start: 39922, Stop: 40665, Start Num: 184

Candidate Starts for JKSyngboy\_43:

(Start: 184 @39922 has 99 MA's), (Start: 201 @39940 has 3 MA's), (223, 39985), (283, 40075), (294, 40105), (303, 40123), (315, 40135), (325, 40165), (335, 40192), (375, 40285), (388, 40297), (456, 40453), (460, 40465), (475, 40492), (492, 40525), (528, 40591), (549, 40618),

Gene: Jabberwocky\_44 Start: 41084, Stop: 41818, Start Num: 184

Candidate Starts for Jabberwocky\_44:

(142, 41027), (Start: 184 @41084 has 99 MA's), (Start: 201 @41102 has 3 MA's), (258, 41189), (271, 41216), (294, 41264), (303, 41282), (325, 41324), (356, 41402), (375, 41444), (400, 41477), (456, 41612), (475, 41651), (528, 41750), (549, 41777), (569, 41810),

Gene: Jablanski\_28 Start: 22900, Stop: 23523, Start Num: 238

Candidate Starts for Jablanski\_28:

(Start: 238 @22900 has 20 MA's), (250, 22909), (265, 22951), (284, 22987), (303, 23032), (311, 23053), (324, 23086), (341, 23131), (369, 23203), (379, 23218), (405, 23266), (423, 23311), (427, 23329), (435, 23350), (439, 23359), (464, 23413), (506, 23464), (523, 23491), (529, 23500), (531, 23503),

Gene: Jace\_72 Start: 41711, Stop: 42511, Start Num: 200

Candidate Starts for Jace\_72:

(Start: 200 @41711 has 1 MA's), (318, 41924), (363, 42038), (410, 42122), (426, 42176), (440, 42209), (447, 42224),

Gene: Jalammah\_27 Start: 21946, Stop: 22749, Start Num: 184

Candidate Starts for Jalammah\_27:

(Start: 184 @21946 has 99 MA's), (Start: 211 @21994 has 1 MA's), (Start: 222 @22006 has 1 MA's), (234, 22021), (258, 22057), (299, 22150), (325, 22201), (347, 22258), (348, 22261), (354, 22279), (357, 22291), (358, 22294), (359, 22297), (440, 22474), (451, 22495), (452, 22501), (559, 22693), (573, 22717), (585, 22738),

Gene: Jalebi\_86 Start: 59669, Stop: 60520, Start Num: 147

Candidate Starts for Jalebi\_86:

(137, 59645), (138, 59648), (Start: 147 @59669 has 26 MA's), (151, 59678), (Start: 167 @59699 has 3 MA's), (195, 59741), (199, 59747), (220, 59792), (273, 59897), (277, 59906), (288, 59933), (295, 59945), (311, 59984), (387, 60164), (416, 60230), (419, 60239), (426, 60269), (436, 60296), (445, 60320), (470, 60374), (495, 60419), (500, 60431), (539, 60497),



Gene: Jambalaya\_44 Start: 35970, Stop: 36725, Start Num: 184

Candidate Starts for Jambalaya\_44:

(120, 35874), (Start: 184 @35970 has 99 MA's), (233, 36042), (295, 36150), (322, 36195), (402, 36345), (407, 36351), (420, 36378), (434, 36426), (483, 36528), (531, 36612), (577, 36684),

Gene: Jamemuya19\_85 Start: 56791, Stop: 57642, Start Num: 147

Candidate Starts for Jamemuya19\_85:

(137, 56767), (138, 56770), (Start: 147 @56791 has 26 MA's), (151, 56800), (Start: 161 @56812 has 2 MA's), (Start: 167 @56821 has 3 MA's), (195, 56863), (199, 56869), (220, 56914), (270, 57016), (273, 57019), (288, 57055), (295, 57067), (311, 57106), (323, 57136), (324, 57139), (328, 57151), (329, 57154), (387, 57286), (416, 57352), (419, 57361), (426, 57391), (436, 57418), (444, 57439), (470, 57496), (495, 57541), (539, 57619),

Gene: Jamzy\_50 Start: 34382, Stop: 33534, Start Num: 148

Candidate Starts for Jamzy\_50:

(142, 34397), (Start: 148 @34382 has 8 MA's), (157, 34367), (206, 34313), (208, 34307), (214, 34292), (Start: 245 @34247 has 28 MA's), (251, 34238), (258, 34232), (269, 34205), (314, 34118), (320, 34106), (321, 34103), (327, 34079), (345, 34031), (354, 34010), (366, 33968), (374, 33956), (386, 33938), (471, 33743), (478, 33731), (552, 33593),

Gene: JasperJr\_25 Start: 21156, Stop: 21959, Start Num: 184

Candidate Starts for JasperJr\_25:

(Start: 184 @21156 has 99 MA's), (Start: 211 @21204 has 1 MA's), (Start: 222 @21216 has 1 MA's), (234, 21231), (258, 21267), (299, 21360), (325, 21411), (347, 21468), (348, 21471), (354, 21489), (357, 21501), (358, 21504), (359, 21507), (440, 21684), (451, 21705), (452, 21711), (532, 21867), (559, 21903), (573, 21927), (585, 21948),

Gene: Jifall16\_18 Start: 8868, Stop: 9593, Start Num: 172

Candidate Starts for Jifall16\_18:

(Start: 172 @8868 has 29 MA's), (Start: 201 @8892 has 3 MA's), (221, 8925), (256, 8928), (273, 8964), (279, 8979), (297, 9021), (356, 9168), (434, 9360), (479, 9462), (495, 9492), (506, 9513), (514, 9528), (550, 9588),

Gene: Jojo24\_48 Start: 32326, Stop: 33183, Start Num: 116

Candidate Starts for Jojo24\_48:

(2, 30784), (5, 31171), (7, 31207), (8, 31291), (12, 31480), (13, 31555), (14, 31585), (17, 31714), (46, 32113), (71, 32212), (73, 32221), (82, 32251), (94, 32281), (100, 32290), (103, 32296), (Start: 116 @32326 has 5 MA's), (218, 32509), (318, 32677), (332, 32710), (334, 32713), (347, 32746), (354, 32767), (383, 32821), (385, 32827), (423, 32914), (475, 33025), (477, 33028), (480, 33034), (496, 33070), (510, 33097), (556, 33172),

Gene: JuJu\_26 Start: 21224, Stop: 22018, Start Num: 182

Candidate Starts for JuJu\_26:

(Start: 182 @21224 has 36 MA's), (Start: 211 @21266 has 1 MA's), (Start: 222 @21278 has 1 MA's), (258, 21329), (299, 21422), (325, 21473), (347, 21530), (348, 21533), (354, 21551), (357, 21563), (358, 21566), (359, 21569), (440, 21746), (451, 21767), (559, 21965), (573, 21989), (585, 22007),

Gene: Jumbo\_41 Start: 43925, Stop: 44704, Start Num: 189

Candidate Starts for Jumbo\_41:

(Start: 189 @43925 has 3 MA's), (216, 43979), (Start: 245 @44015 has 28 MA's), (300, 44117), (308, 44138), (318, 44162), (354, 44240), (398, 44330), (410, 44348), (427, 44411), (442, 44441), (456, 44477), (484, 44528),

Gene: Kabluna\_21 Start: 8839, Stop: 9630, Start Num: 178

Candidate Starts for Kabluna\_21:

(Start: 178 @8839 has 8 MA's), (207, 8884), (246, 8947), (253, 8959), (Start: 255 @8965 has 1 MA's), (259, 8980), (273, 9004), (277, 9013), (297, 9061), (311, 9097), (356, 9208), (361, 9229), (371, 9250), (495, 9535), (506, 9556), (511, 9565), (514, 9571), (533, 9604),

Gene: Kabocha\_32 Start: 22381, Stop: 23079, Start Num: 172

Candidate Starts for Kabocha\_32:

(Start: 160 @22363 has 1 MA's), (Start: 172 @22381 has 29 MA's), (Start: 255 @22444 has 1 MA's), (268, 22480), (298, 22540), (303, 22552), (311, 22573), (324, 22606), (336, 22636), (337, 22639), (345, 22660), (351, 22666), (353, 22672), (359, 22693), (410, 22798), (414, 22807), (435, 22876), (438, 22882), (456, 22918), (459, 22930), (495, 22969), (506, 22990), (547, 23059), (553, 23071), (555, 23074),

Gene: Kamaru\_28 Start: 21606, Stop: 22229, Start Num: 245

Candidate Starts for Kamaru\_28:

(65, 21231), (83, 21288), (97, 21333), (123, 21387), (125, 21390), (136, 21426), (Start: 160 @21471 has 1 MA's), (162, 21474), (Start: 245 @21606 has 28 MA's), (Start: 248 @21612 has 2 MA's), (260, 21642), (265, 21657), (294, 21717), (327, 21798), (341, 21837), (369, 21909), (405, 21972), (423, 22017), (427, 22035), (435, 22056), (439, 22065), (523, 22197), (529, 22206), (537, 22218),

Gene: Kamashten\_43 Start: 39019, Stop: 39753, Start Num: 184

Candidate Starts for Kamashten\_43:

(142, 38962), (Start: 184 @39019 has 99 MA's), (Start: 201 @39037 has 3 MA's), (258, 39124), (271, 39151), (294, 39199), (303, 39217), (325, 39259), (356, 39337), (375, 39379), (400, 39412), (456, 39547), (475, 39586), (528, 39685), (549, 39712), (569, 39745),

Gene: Kampe\_40 Start: 40828, Stop: 41550, Start Num: 192

Candidate Starts for Kampe\_40:

(Start: 192 @40828 has 11 MA's), (216, 40882), (282, 40975), (316, 41056), (327, 41089), (365, 41167), (442, 41329), (481, 41389), (538, 41503),

Gene: KappaFarmDelta\_27 Start: 21652, Stop: 22440, Start Num: 182

Candidate Starts for KappaFarmDelta\_27:

(32, 21259), (62, 21388), (96, 21499), (109, 21526), (127, 21562), (Start: 182 @21652 has 36 MA's), (Start: 211 @21694 has 1 MA's), (Start: 222 @21706 has 1 MA's), (258, 21757), (299, 21850), (325, 21901), (342, 21949), (347, 21958), (348, 21961), (354, 21979), (357, 21991), (358, 21994), (359, 21997), (440, 22174), (451, 22195), (559, 22393), (573, 22417),

Gene: KayGee\_48 Start: 35490, Stop: 34687, Start Num: 188

Candidate Starts for KayGee\_48:

(Start: 139 @35550 has 1 MA's), (Start: 188 @35490 has 69 MA's), (294, 35283), (324, 35229), (331, 35208), (338, 35190), (341, 35181), (356, 35154), (418, 35043), (422, 35025), (431, 34992), (476, 34890), (478, 34887), (515, 34809), (517, 34806), (557, 34740), (576, 34701), (586, 34692),

Gene: Keitabear\_45 Start: 40674, Stop: 41408, Start Num: 184

Candidate Starts for Keitabear\_45:

(176, 40668), (Start: 184 @40674 has 99 MA's), (Start: 201 @40692 has 3 MA's), (258, 40779), (271, 40806), (294, 40854), (303, 40872), (325, 40914), (356, 40992), (375, 41034), (400, 41067), (456, 41202), (475, 41241), (528, 41340), (549, 41367), (569, 41400),

Gene: Kenna\_27 Start: 21499, Stop: 22122, Start Num: 245

Candidate Starts for Kenna\_27:

(65, 21124), (83, 21181), (97, 21226), (123, 21280), (125, 21283), (136, 21319), (Start: 160 @21364 has 1 MA's), (162, 21367), (Start: 245 @21499 has 28 MA's), (Start: 248 @21505 has 2 MA's), (260, 21535), (265, 21550), (294, 21610), (324, 21685), (341, 21730), (357, 21766), (369, 21802), (405, 21865), (423, 21910), (427, 21928), (435, 21949), (443, 21970), (523, 22090), (529, 22099), (537, 22111),

Gene: Kewpiedoll\_45 Start: 39960, Stop: 40694, Start Num: 184

Candidate Starts for Kewpiedoll\_45:

(142, 39903), (Start: 184 @39960 has 99 MA's), (Start: 201 @39978 has 3 MA's), (258, 40065), (271, 40092), (294, 40140), (303, 40158), (325, 40200), (356, 40278), (375, 40320), (400, 40353), (456, 40488), (475, 40527), (528, 40626), (549, 40653), (569, 40686),

Gene: KidneyBean\_19 Start: 9147, Stop: 9872, Start Num: 172

Candidate Starts for KidneyBean\_19:

(Start: 172 @9147 has 29 MA's), (Start: 201 @9171 has 3 MA's), (221, 9204), (256, 9207), (273, 9243), (279, 9258), (297, 9300), (356, 9447), (434, 9639), (479, 9741), (495, 9771), (506, 9792), (514, 9807), (550, 9867),

Gene: Kiko\_27 Start: 21413, Stop: 22117, Start Num: 190

Candidate Starts for Kiko\_27:

(Start: 190 @21413 has 48 MA's), (231, 21482), (247, 21506), (278, 21566), (294, 21596), (298, 21605), (324, 21638), (335, 21668), (336, 21671), (345, 21695), (357, 21722), (372, 21761), (414, 21824), (427, 21872), (439, 21902), (441, 21908), (450, 21929), (459, 21959),

Gene: KimmyK\_45 Start: 36905, Stop: 37660, Start Num: 184

Candidate Starts for KimmyK\_45:

(128, 36827), (Start: 184 @36905 has 99 MA's), (233, 36977), (295, 37085), (322, 37130), (402, 37280), (407, 37286), (420, 37313), (434, 37361), (483, 37463), (531, 37547), (577, 37619),

Gene: Kita\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Kita\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: Kroos\_46 Start: 40063, Stop: 40806, Start Num: 184

Candidate Starts for Kroos\_46:

(Start: 184 @40063 has 99 MA's), (Start: 201 @40081 has 3 MA's), (223, 40126), (258, 40171), (294, 40246), (303, 40264), (325, 40306), (335, 40333), (375, 40426), (388, 40438), (456, 40594), (460, 40606), (475, 40633), (492, 40666), (528, 40732), (549, 40759),

Gene: Kudrefre\_120 Start: 65328, Stop: 66050, Start Num: 196

Candidate Starts for Kudrefre\_120:

(Start: 196 @65328 has 5 MA's), (216, 65376), (235, 65403), (Start: 245 @65418 has 28 MA's), (316, 65550), (354, 65619), (422, 65760), (430, 65790), (462, 65862), (500, 65934), (556, 66033), (558, 66036),

Gene: Kurt\_19 Start: 9384, Stop: 10109, Start Num: 172

Candidate Starts for Kurt\_19:

(Start: 172 @9384 has 29 MA's), (Start: 201 @9408 has 3 MA's), (221, 9441), (256, 9444), (273, 9480), (279, 9495), (297, 9537), (356, 9684), (434, 9876), (479, 9978), (495, 10008), (506, 10029),

(514, 10044), (550, 10104),

Gene: Kuwabara\_27 Start: 20925, Stop: 21548, Start Num: 245

Candidate Starts for Kuwabara\_27:

(65, 20550), (83, 20607), (97, 20652), (123, 20706), (125, 20709), (136, 20745), (Start: 160 @20790 has 1 MA's), (162, 20793), (Start: 245 @20925 has 28 MA's), (Start: 248 @20931 has 2 MA's), (260, 20961), (265, 20976), (294, 21036), (324, 21111), (341, 21156), (357, 21192), (369, 21228), (405, 21291), (427, 21354), (435, 21375), (439, 21384), (467, 21441), (523, 21516), (529, 21525),

Gene: Kwekel\_57 Start: 43609, Stop: 44388, Start Num: 188

Candidate Starts for Kwekel\_57:

(104, 43447), (131, 43513), (136, 43528), (Start: 188 @43609 has 69 MA's), (205, 43630), (247, 43708), (258, 43723), (278, 43768), (325, 43858), (337, 43891), (413, 44023), (422, 44050), (446, 44119), (470, 44173), (497, 44221), (566, 44344), (582, 44374),

Gene: Kwobi\_46 Start: 40049, Stop: 40792, Start Num: 184

Candidate Starts for Kwobi\_46:

(Start: 184 @40049 has 99 MA's), (Start: 201 @40067 has 3 MA's), (223, 40112), (258, 40157), (294, 40232), (303, 40250), (315, 40262), (325, 40292), (335, 40319), (375, 40412), (388, 40424), (456, 40580), (460, 40592), (475, 40619), (492, 40652), (528, 40718), (549, 40745),

Gene: Lamberg\_23 Start: 18707, Stop: 19408, Start Num: 190

Candidate Starts for Lamberg\_23:

(Start: 177 @18689 has 6 MA's), (Start: 179 @18692 has 1 MA's), (Start: 190 @18707 has 48 MA's), (247, 18800), (258, 18815), (274, 18851), (324, 18932), (336, 18965), (338, 18971), (357, 19016), (372, 19055), (439, 19193), (441, 19199), (451, 19223), (456, 19238), (544, 19400),

Gene: Lambo\_86 Start: 58781, Stop: 59629, Start Num: 147

Candidate Starts for Lambo\_86:

(137, 58757), (138, 58760), (143, 58769), (Start: 147 @58781 has 26 MA's), (Start: 161 @58799 has 2 MA's), (Start: 167 @58808 has 3 MA's), (195, 58850), (199, 58856), (220, 58901), (273, 59006), (288, 59042), (295, 59054), (323, 59123), (324, 59126), (328, 59138), (387, 59273), (416, 59339), (419, 59348), (426, 59378), (444, 59426), (445, 59429), (470, 59483), (495, 59528), (500, 59540), (539, 59606),

Gene: Lauer\_43 Start: 36512, Stop: 35706, Start Num: 188

Candidate Starts for Lauer\_43:

(Start: 139 @36572 has 1 MA's), (Start: 188 @36512 has 69 MA's), (294, 36305), (324, 36251), (331, 36230), (338, 36212), (341, 36203), (356, 36176), (418, 36065), (422, 36047), (431, 36014), (476, 35912), (478, 35909), (515, 35831), (517, 35828), (557, 35762), (576, 35723), (586, 35711),

Gene: Lennon\_45 Start: 40763, Stop: 41497, Start Num: 184

Candidate Starts for Lennon\_45:

(142, 40706), (Start: 184 @40763 has 99 MA's), (Start: 201 @40781 has 3 MA's), (258, 40868), (271, 40895), (294, 40943), (303, 40961), (325, 41003), (356, 41081), (375, 41123), (400, 41156), (456, 41291), (475, 41330), (528, 41429), (549, 41456), (569, 41489),

Gene: Lenoshki\_31 Start: 23245, Stop: 23943, Start Num: 172

Candidate Starts for Lenoshki\_31:

