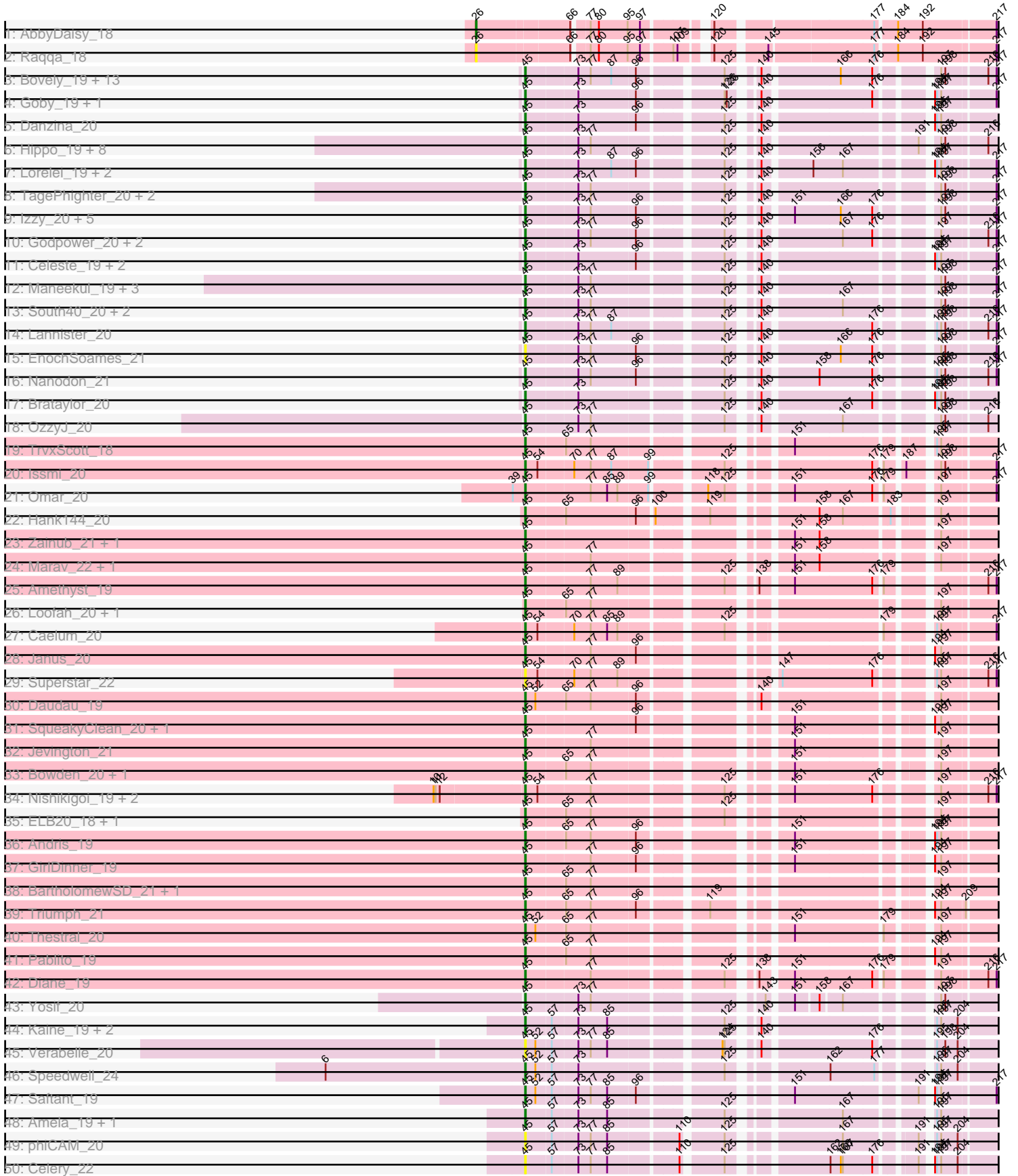
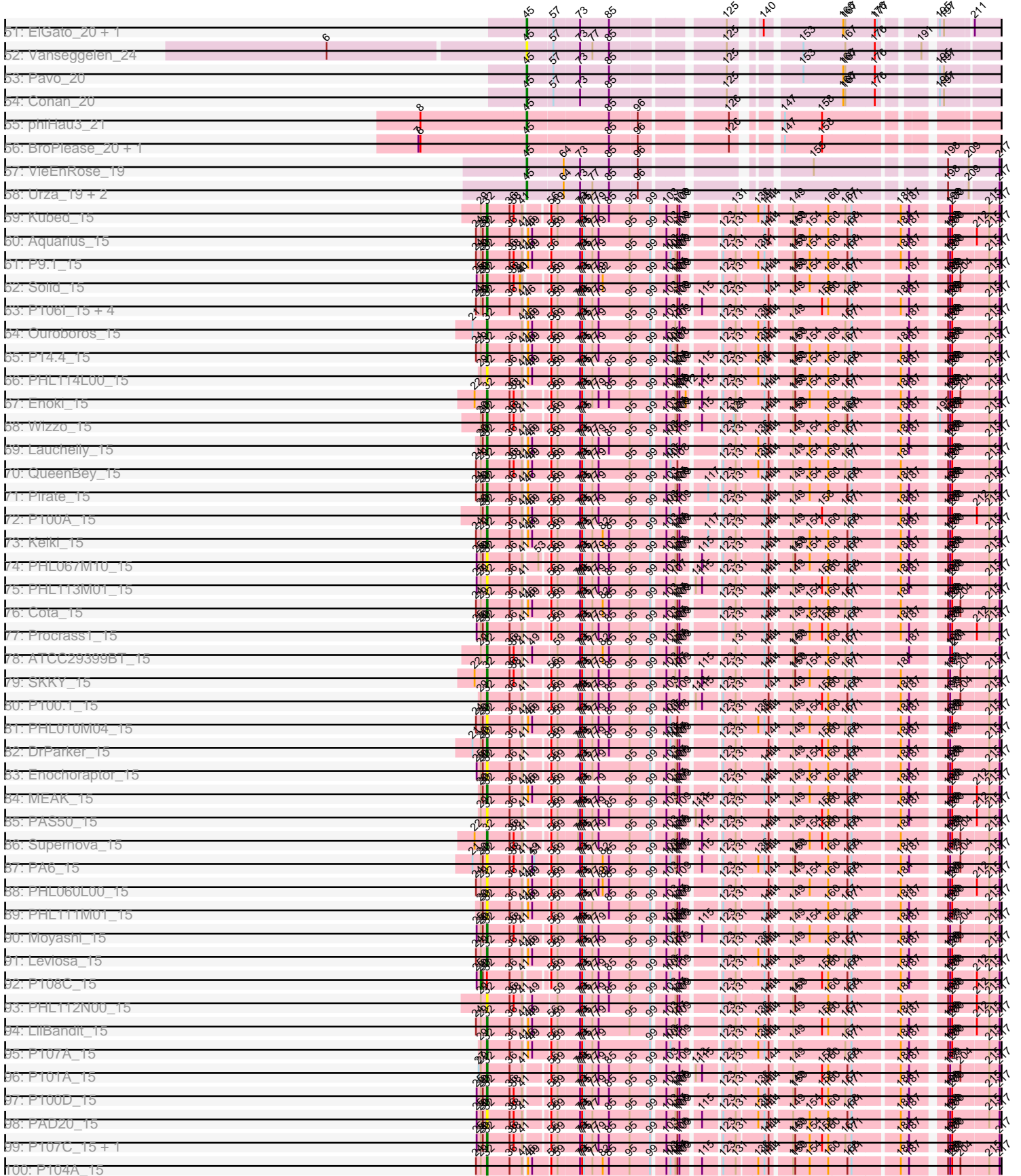


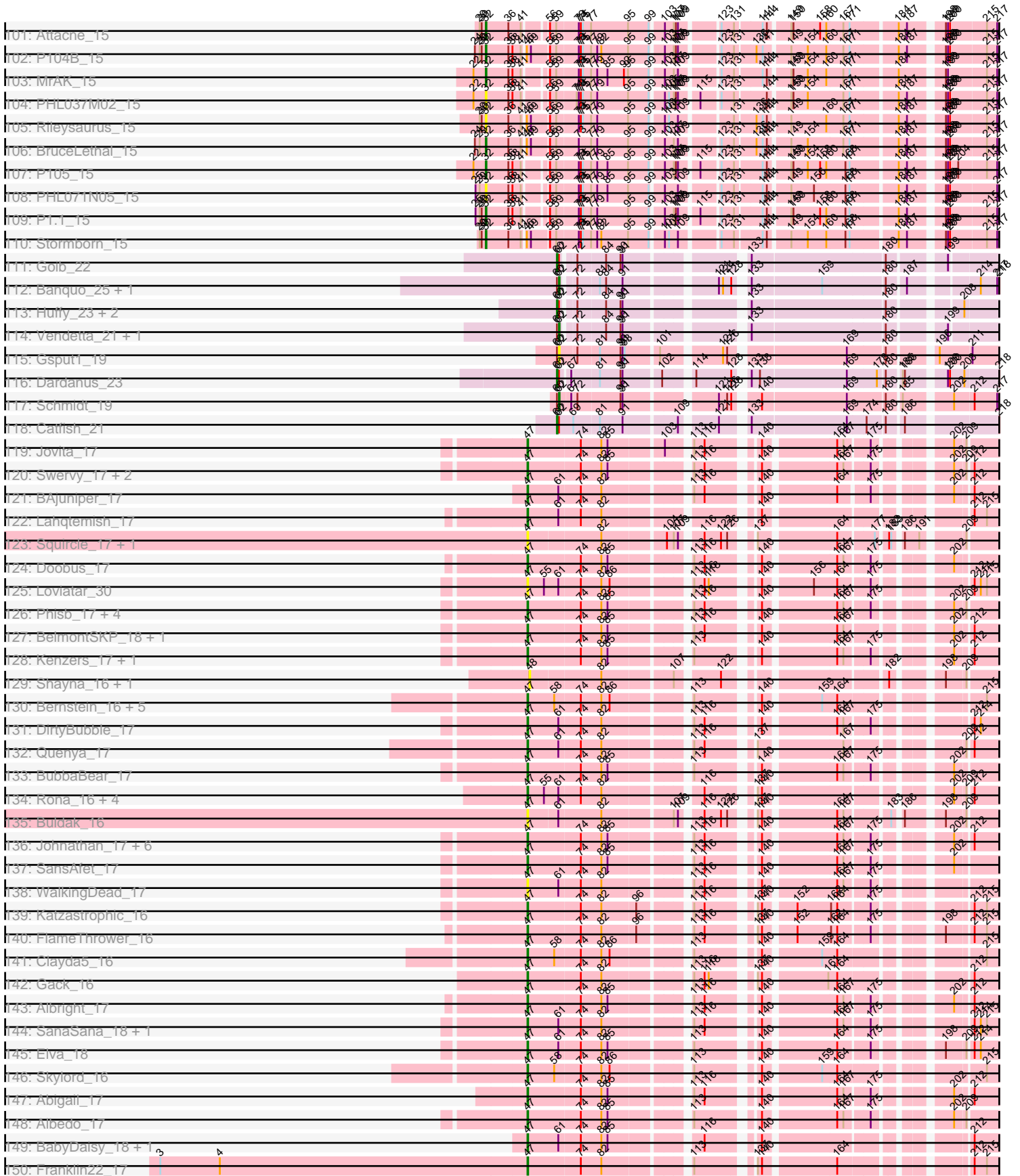
Zoomed Pham 196215



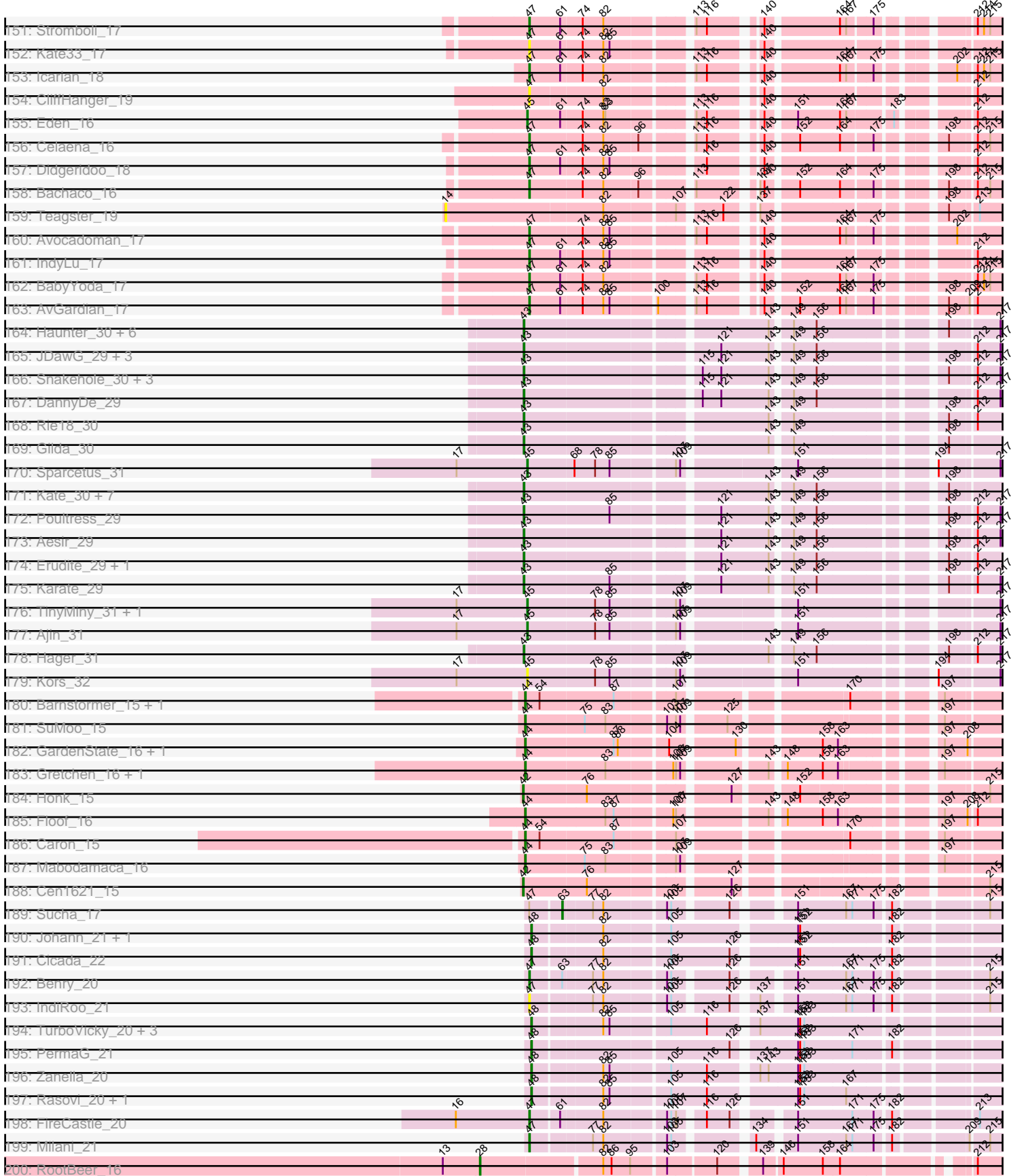
Zoomed Pham 196215



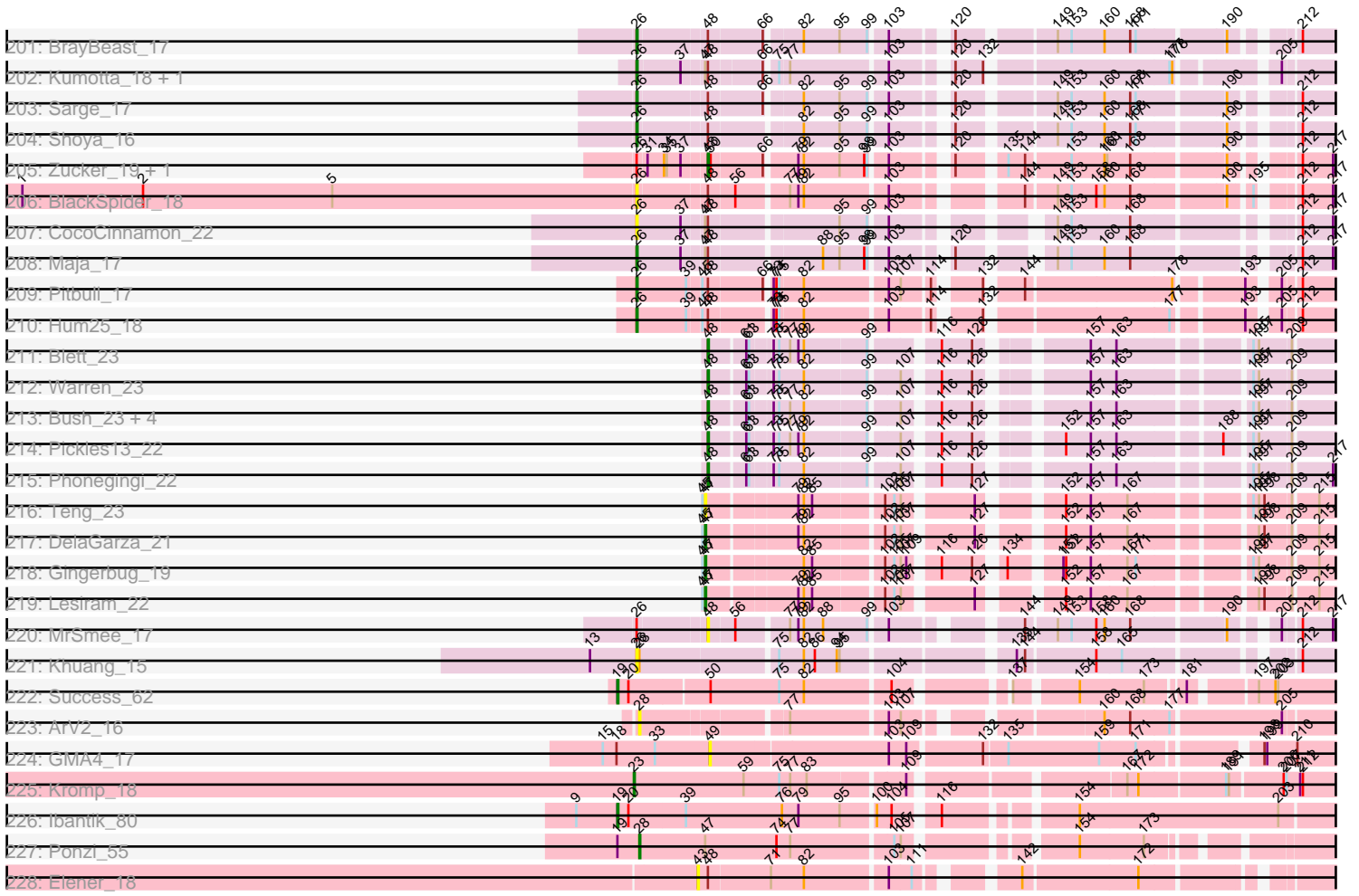
Zoomed Pham 196215



Zoomed Pham 196215



Zoomed Pham 196215



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 196215 Report

This analysis was run 12/09/24 on database version 580.

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

Pham number 196215 has 355 members, 44 are drafts.

Phages represented in each track:

- Track 1 : AbbyDaisy_18
- Track 2 : Raqqa_18
- Track 3 : Bovely_19, BeardedLady_20, Nerdos_19, Ozzie_19, Aaronocolus_19, Unstoppable_19, Hydra_21, SunsetPointe_19, Esperer_19, Indigo_19, Phettuccine_19, Leviticus_19, Caliburn_19, Legacy_19
- Track 4 : Goby_19, Toma_19
- Track 5 : Danzina_20
- Track 6 : Hippo_19, Triste_19, SarahRose_19, Dwayne_19, Whatever_19, Asten_19, Emaanora_21, Werner_19, BarryBee_21
- Track 7 : Lorelei_19, Rana_19, Nabi_19
- Track 8 : TagePhighter_20, Snorlax_19, Chucky_19
- Track 9 : Izzy_20, Eddasa_20, Rusticus_20, BryanRecycles_20, Jash_20, Oliynyk_20
- Track 10 : Godpower_20, Lika_19, Sujidade_20
- Track 11 : Celeste_19, Zemlya_20, Dattran_20
- Track 12 : Maneekul_19, TuanPN_19, Ejemplo_19, Yasdnih_19
- Track 13 : South40_20, RedBear_21, Katalie_20
- Track 14 : Lannister_20
- Track 15 : EnochSoames_21
- Track 16 : Nanodon_21
- Track 17 : Brataylor_20
- Track 18 : OzzyJ_20
- Track 19 : TrvxScott_18
- Track 20 : Issmi_20
- Track 21 : Omar_20
- Track 22 : Hank144_20
- Track 23 : Zainub_21, Paolo_21
- Track 24 : Marav_22, Puginator_21
- Track 25 : Amethyst_19
- Track 26 : Loofah_20, Paedore_19
- Track 27 : Caelum_20
- Track 28 : Janus_20
- Track 29 : Superstar_22

- Track 30 : Daudau_19
- Track 31 : SqueakyClean_20, Animus_20
- Track 32 : Jevington_21
- Track 33 : Bowden_20, TinaBelcher_19
- Track 34 : Nishikigoi_19, Haizum_19, Tefunt_19
- Track 35 : ELB20_18, R4_19
- Track 36 : Andris_19
- Track 37 : GirlDinner_19
- Track 38 : BartholomewSD_21, Alvy_21
- Track 39 : Triumph_21
- Track 40 : Thestral_20
- Track 41 : Pablito_19
- Track 42 : Diane_19
- Track 43 : Yosif_20
- Track 44 : Kaine_19, Dexers_18, Alsaber_20
- Track 45 : Verabelle_20
- Track 46 : Speedwell_24
- Track 47 : Saftant_19
- Track 48 : Amela_19, Verse_19
- Track 49 : phiCAM_20
- Track 50 : Celery_22
- Track 51 : ElGato_20, Provolone_20
- Track 52 : Vanseggelen_24
- Track 53 : Pavo_20
- Track 54 : Conan_20
- Track 55 : phiHau3_21
- Track 56 : BroPlease_20, GreenWeasel_21
- Track 57 : VieEnRose_19
- Track 58 : Urza_19, Itza_19, Celia_19
- Track 59 : Kubed_15
- Track 60 : Aquarius_15
- Track 61 : P9.1_15
- Track 62 : Solid_15
- Track 63 : P106I_15, P106A_15, P106C_15, P106M_15, P106L_15
- Track 64 : Ouroboros_15
- Track 65 : P14.4_15
- Track 66 : PHL114L00_15
- Track 67 : Enoki_15
- Track 68 : Wizzo_15
- Track 69 : Lauchelly_15
- Track 70 : QueenBey_15
- Track 71 : Pirate_15
- Track 72 : P100A_15
- Track 73 : Keiki_15
- Track 74 : PHL067M10_15
- Track 75 : PHL113M01_15
- Track 76 : Cota_15
- Track 77 : Procrass1_15
- Track 78 : ATCC29399BT_15
- Track 79 : SKKY_15
- Track 80 : P100.1_15
- Track 81 : PHL010M04_15
- Track 82 : DrParker_15

- Track 83 : Enochoraptor_15
- Track 84 : MEAK_15
- Track 85 : PAS50_15
- Track 86 : Supernova_15
- Track 87 : PA6_15
- Track 88 : PHL060L00_15
- Track 89 : PHL111M01_15
- Track 90 : Moyashi_15
- Track 91 : Leviosa_15
- Track 92 : P108C_15
- Track 93 : PHL112N00_15
- Track 94 : LilBandit_15
- Track 95 : P107A_15
- Track 96 : P101A_15
- Track 97 : P100D_15
- Track 98 : PAD20_15
- Track 99 : P107C_15, ATCC29399BC_15
- Track 100 : P104A_15
- Track 101 : Attacne_15
- Track 102 : P104B_15
- Track 103 : MrAK_15
- Track 104 : PHL037M02_15
- Track 105 : Rileysaurus_15
- Track 106 : BruceLethal_15
- Track 107 : P105_15
- Track 108 : PHL071N05_15
- Track 109 : P1.1_15
- Track 110 : Stormborn_15
- Track 111 : Goib_22
- Track 112 : Banquo_25, TinaLin_24
- Track 113 : Huffy_23, DinoDaryn_23, TZGordon_23
- Track 114 : Vendetta_21, Splinter_21
- Track 115 : Gsput1_19
- Track 116 : Dardanus_23
- Track 117 : Schmidt_19
- Track 118 : Catfish_21
- Track 119 : Jovita_17
- Track 120 : Swervy_17, Slay_17, SarBear_17
- Track 121 : BAjuniper_17
- Track 122 : Lahqtemish_17
- Track 123 : Squirrel_17, Olliecat_17
- Track 124 : Doobus_17
- Track 125 : Loviatar_30
- Track 126 : Phisb_17, TukTuk_17, Eula_17, QMacho_18, Nicky22_18
- Track 127 : BelmontSKP_18, AnnaLie_18
- Track 128 : Kenzers_17, Lynlen_17
- Track 129 : Shayna_16, SunnyD_18
- Track 130 : Bernstein_16, Armstrong_16, Coltrane_16, Rollins_16, Vitas_16, Brahms_16
- Track 131 : DirtyBubble_17
- Track 132 : Quenya_17
- Track 133 : BubbaBear_17
- Track 134 : Rona_16, Sharkboy_16, Kieran_16, ChiliPepper_16, Dismas_16

- Track 135 : Buldak_16
- Track 136 : Johnathan_17, CroZenni_17, Cashington_17, DickRichards_17, LimaBean_17, Arroyo_18, Burritobowl_17
- Track 137 : SansAfet_17
- Track 138 : WalkingDead_17
- Track 139 : Katzastrophic_16
- Track 140 : FlameThrower_16
- Track 141 : Clayda5_16
- Track 142 : Gack_16
- Track 143 : Albright_17
- Track 144 : SanaSana_18, Stoor_17
- Track 145 : Elva_18
- Track 146 : Skylord_16
- Track 147 : Abigail_17
- Track 148 : Albedo_17
- Track 149 : BabyDaisy_18, Finalfrontier_18
- Track 150 : Franklin22_17
- Track 151 : Stromboli_17
- Track 152 : Kate33_17
- Track 153 : Icarian_18
- Track 154 : CliffHanger_19
- Track 155 : Eden_16
- Track 156 : Celaena_16
- Track 157 : Didgeridoo_18
- Track 158 : Bachaco_16
- Track 159 : Teagster_19
- Track 160 : Avocadoman_17
- Track 161 : IndyLu_17
- Track 162 : BabyYoda_17
- Track 163 : AvGardian_17
- Track 164 : Haunter_30, Pharpay_30, CoolCookie_30, Rachella_30, AnnaSerena_30, PhunaPhoke_30, Tedro_30
- Track 165 : JDawG_29, Crestdrop_29, JingleBells_29, MortySmith_28
- Track 166 : Snakehole_30, FreddieHg_29, Hiddenleaf_29, Chivey_29
- Track 167 : DannyDe_29
- Track 168 : Rie18_30
- Track 169 : Gilda_30
- Track 170 : Sparcetus_31
- Track 171 : Kate_30, Krampus_30, Anakin_30, OverHedge_30, Potty_30, NarutoRun_30, Cybele_30, Neptune_30
- Track 172 : Poultruss_29
- Track 173 : Aesir_29
- Track 174 : Erudite_29, Dauntless_29
- Track 175 : Karate_29
- Track 176 : TinyMiny_31, RikSengupta_31
- Track 177 : Ajin_31
- Track 178 : Hager_31
- Track 179 : Kors_32
- Track 180 : Barnstormer_15, UtzChips_15
- Track 181 : SuMoo_15
- Track 182 : GardenState_16, IAmGroot_16
- Track 183 : Gretchen_16, Percival_16
- Track 184 : Honk_15

- Track 185 : Floof_16
- Track 186 : Caron_15
- Track 187 : Mabodamaca_16
- Track 188 : Cen1621_15
- Track 189 : Sucha_17
- Track 190 : Johann_21, Goodman_21
- Track 191 : Cicada_22
- Track 192 : Benry_20
- Track 193 : IndiRoo_21
- Track 194 : TurboVicky_20, Typher_22, SBlackberry_20, Jera_21
- Track 195 : PermaG_21
- Track 196 : Zanella_20
- Track 197 : Rasovi_20, Htur_20
- Track 198 : FireCastle_20
- Track 199 : Milani_21
- Track 200 : RootBeer_16
- Track 201 : BrayBeast_17
- Track 202 : Kumotta_18, MargaretKali_18
- Track 203 : Sarge_17
- Track 204 : Shoya_16
- Track 205 : Zucker_19, Bauer_20
- Track 206 : BlackSpider_18
- Track 207 : CocoCinnamon_22
- Track 208 : Maja_17
- Track 209 : Pitbull_17
- Track 210 : Hum25_18
- Track 211 : Blett_23
- Track 212 : Warren_23
- Track 213 : Bush_23, MenE_23, Dropshot_22, Antuna_23, Appa_22
- Track 214 : Pickles13_22
- Track 215 : Phonegingi_22
- Track 216 : Teng_23
- Track 217 : DelaGarza_21
- Track 218 : Gingerbug_19
- Track 219 : Lesiram_22
- Track 220 : MrSmee_17
- Track 221 : Khuang_15
- Track 222 : Success_62
- Track 223 : ArV2_16
- Track 224 : GMA4_17
- Track 225 : Kromp_18
- Track 226 : Ibantik_80
- Track 227 : Ponzi_55
- Track 228 : Elener_18

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

The start number called the most often in the published annotations is 45, it was called in 111 of the 311 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aaronocolus_19, Ajin_31, Alsaber_20, Alvy_21, Amela_19, Amethyst_19, Andris_19, Animus_20, Asten_19, BarryBee_21, BartholomewSD_21, BeardedLady_20, Bovely_19, Bowden_20, Brataylor_20, BroPlease_20, BryanRecycles_20, Caelum_20, Caliburn_19, Celery_22, Celeste_19, Celia_19, Chucky_19, Conan_20, Danzina_20, Dattran_20, Daudau_19, Dexers_18, Diane_19, Dwayne_19, ELB20_18, Eddasa_20, Eden_16, Ejemplo_19, ElGato_20, Emaanora_21, EnochSoames_21, Esperer_19, GirlDinner_19, Goby_19, Godpower_20, GreenWeasel_21, Haizum_19, Hank144_20, Hippo_19, Hydra_21, Indigo_19, Issmi_20, Itza_19, Izzy_20, Janus_20, Jash_20, Jevington_21, Kaine_19, Katalie_20, Kors_32, Lannister_20, Legacy_19, Leviticus_19, Lika_19, Loofah_20, Lorelei_19, Maneekul_19, Marav_22, Nabi_19, Nanodon_21, Nerdos_19, Nishikigoi_19, Oliynyk_20, Omar_20, Ozzie_19, OzzyJ_20, Pablito_19, Paedore_19, Paolo_21, Pavo_20, Phettuccine_19, Provolone_20, Puginator_21, R4_19, Rana_19, RedBear_21, RikSengupta_31, Rusticus_20, Saftant_19, SarahRose_19, Snorlax_19, South40_20, Sparcetus_31, Speedwell_24, SqueakyClean_20, Sujidade_20, SunsetPointe_19, Superstar_22, TagePhighter_20, Tefunt_19, Thestral_20, TinaBelcher_19, TinyMiny_31, Toma_19, Triste_19, Triumph_21, TrvxScott_18, TuanPN_19, Unstoppable_19, Urza_19, Vanseggelen_24, Verabelle_20, Verse_19, VieEnRose_19, Werner_19, Whatever_19, Yasdnil_19, Yosif_20, Zainub_21, Zemlya_20, phiCAM_20, phiHau3_21,

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

- DelaGarza_21, Gingerbug_19, Hum25_18, Lesiram_22, Pitbull_17, Teng_23,

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

- ATCC29399BC_15, ATCC29399BT_15, AbbyDaisy_18, Abigail_17, Aesir_29, Albedo_17, Albright_17, Anakin_30, AnnaLie_18, AnnaSerena_30, Antuna_23, Appa_22, Aquarius_15, ArV2_16, Armstrong_16, Arroyo_18, Attacne_15, AvGuardian_17, Avocadoman_17, BAjuniper_17, BabyDaisy_18, BabyYoda_17, Bachaco_16, Banquo_25, Barnstormer_15, Bauer_20, BelmontSKP_18, Benry_20, Bernstein_16, BlackSpider_18, Blett_23, Brahms_16, BrayBeast_17, BruceLethal_15, BubbaBear_17, Buldak_16, Burritobowl_17, Bush_23, Caron_15, Cashington_17, Catfish_21, Celaena_16, Cen1621_15, ChiliPepper_16, Chivey_29, Cicada_22, Clayda5_16, CliffHanger_19, CocoCinnamon_22, Coltrane_16, CoolCookie_30, Cota_15, Crestdrop_29, CroZenni_17, Cybele_30, DannyDe_29, Dardanus_23, Dauntless_29, DickRichards_17, Didgeridoo_18, DinoDaryn_23, DirtyBubble_17, Dismas_16, Doobus_17, DrParker_15, Dropshot_22, Elener_18, Elva_18, Enochoraptor_15, Enoki_15, Erudite_29, Eula_17, Finalfrontier_18, FireCastle_20, FlameThrower_16, Floof_16, Franklin22_17, FreddieHg_29, GMA4_17, Gack_16, GardenState_16, Gilda_30, Goib_22, Goodman_21, Gretchen_16, Gspu1_19, Hager_31, Haunter_30, Hiddenleaf_29, Honk_15, Htur_20, Huffy_23, IAmGroot_16, Ibantik_80, Icarian_18, IndiRoo_21, IndyLu_17, JDawG_29, Jera_21, JingleBells_29, Johann_21, Johnathan_17, Jovita_17, Karate_29, Kate33_17, Kate_30, Katzastrophic_16, Keiki_15, Kenzers_17, Khuang_15, Kieran_16, Krampus_30, Kromp_18, Kubed_15, Kumotta_18, Lahqtemish_17, Lauchelly_15, Leviosa_15, LilBandit_15, LimaBean_17, Loviatar_30, Lynlen_17, MEAK_15, Mabodamaca_16, Maja_17, MargaretKali_18, MenE_23, Milani_21, MortySmith_28, Moyashi_15, MrAK_15, MrSmeem_17, NarutoRun_30, Neptune_30, Nicky22_18, Olliecat_17, Ouroboros_15, OverHedge_30, P1.1_15, P100.1_15, P100A_15, P100D_15, P101A_15, P104A_15, P104B_15, P105_15, P106A_15, P106C_15, P106L_15, P106M_15, P107A_15, P107C_15, P108C_15, P14.4_15, P9.1_15, PA6_15, PAD20_15, PAS50_15, PHL010M04_15,

PHL037M02_15, PHL060L00_15, PHL067M10_15, PHL071N05_15, PHL111M01_15, PHL112N00_15, PHL113M01_15, PHL114L00_15, Percival_16, PermaG_21, Pharpay_30, Phisb_17, Phonegingi_22, PhunaPhoke_30, Pickles13_22, Pirate_15, Ponzi_55, Potty_30, Poultruss_29, Procrass1_15, QMacho_18, QueenBey_15, Quenya_17, Rachella_30, Raqqa_18, Rasovi_20, Rie18_30, Rileysaurus_15, Rollins_16, Rona_16, RootBeer_16, SBlackberry_20, SKKY_15, SanaSana_18, SansAfet_17, SarBear_17, Sarge_17, Schmidt_19, Sharkboy_16, Shayna_16, Shoya_16, Skylord_16, Slay_17, Snakehole_30, Solid_15, Splinter_21, Squircl_17, Stoor_17, Stormborn_15, Stromboli_17, SuMoo_15, Success_62, Sucha_17, SunnyD_18, Supernova_15, Swervy_17, TZGordon_23, Teagster_19, Tedro_30, TinaLin_24, TukTuk_17, TurboVicky_20, Typher_22, UtzChips_15, Vendetta_21, Vitas_16, WalkingDead_17, Warren_23, Wizzo_15, Zanella_20, Zucker_19,

Summary by start number:

Start 14:

- Found in 1 of 355 (0.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Teagster_19 (EB),

Start 19:

- Found in 3 of 355 (0.8%) of genes in pham
- Manual Annotations of this start: 2 of 311
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Ibantik_80 (singleton), Success_62 (singleton),

Start 23:

- Found in 1 of 355 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kromp_18 (singleton),

Start 26:

- Found in 16 of 355 (4.5%) of genes in pham
- Manual Annotations of this start: 9 of 311
- Called 81.2% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_18 (AY), BlackSpider_18 (FN), BrayBeast_17 (FB), CocoCinnamon_22 (FO), Hum25_18 (FQ), Khuang_15 (UNK), Kumotta_18 (FB), Maja_17 (FO), MargaretKali_18 (FB), Pitbull_17 (FQ), Raqqa_18 (AY), Sarge_17 (FB), Shoya_16 (FB),

Start 28:

- Found in 4 of 355 (1.1%) of genes in pham
- Manual Annotations of this start: 2 of 311
- Called 75.0% of time when present
- Phage (with cluster) where this start called: ArV2_16 (singleton), Ponzi_55 (singleton), RootBeer_16 (FA),

Start 29:

- Found in 50 of 355 (14.1%) of genes in pham

- Manual Annotations of this start: 1 of 311
- Called 2.0% of time when present
- Phage (with cluster) where this start called: P108C_15 (BU),

Start 32:

- Found in 57 of 355 (16.1%) of genes in pham
- Manual Annotations of this start: 42 of 311
- Called 98.2% of time when present
- Phage (with cluster) where this start called: ATCC29399BC_15 (BU), ATCC29399BT_15 (BU), Aquarius_15 (BU), Attacne_15 (BU), BruceLethal_15 (BU), Cota_15 (BU), DrParker_15 (BU), Enochoraptor_15 (BU), Enoki_15 (BU), Keiki_15 (BU), Kubed_15 (BU), Lauchelly_15 (BU), Leviosa_15 (BU), LilBandit_15 (BU), MEAK_15 (BU), Moyashi_15 (BU), MrAK_15 (BU), Ouroboros_15 (BU), P1.1_15 (BU), P100.1_15 (BU), P100A_15 (BU), P100D_15 (BU), P101A_15 (BU), P104A_15 (BU), P104B_15 (BU), P105_15 (BU), P106A_15 (BU), P106C_15 (BU), P106I_15 (BU), P106L_15 (BU), P106M_15 (BU), P107A_15 (BU), P107C_15 (BU), P14.4_15 (BU), P9.1_15 (BU), PA6_15 (BU), PAD20_15 (BU), PAS50_15 (BU), PHL010M04_15 (BU), PHL037M02_15 (BU), PHL060L00_15 (BU), PHL067M10_15 (BU), PHL071N05_15 (BU), PHL111M01_15 (BU), PHL112N00_15 (BU), PHL113M01_15 (BU), PHL114L00_15 (BU), Pirate_15 (BU), Procrass1_15 (BU), QueenBey_15 (BU), Rileysaurus_15 (BU), SKKY_15 (BU), Solid_15 (BU), Stormborn_15 (BU), Supernova_15 (BU), Wizzo_15 (BU),

Start 42:

- Found in 2 of 355 (0.6%) of genes in pham
- Manual Annotations of this start: 2 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cen1621_15 (EH), Honk_15 (EH),

Start 43:

- Found in 33 of 355 (9.3%) of genes in pham
- Manual Annotations of this start: 31 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aesir_29 (EF), Anakin_30 (EF), AnnaSerena_30 (EF), Chivey_29 (EF), CoolCookie_30 (EF), Crestdrop_29 (EF), Cybele_30 (EF), DannyDe_29 (EF), Dauntless_29 (EF), Elener_18 (singleton), Erudite_29 (EF), FreddieHg_29 (EF), Gilda_30 (EF), Hager_31 (EF), Haunter_30 (EF), Hiddenleaf_29 (EF), JDawG_29 (EF), JingleBells_29 (EF), Karate_29 (EF), Kate_30 (EF), Krampus_30 (EF), MortySmith_28 (EF), NarutoRun_30 (EF), Neptune_30 (EF), OverHedge_30 (EF), Pharpay_30 (EF), PhunaPhoke_30 (EF), Potty_30 (EF), Poultruss_29 (EF), Rachella_30 (EF), Rie18_30 (EF), Snakehole_30 (EF), Tedro_30 (EF),

Start 44:

- Found in 10 of 355 (2.8%) of genes in pham
- Manual Annotations of this start: 10 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer_15 (EH), Caron_15 (EH), Floof_16 (EH), GardenState_16 (EH), Gretchen_16 (EH), IAmGroot_16 (EH), Mabodamaca_16 (EH), Percival_16 (EH), SuMoo_15 (EH), UtzChips_15 (EH),

Start 45:

- Found in 124 of 355 (34.9%) of genes in pham

- Manual Annotations of this start: 111 of 311
- Called 95.2% of time when present
- Phage (with cluster) where this start called: Aaronocolus_19 (BD1), Ajin_31 (EF), Alsaber_20 (BD3), Alvy_21 (BD2), Amela_19 (BD3), Amethyst_19 (BD2), Andris_19 (BD2), Animus_20 (BD2), Asten_19 (BD1), BarryBee_21 (BD1), BartholomewSD_21 (BD2), BeardedLady_20 (BD1), Bovely_19 (BD1), Bowden_20 (BD2), Brataylor_20 (BD1), BroPlease_20 (BD4), BryanRecycles_20 (BD1), Caelum_20 (BD2), Caliburn_19 (BD1), Celery_22 (BD3), Celeste_19 (BD1), Celia_19 (BD6), Chucky_19 (BD1), Conan_20 (BD3), Danzina_20 (BD1), Dattran_20 (BD1), Daudau_19 (BD2), Dexers_18 (BD3), Diane_19 (BD2), Dwayne_19 (BD1), ELB20_18 (BD2), Eddasa_20 (BD1), Eden_16 (EB), Ejemplo_19 (BD1), ElGato_20 (BD3), Emaanora_21 (BD1), EnochSoames_21 (BD1), Esperer_19 (BD1), GirlDinner_19 (BD2), Goby_19 (BD1), Godpower_20 (BD1), GreenWeasel_21 (BD4), Haizum_19 (BD2), Hank144_20 (BD2), Hippo_19 (BD1), Hydra_21 (BD1), Indigo_19 (BD1), Issmi_20 (BD2), Itza_19 (BD6), Izzy_20 (BD1), Janus_20 (BD2), Jash_20 (BD1), Jevington_21 (BD2), Kaine_19 (BD3), Katalie_20 (BD1), Kors_32 (EF), Lannister_20 (BD1), Legacy_19 (BD1), Leviticus_19 (BD1), Lika_19 (BD1), Loofah_20 (BD2), Lorelei_19 (BD1), Maneekul_19 (BD1), Marav_22 (BD2), Nabi_19 (BD1), Nanodon_21 (BD1), Nerdos_19 (BD1), Nishikigoi_19 (BD2), Oliynyk_20 (BD1), Omar_20 (BD2), Ozzie_19 (BD1), OzzyJ_20 (BD1), Pablito_19 (BD2), Paedore_19 (BD2), Paolo_21 (BD2), Pavo_20 (BD3), Phettuccine_19 (BD1), Provolone_20 (BD3), Puginator_21 (BD2), R4_19 (BD2), Rana_19 (BD1), RedBear_21 (BD1), RikSengupta_31 (EF), Rusticus_20 (BD1), Saftant_19 (BD3), SarahRose_19 (BD1), Snorlax_19 (BD1), South40_20 (BD1), Sparcetus_31 (EF), Speedwell_24 (BD3), SqueakyClean_20 (BD2), Sujidade_20 (BD1), SunsetPointe_19 (BD1), Superstar_22 (BD2), TagePighter_20 (BD1), Tefunt_19 (BD2), Thestral_20 (BD2), TinaBelcher_19 (BD2), TinyMiny_31 (EF), Toma_19 (BD1), Triste_19 (BD1), Triumph_21 (BD2), TrvxScott_18 (BD2), TuanPN_19 (BD1), Unstoppable_19 (BD1), Urza_19 (BD6), Vanseggelen_24 (BD3), Verabelle_20 (BD3), Verse_19 (BD3), VieEnRose_19 (BD6), Werner_19 (BD1), Whatever_19 (BD1), Yasdnil_19 (BD1), Yosif_20 (BD3), Zainub_21 (BD2), Zemlya_20 (BD1), phiCAM_20 (BD3), phiHau3_21 (BD4),

Start 47:

- Found in 82 of 355 (23.1%) of genes in pham
- Manual Annotations of this start: 66 of 311
- Called 92.7% of time when present
- Phage (with cluster) where this start called: Abigail_17 (EB), Albedo_17 (EB), Albright_17 (EB), AnnaLie_18 (EB), Armstrong_16 (EB), Arroyo_18 (EB), AvGuardian_17 (EB), Avocadoman_17 (EB), BAjuniper_17 (EB), BabyDaisy_18 (EB), BabyYoda_17 (EB), Bachaco_16 (EB), BelmontSKP_18 (EB), Benry_20 (EJ), Bernstein_16 (EB), Brahms_16 (EB), BubbaBear_17 (EB), Buldak_16 (EB), Burritobowl_17 (EB), Cashington_17 (EB), Celaena_16 (EB), ChiliPepper_16 (EB), Clayda5_16 (EB), CliffHanger_19 (EB), Coltrane_16 (EB), CroZenni_17 (EB), DelaGarza_21 (GF), DickRichards_17 (EB), Didgeridoo_18 (EB), DirtyBubble_17 (EB), Dismas_16 (EB), Doobus_17 (EB), Elva_18 (EB), Eula_17 (EB), Finalfrontier_18 (EB), FireCastle_20 (EJ), FlameThrower_16 (EB), Franklin22_17 (EB), Gack_16 (EB), Gingerbug_19 (GF), Icarian_18 (EB), IndiRoo_21 (EJ), IndyLu_17 (EB), Johnathan_17 (EB), Jovita_17 (EB), Kate33_17 (EB), Katzastrophic_16 (EB), Kenzers_17 (EB), Kieran_16 (EB), Lahqtemish_17 (EB), Lesiram_22 (GF), LimaBean_17 (EB), Loviatar_30 (EB), Lynlen_17 (EB), Milani_21 (EJ), Nicky22_18 (EB), Olliecat_17 (EB), Phisb_17 (EB), QMacho_18 (EB), Quenya_17 (EB), Rollins_16 (EB), Rona_16 (EB), SanaSana_18 (EB), SansAfet_17 (EB), SarBear_17 (EB), Sharkboy_16 (EB), Skylord_16 (EB), Slay_17 (EB),

Squirrel_17 (EB), Stoor_17 (EB), Stromboli_17 (EB), Swervy_17 (EB), Teng_23 (GF), TukTuk_17 (EB), Vitas_16 (EB), WalkingDead_17 (EB),

Start 48:

- Found in 36 of 355 (10.1%) of genes in pham
- Manual Annotations of this start: 22 of 311
- Called 69.4% of time when present
- Phage (with cluster) where this start called: Antuna_23 (GA), Appa_22 (GA), Bauer_20 (FN), Blett_23 (GA), Bush_23 (GA), Cicada_22 (EJ), Dropshot_22 (GA), Goodman_21 (EJ), Htur_20 (EJ), Jera_21 (EJ), Johann_21 (EJ), MenE_23 (GA), MrSme_17 (UNK), PermaG_21 (EJ), Phonegingi_22 (GA), Pickles13_22 (GA), Rasovi_20 (EJ), SBlackberry_20 (EJ), Shayna_16 (EB), SunnyD_18 (EB), TurboVicky_20 (EJ), Typher_22 (EJ), Warren_23 (GA), Zanella_20 (EJ), Zucker_19 (FN),

Start 49:

- Found in 26 of 355 (7.3%) of genes in pham
- No Manual Annotations of this start.
- Called 3.8% of time when present
- Phage (with cluster) where this start called: GMA4_17 (singleton),

Start 60:

- Found in 12 of 355 (3.4%) of genes in pham
- Manual Annotations of this start: 6 of 311
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Catfish_21 (CU5), Dardanus_23 (CU3), DinoDaryn_23 (CU1), Goib_22 (CU1), Huffy_23 (CU1), TZGordon_23 (CU1),

Start 62:

- Found in 12 of 355 (3.4%) of genes in pham
- Manual Annotations of this start: 5 of 311
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Banquo_25 (CU1), Gsput1_19 (CU2), Schmidt_19 (CU4), Splinter_21 (CU1), TinaLin_24 (CU1), Vendetta_21 (CU1),

Start 63:

- Found in 11 of 355 (3.1%) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Sucha_17 (EJ),

Summary by clusters:

There are 25 clusters represented in this pham: FQ, singleton, FA, FB, FN, FO, CU5, CU4, CU3, CU2, CU1, BD4, BD6, BD1, BD3, BD2, EH, EJ, EF, EB, GF, GA, AY, UNK, BU,

Info for manual annotations of cluster AY:

- Start number 26 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BD1:

- Start number 45 was manually annotated 55 times for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 45 was manually annotated 32 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 45 was manually annotated 12 times for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 45 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:

- Start number 45 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster BU:

- Start number 29 was manually annotated 1 time for cluster BU.
- Start number 32 was manually annotated 42 times for cluster BU.

Info for manual annotations of cluster CU1:

- Start number 60 was manually annotated 4 times for cluster CU1.
- Start number 62 was manually annotated 4 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 60 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 62 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 60 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster EB:

- Start number 45 was manually annotated 1 time for cluster EB.
- Start number 47 was manually annotated 60 times for cluster EB.

Info for manual annotations of cluster EF:

- Start number 43 was manually annotated 31 times for cluster EF.
- Start number 45 was manually annotated 4 times for cluster EF.

Info for manual annotations of cluster EH:

- Start number 42 was manually annotated 2 times for cluster EH.
- Start number 44 was manually annotated 10 times for cluster EH.

Info for manual annotations of cluster EJ:

- Start number 47 was manually annotated 3 times for cluster EJ.
- Start number 48 was manually annotated 11 times for cluster EJ.
- Start number 63 was manually annotated 1 time for cluster EJ.

Info for manual annotations of cluster FA:

- Start number 28 was manually annotated 1 time for cluster FA.

Info for manual annotations of cluster FB:

- Start number 26 was manually annotated 5 times for cluster FB.

Info for manual annotations of cluster FN:

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

Info for manual annotations of cluster FO:

- Start number 26 was manually annotated 1 time for cluster FO.

Info for manual annotations of cluster FQ:

- Start number 26 was manually annotated 2 times for cluster FQ.

Info for manual annotations of cluster GA:

- Start number 48 was manually annotated 9 times for cluster GA.

Info for manual annotations of cluster GF:

- Start number 47 was manually annotated 3 times for cluster GF.