(Start: 160 @23227 has 1 MA's), (Start: 172 @23245 has 29 MA's), (Start: 255 @23308 has 1 MA's), (268, 23344), (303, 23416), (311, 23437), (324, 23470), (336, 23500), (337, 23503), (345, 23524), (351, 23530), (353, 23536), (359, 23557), (410, 23662), (414, 23671), (435, 23740), (438, 23746), (456, 23782), (459, 23794), (495, 23833), (547, 23923), (553, 23935), (555, 23938),

Gene: Leonard\_44 Start: 39063, Stop: 39782, Start Num: 185

Candidate Starts for Leonard\_44:

(Start: 185 @39063 has 7 MA's), (202, 39078), (Start: 222 @39117 has 1 MA's), (Start: 248 @39156 has 2 MA's), (258, 39168), (282, 39207), (294, 39228), (407, 39447), (414, 39456), (420, 39474), (425, 39495), (440, 39534), (475, 39609), (528, 39708), (555, 39747), (567, 39768),

Gene: Leroy\_28 Start: 21524, Stop: 22147, Start Num: 245

Candidate Starts for Leroy\_28:

(65, 21149), (83, 21206), (97, 21251), (123, 21305), (125, 21308), (136, 21344), (Start: 160 @21389 has 1 MA's), (162, 21392), (Start: 245 @21524 has 28 MA's), (Start: 248 @21530 has 2 MA's), (260, 21560), (265, 21575), (294, 21635), (327, 21716), (341, 21755), (369, 21827), (405, 21890), (423, 21935), (427, 21953), (435, 21974), (439, 21983), (523, 22115), (529, 22124), (537, 22136),

Gene: Ligma\_42 Start: 35273, Stop: 35995, Start Num: 190

Candidate Starts for Ligma\_42:

(31, 34883), (75, 35060), (117, 35168), (Start: 190 @35273 has 48 MA's), (282, 35435), (304, 35480), (338, 35543), (345, 35561), (357, 35588), (398, 35666), (399, 35669), (427, 35738), (439, 35768), (441, 35774), (532, 35963),

Gene: LilHam\_43 Start: 38650, Stop: 39393, Start Num: 184

Candidate Starts for LilHam\_43:

(Start: 184 @38650 has 99 MA's), (Start: 201 @38668 has 3 MA's), (223, 38713), (258, 38758), (294, 38833), (303, 38851), (325, 38893), (375, 39013), (388, 39025), (442, 39145), (456, 39181), (460, 39193), (475, 39220), (492, 39253), (509, 39286), (528, 39319), (549, 39346),

Gene: Lila22\_87 Start: 59144, Stop: 59992, Start Num: 147

Candidate Starts for Lila22\_87:

(137, 59120), (138, 59123), (141, 59129), (Start: 147 @59144 has 26 MA's), (Start: 161 @59162 has 2 MA's), (Start: 167 @59171 has 3 MA's), (195, 59213), (199, 59219), (220, 59264), (273, 59369), (288, 59405), (295, 59417), (323, 59486), (324, 59489), (328, 59501), (387, 59636), (416, 59702), (419, 59711), (426, 59741), (444, 59789), (445, 59792), (470, 59846), (495, 59891), (500, 59903), (539, 59969),

Gene: Lilas\_27 Start: 22035, Stop: 22775, Start Num: 168

Candidate Starts for Lilas\_27:

(Start: 167 @22032 has 3 MA's), (Start: 168 @22035 has 1 MA's), (Start: 187 @22059 has 15 MA's), (203, 22077), (231, 22131), (278, 22215), (298, 22254), (325, 22290), (335, 22317), (357, 22371), (361, 22389), (414, 22482), (439, 22560), (441, 22566), (530, 22743), (542, 22761),

Gene: Lilbeanie\_44 Start: 35096, Stop: 35851, Start Num: 184

Candidate Starts for Lilbeanie\_44:

(146, 35048), (Start: 184 @35096 has 99 MA's), (202, 35111), (Start: 222 @35150 has 1 MA's), (232, 35162), (234, 35165), (304, 35306), (325, 35345), (341, 35390), (375, 35471), (420, 35540), (429, 35576), (440, 35600),

Gene: LitninMcQueen\_27 Start: 21255, Stop: 21878, Start Num: 245

Candidate Starts for LitninMcQueen\_27:

(65, 20880), (83, 20937), (97, 20982), (123, 21036), (125, 21039), (136, 21075), (Start: 160 @21120 has 1 MA's), (162, 21123), (Start: 245 @21255 has 28 MA's), (Start: 248 @21261 has 2 MA's), (260, 21291), (265, 21306), (294, 21366), (341, 21486), (369, 21558), (405, 21621), (423, 21666), (427, 21684), (435, 21705), (439, 21714), (523, 21846), (529, 21855), (537, 21867),

Gene: LittleMunchkin\_44 Start: 38558, Stop: 39280, Start Num: 188

Candidate Starts for LittleMunchkin\_44:

(88, 38360), (113, 38423), (117, 38432), (Start: 188 @38558 has 69 MA's), (278, 38717), (282, 38723), (294, 38747), (304, 38768), (318, 38783), (338, 38831), (358, 38879), (399, 38954), (427, 39023), (439, 39053), (461, 39113), (487, 39161), (540, 39260),

Gene: Lollipop1437\_23 Start: 10516, Stop: 11289, Start Num: 172

Candidate Starts for Lollipop1437\_23:

(Start: 172 @10516 has 29 MA's), (Start: 255 @10624 has 1 MA's), (256, 10627), (279, 10678), (297, 10720), (341, 10834), (361, 10888), (506, 11209), (538, 11263),

Gene: LonelyBoi\_27 Start: 22523, Stop: 23143, Start Num: 245

Candidate Starts for LonelyBoi\_27:

(197, 22436), (Start: 245 @22523 has 28 MA's), (Start: 248 @22529 has 2 MA's), (260, 22559), (265, 22574), (267, 22577), (284, 22610), (303, 22655), (324, 22709), (341, 22754), (369, 22826), (405, 22889), (427, 22952), (464, 23033), (523, 23111), (529, 23120), (531, 23123),

Gene: LordFarquaad\_24 Start: 19791, Stop: 20498, Start Num: 190

Candidate Starts for LordFarquaad\_24:

(112, 19647), (Start: 190 @19791 has 48 MA's), (223, 19848), (247, 19887), (278, 19947), (289, 19965), (291, 19968), (298, 19986), (325, 20022), (326, 20025), (338, 20058), (345, 20076), (357, 20103), (398, 20181), (427, 20250), (439, 20280), (441, 20286), (544, 20490),

Gene: Love\_49 Start: 41211, Stop: 41945, Start Num: 184

Candidate Starts for Love\_49:

(102, 41064), (142, 41154), (Start: 184 @41211 has 99 MA's), (Start: 201 @41229 has 3 MA's), (258, 41316), (271, 41343), (294, 41391), (303, 41409), (325, 41451), (356, 41529), (375, 41571), (400, 41604), (456, 41739), (475, 41778), (528, 41877), (549, 41904), (569, 41937),

Gene: Lton\_23 Start: 18736, Stop: 19437, Start Num: 190

Candidate Starts for Lton\_23:

(Start: 177 @18718 has 6 MA's), (Start: 179 @18721 has 1 MA's), (Start: 190 @18736 has 48 MA's), (258, 18844), (274, 18880), (324, 18961), (336, 18994), (338, 19000), (357, 19045), (372, 19084), (439, 19222), (441, 19228), (464, 19285), (544, 19429),

Gene: Lucky10\_24 Start: 19603, Stop: 20307, Start Num: 190

Candidate Starts for Lucky10\_24:

(Start: 190 @19603 has 48 MA's), (223, 19660), (247, 19699), (294, 19789), (304, 19810), (305, 19813), (326, 19837), (335, 19861), (336, 19864), (341, 19879), (357, 19915), (398, 19993), (416, 20020), (430, 20071), (439, 20092), (524, 20269), (544, 20299),

Gene: LuckyLeo\_84 Start: 58457, Stop: 59287, Start Num: 161

Candidate Starts for LuckyLeo\_84:

(137, 58415), (138, 58418), (143, 58427), (Start: 147 @58439 has 26 MA's), (Start: 161 @58457 has 2 MA's), (Start: 167 @58466 has 3 MA's), (Start: 184 @58490 has 99 MA's), (195, 58508), (226, 58565), (288, 58700), (307, 58739), (311, 58751), (324, 58784), (328, 58796), (336, 58817), (370, 58904), (387, 58931), (420, 59009), (426, 59036), (428, 59042), (434, 59057), (436, 59063), (470, 59141), (493, 59177), (541, 59267),

Gene: Lutum\_28 Start: 21499, Stop: 22122, Start Num: 245

Candidate Starts for Lutum\_28:

(65, 21124), (83, 21181), (97, 21226), (123, 21280), (125, 21283), (136, 21319), (Start: 160 @21364 has 1 MA's), (162, 21367), (Start: 245 @21499 has 28 MA's), (Start: 248 @21505 has 2 MA's), (260,

21535), (265, 21550), (294, 21610), (324, 21685), (341, 21730), (357, 21766), (369, 21802), (405, 21865), (423, 21910), (427, 21928), (435, 21949), (443, 21970), (523, 22090), (529, 22099), (537, 22111),

Gene: Lysidious\_26 Start: 21676, Stop: 22476, Start Num: 184

Candidate Starts for Lysidious\_26:

(Start: 184 @21676 has 99 MA's), (Start: 211 @21724 has 1 MA's), (Start: 222 @21736 has 1 MA's), (234, 21751), (258, 21787), (299, 21880), (324, 21928), (325, 21931), (342, 21979), (348, 21991), (354, 22009), (357, 22021), (358, 22024), (359, 22027), (440, 22204), (451, 22225), (452, 22231), (559, 22423), (573, 22447),

Gene: MAnor\_48 Start: 35832, Stop: 35035, Start Num: 188

Candidate Starts for MAnor\_48:

(Start: 139 @35892 has 1 MA's), (Start: 188 @35832 has 69 MA's), (235, 35760), (249, 35739), (294, 35631), (324, 35577), (338, 35538), (351, 35517), (422, 35373), (431, 35340), (478, 35235), (515, 35157), (557, 35088), (561, 35079), (576, 35049), (586, 35040),

Gene: MScarn\_50 Start: 34184, Stop: 33336, Start Num: 188

Candidate Starts for MScarn\_50:

(Start: 139 @34244 has 1 MA's), (Start: 188 @34184 has 69 MA's), (Start: 245 @34088 has 28 MA's), (251, 34079), (294, 33989), (336, 33899), (337, 33896), (356, 33848), (359, 33839), (366, 33815), (386, 33782), (402, 33749), (420, 33710), (517, 33482), (521, 33473), (566, 33398), (570, 33389),

Gene: MaVan\_42 Start: 33215, Stop: 32457, Start Num: 188

Candidate Starts for MaVan\_42:

(Start: 188 @33215 has 69 MA's), (Start: 211 @33176 has 1 MA's), (Start: 222 @33158 has 1 MA's), (Start: 245 @33122 has 28 MA's), (258, 33107), (268, 33083), (285, 33047), (294, 33023), (323, 32969), (364, 32864), (378, 32843), (422, 32783), (451, 32705), (470, 32660), (497, 32615), (561, 32501), (568, 32486),

Gene: MacGully\_23 Start: 9496, Stop: 10359, Start Num: 184

Candidate Starts for MacGully\_23:

(45, 9142), (54, 9184), (Start: 184 @9496 has 99 MA's), (213, 9559), (225, 9574), (280, 9679), (285, 9691), (293, 9712), (326, 9802), (336, 9829), (349, 9853), (359, 9883), (367, 9904), (410, 9979), (439, 10066), (456, 10111), (490, 10183), (494, 10189), (499, 10201), (565, 10282), (583, 10315), (587, 10327),

Gene: Madeline\_25 Start: 22607, Stop: 23224, Start Num: 238

Candidate Starts for Madeline\_25:

(175, 22508), (204, 22547), (224, 22580), (Start: 238 @22607 has 20 MA's), (Start: 248 @22616 has 2 MA's), (265, 22658), (273, 22670), (294, 22718), (303, 22739), (311, 22760), (324, 22793), (341, 22838), (357, 22874), (358, 22877), (379, 22925), (427, 23036), (439, 23066), (464, 23117), (523, 23195),

Gene: MagicMan\_26 Start: 21754, Stop: 22467, Start Num: 190

Candidate Starts for MagicMan\_26:

(Start: 148 @21697 has 8 MA's), (Start: 190 @21754 has 48 MA's), (247, 21847), (258, 21862), (278, 21907), (326, 21985), (335, 22009), (360, 22072), (361, 22081), (410, 22156), (434, 22231), (439, 22243), (441, 22249), (501, 22384),

Gene: Mahdia\_35 Start: 27405, Stop: 28184, Start Num: 191

Candidate Starts for Mahdia\_35:

(Start: 191 @27405 has 3 MA's), (198, 27414), (216, 27459), (261, 27522), (289, 27579), (298, 27600), (302, 27609), (303, 27612), (308, 27624), (325, 27672), (326, 27675), (333, 27696), (335, 27699), (356, 27732), (459, 27966), (476, 27993), (548, 28134), (560, 28155), (562, 28158),

Gene: MakoManhole\_45 Start: 37571, Stop: 38293, Start Num: 188

Candidate Starts for MakoManhole\_45:

(89, 37385), (Start: 188 @37571 has 69 MA's), (Start: 245 @37664 has 28 MA's), (282, 37733), (296, 37760), (299, 37766), (357, 37880), (406, 37964), (439, 38057), (451, 38087),

Gene: Malachai\_26 Start: 21633, Stop: 22436, Start Num: 184

Candidate Starts for Malachai\_26:

(Start: 184 @21633 has 99 MA's), (Start: 211 @21681 has 1 MA's), (Start: 222 @21693 has 1 MA's), (234, 21708), (258, 21744), (299, 21837), (325, 21888), (347, 21945), (348, 21948), (354, 21966), (357, 21978), (358, 21981), (359, 21984), (440, 22161), (451, 22182), (452, 22188), (532, 22344), (559, 22380), (573, 22404), (585, 22425),

Gene: Malibo\_27 Start: 21379, Stop: 21999, Start Num: 238

Candidate Starts for Malibo\_27:

(Start: 238 @21379 has 20 MA's), (247, 21385), (265, 21430), (273, 21442), (311, 21532), (324, 21565), (341, 21610), (358, 21649), (379, 21697), (390, 21718), (427, 21808), (439, 21838), (464, 21889), (523, 21967),

Gene: Malisha\_30 Start: 24037, Stop: 24663, Start Num: 238

Candidate Starts for Malisha\_30:

(Start: 238 @24037 has 20 MA's), (265, 24091), (279, 24118), (294, 24151), (303, 24172), (324, 24226), (331, 24244), (357, 24307), (358, 24310), (359, 24313), (369, 24343), (405, 24406), (427, 24469), (439, 24499), (523, 24631), (529, 24640),

Gene: Manasvini\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Manasvini\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: Margaret\_51 Start: 35131, Stop: 34277, Start Num: 148

Candidate Starts for Margaret\_51:

(59, 35368), (100, 35245), (142, 35146), (Start: 148 @35131 has 8 MA's), (159, 35113), (204, 35065), (208, 35053), (251, 34984), (258, 34978), (269, 34951), (278, 34933), (314, 34864), (320, 34852), (321, 34849), (336, 34801), (354, 34756), (411, 34645), (417, 34630), (427, 34591), (442, 34555), (446, 34543), (474, 34483), (476, 34480), (552, 34339), (564, 34318),

Gene: Maridalia\_26 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Maridalia\_26:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: Marietta\_19 Start: 7689, Stop: 8432, Start Num: 217

Candidate Starts for Marietta\_19:

(145, 7560), (215, 7686), (Start: 217 @7689 has 2 MA's), (Start: 255 @7752 has 1 MA's), (256, 7755), (259, 7767), (297, 7848), (356, 7998), (362, 8022), (382, 8055), (434, 8187), (485, 8301), (489, 8313),



(506, 8349), (538, 8403),

Gene: Mariokart\_42 Start: 35106, Stop: 35828, Start Num: 190

Candidate Starts for Mariokart\_42:

(1, 33240), (3, 33684), (4, 33756), (6, 33807), (10, 33999), (15, 34224), (22, 34527), (Start: 190 @35106 has 48 MA's), (278, 35262), (282, 35268), (304, 35313), (324, 35337), (338, 35376), (341, 35385), (345, 35394), (357, 35421), (358, 35424), (427, 35571), (439, 35601), (441, 35607), (492, 35718), (503, 35742), (530, 35793), (540, 35808),

Gene: Marteena\_27 Start: 21910, Stop: 22626, Start Num: 187

Candidate Starts for Marteena\_27:

(Start: 167 @21883 has 3 MA's), (Start: 168 @21886 has 1 MA's), (Start: 187 @21910 has 15 MA's), (203, 21928), (231, 21982), (278, 22066), (298, 22105), (325, 22141), (335, 22168), (357, 22222), (361, 22240), (414, 22333), (439, 22411), (441, 22417), (530, 22594), (542, 22612),

Gene: Maselop\_20 Start: 9989, Stop: 10885, Start Num: 184

Candidate Starts for Maselop\_20:

(69, 9752), (Start: 184 @9989 has 99 MA's), (225, 10067), (272, 10154), (292, 10202), (298, 10217), (330, 10295), (348, 10340), (410, 10472), (442, 10565), (448, 10580), (494, 10679), (537, 10760), (565, 10808), (587, 10853),

Gene: Matteo\_23 Start: 18653, Stop: 19369, Start Num: 187

Candidate Starts for Matteo\_23:

(Start: 167 @18626 has 3 MA's), (Start: 168 @18629 has 1 MA's), (Start: 187 @18653 has 15 MA's), (203, 18671), (231, 18725), (278, 18809), (298, 18848), (325, 18884), (335, 18911), (357, 18965), (361, 18983), (398, 19046), (414, 19076), (439, 19154), (441, 19160), (546, 19361),

Gene: Mayweather\_51 Start: 36577, Stop: 35774, Start Num: 188

Candidate Starts for Mayweather\_51:

(Start: 139 @36637 has 1 MA's), (Start: 188 @36577 has 69 MA's), (235, 36499), (294, 36370), (324, 36316), (338, 36277), (351, 36256), (422, 36112), (431, 36079), (476, 35977), (478, 35974), (515, 35896), (517, 35893), (557, 35827), (568, 35803), (576, 35788), (586, 35779),

Gene: Mbo2\_63 Start: 49136, Stop: 48321, Start Num: 164

Candidate Starts for Mbo2\_63:

(164, 49136), (213, 49061), (225, 49052), (Start: 238 @49028 has 20 MA's), (252, 49007), (276, 48959), (327, 48863), (336, 48839), (394, 48725), (438, 48608), (449, 48587), (456, 48569), (512, 48458), (526, 48443), (581, 48350),

Gene: Mbo4\_54 Start: 39648, Stop: 40400, Start Num: 194

Candidate Starts for Mbo4\_54:

(68, 39369), (72, 39378), (84, 39417), (86, 39426), (91, 39444), (173, 39618), (186, 39636), (Start: 194 @39648 has 4 MA's), (Start: 211 @39687 has 1 MA's), (219, 39702), (258, 39756), (298, 39837), (330, 39918), (376, 40002), (410, 40062), (420, 40089),

Gene: McKinley\_47 Start: 40584, Stop: 41318, Start Num: 184

Candidate Starts for McKinley\_47:

(102, 40437), (142, 40527), (Start: 184 @40584 has 99 MA's), (Start: 201 @40602 has 3 MA's), (258, 40689), (271, 40716), (294, 40764), (303, 40782), (325, 40824), (356, 40902), (375, 40944), (400, 40977), (456, 41112), (475, 41151), (528, 41250), (549, 41277), (569, 41310),

Gene: Mcklovin\_25 Start: 24000, Stop: 24788, Start Num: 182

Candidate Starts for Mcklovin\_25:

(Start: 167 @23988 has 3 MA's), (Start: 182 @24000 has 36 MA's), (Start: 201 @24012 has 3 MA's), (202, 24015), (Start: 211 @24042 has 1 MA's), (Start: 222 @24054 has 1 MA's), (258, 24105), (299, 24198), (323, 24243), (324, 24246), (325, 24249), (348, 24309), (354, 24327), (357, 24339), (358, 24342), (359, 24345), (410, 24435), (440, 24522), (559, 24744), (573, 24768),

Gene: MelBins\_45 Start: 39210, Stop: 39932, Start Num: 185

Candidate Starts for MelBins\_45:

(Start: 185 @39210 has 7 MA's), (202, 39225), (Start: 222 @39264 has 1 MA's), (Start: 248 @39303 has 2 MA's), (258, 39315), (294, 39375), (352, 39498), (403, 39591), (407, 39597), (414, 39606), (425, 39645), (440, 39684), (475, 39759), (528, 39858), (555, 39897), (567, 39918),

Gene: Melba\_25 Start: 21152, Stop: 21955, Start Num: 184

Candidate Starts for Melba\_25:

(Start: 184 @21152 has 99 MA's), (Start: 211 @21200 has 1 MA's), (Start: 222 @21212 has 1 MA's), (234, 21227), (258, 21263), (299, 21356), (325, 21407), (347, 21464), (348, 21467), (354, 21485), (357, 21497), (358, 21500), (359, 21503), (440, 21680), (451, 21701), (452, 21707), (532, 21863), (559, 21899), (573, 21923), (585, 21944),

Gene: Mellie\_24 Start: 20913, Stop: 21716, Start Num: 184

Candidate Starts for Mellie\_24:

(Start: 184 @20913 has 99 MA's), (Start: 211 @20961 has 1 MA's), (Start: 222 @20973 has 1 MA's), (234, 20988), (299, 21117), (310, 21129), (325, 21168), (342, 21216), (347, 21225), (348, 21228), (354, 21246), (357, 21258), (358, 21261), (359, 21264), (440, 21441), (451, 21462), (452, 21468), (559, 21660), (573, 21684), (585, 21705),

Gene: MerCougar\_19 Start: 8841, Stop: 9629, Start Num: 178

Candidate Starts for MerCougar\_19:

(Start: 178 @8841 has 8 MA's), (Start: 184 @8850 has 99 MA's), (243, 8940), (Start: 255 @8964 has 1 MA's), (259, 8979), (277, 9012), (297, 9060), (361, 9228), (371, 9249), (506, 9555), (511, 9564), (514, 9570), (520, 9579), (533, 9603),

Gene: MichaelScott\_25 Start: 21603, Stop: 22391, Start Num: 182

Candidate Starts for MichaelScott\_25:

(Start: 167 @21591 has 3 MA's), (Start: 182 @21603 has 36 MA's), (Start: 201 @21615 has 3 MA's), (202, 21618), (Start: 211 @21645 has 1 MA's), (Start: 222 @21657 has 1 MA's), (258, 21708), (299, 21801), (323, 21846), (324, 21849), (325, 21852), (348, 21912), (354, 21930), (357, 21942), (358, 21945), (359, 21948), (410, 22038), (440, 22125), (559, 22347), (573, 22371),

Gene: Mima20\_87 Start: 58476, Stop: 59327, Start Num: 147

Candidate Starts for Mima20\_87:

(76, 58299), (87, 58326), (90, 58335), (92, 58350), (98, 58359), (137, 58452), (138, 58455), (Start: 147 @58476 has 26 MA's), (151, 58485), (Start: 167 @58506 has 3 MA's), (195, 58548), (199, 58554), (270, 58701), (273, 58704), (288, 58740), (295, 58752), (311, 58791), (323, 58821), (324, 58824), (328, 58836), (387, 58971), (416, 59037), (419, 59046), (426, 59076), (436, 59103), (445, 59127), (470, 59181), (495, 59226), (500, 59238), (521, 59277), (539, 59304),

Gene: MintFen\_25 Start: 21152, Stop: 21955, Start Num: 184

Candidate Starts for MintFen\_25:

(Start: 184 @21152 has 99 MA's), (Start: 211 @21200 has 1 MA's), (Start: 222 @21212 has 1 MA's), (234, 21227), (258, 21263), (299, 21356), (325, 21407), (347, 21464), (348, 21467), (354, 21485), (357, 21497), (358, 21500), (359, 21503), (440, 21680), (451, 21701), (452, 21707), (532, 21863), (559, 21899), (573, 21923), (585, 21944),

Gene: MintFritos\_30 Start: 21568, Stop: 22266, Start Num: 172

Candidate Starts for MintFritos\_30:

(Start: 160 @21550 has 1 MA's), (Start: 172 @21568 has 29 MA's), (Start: 255 @21631 has 1 MA's), (268, 21667), (298, 21727), (303, 21739), (311, 21760), (324, 21793), (336, 21823), (337, 21826), (345, 21847), (351, 21853), (353, 21859), (359, 21880), (410, 21985), (414, 21994), (435, 22063), (438, 22069), (456, 22105), (459, 22117), (495, 22156), (506, 22177), (547, 22246), (553, 22258), (555, 22261),

Gene: MissRona\_27 Start: 21464, Stop: 22264, Start Num: 184

Candidate Starts for MissRona\_27:

(102, 21314), (Start: 184 @21464 has 99 MA's), (Start: 211 @21512 has 1 MA's), (Start: 222 @21524 has 1 MA's), (258, 21575), (299, 21668), (325, 21719), (347, 21776), (348, 21779), (354, 21797), (357, 21809), (358, 21812), (359, 21815), (440, 21992), (451, 22013), (452, 22019), (468, 22055), (522, 22160), (532, 22175), (534, 22178), (559, 22211), (573, 22235),

Gene: Mocha12\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Mocha12\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: ModicumRichard\_33 Start: 27844, Stop: 28596, Start Num: 194

Candidate Starts for ModicumRichard\_33:

(Start: 194 @27844 has 4 MA's), (Start: 222 @27895 has 1 MA's), (325, 28072), (364, 28171), (413, 28231), (440, 28309), (468, 28372), (498, 28435), (513, 28462), (580, 28564),

Gene: MoiGyank\_89 Start: 59075, Stop: 59926, Start Num: 147

Candidate Starts for MoiGyank\_89:

(137, 59051), (138, 59054), (Start: 147 @59075 has 26 MA's), (151, 59084), (Start: 167 @59105 has 3 MA's), (195, 59147), (199, 59153), (220, 59198), (273, 59303), (277, 59312), (288, 59339), (295, 59351), (311, 59390), (387, 59570), (416, 59636), (419, 59645), (426, 59675), (436, 59702), (445, 59726), (470, 59780), (495, 59825), (500, 59837), (539, 59903),

Gene: MoontowerMania\_45 Start: 40419, Stop: 41153, Start Num: 184

Candidate Starts for MoontowerMania\_45:

(102, 40272), (142, 40362), (Start: 184 @40419 has 99 MA's), (Start: 201 @40437 has 3 MA's), (258, 40524), (271, 40551), (294, 40599), (303, 40617), (325, 40659), (356, 40737), (375, 40779), (400, 40812), (456, 40947), (475, 40986), (528, 41085), (549, 41112), (569, 41145),

Gene: Moosehead\_23 Start: 18651, Stop: 19352, Start Num: 190

Candidate Starts for Moosehead\_23:

(Start: 190 @18651 has 48 MA's), (247, 18744), (258, 18759), (274, 18795), (324, 18876), (338, 18915), (360, 18969), (372, 18999), (439, 19137), (441, 19143), (544, 19344),

Gene: Morgana\_33 Start: 27600, Stop: 28349, Start Num: 194

Candidate Starts for Morgana\_33:

(39, 27204), (Start: 194 @27600 has 4 MA's), (Start: 222 @27651 has 1 MA's), (325, 27828), (357, 27909), (364, 27927), (413, 27984), (427, 28032), (440, 28062), (468, 28125), (498, 28188), (513, 28215), (580, 28317),

Gene: Morkie\_24 Start: 19442, Stop: 20146, Start Num: 187

Candidate Starts for Morkie\_24:

(Start: 187 @19442 has 15 MA's), (247, 19538), (294, 19628), (304, 19649), (305, 19652), (326, 19676), (335, 19700), (336, 19703), (341, 19718), (357, 19754), (398, 19832), (416, 19859), (430, 19910), (439, 19931), (524, 20108), (544, 20138),

Gene: MortyNRick\_27 Start: 21231, Stop: 21854, Start Num: 245

Candidate Starts for MortyNRick\_27:

(65, 20856), (83, 20913), (97, 20958), (123, 21012), (125, 21015), (136, 21051), (Start: 160 @21096 has 1 MA's), (162, 21099), (Start: 245 @21231 has 28 MA's), (Start: 248 @21237 has 2 MA's), (260, 21267), (265, 21282), (294, 21342), (324, 21417), (341, 21462), (357, 21498), (369, 21534), (405, 21597), (427, 21660), (435, 21681), (439, 21690), (467, 21747), (523, 21822), (529, 21831),

Gene: MossRose\_45 Start: 37550, Stop: 38272, Start Num: 188

Candidate Starts for MossRose\_45:

(89, 37364), (Start: 188 @37550 has 69 MA's), (Start: 245 @37643 has 28 MA's), (282, 37712), (296, 37739), (299, 37745), (357, 37859), (406, 37943), (439, 38036), (451, 38066),

Gene: MunkgeeRoachy\_43 Start: 33256, Stop: 32417, Start Num: 188

Candidate Starts for MunkgeeRoachy\_43:

(Start: 139 @33316 has 1 MA's), (Start: 188 @33256 has 69 MA's), (Start: 222 @33196 has 1 MA's), (241, 33166), (Start: 245 @33160 has 28 MA's), (287, 33079), (336, 32971), (350, 32938), (358, 32911), (470, 32647), (515, 32554), (566, 32467),

Gene: Murp\_26 Start: 21420, Stop: 22214, Start Num: 184

Candidate Starts for Murp\_26:

(55, 21117), (78, 21204), (102, 21270), (Start: 184 @21420 has 99 MA's), (Start: 211 @21468 has 1 MA's), (Start: 222 @21480 has 1 MA's), (258, 21531), (299, 21624), (325, 21675), (342, 21723), (347, 21732), (348, 21735), (354, 21753), (357, 21765), (358, 21768), (359, 21771), (371, 21804), (440, 21948), (451, 21969), (559, 22167), (573, 22191),

Gene: Mutzi\_43 Start: 37151, Stop: 37906, Start Num: 182

Candidate Starts for Mutzi\_43:

(Start: 148 @37115 has 8 MA's), (165, 37136), (Start: 182 @37151 has 36 MA's), (233, 37223), (258, 37259), (295, 37331), (336, 37412), (402, 37526), (407, 37532), (420, 37559), (434, 37607), (483, 37709), (523, 37784), (531, 37793), (577, 37865), (580, 37871),

Gene: NHagos\_43 Start: 36157, Stop: 36879, Start Num: 188

Candidate Starts for NHagos\_43:

(Start: 188 @36157 has 69 MA's), (231, 36226), (Start: 245 @36250 has 28 MA's), (278, 36313), (282, 36319), (357, 36466), (413, 36562), (414, 36565), (439, 36643), (451, 36673), (456, 36688),

Gene: NadineRae\_17 Start: 6891, Stop: 7682, Start Num: 177

Candidate Starts for NadineRae\_17:

(Start: 177 @6891 has 6 MA's), (Start: 255 @7002 has 1 MA's), (256, 7005), (259, 7017), (297, 7098), (356, 7248), (362, 7272), (382, 7305), (434, 7437), (485, 7551), (489, 7563), (506, 7599), (531, 7644), (538, 7653),

Gene: NatB6\_19 Start: 9475, Stop: 10200, Start Num: 172

Candidate Starts for NatB6\_19:

(Start: 172 @9475 has 29 MA's), (Start: 201 @9499 has 3 MA's), (221, 9532), (256, 9535), (273, 9571), (279, 9586), (297, 9628), (356, 9775), (434, 9967), (479, 10069), (495, 10099), (506, 10120), (514, 10135), (550, 10195),

Gene: Natkenzie\_46 Start: 40683, Stop: 41405, Start Num: 188

Candidate Starts for Natkenzie\_46:

(80, 40467), (123, 40572), (Start: 188 @40683 has 69 MA's), (258, 40788), (261, 40797), (294, 40848), (303, 40866), (325, 40908), (354, 40974), (355, 40980), (357, 40986), (396, 41052), (440, 41151), (528, 41325), (544, 41346), (553, 41361),

Gene: Neobush\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Neobush\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: Nettuno\_23 Start: 18707, Stop: 19408, Start Num: 190

Candidate Starts for Nettuno\_23:

(Start: 177 @18692 has 6 MA's), (Start: 179 @18695 has 1 MA's), (Start: 190 @18707 has 48 MA's), (247, 18800), (258, 18815), (274, 18851), (324, 18932), (336, 18965), (338, 18971), (357, 19016), (372, 19055), (439, 19193), (441, 19199), (451, 19223), (456, 19238), (544, 19400),

Gene: Neville\_115 Start: 65621, Stop: 66349, Start Num: 192

Candidate Starts for Neville\_115:

(Start: 192 @65621 has 11 MA's), (216, 65675), (Start: 222 @65681 has 1 MA's), (228, 65687), (250, 65729), (269, 65765), (298, 65819), (356, 65927), (365, 65951), (410, 66023), (456, 66143), (473, 66179), (479, 66188), (486, 66203), (562, 66338),

Gene: Nibbles\_41 Start: 32902, Stop: 32144, Start Num: 188

Candidate Starts for Nibbles\_41:

(123, 33016), (Start: 174 @32917 has 3 MA's), (Start: 188 @32902 has 69 MA's), (Start: 211 @32863 has 1 MA's), (Start: 222 @32845 has 1 MA's), (Start: 245 @32809 has 28 MA's), (258, 32794), (268, 32770), (285, 32734), (294, 32710), (323, 32656), (364, 32551), (378, 32530), (422, 32470), (451, 32392), (470, 32347), (497, 32302), (561, 32188), (568, 32173),

Gene: Nina\_44 Start: 34031, Stop: 33192, Start Num: 188

Candidate Starts for Nina\_44:

(50, 34352), (56, 34328), (74, 34259), (81, 34238), (96, 34193), (Start: 139 @34091 has 1 MA's), (Start: 188 @34031 has 69 MA's), (Start: 222 @33971 has 1 MA's), (241, 33941), (Start: 245 @33935 has 28 MA's), (287, 33854), (336, 33746), (350, 33713), (358, 33686), (470, 33422), (561, 33251), (566, 33242),

Gene: Nodigi\_53 Start: 36539, Stop: 35688, Start Num: 148

Candidate Starts for Nodigi\_53:

(26, 36941), (142, 36554), (Start: 148 @36539 has 8 MA's), (164, 36515), (208, 36461), (212, 36449), (251, 36392), (258, 36386), (269, 36359), (320, 36260), (321, 36257), (326, 36236), (327, 36233), (354, 36164), (359, 36146), (366, 36122), (371, 36113), (384, 36095), (411, 36050), (442, 35960), (446, 35948), (474, 35888), (484, 35870), (572, 35711), (576, 35702),

Gene: NorManre\_91 Start: 59988, Stop: 60839, Start Num: 147

Candidate Starts for NorManre\_91:

(137, 59964), (138, 59967), (Start: 147 @59988 has 26 MA's), (151, 59997), (Start: 167 @60018 has 3 MA's), (195, 60060), (199, 60066), (220, 60111), (273, 60216), (277, 60225), (288, 60252), (295, 60264), (311, 60303), (387, 60483), (419, 60558), (426, 60588), (444, 60636), (445, 60639), (470, 60693), (495, 60738), (500, 60750), (539, 60816),

Gene: Nordenberg\_40 Start: 39404, Stop: 40138, Start Num: 184

Candidate Starts for Nordenberg\_40:

(102, 39257), (142, 39347), (Start: 184 @39404 has 99 MA's), (Start: 201 @39422 has 3 MA's), (258, 39509), (271, 39536), (294, 39584), (303, 39602), (325, 39644), (356, 39722), (375, 39764), (400, 39797), (456, 39932), (475, 39971), (528, 40070), (549, 40097), (569, 40130),

Gene: NosilaM\_21 Start: 9718, Stop: 10509, Start Num: 178

Candidate Starts for NosilaM\_21:

(Start: 178 @9718 has 8 MA's), (207, 9763), (246, 9826), (253, 9838), (Start: 255 @9844 has 1 MA's), (259, 9859), (273, 9883), (277, 9892), (297, 9940), (311, 9976), (356, 10087), (361, 10108), (371, 10129), (495, 10414), (506, 10435), (511, 10444), (514, 10450), (533, 10483),

Gene: NovaSharks\_86 Start: 56889, Stop: 57740, Start Num: 147

Candidate Starts for NovaSharks\_86:

(137, 56865), (138, 56868), (Start: 147 @56889 has 26 MA's), (Start: 161 @56910 has 2 MA's), (Start: 167 @56919 has 3 MA's), (195, 56961), (199, 56967), (220, 57012), (270, 57114), (273, 57117), (288, 57153), (295, 57165), (311, 57204), (323, 57234), (324, 57237), (328, 57249), (329, 57252), (387, 57384), (416, 57450), (419, 57459), (426, 57489), (436, 57516), (444, 57537), (470, 57594), (495, 57639), (539, 57717),

Gene: NovumRegina\_19 Start: 9806, Stop: 10531, Start Num: 172

Candidate Starts for NovumRegina\_19:

(Start: 172 @9806 has 29 MA's), (Start: 201 @9830 has 3 MA's), (221, 9863), (256, 9866), (273, 9902), (279, 9917), (297, 9959), (356, 10106), (434, 10298), (479, 10400), (495, 10430), (506, 10451), (514, 10466), (550, 10526),