Gene Information:

Gene: ATCC29399BC_15 Start: 11283, Stop: 12224, Start Num: 32

Candidate Starts for ATCC29399BC_15:

(25, 11268), (Start: 29 @11274 has 1 MA's), (30, 11277), (Start: 32 @11283 has 42 MA's), (36, 11316), (38, 11322), (41, 11334), (56, 11361), (59, 11370), (73, 11400), (74, 11403), (75, 11406), (77, 11418), (79, 11427), (85, 11442), (95, 11472), (99, 11502), (103, 11517), (108, 11532), (109, 11535), (123, 11583), (131, 11601), (141, 11637), (144, 11643), (149, 11670), (150, 11673), (154, 11694), (158, 11712), (160, 11721), (167, 11745), (171, 11754), (184, 11817), (187, 11829), (198, 11871), (199, 11874), (200, 11877), (217, 11943), (221, 11964), (224, 11979), (227, 11994), (229, 12000), (259, 12072), (260, 12075), (262, 12093), (263, 12096), (266, 12105), (278, 12153), (282, 12165), (285, 12174), (287, 12183), (289, 12189), (291, 12195), (295, 12210),

Gene: ATCC29399BT_15 Start: 11281, Stop: 12228, Start Num: 32

Candidate Starts for ATCC29399BT_15:

(Start: 29 @11272 has 1 MA's), (Start: 32 @11281 has 42 MA's), (36, 11314), (38, 11320), (41, 11332), (49, 11341), (59, 11374), (73, 11404), (74, 11407), (75, 11410), (77, 11422), (82, 11437), (85, 11446), (95, 11476), (99, 11506), (103, 11521), (107, 11533), (108, 11536), (109, 11539), (131, 11605), (141, 11641), (144, 11647), (149, 11674), (150, 11677), (160, 11725), (167, 11749), (171, 11758), (187, 11833), (199, 11878), (200, 11881), (201, 11884), (217, 11947), (221, 11968), (224, 11983), (227, 11998), (229, 12004), (259, 12076), (260, 12079), (262, 12097), (263, 12100), (278, 12157), (282, 12169), (285, 12178), (289, 12193), (291, 12199), (295, 12214),

Gene: Aaronocolus_19 Start: 14993, Stop: 15850, Start Num: 45

Candidate Starts for Aaronocolus_19:

(Start: 45 @14993 has 111 MA's), (73, 15065), (77, 15083), (87, 15113), (96, 15146), (125, 15251), (140, 15278), (166, 15380), (176, 15425), (197, 15491), (198, 15497), (216, 15551), (217, 15563), (244, 15665), (248, 15677), (252, 15686), (296, 15839), (297, 15842),

Gene: AbbyDaisy_18 Start: 14442, Stop: 15422, Start Num: 26

Candidate Starts for AbbyDaisy_18:

(Start: 26 @14442 has 9 MA's), (66, 14571), (77, 14589), (80, 14601), (95, 14643), (97, 14661), (120, 14736), (177, 14943), (184, 14970), (192, 15006), (217, 15105), (222, 15135), (226, 15147), (231, 15168), (238, 15198), (244, 15231), (254, 15258), (267, 15300), (280, 15351), (284, 15363),

Gene: Abigail_17 Start: 13263, Stop: 14117, Start Num: 47

Candidate Starts for Abigail_17:

(Start: 47 @13263 has 66 MA's), (74, 13338), (82, 13368), (85, 13377), (113, 13476), (116, 13491), (140, 13548), (164, 13644), (167, 13653), (175, 13686), (202, 13770), (212, 13791), (238, 13908), (280, 14049), (297, 14109),

Gene: Aesir_29 Start: 17532, Stop: 18422, Start Num: 43

Candidate Starts for Aesir_29:

(Start: 43 @17532 has 31 MA's), (121, 17787), (143, 17856), (149, 17880), (156, 17913), (198, 18069), (212, 18102), (217, 18135), (229, 18192), (245, 18243), (273, 18333), (283, 18363), (297, 18414), (298, 18417),

Gene: Ajin_31 Start: 17618, Stop: 18502, Start Num: 45

Candidate Starts for Ajin_31:

(17, 17519), (Start: 45 @17618 has 111 MA's), (78, 17714), (85, 17735), (107, 17819), (109, 17825), (151, 17966), (217, 18215), (222, 18245), (245, 18323), (251, 18335), (252, 18338), (260, 18356), (276, 18422), (277, 18425), (278, 18428), (298, 18497),

Gene: Albedo_17 Start: 13131, Stop: 13985, Start Num: 47

Candidate Starts for Albedo_17:

(Start: 47 @13131 has 66 MA's), (74, 13206), (82, 13236), (85, 13245), (113, 13344), (140, 13416), (164, 13512), (167, 13521), (175, 13554), (202, 13638), (209, 13653), (276, 13905), (280, 13917), (297, 13977),

Gene: Albright_17 Start: 13042, Stop: 13896, Start Num: 47

Candidate Starts for Albright_17:

(Start: 47 @13042 has 66 MA's), (74, 13117), (82, 13147), (85, 13156), (113, 13255), (116, 13270), (140, 13327), (164, 13423), (167, 13432), (175, 13465), (202, 13549), (212, 13570), (238, 13687), (239, 13696), (275, 13813), (280, 13828), (297, 13888),

Gene: Alsaber_20 Start: 15677, Stop: 16534, Start Num: 45

Candidate Starts for Alsaber_20:

(Start: 45 @15677 has 111 MA's), (57, 15713), (73, 15749), (85, 15791), (125, 15935), (140, 15962), (195, 16169), (197, 16175), (204, 16199), (244, 16349), (289, 16499), (296, 16523), (297, 16526),

Gene: Alvy_21 Start: 15007, Stop: 15861, Start Num: 45

Candidate Starts for Alvy_21:

(Start: 45 @15007 has 111 MA's), (65, 15061), (77, 15097), (197, 15502), (296, 15850), (297, 15853),

Gene: Amela_19 Start: 15969, Stop: 16826, Start Num: 45

Candidate Starts for Amela_19:

(Start: 45 @15969 has 111 MA's), (57, 16005), (73, 16041), (85, 16083), (125, 16227), (167, 16359), (195, 16461), (197, 16467), (244, 16641), (252, 16662), (278, 16752), (289, 16791), (296, 16815), (297, 16818),

Gene: Amethyst_19 Start: 15455, Stop: 16312, Start Num: 45

Candidate Starts for Amethyst_19:

(Start: 45 @15455 has 111 MA's), (77, 15545), (89, 15584), (125, 15713), (138, 15737), (151, 15776), (176, 15887), (179, 15896), (216, 16013), (217, 16025), (219, 16034), (252, 16148), (262, 16184), (281, 16247), (296, 16301), (297, 16304),

Gene: Anakin_30 Start: 17786, Stop: 18676, Start Num: 43

Candidate Starts for Anakin_30:

(Start: 43 @17786 has 31 MA's), (143, 18110), (149, 18134), (156, 18167), (198, 18323), (245, 18497), (283, 18617), (297, 18668), (298, 18671),

Gene: Andris_19 Start: 14711, Stop: 15565, Start Num: 45

Candidate Starts for Andris_19:

(Start: 45 @14711 has 111 MA's), (65, 14765), (77, 14801), (96, 14864), (151, 15032), (194, 15197), (195, 15200), (197, 15206), (238, 15362), (252, 15401), (253, 15404), (296, 15554), (297, 15557),

Gene: Animus_20 Start: 15047, Stop: 15901, Start Num: 45

Candidate Starts for Animus_20:

(Start: 45 @15047 has 111 MA's), (96, 15200), (151, 15368), (194, 15533), (197, 15542), (219, 15623), (252, 15737), (296, 15890), (297, 15893),

Gene: AnnaLie_18 Start: 13450, Stop: 14304, Start Num: 47

Candidate Starts for AnnaLie_18:

(Start: 47 @13450 has 66 MA's), (74, 13525), (82, 13555), (85, 13564), (113, 13663), (116, 13678), (140, 13735), (164, 13831), (167, 13840), (202, 13957), (212, 13978), (238, 14095), (280, 14236), (297, 14296),

Gene: AnnaSerena_30 Start: 17795, Stop: 18685, Start Num: 43

Candidate Starts for AnnaSerena_30:

(Start: 43 @17795 has 31 MA's), (143, 18119), (149, 18143), (156, 18176), (198, 18332), (217, 18398), (245, 18506), (283, 18626), (297, 18677), (298, 18680),

Gene: Antuna_23 Start: 13703, Stop: 14563, Start Num: 48

Candidate Starts for Antuna_23:

(Start: 48 @13703 has 22 MA's), (61, 13739), (Start: 63 @13742 has 1 MA's), (73, 13763), (75, 13769), (77, 13781), (82, 13796), (99, 13862), (107, 13889), (116, 13919), (126, 13952), (157, 14045), (163, 14072), (195, 14195), (197, 14201), (209, 14234), (225, 14312), (295, 14549), (296, 14552),

Gene: Appa_22 Start: 13565, Stop: 14425, Start Num: 48

Candidate Starts for Appa_22:

(Start: 48 @13565 has 22 MA's), (61, 13601), (Start: 63 @13604 has 1 MA's), (73, 13625), (75, 13631), (77, 13643), (82, 13658), (99, 13724), (107, 13751), (116, 13781), (126, 13814), (157, 13907), (163, 13934), (195, 14057), (197, 14063), (209, 14096), (225, 14174), (295, 14411), (296, 14414),

Gene: Aquarius_15 Start: 11300, Stop: 12247, Start Num: 32

Candidate Starts for Aquarius_15:

(24, 11285), (Start: 29 @11291 has 1 MA's), (30, 11294), (Start: 32 @11300 has 42 MA's), (36, 11333), (41, 11351), (46, 11354), (49, 11360), (56, 11384), (59, 11393), (73, 11423), (74, 11426), (75, 11429), (77, 11441), (79, 11450), (95, 11495), (99, 11525), (103, 11540), (108, 11555), (109, 11558), (123, 11606), (131, 11624), (141, 11660), (144, 11666), (149, 11693), (150, 11696), (154, 11717), (160, 11744), (168, 11771), (171, 11777), (184, 11840), (187, 11852), (198, 11894), (199, 11897), (200, 11900), (212, 11933), (215, 11951), (217, 11966), (224, 12002), (227, 12017), (229, 12023), (255, 12092), (259, 12095), (260, 12098), (262, 12116), (263, 12119), (266, 12128), (278, 12176), (282, 12188), (285, 12197), (289, 12212), (291, 12218), (295, 12233),

Gene: ArV2_16 Start: 12791, Stop: 13762, Start Num: 28

Candidate Starts for ArV2_16:

(Start: 28 @12791 has 2 MA's), (77, 12935), (103, 13034), (107, 13046), (160, 13220), (168, 13247), (177, 13289), (205, 13403), (220, 13463), (222, 13481), (238, 13544), (250, 13592), (254, 13604), (284, 13703),

Gene: Armstrong_16 Start: 11609, Stop: 12466, Start Num: 47

Candidate Starts for Armstrong_16:

(Start: 47 @11609 has 66 MA's), (58, 11648), (74, 11684), (82, 11714), (86, 11726), (113, 11822), (140, 11894), (159, 11969), (164, 11990), (215, 12158), (240, 12269),

Gene: Arroyo_18 Start: 13651, Stop: 14505, Start Num: 47

Candidate Starts for Arroyo_18:

(Start: 47 @13651 has 66 MA's), (74, 13726), (82, 13756), (85, 13765), (113, 13864), (116, 13879), (140, 13936), (164, 14032), (167, 14041), (175, 14074), (202, 14158), (212, 14179), (238, 14296), (280, 14437), (297, 14497),

Gene: Asten_19 Start: 14959, Stop: 15816, Start Num: 45

Candidate Starts for Asten_19:

(Start: 45 @14959 has 111 MA's), (73, 15031), (77, 15049), (125, 15217), (140, 15244), (191, 15439), (197, 15457), (198, 15463), (216, 15517), (244, 15631), (252, 15652), (296, 15805), (297, 15808),

Gene: Attacne_15 Start: 11286, Stop: 12227, Start Num: 32

Candidate Starts for Attacne_15:

(Start: 29 @11277 has 1 MA's), (30, 11280), (Start: 32 @11286 has 42 MA's), (36, 11319), (41, 11337), (56, 11364), (59, 11373), (73, 11403), (74, 11406), (75, 11409), (77, 11421), (95, 11475), (99, 11505), (103, 11520), (107, 11532), (108, 11535), (109, 11538), (123, 11586), (131, 11604), (141, 11640), (144, 11646), (149, 11673), (150, 11676), (158, 11715), (160, 11724), (167, 11748), (171, 11757), (184, 11820), (187, 11832), (198, 11874), (199, 11877), (200, 11880), (215, 11931), (217, 11946), (221, 11967), (224, 11982), (227, 11997), (229, 12003), (259, 12075), (260, 12078), (262, 12096), (263, 12099), (266, 12108), (278, 12156), (282, 12168), (285, 12177), (289, 12192), (291, 12198), (295, 12213),

Gene: AvGardian_17 Start: 12793, Stop: 13647, Start Num: 47

Candidate Starts for AvGardian_17:

(Start: 47 @12793 has 66 MA's), (61, 12838), (74, 12868), (82, 12898), (85, 12907), (100, 12967), (113, 13006), (116, 13021), (140, 13078), (152, 13117), (164, 13174), (167, 13183), (175, 13216), (198, 13288), (209, 13315), (212, 13321), (230, 13414), (241, 13456), (276, 13567), (278, 13573), (280, 13579), (297, 13639),

Gene: Avocadoman_17 Start: 13206, Stop: 14060, Start Num: 47

Candidate Starts for Avocadoman_17:

(Start: 47 @13206 has 66 MA's), (74, 13281), (82, 13311), (85, 13320), (113, 13419), (116, 13434), (140, 13491), (164, 13587), (167, 13596), (175, 13629), (202, 13713), (238, 13851), (280, 13992), (297, 14052),

Gene: BAjuniper_17 Start: 12793, Stop: 13644, Start Num: 47

Candidate Starts for BAjuniper_17:

(Start: 47 @12793 has 66 MA's), (61, 12838), (74, 12868), (82, 12898), (113, 13006), (116, 13021), (140, 13078), (164, 13174), (175, 13213), (202, 13297), (212, 13318), (226, 13393), (245, 13462), (261, 13504), (280, 13576), (297, 13636),

Gene: BabyDaisy_18 Start: 13266, Stop: 14120, Start Num: 47

Candidate Starts for BabyDaisy_18:

(Start: 47 @13266 has 66 MA's), (61, 13311), (74, 13341), (82, 13371), (85, 13380), (116, 13494), (140, 13551), (212, 13794), (225, 13866), (240, 13923), (276, 14040), (280, 14052), (297, 14112),

Gene: BabyYoda_17 Start: 13134, Stop: 13988, Start Num: 47

Candidate Starts for BabyYoda_17:

(Start: 47 @13134 has 66 MA's), (61, 13179), (74, 13209), (82, 13239), (113, 13347), (116, 13362), (140, 13419), (164, 13515), (167, 13524), (175, 13557), (212, 13662), (214, 13671), (215, 13680), (226, 13737), (230, 13755), (238, 13779), (276, 13908), (280, 13920), (297, 13980),

Gene: Bachaco_16 Start: 12667, Stop: 13521, Start Num: 47

Candidate Starts for Bachaco_16:

(Start: 47 @12667 has 66 MA's), (74, 12742), (82, 12772), (96, 12820), (113, 12880), (137, 12946), (140, 12952), (152, 12991), (164, 13048), (175, 13090), (198, 13162), (212, 13195), (215, 13213), (276, 13441), (278, 13447), (297, 13513),

Gene: Banquo_25 Start: 16992, Stop: 17822, Start Num: 62

Candidate Starts for Banquo_25:

(Start: 60 @16989 has 6 MA's), (Start: 62 @16992 has 5 MA's), (72, 17007), (81, 17037), (84, 17046), (91, 17070), (121, 17184), (124, 17190), (128, 17202), (133, 17214), (159, 17313), (180, 17400), (187, 17424), (214, 17508), (217, 17532), (218, 17535), (226, 17571), (254, 17652), (270, 17718), (276, 17742), (280, 17754), (281, 17757),

Gene: Barnstormer_15 Start: 12284, Stop: 13150, Start Num: 44

Candidate Starts for Barnstormer_15:

(Start: 44 @12284 has 10 MA's), (54, 12305), (87, 12410), (107, 12488), (170, 12695), (197, 12797), (238, 12947), (262, 13022), (280, 13082), (294, 13133),

Gene: BarryBee_21 Start: 14969, Stop: 15826, Start Num: 45

Candidate Starts for BarryBee_21:

(Start: 45 @14969 has 111 MA's), (73, 15041), (77, 15059), (125, 15227), (140, 15254), (191, 15449), (197, 15467), (198, 15473), (216, 15527), (244, 15641), (252, 15662), (296, 15815), (297, 15818),

Gene: BartholomewSD_21 Start: 15007, Stop: 15861, Start Num: 45

Candidate Starts for BartholomewSD_21:

(Start: 45 @15007 has 111 MA's), (65, 15061), (77, 15097), (197, 15502), (296, 15850), (297, 15853),

Gene: Bauer_20 Start: 15182, Stop: 16024, Start Num: 48

Candidate Starts for Bauer_20:

(Start: 26 @15113 has 9 MA's), (31, 15122), (34, 15140), (35, 15143), (37, 15158), (Start: 48 @15182 has 22 MA's), (50, 15185), (66, 15239), (79, 15269), (82, 15275), (95, 15314), (98, 15341), (99, 15344), (103, 15359), (120, 15407), (135, 15449), (144, 15467), (153, 15512), (160, 15548), (161, 15551), (168, 15575), (190, 15668), (212, 15713), (217, 15746), (222, 15776), (229, 15803), (233, 15815), (235, 15836), (241, 15863), (264, 15893), (278, 15947), (280, 15953), (284, 15965),

Gene: BeardedLady_20 Start: 15240, Stop: 16097, Start Num: 45

Candidate Starts for BeardedLady_20:

(Start: 45 @15240 has 111 MA's), (73, 15312), (77, 15330), (87, 15360), (96, 15393), (125, 15498), (140, 15525), (166, 15627), (176, 15672), (197, 15738), (198, 15744), (216, 15798), (217, 15810), (244, 15912), (248, 15924), (252, 15933), (296, 16086), (297, 16089),

Gene: BelmontSKP_18 Start: 13450, Stop: 14304, Start Num: 47

Candidate Starts for BelmontSKP_18:

(Start: 47 @13450 has 66 MA's), (74, 13525), (82, 13555), (85, 13564), (113, 13663), (116, 13678), (140, 13735), (164, 13831), (167, 13840), (202, 13957), (212, 13978), (238, 14095), (280, 14236), (297, 14296),

Gene: Benry_20 Start: 13807, Stop: 14670, Start Num: 47

Candidate Starts for Benry_20:

(Start: 47 @13807 has 66 MA's), (Start: 63 @13849 has 1 MA's), (77, 13888), (82, 13903), (103, 13984), (105, 13990), (126, 14059), (151, 14125), (167, 14194), (171, 14203), (175, 14233), (182, 14251), (215, 14368), (229, 14437), (236, 14458), (237, 14461), (244, 14485), (278, 14596), (279, 14599), (295, 14656), (296, 14659),

Gene: Bernstein_16 Start: 11669, Stop: 12526, Start Num: 47

Candidate Starts for Bernstein_16:

(Start: 47 @11669 has 66 MA's), (58, 11708), (74, 11744), (82, 11774), (86, 11786), (113, 11882), (140, 11954), (159, 12029), (164, 12050), (215, 12218), (240, 12329),

Gene: BlackSpider_18 Start: 14770, Stop: 15681, Start Num: 26

Candidate Starts for BlackSpider_18:

(1, 14101), (2, 14233), (5, 14440), (Start: 26 @14770 has 9 MA's), (Start: 48 @14839 has 22 MA's), (56, 14866), (77, 14917), (79, 14926), (82, 14932), (103, 15016), (144, 15124), (149, 15154), (153, 15169), (158, 15196), (160, 15205), (168, 15232), (190, 15325), (195, 15340), (212, 15370), (217, 15403), (224, 15439), (226, 15445), (233, 15472), (237, 15499), (260, 15544), (264, 15550), (267, 15562), (280, 15610), (282, 15616), (284, 15622),

Gene: Blett_23 Start: 13718, Stop: 14578, Start Num: 48

Candidate Starts for Blett_23:

(Start: 48 @13718 has 22 MA's), (61, 13754), (Start: 63 @13757 has 1 MA's), (73, 13778), (75, 13784), (77, 13796), (79, 13805), (82, 13811), (99, 13877), (116, 13934), (126, 13967), (157, 14060), (163, 14087), (195, 14210), (197, 14216), (209, 14249), (225, 14327), (295, 14564), (296, 14567),

Gene: Bovely_19 Start: 14999, Stop: 15856, Start Num: 45

Candidate Starts for Bovely_19:

(Start: 45 @14999 has 111 MA's), (73, 15071), (77, 15089), (87, 15119), (96, 15152), (125, 15257), (140, 15284), (166, 15386), (176, 15431), (197, 15497), (198, 15503), (216, 15557), (217, 15569), (244, 15671), (248, 15683), (252, 15692), (296, 15845), (297, 15848),

Gene: Bowden_20 Start: 14939, Stop: 15793, Start Num: 45

Candidate Starts for Bowden_20:

(Start: 45 @14939 has 111 MA's), (65, 14993), (77, 15029), (151, 15260), (197, 15434), (296, 15782), (297, 15785),

Gene: Brahms_16 Start: 11609, Stop: 12466, Start Num: 47

Candidate Starts for Brahms_16:

(Start: 47 @11609 has 66 MA's), (58, 11648), (74, 11684), (82, 11714), (86, 11726), (113, 11822), (140, 11894), (159, 11969), (164, 11990), (215, 12158), (240, 12269),

Gene: Brataylor_20 Start: 14985, Stop: 15842, Start Num: 45

Candidate Starts for Brataylor_20:

(Start: 45 @14985 has 111 MA's), (73, 15057), (125, 15243), (140, 15270), (176, 15417), (194, 15474), (195, 15477), (197, 15483), (198, 15489), (229, 15612), (252, 15678), (296, 15831), (297, 15834),

Gene: BrayBeast_17 Start: 13162, Stop: 14070, Start Num: 26

Candidate Starts for BrayBeast_17:

(Start: 26 @13162 has 9 MA's), (Start: 48 @13231 has 22 MA's), (66, 13288), (82, 13321), (95, 13360), (99, 13390), (103, 13405), (120, 13453), (149, 13543), (153, 13558), (160, 13594), (168, 13621), (171, 13627), (190, 13714), (212, 13759), (222, 13822), (224, 13828), (233, 13861), (237, 13888), (241, 13909), (260, 13933), (264, 13939), (267, 13951), (278, 13993), (280, 13999), (282, 14005), (284, 14011),

Gene: BroPlease_20 Start: 15689, Stop: 16543, Start Num: 45

Candidate Starts for BroPlease_20:

(7, 15533), (8, 15536), (Start: 45 @15689 has 111 MA's), (85, 15803), (96, 15842), (126, 15950), (147, 15992), (158, 16046), (239, 16349), (296, 16532), (297, 16535), (298, 16538),

Gene: BruceLethal_15 Start: 11290, Stop: 12237, Start Num: 32

Candidate Starts for BruceLethal_15:

(24, 11275), (Start: 29 @11281 has 1 MA's), (Start: 32 @11290 has 42 MA's), (36, 11323), (41, 11341), (46, 11344), (49, 11350), (56, 11374), (59, 11383), (73, 11413), (77, 11431), (79, 11440), (95, 11485), (99, 11515), (103, 11530), (107, 11542), (109, 11548), (123, 11596), (131, 11614), (136, 11641), (141, 11650), (144, 11656), (149, 11683), (154, 11707), (167, 11758), (171, 11767), (184, 11830), (187, 11842), (198, 11884), (199, 11887), (200, 11890), (215, 11941), (217, 11956), (221, 11977), (224, 11992), (227, 12007), (229, 12013), (259, 12085), (260, 12088), (262, 12106), (263, 12109), (266, 12118), (278, 12166), (282, 12178), (285, 12187), (289, 12202), (291, 12208), (295, 12223),

Gene: BryanRecycles_20 Start: 15156, Stop: 16013, Start Num: 45

Candidate Starts for BryanRecycles_20:

(Start: 45 @15156 has 111 MA's), (73, 15228), (77, 15246), (96, 15309), (125, 15414), (140, 15441), (151, 15477), (166, 15543), (176, 15588), (197, 15654), (198, 15660), (217, 15726), (225, 15765), (229, 15783), (248, 15840), (260, 15867), (296, 16002), (297, 16005),

Gene: BubbaBear_17 Start: 13131, Stop: 13985, Start Num: 47

Candidate Starts for BubbaBear_17:

(Start: 47 @13131 has 66 MA's), (74, 13206), (82, 13236), (85, 13245), (113, 13344), (140, 13416), (164, 13512), (167, 13521), (175, 13554), (202, 13638), (276, 13905), (280, 13917), (297, 13977),

Gene: Buldak_16 Start: 13043, Stop: 13900, Start Num: 47

Candidate Starts for Buldak_16:

(Start: 47 @13043 has 66 MA's), (61, 13085), (82, 13145), (107, 13238), (109, 13244), (116, 13268), (122, 13292), (126, 13301), (137, 13319), (140, 13325), (164, 13421), (167, 13430), (183, 13484), (186, 13493), (198, 13538), (209, 13565), (219, 13613), (230, 13664), (268, 13787), (275, 13817), (278, 13826), (296, 13889),

Gene: Burritobowl_17 Start: 13209, Stop: 14063, Start Num: 47

Candidate Starts for Burritobowl_17:

(Start: 47 @13209 has 66 MA's), (74, 13284), (82, 13314), (85, 13323), (113, 13422), (116, 13437), (140, 13494), (164, 13590), (167, 13599), (175, 13632), (202, 13716), (212, 13737), (238, 13854), (280, 13995), (297, 14055),

Gene: Bush_23 Start: 13699, Stop: 14559, Start Num: 48

Candidate Starts for Bush_23:

(Start: 48 @13699 has 22 MA's), (61, 13735), (Start: 63 @13738 has 1 MA's), (73, 13759), (75, 13765), (77, 13777), (82, 13792), (99, 13858), (107, 13885), (116, 13915), (126, 13948), (157, 14041), (163, 14068), (195, 14191), (197, 14197), (209, 14230), (225, 14308), (295, 14545), (296, 14548),

Gene: Caelum_20 Start: 15485, Stop: 16339, Start Num: 45

Candidate Starts for Caelum_20:

(Start: 45 @15485 has 111 MA's), (54, 15503), (70, 15551), (77, 15575), (85, 15599), (89, 15614), (125, 15743), (179, 15923), (195, 15974), (197, 15980), (217, 16052), (252, 16175), (262, 16211), (281, 16274), (296, 16328), (297, 16331),

Gene: Caliburn_19 Start: 14973, Stop: 15830, Start Num: 45

Candidate Starts for Caliburn_19:

(Start: 45 @14973 has 111 MA's), (73, 15045), (77, 15063), (87, 15093), (96, 15126), (125, 15231), (140, 15258), (166, 15360), (176, 15405), (197, 15471), (198, 15477), (216, 15531), (217, 15543), (244, 15645), (248, 15657), (252, 15666), (296, 15819), (297, 15822),

Gene: Caron_15 Start: 12326, Stop: 13192, Start Num: 44

Candidate Starts for Caron_15:

(Start: 44 @12326 has 10 MA's), (54, 12347), (87, 12452), (107, 12530), (170, 12737), (197, 12839), (253, 13028), (262, 13064), (280, 13124), (294, 13175),

Gene: Cashington_17 Start: 13058, Stop: 13912, Start Num: 47

Candidate Starts for Cashington_17:

(Start: 47 @13058 has 66 MA's), (74, 13133), (82, 13163), (85, 13172), (113, 13271), (116, 13286), (140, 13343), (164, 13439), (167, 13448), (175, 13481), (202, 13565), (212, 13586), (238, 13703), (280, 13844), (297, 13904),

Gene: Catfish_21 Start: 17616, Stop: 18467, Start Num: 60

Candidate Starts for Catfish_21:

(Start: 60 @17616 has 6 MA's), (Start: 62 @17619 has 5 MA's), (69, 17640), (81, 17676), (91, 17709), (109, 17778), (121, 17823), (133, 17853), (169, 17988), (174, 18015), (180, 18039), (186, 18060), (218, 18180), (236, 18246), (238, 18252), (292, 18447),

Gene: Celaena_16 Start: 12603, Stop: 13457, Start Num: 47

Candidate Starts for Celaena_16:

(Start: 47 @12603 has 66 MA's), (74, 12678), (82, 12708), (96, 12756), (113, 12816), (116, 12831), (140, 12888), (152, 12927), (164, 12984), (175, 13026), (198, 13098), (212, 13131), (215, 13149), (276, 13377), (278, 13383), (297, 13449),

Gene: Celery_22 Start: 15630, Stop: 16484, Start Num: 45

Candidate Starts for Celery_22:

(Start: 45 @15630 has 111 MA's), (57, 15666), (73, 15702), (77, 15720), (85, 15744), (110, 15837), (125, 15888), (162, 16002), (166, 16017), (167, 16020), (176, 16062), (191, 16107), (194, 16116), (195, 16119), (197, 16125), (204, 16149), (289, 16449), (296, 16473), (297, 16476),

Gene: Celeste_19 Start: 14977, Stop: 15834, Start Num: 45

Candidate Starts for Celeste_19:

(Start: 45 @14977 has 111 MA's), (73, 15049), (96, 15130), (125, 15235), (140, 15262), (194, 15466), (195, 15469), (197, 15475), (217, 15547), (229, 15604), (252, 15670), (296, 15823), (297, 15826),

Gene: Celia_19 Start: 15416, Stop: 16273, Start Num: 45

Candidate Starts for Celia_19:

(Start: 45 @15416 has 111 MA's), (64, 15467), (73, 15488), (77, 15506), (85, 15530), (96, 15569), (198, 15920), (209, 15947), (217, 15986), (230, 16046), (288, 16235), (296, 16262), (297, 16265),

Gene: Cen1621_15 Start: 11346, Stop: 12224, Start Num: 42

Candidate Starts for Cen1621_15:

(Start: 42 @11346 has 2 MA's), (76, 11436), (127, 11619), (215, 11919), (280, 12156), (297, 12216),

Gene: ChiliPepper_16 Start: 12807, Stop: 13661, Start Num: 47

Candidate Starts for ChiliPepper_16:

(Start: 47 @12807 has 66 MA's), (55, 12831), (61, 12852), (74, 12882), (82, 12912), (116, 13035), (137, 13086), (140, 13092), (202, 13314), (209, 13329), (212, 13335), (241, 13470), (276, 13581),

(280, 13593), (297, 13653),

Gene: Chivey_29 Start: 16948, Stop: 17838, Start Num: 43

Candidate Starts for Chivey_29:

(Start: 43 @16948 has 31 MA's), (115, 17176), (121, 17203), (143, 17272), (149, 17296), (156, 17329), (198, 17485), (212, 17518), (217, 17551), (229, 17608), (245, 17659), (273, 17749), (283, 17779), (297, 17830), (298, 17833),

Gene: Chucky_19 Start: 14970, Stop: 15827, Start Num: 45

Candidate Starts for Chucky_19:

(Start: 45 @14970 has 111 MA's), (73, 15042), (77, 15060), (125, 15228), (140, 15255), (197, 15468), (198, 15474), (217, 15540), (229, 15597), (244, 15642), (252, 15663), (296, 15816), (297, 15819),

Gene: Cicada_22 Start: 15575, Stop: 16468, Start Num: 48

Candidate Starts for Cicada_22:

(Start: 48 @15575 has 22 MA's), (82, 15668), (105, 15755), (126, 15839), (151, 15920), (152, 15923), (182, 16046), (224, 16214), (244, 16283), (252, 16304), (253, 16307), (278, 16394), (279, 16397), (289, 16433),

Gene: Clayda5_16 Start: 11609, Stop: 12466, Start Num: 47

Candidate Starts for Clayda5_16:

(Start: 47 @11609 has 66 MA's), (58, 11648), (74, 11684), (82, 11714), (86, 11726), (113, 11822), (140, 11894), (159, 11969), (164, 11990), (215, 12158), (240, 12269),

Gene: CliffHanger_19 Start: 12643, Stop: 13500, Start Num: 47

Candidate Starts for CliffHanger_19:

(Start: 47 @12643 has 66 MA's), (82, 12745), (140, 12925), (212, 13171), (272, 13405), (280, 13432), (296, 13489), (297, 13492),

Gene: CocoCinnamon_22 Start: 14814, Stop: 15716, Start Num: 26

Candidate Starts for CocoCinnamon_22:

(Start: 26 @14814 has 9 MA's), (37, 14862), (Start: 47 @14883 has 66 MA's), (Start: 48 @14886 has 22 MA's), (95, 15015), (99, 15045), (103, 15060), (149, 15183), (153, 15198), (168, 15261), (212, 15405), (217, 15438), (224, 15474), (226, 15480), (233, 15507), (241, 15555), (280, 15645), (284, 15657),

Gene: Coltrane_16 Start: 11609, Stop: 12466, Start Num: 47

Candidate Starts for Coltrane_16:

(Start: 47 @11609 has 66 MA's), (58, 11648), (74, 11684), (82, 11714), (86, 11726), (113, 11822), (140, 11894), (159, 11969), (164, 11990), (215, 12158), (240, 12269),

Gene: Conan_20 Start: 15399, Stop: 16256, Start Num: 45

Candidate Starts for Conan_20:

(Start: 45 @15399 has 111 MA's), (57, 15435), (73, 15471), (85, 15513), (125, 15657), (166, 15786), (167, 15789), (176, 15831), (195, 15891), (197, 15897), (225, 16008), (244, 16071), (252, 16092), (289, 16221), (296, 16245), (297, 16248),

Gene: CoolCookie_30 Start: 17793, Stop: 18683, Start Num: 43

Candidate Starts for CoolCookie_30:

(Start: 43 @17793 has 31 MA's), (143, 18117), (149, 18141), (156, 18174), (198, 18330), (217, 18396), (245, 18504), (283, 18624), (297, 18675), (298, 18678),

Gene: Cota_15 Start: 11295, Stop: 12242, Start Num: 32

Candidate Starts for Cota_15:

(24, 11280), (Start: 29 @11286 has 1 MA's), (Start: 32 @11295 has 42 MA's), (36, 11328), (41, 11346), (46, 11349), (49, 11355), (56, 11379), (59, 11388), (73, 11418), (74, 11421), (75, 11424), (77, 11436), (82, 11451), (85, 11460), (95, 11490), (99, 11520), (103, 11535), (107, 11547), (108, 11550), (109, 11553), (123, 11601), (131, 11619), (141, 11655), (144, 11661), (149, 11688), (154, 11712), (160, 11739), (167, 11763), (171, 11772), (184, 11835), (198, 11889), (199, 11892), (200, 11895), (204, 11907), (215, 11946), (217, 11961), (219, 11970), (221, 11982), (224, 11997), (227, 12012), (229, 12018), (259, 12090), (260, 12093), (262, 12111), (263, 12114), (266, 12123), (278, 12171), (282, 12183), (285, 12192), (289, 12207), (291, 12213), (295, 12228),

Gene: Crestdrop_29 Start: 16857, Stop: 17747, Start Num: 43

Candidate Starts for Crestdrop_29:

(Start: 43 @16857 has 31 MA's), (121, 17112), (143, 17181), (149, 17205), (156, 17238), (212, 17427), (217, 17460), (229, 17517), (245, 17568), (273, 17658), (283, 17688), (297, 17739), (298, 17742),

Gene: CroZenni_17 Start: 13041, Stop: 13895, Start Num: 47

Candidate Starts for CroZenni_17:

(Start: 47 @13041 has 66 MA's), (74, 13116), (82, 13146), (85, 13155), (113, 13254), (116, 13269), (140, 13326), (164, 13422), (167, 13431), (175, 13464), (202, 13548), (212, 13569), (238, 13686), (280, 13827), (297, 13887),

Gene: Cybele_30 Start: 17763, Stop: 18653, Start Num: 43

Candidate Starts for Cybele_30:

(Start: 43 @17763 has 31 MA's), (143, 18087), (149, 18111), (156, 18144), (198, 18300), (245, 18474), (283, 18594), (297, 18645), (298, 18648),

Gene: DannyDe_29 Start: 16940, Stop: 17830, Start Num: 43

Candidate Starts for DannyDe_29:

(Start: 43 @16940 has 31 MA's), (115, 17168), (121, 17195), (143, 17264), (149, 17288), (156, 17321), (212, 17510), (217, 17543), (229, 17600), (245, 17651), (273, 17741), (283, 17771), (297, 17822), (298, 17825),

Gene: Danzina_20 Start: 15187, Stop: 16044, Start Num: 45

Candidate Starts for Danzina_20:

(Start: 45 @15187 has 111 MA's), (73, 15259), (96, 15340), (125, 15445), (140, 15472), (194, 15676), (195, 15679), (197, 15685), (229, 15814), (252, 15880), (296, 16033), (297, 16036),

Gene: Dardanus_23 Start: 15835, Stop: 16677, Start Num: 60

Candidate Starts for Dardanus_23:

(Start: 60 @15835 has 6 MA's), (Start: 62 @15838 has 5 MA's), (67, 15850), (81, 15886), (90, 15916), (91, 15919), (102, 15967), (114, 16000), (128, 16051), (133, 16063), (138, 16075), (169, 16198), (178, 16240), (180, 16249), (185, 16267), (186, 16270), (199, 16318), (200, 16321), (208, 16342), (218, 16390), (226, 16426), (251, 16498), (252, 16501), (254, 16507), (276, 16597), (281, 16612), (291, 16648),

Gene: Dattran_20 Start: 14976, Stop: 15833, Start Num: 45

Candidate Starts for Dattran_20:

(Start: 45 @14976 has 111 MA's), (73, 15048), (96, 15129), (125, 15234), (140, 15261), (194, 15465), (195, 15468), (197, 15474), (217, 15546), (229, 15603), (252, 15669), (296, 15822), (297, 15825),

Gene: Daudau_19 Start: 14913, Stop: 15773, Start Num: 45

Candidate Starts for Daudau_19:

(Start: 45 @14913 has 111 MA's), (52, 14928), (65, 14970), (77, 15006), (96, 15069), (140, 15201), (197, 15414), (296, 15762), (297, 15765), (298, 15768),

Gene: Dauntless_29 Start: 17500, Stop: 18390, Start Num: 43

Candidate Starts for Dauntless_29:

(Start: 43 @17500 has 31 MA's), (121, 17755), (143, 17824), (149, 17848), (156, 17881), (198, 18037), (212, 18070), (229, 18160), (245, 18211), (273, 18301), (283, 18331), (287, 18349), (297, 18382), (298, 18385),

Gene: DelaGarza_21 Start: 14265, Stop: 15128, Start Num: 47

Candidate Starts for DelaGarza_21:

(Start: 45 @14262 has 111 MA's), (Start: 47 @14265 has 66 MA's), (79, 14355), (82, 14361), (102, 14439), (105, 14448), (107, 14454), (127, 14520), (152, 14586), (157, 14613), (167, 14652), (197, 14769), (198, 14775), (209, 14802), (215, 14826), (244, 14943), (246, 14952), (260, 14982), (278, 15054), (295, 15114),

Gene: Dexers_18 Start: 15380, Stop: 16237, Start Num: 45

Candidate Starts for Dexers_18:

(Start: 45 @15380 has 111 MA's), (57, 15416), (73, 15452), (85, 15494), (125, 15638), (140, 15665), (195, 15872), (197, 15878), (204, 15902), (244, 16052), (289, 16202), (296, 16226), (297, 16229),

Gene: Diane_19 Start: 15448, Stop: 16305, Start Num: 45

Candidate Starts for Diane_19:

(Start: 45 @15448 has 111 MA's), (77, 15538), (125, 15706), (138, 15730), (151, 15769), (176, 15880), (179, 15889), (197, 15946), (216, 16006), (217, 16018), (219, 16027), (229, 16075), (252, 16141), (262, 16177), (281, 16240), (296, 16294), (297, 16297),

Gene: DickRichards_17 Start: 13536, Stop: 14390, Start Num: 47

Candidate Starts for DickRichards_17:

(Start: 47 @13536 has 66 MA's), (74, 13611), (82, 13641), (85, 13650), (113, 13749), (116, 13764), (140, 13821), (164, 13917), (167, 13926), (175, 13959), (202, 14043), (212, 14064), (238, 14181), (280, 14322), (297, 14382),

Gene: Didgeridoo_18 Start: 13268, Stop: 14122, Start Num: 47

Candidate Starts for Didgeridoo_18:

(Start: 47 @13268 has 66 MA's), (61, 13313), (74, 13343), (82, 13373), (85, 13382), (116, 13496), (140, 13553), (212, 13796), (225, 13868), (240, 13925), (276, 14042), (280, 14054), (297, 14114),

Gene: DinoDaryn_23 Start: 15864, Stop: 16697, Start Num: 60

Candidate Starts for DinoDaryn_23:

(Start: 60 @15864 has 6 MA's), (Start: 62 @15867 has 5 MA's), (72, 15882), (84, 15921), (90, 15942), (91, 15945), (133, 16089), (180, 16275), (208, 16362), (226, 16446), (254, 16527), (274, 16611), (276, 16617), (280, 16629), (281, 16632), (287, 16656),

Gene: DirtyBubble_17 Start: 13092, Stop: 13946, Start Num: 47

Candidate Starts for DirtyBubble_17:

(Start: 47 @13092 has 66 MA's), (61, 13137), (74, 13167), (82, 13197), (113, 13305), (116, 13320), (140, 13377), (164, 13473), (167, 13482), (175, 13515), (212, 13620), (214, 13629), (226, 13695), (230, 13713), (238, 13737), (276, 13866), (280, 13878), (297, 13938),

Gene: Dismas_16 Start: 12807, Stop: 13661, Start Num: 47

Candidate Starts for Dismas_16:

(Start: 47 @12807 has 66 MA's), (55, 12831), (61, 12852), (74, 12882), (82, 12912), (116, 13035), (137, 13086), (140, 13092), (202, 13314), (209, 13329), (212, 13335), (241, 13470), (276, 13581), (280, 13593), (297, 13653),

Gene: Doobus_17 Start: 13393, Stop: 14247, Start Num: 47

Candidate Starts for Doobus_17:

(Start: 47 @13393 has 66 MA's), (74, 13468), (82, 13498), (85, 13507), (113, 13606), (116, 13621), (140, 13678), (164, 13774), (167, 13783), (175, 13816), (202, 13900), (238, 14038), (239, 14047), (275, 14164), (280, 14179), (297, 14239),

Gene: DrParker_15 Start: 11327, Stop: 12268, Start Num: 32

Candidate Starts for DrParker_15:

(21, 11306), (Start: 29 @11318 has 1 MA's), (30, 11321), (Start: 32 @11327 has 42 MA's), (36, 11360), (41, 11378), (56, 11405), (59, 11414), (71, 11441), (73, 11444), (74, 11447), (75, 11450), (77, 11462), (79, 11471), (85, 11486), (95, 11516), (99, 11546), (103, 11561), (105, 11567), (107, 11573), (108, 11576), (109, 11579), (123, 11627), (131, 11645), (144, 11687), (149, 11714), (158, 11756), (160, 11765), (168, 11792), (171, 11798), (184, 11861), (187, 11873), (198, 11915), (199, 11918), (215, 11972), (217, 11987), (221, 12008), (224, 12023), (227, 12038), (229, 12044), (236, 12062), (262, 12137), (263, 12140), (266, 12149), (278, 12197), (282, 12209), (285, 12218), (289, 12233), (291, 12239), (295, 12254),

Gene: Dropshot_22 Start: 13565, Stop: 14425, Start Num: 48

Candidate Starts for Dropshot_22:

(Start: 48 @13565 has 22 MA's), (61, 13601), (Start: 63 @13604 has 1 MA's), (73, 13625), (75, 13631), (77, 13643), (82, 13658), (99, 13724), (107, 13751), (116, 13781), (126, 13814), (157, 13907), (163, 13934), (195, 14057), (197, 14063), (209, 14096), (225, 14174), (295, 14411), (296, 14414),

Gene: Dwayne_19 Start: 14966, Stop: 15823, Start Num: 45

Candidate Starts for Dwayne_19:

(Start: 45 @14966 has 111 MA's), (73, 15038), (77, 15056), (125, 15224), (140, 15251), (191, 15446), (197, 15464), (198, 15470), (216, 15524), (244, 15638), (252, 15659), (296, 15812), (297, 15815),

Gene: ELB20_18 Start: 15035, Stop: 15892, Start Num: 45

Candidate Starts for ELB20_18:

(Start: 45 @15035 has 111 MA's), (65, 15089), (77, 15125), (125, 15293), (197, 15533), (253, 15731), (296, 15881), (297, 15884),

Gene: Eddasa_20 Start: 15156, Stop: 16013, Start Num: 45

Candidate Starts for Eddasa_20:

(Start: 45 @15156 has 111 MA's), (73, 15228), (77, 15246), (96, 15309), (125, 15414), (140, 15441), (151, 15477), (166, 15543), (176, 15588), (197, 15654), (198, 15660), (217, 15726), (225, 15765), (229, 15783), (248, 15840), (260, 15867), (296, 16002), (297, 16005),

Gene: Eden_16 Start: 11733, Stop: 12590, Start Num: 45

Candidate Starts for Eden_16:

(Start: 45 @11733 has 111 MA's), (61, 11778), (74, 11808), (82, 11838), (83, 11841), (113, 11946), (116, 11961), (140, 12018), (151, 12054), (164, 12114), (167, 12123), (183, 12180), (212, 12264), (225, 12336), (245, 12408), (297, 12582),

Gene: Ejemplo_19 Start: 14966, Stop: 15823, Start Num: 45

Candidate Starts for Ejemplo_19:

(Start: 45 @14966 has 111 MA's), (73, 15038), (77, 15056), (125, 15224), (140, 15251), (197, 15464), (198, 15470), (217, 15536), (229, 15593), (244, 15638), (252, 15659), (288, 15785), (296, 15812),

(297, 15815),

Gene: ElGato_20 Start: 15402, Stop: 16259, Start Num: 45

Candidate Starts for ElGato_20:

(Start: 45 @15402 has 111 MA's), (57, 15438), (73, 15474), (85, 15516), (125, 15660), (140, 15687), (166, 15789), (167, 15792), (176, 15834), (177, 15837), (195, 15894), (197, 15900), (211, 15936), (244, 16074), (289, 16224), (296, 16248), (297, 16251),

Gene: Elener_18 Start: 15583, Stop: 16464, Start Num: 43

Candidate Starts for Elener_18:

(Start: 43 @15583 has 31 MA's), (Start: 48 @15592 has 22 MA's), (71, 15658), (82, 15694), (103, 15778), (111, 15802), (142, 15883), (172, 16003), (241, 16288), (264, 16333),

Gene: Elva_18 Start: 13053, Stop: 13907, Start Num: 47

Candidate Starts for Elva_18:

(Start: 47 @13053 has 66 MA's), (61, 13098), (74, 13128), (82, 13158), (85, 13167), (113, 13266), (140, 13338), (164, 13434), (175, 13476), (198, 13548), (209, 13575), (212, 13581), (214, 13590), (225, 13653), (258, 13755), (280, 13839), (297, 13899),

Gene: Emaanora_21 Start: 14969, Stop: 15826, Start Num: 45

Candidate Starts for Emaanora_21:

(Start: 45 @14969 has 111 MA's), (73, 15041), (77, 15059), (125, 15227), (140, 15254), (191, 15449), (197, 15467), (198, 15473), (216, 15527), (244, 15641), (252, 15662), (296, 15815), (297, 15818),

Gene: EnochSoames_21 Start: 15152, Stop: 16009, Start Num: 45

Candidate Starts for EnochSoames_21:

(Start: 45 @15152 has 111 MA's), (73, 15224), (77, 15242), (96, 15305), (125, 15410), (140, 15437), (166, 15539), (176, 15584), (197, 15650), (198, 15656), (217, 15722), (225, 15761), (229, 15779), (248, 15836), (296, 15998), (297, 16001),

Gene: Enochoraptor_15 Start: 11298, Stop: 12239, Start Num: 32

Candidate Starts for Enochoraptor_15:

(25, 11283), (Start: 29 @11289 has 1 MA's), (30, 11292), (Start: 32 @11298 has 42 MA's), (36, 11331), (41, 11349), (56, 11376), (59, 11385), (73, 11415), (74, 11418), (75, 11421), (77, 11433), (79, 11442), (95, 11487), (99, 11517), (103, 11532), (107, 11544), (108, 11547), (109, 11550), (123, 11598), (131, 11616), (141, 11652), (144, 11658), (149, 11685), (154, 11709), (160, 11736), (168, 11763), (171, 11769), (184, 11832), (187, 11844), (198, 11886), (199, 11889), (200, 11892), (215, 11943), (217, 11958), (221, 11979), (224, 11994), (227, 12009), (229, 12015), (259, 12087), (260, 12090), (262, 12108), (263, 12111), (266, 12120), (278, 12168), (282, 12180), (285, 12189), (289, 12204), (291, 12210), (295, 12225),

Gene: Enoki_15 Start: 11280, Stop: 12221, Start Num: 32

Candidate Starts for Enoki_15:

(22, 11262), (Start: 32 @11280 has 42 MA's), (36, 11313), (38, 11319), (41, 11331), (56, 11358), (59, 11367), (73, 11397), (74, 11400), (75, 11403), (77, 11415), (79, 11424), (85, 11439), (95, 11469), (99, 11499), (103, 11514), (107, 11526), (108, 11529), (109, 11532), (112, 11541), (115, 11556), (123, 11580), (131, 11598), (141, 11634), (144, 11640), (149, 11667), (150, 11670), (154, 11691), (160, 11718), (167, 11742), (171, 11751), (184, 11814), (187, 11826), (198, 11868), (199, 11871), (200, 11874), (204, 11886), (215, 11925), (217, 11940), (221, 11961), (224, 11976), (227, 11991), (229, 11997), (259, 12069), (260, 12072), (262, 12090), (263, 12093), (266, 12102), (278, 12150), (282, 12162), (285, 12171), (289, 12186), (291, 12192), (295, 12207),

Gene: Erudite_29 Start: 17500, Stop: 18390, Start Num: 43

Candidate Starts for Erudite_29:

(Start: 43 @17500 has 31 MA's), (121, 17755), (143, 17824), (149, 17848), (156, 17881), (198, 18037), (212, 18070), (229, 18160), (245, 18211), (273, 18301), (283, 18331), (287, 18349), (297, 18382), (298, 18385),

Gene: Esperer_19 Start: 14993, Stop: 15850, Start Num: 45

Candidate Starts for Esperer_19:

(Start: 45 @14993 has 111 MA's), (73, 15065), (77, 15083), (87, 15113), (96, 15146), (125, 15251), (140, 15278), (166, 15380), (176, 15425), (197, 15491), (198, 15497), (216, 15551), (217, 15563), (244, 15665), (248, 15677), (252, 15686), (296, 15839), (297, 15842),

Gene: Eula_17 Start: 13119, Stop: 13973, Start Num: 47

Candidate Starts for Eula_17:

(Start: 47 @13119 has 66 MA's), (74, 13194), (82, 13224), (85, 13233), (113, 13332), (116, 13347), (140, 13404), (164, 13500), (167, 13509), (175, 13542), (202, 13626), (209, 13641), (276, 13893), (280, 13905), (297, 13965),

Gene: Finalfrontier_18 Start: 13632, Stop: 14486, Start Num: 47

Candidate Starts for Finalfrontier_18:

(Start: 47 @13632 has 66 MA's), (61, 13677), (74, 13707), (82, 13737), (85, 13746), (116, 13860), (140, 13917), (212, 14160), (225, 14232), (240, 14289), (276, 14406), (280, 14418), (297, 14478),

Gene: FireCastle_20 Start: 15375, Stop: 16238, Start Num: 47

Candidate Starts for FireCastle_20:

(16, 15270), (Start: 47 @15375 has 66 MA's), (61, 15414), (82, 15471), (103, 15552), (105, 15558), (107, 15564), (116, 15594), (126, 15627), (151, 15693), (171, 15771), (175, 15801), (182, 15819), (213, 15921), (224, 15987), (228, 16002), (260, 16092), (278, 16164), (287, 16197), (289, 16203), (290, 16206), (295, 16224),

Gene: FlameThrower_16 Start: 12491, Stop: 13345, Start Num: 47

Candidate Starts for FlameThrower_16:

(Start: 47 @12491 has 66 MA's), (74, 12566), (82, 12596), (96, 12644), (113, 12704), (116, 12719), (137, 12770), (140, 12776), (152, 12815), (162, 12863), (164, 12872), (175, 12914), (198, 12986), (212, 13019), (215, 13037), (276, 13265), (278, 13271), (297, 13337),

Gene: Floof_16 Start: 12468, Stop: 13334, Start Num: 44

Candidate Starts for Floof_16:

(Start: 44 @12468 has 10 MA's), (83, 12582), (87, 12594), (106, 12669), (107, 12672), (143, 12780), (148, 12795), (158, 12846), (163, 12867), (197, 12981), (208, 13011), (212, 13020), (239, 13140), (280, 13266),

Gene: Franklin22_17 Start: 11912, Stop: 12769, Start Num: 47

Candidate Starts for Franklin22_17:

(3, 11378), (4, 11465), (Start: 47 @11912 has 66 MA's), (74, 11987), (82, 12017), (113, 12125), (137, 12191), (140, 12197), (164, 12293), (212, 12443), (215, 12461), (225, 12515), (245, 12587), (276, 12689), (297, 12761),

Gene: FreddieHg_29 Start: 16964, Stop: 17854, Start Num: 43

Candidate Starts for FreddieHg_29:

(Start: 43 @16964 has 31 MA's), (115, 17192), (121, 17219), (143, 17288), (149, 17312), (156, 17345), (198, 17501), (212, 17534), (217, 17567), (229, 17624), (245, 17675), (273, 17765), (283, 17795), (297, 17846), (298, 17849),

Gene: GMA4_17 Start: 16043, Stop: 16957, Start Num: 49

Candidate Starts for GMA4_17:

(15, 15926), (18, 15941), (33, 15983), (49, 16043), (103, 16232), (109, 16250), (132, 16325), (135, 16349), (159, 16448), (171, 16487), (198, 16598), (199, 16601), (210, 16634), (221, 16694), (254, 16793), (276, 16871), (279, 16880), (282, 16889), (288, 16916), (293, 16937), (295, 16943),

Gene: Gack_16 Start: 11801, Stop: 12658, Start Num: 47

Candidate Starts for Gack_16:

(Start: 47 @11801 has 66 MA's), (74, 11876), (82, 11906), (113, 12014), (116, 12029), (118, 12035), (137, 12080), (140, 12086), (161, 12170), (164, 12182), (212, 12332), (245, 12476), (276, 12578), (297, 12650),

Gene: GardenState_16 Start: 12560, Stop: 13426, Start Num: 44

Candidate Starts for GardenState_16:

(Start: 44 @12560 has 10 MA's), (87, 12686), (88, 12692), (104, 12755), (130, 12836), (158, 12938), (163, 12959), (197, 13073), (208, 13103), (280, 13358),

Gene: Gilda_30 Start: 17787, Stop: 18677, Start Num: 43

Candidate Starts for Gilda_30:

(Start: 43 @17787 has 31 MA's), (143, 18111), (149, 18135), (198, 18324), (245, 18498), (283, 18618), (297, 18669), (298, 18672),

Gene: Gingerbug_19 Start: 13474, Stop: 14337, Start Num: 47

Candidate Starts for Gingerbug_19:

(Start: 45 @13471 has 111 MA's), (Start: 47 @13474 has 66 MA's), (82, 13570), (85, 13579), (102, 13648), (105, 13657), (107, 13663), (109, 13669), (116, 13693), (126, 13726), (134, 13747), (151, 13792), (152, 13795), (157, 13822), (167, 13861), (171, 13870), (195, 13972), (197, 13978), (209, 14011), (215, 14035), (224, 14086), (237, 14128), (244, 14152), (258, 14185), (278, 14263), (287, 14296), (289, 14302), (295, 14323), (296, 14326),