Gene: Nubi\_44 Start: 36296, Stop: 37051, Start Num: 182

Candidate Starts for Nubi\_44:

(Start: 148 @36260 has 8 MA's), (165, 36281), (Start: 182 @36296 has 36 MA's), (233, 36368), (258, 36404), (295, 36476), (336, 36557), (402, 36671), (407, 36677), (420, 36704), (434, 36752), (483, 36854), (531, 36938), (577, 37010),

Gene: Nymphadora\_25 Start: 22318, Stop: 22926, Start Num: 248

Candidate Starts for Nymphadora\_25:

(175, 22210), (204, 22249), (224, 22282), (Start: 238 @22309 has 20 MA's), (Start: 248 @22318 has 2 MA's), (265, 22360), (273, 22372), (294, 22420), (303, 22441), (311, 22462), (324, 22495), (326, 22498), (341, 22540), (357, 22576), (379, 22627), (405, 22675), (427, 22738), (439, 22768), (464, 22819), (523, 22897),

Gene: ODay\_32 Start: 23377, Stop: 24000, Start Num: 245

Candidate Starts for ODay\_32:

(156, 23236), (180, 23269), (193, 23290), (195, 23293), (Start: 245 @23377 has 28 MA's), (Start: 248 @23383 has 2 MA's), (260, 23413), (265, 23428), (294, 23488), (324, 23563), (341, 23608), (357, 23644), (359, 23650), (369, 23680), (405, 23743), (427, 23806), (435, 23827), (439, 23836), (523, 23968), (529, 23977),

Gene: ObLaDi\_33 Start: 27823, Stop: 28575, Start Num: 194

Candidate Starts for ObLaDi\_33:

(Start: 194 @27823 has 4 MA's), (Start: 222 @27874 has 1 MA's), (325, 28051), (364, 28150), (413, 28210), (440, 28288), (468, 28351), (498, 28414), (513, 28441), (580, 28543),

Gene: Obliviate\_25 Start: 21074, Stop: 21871, Start Num: 182

Candidate Starts for Obliviate\_25:

(32, 20681), (62, 20810), (96, 20921), (109, 20948), (127, 20984), (Start: 182 @21074 has 36 MA's), (Start: 222 @21128 has 1 MA's), (234, 21143), (258, 21179), (299, 21272), (310, 21284), (324, 21320), (325, 21323), (342, 21371), (347, 21380), (348, 21383), (354, 21401), (357, 21413), (358, 21416), (359, 21419), (427, 21566), (440, 21596), (451, 21617), (452, 21623), (456, 21632), (559, 21815), (573, 21839), (585, 21860),

Gene: Octobien14\_115 Start: 63857, Stop: 64579, Start Num: 196

Candidate Starts for Octobien14\_115:

(134, 63755), (Start: 167 @63815 has 3 MA's), (Start: 196 @63857 has 5 MA's), (216, 63905), (309, 64067), (316, 64079), (422, 64289), (444, 64346), (456, 64376), (462, 64391), (500, 64463), (508, 64478), (556, 64562), (558, 64565),

Gene: Ohgeesy\_25 Start: 21932, Stop: 22549, Start Num: 238

Candidate Starts for Ohgeesy\_25:

(175, 21833), (204, 21872), (224, 21905), (Start: 238 @21932 has 20 MA's), (265, 21983), (273, 21995), (294, 22043), (303, 22064), (311, 22085), (324, 22118), (341, 22163), (357, 22199), (358, 22202), (379, 22250), (427, 22361), (439, 22391), (464, 22442), (523, 22520),

Gene: OneDirection\_22 Start: 18679, Stop: 19380, Start Num: 190

Candidate Starts for OneDirection\_22:

(Start: 179 @18664 has 1 MA's), (Start: 190 @18679 has 48 MA's), (205, 18697), (247, 18772), (258, 18787), (274, 18823), (324, 18904), (338, 18943), (357, 18988), (372, 19027), (439, 19165), (441, 19171), (451, 19195), (544, 19372),

Gene: Oogie\_31 Start: 23271, Stop: 23969, Start Num: 172

Candidate Starts for Oogie\_31:

(Start: 160 @23253 has 1 MA's), (Start: 172 @23271 has 29 MA's), (Start: 255 @23334 has 1 MA's), (268, 23370), (303, 23442), (311, 23463), (324, 23496), (336, 23526), (337, 23529), (345, 23550), (351, 23556), (353, 23562), (359, 23583), (410, 23688), (414, 23697), (435, 23766), (438, 23772), (456, 23808), (459, 23820), (495, 23859), (547, 23949), (553, 23961), (555, 23964),

Gene: Opie\_26 Start: 21778, Stop: 22491, Start Num: 190

Candidate Starts for Opie\_26:

(Start: 148 @21721 has 8 MA's), (Start: 190 @21778 has 48 MA's), (202, 21790), (247, 21871), (258, 21886), (278, 21931), (304, 21982), (335, 22033), (360, 22096), (361, 22105), (410, 22180), (434, 22255), (439, 22267), (441, 22273),

Gene: Orchid\_39 Start: 40829, Stop: 41551, Start Num: 192

Candidate Starts for Orchid\_39:

(Start: 192 @40829 has 11 MA's), (216, 40883), (282, 40976), (316, 41057), (327, 41090), (365, 41168), (442, 41330), (481, 41390), (538, 41504),

Gene: Oregano\_25 Start: 21268, Stop: 22056, Start Num: 182

Candidate Starts for Oregano\_25:

(Start: 167 @21256 has 3 MA's), (Start: 182 @21268 has 36 MA's), (Start: 201 @21280 has 3 MA's), (202, 21283), (Start: 211 @21310 has 1 MA's), (Start: 222 @21322 has 1 MA's), (258, 21373), (299, 21466), (323, 21511), (324, 21514), (325, 21517), (326, 21520), (348, 21577), (354, 21595), (357, 21607), (358, 21610), (359, 21613), (410, 21703), (440, 21790), (522, 21958), (559, 22012), (573, 22036),

Gene: Orla\_53 Start: 36447, Stop: 35596, Start Num: 148

Candidate Starts for Orla\_53:

(26, 36849), (59, 36684), (142, 36462), (Start: 148 @36447 has 8 MA's), (164, 36423), (208, 36369), (212, 36357), (251, 36300), (258, 36294), (269, 36267), (320, 36168), (321, 36165), (326, 36144), (327, 36141), (336, 36117), (354, 36072), (358, 36057), (359, 36054), (366, 36030), (384, 36003), (411, 35958), (442, 35868), (446, 35856), (474, 35796), (484, 35778), (572, 35619), (576, 35610),

Gene: OtterstedtS21\_87 Start: 58792, Stop: 59643, Start Num: 147

Candidate Starts for OtterstedtS21\_87:

(137, 58768), (138, 58771), (Start: 147 @58792 has 26 MA's), (151, 58801), (Start: 167 @58822 has 3 MA's), (195, 58864), (199, 58870), (220, 58915), (273, 59020), (288, 59056), (295, 59068), (311, 59107), (387, 59287), (416, 59353), (419, 59362), (426, 59392), (436, 59419), (445, 59443), (470, 59497), (495, 59542), (500, 59554), (539, 59620),

Gene: Outis\_19 Start: 8535, Stop: 9323, Start Num: 178

Candidate Starts for Outis\_19:

(Start: 178 @8535 has 8 MA's), (Start: 184 @8544 has 99 MA's), (243, 8634), (Start: 255 @8658 has 1 MA's), (259, 8673), (277, 8706), (297, 8754), (361, 8922), (371, 8943), (506, 9249), (511, 9258), (514, 9264), (520, 9273), (533, 9297),

Gene: PCoral7\_26 Start: 21477, Stop: 22187, Start Num: 187

Candidate Starts for PCoral7\_26:

(Start: 187 @21477 has 15 MA's), (Start: 201 @21489 has 3 MA's), (203, 21495), (278, 21633), (294, 21663), (325, 21708), (335, 21735), (345, 21762), (361, 21813), (404, 21882), (414, 21897), (416, 21903), (424, 21933), (439, 21975), (441, 21981), (459, 22032), (501, 22104), (536, 22167),

Gene: Pakusa\_30 Start: 21310, Stop: 22008, Start Num: 172

Candidate Starts for Pakusa\_30:

(Start: 160 @21292 has 1 MA's), (Start: 172 @21310 has 29 MA's), (Start: 255 @21373 has 1 MA's), (268, 21409), (298, 21469), (303, 21481), (311, 21502), (324, 21535), (336, 21565), (337, 21568), (345, 21589), (351, 21595), (353, 21601), (359, 21622), (410, 21727), (414, 21736), (435, 21805), (438, 21811), (456, 21847), (459, 21859), (495, 21898), (506, 21919), (547, 21988), (553, 22000), (555, 22003),

Gene: PantheRoc\_26 Start: 21501, Stop: 22121, Start Num: 239

Candidate Starts for PantheRoc\_26:

(60, 21126), (123, 21297), (125, 21300), (Start: 160 @21381 has 1 MA's), (175, 21402), (Start: 239 @21501 has 16 MA's), (Start: 248 @21510 has 2 MA's), (265, 21555), (303, 21636), (324, 21690), (341, 21735), (357, 21771), (379, 21822), (405, 21870), (427, 21933), (439, 21963), (464, 22014), (523, 22092),

Gene: Paries\_48 Start: 40873, Stop: 41607, Start Num: 184

Candidate Starts for Paries\_48:

(102, 40726), (142, 40816), (Start: 184 @40873 has 99 MA's), (Start: 201 @40891 has 3 MA's), (258, 40978), (271, 41005), (294, 41053), (303, 41071), (325, 41113), (356, 41191), (375, 41233), (400, 41266), (456, 41401), (475, 41440), (528, 41539), (549, 41566), (569, 41599),

Gene: ParvusTarda\_86 Start: 58065, Stop: 58916, Start Num: 147

Candidate Starts for ParvusTarda\_86:

(76, 57888), (87, 57915), (90, 57924), (92, 57939), (98, 57948), (137, 58041), (138, 58044), (Start: 147 @58065 has 26 MA's), (151, 58074), (Start: 167 @58095 has 3 MA's), (195, 58137), (199, 58143), (220, 58188), (270, 58290), (273, 58293), (288, 58329), (295, 58341), (323, 58410), (324, 58413), (328, 58425), (387, 58560), (416, 58626), (419, 58635), (426, 58665), (444, 58713), (445, 58716), (470, 58770), (495, 58815), (500, 58827), (539, 58893),



Gene: Patio\_21 Start: 9753, Stop: 10526, Start Num: 172

Candidate Starts for Patio\_21:

(Start: 172 @9753 has 29 MA's), (Start: 255 @9861 has 1 MA's), (256, 9864), (279, 9915), (297, 9957), (361, 10125), (506, 10446), (538, 10500),

Gene: Patos\_91 Start: 59987, Stop: 60838, Start Num: 147

Candidate Starts for Patos\_91:

(137, 59963), (138, 59966), (Start: 147 @59987 has 26 MA's), (151, 59996), (Start: 167 @60017 has 3 MA's), (195, 60059), (199, 60065), (220, 60110), (273, 60215), (277, 60224), (288, 60251), (295, 60263), (311, 60302), (387, 60482), (419, 60557), (426, 60587), (444, 60635), (445, 60638), (470, 60692), (495, 60737), (500, 60749), (539, 60815),

Gene: PatrickStar\_40 Start: 40828, Stop: 41550, Start Num: 192

Candidate Starts for PatrickStar\_40:

(Start: 192 @40828 has 11 MA's), (216, 40882), (282, 40975), (316, 41056), (327, 41089), (365, 41167), (442, 41329), (481, 41389), (538, 41503),

Gene: Pepperoni\_24 Start: 19528, Stop: 20244, Start Num: 187

Candidate Starts for Pepperoni\_24:

(Start: 167 @19501 has 3 MA's), (Start: 168 @19504 has 1 MA's), (Start: 187 @19528 has 15 MA's), (203, 19546), (278, 19684), (298, 19723), (325, 19759), (335, 19786), (357, 19840), (361, 19858), (398, 19921), (414, 19951), (439, 20029), (441, 20035), (530, 20212), (546, 20236),

Gene: Periwinkle\_30 Start: 21968, Stop: 22591, Start Num: 245

Candidate Starts for Periwinkle\_30:

(65, 21593), (83, 21650), (97, 21695), (123, 21749), (125, 21752), (136, 21788), (Start: 160 @21833 has 1 MA's), (162, 21836), (Start: 245 @21968 has 28 MA's), (Start: 248 @21974 has 2 MA's), (260, 22004), (265, 22019), (294, 22079), (303, 22100), (327, 22160), (341, 22199), (369, 22271), (405, 22334), (423, 22379), (427, 22397), (435, 22418), (439, 22427), (523, 22559), (529, 22568), (537, 22580),

Gene: Petra\_27 Start: 21152, Stop: 21940, Start Num: 182

Candidate Starts for Petra\_27:

(81, 20948), (114, 21032), (126, 21053), (Start: 182 @21152 has 36 MA's), (Start: 201 @21164 has 3 MA's), (202, 21167), (Start: 211 @21194 has 1 MA's), (Start: 222 @21206 has 1 MA's), (234, 21221), (299, 21350), (310, 21362), (325, 21401), (342, 21449), (348, 21461), (357, 21491), (358, 21494), (359, 21497), (440, 21674), (451, 21695), (452, 21701), (456, 21710), (559, 21893), (573, 21917),

Gene: Phabuloso\_27 Start: 21255, Stop: 21878, Start Num: 245

Candidate Starts for Phabuloso\_27:

(65, 20880), (83, 20937), (97, 20982), (123, 21036), (125, 21039), (136, 21075), (Start: 160 @21120 has 1 MA's), (162, 21123), (Start: 245 @21255 has 28 MA's), (Start: 248 @21261 has 2 MA's), (260, 21291), (265, 21306), (294, 21366), (327, 21447), (341, 21486), (369, 21558), (405, 21621), (423, 21666), (427, 21684), (435, 21705), (439, 21714), (523, 21846), (529, 21855), (537, 21867),

Gene: Phauci\_37 Start: 35913, Stop: 36635, Start Num: 185

Candidate Starts for Phauci\_37:

(Start: 185 @35913 has 7 MA's), (202, 35928), (Start: 248 @36006 has 2 MA's), (258, 36018), (294, 36078), (352, 36201), (403, 36294), (407, 36300), (425, 36348), (440, 36387), (475, 36462), (528, 36561), (555, 36600), (567, 36621),

Gene: Phinally\_44 Start: 39060, Stop: 39779, Start Num: 185

Candidate Starts for Phinally\_44:

(Start: 185 @39060 has 7 MA's), (202, 39075), (Start: 222 @39114 has 1 MA's), (Start: 248 @39153 has 2 MA's), (258, 39165), (282, 39204), (294, 39225), (407, 39444), (414, 39453), (420, 39471), (425, 39492), (440, 39531), (475, 39606), (528, 39705), (555, 39744), (567, 39765),

Gene: Phistory\_29 Start: 22289, Stop: 22912, Start Num: 245

Candidate Starts for Phistory\_29:

(65, 21914), (83, 21971), (97, 22016), (123, 22070), (125, 22073), (136, 22109), (Start: 160 @22154 has 1 MA's), (162, 22157), (Start: 245 @22289 has 28 MA's), (Start: 248 @22295 has 2 MA's), (260, 22325), (265, 22340), (294, 22400), (327, 22481), (341, 22520), (369, 22592), (405, 22655), (423, 22700), (427, 22718), (435, 22739), (439, 22748), (523, 22880), (529, 22889), (537, 22901),

Gene: Phlop\_43 Start: 36377, Stop: 37132, Start Num: 182

Candidate Starts for Phlop\_43:

(165, 36362), (Start: 182 @36377 has 36 MA's), (233, 36449), (258, 36485), (295, 36557), (402, 36752), (407, 36758), (420, 36785), (434, 36833), (483, 36935), (531, 37019), (577, 37091),

Gene: Phomeo\_18 Start: 9091, Stop: 9759, Start Num: 221

Candidate Starts for Phomeo\_18:

(Start: 172 @9034 has 29 MA's), (Start: 201 @9058 has 3 MA's), (221, 9091), (256, 9094), (273, 9130), (279, 9145), (297, 9187), (313, 9226), (356, 9334), (434, 9526), (479, 9628), (495, 9658), (506, 9679), (514, 9694), (550, 9754),

Gene: PhorbesPhlower\_24 Start: 19442, Stop: 20146, Start Num: 187

Candidate Starts for PhorbesPhlower\_24:

(Start: 187 @19442 has 15 MA's), (247, 19538), (294, 19628), (304, 19649), (305, 19652), (326, 19676), (335, 19700), (336, 19703), (341, 19718), (357, 19754), (398, 19832), (416, 19859), (430, 19910), (439, 19931), (524, 20108), (544, 20138),

Gene: PhriskyACE\_24 Start: 20739, Stop: 21473, Start Num: 222

Candidate Starts for PhriskyACE\_24:

(93, 20526), (Start: 167 @20676 has 3 MA's), (180, 20685), (Start: 201 @20697 has 3 MA's), (202, 20700), (Start: 211 @20727 has 1 MA's), (Start: 222 @20739 has 1 MA's), (258, 20790), (299, 20883), (323, 20928), (324, 20931), (325, 20934), (326, 20937), (348, 20994), (354, 21012), (358, 21027), (359, 21030), (402, 21108), (410, 21120), (420, 21147), (440, 21207), (456, 21243), (522, 21375), (534, 21393), (559, 21429), (579, 21465),

Gene: PhrostedPhlake\_27 Start: 21845, Stop: 22648, Start Num: 184

Candidate Starts for PhrostedPhlake\_27:

(Start: 184 @21845 has 99 MA's), (Start: 211 @21893 has 1 MA's), (Start: 222 @21905 has 1 MA's), (234, 21920), (258, 21956), (299, 22049), (325, 22100), (347, 22157), (348, 22160), (354, 22178), (357, 22190), (358, 22193), (359, 22196), (440, 22373), (451, 22394), (452, 22400), (532, 22556), (559, 22592), (573, 22616), (585, 22637),

Gene: Pickett\_23 Start: 18631, Stop: 19332, Start Num: 190

Candidate Starts for Pickett\_23:

(Start: 177 @18616 has 6 MA's), (Start: 179 @18619 has 1 MA's), (Start: 190 @18631 has 48 MA's), (258, 18739), (274, 18775), (324, 18856), (338, 18895), (357, 18940), (372, 18979), (430, 19096), (439, 19117), (441, 19123), (464, 19180), (544, 19324),

Gene: PinkCoffee\_46 Start: 36480, Stop: 37235, Start Num: 182

Candidate Starts for PinkCoffee\_46:

(165, 36465), (Start: 182 @36480 has 36 MA's), (233, 36552), (258, 36588), (295, 36660), (402, 36855), (407, 36861), (420, 36888), (434, 36936), (483, 37038), (531, 37122), (577, 37194),

Gene: Pipp\_25 Start: 21146, Stop: 21946, Start Num: 184

Candidate Starts for Pipp\_25:

(Start: 184 @21146 has 99 MA's), (Start: 211 @21194 has 1 MA's), (Start: 222 @21206 has 1 MA's), (258, 21257), (299, 21350), (325, 21401), (347, 21458), (348, 21461), (354, 21479), (357, 21491), (358, 21494), (359, 21497), (429, 21650), (440, 21674), (451, 21695), (559, 21893), (573, 21917), (585, 21935),

Gene: Pleakley\_25 Start: 9799, Stop: 10464, Start Num: 255

Candidate Starts for Pleakley\_25:

(Start: 255 @9799 has 1 MA's), (256, 9802), (279, 9859), (297, 9901), (341, 10015), (351, 10030), (356, 10048), (370, 10084), (404, 10153), (410, 10159), (435, 10237), (439, 10246), (459, 10300), (495, 10360),

Gene: Pollux\_27 Start: 21910, Stop: 22626, Start Num: 187

Candidate Starts for Pollux\_27:

(Start: 167 @21883 has 3 MA's), (Start: 168 @21886 has 1 MA's), (Start: 187 @21910 has 15 MA's), (203, 21928), (231, 21982), (278, 22066), (298, 22105), (325, 22141), (335, 22168), (357, 22222), (361, 22240), (414, 22333), (439, 22411), (441, 22417), (530, 22594), (542, 22612),

Gene: Polly\_24 Start: 21758, Stop: 22366, Start Num: 248

Candidate Starts for Polly\_24:

(175, 21650), (204, 21689), (224, 21722), (Start: 238 @21749 has 20 MA's), (Start: 248 @21758 has 2 MA's), (265, 21800), (273, 21812), (294, 21860), (303, 21881), (311, 21902), (324, 21935), (341, 21980), (358, 22019), (379, 22067), (405, 22115), (427, 22178), (464, 22259), (506, 22310), (523, 22337),

Gene: Polyuki\_20 Start: 9999, Stop: 10895, Start Num: 184

Candidate Starts for Polyuki\_20:

(69, 9762), (Start: 184 @9999 has 99 MA's), (225, 10077), (272, 10164), (292, 10212), (298, 10227), (330, 10305), (348, 10350), (410, 10482), (442, 10575), (448, 10590), (494, 10689), (537, 10770), (565, 10818), (587, 10863),

Gene: Pons\_48 Start: 35462, Stop: 34665, Start Num: 188

Candidate Starts for Pons\_48:

(Start: 139 @35522 has 1 MA's), (Start: 188 @35462 has 69 MA's), (235, 35390), (249, 35369), (269, 35318), (294, 35261), (324, 35207), (338, 35168), (351, 35147), (422, 35003), (431, 34970), (478, 34865), (515, 34787), (557, 34718), (568, 34694), (576, 34679), (586, 34670),

Gene: Portcullis\_45 Start: 35691, Stop: 36446, Start Num: 184

Candidate Starts for Portcullis\_45:

(120, 35595), (Start: 184 @35691 has 99 MA's), (233, 35763), (258, 35799), (295, 35871), (402, 36066), (407, 36072), (420, 36099), (483, 36249), (531, 36333), (577, 36405),

Gene: Posh\_28 Start: 22753, Stop: 23376, Start Num: 238

Candidate Starts for Posh\_28:

(Start: 238 @22753 has 20 MA's), (250, 22762), (265, 22804), (284, 22840), (303, 22885), (311, 22906), (324, 22939), (341, 22984), (369, 23056), (379, 23071), (405, 23119), (423, 23164), (427, 23182), (435, 23203), (439, 23212), (464, 23266), (506, 23317), (523, 23344), (529, 23353), (531, 23356),

Gene: PotPie\_46 Start: 36143, Stop: 35340, Start Num: 188

Candidate Starts for PotPie\_46:

(Start: 139 @36203 has 1 MA's), (Start: 188 @36143 has 69 MA's), (294, 35936), (324, 35882), (331, 35861), (338, 35843), (341, 35834), (351, 35822), (356, 35807), (418, 35696), (422, 35678), (431, 35645), (476, 35543), (506, 35483), (515, 35462), (557, 35393), (576, 35354), (586, 35345),

Gene: PrincePatrick\_25 Start: 21553, Stop: 22266, Start Num: 187

Candidate Starts for PrincePatrick\_25:

(176, 21538), (Start: 187 @21553 has 15 MA's), (Start: 201 @21565 has 3 MA's), (202, 21568), (203, 21571), (263, 21679), (278, 21709), (294, 21739), (325, 21784), (341, 21829), (345, 21838), (357, 21871), (361, 21889), (414, 21976), (416, 21982), (430, 22033), (439, 22054), (441, 22060), (456, 22099), (459, 22111), (501, 22183), (536, 22246),

Gene: PsychoKiller\_44 Start: 33794, Stop: 32955, Start Num: 188

Candidate Starts for PsychoKiller\_44:

(50, 34115), (56, 34091), (57, 34088), (81, 34001), (96, 33956), (Start: 139 @33854 has 1 MA's), (Start: 188 @33794 has 69 MA's), (Start: 222 @33734 has 1 MA's), (241, 33704), (Start: 245 @33698 has 28 MA's), (287, 33617), (336, 33509), (350, 33476), (358, 33449), (470, 33185), (561, 33014), (566, 33005),

Gene: PullumCavea\_43 Start: 36377, Stop: 37132, Start Num: 182

Candidate Starts for PullumCavea\_43:

(165, 36362), (Start: 182 @36377 has 36 MA's), (233, 36449), (258, 36485), (295, 36557), (402, 36752), (407, 36758), (420, 36785), (434, 36833), (483, 36935), (531, 37019), (577, 37091),

Gene: Pytheas\_28 Start: 22899, Stop: 23522, Start Num: 238

Candidate Starts for Pytheas\_28:

(Start: 238 @22899 has 20 MA's), (250, 22908), (265, 22950), (284, 22986), (303, 23031), (311, 23052), (324, 23085), (341, 23130), (369, 23202), (379, 23217), (405, 23265), (423, 23310), (427, 23328), (435, 23349), (439, 23358), (464, 23412), (506, 23463), (523, 23490), (529, 23499), (531, 23502),

Gene: Quasar\_45 Start: 34456, Stop: 33617, Start Num: 188

Candidate Starts for Quasar\_45:

(50, 34777), (56, 34753), (81, 34663), (96, 34618), (Start: 139 @34516 has 1 MA's), (Start: 188 @34456 has 69 MA's), (Start: 222 @34396 has 1 MA's), (Start: 245 @34360 has 28 MA's), (287, 34279), (336, 34171), (350, 34138), (358, 34111), (470, 33847), (561, 33676), (566, 33667),

Gene: Rabbitrun\_118 Start: 66939, Stop: 67664, Start Num: 192

Candidate Starts for Rabbitrun\_118:

(Start: 192 @66939 has 11 MA's), (Start: 222 @66999 has 1 MA's), (250, 67047), (269, 67083), (298, 67137), (327, 67200), (356, 67242), (365, 67266), (367, 67272), (408, 67341), (410, 67344), (456, 67464), (486, 67524), (562, 67656),

Gene: Ranch\_90 Start: 58464, Stop: 59315, Start Num: 147

Candidate Starts for Ranch\_90:

(76, 58287), (87, 58314), (90, 58323), (92, 58338), (98, 58347), (137, 58440), (138, 58443), (Start: 147 @58464 has 26 MA's), (151, 58473), (Start: 167 @58494 has 3 MA's), (195, 58536), (199, 58542), (273, 58692), (277, 58701), (288, 58728), (295, 58740), (311, 58779), (323, 58809), (324, 58812), (328, 58824), (387, 58959), (419, 59034), (426, 59064), (438, 59094), (444, 59112), (445, 59115), (470, 59169), (495, 59214), (539, 59292),

Gene: RanchParmCat\_50 Start: 35272, Stop: 34418, Start Num: 148

Candidate Starts for RanchParmCat\_50:

(59, 35509), (100, 35386), (142, 35287), (Start: 148 @35272 has 8 MA's), (159, 35254), (204, 35206), (208, 35194), (251, 35125), (258, 35119), (269, 35092), (278, 35074), (314, 35005), (320, 34993), (321, 34990), (336, 34942), (354, 34897), (411, 34786), (417, 34771), (427, 34732), (442, 34696), (446, 34684), (474, 34624), (476, 34621), (552, 34480), (564, 34459),

Gene: RavenCo17\_24 Start: 20690, Stop: 21409, Start Num: 190

Candidate Starts for RavenCo17\_24:

(16, 19883), (19, 20024), (44, 20324), (112, 20546), (Start: 190 @20690 has 48 MA's), (231, 20756), (247, 20783), (258, 20798), (278, 20843), (304, 20894), (324, 20915), (335, 20945), (357, 20999), (360, 21008), (361, 21017), (439, 21185), (441, 21191), (487, 21293), (516, 21356),

Gene: RayTheFireFly\_27 Start: 22566, Stop: 23267, Start Num: 190

Candidate Starts for RayTheFireFly\_27:

(Start: 190 @22566 has 48 MA's), (205, 22584), (247, 22659), (258, 22674), (304, 22770), (306, 22776), (335, 22821), (357, 22875), (360, 22884), (361, 22893), (412, 22968), (414, 22974), (439, 23052), (441, 23058), (501, 23181), (536, 23244),

Gene: RedBaron\_47 Start: 34123, Stop: 33284, Start Num: 188

Candidate Starts for RedBaron\_47:

(50, 34444), (56, 34420), (57, 34417), (70, 34372), (81, 34330), (96, 34285), (Start: 139 @34183 has 1 MA's), (Start: 188 @34123 has 69 MA's), (Start: 222 @34063 has 1 MA's), (241, 34033), (Start: 245 @34027 has 28 MA's), (287, 33946), (336, 33838), (350, 33805), (358, 33778), (470, 33514), (561, 33343), (566, 33334),

Gene: Reyja\_51 Start: 33537, Stop: 34391, Start Num: 116

Candidate Starts for Reyja\_51:

(Start: 116 @33537 has 5 MA's), (218, 33720), (334, 33918), (347, 33951), (390, 34044), (423, 34122), (475, 34233), (477, 34236), (480, 34242), (496, 34278), (510, 34305), (556, 34380),

Gene: Reynauld\_61 Start: 54042, Stop: 53173, Start Num: 179

Candidate Starts for Reynauld\_61:

(Start: 179 @54042 has 1 MA's), (Start: 196 @54015 has 5 MA's), (219, 53964), (225, 53958), (294, 53832), (339, 53715), (351, 53682), (361, 53643), (410, 53553), (439, 53466), (473, 53388), (489, 53355), (516, 53295), (528, 53274), (551, 53235), (558, 53226), (583, 53178),

Gene: Ribeye\_46 Start: 40481, Stop: 41224, Start Num: 184

Candidate Starts for Ribeye\_46:

(Start: 184 @40481 has 99 MA's), (Start: 201 @40499 has 3 MA's), (223, 40544), (258, 40589), (294, 40664), (303, 40682), (335, 40751), (375, 40844), (388, 40856), (456, 41012), (460, 41024), (475, 41051), (492, 41084), (506, 41111), (528, 41150), (549, 41177),

Gene: RiverRaider\_46 Start: 38597, Stop: 39352, Start Num: 184

Candidate Starts for RiverRaider\_46:

(Start: 184 @38597 has 99 MA's), (Start: 201 @38615 has 3 MA's), (Start: 211 @38645 has 1 MA's), (258, 38702), (283, 38747), (294, 38777), (309, 38798), (325, 38837), (352, 38903), (375, 38957), (440, 39086), (460, 39140), (475, 39167), (549, 39293), (561, 39314),

Gene: RoadKill\_54 Start: 43158, Stop: 43937, Start Num: 188

Candidate Starts for RoadKill\_54:

(104, 42996), (131, 43062), (136, 43077), (Start: 188 @43158 has 69 MA's), (205, 43179), (247, 43257), (258, 43272), (278, 43317), (325, 43407), (337, 43440), (379, 43533), (422, 43599), (446, 43668), (470, 43722), (582, 43923),

Gene: RobinSparkles\_42 Start: 41471, Stop: 42193, Start Num: 192

Candidate Starts for RobinSparkles\_42:

(Start: 192 @41471 has 11 MA's), (Start: 196 @41477 has 5 MA's), (Start: 211 @41513 has 1 MA's), (216, 41525), (282, 41618), (331, 41744), (343, 41762), (346, 41768), (365, 41810), (398, 41864), (406, 41876), (442, 41972), (481, 42032), (538, 42146),

Gene: Rofo\_46 Start: 40199, Stop: 40933, Start Num: 184

Candidate Starts for Rofo\_46:

(102, 40052), (142, 40142), (Start: 184 @40199 has 99 MA's), (Start: 201 @40217 has 3 MA's), (258, 40304), (271, 40331), (294, 40379), (303, 40397), (325, 40439), (356, 40517), (375, 40559), (400, 40592), (456, 40727), (475, 40766), (528, 40865), (549, 40892), (569, 40925),

Gene: RogerDodger\_47 Start: 36520, Stop: 37275, Start Num: 184

Candidate Starts for RogerDodger\_47:

(128, 36442), (Start: 184 @36520 has 99 MA's), (233, 36592), (258, 36628), (295, 36700), (402, 36895), (407, 36901), (420, 36928), (434, 36976), (483, 37078), (531, 37162), (577, 37234),

Gene: Rumi\_85 Start: 56474, Stop: 57325, Start Num: 147

Candidate Starts for Rumi\_85:

(87, 56324), (90, 56333), (92, 56348), (98, 56357), (137, 56450), (138, 56453), (Start: 147 @56474 has 26 MA's), (151, 56483), (Start: 161 @56495 has 2 MA's), (Start: 167 @56504 has 3 MA's), (195, 56546), (199, 56552), (220, 56597), (270, 56699), (273, 56702), (288, 56738), (295, 56750), (311, 56789), (323, 56819), (324, 56822), (328, 56834), (329, 56837), (387, 56969), (416, 57035), (419, 57044), (426, 57074), (436, 57101), (444, 57122), (470, 57179), (495, 57224), (539, 57302),

Gene: Ruthy\_29 Start: 24516, Stop: 25301, Start Num: 201

Candidate Starts for Ruthy\_29:

(Start: 181 @24495 has 1 MA's), (Start: 188 @24504 has 69 MA's), (Start: 201 @24516 has 3 MA's), (202, 24519), (Start: 211 @24546 has 1 MA's), (Start: 222 @24558 has 1 MA's), (258, 24609), (325, 24753), (342, 24801), (348, 24813), (354, 24831), (357, 24843), (358, 24846), (359, 24849), (440, 25026), (451, 25047), (468, 25089), (522, 25194), (559, 25248), (573, 25272),

Gene: Sadboi\_86 Start: 58752, Stop: 59600, Start Num: 147

Candidate Starts for Sadboi\_86:

(137, 58728), (138, 58731), (143, 58740), (Start: 147 @58752 has 26 MA's), (151, 58761), (Start: 161 @58773 has 2 MA's), (Start: 167 @58782 has 3 MA's), (Start: 184 @58806 has 99 MA's), (195, 58824), (199, 58830), (228, 58881), (273, 58977), (277, 58986), (288, 59013), (295, 59025), (323, 59094), (324, 59097), (328, 59109), (387, 59244), (419, 59319), (426, 59349), (444, 59397), (445, 59400), (470, 59454), (495, 59499), (500, 59511), (539, 59577),

Gene: Sahara\_23 Start: 19470, Stop: 20177, Start Num: 190

Candidate Starts for Sahara\_23:

(112, 19326), (Start: 190 @19470 has 48 MA's), (223, 19527), (247, 19566), (278, 19626), (289, 19644), (291, 19647), (298, 19665), (325, 19701), (338, 19737), (345, 19755), (358, 19785), (398, 19860), (439, 19959), (441, 19965), (544, 20169),

Gene: Salvador\_43 Start: 36189, Stop: 36944, Start Num: 184

Candidate Starts for Salvador\_43:

(120, 36093), (Start: 184 @36189 has 99 MA's), (233, 36261), (258, 36297), (295, 36369), (304, 36384), (402, 36564), (407, 36570), (420, 36597), (434, 36645), (483, 36747), (531, 36831), (577, 36903),

Gene: Samba\_25 Start: 21230, Stop: 22033, Start Num: 184

Candidate Starts for Samba\_25:

(Start: 184 @21230 has 99 MA's), (Start: 211 @21278 has 1 MA's), (Start: 222 @21290 has 1 MA's), (234, 21305), (299, 21434), (310, 21446), (325, 21485), (342, 21533), (348, 21545), (354, 21563), (357, 21575), (358, 21578), (359, 21581), (440, 21758), (451, 21779), (452, 21785), (532, 21941), (559, 21977), (573, 22001), (585, 22022),

Gene: Samman98\_25 Start: 21237, Stop: 22025, Start Num: 182

Candidate Starts for Samman98\_25:

(Start: 167 @21225 has 3 MA's), (Start: 182 @21237 has 36 MA's), (Start: 201 @21249 has 3 MA's), (202, 21252), (Start: 211 @21279 has 1 MA's), (Start: 222 @21291 has 1 MA's), (258, 21342), (299, 21435), (323, 21480), (324, 21483), (325, 21486), (326, 21489), (348, 21546), (354, 21564), (357, 21576), (358, 21579), (359, 21582), (410, 21672), (440, 21759), (456, 21795), (522, 21927), (534, 21945), (559, 21981), (579, 22017),

Gene: Sampson\_46 Start: 40628, Stop: 41350, Start Num: 188

Candidate Starts for Sampson\_46:

(80, 40412), (123, 40517), (Start: 188 @40628 has 69 MA's), (258, 40733), (261, 40742), (294, 40793), (303, 40811), (325, 40853), (354, 40919), (355, 40925), (357, 40931), (396, 40997), (440, 41096), (528, 41270), (544, 41291), (553, 41306),

Gene: Sampudon\_88 Start: 59669, Stop: 60520, Start Num: 147

Candidate Starts for Sampudon\_88:

(137, 59645), (138, 59648), (Start: 147 @59669 has 26 MA's), (151, 59678), (Start: 167 @59699 has 3 MA's), (195, 59741), (199, 59747), (220, 59792), (273, 59897), (277, 59906), (288, 59933), (295, 59945), (311, 59984), (387, 60164), (416, 60230), (419, 60239), (426, 60269), (436, 60296), (445, 60320), (470, 60374), (495, 60419), (500, 60431), (539, 60497),

Gene: Sanjuju\_44 Start: 40813, Stop: 41547, Start Num: 184

Candidate Starts for Sanjuju\_44:

(102, 40666), (142, 40756), (Start: 184 @40813 has 99 MA's), (Start: 201 @40831 has 3 MA's), (258, 40918), (271, 40945), (294, 40993), (303, 41011), (325, 41053), (356, 41131), (375, 41173), (400, 41206), (456, 41341), (475, 41380), (528, 41479), (549, 41506), (569, 41539),

Gene: Santhid\_48 Start: 31055, Stop: 31930, Start Num: 116

Candidate Starts for Santhid\_48:

(46, 30830), (71, 30929), (73, 30938), (82, 30968), (100, 31019), (103, 31025), (Start: 116 @31055 has 5 MA's), (218, 31238), (332, 31457), (334, 31460), (347, 31493), (383, 31568), (385, 31574), (390, 31583), (423, 31661), (475, 31772), (477, 31775), (480, 31781), (496, 31817), (510, 31844), (556, 31919),

Gene: Saronaya\_45 Start: 39323, Stop: 40066, Start Num: 184

Candidate Starts for Saronaya\_45:

(Start: 184 @39323 has 99 MA's), (Start: 201 @39341 has 3 MA's), (223, 39386), (258, 39431), (289, 39494), (294, 39506), (303, 39524), (325, 39566), (335, 39593), (375, 39686), (388, 39698), (442, 39818), (456, 39854), (460, 39866), (475, 39893), (492, 39926), (509, 39959), (528, 39992), (549, 40019),

Gene: Savage\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Savage\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Savbucketdawg\_44 Start: 35970, Stop: 36725, Start Num: 184

Candidate Starts for Savbucketdawg\_44:

(120, 35874), (Start: 184 @35970 has 99 MA's), (233, 36042), (295, 36150), (322, 36195), (402, 36345), (407, 36351), (420, 36378), (434, 36426), (483, 36528), (531, 36612), (577, 36684),

Gene: ScarletRaider\_30 Start: 24488, Stop: 25168, Start Num: 172

Candidate Starts for ScarletRaider\_30:

(Start: 172 @24488 has 29 MA's), (Start: 255 @24545 has 1 MA's), (311, 24662), (324, 24695), (336, 24725), (337, 24728), (345, 24749), (351, 24755), (356, 24773), (361, 24794), (398, 24863), (410, 24887), (418, 24905), (423, 24926), (459, 25019), (464, 25028), (506, 25079), (547, 25148), (555, 25163),

Gene: Schnabeltier\_26 Start: 21755, Stop: 22468, Start Num: 190

Candidate Starts for Schnabeltier\_26:

(Start: 148 @21698 has 8 MA's), (Start: 190 @21755 has 48 MA's), (247, 21848), (258, 21863), (278, 21908), (326, 21986), (335, 22010), (360, 22073), (361, 22082), (410, 22157), (434, 22232), (439, 22244), (441, 22250), (501, 22385),

Gene: Schomber\_30 Start: 21318, Stop: 22016, Start Num: 172

Candidate Starts for Schomber\_30:

(Start: 160 @21300 has 1 MA's), (Start: 172 @21318 has 29 MA's), (Start: 255 @21381 has 1 MA's), (268, 21417), (298, 21477), (303, 21489), (311, 21510), (324, 21543), (336, 21573), (337, 21576), (345, 21597), (351, 21603), (353, 21609), (359, 21630), (410, 21735), (414, 21744), (435, 21813), (438, 21819), (456, 21855), (459, 21867), (495, 21906), (506, 21927), (547, 21996), (553, 22008), (555, 22011),

Gene: SchottB\_44 Start: 40323, Stop: 41066, Start Num: 184

Candidate Starts for SchottB\_44:

(Start: 184 @40323 has 99 MA's), (Start: 201 @40341 has 3 MA's), (223, 40386), (258, 40431), (294, 40506), (303, 40524), (325, 40566), (375, 40686), (388, 40698), (442, 40818), (456, 40854), (460, 40866), (475, 40893), (492, 40926), (509, 40959), (528, 40992), (549, 41019),

Gene: Scioto\_47 Start: 40684, Stop: 41406, Start Num: 188

Candidate Starts for Scioto\_47:

(80, 40468), (123, 40573), (Start: 188 @40684 has 69 MA's), (258, 40789), (261, 40798), (294, 40849), (303, 40867), (325, 40909), (354, 40975), (355, 40981), (357, 40987), (396, 41053), (440, 41152), (528, 41326), (544, 41347), (553, 41362),

Gene: Sedona\_45 Start: 40410, Stop: 41144, Start Num: 184

Candidate Starts for Sedona\_45:

(176, 40404), (Start: 184 @40410 has 99 MA's), (Start: 201 @40428 has 3 MA's), (258, 40515), (271, 40542), (294, 40590), (303, 40608), (325, 40650), (356, 40728), (375, 40770), (456, 40938), (475, 40977), (528, 41076), (549, 41103), (569, 41136),

Gene: Sekhmet\_25 Start: 21597, Stop: 22385, Start Num: 182

Candidate Starts for Sekhmet\_25:

(Start: 167 @21585 has 3 MA's), (Start: 182 @21597 has 36 MA's), (Start: 201 @21609 has 3 MA's), (202, 21612), (Start: 222 @21651 has 1 MA's), (227, 21654), (258, 21702), (299, 21795), (323, 21840), (324, 21843), (325, 21846), (326, 21849), (348, 21906), (354, 21924), (358, 21939), (359, 21942), (402, 22020), (410, 22032), (420, 22059), (440, 22119), (456, 22155), (522, 22287), (534, 22305), (559, 22341), (579, 22377),

Gene: Sephiroth\_116 Start: 65083, Stop: 65805, Start Num: 196



Candidate Starts for Sephiroth\_116:

(Start: 196 @65083 has 5 MA's), (216, 65131), (235, 65158), (Start: 245 @65173 has 28 MA's), (316, 65305), (422, 65515), (462, 65617), (500, 65689), (556, 65788), (558, 65791),

Gene: Shatter\_42 Start: 35273, Stop: 35995, Start Num: 190

Candidate Starts for Shatter\_42:

(31, 34883), (75, 35060), (117, 35168), (Start: 190 @35273 has 48 MA's), (282, 35435), (304, 35480), (338, 35543), (345, 35561), (357, 35588), (398, 35666), (399, 35669), (427, 35738), (439, 35768), (441, 35774), (532, 35963),

Gene: SheckWes\_50 Start: 35167, Stop: 34364, Start Num: 188

Candidate Starts for SheckWes\_50:

(Start: 139 @35227 has 1 MA's), (Start: 188 @35167 has 69 MA's), (235, 35089), (269, 35017), (294, 34960), (324, 34906), (338, 34867), (351, 34846), (422, 34702), (431, 34669), (478, 34564), (515, 34486), (557, 34417), (576, 34378), (586, 34369),

Gene: Shinji\_44 Start: 35841, Stop: 36488, Start Num: 258

Candidate Starts for Shinji\_44:

(165, 35718), (Start: 182 @35733 has 36 MA's), (209, 35778), (233, 35805), (258, 35841), (295, 35913), (336, 35994), (402, 36108), (407, 36114), (420, 36141), (434, 36189), (483, 36291), (531, 36375), (577, 36447),

Gene: Shivanishola\_45 Start: 39080, Stop: 39814, Start Num: 184

Candidate Starts for Shivanishola\_45:

(102, 38933), (142, 39023), (Start: 184 @39080 has 99 MA's), (Start: 201 @39098 has 3 MA's), (258, 39185), (271, 39212), (294, 39260), (303, 39278), (325, 39320), (356, 39398), (375, 39440), (400, 39473), (456, 39608), (475, 39647), (528, 39746), (549, 39773), (569, 39806),

Gene: Shlim410\_25 Start: 21831, Stop: 22619, Start Num: 182

Candidate Starts for Shlim410\_25:

(Start: 167 @21819 has 3 MA's), (Start: 182 @21831 has 36 MA's), (Start: 201 @21843 has 3 MA's), (202, 21846), (Start: 211 @21873 has 1 MA's), (Start: 222 @21885 has 1 MA's), (258, 21936), (299, 22029), (323, 22074), (324, 22077), (325, 22080), (348, 22140), (354, 22158), (357, 22170), (358, 22173), (359, 22176), (410, 22266), (440, 22353), (522, 22521), (534, 22539), (559, 22575), (573, 22599),

Gene: Sidious\_26 Start: 22171, Stop: 22956, Start Num: 182

Candidate Starts for Sidious\_26:

(Start: 182 @22171 has 36 MA's), (Start: 211 @22213 has 1 MA's), (Start: 222 @22225 has 1 MA's), (244, 22258), (258, 22276), (299, 22369), (325, 22420), (347, 22477), (348, 22480), (354, 22498), (357, 22510), (358, 22513), (359, 22516), (427, 22663), (440, 22693), (452, 22720), (468, 22756), (522, 22861), (532, 22876), (534, 22879), (559, 22912),

Gene: Sisko\_42 Start: 36073, Stop: 36798, Start Num: 188

Candidate Starts for Sisko\_42:

(88, 35875), (117, 35947), (Start: 188 @36073 has 69 MA's), (198, 36082), (278, 36232), (282, 36238), (294, 36262), (298, 36271), (304, 36283), (318, 36298), (336, 36340), (345, 36364), (358, 36394), (406, 36478), (427, 36541), (436, 36565), (439, 36571), (524, 36754), (530, 36763),

Gene: Sitar\_45 Start: 40763, Stop: 41497, Start Num: 184

Candidate Starts for Sitar\_45:

(142, 40706), (Start: 184 @40763 has 99 MA's), (Start: 201 @40781 has 3 MA's), (258, 40868), (271, 40895), (294, 40943), (303, 40961), (325, 41003), (356, 41081), (375, 41123), (400, 41156), (456,

41291), (475, 41330), (528, 41429), (549, 41456), (569, 41489),

Gene: SketchMex\_46 Start: 34069, Stop: 33221, Start Num: 188

Candidate Starts for SketchMex\_46:

(Start: 139 @34129 has 1 MA's), (Start: 188 @34069 has 69 MA's), (Start: 245 @33973 has 28 MA's), (251, 33964), (294, 33874), (336, 33784), (356, 33733), (359, 33724), (366, 33700), (386, 33667), (402, 33634), (420, 33595), (517, 33367), (521, 33358), (566, 33283), (570, 33274),

Gene: Skysand\_20 Start: 9079, Stop: 9852, Start Num: 172

Candidate Starts for Skysand\_20:

(Start: 172 @9079 has 29 MA's), (Start: 255 @9187 has 1 MA's), (256, 9190), (279, 9241), (297, 9283), (341, 9397), (361, 9451), (423, 9583), (506, 9772), (538, 9826),

Gene: SmokingBunny\_44 Start: 36282, Stop: 37037, Start Num: 182

Candidate Starts for SmokingBunny\_44:

(Start: 148 @36246 has 8 MA's), (165, 36267), (Start: 182 @36282 has 36 MA's), (233, 36354), (258, 36390), (295, 36462), (336, 36543), (402, 36657), (407, 36663), (420, 36690), (434, 36738), (483, 36840), (531, 36924), (577, 36996),

Gene: SoilAssassin\_24 Start: 19791, Stop: 20498, Start Num: 190

Candidate Starts for SoilAssassin\_24:

(112, 19647), (Start: 190 @19791 has 48 MA's), (223, 19848), (247, 19887), (278, 19947), (289, 19965), (291, 19968), (298, 19986), (325, 20022), (326, 20025), (338, 20058), (345, 20076), (357, 20103), (398, 20181), (427, 20250), (439, 20280), (441, 20286), (544, 20490),

Gene: Sopespian\_43 Start: 33795, Stop: 32956, Start Num: 188

Candidate Starts for Sopespian\_43:

(50, 34116), (56, 34092), (57, 34089), (81, 34002), (96, 33957), (Start: 139 @33855 has 1 MA's), (Start: 188 @33795 has 69 MA's), (Start: 222 @33735 has 1 MA's), (241, 33705), (Start: 245 @33699 has 28 MA's), (287, 33618), (336, 33510), (350, 33477), (358, 33450), (470, 33186), (561, 33015), (566, 33006),

Gene: Sour\_47 Start: 39940, Stop: 40659, Start Num: 188

Candidate Starts for Sour\_47:

(117, 39817), (Start: 188 @39940 has 69 MA's), (Start: 201 @39949 has 3 MA's), (231, 40009), (278, 40096), (282, 40102), (294, 40126), (304, 40147), (324, 40171), (326, 40177), (336, 40204), (338, 40210), (345, 40228), (357, 40255), (358, 40258), (427, 40402), (439, 40432), (516, 40600), (540, 40639),

Gene: SpeedDemon\_1340 Start: 81228, Stop: 81950, Start Num: 192

Candidate Starts for SpeedDemon\_1340:

(101, 81057), (153, 81177), (171, 81201), (Start: 192 @81228 has 11 MA's), (219, 81285), (278, 81381),

Gene: Spooky\_28 Start: 21590, Stop: 22213, Start Num: 245

Candidate Starts for Spooky\_28:

(65, 21218), (83, 21275), (97, 21320), (123, 21374), (125, 21377), (136, 21413), (Start: 160 @21458 has 1 MA's), (162, 21461), (Start: 245 @21590 has 28 MA's), (250, 21599), (260, 21626), (265, 21641), (294, 21701), (331, 21794), (341, 21821), (369, 21893), (405, 21956), (423, 22001), (427, 22019), (435, 22040), (439, 22049), (523, 22181), (529, 22190),

Gene: Sproutie\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Sproutie\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Squiddly\_30 Start: 23002, Stop: 23625, Start Num: 245

Candidate Starts for Squiddly\_30:

(65, 22630), (83, 22687), (97, 22732), (123, 22786), (125, 22789), (136, 22825), (Start: 160 @22870 has 1 MA's), (162, 22873), (Start: 245 @23002 has 28 MA's), (250, 23011), (260, 23038), (265, 23053), (294, 23113), (331, 23206), (341, 23233), (369, 23305), (405, 23368), (423, 23413), (427, 23431), (435, 23452), (439, 23461), (523, 23593), (529, 23602),

Gene: StarStruck\_19 Start: 8535, Stop: 9323, Start Num: 178

Candidate Starts for StarStruck\_19:

(Start: 178 @8535 has 8 MA's), (Start: 184 @8544 has 99 MA's), (243, 8634), (Start: 255 @8658 has 1 MA's), (259, 8673), (277, 8706), (297, 8754), (361, 8922), (371, 8943), (506, 9249), (511, 9258), (514, 9264), (520, 9273), (533, 9297),

Gene: SteamedHams\_45 Start: 33292, Stop: 32453, Start Num: 188

Candidate Starts for SteamedHams\_45:

(Start: 188 @33292 has 69 MA's), (Start: 222 @33232 has 1 MA's), (Start: 245 @33196 has 28 MA's), (251, 33187), (287, 33115), (336, 33007), (356, 32953), (368, 32917), (386, 32887), (413, 32836), (420, 32815), (506, 32611), (515, 32590), (566, 32503), (575, 32485),

Gene: StorminNorm\_45 Start: 39414, Stop: 40157, Start Num: 184

Candidate Starts for StorminNorm\_45:

(Start: 184 @39414 has 99 MA's), (Start: 201 @39432 has 3 MA's), (223, 39477), (258, 39522), (294, 39597), (303, 39615), (315, 39627), (325, 39657), (335, 39684), (375, 39777), (388, 39789), (456, 39945), (460, 39957), (475, 39984), (492, 40017), (528, 40083), (549, 40110),

Gene: Stultus\_44 Start: 39716, Stop: 40450, Start Num: 184

Candidate Starts for Stultus\_44:

(142, 39659), (Start: 184 @39716 has 99 MA's), (Start: 201 @39734 has 3 MA's), (258, 39821), (271, 39848), (294, 39896), (303, 39914), (325, 39956), (356, 40034), (375, 40076), (400, 40109), (456, 40244), (475, 40283), (528, 40382), (549, 40409), (569, 40442),

Gene: Suerte\_23 Start: 20721, Stop: 21509, Start Num: 182

Candidate Starts for Suerte\_23:

(Start: 167 @20709 has 3 MA's), (Start: 182 @20721 has 36 MA's), (Start: 201 @20733 has 3 MA's), (202, 20736), (Start: 211 @20763 has 1 MA's), (Start: 222 @20775 has 1 MA's), (258, 20826), (299, 20919), (323, 20964), (325, 20970), (348, 21030), (354, 21048), (357, 21060), (358, 21063), (359, 21066), (410, 21156), (420, 21183), (440, 21243), (456, 21279), (522, 21411), (534, 21429), (559, 21465),

Gene: Sukkupi\_19 Start: 7686, Stop: 8480, Start Num: 174

Candidate Starts for Sukkupi\_19:

(Start: 174 @7686 has 3 MA's), (Start: 255 @7800 has 1 MA's), (256, 7803), (259, 7815), (297, 7896), (356, 8046), (362, 8070), (382, 8103), (434, 8235), (489, 8361), (506, 8397), (538, 8451),

Gene: SummitAcademy\_46 Start: 35232, Stop: 34429, Start Num: 188

Candidate Starts for SummitAcademy\_46:

(Start: 139 @35292 has 1 MA's), (Start: 188 @35232 has 69 MA's), (294, 35025), (324, 34971), (331, 34950), (338, 34932), (341, 34923), (351, 34911), (356, 34896), (418, 34785), (422, 34767), (431, 34734), (476, 34632), (506, 34572), (515, 34551), (557, 34482), (576, 34443), (586, 34434),

Gene: SuperSulley\_20 Start: 8964, Stop: 9755, Start Num: 178

Candidate Starts for SuperSulley\_20:

(Start: 178 @8964 has 8 MA's), (Start: 184 @8973 has 99 MA's), (207, 9009), (246, 9072), (Start: 255 @9090 has 1 MA's), (259, 9105), (273, 9129), (277, 9138), (297, 9186), (311, 9222), (356, 9333), (371, 9375), (495, 9660), (506, 9681), (511, 9690), (514, 9696), (533, 9729),

Gene: Survivors\_42 Start: 33111, Stop: 32353, Start Num: 188

Candidate Starts for Survivors\_42:

(Start: 188 @33111 has 69 MA's), (Start: 211 @33072 has 1 MA's), (Start: 222 @33054 has 1 MA's), (Start: 245 @33018 has 28 MA's), (258, 33003), (268, 32979), (285, 32943), (294, 32919), (323, 32865), (364, 32760), (378, 32739), (422, 32679), (451, 32601), (454, 32592), (470, 32556), (497, 32511), (561, 32397), (568, 32382),

Gene: Susceptit\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Susceptit\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: SweatNTears\_46 Start: 33738, Stop: 32899, Start Num: 188

Candidate Starts for SweatNTears\_46:

(146, 33786), (163, 33756), (Start: 188 @33738 has 69 MA's), (Start: 222 @33678 has 1 MA's), (241, 33648), (Start: 245 @33642 has 28 MA's), (287, 33561), (336, 33453), (350, 33420), (358, 33393), (470, 33129), (566, 32949),