Gene: GirlDinner_19 Start: 14709, Stop: 15563, Start Num: 45

Candidate Starts for GirlDinner_19:

(Start: 45 @14709 has 111 MA's), (77, 14799), (96, 14862), (151, 15030), (194, 15195), (197, 15204), (219, 15285), (238, 15360), (252, 15399), (296, 15552), (297, 15555),

Gene: Goby_19 Start: 14982, Stop: 15839, Start Num: 45

Candidate Starts for Goby_19:

(Start: 45 @14982 has 111 MA's), (73, 15054), (96, 15135), (125, 15240), (126, 15243), (140, 15267), (176, 15414), (194, 15471), (195, 15474), (197, 15480), (217, 15552), (229, 15609), (252, 15675), (296, 15828), (297, 15831),

Gene: Godpower_20 Start: 14994, Stop: 15851, Start Num: 45

Candidate Starts for Godpower_20:

(Start: 45 @14994 has 111 MA's), (73, 15066), (77, 15084), (96, 15147), (125, 15252), (140, 15279), (167, 15384), (176, 15426), (197, 15492), (216, 15552), (217, 15564), (229, 15621), (244, 15666), (252, 15687), (296, 15840), (297, 15843),

Gene: Goib_22 Start: 15642, Stop: 16475, Start Num: 60

Candidate Starts for Goib_22:

(Start: 60 @15642 has 6 MA's), (Start: 62 @15645 has 5 MA's), (72, 15660), (84, 15699), (90, 15720), (91, 15723), (133, 15867), (180, 16053), (199, 16122), (226, 16224), (254, 16305), (256, 16308), (274, 16389), (276, 16395), (280, 16407), (281, 16410), (287, 16434),

Gene: Goodman_21 Start: 15488, Stop: 16381, Start Num: 48

Candidate Starts for Goodman_21:

(Start: 48 @15488 has 22 MA's), (82, 15581), (105, 15668), (151, 15833), (152, 15836), (182, 15959), (224, 16127), (244, 16196), (252, 16217), (253, 16220), (278, 16307), (279, 16310), (280, 16313), (289, 16346),

Gene: GreenWeasel_21 Start: 15698, Stop: 16552, Start Num: 45

Candidate Starts for GreenWeasel_21:

(7, 15542), (8, 15545), (Start: 45 @15698 has 111 MA's), (85, 15812), (96, 15851), (126, 15959), (147, 16001), (158, 16055), (239, 16358), (296, 16541), (297, 16544), (298, 16547),

Gene: Gretchen_16 Start: 13995, Stop: 14861, Start Num: 44

Candidate Starts for Gretchen_16:

(Start: 44 @13995 has 10 MA's), (83, 14109), (106, 14196), (107, 14199), (109, 14205), (143, 14307), (148, 14322), (158, 14373), (163, 14394), (197, 14508), (239, 14667), (278, 14787), (280, 14793), (288, 14823),

Gene: Gspu1_19 Start: 14904, Stop: 15749, Start Num: 62

Candidate Starts for Gspu1_19:

(Start: 60 @14901 has 6 MA's), (Start: 62 @14904 has 5 MA's), (72, 14928), (81, 14958), (90, 14988), (91, 14991), (93, 14994), (101, 15036), (124, 15111), (126, 15117), (169, 15270), (180, 15321), (196, 15378), (211, 15423), (239, 15543), (240, 15546), (269, 15642), (280, 15681), (281, 15684), (291, 15720),

Gene: Hager_31 Start: 17349, Stop: 18239, Start Num: 43

Candidate Starts for Hager_31:

(Start: 43 @17349 has 31 MA's), (143, 17673), (149, 17697), (156, 17730), (198, 17886), (212, 17919), (217, 17952), (245, 18060), (273, 18150), (283, 18180), (297, 18231), (298, 18234),

Gene: Haizum_19 Start: 15480, Stop: 16337, Start Num: 45

Candidate Starts for Haizum_19:

(10, 15354), (11, 15357), (12, 15363), (Start: 45 @15480 has 111 MA's), (54, 15498), (77, 15570), (125, 15738), (151, 15801), (176, 15912), (197, 15978), (216, 16038), (217, 16050), (219, 16059), (229, 16107), (252, 16173), (262, 16209), (281, 16272), (296, 16326), (297, 16329),

Gene: Hank144_20 Start: 15105, Stop: 15959, Start Num: 45

Candidate Starts for Hank144_20:

(Start: 45 @15105 has 111 MA's), (65, 15159), (96, 15258), (100, 15279), (119, 15342), (158, 15462), (167, 15495), (183, 15555), (197, 15600), (238, 15756), (252, 15795), (271, 15858), (296, 15948), (297, 15951), (298, 15954),

Gene: Haunter_30 Start: 17200, Stop: 18090, Start Num: 43

Candidate Starts for Haunter_30:

(Start: 43 @17200 has 31 MA's), (143, 17524), (149, 17548), (156, 17581), (198, 17737), (217, 17803), (245, 17911), (283, 18031), (297, 18082), (298, 18085),

Gene: Hiddenleaf_29 Start: 16948, Stop: 17838, Start Num: 43

Candidate Starts for Hiddenleaf_29:

(Start: 43 @16948 has 31 MA's), (115, 17176), (121, 17203), (143, 17272), (149, 17296), (156, 17329), (198, 17485), (212, 17518), (217, 17551), (229, 17608), (245, 17659), (273, 17749), (283, 17779), (297, 17830), (298, 17833),

Gene: Hippo_19 Start: 14969, Stop: 15826, Start Num: 45

Candidate Starts for Hippo_19:

(Start: 45 @14969 has 111 MA's), (73, 15041), (77, 15059), (125, 15227), (140, 15254), (191, 15449), (197, 15467), (198, 15473), (216, 15527), (244, 15641), (252, 15662), (296, 15815), (297, 15818),

Gene: Honk_15 Start: 11270, Stop: 12148, Start Num: 42

Candidate Starts for Honk_15:

(Start: 42 @11270 has 2 MA's), (76, 11360), (127, 11543), (152, 11618), (215, 11843), (280, 12080), (297, 12140),

Gene: Htur_20 Start: 15518, Stop: 16411, Start Num: 48

Candidate Starts for Htur_20:

(Start: 48 @15518 has 22 MA's), (82, 15611), (85, 15620), (105, 15698), (116, 15749), (151, 15863), (152, 15866), (153, 15872), (167, 15932), (223, 16154), (224, 16157), (244, 16226), (252, 16247), (253, 16250), (271, 16310), (289, 16376),

Gene: Huffy_23 Start: 15864, Stop: 16697, Start Num: 60

Candidate Starts for Huffy_23:

(Start: 60 @15864 has 6 MA's), (Start: 62 @15867 has 5 MA's), (72, 15882), (84, 15921), (90, 15942), (91, 15945), (133, 16089), (180, 16275), (208, 16362), (226, 16446), (254, 16527), (274, 16611), (276, 16617), (280, 16629), (281, 16632), (287, 16656),

Gene: Hum25_18 Start: 12574, Stop: 13560, Start Num: 26

Candidate Starts for Hum25_18:

(Start: 26 @12574 has 9 MA's), (39, 12628), (Start: 45 @12640 has 111 MA's), (Start: 48 @12646 has 22 MA's), (73, 12706), (74, 12709), (75, 12712), (82, 12736), (103, 12820), (114, 12859), (132, 12898), (177, 13078), (193, 13144), (205, 13168), (212, 13183), (219, 13225), (228, 13270), (249, 13372), (257, 13396), (285, 13510), (292, 13540),

Gene: Hydra_21 Start: 15521, Stop: 16378, Start Num: 45

Candidate Starts for Hydra_21:

(Start: 45 @15521 has 111 MA's), (73, 15593), (77, 15611), (87, 15641), (96, 15674), (125, 15779), (140, 15806), (166, 15908), (176, 15953), (197, 16019), (198, 16025), (216, 16079), (217, 16091), (244, 16193), (248, 16205), (252, 16214), (296, 16367), (297, 16370),

Gene: IAmGroot_16 Start: 13204, Stop: 14070, Start Num: 44

Candidate Starts for IAmGroot_16:

(Start: 44 @13204 has 10 MA's), (87, 13330), (88, 13336), (104, 13399), (130, 13480), (158, 13582), (163, 13603), (197, 13717), (208, 13747), (280, 14002),

Gene: Ibantik_80 Start: 41938, Stop: 42960, Start Num: 19

Candidate Starts for Ibantik_80:

(9, 41893), (Start: 19 @41938 has 2 MA's), (20, 41950), (39, 42007), (76, 42112), (79, 42130), (95, 42175), (100, 42208), (104, 42223), (116, 42262), (154, 42382), (203, 42598), (236, 42745), (241, 42769), (244, 42772),

Gene: Icarian_18 Start: 12974, Stop: 13828, Start Num: 47

Candidate Starts for Icarian_18:

(Start: 47 @12974 has 66 MA's), (61, 13019), (74, 13049), (82, 13079), (113, 13187), (116, 13202), (140, 13259), (164, 13355), (167, 13364), (175, 13397), (202, 13481), (212, 13502), (214, 13511), (215, 13520), (230, 13595), (238, 13619), (276, 13748), (280, 13760), (297, 13820),

Gene: IndiRoo_21 Start: 13817, Stop: 14680, Start Num: 47

Candidate Starts for IndiRoo_21:

(Start: 47 @13817 has 66 MA's), (77, 13898), (82, 13913), (103, 13994), (105, 14000), (126, 14069), (137, 14096), (151, 14135), (167, 14204), (171, 14213), (175, 14243), (182, 14261), (215, 14378), (220, 14405), (230, 14450), (237, 14471), (278, 14606), (279, 14609), (287, 14639), (289, 14645), (295, 14666), (296, 14669),

Gene: Indigo_19 Start: 14993, Stop: 15850, Start Num: 45

Candidate Starts for Indigo_19:

(Start: 45 @14993 has 111 MA's), (73, 15065), (77, 15083), (87, 15113), (96, 15146), (125, 15251), (140, 15278), (166, 15380), (176, 15425), (197, 15491), (198, 15497), (216, 15551), (217, 15563), (244, 15665), (248, 15677), (252, 15686), (296, 15839), (297, 15842),

Gene: IndyLu_17 Start: 13090, Stop: 13944, Start Num: 47

Candidate Starts for IndyLu_17:

(Start: 47 @13090 has 66 MA's), (61, 13135), (74, 13165), (82, 13195), (85, 13204), (140, 13375), (212, 13618), (225, 13690), (240, 13747), (276, 13864), (280, 13876), (297, 13936),

Gene: Issmi_20 Start: 15911, Stop: 16768, Start Num: 45

Candidate Starts for Issmi_20:

(Start: 45 @15911 has 111 MA's), (54, 15929), (70, 15977), (77, 16001), (87, 16031), (99, 16082), (125, 16169), (176, 16343), (179, 16352), (187, 16373), (197, 16409), (198, 16415), (217, 16481), (223, 16514), (252, 16604), (253, 16607), (262, 16640), (281, 16703), (296, 16757), (297, 16760),

Gene: Itza_19 Start: 15339, Stop: 16196, Start Num: 45

Candidate Starts for Itza_19:

(Start: 45 @15339 has 111 MA's), (64, 15390), (73, 15411), (77, 15429), (85, 15453), (96, 15492), (198, 15843), (209, 15870), (217, 15909), (230, 15969), (288, 16158), (296, 16185), (297, 16188),

Gene: Izzy_20 Start: 15203, Stop: 16060, Start Num: 45

Candidate Starts for Izzy_20:

(Start: 45 @15203 has 111 MA's), (73, 15275), (77, 15293), (96, 15356), (125, 15461), (140, 15488), (151, 15524), (166, 15590), (176, 15635), (197, 15701), (198, 15707), (217, 15773), (225, 15812), (229, 15830), (248, 15887), (260, 15914), (296, 16049), (297, 16052),

Gene: JDawG_29 Start: 17530, Stop: 18420, Start Num: 43

Candidate Starts for JDawG_29:

(Start: 43 @17530 has 31 MA's), (121, 17785), (143, 17854), (149, 17878), (156, 17911), (212, 18100), (217, 18133), (229, 18190), (245, 18241), (273, 18331), (283, 18361), (297, 18412), (298, 18415),

Gene: Janus_20 Start: 15047, Stop: 15901, Start Num: 45

Candidate Starts for Janus_20:

(Start: 45 @15047 has 111 MA's), (77, 15137), (96, 15200), (194, 15533), (197, 15542), (219, 15623), (238, 15698), (252, 15737), (273, 15812), (296, 15890), (297, 15893),

Gene: Jash_20 Start: 15156, Stop: 16013, Start Num: 45

Candidate Starts for Jash_20:

(Start: 45 @15156 has 111 MA's), (73, 15228), (77, 15246), (96, 15309), (125, 15414), (140, 15441), (151, 15477), (166, 15543), (176, 15588), (197, 15654), (198, 15660), (217, 15726), (225, 15765), (229, 15783), (248, 15840), (260, 15867), (296, 16002), (297, 16005),

Gene: Jera_21 Start: 14585, Stop: 15478, Start Num: 48

Candidate Starts for Jera_21:

(Start: 48 @14585 has 22 MA's), (82, 14678), (85, 14687), (105, 14765), (116, 14816), (137, 14876), (151, 14930), (152, 14933), (153, 14939), (223, 15221), (224, 15224), (244, 15293), (252, 15314), (253, 15317), (271, 15377), (289, 15443),

Gene: Jevington_21 Start: 15349, Stop: 16206, Start Num: 45

Candidate Starts for Jevington_21:

(Start: 45 @15349 has 111 MA's), (77, 15439), (151, 15670), (197, 15847), (252, 16042), (296, 16195), (297, 16198),

Gene: JingleBells_29 Start: 17064, Stop: 17954, Start Num: 43

Candidate Starts for JingleBells_29:

(Start: 43 @17064 has 31 MA's), (121, 17319), (143, 17388), (149, 17412), (156, 17445), (212, 17634), (217, 17667), (229, 17724), (245, 17775), (273, 17865), (283, 17895), (297, 17946), (298, 17949),

Gene: Johann_21 Start: 15488, Stop: 16381, Start Num: 48

Candidate Starts for Johann_21:

(Start: 48 @15488 has 22 MA's), (82, 15581), (105, 15668), (151, 15833), (152, 15836), (182, 15959), (224, 16127), (244, 16196), (252, 16217), (253, 16220), (278, 16307), (279, 16310), (280, 16313), (289, 16346),

Gene: Johnathan_17 Start: 13145, Stop: 13999, Start Num: 47

Candidate Starts for Johnathan_17:

(Start: 47 @13145 has 66 MA's), (74, 13220), (82, 13250), (85, 13259), (113, 13358), (116, 13373), (140, 13430), (164, 13526), (167, 13535), (175, 13568), (202, 13652), (212, 13673), (238, 13790), (280, 13931), (297, 13991),

Gene: Jovita_17 Start: 13220, Stop: 14074, Start Num: 47

Candidate Starts for Jovita_17:

(Start: 47 @13220 has 66 MA's), (74, 13295), (82, 13325), (85, 13334), (103, 13406), (113, 13433), (116, 13448), (140, 13505), (164, 13601), (167, 13610), (175, 13643), (202, 13727), (209, 13742), (276, 13994), (280, 14006), (297, 14066),

Gene: Kaine_19 Start: 15380, Stop: 16237, Start Num: 45

Candidate Starts for Kaine_19:

(Start: 45 @15380 has 111 MA's), (57, 15416), (73, 15452), (85, 15494), (125, 15638), (140, 15665), (195, 15872), (197, 15878), (204, 15902), (244, 16052), (289, 16202), (296, 16226), (297, 16229),

Gene: Karate_29 Start: 17199, Stop: 18089, Start Num: 43

Candidate Starts for Karate_29:

(Start: 43 @17199 has 31 MA's), (85, 17319), (121, 17454), (143, 17523), (149, 17547), (156, 17580), (198, 17736), (212, 17769), (217, 17802), (245, 17910), (273, 18000), (283, 18030), (297, 18081), (298, 18084),

Gene: Katalie_20 Start: 15234, Stop: 16091, Start Num: 45

Candidate Starts for Katalie_20:

(Start: 45 @15234 has 111 MA's), (73, 15306), (77, 15324), (125, 15492), (140, 15519), (167, 15624), (197, 15732), (198, 15738), (217, 15804), (252, 15927), (296, 16080), (297, 16083),

Gene: Kate_30 Start: 17795, Stop: 18685, Start Num: 43

Candidate Starts for Kate_30:

(Start: 43 @17795 has 31 MA's), (143, 18119), (149, 18143), (156, 18176), (198, 18332), (245, 18506), (283, 18626), (297, 18677), (298, 18680),

Gene: Kate33_17 Start: 13089, Stop: 13943, Start Num: 47

Candidate Starts for Kate33_17:

(Start: 47 @13089 has 66 MA's), (61, 13134), (74, 13164), (82, 13194), (85, 13203), (140, 13374), (225, 13689), (240, 13746), (276, 13863), (280, 13875), (297, 13935),

Gene: Katzastrophic_16 Start: 12666, Stop: 13520, Start Num: 47

Candidate Starts for Katzastrophic_16:

(Start: 47 @12666 has 66 MA's), (74, 12741), (82, 12771), (96, 12819), (113, 12879), (116, 12894), (137, 12945), (140, 12951), (152, 12990), (162, 13038), (164, 13047), (175, 13089), (212, 13194), (215, 13212), (276, 13440), (278, 13446), (297, 13512),

Gene: Keiki_15 Start: 11295, Stop: 12242, Start Num: 32

Candidate Starts for Keiki_15:

(24, 11280), (Start: 29 @11286 has 1 MA's), (Start: 32 @11295 has 42 MA's), (36, 11328), (41, 11346), (46, 11349), (49, 11355), (56, 11379), (59, 11388), (73, 11418), (74, 11421), (75, 11424), (77, 11436), (82, 11451), (85, 11460), (95, 11490), (99, 11520), (103, 11535), (107, 11547), (108, 11550), (109, 11553), (117, 11586), (123, 11601), (131, 11619), (141, 11655), (144, 11661), (149, 11688), (154, 11712), (160, 11739), (168, 11766), (171, 11772), (184, 11835), (187, 11847), (198, 11889), (199, 11892), (200, 11895), (215, 11946), (217, 11961), (221, 11982), (224, 11997), (226, 12003), (227, 12012), (229, 12018), (259, 12090), (260, 12093), (262, 12111), (263, 12114), (266, 12123), (278, 12171), (282, 12183), (285, 12192), (289, 12207), (291, 12213), (295, 12228),

Gene: Kenzers_17 Start: 13132, Stop: 13986, Start Num: 47

Candidate Starts for Kenzers_17:

(Start: 47 @13132 has 66 MA's), (74, 13207), (82, 13237), (85, 13246), (113, 13345), (140, 13417), (164, 13513), (167, 13522), (175, 13555), (202, 13639), (212, 13660), (230, 13753), (238, 13777), (239, 13786), (260, 13840), (275, 13903), (280, 13918), (297, 13978),

Gene: Khuang_15 Start: 13016, Stop: 13963, Start Num: 26

Candidate Starts for Khuang_15:

(13, 12965), (Start: 26 @13016 has 9 MA's), (Start: 28 @13019 has 2 MA's), (75, 13160), (82, 13187), (86, 13199), (94, 13223), (95, 13226), (139, 13388), (144, 13397), (158, 13469), (165, 13496), (212, 13652), (227, 13736), (234, 13760), (260, 13826), (265, 13835), (296, 13952), (298, 13958),

Gene: Kieran_16 Start: 12810, Stop: 13664, Start Num: 47

Candidate Starts for Kieran_16:

(Start: 47 @12810 has 66 MA's), (55, 12834), (61, 12855), (74, 12885), (82, 12915), (116, 13038), (137, 13089), (140, 13095), (202, 13317), (209, 13332), (212, 13338), (241, 13473), (276, 13584), (280, 13596), (297, 13656),

Gene: Kors_32 Start: 17664, Stop: 18548, Start Num: 45

Candidate Starts for Kors_32:

(17, 17565), (Start: 45 @17664 has 111 MA's), (78, 17760), (85, 17781), (107, 17865), (109, 17871), (151, 18012), (194, 18180), (217, 18261), (222, 18291), (245, 18369), (251, 18381), (252, 18384), (260, 18402), (276, 18468), (277, 18471), (278, 18474), (297, 18540), (298, 18543),

Gene: Krampus_30 Start: 17793, Stop: 18683, Start Num: 43

Candidate Starts for Krampus_30:

(Start: 43 @17793 has 31 MA's), (143, 18117), (149, 18141), (156, 18174), (198, 18330), (245, 18504), (283, 18624), (297, 18675), (298, 18678),

Gene: Kromp_18 Start: 16065, Stop: 17072, Start Num: 23

Candidate Starts for Kromp_18:

(Start: 23 @16065 has 1 MA's), (59, 16185), (75, 16224), (77, 16236), (83, 16254), (109, 16350), (167, 16554), (172, 16566), (189, 16656), (191, 16659), (206, 16713), (207, 16716), (211, 16731), (212, 16734), (247, 16896),

Gene: Kubed_15 Start: 11291, Stop: 12232, Start Num: 32

Candidate Starts for Kubed_15:

(Start: 29 @11282 has 1 MA's), (Start: 32 @11291 has 42 MA's), (36, 11324), (38, 11330), (41, 11342), (56, 11369), (59, 11378), (73, 11408), (74, 11411), (75, 11414), (77, 11426), (79, 11435), (85, 11450), (95, 11480), (99, 11510), (103, 11525), (108, 11540), (109, 11543), (131, 11609), (136, 11636), (141, 11645), (144, 11651), (149, 11678), (160, 11729), (167, 11753), (171, 11762), (184, 11825), (187, 11837), (199, 11882), (200, 11885), (215, 11936), (217, 11951), (221, 11972), (224, 11987), (227, 12002), (259, 12080), (260, 12083), (262, 12101), (263, 12104), (278, 12161), (282, 12173), (285, 12182), (289, 12197), (295, 12218),

Gene: Kumotta_18 Start: 14074, Stop: 15051, Start Num: 26

Candidate Starts for Kumotta_18:

(Start: 26 @14074 has 9 MA's), (37, 14119), (Start: 47 @14140 has 66 MA's), (Start: 48 @14143 has 22 MA's), (66, 14197), (75, 14206), (77, 14215), (103, 14314), (120, 14362), (132, 14392), (177, 14572), (178, 14575), (205, 14659), (226, 14749), (231, 14770), (237, 14803), (242, 14839), (243, 14848), (261, 14902), (262, 14914), (286, 15007), (291, 15022), (292, 15031),

Gene: Lahqtemish_17 Start: 13135, Stop: 13989, Start Num: 47

Candidate Starts for Lahqtemish_17:

(Start: 47 @13135 has 66 MA's), (61, 13180), (74, 13210), (82, 13240), (140, 13420), (212, 13663), (215, 13681), (225, 13735), (240, 13792), (276, 13909), (280, 13921), (297, 13981),

Gene: Lannister_20 Start: 15000, Stop: 15857, Start Num: 45

Candidate Starts for Lannister_20:

(Start: 45 @15000 has 111 MA's), (73, 15072), (77, 15090), (87, 15120), (125, 15258), (140, 15285), (176, 15432), (195, 15492), (197, 15498), (198, 15504), (216, 15558), (217, 15570), (244, 15672), (252, 15693), (296, 15846), (297, 15849),

Gene: Lauchelly_15 Start: 11298, Stop: 12245, Start Num: 32

Candidate Starts for Lauchelly_15:

(Start: 29 @11289 has 1 MA's), (30, 11292), (Start: 32 @11298 has 42 MA's), (36, 11331), (41, 11349), (46, 11352), (49, 11358), (56, 11382), (59, 11391), (73, 11421), (74, 11424), (75, 11427), (77, 11439), (79, 11448), (85, 11463), (95, 11493), (99, 11523), (103, 11538), (105, 11544), (109, 11556), (123, 11604), (131, 11622), (136, 11649), (141, 11658), (144, 11664), (149, 11691), (154, 11715), (160, 11742), (167, 11766), (171, 11775), (184, 11838), (187, 11850), (198, 11892), (199, 11895), (200, 11898), (215, 11949), (217, 11964), (221, 11985), (224, 12000), (227, 12015), (229, 12021), (259, 12093), (260, 12096), (262, 12114), (263, 12117), (278, 12174), (282, 12186), (285, 12195), (289, 12210), (291, 12216), (295, 12231),

Gene: Legacy_19 Start: 14964, Stop: 15821, Start Num: 45

Candidate Starts for Legacy_19:

(Start: 45 @14964 has 111 MA's), (73, 15036), (77, 15054), (87, 15084), (96, 15117), (125, 15222), (140, 15249), (166, 15351), (176, 15396), (197, 15462), (198, 15468), (216, 15522), (217, 15534), (244, 15636), (248, 15648), (252, 15657), (296, 15810), (297, 15813),

Gene: Lesiram_22 Start: 14235, Stop: 15098, Start Num: 47

Candidate Starts for Lesiram_22:

(Start: 45 @14232 has 111 MA's), (Start: 47 @14235 has 66 MA's), (79, 14325), (82, 14331), (85, 14340), (102, 14409), (105, 14418), (107, 14424), (127, 14490), (152, 14556), (157, 14583), (167, 14622), (197, 14739), (198, 14745), (209, 14772), (215, 14796), (244, 14913), (246, 14922), (260, 14952), (289, 15063), (295, 15084),

Gene: Leviosa_15 Start: 11312, Stop: 12259, Start Num: 32

Candidate Starts for Leviosa_15:

(24, 11297), (Start: 29 @11303 has 1 MA's), (Start: 32 @11312 has 42 MA's), (36, 11345), (41, 11363), (46, 11366), (49, 11372), (56, 11396), (59, 11405), (73, 11435), (74, 11438), (75, 11441), (77, 11453), (79, 11462), (95, 11507), (99, 11537), (103, 11552), (107, 11564), (109, 11570), (123, 11618), (131, 11636), (136, 11663), (141, 11672), (144, 11678), (149, 11705), (160, 11756), (167, 11780), (171, 11789), (184, 11852), (187, 11864), (198, 11906), (199, 11909), (200, 11912), (215, 11963), (217, 11978), (221, 11999), (224, 12014), (227, 12029), (229, 12035), (259, 12107), (260, 12110), (262, 12128), (263, 12131), (266, 12140), (278, 12188), (282, 12200), (285, 12209), (289, 12224), (291, 12230), (295, 12245),

Gene: Leviticus_19 Start: 14993, Stop: 15850, Start Num: 45

Candidate Starts for Leviticus_19:

(Start: 45 @14993 has 111 MA's), (73, 15065), (77, 15083), (87, 15113), (96, 15146), (125, 15251), (140, 15278), (166, 15380), (176, 15425), (197, 15491), (198, 15497), (216, 15551), (217, 15563), (244, 15665), (248, 15677), (252, 15686), (296, 15839), (297, 15842),