Gene: Syleon\_121 Start: 65865, Stop: 66587, Start Num: 196

Candidate Starts for Syleon\_121:

(Start: 196 @65865 has 5 MA's), (216, 65913), (235, 65940), (Start: 245 @65955 has 28 MA's), (316, 66087), (422, 66297), (456, 66384), (462, 66399), (500, 66471), (508, 66486), (556, 66570), (558, 66573),

Gene: TPA2\_54 Start: 40199, Stop: 41080, Start Num: 116

Candidate Starts for TPA2\_54:

(99, 40160), (Start: 116 @40199 has 5 MA's), (144, 40265), (Start: 172 @40310 has 29 MA's), (Start: 177 @40316 has 6 MA's), (183, 40325), (203, 40349), (263, 40463), (301, 40541), (337, 40610), (362, 40676), (381, 40700), (398, 40733), (399, 40736), (421, 40787), (432, 40820), (437, 40832), (453, 40874), (455, 40880), (488, 40949), (505, 40985), (519, 41012),

Gene: TPA4\_30 Start: 27688, Stop: 28482, Start Num: 189

Candidate Starts for TPA4\_30:

(95, 27505), (Start: 189 @27688 has 3 MA's), (230, 27760), (264, 27820), (283, 27856), (292, 27880), (423, 28165), (440, 28213), (486, 28309), (511, 28354),

Gene: Tangent\_46 Start: 39790, Stop: 40524, Start Num: 184

Candidate Starts for Tangent\_46:

(102, 39643), (142, 39733), (Start: 184 @39790 has 99 MA's), (Start: 201 @39808 has 3 MA's), (258, 39895), (271, 39922), (294, 39970), (303, 39988), (325, 40030), (356, 40108), (375, 40150), (400, 40183), (456, 40318), (475, 40357), (528, 40456), (549, 40483), (569, 40516),

Gene: Tangerine\_45 Start: 39195, Stop: 39938, Start Num: 184

Candidate Starts for Tangerine\_45:

(Start: 184 @39195 has 99 MA's), (Start: 201 @39213 has 3 MA's), (223, 39258), (258, 39303), (294, 39378), (303, 39396), (325, 39438), (335, 39465), (375, 39558), (388, 39570), (456, 39726), (460, 39738), (475, 39765), (492, 39798), (509, 39831), (528, 39864), (549, 39891),

Gene: Tardus\_47 Start: 40038, Stop: 40760, Start Num: 188

Candidate Starts for Tardus\_47:

(80, 39822), (106, 39891), (123, 39927), (Start: 188 @40038 has 69 MA's), (258, 40143), (261, 40152), (294, 40203), (303, 40221), (325, 40263), (357, 40341), (440, 40506), (456, 40542), (468, 40569), (528, 40680), (553, 40716),

Gene: TaronosaurusRx\_26 Start: 21786, Stop: 22499, Start Num: 190

Candidate Starts for TaronosaurusRx\_26:

(Start: 148 @21729 has 8 MA's), (152, 21738), (Start: 190 @21786 has 48 MA's), (231, 21852), (247, 21879), (258, 21894), (278, 21939), (304, 21990), (326, 22017), (335, 22041), (360, 22104), (361, 22113), (410, 22188), (434, 22263), (439, 22275), (441, 22281), (487, 22383),

Gene: Tarzan\_50 Start: 32536, Stop: 33387, Start Num: 116

Candidate Starts for Tarzan\_50:

(100, 32500), (103, 32506), (Start: 116 @32536 has 5 MA's), (218, 32719), (334, 32917), (347, 32950), (383, 33025), (390, 33040), (423, 33118), (475, 33229), (477, 33232), (480, 33238), (496, 33274), (510, 33301), (556, 33376),

Gene: Tayonia\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Tayonia\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: ThankyouJordi\_24 Start: 22284, Stop: 22901, Start Num: 238

Candidate Starts for ThankyouJordi\_24:

(175, 22185), (204, 22224), (224, 22257), (Start: 238 @22284 has 20 MA's), (247, 22290), (Start: 248 @22293 has 2 MA's), (265, 22335), (294, 22395), (324, 22470), (331, 22488), (341, 22515), (357, 22551), (379, 22602), (390, 22623), (427, 22713), (464, 22794), (523, 22872),

Gene: Thimann\_25 Start: 21189, Stop: 21977, Start Num: 182

Candidate Starts for Thimann\_25:

(Start: 167 @21177 has 3 MA's), (Start: 182 @21189 has 36 MA's), (Start: 201 @21201 has 3 MA's), (202, 21204), (Start: 211 @21231 has 1 MA's), (Start: 222 @21243 has 1 MA's), (258, 21294), (299, 21387), (323, 21432), (325, 21438), (348, 21498), (354, 21516), (357, 21528), (358, 21531), (359, 21534), (410, 21624), (420, 21651), (440, 21711), (456, 21747), (522, 21879), (534, 21897), (559, 21933),

Gene: Thing3\_43 Start: 39019, Stop: 39753, Start Num: 184

Candidate Starts for Thing3\_43:

(142, 38962), (Start: 184 @39019 has 99 MA's), (Start: 201 @39037 has 3 MA's), (258, 39124), (271, 39151), (294, 39199), (303, 39217), (325, 39259), (356, 39337), (375, 39379), (400, 39412), (456, 39547), (475, 39586), (528, 39685), (549, 39712), (569, 39745),

Gene: Tiamoceli\_57 Start: 44584, Stop: 45363, Start Num: 188

Candidate Starts for Tiamoceli\_57:

(131, 44488), (136, 44503), (Start: 188 @44584 has 69 MA's), (205, 44605), (247, 44683), (258, 44698), (278, 44743), (325, 44833), (337, 44866), (379, 44959), (422, 45025), (446, 45094), (470,

45148), (566, 45319), (582, 45349),

Gene: Tillicus\_82 Start: 58169, Stop: 59020, Start Num: 147

Candidate Starts for Tillicus\_82:

(138, 58148), (Start: 147 @58169 has 26 MA's), (151, 58178), (Start: 161 @58190 has 2 MA's), (Start: 167 @58199 has 3 MA's), (Start: 184 @58223 has 99 MA's), (195, 58241), (226, 58298), (288, 58433), (307, 58472), (311, 58484), (324, 58517), (328, 58529), (336, 58550), (370, 58637), (387, 58664), (401, 58700), (416, 58730), (420, 58742), (426, 58769), (444, 58817), (445, 58820), (470, 58874), (541, 59000),

Gene: TillyBobJoe\_44 Start: 36086, Stop: 36841, Start Num: 182

Candidate Starts for TillyBobJoe\_44:

(Start: 148 @36050 has 8 MA's), (165, 36071), (Start: 182 @36086 has 36 MA's), (233, 36158), (258, 36194), (295, 36266), (336, 36347), (402, 36461), (407, 36467), (420, 36494), (434, 36542), (483, 36644), (531, 36728), (577, 36800), (580, 36806),

Gene: TimTam\_25 Start: 22309, Stop: 22926, Start Num: 238

Candidate Starts for TimTam\_25:

(175, 22210), (204, 22249), (224, 22282), (Start: 238 @22309 has 20 MA's), (Start: 248 @22318 has 2 MA's), (265, 22360), (273, 22372), (294, 22420), (303, 22441), (311, 22462), (324, 22495), (326, 22498), (341, 22540), (357, 22576), (379, 22627), (405, 22675), (427, 22738), (439, 22768), (464, 22819), (523, 22897),

Gene: TinyDot\_25 Start: 19158, Stop: 19859, Start Num: 190

Candidate Starts for TinyDot\_25:

(23, 18633), (35, 18750), (41, 18777), (42, 18780), (51, 18819), (64, 18876), (67, 18879), (79, 18924), (127, 19041), (164, 19122), (Start: 179 @19143 has 1 MA's), (Start: 190 @19158 has 48 MA's), (Start: 201 @19167 has 3 MA's), (247, 19251), (258, 19266), (274, 19302), (324, 19383), (336, 19416), (338, 19422), (357, 19467), (372, 19506), (439, 19644), (441, 19650), (464, 19707), (544, 19851),

Gene: Toast\_26 Start: 21477, Stop: 22187, Start Num: 187

Candidate Starts for Toast\_26:

(Start: 187 @21477 has 15 MA's), (Start: 201 @21489 has 3 MA's), (203, 21495), (278, 21633), (294, 21663), (325, 21708), (335, 21735), (345, 21762), (361, 21813), (404, 21882), (414, 21897), (416, 21903), (424, 21933), (439, 21975), (441, 21981), (459, 22032), (501, 22104), (536, 22167),

Gene: Togo\_43 Start: 36282, Stop: 37037, Start Num: 182

Candidate Starts for Togo\_43:

(Start: 148 @36246 has 8 MA's), (165, 36267), (Start: 182 @36282 has 36 MA's), (233, 36354), (258, 36390), (295, 36462), (336, 36543), (402, 36657), (407, 36663), (420, 36690), (434, 36738), (483, 36840), (531, 36924), (577, 36996),

Gene: Tolls\_46 Start: 33685, Stop: 32846, Start Num: 188

Candidate Starts for Tolls\_46:

(Start: 188 @33685 has 69 MA's), (Start: 222 @33625 has 1 MA's), (Start: 245 @33589 has 28 MA's), (251, 33580), (287, 33508), (336, 33400), (356, 33346), (368, 33310), (386, 33280), (413, 33229), (420, 33208), (506, 33004), (515, 32983), (566, 32896), (575, 32878),

Gene: Tracker\_19 Start: 9229, Stop: 9954, Start Num: 172

Candidate Starts for Tracker\_19:

(Start: 172 @9229 has 29 MA's), (Start: 201 @9253 has 3 MA's), (221, 9286), (256, 9289), (273, 9325), (279, 9340), (297, 9382), (313, 9421), (356, 9529), (410, 9646), (434, 9721), (457, 9778), (478, 9820), (495, 9853), (506, 9874), (514, 9889), (550, 9949),

Gene: Trax\_117 Start: 66615, Stop: 67343, Start Num: 192

Candidate Starts for Trax\_117:

(Start: 192 @66615 has 11 MA's), (202, 66630), (Start: 222 @66675 has 1 MA's), (229, 66684), (250, 66723), (269, 66759), (298, 66813), (327, 66879), (365, 66945), (380, 66966), (410, 67023), (456, 67143), (486, 67203), (562, 67335),

Gene: Troje\_48 Start: 34407, Stop: 33559, Start Num: 188

Candidate Starts for Troje\_48:

(Start: 139 @34467 has 1 MA's), (Start: 188 @34407 has 69 MA's), (Start: 245 @34311 has 28 MA's), (251, 34302), (294, 34212), (336, 34122), (337, 34119), (356, 34071), (359, 34062), (366, 34038), (386, 34005), (402, 33972), (420, 33933), (517, 33705), (521, 33696), (566, 33621), (570, 33612),

Gene: Trumpet\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Trumpet\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: TuertoX\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for TuertoX\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Turuncu\_22 Start: 8752, Stop: 9522, Start Num: 172

Candidate Starts for Turuncu\_22:

(Start: 172 @8752 has 29 MA's), (186, 8770), (Start: 255 @8860 has 1 MA's), (279, 8914), (297, 8956), (392, 9184), (410, 9217), (412, 9220), (506, 9439), (533, 9487), (538, 9493),

Gene: Twin\_30 Start: 21568, Stop: 22266, Start Num: 172

Candidate Starts for Twin\_30:

(Start: 160 @21550 has 1 MA's), (Start: 172 @21568 has 29 MA's), (Start: 255 @21631 has 1 MA's), (268, 21667), (298, 21727), (303, 21739), (311, 21760), (324, 21793), (336, 21823), (337, 21826), (345, 21847), (351, 21853), (353, 21859), (359, 21880), (410, 21985), (414, 21994), (435, 22063), (438, 22069), (456, 22105), (459, 22117), (495, 22156), (506, 22177), (547, 22246), (553, 22258), (555, 22261),

Gene: Twinkle\_25 Start: 22890, Stop: 23678, Start Num: 182

Candidate Starts for Twinkle\_25:

(Start: 167 @22878 has 3 MA's), (Start: 182 @22890 has 36 MA's), (Start: 201 @22902 has 3 MA's), (202, 22905), (Start: 211 @22932 has 1 MA's), (Start: 222 @22944 has 1 MA's), (258, 22995), (299, 23088), (323, 23133), (324, 23136), (325, 23139), (348, 23199), (354, 23217), (357, 23229), (358, 23232), (359, 23235), (410, 23325), (440, 23412), (522, 23580), (534, 23598), (559, 23634), (573, 23658),

Gene: Twister6\_46 Start: 36083, Stop: 36838, Start Num: 184

Candidate Starts for Twister6\_46:

(120, 35987), (Start: 184 @36083 has 99 MA's), (233, 36155), (258, 36191), (295, 36263), (304, 36278), (402, 36458), (407, 36464), (420, 36491), (483, 36641), (531, 36725), (577, 36797),

Gene: Twonlo\_54 Start: 43079, Stop: 43858, Start Num: 188

Candidate Starts for Twonlo\_54:

(104, 42917), (131, 42983), (136, 42998), (Start: 188 @43079 has 69 MA's), (205, 43100), (247, 43178), (258, 43193), (278, 43238), (325, 43328), (337, 43361), (379, 43454), (422, 43520), (446, 43589), (470, 43643), (566, 43814), (582, 43844),

Gene: Tycho\_45 Start: 39282, Stop: 40025, Start Num: 184

Candidate Starts for Tycho\_45:

(Start: 184 @39282 has 99 MA's), (Start: 201 @39300 has 3 MA's), (223, 39345), (258, 39390), (294, 39465), (303, 39483), (315, 39495), (325, 39525), (335, 39552), (375, 39645), (388, 39657), (456, 39813), (460, 39825), (475, 39852), (492, 39885), (528, 39951), (549, 39978),

Gene: Typhonomachy\_45 Start: 33617, Stop: 32778, Start Num: 188

Candidate Starts for Typhonomachy\_45:

(50, 33938), (56, 33914), (81, 33824), (96, 33779), (Start: 139 @33677 has 1 MA's), (Start: 188 @33617 has 69 MA's), (Start: 222 @33557 has 1 MA's), (Start: 245 @33521 has 28 MA's), (287, 33440), (336, 33332), (350, 33299), (358, 33272), (470, 33008), (566, 32828),

Gene: UBSmoodge\_32 Start: 23407, Stop: 24087, Start Num: 172

Candidate Starts for UBSmoodge\_32:

(158, 23386), (Start: 172 @23407 has 29 MA's), (Start: 255 @23464 has 1 MA's), (261, 23485), (311, 23581), (324, 23614), (336, 23644), (337, 23647), (345, 23668), (351, 23674), (356, 23692), (361, 23713), (398, 23782), (410, 23806), (418, 23824), (423, 23845), (459, 23938), (464, 23947), (469, 23953), (506, 23998), (547, 24067), (555, 24082),

Gene: UmaThurman\_25 Start: 21277, Stop: 22080, Start Num: 184

Candidate Starts for UmaThurman\_25:

(Start: 184 @21277 has 99 MA's), (Start: 211 @21325 has 1 MA's), (Start: 222 @21337 has 1 MA's), (299, 21481), (310, 21493), (325, 21532), (348, 21592), (354, 21610), (357, 21622), (358, 21625), (359, 21628), (440, 21805), (451, 21826), (452, 21832), (456, 21841), (532, 21988), (559, 22024), (573, 22048), (585, 22069),

Gene: Utz\_25 Start: 21147, Stop: 21947, Start Num: 184

Candidate Starts for Utz\_25:

(Start: 184 @21147 has 99 MA's), (Start: 211 @21195 has 1 MA's), (Start: 222 @21207 has 1 MA's), (258, 21258), (299, 21351), (325, 21402), (347, 21459), (348, 21462), (354, 21480), (357, 21492), (358, 21495), (359, 21498), (429, 21651), (440, 21675), (451, 21696), (559, 21894), (573, 21918), (585, 21936),

Gene: Valary\_46 Start: 37125, Stop: 37880, Start Num: 184

Candidate Starts for Valary\_46:

(128, 37047), (Start: 184 @37125 has 99 MA's), (233, 37197), (295, 37305), (322, 37350), (402, 37500), (407, 37506), (420, 37533), (434, 37581), (483, 37683), (531, 37767), (577, 37839),

Gene: VanDeWege\_47 Start: 36417, Stop: 37172, Start Num: 184

Candidate Starts for VanDeWege\_47:

(128, 36339), (Start: 184 @36417 has 99 MA's), (233, 36489), (295, 36597), (322, 36642), (402, 36792), (407, 36798), (420, 36825), (434, 36873), (483, 36975), (531, 37059), (577, 37131),

Gene: VanLee\_104 Start: 55246, Stop: 55980, Start Num: 196

Candidate Starts for VanLee\_104:

(149, 55198), (Start: 196 @55246 has 5 MA's), (205, 55264), (232, 55309), (240, 55321), (269, 55372), (292, 55399), (310, 55426), (325, 55462), (340, 55501), (357, 55537), (364, 55555), (377, 55579), (409, 55618), (420, 55645), (477, 55783), (523, 55864), (588, 55969),



Gene: Vasanti\_23 Start: 19352, Stop: 20059, Start Num: 190

Candidate Starts for Vasanti\_23:

(112, 19208), (Start: 190 @19352 has 48 MA's), (223, 19409), (247, 19448), (278, 19508), (291, 19529), (324, 19580), (325, 19583), (326, 19586), (338, 19619), (345, 19637), (347, 19640), (398, 19742), (427, 19811), (430, 19820), (439, 19841), (441, 19847), (524, 20021), (544, 20051),

Gene: Verity\_46 Start: 41437, Stop: 42174, Start Num: 177

Candidate Starts for Verity\_46:

(18, 40798), (24, 40969), (27, 41011), (57, 41152), (Start: 167 @41428 has 3 MA's), (Start: 177 @41437 has 6 MA's), (Start: 181 @41443 has 1 MA's), (Start: 188 @41452 has 69 MA's), (242, 41536), (258, 41557), (261, 41566), (289, 41605), (294, 41617), (303, 41635), (325, 41677), (355, 41749), (357, 41755), (425, 41881), (440, 41920), (451, 41941), (456, 41956), (468, 41983), (553, 42130),

Gene: ViaConlectus\_46 Start: 39318, Stop: 40043, Start Num: 188

Candidate Starts for ViaConlectus\_46:

(80, 39102), (123, 39207), (Start: 188 @39318 has 69 MA's), (258, 39423), (294, 39483), (303, 39501), (325, 39543), (349, 39600), (357, 39624), (396, 39690), (440, 39789), (456, 39825), (468, 39852), (528, 39963), (553, 39999),

Gene: Vine\_49 Start: 35909, Stop: 35106, Start Num: 188

Candidate Starts for Vine\_49:

(Start: 139 @35969 has 1 MA's), (Start: 188 @35909 has 69 MA's), (Start: 222 @35849 has 1 MA's), (294, 35702), (324, 35648), (331, 35627), (338, 35609), (341, 35600), (351, 35588), (356, 35573), (418, 35462), (422, 35444), (431, 35411), (476, 35309), (506, 35249), (515, 35228), (557, 35159), (576, 35120), (586, 35111),

Gene: Vivi2\_48 Start: 40816, Stop: 41550, Start Num: 184

Candidate Starts for Vivi2\_48:

(102, 40669), (142, 40759), (Start: 184 @40816 has 99 MA's), (Start: 201 @40834 has 3 MA's), (258, 40921), (271, 40948), (294, 40996), (303, 41014), (325, 41056), (356, 41134), (375, 41176), (400, 41209), (456, 41344), (475, 41383), (528, 41482), (549, 41509), (569, 41542),

Gene: Walrus\_27 Start: 21692, Stop: 22495, Start Num: 184

Candidate Starts for Walrus\_27:

(Start: 184 @21692 has 99 MA's), (Start: 211 @21740 has 1 MA's), (Start: 222 @21752 has 1 MA's), (234, 21767), (299, 21896), (310, 21908), (325, 21947), (341, 21992), (342, 21995), (348, 22007), (354, 22025), (357, 22037), (358, 22040), (359, 22043), (440, 22220), (451, 22241), (452, 22247), (532, 22403), (559, 22439), (573, 22463), (585, 22484),

Gene: WelcomeAyanna\_24 Start: 22284, Stop: 22901, Start Num: 238

Candidate Starts for WelcomeAyanna\_24:

(175, 22185), (204, 22224), (224, 22257), (Start: 238 @22284 has 20 MA's), (247, 22290), (Start: 248 @22293 has 2 MA's), (265, 22335), (294, 22395), (324, 22470), (331, 22488), (341, 22515), (357, 22551), (379, 22602), (390, 22623), (427, 22713), (464, 22794), (523, 22872),

Gene: Wheezy\_19 Start: 9432, Stop: 10157, Start Num: 172

Candidate Starts for Wheezy\_19:

(Start: 172 @9432 has 29 MA's), (Start: 201 @9456 has 3 MA's), (221, 9489), (256, 9492), (273, 9528), (279, 9543), (297, 9585), (313, 9624), (356, 9732), (410, 9849), (434, 9924), (457, 9981), (478, 10023), (495, 10056), (506, 10077), (514, 10092), (550, 10152),

Gene: Whiteclaw\_24 Start: 19798, Stop: 20505, Start Num: 190

Candidate Starts for Whiteclaw\_24:

(112, 19654), (Start: 190 @19798 has 48 MA's), (223, 19855), (247, 19894), (274, 19945), (278, 19954), (289, 19972), (291, 19975), (325, 20029), (326, 20032), (338, 20065), (345, 20083), (357, 20110), (398, 20188), (427, 20257), (429, 20263), (439, 20287), (441, 20293), (544, 20497),

Gene: Whitney\_29 Start: 22410, Stop: 23033, Start Num: 245

Candidate Starts for Whitney\_29:

(65, 22035), (83, 22092), (97, 22137), (123, 22191), (125, 22194), (136, 22230), (Start: 160 @22275 has 1 MA's), (162, 22278), (Start: 245 @22410 has 28 MA's), (Start: 248 @22416 has 2 MA's), (260, 22446), (265, 22461), (294, 22521), (327, 22602), (341, 22641), (369, 22713), (405, 22776), (423, 22821), (427, 22839), (435, 22860), (439, 22869), (523, 23001), (529, 23010), (537, 23022),

Gene: WhoseManz\_19 Start: 7300, Stop: 8043, Start Num: 217

Candidate Starts for WhoseManz\_19:

(145, 7171), (215, 7297), (Start: 217 @7300 has 2 MA's), (Start: 255 @7363 has 1 MA's), (256, 7366), (259, 7378), (297, 7459), (356, 7609), (362, 7633), (382, 7666), (434, 7798), (489, 7924), (506, 7960), (538, 8014),

Gene: William\_26 Start: 21300, Stop: 22013, Start Num: 187

Candidate Starts for William\_26:

(176, 21285), (Start: 187 @21300 has 15 MA's), (Start: 201 @21312 has 3 MA's), (202, 21315), (203, 21318), (263, 21426), (278, 21456), (294, 21486), (325, 21531), (341, 21576), (345, 21585), (357, 21618), (361, 21636), (414, 21723), (416, 21729), (424, 21759), (430, 21780), (439, 21801), (441, 21807), (456, 21846), (459, 21858), (501, 21930), (536, 21993),

Gene: WinkNick\_25 Start: 21234, Stop: 22010, Start Num: 201

Candidate Starts for WinkNick\_25:

(Start: 167 @21210 has 3 MA's), (Start: 182 @21222 has 36 MA's), (Start: 201 @21234 has 3 MA's), (202, 21237), (Start: 211 @21264 has 1 MA's), (Start: 222 @21276 has 1 MA's), (258, 21327), (299, 21420), (323, 21465), (324, 21468), (325, 21471), (348, 21531), (354, 21549), (357, 21561), (358, 21564), (359, 21567), (410, 21657), (440, 21744), (559, 21966), (573, 21990),

Gene: Wisp\_24 Start: 20862, Stop: 21665, Start Num: 184

Candidate Starts for Wisp\_24:

(Start: 184 @20862 has 99 MA's), (Start: 211 @20910 has 1 MA's), (Start: 222 @20922 has 1 MA's), (234, 20937), (258, 20973), (299, 21066), (325, 21117), (347, 21174), (348, 21177), (354, 21195), (357, 21207), (358, 21210), (359, 21213), (440, 21390), (451, 21411), (452, 21417), (532, 21573), (559, 21609), (573, 21633), (585, 21654),

Gene: Wizard\_43 Start: 36323, Stop: 37078, Start Num: 184

Candidate Starts for Wizard\_43:

(128, 36245), (Start: 184 @36323 has 99 MA's), (233, 36395), (295, 36503), (322, 36548), (402, 36698), (407, 36704), (420, 36731), (434, 36779), (483, 36881), (531, 36965), (577, 37037),

Gene: Wocket\_27 Start: 21844, Stop: 22632, Start Num: 188

Candidate Starts for Wocket\_27:

(133, 21760), (Start: 188 @21844 has 69 MA's), (Start: 222 @21898 has 1 MA's), (258, 21949), (299, 22042), (325, 22093), (342, 22141), (348, 22153), (354, 22171), (357, 22183), (358, 22186), (359, 22189), (440, 22366), (451, 22387), (559, 22585), (573, 22609),

Gene: Wojtek\_79 Start: 58771, Stop: 59619, Start Num: 147

Candidate Starts for Wojtek\_79:

(137, 58747), (138, 58750), (Start: 147 @58771 has 26 MA's), (151, 58780), (Start: 161 @58792 has 2 MA's), (Start: 167 @58801 has 3 MA's), (Start: 184 @58825 has 99 MA's), (195, 58843), (199, 58849), (228, 58900), (273, 58996), (277, 59005), (288, 59032), (295, 59044), (311, 59083), (387, 59263), (416, 59329), (419, 59338), (426, 59368), (436, 59395), (445, 59419), (470, 59473), (495, 59518), (500, 59530), (539, 59596),

Gene: Wooper\_45 Start: 37588, Stop: 38310, Start Num: 188

Candidate Starts for Wooper\_45:

(89, 37402), (Start: 188 @37588 has 69 MA's), (282, 37750), (296, 37777), (299, 37783), (357, 37897), (406, 37981), (439, 38074), (451, 38104),

Gene: Wrigley\_28 Start: 22650, Stop: 23273, Start Num: 238

Candidate Starts for Wrigley\_28:

(Start: 238 @22650 has 20 MA's), (250, 22659), (265, 22701), (284, 22737), (303, 22782), (311, 22803), (324, 22836), (341, 22881), (369, 22953), (379, 22968), (405, 23016), (423, 23061), (427, 23079), (435, 23100), (439, 23109), (464, 23163), (506, 23214), (523, 23241), (529, 23250), (531, 23253),

Gene: Xenia2\_87 Start: 59110, Stop: 59985, Start Num: 134

Candidate Starts for Xenia2\_87:

(134, 59110), (Start: 139 @59122 has 1 MA's), (150, 59140), (Start: 161 @59152 has 2 MA's), (Start: 167 @59161 has 3 MA's), (195, 59203), (254, 59311), (295, 59404), (336, 59509), (344, 59530), (347, 59536), (351, 59539), (387, 59623), (429, 59737), (436, 59755), (444, 59776), (479, 59851), (511, 59908),

Gene: Yago84\_42 Start: 36147, Stop: 36872, Start Num: 188

Candidate Starts for Yago84\_42:

(88, 35949), (117, 36021), (Start: 188 @36147 has 69 MA's), (278, 36306), (282, 36312), (294, 36336), (298, 36345), (304, 36357), (318, 36372), (345, 36438), (358, 36468), (406, 36552), (427, 36615), (436, 36639), (439, 36645), (524, 36828), (530, 36837),

Gene: Yakult\_48 Start: 35205, Stop: 34351, Start Num: 148

Candidate Starts for Yakult\_48:

(142, 35220), (Start: 148 @35205 has 8 MA's), (157, 35190), (204, 35139), (208, 35127), (214, 35112), (227, 35097), (Start: 245 @35067 has 28 MA's), (Start: 248 @35064 has 2 MA's), (251, 35058), (258, 35052), (269, 35025), (278, 35007), (320, 34926), (321, 34923), (336, 34875), (345, 34851), (354, 34830), (377, 34770), (411, 34719), (431, 34653), (446, 34617), (474, 34557), (476, 34554), (484, 34539), (517, 34467), (534, 34437), (552, 34413), (564, 34392), (572, 34377),

Gene: Yarn\_42 Start: 33445, Stop: 32606, Start Num: 188

Candidate Starts for Yarn\_42:

(Start: 188 @33445 has 69 MA's), (Start: 222 @33385 has 1 MA's), (Start: 245 @33349 has 28 MA's), (251, 33340), (287, 33268), (336, 33160), (356, 33106), (368, 33070), (386, 33040), (413, 32989), (420, 32968), (506, 32764), (515, 32743), (566, 32656), (575, 32638),

Gene: Yeet412\_24 Start: 19791, Stop: 20498, Start Num: 190

Candidate Starts for Yeet412\_24:

(112, 19647), (Start: 190 @19791 has 48 MA's), (223, 19848), (247, 19887), (278, 19947), (289, 19965), (291, 19968), (298, 19986), (325, 20022), (326, 20025), (338, 20058), (345, 20076), (357, 20103), (398, 20181), (427, 20250), (439, 20280), (441, 20286), (544, 20490),

Gene: Yeezy\_27 Start: 21525, Stop: 22145, Start Num: 239

Candidate Starts for Yeezy\_27:

(Start: 239 @21525 has 16 MA's), (Start: 248 @21534 has 2 MA's), (265, 21579), (303, 21660), (324, 21714), (341, 21759), (357, 21795), (379, 21846), (405, 21894), (427, 21957), (439, 21987), (464, 22038), (523, 22116),

Gene: Yikes\_87 Start: 59300, Stop: 60151, Start Num: 147

Candidate Starts for Yikes\_87:

(76, 59123), (87, 59150), (90, 59159), (92, 59174), (98, 59183), (137, 59276), (138, 59279), (Start: 147 @59300 has 26 MA's), (151, 59309), (Start: 167 @59330 has 3 MA's), (195, 59372), (199, 59378), (220, 59423), (273, 59528), (288, 59564), (295, 59576), (311, 59615), (323, 59645), (324, 59648), (328, 59660), (387, 59795), (416, 59861), (419, 59870), (426, 59900), (436, 59927), (445, 59951), (470, 60005), (495, 60050), (500, 60062), (539, 60128),

Gene: Yndexa\_19 Start: 7686, Stop: 8480, Start Num: 174

Candidate Starts for Yndexa\_19:

(Start: 174 @7686 has 3 MA's), (Start: 255 @7800 has 1 MA's), (256, 7803), (259, 7815), (297, 7896), (356, 8046), (362, 8070), (382, 8103), (434, 8235), (489, 8361), (506, 8397), (538, 8451),

Gene: YorkOnyx\_46 Start: 39539, Stop: 40282, Start Num: 184

Candidate Starts for YorkOnyx\_46:

(Start: 184 @39539 has 99 MA's), (Start: 201 @39557 has 3 MA's), (223, 39602), (258, 39647), (271, 39674), (283, 39692), (294, 39722), (303, 39740), (315, 39752), (325, 39782), (335, 39809), (375, 39902), (388, 39914), (442, 40034), (456, 40070), (460, 40082), (475, 40109), (492, 40142), (506, 40169), (509, 40175), (528, 40208), (549, 40235),

Gene: Yummy\_48 Start: 34116, Stop: 33268, Start Num: 188

Candidate Starts for Yummy\_48:

(Start: 139 @34176 has 1 MA's), (Start: 188 @34116 has 69 MA's), (Start: 245 @34020 has 28 MA's), (251, 34011), (294, 33921), (336, 33831), (337, 33828), (356, 33780), (359, 33771), (366, 33747), (386, 33714), (402, 33681), (420, 33642), (517, 33414), (521, 33405), (566, 33330), (570, 33321),

Gene: YungMoney\_47 Start: 38725, Stop: 39480, Start Num: 182

Candidate Starts for YungMoney\_47:

(165, 38710), (Start: 182 @38725 has 36 MA's), (233, 38797), (257, 38830), (258, 38833), (269, 38860), (280, 38881), (295, 38905), (391, 39085), (402, 39100), (407, 39106), (420, 39133), (434, 39181), (483, 39283), (531, 39367), (577, 39439),

Gene: ZAYM\_27 Start: 22255, Stop: 22968, Start Num: 190

Candidate Starts for ZAYM\_27:

(58, 21961), (61, 21964), (86, 22045), (93, 22075), (Start: 148 @22198 has 8 MA's), (Start: 190 @22255 has 48 MA's), (231, 22321), (247, 22348), (258, 22363), (278, 22408), (304, 22459), (326, 22486), (335, 22510), (360, 22573), (410, 22657), (427, 22714), (434, 22732), (439, 22744), (441, 22750),

Gene: Zameen\_27 Start: 22303, Stop: 22923, Start Num: 239

Candidate Starts for Zameen\_27:

(60, 21928), (123, 22099), (125, 22102), (Start: 160 @22183 has 1 MA's), (175, 22204), (Start: 239 @22303 has 16 MA's), (Start: 248 @22312 has 2 MA's), (265, 22357), (303, 22438), (341, 22537), (357, 22573), (379, 22624), (405, 22672), (427, 22735), (439, 22765), (464, 22816), (506, 22867), (523, 22894),

Gene: Zany\_85 Start: 59554, Stop: 60444, Start Num: 147

Candidate Starts for Zany\_85:

(137, 59530), (138, 59533), (Start: 147 @59554 has 26 MA's), (151, 59563), (Start: 167 @59584 has 3 MA's), (195, 59626), (199, 59632), (273, 59782), (277, 59791), (288, 59818), (295, 59830), (311, 59869), (387, 60049), (416, 60115), (419, 60124), (426, 60154), (436, 60181), (445, 60205), (470, 60259), (495, 60304), (500, 60316), (554, 60403), (571, 60436),

Gene: Zarbodnamra\_25 Start: 21151, Stop: 21954, Start Num: 184

Candidate Starts for Zarbodnamra\_25:

(Start: 184 @21151 has 99 MA's), (Start: 211 @21199 has 1 MA's), (Start: 222 @21211 has 1 MA's), (234, 21226), (258, 21262), (299, 21355), (325, 21406), (347, 21463), (348, 21466), (354, 21484), (357, 21496), (358, 21499), (359, 21502), (440, 21679), (451, 21700), (452, 21706), (532, 21862), (559, 21898), (573, 21922), (585, 21943),

Gene: Zareef\_44 Start: 33205, Stop: 32447, Start Num: 188

Candidate Starts for Zareef\_44:

(Start: 188 @33205 has 69 MA's), (Start: 211 @33166 has 1 MA's), (Start: 222 @33148 has 1 MA's), (Start: 245 @33112 has 28 MA's), (258, 33097), (268, 33073), (285, 33037), (294, 33013), (323, 32959), (364, 32854), (378, 32833), (422, 32773), (451, 32695), (456, 32680), (470, 32650), (497, 32605), (561, 32491), (568, 32476),

Gene: ZiggyZoo\_25 Start: 21074, Stop: 21871, Start Num: 182

Candidate Starts for ZiggyZoo\_25:

(32, 20681), (62, 20810), (96, 20921), (109, 20948), (127, 20984), (Start: 182 @21074 has 36 MA's), (Start: 222 @21128 has 1 MA's), (234, 21143), (258, 21179), (299, 21272), (310, 21284), (324, 21320), (325, 21323), (342, 21371), (347, 21380), (348, 21383), (354, 21401), (357, 21413), (358, 21416), (359, 21419), (427, 21566), (440, 21596), (451, 21617), (452, 21623), (456, 21632), (559, 21815), (573, 21839), (585, 21860),

Gene: Zipp\_47 Start: 41352, Stop: 42089, Start Num: 177

Candidate Starts for Zipp\_47:

(20, 40737), (21, 40776), (24, 40884), (27, 40926), (57, 41067), (Start: 167 @41343 has 3 MA's), (Start: 177 @41352 has 6 MA's), (Start: 181 @41358 has 1 MA's), (Start: 188 @41367 has 69 MA's), (258, 41472), (261, 41481), (289, 41520), (294, 41532), (303, 41550), (325, 41592), (355, 41664), (357, 41670), (425, 41796), (440, 41835), (451, 41856), (456, 41871), (468, 41898), (553, 42045),

Gene: Zirinka\_25 Start: 22321, Stop: 22938, Start Num: 238

Candidate Starts for Zirinka\_25:

(175, 22222), (204, 22261), (224, 22294), (Start: 238 @22321 has 20 MA's), (Start: 248 @22330 has 2 MA's), (265, 22372), (273, 22384), (294, 22432), (303, 22453), (311, 22474), (324, 22507), (341, 22552), (357, 22588), (379, 22639), (427, 22750), (439, 22780), (464, 22831), (523, 22909),

Gene: Zitch\_49 Start: 39473, Stop: 40198, Start Num: 188

Candidate Starts for Zitch\_49:

(106, 39326), (123, 39362), (Start: 188 @39473 has 69 MA's), (Start: 222 @39527 has 1 MA's), (258, 39578), (261, 39587), (294, 39638), (303, 39656), (325, 39698), (349, 39755), (357, 39779), (396, 39845), (425, 39905), (440, 39944), (456, 39980), (468, 40007), (528, 40118), (553, 40154),