Gene: Lika_19 Start: 14998, Stop: 15855, Start Num: 45

Candidate Starts for Lika_19:

(Start: 45 @14998 has 111 MA's), (73, 15070), (77, 15088), (96, 15151), (125, 15256), (140, 15283), (167, 15388), (176, 15430), (197, 15496), (216, 15556), (217, 15568), (229, 15625), (244, 15670), (252, 15691), (296, 15844), (297, 15847),

Gene: LilBandit_15 Start: 11296, Stop: 12243, Start Num: 32

Candidate Starts for LilBandit_15:

(24, 11281), (Start: 29 @11287 has 1 MA's), (Start: 32 @11296 has 42 MA's), (36, 11329), (41, 11347), (46, 11350), (49, 11356), (56, 11380), (59, 11389), (73, 11419), (74, 11422), (75, 11425), (77, 11437), (79, 11446), (95, 11491), (99, 11521), (103, 11536), (107, 11548), (109, 11554), (123, 11602), (131, 11620), (136, 11647), (141, 11656), (144, 11662), (149, 11689), (158, 11731), (160, 11740), (167, 11764), (171, 11773), (184, 11836), (187, 11848), (198, 11890), (199, 11893), (200, 11896), (212, 11929), (215, 11947), (217, 11962), (221, 11983), (224, 11998), (227, 12013), (229, 12019), (259, 12091), (260, 12094), (262, 12112), (263, 12115), (266, 12124), (278, 12172), (282, 12184), (285, 12193), (289, 12208), (291, 12214), (295, 12229),

Gene: LimaBean_17 Start: 13144, Stop: 13998, Start Num: 47

Candidate Starts for LimaBean_17:

(Start: 47 @13144 has 66 MA's), (74, 13219), (82, 13249), (85, 13258), (113, 13357), (116, 13372), (140, 13429), (164, 13525), (167, 13534), (175, 13567), (202, 13651), (212, 13672), (238, 13789), (280, 13930), (297, 13990),

Gene: Loofah_20 Start: 14964, Stop: 15821, Start Num: 45

Candidate Starts for Loofah_20:

(Start: 45 @14964 has 111 MA's), (65, 15018), (77, 15054), (197, 15462), (253, 15660), (296, 15810), (297, 15813),

Gene: Lorelei_19 Start: 14967, Stop: 15824, Start Num: 45

Candidate Starts for Lorelei_19:

(Start: 45 @14967 has 111 MA's), (73, 15039), (87, 15087), (96, 15120), (125, 15225), (140, 15252), (156, 15315), (167, 15357), (194, 15456), (195, 15459), (197, 15465), (217, 15537), (229, 15594), (248, 15651), (252, 15660), (296, 15813), (297, 15816),

Gene: Loviatar_30 Start: 13062, Stop: 13919, Start Num: 47

Candidate Starts for Loviatar_30:

(Start: 47 @13062 has 66 MA's), (55, 13086), (61, 13107), (74, 13137), (82, 13167), (86, 13179), (113, 13275), (116, 13290), (118, 13296), (140, 13347), (156, 13410), (164, 13443), (175, 13485), (212, 13590), (214, 13599), (215, 13608), (237, 13704), (276, 13839), (280, 13851), (297, 13911),

Gene: Lynlen_17 Start: 13132, Stop: 13986, Start Num: 47

Candidate Starts for Lynlen_17:

(Start: 47 @13132 has 66 MA's), (74, 13207), (82, 13237), (85, 13246), (113, 13345), (140, 13417), (164, 13513), (167, 13522), (175, 13555), (202, 13639), (212, 13660), (230, 13753), (238, 13777), (239, 13786), (260, 13840), (275, 13903), (280, 13918), (297, 13978),

Gene: MEAK_15 Start: 11282, Stop: 12229, Start Num: 32

Candidate Starts for MEAK_15:

(Start: 29 @11273 has 1 MA's), (30, 11276), (Start: 32 @11282 has 42 MA's), (36, 11315), (41, 11333), (46, 11336), (49, 11342), (56, 11366), (59, 11375), (73, 11405), (74, 11408), (75, 11411), (79, 11432), (95, 11477), (99, 11507), (103, 11522), (107, 11534), (108, 11537), (109, 11540), (123, 11588), (131, 11606), (141, 11642), (144, 11648), (149, 11675), (154, 11699), (160, 11726), (168, 11753), (171, 11759), (184, 11822), (187, 11834), (198, 11876), (199, 11879), (200, 11882), (212, 11915), (215, 11933), (217, 11948), (221, 11969), (224, 11984), (227, 11999), (229, 12005), (259, 12077), (260, 12080), (262, 12098), (263, 12101), (266, 12110), (278, 12158), (282, 12170), (285, 12179), (289, 12194), (291, 12200), (295, 12215),

Gene: Mabodamaca_16 Start: 13111, Stop: 13977, Start Num: 44

Candidate Starts for Mabodamaca_16:

(Start: 44 @13111 has 10 MA's), (75, 13195), (83, 13225), (107, 13315), (109, 13321), (197, 13624), (280, 13909),

Gene: Maja_17 Start: 13790, Stop: 14692, Start Num: 26

Candidate Starts for Maja_17:

(Start: 26 @13790 has 9 MA's), (37, 13838), (Start: 47 @13859 has 66 MA's), (Start: 48 @13862 has 22 MA's), (88, 13973), (95, 13991), (98, 14018), (99, 14021), (103, 14036), (120, 14084), (149, 14159), (153, 14174), (160, 14210), (168, 14237), (212, 14381), (217, 14414), (226, 14456), (233, 14483), (241, 14531), (267, 14573), (280, 14621), (284, 14633),

Gene: Maneekul_19 Start: 14965, Stop: 15822, Start Num: 45

Candidate Starts for Maneekul_19:

(Start: 45 @14965 has 111 MA's), (73, 15037), (77, 15055), (125, 15223), (140, 15250), (197, 15463), (198, 15469), (217, 15535), (229, 15592), (244, 15637), (252, 15658), (288, 15784), (296, 15811), (297, 15814),

Gene: Marav_22 Start: 15699, Stop: 16556, Start Num: 45

Candidate Starts for Marav_22:

(Start: 45 @15699 has 111 MA's), (77, 15789), (151, 16020), (158, 16056), (197, 16197), (252, 16392), (296, 16545), (297, 16548),

Gene: MargaretKali_18 Start: 13709, Stop: 14686, Start Num: 26

Candidate Starts for MargaretKali_18:

(Start: 26 @13709 has 9 MA's), (37, 13754), (Start: 47 @13775 has 66 MA's), (Start: 48 @13778 has 22 MA's), (66, 13832), (75, 13841), (77, 13850), (103, 13949), (120, 13997), (132, 14027), (177, 14207), (178, 14210), (205, 14294), (226, 14384), (231, 14405), (237, 14438), (242, 14474), (243, 14483), (261, 14537), (262, 14549), (286, 14642), (291, 14657), (292, 14666),

Gene: MenE_23 Start: 13833, Stop: 14693, Start Num: 48

Candidate Starts for MenE_23:

(Start: 48 @13833 has 22 MA's), (61, 13869), (Start: 63 @13872 has 1 MA's), (73, 13893), (75, 13899), (77, 13911), (82, 13926), (99, 13992), (107, 14019), (116, 14049), (126, 14082), (157, 14175), (163, 14202), (195, 14325), (197, 14331), (209, 14364), (225, 14442), (295, 14679), (296, 14682),

Gene: Milani_21 Start: 14466, Stop: 15329, Start Num: 47

Candidate Starts for Milani_21:

(Start: 47 @14466 has 66 MA's), (77, 14547), (82, 14562), (103, 14643), (105, 14649), (134, 14739), (151, 14784), (167, 14853), (171, 14862), (175, 14892), (182, 14910), (209, 15003), (215, 15027), (228, 15093), (278, 15255), (287, 15288), (295, 15315), (296, 15318),

Gene: MortySmith_28 Start: 16923, Stop: 17813, Start Num: 43

Candidate Starts for MortySmith_28:

(Start: 43 @16923 has 31 MA's), (121, 17178), (143, 17247), (149, 17271), (156, 17304), (212, 17493), (217, 17526), (229, 17583), (245, 17634), (273, 17724), (283, 17754), (297, 17805), (298, 17808),

Gene: Moyashi_15 Start: 11324, Stop: 12265, Start Num: 32

Candidate Starts for Moyashi_15:

(25, 11309), (Start: 29 @11315 has 1 MA's), (30, 11318), (Start: 32 @11324 has 42 MA's), (36, 11357), (38, 11363), (41, 11375), (56, 11402), (59, 11411), (71, 11438), (73, 11441), (74, 11444), (75, 11447), (77, 11459), (79, 11468), (95, 11513), (99, 11543), (103, 11558), (105, 11564), (107, 11570), (108, 11573), (109, 11576), (115, 11600), (123, 11624), (131, 11642), (141, 11678), (144, 11684), (149, 11711), (154, 11735), (160, 11762), (168, 11789), (171, 11795), (184, 11858), (187, 11870), (198, 11912), (199, 11915), (204, 11930), (215, 11969), (217, 11984), (221, 12005), (224, 12020), (227, 12035), (229, 12041), (259, 12113), (260, 12116), (262, 12134), (263, 12137), (266, 12146), (278, 12194), (282, 12206), (285, 12215), (289, 12230), (291, 12236), (295, 12251),

Gene: MrAK_15 Start: 11335, Stop: 12276, Start Num: 32

Candidate Starts for MrAK_15:

(22, 11317), (Start: 32 @11335 has 42 MA's), (36, 11368), (38, 11374), (41, 11386), (56, 11413), (59, 11422), (73, 11452), (74, 11455), (75, 11458), (77, 11470), (79, 11479), (85, 11494), (92, 11518), (95, 11524), (99, 11554), (103, 11569), (107, 11581), (109, 11587), (123, 11635), (131, 11653), (141, 11689), (144, 11695), (149, 11722), (150, 11725), (154, 11746), (160, 11773), (167, 11797), (171, 11806), (184, 11869), (198, 11923), (199, 11926), (215, 11980), (217, 11995), (221, 12016), (224, 12031), (227, 12046), (229, 12052), (259, 12124), (260, 12127), (262, 12145), (263, 12148), (266, 12157), (278, 12205), (282, 12217), (285, 12226), (289, 12241), (291, 12247), (295, 12262),

Gene: MrSmee_17 Start: 12921, Stop: 13763, Start Num: 48

Candidate Starts for MrSmee_17:

(Start: 26 @12852 has 9 MA's), (Start: 48 @12921 has 22 MA's), (56, 12948), (77, 12999), (79, 13008), (82, 13014), (88, 13035), (99, 13083), (103, 13098), (144, 13206), (149, 13236), (153, 13251), (158, 13278), (160, 13287), (168, 13314), (190, 13407), (205, 13437), (212, 13452), (217, 13485), (226, 13527), (233, 13554), (241, 13602), (278, 13686), (280, 13692), (282, 13698), (284, 13704),

Gene: Nabi_19 Start: 14967, Stop: 15824, Start Num: 45

Candidate Starts for Nabi_19:

(Start: 45 @14967 has 111 MA's), (73, 15039), (87, 15087), (96, 15120), (125, 15225), (140, 15252), (156, 15315), (167, 15357), (194, 15456), (195, 15459), (197, 15465), (217, 15537), (229, 15594), (248, 15651), (252, 15660), (296, 15813), (297, 15816),

Gene: Nanodon_21 Start: 15175, Stop: 16032, Start Num: 45

Candidate Starts for Nanodon_21:

(Start: 45 @15175 has 111 MA's), (73, 15247), (77, 15265), (96, 15328), (125, 15433), (140, 15460), (158, 15532), (176, 15607), (195, 15667), (197, 15673), (198, 15679), (216, 15733), (217, 15745), (229, 15802), (244, 15847), (248, 15859), (252, 15868), (283, 15973), (296, 16021), (297, 16024),

Gene: NarutoRun_30 Start: 17786, Stop: 18676, Start Num: 43

Candidate Starts for NarutoRun_30:

(Start: 43 @17786 has 31 MA's), (143, 18110), (149, 18134), (156, 18167), (198, 18323), (245, 18497), (283, 18617), (297, 18668), (298, 18671),

Gene: Neptune_30 Start: 17763, Stop: 18653, Start Num: 43

Candidate Starts for Neptune_30:

(Start: 43 @17763 has 31 MA's), (143, 18087), (149, 18111), (156, 18144), (198, 18300), (245, 18474), (283, 18594), (297, 18645), (298, 18648),

Gene: Nerdos_19 Start: 14993, Stop: 15850, Start Num: 45

Candidate Starts for Nerdos_19:

(Start: 45 @14993 has 111 MA's), (73, 15065), (77, 15083), (87, 15113), (96, 15146), (125, 15251), (140, 15278), (166, 15380), (176, 15425), (197, 15491), (198, 15497), (216, 15551), (217, 15563), (244, 15665), (248, 15677), (252, 15686), (296, 15839), (297, 15842),

Gene: Nicky22_18 Start: 13563, Stop: 14417, Start Num: 47

Candidate Starts for Nicky22_18:

(Start: 47 @13563 has 66 MA's), (74, 13638), (82, 13668), (85, 13677), (113, 13776), (116, 13791), (140, 13848), (164, 13944), (167, 13953), (175, 13986), (202, 14070), (209, 14085), (276, 14337), (280, 14349), (297, 14409),

Gene: Nishikigoi_19 Start: 15480, Stop: 16337, Start Num: 45

Candidate Starts for Nishikigoi_19:

(10, 15354), (11, 15357), (12, 15363), (Start: 45 @15480 has 111 MA's), (54, 15498), (77, 15570), (125, 15738), (151, 15801), (176, 15912), (197, 15978), (216, 16038), (217, 16050), (219, 16059), (229, 16107), (252, 16173), (262, 16209), (281, 16272), (296, 16326), (297, 16329),

Gene: Oliynyk_20 Start: 15156, Stop: 16013, Start Num: 45

Candidate Starts for Oliynyk_20:

(Start: 45 @15156 has 111 MA's), (73, 15228), (77, 15246), (96, 15309), (125, 15414), (140, 15441), (151, 15477), (166, 15543), (176, 15588), (197, 15654), (198, 15660), (217, 15726), (225, 15765), (229, 15783), (248, 15840), (260, 15867), (296, 16002), (297, 16005),

Gene: Olliecat_17 Start: 13002, Stop: 13859, Start Num: 47

Candidate Starts for Olliecat_17:

(Start: 47 @13002 has 66 MA's), (82, 13104), (104, 13188), (107, 13197), (109, 13203), (116, 13227), (122, 13251), (126, 13260), (137, 13278), (164, 13380), (177, 13428), (182, 13440), (183, 13443), (186, 13452), (191, 13473), (209, 13524), (219, 13572), (275, 13776), (278, 13785),

Gene: Omar_20 Start: 15815, Stop: 16672, Start Num: 45

Candidate Starts for Omar_20:

(39, 15797), (Start: 45 @15815 has 111 MA's), (77, 15905), (85, 15929), (89, 15944), (99, 15986), (118, 16049), (125, 16073), (151, 16136), (176, 16247), (179, 16256), (197, 16313), (217, 16385), (229, 16442), (252, 16508), (262, 16544), (281, 16607), (296, 16661), (297, 16664),

Gene: Ouroboros_15 Start: 11284, Stop: 12231, Start Num: 32

Candidate Starts for Ouroboros_15:

(21, 11266), (Start: 32 @11284 has 42 MA's), (41, 11335), (46, 11338), (49, 11344), (56, 11368), (59, 11377), (73, 11407), (74, 11410), (75, 11413), (77, 11425), (79, 11434), (95, 11479), (99, 11509), (103, 11524), (107, 11536), (109, 11542), (123, 11590), (131, 11608), (136, 11635), (141, 11644), (144, 11650), (149, 11677), (167, 11752), (171, 11761), (187, 11836), (198, 11878), (199, 11881), (200, 11884), (215, 11935), (217, 11950), (221, 11971), (224, 11986), (227, 12001), (229, 12007), (259, 12079), (260, 12082), (262, 12100), (263, 12103), (266, 12112), (278, 12160), (282, 12172), (285, 12181), (289, 12196), (291, 12202), (295, 12217),

Gene: OverHedge_30 Start: 17753, Stop: 18643, Start Num: 43

Candidate Starts for OverHedge_30:

(Start: 43 @17753 has 31 MA's), (143, 18077), (149, 18101), (156, 18134), (198, 18290), (245, 18464), (283, 18584), (297, 18635), (298, 18638),

Gene: Ozzie_19 Start: 14973, Stop: 15830, Start Num: 45

Candidate Starts for Ozzie_19:

(Start: 45 @14973 has 111 MA's), (73, 15045), (77, 15063), (87, 15093), (96, 15126), (125, 15231), (140, 15258), (166, 15360), (176, 15405), (197, 15471), (198, 15477), (216, 15531), (217, 15543), (244, 15645), (248, 15657), (252, 15666), (296, 15819), (297, 15822),

Gene: OzzyJ_20 Start: 14960, Stop: 15817, Start Num: 45

Candidate Starts for OzzyJ_20:

(Start: 45 @14960 has 111 MA's), (73, 15032), (77, 15050), (125, 15218), (140, 15245), (167, 15350), (197, 15458), (198, 15464), (216, 15518), (244, 15632), (252, 15653), (296, 15806), (297, 15809),

Gene: P1.1_15 Start: 11293, Stop: 12234, Start Num: 32

Candidate Starts for P1.1_15:

(25, 11278), (Start: 29 @11284 has 1 MA's), (30, 11287), (Start: 32 @11293 has 42 MA's), (36, 11326), (38, 11332), (41, 11344), (56, 11371), (59, 11380), (73, 11410), (74, 11413), (75, 11416), (77, 11428), (79, 11437), (95, 11482), (99, 11512), (103, 11527), (107, 11539), (108, 11542), (109, 11545), (115, 11569), (123, 11593), (131, 11611), (141, 11647), (144, 11653), (149, 11680), (150, 11683), (158, 11722), (160, 11731), (168, 11758), (171, 11764), (184, 11827), (187, 11839), (198, 11881), (199, 11884), (200, 11887), (215, 11938), (217, 11953), (221, 11974), (224, 11989), (227, 12004), (229, 12010), (259, 12082), (260, 12085), (262, 12103), (263, 12106), (266, 12115), (278, 12163), (282, 12175), (285, 12184), (289, 12199), (291, 12205), (295, 12220),

Gene: P100.1_15 Start: 11300, Stop: 12241, Start Num: 32

Candidate Starts for P100.1_15:

(Start: 29 @11291 has 1 MA's), (Start: 32 @11300 has 42 MA's), (36, 11333), (41, 11351), (56, 11378), (59, 11387), (71, 11414), (73, 11417), (74, 11420), (75, 11423), (77, 11435), (79, 11444), (85, 11459), (95, 11489), (99, 11519), (103, 11534), (109, 11552), (113, 11567), (115, 11576), (123, 11600), (131, 11618), (144, 11660), (149, 11687), (158, 11729), (160, 11738), (168, 11765), (171, 11771), (184, 11834), (187, 11846), (198, 11888), (199, 11891), (204, 11906), (215, 11945), (217, 11960), (221, 11981), (224, 11996), (227, 12011), (229, 12017), (259, 12089), (260, 12092), (262, 12110), (263, 12113), (266, 12122), (278, 12170), (282, 12182), (285, 12191), (289, 12206), (291, 12212), (295, 12227),

Gene: P100A_15 Start: 11295, Stop: 12242, Start Num: 32

Candidate Starts for P100A_15:

(Start: 29 @11286 has 1 MA's), (30, 11289), (Start: 32 @11295 has 42 MA's), (36, 11328), (41, 11346), (46, 11349), (49, 11355), (56, 11379), (59, 11388), (73, 11418), (74, 11421), (75, 11424), (77, 11436), (79, 11445), (95, 11490), (99, 11520), (103, 11535), (105, 11541), (109, 11553), (123, 11601), (131, 11619), (141, 11655), (144, 11661), (149, 11688), (158, 11730), (167, 11763), (171, 11772), (184, 11835), (187, 11847), (198, 11889), (199, 11892), (200, 11895), (212, 11928), (215, 11946), (217, 11961), (221, 11982), (224, 11997), (227, 12012), (229, 12018), (259, 12090), (260, 12093), (262, 12111), (263, 12114), (278, 12171), (282, 12183), (285, 12192), (289, 12207), (291, 12213), (295, 12228),

Gene: P100D_15 Start: 11296, Stop: 12237, Start Num: 32

Candidate Starts for P100D_15:

(25, 11281), (Start: 29 @11287 has 1 MA's), (30, 11290), (Start: 32 @11296 has 42 MA's), (36, 11329), (38, 11335), (41, 11347), (56, 11374), (59, 11383), (73, 11413), (74, 11416), (75, 11419), (77, 11431), (79, 11440), (85, 11455), (95, 11485), (99, 11515), (103, 11530), (107, 11542), (108, 11545), (109, 11548), (123, 11596), (131, 11614), (136, 11641), (141, 11650), (144, 11656), (149, 11683), (150, 11686), (158, 11725), (160, 11734), (167, 11758), (171, 11767), (184, 11830), (187, 11842), (198, 11884), (199, 11887), (200, 11890), (215, 11941), (217, 11956), (221, 11977), (224, 11992), (227, 12007), (229, 12013), (259, 12085), (260, 12088), (262, 12106), (263, 12109), (266, 12118), (278, 12166), (282, 12178), (285, 12187), (289, 12202), (291, 12208), (295, 12223),

Gene: P101A_15 Start: 11308, Stop: 12249, Start Num: 32

Candidate Starts for P101A_15:

(27, 11296), (Start: 29 @11299 has 1 MA's), (Start: 32 @11308 has 42 MA's), (36, 11341), (41, 11359), (56, 11386), (59, 11395), (71, 11422), (73, 11425), (74, 11428), (75, 11431), (77, 11443), (79, 11452), (85, 11467), (95, 11497), (99, 11527), (103, 11542), (109, 11560), (113, 11575), (115, 11584), (123, 11608), (131, 11626), (144, 11668), (149, 11695), (158, 11737), (160, 11746), (168, 11773), (171, 11779), (184, 11842), (187, 11854), (198, 11896), (199, 11899), (204, 11914), (215, 11953), (217, 11968), (221, 11989), (224, 12004), (227, 12019), (229, 12025), (259, 12097), (260, 12100), (262, 12118), (263, 12121), (266, 12130), (278, 12178), (282, 12190), (285, 12199), (289, 12214), (291, 12220), (295, 12235),

Gene: P104A_15 Start: 11279, Stop: 12226, Start Num: 32

Candidate Starts for P104A_15:

(24, 11264), (Start: 29 @11270 has 1 MA's), (Start: 32 @11279 has 42 MA's), (36, 11312), (41, 11330), (46, 11333), (49, 11339), (56, 11363), (59, 11372), (73, 11402), (74, 11405), (75, 11408), (77, 11420), (82, 11435), (85, 11444), (95, 11474), (99, 11504), (103, 11519), (105, 11525), (107, 11531), (108, 11534), (109, 11537), (115, 11561), (123, 11585), (131, 11603), (136, 11630), (141, 11639), (144, 11645), (149, 11672), (150, 11675), (154, 11696), (160, 11723), (168, 11750), (171, 11756), (184, 11819), (187, 11831), (198, 11873), (199, 11876), (200, 11879), (204, 11891), (215, 11930), (217, 11945), (221, 11966), (224, 11981), (227, 11996), (229, 12002), (259, 12074), (260, 12077), (262, 12095), (263, 12098), (266, 12107), (278, 12155), (282, 12167), (285, 12176), (289, 12191), (291, 12197), (295, 12212),

Gene: P104B_15 Start: 11296, Stop: 12243, Start Num: 32

Candidate Starts for P104B_15:

(24, 11281), (Start: 29 @11287 has 1 MA's), (30, 11290), (Start: 32 @11296 has 42 MA's), (36, 11329), (38, 11335), (41, 11347), (46, 11350), (49, 11356), (56, 11380), (59, 11389), (73, 11419), (74, 11422), (75, 11425), (77, 11437), (79, 11446), (82, 11452), (95, 11491), (99, 11521), (103, 11536), (107, 11548), (108, 11551), (109, 11554), (123, 11602), (131, 11620), (136, 11647), (141, 11656), (149, 11689), (154, 11713), (160, 11740), (167, 11764), (171, 11773), (184, 11836), (187, 11848), (198, 11890), (199, 11893), (200, 11896), (215, 11947), (217, 11962), (221, 11983), (224, 11998), (227, 12013), (229, 12019), (259, 12091), (260, 12094), (262, 12112), (263, 12115), (266, 12124),

(278, 12172), (282, 12184), (285, 12193), (289, 12208), (291, 12214), (295, 12229),

Gene: P105_15 Start: 11205, Stop: 12146, Start Num: 32

Candidate Starts for P105_15:

(22, 11187), (Start: 32 @11205 has 42 MA's), (36, 11238), (38, 11244), (41, 11256), (56, 11283), (59, 11292), (73, 11322), (74, 11325), (75, 11328), (77, 11340), (79, 11349), (85, 11364), (95, 11394), (99, 11424), (103, 11439), (107, 11451), (108, 11454), (109, 11457), (115, 11481), (123, 11505), (131, 11523), (141, 11559), (144, 11565), (149, 11592), (150, 11595), (154, 11616), (158, 11634), (160, 11643), (168, 11670), (171, 11676), (184, 11739), (187, 11751), (198, 11793), (199, 11796), (200, 11799), (204, 11811), (215, 11850), (217, 11865), (221, 11886), (224, 11901), (227, 11916), (229, 11922), (259, 11994), (262, 12015), (263, 12018), (266, 12027), (278, 12075), (282, 12087), (285, 12096), (289, 12111), (291, 12117), (295, 12132),

Gene: P106A_15 Start: 11324, Stop: 12271, Start Num: 32

Candidate Starts for P106A_15:

(24, 11309), (Start: 29 @11315 has 1 MA's), (30, 11318), (Start: 32 @11324 has 42 MA's), (36, 11357), (41, 11375), (46, 11378), (56, 11408), (59, 11417), (71, 11444), (73, 11447), (74, 11450), (75, 11453), (77, 11465), (79, 11474), (95, 11519), (99, 11549), (103, 11564), (108, 11579), (109, 11582), (115, 11606), (123, 11630), (131, 11648), (144, 11690), (149, 11717), (158, 11759), (160, 11768), (168, 11795), (171, 11801), (184, 11864), (187, 11876), (198, 11918), (199, 11921), (200, 11924), (215, 11975), (217, 11990), (219, 11999), (224, 12026), (227, 12041), (229, 12047), (259, 12119), (260, 12122), (262, 12140), (263, 12143), (266, 12152), (278, 12200), (282, 12212), (285, 12221), (289, 12236), (291, 12242), (295, 12257),

Gene: P106C_15 Start: 11324, Stop: 12271, Start Num: 32

Candidate Starts for P106C_15:

(24, 11309), (Start: 29 @11315 has 1 MA's), (30, 11318), (Start: 32 @11324 has 42 MA's), (36, 11357), (41, 11375), (46, 11378), (56, 11408), (59, 11417), (71, 11444), (73, 11447), (74, 11450), (75, 11453), (77, 11465), (79, 11474), (95, 11519), (99, 11549), (103, 11564), (108, 11579), (109, 11582), (115, 11606), (123, 11630), (131, 11648), (144, 11690), (149, 11717), (158, 11759), (160, 11768), (168, 11795), (171, 11801), (184, 11864), (187, 11876), (198, 11918), (199, 11921), (200, 11924), (215, 11975), (217, 11990), (219, 11999), (224, 12026), (227, 12041), (229, 12047), (259, 12119), (260, 12122), (262, 12140), (263, 12143), (266, 12152), (278, 12200), (282, 12212), (285, 12221), (289, 12236), (291, 12242), (295, 12257),

Gene: P106I_15 Start: 11324, Stop: 12271, Start Num: 32

Candidate Starts for P106I_15:

(24, 11309), (Start: 29 @11315 has 1 MA's), (30, 11318), (Start: 32 @11324 has 42 MA's), (36, 11357), (41, 11375), (46, 11378), (56, 11408), (59, 11417), (71, 11444), (73, 11447), (74, 11450), (75, 11453), (77, 11465), (79, 11474), (95, 11519), (99, 11549), (103, 11564), (108, 11579), (109, 11582), (115, 11606), (123, 11630), (131, 11648), (144, 11690), (149, 11717), (158, 11759), (160, 11768), (168, 11795), (171, 11801), (184, 11864), (187, 11876), (198, 11918), (199, 11921), (200, 11924), (215, 11975), (217, 11990), (219, 11999), (224, 12026), (227, 12041), (229, 12047), (259, 12119), (260, 12122), (262, 12140), (263, 12143), (266, 12152), (278, 12200), (282, 12212), (285, 12221), (289, 12236), (291, 12242), (295, 12257),

Gene: P106L_15 Start: 11324, Stop: 12271, Start Num: 32

Candidate Starts for P106L_15:

(24, 11309), (Start: 29 @11315 has 1 MA's), (30, 11318), (Start: 32 @11324 has 42 MA's), (36, 11357), (41, 11375), (46, 11378), (56, 11408), (59, 11417), (71, 11444), (73, 11447), (74, 11450), (75, 11453), (77, 11465), (79, 11474), (95, 11519), (99, 11549), (103, 11564), (108, 11579), (109, 11582), (115, 11606), (123, 11630), (131, 11648), (144, 11690), (149, 11717), (158, 11759), (160, 11768), (168, 11795), (171, 11801), (184, 11864), (187, 11876), (198, 11918), (199, 11921), (200, 11924),

(215, 11975), (217, 11990), (219, 11999), (224, 12026), (227, 12041), (229, 12047), (259, 12119), (260, 12122), (262, 12140), (263, 12143), (266, 12152), (278, 12200), (282, 12212), (285, 12221), (289, 12236), (291, 12242), (295, 12257),

Gene: P106M_15 Start: 11324, Stop: 12271, Start Num: 32

Candidate Starts for P106M_15:

(24, 11309), (Start: 29 @11315 has 1 MA's), (30, 11318), (Start: 32 @11324 has 42 MA's), (36, 11357), (41, 11375), (46, 11378), (56, 11408), (59, 11417), (71, 11444), (73, 11447), (74, 11450), (75, 11453), (77, 11465), (79, 11474), (95, 11519), (99, 11549), (103, 11564), (108, 11579), (109, 11582), (115, 11606), (123, 11630), (131, 11648), (144, 11690), (149, 11717), (158, 11759), (160, 11768), (168, 11795), (171, 11801), (184, 11864), (187, 11876), (198, 11918), (199, 11921), (200, 11924), (215, 11975), (217, 11990), (219, 11999), (224, 12026), (227, 12041), (229, 12047), (259, 12119), (260, 12122), (262, 12140), (263, 12143), (266, 12152), (278, 12200), (282, 12212), (285, 12221), (289, 12236), (291, 12242), (295, 12257),

Gene: P107A_15 Start: 11301, Stop: 12248, Start Num: 32

Candidate Starts for P107A_15:

(Start: 29 @11292 has 1 MA's), (Start: 32 @11301 has 42 MA's), (36, 11334), (41, 11352), (46, 11355), (49, 11361), (56, 11385), (59, 11394), (73, 11424), (74, 11427), (75, 11430), (77, 11442), (79, 11451), (99, 11526), (103, 11541), (105, 11547), (109, 11559), (123, 11607), (131, 11625), (136, 11652), (141, 11661), (144, 11667), (149, 11694), (167, 11769), (171, 11778), (184, 11841), (187, 11853), (198, 11895), (199, 11898), (200, 11901), (215, 11952), (217, 11967), (221, 11988), (224, 12003), (227, 12018), (229, 12024), (259, 12096), (260, 12099), (262, 12117), (263, 12120), (278, 12177), (282, 12189), (285, 12198), (289, 12213), (291, 12219), (295, 12234),

Gene: P107C_15 Start: 11283, Stop: 12224, Start Num: 32

Candidate Starts for P107C_15:

(25, 11268), (Start: 29 @11274 has 1 MA's), (30, 11277), (Start: 32 @11283 has 42 MA's), (36, 11316), (38, 11322), (41, 11334), (56, 11361), (59, 11370), (73, 11400), (74, 11403), (75, 11406), (77, 11418), (79, 11427), (85, 11442), (95, 11472), (99, 11502), (103, 11517), (108, 11532), (109, 11535), (123, 11583), (131, 11601), (141, 11637), (144, 11643), (149, 11670), (150, 11673), (154, 11694), (158, 11712), (160, 11721), (167, 11745), (171, 11754), (184, 11817), (187, 11829), (198, 11871), (199, 11874), (200, 11877), (217, 11943), (221, 11964), (224, 11979), (227, 11994), (229, 12000), (259, 12072), (260, 12075), (262, 12093), (263, 12096), (266, 12105), (278, 12153), (282, 12165), (285, 12174), (287, 12183), (289, 12189), (291, 12195), (295, 12210),

Gene: P108C_15 Start: 11282, Stop: 12232, Start Num: 29

Candidate Starts for P108C_15:

(25, 11276), (Start: 29 @11282 has 1 MA's), (30, 11285), (Start: 32 @11291 has 42 MA's), (36, 11324), (41, 11342), (56, 11369), (59, 11378), (73, 11408), (74, 11411), (75, 11414), (77, 11426), (79, 11435), (85, 11450), (95, 11480), (99, 11510), (103, 11525), (105, 11531), (109, 11543), (123, 11591), (131, 11609), (141, 11645), (144, 11651), (149, 11678), (158, 11720), (160, 11729), (168, 11756), (171, 11762), (184, 11825), (187, 11837), (198, 11879), (199, 11882), (200, 11885), (212, 11918), (215, 11936), (217, 11951), (219, 11960), (224, 11987), (227, 12002), (229, 12008), (259, 12080), (260, 12083), (262, 12101), (263, 12104), (266, 12113), (278, 12161), (282, 12173), (285, 12182), (289, 12197), (291, 12203), (295, 12218),

Gene: P14.4_15 Start: 11291, Stop: 12238, Start Num: 32

Candidate Starts for P14.4_15:

(24, 11276), (Start: 29 @11282 has 1 MA's), (Start: 32 @11291 has 42 MA's), (36, 11324), (41, 11342), (46, 11345), (49, 11351), (56, 11375), (59, 11384), (73, 11414), (74, 11417), (75, 11420), (77, 11432), (79, 11441), (95, 11486), (99, 11516), (103, 11531), (105, 11537), (107, 11543), (108, 11546), (123, 11597), (131, 11615), (136, 11642), (141, 11651), (144, 11657), (149, 11684), (150, 11687),

(154, 11708), (160, 11735), (167, 11759), (171, 11768), (184, 11831), (187, 11843), (198, 11885), (199, 11888), (200, 11891), (215, 11942), (217, 11957), (221, 11978), (224, 11993), (227, 12008), (229, 12014), (259, 12086), (260, 12089), (262, 12107), (263, 12110), (266, 12119), (278, 12167), (282, 12179), (289, 12203), (291, 12209), (295, 12224),

Gene: P9.1_15 Start: 11286, Stop: 12233, Start Num: 32

Candidate Starts for P9.1_15:

(24, 11271), (Start: 29 @11277 has 1 MA's), (30, 11280), (Start: 32 @11286 has 42 MA's), (36, 11319), (38, 11325), (41, 11337), (46, 11340), (49, 11346), (56, 11370), (73, 11409), (74, 11412), (75, 11415), (77, 11427), (79, 11436), (95, 11481), (99, 11511), (103, 11526), (105, 11532), (107, 11538), (108, 11541), (109, 11544), (123, 11592), (131, 11610), (136, 11637), (141, 11646), (149, 11679), (150, 11682), (154, 11703), (160, 11730), (168, 11757), (171, 11763), (184, 11826), (187, 11838), (198, 11880), (199, 11883), (200, 11886), (215, 11937), (217, 11952), (219, 11961), (224, 11988), (227, 12003), (229, 12009), (259, 12081), (260, 12084), (262, 12102), (263, 12105), (266, 12114), (278, 12162), (282, 12174), (285, 12183), (289, 12198), (291, 12204), (295, 12219),

Gene: PA6_15 Start: 11315, Stop: 12262, Start Num: 32

Candidate Starts for PA6_15:

(21, 11294), (Start: 29 @11306 has 1 MA's), (30, 11309), (Start: 32 @11315 has 42 MA's), (36, 11348), (38, 11354), (41, 11366), (49, 11375), (51, 11378), (56, 11399), (59, 11408), (73, 11438), (74, 11441), (75, 11444), (77, 11456), (82, 11471), (85, 11480), (95, 11510), (99, 11540), (103, 11555), (105, 11561), (107, 11567), (108, 11570), (109, 11573), (115, 11597), (123, 11621), (131, 11639), (136, 11666), (141, 11675), (144, 11681), (149, 11708), (150, 11711), (160, 11759), (168, 11786), (171, 11792), (184, 11855), (187, 11867), (198, 11909), (199, 11912), (204, 11927), (215, 11966), (217, 11981), (221, 12002), (224, 12017), (227, 12032), (229, 12038), (259, 12110), (260, 12113), (262, 12131), (263, 12134), (266, 12143), (278, 12191), (282, 12203), (285, 12212), (289, 12227), (291, 12233), (295, 12248),

Gene: PAD20_15 Start: 11289, Stop: 12230, Start Num: 32

Candidate Starts for PAD20_15:

(25, 11274), (Start: 29 @11280 has 1 MA's), (30, 11283), (Start: 32 @11289 has 42 MA's), (36, 11322), (38, 11328), (41, 11340), (56, 11367), (59, 11376), (73, 11406), (74, 11409), (75, 11412), (77, 11424), (85, 11448), (95, 11478), (99, 11508), (103, 11523), (107, 11535), (108, 11538), (109, 11541), (115, 11565), (123, 11589), (131, 11607), (136, 11634), (141, 11643), (144, 11649), (149, 11676), (154, 11700), (160, 11727), (168, 11754), (171, 11760), (184, 11823), (187, 11835), (198, 11877), (199, 11880), (200, 11883), (215, 11934), (217, 11949), (221, 11970), (224, 11985), (229, 12006), (259, 12078), (260, 12081), (262, 12099), (263, 12102), (266, 12111), (278, 12159), (282, 12171), (289, 12195), (291, 12201), (295, 12216),

Gene: PAS50_15 Start: 11298, Stop: 12239, Start Num: 32

Candidate Starts for PAS50_15:

(Start: 29 @11289 has 1 MA's), (Start: 32 @11298 has 42 MA's), (36, 11331), (41, 11349), (56, 11376), (59, 11385), (71, 11412), (73, 11415), (74, 11418), (75, 11421), (77, 11433), (79, 11442), (85, 11457), (95, 11487), (99, 11517), (103, 11532), (109, 11550), (113, 11565), (115, 11574), (123, 11598), (131, 11616), (144, 11658), (149, 11685), (158, 11727), (160, 11736), (168, 11763), (171, 11769), (184, 11832), (187, 11844), (198, 11886), (199, 11889), (200, 11892), (212, 11925), (215, 11943), (217, 11958), (219, 11967), (224, 11994), (227, 12009), (229, 12015), (259, 12087), (260, 12090), (262, 12108), (263, 12111), (266, 12120), (278, 12168), (282, 12180), (285, 12189), (289, 12204), (291, 12210), (295, 12225),

Gene: PHL010M04_15 Start: 11286, Stop: 12233, Start Num: 32

Candidate Starts for PHL010M04_15:

(24, 11271), (Start: 29 @11277 has 1 MA's), (30, 11280), (Start: 32 @11286 has 42 MA's), (36, 11319), (41, 11337), (46, 11340), (49, 11346), (56, 11370), (59, 11379), (73, 11409), (74, 11412), (75, 11415), (77, 11427), (79, 11436), (85, 11451), (95, 11481), (99, 11511), (103, 11526), (105, 11532), (108, 11541), (123, 11592), (131, 11610), (136, 11637), (141, 11646), (144, 11652), (149, 11679), (154, 11703), (160, 11730), (167, 11754), (171, 11763), (184, 11826), (187, 11838), (198, 11880), (199, 11883), (200, 11886), (215, 11937), (217, 11952), (221, 11973), (224, 11988), (227, 12003), (229, 12009), (259, 12081), (260, 12084), (262, 12102), (263, 12105), (266, 12114), (278, 12162), (282, 12174), (285, 12183), (289, 12198), (291, 12204), (295, 12219),

Gene: PHL037M02_15 Start: 11301, Stop: 12242, Start Num: 32

Candidate Starts for PHL037M02_15:

(22, 11283), (Start: 32 @11301 has 42 MA's), (36, 11334), (38, 11340), (41, 11352), (56, 11379), (59, 11388), (71, 11415), (73, 11418), (74, 11421), (75, 11424), (77, 11436), (79, 11445), (95, 11490), (99, 11520), (103, 11535), (105, 11541), (107, 11547), (108, 11550), (109, 11553), (115, 11577), (123, 11601), (131, 11619), (144, 11661), (149, 11688), (150, 11691), (154, 11712), (167, 11763), (171, 11772), (184, 11835), (187, 11847), (198, 11889), (199, 11892), (200, 11895), (215, 11946), (217, 11961), (221, 11982), (224, 11997), (227, 12012), (229, 12018), (259, 12090), (260, 12093), (262, 12111), (263, 12114), (278, 12171), (282, 12183), (285, 12192), (289, 12207), (291, 12213), (295, 12228),

Gene: PHL060L00_15 Start: 11302, Stop: 12249, Start Num: 32

Candidate Starts for PHL060L00_15:

(24, 11287), (Start: 29 @11293 has 1 MA's), (Start: 32 @11302 has 42 MA's), (36, 11335), (41, 11353), (46, 11356), (49, 11362), (56, 11386), (59, 11395), (73, 11425), (74, 11428), (75, 11431), (77, 11443), (79, 11452), (82, 11458), (85, 11467), (95, 11497), (99, 11527), (103, 11542), (109, 11560), (123, 11608), (131, 11626), (144, 11668), (149, 11695), (154, 11719), (160, 11746), (168, 11773), (171, 11779), (184, 11842), (198, 11896), (199, 11899), (200, 11902), (212, 11935), (215, 11953), (217, 11968), (221, 11989), (224, 12004), (227, 12019), (229, 12025), (259, 12097), (260, 12100), (262, 12118), (263, 12121), (278, 12178), (282, 12190), (285, 12199), (289, 12214), (291, 12220), (295, 12235),

Gene: PHL067M10_15 Start: 11269, Stop: 12210, Start Num: 32

Candidate Starts for PHL067M10_15:

(25, 11254), (Start: 29 @11260 has 1 MA's), (30, 11263), (Start: 32 @11269 has 42 MA's), (36, 11302), (41, 11320), (53, 11338), (56, 11347), (59, 11356), (73, 11386), (74, 11389), (75, 11392), (77, 11404), (79, 11413), (85, 11428), (95, 11458), (99, 11488), (103, 11503), (107, 11515), (108, 11518), (109, 11521), (115, 11545), (123, 11569), (131, 11587), (141, 11623), (144, 11629), (149, 11656), (150, 11659), (154, 11680), (160, 11707), (168, 11734), (171, 11740), (184, 11803), (187, 11815), (198, 11857), (199, 11860), (200, 11863), (215, 11914), (217, 11929), (221, 11950), (224, 11965), (227, 11980), (229, 11986), (259, 12058), (260, 12061), (262, 12079), (263, 12082), (266, 12091), (278, 12139), (282, 12151), (285, 12160), (289, 12175), (291, 12181), (295, 12196),

Gene: PHL071N05_15 Start: 11297, Stop: 12238, Start Num: 32

Candidate Starts for PHL071N05_15:

(25, 11282), (Start: 29 @11288 has 1 MA's), (Start: 32 @11297 has 42 MA's), (36, 11330), (38, 11336), (41, 11348), (56, 11375), (59, 11384), (73, 11414), (74, 11417), (75, 11420), (77, 11432), (79, 11441), (85, 11456), (95, 11486), (99, 11516), (103, 11531), (109, 11549), (123, 11597), (131, 11615), (141, 11651), (144, 11657), (149, 11684), (156, 11717), (168, 11762), (171, 11768), (184, 11831), (187, 11843), (198, 11885), (199, 11888), (200, 11891), (217, 11957), (221, 11978), (224, 11993), (227, 12008), (229, 12014), (259, 12086), (260, 12089), (262, 12107), (263, 12110), (266, 12119), (278, 12167), (282, 12179), (285, 12188), (289, 12203), (291, 12209), (295, 12224),

Gene: PHL111M01_15 Start: 11287, Stop: 12234, Start Num: 32

Candidate Starts for PHL111M01_15:

(Start: 29 @11278 has 1 MA's), (30, 11281), (Start: 32 @11287 has 42 MA's), (36, 11320), (41, 11338), (46, 11341), (49, 11347), (56, 11371), (59, 11380), (73, 11410), (74, 11413), (75, 11416), (77, 11428), (85, 11452), (95, 11482), (99, 11512), (103, 11527), (107, 11539), (108, 11542), (109, 11545), (123, 11593), (131, 11611), (141, 11647), (144, 11653), (149, 11680), (160, 11731), (167, 11755), (171, 11764), (184, 11827), (187, 11839), (198, 11881), (199, 11884), (200, 11887), (215, 11938), (217, 11953), (221, 11974), (224, 11989), (227, 12004), (229, 12010), (259, 12082), (260, 12085), (262, 12103), (263, 12106), (266, 12115), (278, 12163), (282, 12175), (285, 12184), (289, 12199), (291, 12205), (295, 12220),

Gene: PHL112N00_15 Start: 11284, Stop: 12231, Start Num: 32

Candidate Starts for PHL112N00_15:

(Start: 29 @11275 has 1 MA's), (Start: 32 @11284 has 42 MA's), (36, 11317), (38, 11323), (41, 11335), (49, 11344), (59, 11377), (73, 11407), (74, 11410), (75, 11413), (77, 11425), (79, 11434), (85, 11449), (95, 11479), (99, 11509), (103, 11524), (107, 11536), (108, 11539), (109, 11542), (123, 11590), (131, 11608), (141, 11644), (144, 11650), (149, 11677), (150, 11680), (160, 11728), (168, 11755), (171, 11761), (184, 11824), (198, 11878), (199, 11881), (200, 11884), (212, 11917), (215, 11935), (217, 11950), (221, 11971), (224, 11986), (227, 12001), (229, 12007), (259, 12079), (260, 12082), (262, 12100), (263, 12103), (266, 12112), (278, 12160), (282, 12172), (285, 12181), (289, 12196), (291, 12202), (295, 12217),

Gene: PHL113M01_15 Start: 11311, Stop: 12252, Start Num: 32

Candidate Starts for PHL113M01_15:

(25, 11296), (Start: 29 @11302 has 1 MA's), (Start: 32 @11311 has 42 MA's), (36, 11344), (41, 11362), (56, 11389), (59, 11398), (71, 11425), (73, 11428), (74, 11431), (75, 11434), (77, 11446), (79, 11455), (85, 11470), (95, 11500), (99, 11530), (103, 11545), (107, 11557), (113, 11578), (115, 11587), (123, 11611), (131, 11629), (141, 11665), (144, 11671), (149, 11698), (158, 11740), (160, 11749), (168, 11776), (171, 11782), (184, 11845), (187, 11857), (198, 11899), (199, 11902), (200, 11905), (215, 11956), (217, 11971), (221, 11992), (224, 12007), (227, 12022), (229, 12028), (259, 12100), (260, 12103), (262, 12121), (263, 12124), (266, 12133), (278, 12181), (282, 12193), (285, 12202), (289, 12217), (291, 12223), (295, 12238),

Gene: PHL114L00_15 Start: 11289, Stop: 12236, Start Num: 32

Candidate Starts for PHL114L00_15:

(Start: 29 @11280 has 1 MA's), (Start: 32 @11289 has 42 MA's), (36, 11322), (41, 11340), (46, 11343), (49, 11349), (56, 11373), (59, 11382), (73, 11412), (74, 11415), (75, 11418), (77, 11430), (85, 11454), (95, 11484), (99, 11514), (103, 11529), (107, 11541), (108, 11544), (109, 11547), (115, 11571), (123, 11595), (131, 11613), (136, 11640), (141, 11649), (149, 11682), (150, 11685), (154, 11706), (160, 11733), (168, 11760), (171, 11766), (184, 11829), (187, 11841), (198, 11883), (199, 11886), (200, 11889), (215, 11940), (217, 11955), (221, 11976), (224, 11991), (227, 12006), (229, 12012), (259, 12084), (260, 12087), (262, 12105), (263, 12108), (278, 12165), (282, 12177), (285, 12186), (289, 12201), (291, 12207), (295, 12222),

Gene: Pablito_19 Start: 14808, Stop: 15662, Start Num: 45

Candidate Starts for Pablito_19:

(Start: 45 @14808 has 111 MA's), (65, 14862), (77, 14898), (194, 15294), (197, 15303), (238, 15459), (252, 15498), (271, 15561), (296, 15651), (297, 15654), (298, 15657),

Gene: Paedore_19 Start: 14964, Stop: 15821, Start Num: 45

Candidate Starts for Paedore_19:

(Start: 45 @14964 has 111 MA's), (65, 15018), (77, 15054), (197, 15462), (253, 15660), (296, 15810), (297, 15813),

Gene: Paolo_21 Start: 15362, Stop: 16219, Start Num: 45

Candidate Starts for Paolo_21:

(Start: 45 @15362 has 111 MA's), (151, 15683), (158, 15719), (197, 15860), (252, 16055), (296, 16208), (297, 16211),

Gene: Pavo_20 Start: 15672, Stop: 16529, Start Num: 45

Candidate Starts for Pavo_20:

(Start: 45 @15672 has 111 MA's), (57, 15708), (73, 15744), (85, 15786), (125, 15930), (153, 16002), (166, 16059), (167, 16062), (176, 16104), (195, 16164), (197, 16170), (225, 16281), (244, 16344), (252, 16365), (289, 16494), (296, 16518), (297, 16521),

Gene: Percival_16 Start: 13829, Stop: 14695, Start Num: 44

Candidate Starts for Percival_16:

(Start: 44 @13829 has 10 MA's), (83, 13943), (106, 14030), (107, 14033), (109, 14039), (143, 14141), (148, 14156), (158, 14207), (163, 14228), (197, 14342), (239, 14501), (278, 14621), (280, 14627), (288, 14657),

Gene: PermaG_21 Start: 15549, Stop: 16442, Start Num: 48

Candidate Starts for PermaG_21:

(Start: 48 @15549 has 22 MA's), (126, 15813), (151, 15894), (152, 15897), (153, 15903), (171, 15972), (182, 16020), (224, 16188), (244, 16257), (252, 16278), (253, 16281), (271, 16341), (278, 16368), (279, 16371), (280, 16374), (289, 16407), (290, 16410), (297, 16434),

Gene: Pharpay_30 Start: 17808, Stop: 18698, Start Num: 43

Candidate Starts for Pharpay_30:

(Start: 43 @17808 has 31 MA's), (143, 18132), (149, 18156), (156, 18189), (198, 18345), (217, 18411), (245, 18519), (283, 18639), (297, 18690), (298, 18693),

Gene: Phettuccine_19 Start: 14993, Stop: 15850, Start Num: 45

Candidate Starts for Phettuccine_19:

(Start: 45 @14993 has 111 MA's), (73, 15065), (77, 15083), (87, 15113), (96, 15146), (125, 15251), (140, 15278), (166, 15380), (176, 15425), (197, 15491), (198, 15497), (216, 15551), (217, 15563), (244, 15665), (248, 15677), (252, 15686), (296, 15839), (297, 15842),

Gene: Phisb_17 Start: 13132, Stop: 13986, Start Num: 47

Candidate Starts for Phisb_17:

(Start: 47 @13132 has 66 MA's), (74, 13207), (82, 13237), (85, 13246), (113, 13345), (116, 13360), (140, 13417), (164, 13513), (167, 13522), (175, 13555), (202, 13639), (209, 13654), (276, 13906), (280, 13918), (297, 13978),

Gene: Phonegingi_22 Start: 13626, Stop: 14486, Start Num: 48

Candidate Starts for Phonegingi_22:

(Start: 48 @13626 has 22 MA's), (61, 13662), (Start: 63 @13665 has 1 MA's), (73, 13686), (75, 13692), (82, 13719), (99, 13785), (107, 13812), (116, 13842), (126, 13875), (157, 13968), (163, 13995), (195, 14118), (197, 14124), (209, 14157), (217, 14196), (225, 14235), (279, 14415), (280, 14418), (295, 14472), (296, 14475),

Gene: PhunaPhoke_30 Start: 17781, Stop: 18671, Start Num: 43

Candidate Starts for PhunaPhoke_30:

(Start: 43 @17781 has 31 MA's), (143, 18105), (149, 18129), (156, 18162), (198, 18318), (217, 18384), (245, 18492), (283, 18612), (297, 18663), (298, 18666),

Gene: Pickles13_22 Start: 13990, Stop: 14850, Start Num: 48

Candidate Starts for Pickles13_22:

(Start: 48 @13990 has 22 MA's), (61, 14026), (Start: 63 @14029 has 1 MA's), (73, 14050), (75, 14056), (77, 14068), (79, 14077), (82, 14083), (99, 14149), (107, 14176), (116, 14206), (126, 14239), (152, 14305), (157, 14332), (163, 14359), (188, 14458), (195, 14482), (197, 14488), (209, 14521), (225, 14599), (279, 14779), (289, 14815), (295, 14836),

Gene: Pirate_15 Start: 11280, Stop: 12227, Start Num: 32

Candidate Starts for Pirate_15:

(24, 11265), (Start: 29 @11271 has 1 MA's), (30, 11274), (Start: 32 @11280 has 42 MA's), (36, 11313), (41, 11331), (46, 11334), (56, 11364), (59, 11373), (73, 11403), (74, 11406), (75, 11409), (77, 11421), (79, 11430), (95, 11475), (99, 11505), (103, 11520), (107, 11532), (108, 11535), (109, 11538), (117, 11571), (123, 11586), (131, 11604), (141, 11640), (144, 11646), (149, 11673), (154, 11697), (160, 11724), (168, 11751), (171, 11757), (184, 11820), (187, 11832), (198, 11874), (199, 11877), (200, 11880), (215, 11931), (217, 11946), (221, 11967), (224, 11982), (227, 11997), (229, 12003), (259, 12075), (260, 12078), (262, 12096), (263, 12099), (266, 12108), (278, 12156), (282, 12168), (285, 12177), (289, 12192), (291, 12198), (295, 12213),

Gene: Pitbull_17 Start: 12204, Stop: 13190, Start Num: 26

Candidate Starts for Pitbull_17:

(Start: 26 @12204 has 9 MA's), (39, 12258), (Start: 45 @12270 has 111 MA's), (Start: 48 @12276 has 22 MA's), (66, 12333), (73, 12336), (74, 12339), (75, 12342), (82, 12366), (103, 12450), (107, 12462), (114, 12489), (132, 12528), (144, 12558), (178, 12711), (193, 12774), (205, 12798), (212, 12813), (219, 12855), (228, 12900), (249, 13002), (257, 13026), (285, 13140), (292, 13170),

Gene: Ponzi_55 Start: 36570, Stop: 37538, Start Num: 28

Candidate Starts for Ponzi_55:

(Start: 19 @36546 has 2 MA's), (Start: 28 @36570 has 2 MA's), (Start: 47 @36642 has 66 MA's), (74, 36720), (77, 36735), (105, 36840), (107, 36846), (154, 36996), (173, 37065), (232, 37296), (254, 37377), (262, 37413), (287, 37500), (289, 37506),

Gene: Potty_30 Start: 17786, Stop: 18676, Start Num: 43

Candidate Starts for Potty_30:

(Start: 43 @17786 has 31 MA's), (143, 18110), (149, 18134), (156, 18167), (198, 18323), (245, 18497), (283, 18617), (297, 18668), (298, 18671),

Gene: Poultruss_29 Start: 17550, Stop: 18440, Start Num: 43

Candidate Starts for Poultruss_29:

(Start: 43 @17550 has 31 MA's), (85, 17670), (121, 17805), (143, 17874), (149, 17898), (156, 17931), (198, 18087), (212, 18120), (217, 18153), (245, 18261), (273, 18351), (283, 18381), (297, 18432),

Gene: Procrass1_15 Start: 11294, Stop: 12235, Start Num: 32

Candidate Starts for Procrass1_15:

(25, 11279), (Start: 29 @11285 has 1 MA's), (30, 11288), (Start: 32 @11294 has 42 MA's), (36, 11327), (41, 11345), (56, 11372), (59, 11381), (73, 11411), (74, 11414), (75, 11417), (77, 11429), (79, 11438), (85, 11453), (95, 11483), (99, 11513), (103, 11528), (107, 11540), (108, 11543), (109, 11546), (123, 11594), (131, 11612), (141, 11648), (144, 11654), (149, 11681), (154, 11705), (158, 11723), (160, 11732), (168, 11759), (171, 11765), (184, 11828), (187, 11840), (198, 11882), (199, 11885), (200, 11888), (212, 11921), (215, 11939), (217, 11954), (221, 11975), (224, 11990), (227, 12005), (229, 12011), (259, 12083), (260, 12086), (262, 12104), (263, 12107), (266, 12116), (278, 12164), (282, 12176), (285, 12185), (289, 12200), (291, 12206), (295, 12221),

Gene: Provolone_20 Start: 15402, Stop: 16259, Start Num: 45

Candidate Starts for Provolone_20:

(Start: 45 @15402 has 111 MA's), (57, 15438), (73, 15474), (85, 15516), (125, 15660), (140, 15687), (166, 15789), (167, 15792), (176, 15834), (177, 15837), (195, 15894), (197, 15900), (211, 15936), (244, 16074), (289, 16224), (296, 16248), (297, 16251),

Gene: Puginator_21 Start: 15407, Stop: 16264, Start Num: 45

Candidate Starts for Puginator_21:

(Start: 45 @15407 has 111 MA's), (77, 15497), (151, 15728), (158, 15764), (197, 15905), (252, 16100), (296, 16253), (297, 16256),

Gene: QMacho_18 Start: 13602, Stop: 14456, Start Num: 47

Candidate Starts for QMacho_18:

(Start: 47 @13602 has 66 MA's), (74, 13677), (82, 13707), (85, 13716), (113, 13815), (116, 13830), (140, 13887), (164, 13983), (167, 13992), (175, 14025), (202, 14109), (209, 14124), (276, 14376), (280, 14388), (297, 14448),

Gene: QueenBey_15 Start: 11288, Stop: 12235, Start Num: 32

Candidate Starts for QueenBey_15:

(24, 11273), (Start: 29 @11279 has 1 MA's), (Start: 32 @11288 has 42 MA's), (36, 11321), (38, 11327), (41, 11339), (46, 11342), (49, 11348), (56, 11372), (59, 11381), (73, 11411), (74, 11414), (75, 11417), (77, 11429), (79, 11438), (95, 11483), (99, 11513), (103, 11528), (105, 11534), (108, 11543), (123, 11594), (131, 11612), (136, 11639), (141, 11648), (144, 11654), (149, 11681), (154, 11705), (160, 11732), (167, 11756), (171, 11765), (184, 11828), (198, 11882), (199, 11885), (200, 11888), (215, 11939), (217, 11954), (221, 11975), (224, 11990), (227, 12005), (229, 12011), (259, 12083), (260, 12086), (262, 12104), (263, 12107), (266, 12116), (278, 12164), (282, 12176), (285, 12185), (289, 12200), (291, 12206), (295, 12221),

Gene: Quenya_17 Start: 12664, Stop: 13518, Start Num: 47

Candidate Starts for Quenya_17:

(Start: 47 @12664 has 66 MA's), (61, 12709), (74, 12739), (82, 12769), (113, 12877), (116, 12892), (137, 12943), (167, 13054), (209, 13186), (212, 13192), (236, 13303), (239, 13318), (276, 13438), (278, 13444), (280, 13450), (297, 13510),

Gene: R4_19 Start: 15046, Stop: 15903, Start Num: 45

Candidate Starts for R4_19:

(Start: 45 @15046 has 111 MA's), (65, 15100), (77, 15136), (125, 15304), (197, 15544), (253, 15742), (296, 15892), (297, 15895),

Gene: Rachella_30 Start: 17789, Stop: 18679, Start Num: 43

Candidate Starts for Rachella_30:

(Start: 43 @17789 has 31 MA's), (143, 18113), (149, 18137), (156, 18170), (198, 18326), (217, 18392), (245, 18500), (283, 18620), (297, 18671), (298, 18674),

Gene: Rana_19 Start: 14967, Stop: 15824, Start Num: 45

Candidate Starts for Rana_19:

(Start: 45 @14967 has 111 MA's), (73, 15039), (87, 15087), (96, 15120), (125, 15225), (140, 15252), (156, 15315), (167, 15357), (194, 15456), (195, 15459), (197, 15465), (217, 15537), (229, 15594), (248, 15651), (252, 15660), (296, 15813), (297, 15816),

Gene: Raqqa_18 Start: 14740, Stop: 15720, Start Num: 26

Candidate Starts for Raqqa_18:

(Start: 26 @14740 has 9 MA's), (66, 14869), (77, 14887), (80, 14899), (95, 14941), (97, 14959), (107, 14998), (109, 15004), (120, 15034), (145, 15097), (177, 15241), (184, 15268), (192, 15304), (217, 15403), (222, 15433), (226, 15445), (231, 15466), (238, 15496), (244, 15529), (254, 15556), (267,

15598), (280, 15649), (284, 15661),

Gene: Rasovi_20 Start: 15518, Stop: 16411, Start Num: 48

Candidate Starts for Rasovi_20:

(Start: 48 @15518 has 22 MA's), (82, 15611), (85, 15620), (105, 15698), (116, 15749), (151, 15863), (152, 15866), (153, 15872), (167, 15932), (223, 16154), (224, 16157), (244, 16226), (252, 16247), (253, 16250), (271, 16310), (289, 16376),

Gene: RedBear_21 Start: 15234, Stop: 16091, Start Num: 45

Candidate Starts for RedBear_21:

(Start: 45 @15234 has 111 MA's), (73, 15306), (77, 15324), (125, 15492), (140, 15519), (167, 15624), (197, 15732), (198, 15738), (217, 15804), (252, 15927), (296, 16080), (297, 16083),

Gene: Rie18_30 Start: 17302, Stop: 18192, Start Num: 43

Candidate Starts for Rie18_30:

(Start: 43 @17302 has 31 MA's), (143, 17626), (149, 17650), (198, 17839), (212, 17872), (245, 18013), (273, 18103), (283, 18133), (297, 18184), (298, 18187),

Gene: RikSengupta_31 Start: 17701, Stop: 18585, Start Num: 45

Candidate Starts for RikSengupta_31:

(17, 17602), (Start: 45 @17701 has 111 MA's), (78, 17797), (85, 17818), (107, 17902), (109, 17908), (151, 18049), (217, 18298), (222, 18328), (245, 18406), (251, 18418), (252, 18421), (260, 18439), (276, 18505), (277, 18508), (278, 18511), (297, 18577), (298, 18580),

Gene: Rileysaurus_15 Start: 11284, Stop: 12231, Start Num: 32

Candidate Starts for Rileysaurus_15:

(Start: 29 @11275 has 1 MA's), (30, 11278), (Start: 32 @11284 has 42 MA's), (36, 11317), (41, 11335), (46, 11338), (49, 11344), (56, 11368), (59, 11377), (73, 11407), (74, 11410), (75, 11413), (77, 11425), (79, 11434), (95, 11479), (99, 11509), (103, 11524), (105, 11530), (109, 11542), (131, 11608), (136, 11635), (141, 11644), (144, 11650), (149, 11677), (160, 11728), (167, 11752), (171, 11761), (184, 11824), (187, 11836), (198, 11878), (199, 11881), (200, 11884), (215, 11935), (217, 11950), (221, 11971), (224, 11986), (227, 12001), (229, 12007), (259, 12079), (260, 12082), (262, 12100), (263, 12103), (266, 12112), (278, 12160), (282, 12172), (285, 12181), (289, 12196), (291, 12202), (295, 12217),

Gene: Rollins_16 Start: 11669, Stop: 12526, Start Num: 47

Candidate Starts for Rollins_16:

(Start: 47 @11669 has 66 MA's), (58, 11708), (74, 11744), (82, 11774), (86, 11786), (113, 11882), (140, 11954), (159, 12029), (164, 12050), (215, 12218), (240, 12329),

Gene: Rona_16 Start: 12807, Stop: 13661, Start Num: 47

Candidate Starts for Rona_16:

(Start: 47 @12807 has 66 MA's), (55, 12831), (61, 12852), (74, 12882), (82, 12912), (116, 13035), (137, 13086), (140, 13092), (202, 13314), (209, 13329), (212, 13335), (241, 13470), (276, 13581), (280, 13593), (297, 13653),

Gene: RootBeer_16 Start: 13240, Stop: 14184, Start Num: 28

Candidate Starts for RootBeer_16:

(13, 13192), (Start: 28 @13240 has 2 MA's), (82, 13408), (86, 13420), (95, 13447), (103, 13492), (120, 13558), (139, 13609), (146, 13633), (158, 13690), (164, 13714), (212, 13873), (265, 14056), (280, 14113),

Gene: Rusticus_20 Start: 15156, Stop: 16013, Start Num: 45

Candidate Starts for Rusticus_20:

(Start: 45 @15156 has 111 MA's), (73, 15228), (77, 15246), (96, 15309), (125, 15414), (140, 15441), (151, 15477), (166, 15543), (176, 15588), (197, 15654), (198, 15660), (217, 15726), (225, 15765), (229, 15783), (248, 15840), (260, 15867), (296, 16002), (297, 16005),

Gene: SBlackberry_20 Start: 15344, Stop: 16237, Start Num: 48

Candidate Starts for SBlackberry_20:

(Start: 48 @15344 has 22 MA's), (82, 15437), (85, 15446), (105, 15524), (116, 15575), (137, 15635), (151, 15689), (152, 15692), (153, 15698), (223, 15980), (224, 15983), (244, 16052), (252, 16073), (253, 16076), (271, 16136), (289, 16202),

Gene: SKKY_15 Start: 11329, Stop: 12270, Start Num: 32

Candidate Starts for SKKY_15:

(22, 11311), (Start: 32 @11329 has 42 MA's), (36, 11362), (38, 11368), (41, 11380), (56, 11407), (59, 11416), (73, 11446), (74, 11449), (75, 11452), (77, 11464), (79, 11473), (85, 11488), (95, 11518), (99, 11548), (103, 11563), (107, 11575), (109, 11581), (115, 11605), (123, 11629), (131, 11647), (141, 11683), (144, 11689), (149, 11716), (150, 11719), (154, 11740), (160, 11767), (167, 11791), (171, 11800), (184, 11863), (198, 11917), (199, 11920), (204, 11935), (215, 11974), (217, 11989), (221, 12010), (224, 12025), (227, 12040), (229, 12046), (259, 12118), (260, 12121), (262, 12139), (263, 12142), (266, 12151), (278, 12199), (282, 12211), (285, 12220), (289, 12235), (291, 12241), (295, 12256),

Gene: Saftant_19 Start: 15950, Stop: 16807, Start Num: 45

Candidate Starts for Saftant_19:

(Start: 45 @15950 has 111 MA's), (52, 15965), (57, 15986), (73, 16022), (77, 16040), (85, 16064), (96, 16103), (151, 16271), (191, 16430), (194, 16439), (195, 16442), (197, 16448), (217, 16520), (230, 16580), (244, 16622), (252, 16643), (289, 16772), (296, 16796), (297, 16799),

Gene: SanaSana_18 Start: 13004, Stop: 13858, Start Num: 47

Candidate Starts for SanaSana_18:

(Start: 47 @13004 has 66 MA's), (61, 13049), (74, 13079), (82, 13109), (113, 13217), (116, 13232), (140, 13289), (164, 13385), (167, 13394), (175, 13427), (212, 13532), (214, 13541), (215, 13550), (230, 13625), (238, 13649), (276, 13778), (280, 13790), (297, 13850),

Gene: SansAfet_17 Start: 13052, Stop: 13906, Start Num: 47

Candidate Starts for SansAfet_17:

(Start: 47 @13052 has 66 MA's), (74, 13127), (82, 13157), (85, 13166), (113, 13265), (116, 13280), (140, 13337), (164, 13433), (167, 13442), (175, 13475), (202, 13559), (237, 13694), (238, 13697), (280, 13838), (297, 13898),

Gene: SarBear_17 Start: 13097, Stop: 13951, Start Num: 47

Candidate Starts for SarBear_17:

(Start: 47 @13097 has 66 MA's), (74, 13172), (82, 13202), (85, 13211), (113, 13310), (116, 13325), (140, 13382), (164, 13478), (167, 13487), (175, 13520), (202, 13604), (209, 13619), (212, 13625), (276, 13871), (280, 13883), (297, 13943),

Gene: SarahRose_19 Start: 14966, Stop: 15823, Start Num: 45

Candidate Starts for SarahRose_19:

(Start: 45 @14966 has 111 MA's), (73, 15038), (77, 15056), (125, 15224), (140, 15251), (191, 15446), (197, 15464), (198, 15470), (216, 15524), (244, 15638), (252, 15659), (296, 15812), (297, 15815),

Gene: Sarge_17 Start: 13073, Stop: 13981, Start Num: 26

Candidate Starts for Sarge_17:

(Start: 26 @13073 has 9 MA's), (Start: 48 @13142 has 22 MA's), (66, 13199), (82, 13232), (95, 13271), (99, 13301), (103, 13316), (120, 13364), (149, 13454), (153, 13469), (160, 13505), (168, 13532), (171, 13538), (190, 13625), (212, 13670), (222, 13733), (224, 13739), (233, 13772), (237, 13799), (241, 13820), (260, 13844), (264, 13850), (267, 13862), (280, 13910), (282, 13916), (284, 13922),

Gene: Schmidt_19 Start: 13858, Stop: 14700, Start Num: 62

Candidate Starts for Schmidt_19:

(Start: 60 @13855 has 6 MA's), (Start: 62 @13858 has 5 MA's), (67, 13873), (72, 13879), (90, 13939), (91, 13942), (121, 14056), (126, 14068), (128, 14074), (140, 14101), (169, 14221), (180, 14272), (185, 14290), (202, 14350), (212, 14377), (217, 14410), (256, 14533), (274, 14614), (287, 14659), (290, 14668),

Gene: Sharkboy_16 Start: 12806, Stop: 13660, Start Num: 47

Candidate Starts for Sharkboy_16:

(Start: 47 @12806 has 66 MA's), (55, 12830), (61, 12851), (74, 12881), (82, 12911), (116, 13034), (137, 13085), (140, 13091), (202, 13313), (209, 13328), (212, 13334), (241, 13469), (276, 13580), (280, 13592), (297, 13652),

Gene: Shayna_16 Start: 12861, Stop: 13715, Start Num: 48

Candidate Starts for Shayna_16:

(Start: 48 @12861 has 22 MA's), (82, 12960), (107, 13053), (122, 13107), (182, 13296), (198, 13353), (209, 13380), (254, 13548), (260, 13563), (280, 13647), (296, 13704), (297, 13707),

Gene: Shoya_16 Start: 12709, Stop: 13617, Start Num: 26

Candidate Starts for Shoya_16:

(Start: 26 @12709 has 9 MA's), (Start: 48 @12778 has 22 MA's), (82, 12868), (95, 12907), (99, 12937), (103, 12952), (120, 13000), (149, 13090), (153, 13105), (160, 13141), (168, 13168), (171, 13174), (190, 13261), (212, 13306), (222, 13369), (224, 13375), (233, 13408), (237, 13435), (241, 13456), (260, 13480), (264, 13486), (267, 13498), (280, 13546), (282, 13552), (284, 13558),

Gene: Skylord_16 Start: 11609, Stop: 12466, Start Num: 47

Candidate Starts for Skylord_16:

(Start: 47 @11609 has 66 MA's), (58, 11648), (74, 11684), (82, 11714), (86, 11726), (113, 11822), (140, 11894), (159, 11969), (164, 11990), (215, 12158), (240, 12269), (281, 12401),

Gene: Slay_17 Start: 13639, Stop: 14493, Start Num: 47

Candidate Starts for Slay_17:

(Start: 47 @13639 has 66 MA's), (74, 13714), (82, 13744), (85, 13753), (113, 13852), (116, 13867), (140, 13924), (164, 14020), (167, 14029), (175, 14062), (202, 14146), (209, 14161), (212, 14167), (276, 14413), (280, 14425), (297, 14485),

Gene: Snakehole_30 Start: 17045, Stop: 17935, Start Num: 43

Candidate Starts for Snakehole_30:

(Start: 43 @17045 has 31 MA's), (115, 17273), (121, 17300), (143, 17369), (149, 17393), (156, 17426), (198, 17582), (212, 17615), (217, 17648), (229, 17705), (245, 17756), (273, 17846), (283, 17876), (297, 17927), (298, 17930),

Gene: Snorlax_19 Start: 14969, Stop: 15826, Start Num: 45

Candidate Starts for Snorlax_19:

(Start: 45 @14969 has 111 MA's), (73, 15041), (77, 15059), (125, 15227), (140, 15254), (197, 15467), (198, 15473), (217, 15539), (229, 15596), (244, 15641), (252, 15662), (296, 15815), (297, 15818),

Gene: Solid_15 Start: 11283, Stop: 12224, Start Num: 32

Candidate Starts for Solid_15:

(25, 11268), (Start: 29 @11274 has 1 MA's), (30, 11277), (Start: 32 @11283 has 42 MA's), (36, 11316), (38, 11322), (40, 11331), (41, 11334), (56, 11361), (59, 11370), (73, 11400), (74, 11403), (75, 11406), (77, 11418), (79, 11427), (82, 11433), (95, 11472), (99, 11502), (103, 11517), (107, 11529), (108, 11532), (109, 11535), (123, 11583), (131, 11601), (141, 11637), (144, 11643), (149, 11670), (150, 11673), (154, 11694), (160, 11721), (167, 11745), (171, 11754), (187, 11829), (198, 11871), (199, 11874), (200, 11877), (204, 11889), (215, 11928), (217, 11943), (221, 11964), (224, 11979), (227, 11994), (229, 12000), (236, 12018), (259, 12072), (260, 12075), (262, 12093), (263, 12096), (278, 12153), (282, 12165), (285, 12174), (289, 12189), (291, 12195), (295, 12210),

Gene: South40_20 Start: 15234, Stop: 16091, Start Num: 45

Candidate Starts for South40_20:

(Start: 45 @15234 has 111 MA's), (73, 15306), (77, 15324), (125, 15492), (140, 15519), (167, 15624), (197, 15732), (198, 15738), (217, 15804), (252, 15927), (296, 16080), (297, 16083),

Gene: Sparcetus_31 Start: 17580, Stop: 18464, Start Num: 45

Candidate Starts for Sparcetus_31:

(17, 17481), (Start: 45 @17580 has 111 MA's), (68, 17646), (78, 17676), (85, 17697), (107, 17781), (109, 17787), (151, 17928), (194, 18096), (217, 18177), (222, 18207), (245, 18285), (251, 18297), (252, 18300), (260, 18318), (276, 18384), (277, 18387), (278, 18390), (297, 18456), (298, 18459),

Gene: Speedwell_24 Start: 17695, Stop: 18552, Start Num: 45

Candidate Starts for Speedwell_24:

(6, 17407), (Start: 45 @17695 has 111 MA's), (52, 17710), (57, 17731), (73, 17767), (125, 17953), (162, 18067), (177, 18130), (195, 18187), (197, 18193), (204, 18217), (244, 18367), (252, 18388), (289, 18517), (296, 18541), (297, 18544),

Gene: Splinter_21 Start: 15645, Stop: 16475, Start Num: 62

Candidate Starts for Splinter_21:

(Start: 60 @15642 has 6 MA's), (Start: 62 @15645 has 5 MA's), (72, 15660), (84, 15699), (90, 15720), (91, 15723), (133, 15867), (180, 16053), (199, 16122), (226, 16224), (254, 16305), (256, 16308), (274, 16389), (276, 16395), (280, 16407), (281, 16410), (287, 16434),

Gene: SqueakyClean_20 Start: 14973, Stop: 15827, Start Num: 45

Candidate Starts for SqueakyClean_20:

(Start: 45 @14973 has 111 MA's), (96, 15126), (151, 15294), (194, 15459), (197, 15468), (219, 15549), (252, 15663), (296, 15816), (297, 15819),

Gene: Squiracle_17 Start: 13001, Stop: 13858, Start Num: 47

Candidate Starts for Squiracle_17:

(Start: 47 @13001 has 66 MA's), (82, 13103), (104, 13187), (107, 13196), (109, 13202), (116, 13226), (122, 13250), (126, 13259), (137, 13277), (164, 13379), (177, 13427), (182, 13439), (183, 13442), (186, 13451), (191, 13472), (209, 13523), (219, 13571), (275, 13775), (278, 13784),

Gene: Stoor_17 Start: 13001, Stop: 13855, Start Num: 47

Candidate Starts for Stoor_17:

(Start: 47 @13001 has 66 MA's), (61, 13046), (74, 13076), (82, 13106), (113, 13214), (116, 13229), (140, 13286), (164, 13382), (167, 13391), (175, 13424), (212, 13529), (214, 13538), (215, 13547), (230, 13622), (238, 13646), (276, 13775), (280, 13787), (297, 13847),

Gene: Stormborn_15 Start: 11299, Stop: 12246, Start Num: 32

Candidate Starts for Stormborn_15:

(Start: 29 @11290 has 1 MA's), (30, 11293), (Start: 32 @11299 has 42 MA's), (36, 11332), (41, 11350), (46, 11353), (49, 11359), (56, 11383), (59, 11392), (73, 11422), (74, 11425), (75, 11428), (77, 11440), (79, 11449), (82, 11455), (95, 11494), (99, 11524), (103, 11539), (105, 11545), (109, 11557), (123, 11605), (131, 11623), (141, 11659), (144, 11665), (149, 11692), (154, 11716), (160, 11743), (168, 11770), (171, 11776), (184, 11839), (187, 11851), (198, 11893), (199, 11896), (200, 11899), (215, 11950), (217, 11965), (219, 11974), (221, 11986), (224, 12001), (229, 12022), (259, 12094), (260, 12097), (262, 12115), (263, 12118), (278, 12175), (282, 12187), (285, 12196), (289, 12211), (291, 12217), (295, 12232),

Gene: Stromboli_17 Start: 13132, Stop: 13986, Start Num: 47

Candidate Starts for Stromboli_17:

(Start: 47 @13132 has 66 MA's), (61, 13177), (74, 13207), (82, 13237), (113, 13345), (116, 13360), (140, 13417), (164, 13513), (167, 13522), (175, 13555), (212, 13660), (214, 13669), (215, 13678), (226, 13735), (230, 13753), (238, 13777), (280, 13918), (297, 13978),

Gene: SuMoo_15 Start: 12068, Stop: 12934, Start Num: 44

Candidate Starts for SuMoo_15:

(Start: 44 @12068 has 10 MA's), (75, 12152), (83, 12182), (103, 12260), (107, 12272), (109, 12278), (125, 12332), (197, 12581), (261, 12794), (280, 12866),

Gene: Success_62 Start: 38159, Stop: 39157, Start Num: 19

Candidate Starts for Success_62:

(Start: 19 @38159 has 2 MA's), (20, 38171), (50, 38252), (75, 38327), (82, 38354), (104, 38441), (137, 38540), (154, 38600), (173, 38669), (181, 38705), (197, 38765), (202, 38783), (203, 38786), (237, 38942), (254, 38993), (280, 39089), (281, 39092),

Gene: Sucha_17 Start: 12846, Stop: 13667, Start Num: 63

Candidate Starts for Sucha_17:

(Start: 47 @12804 has 66 MA's), (Start: 63 @12846 has 1 MA's), (77, 12885), (82, 12900), (103, 12981), (105, 12987), (126, 13056), (151, 13122), (167, 13191), (171, 13200), (175, 13230), (182, 13248), (215, 13365), (237, 13458), (260, 13521), (278, 13593), (279, 13596), (287, 13626), (289, 13632), (295, 13653), (296, 13656),

Gene: Sujidade_20 Start: 15274, Stop: 16131, Start Num: 45

Candidate Starts for Sujidade_20:

(Start: 45 @15274 has 111 MA's), (73, 15346), (77, 15364), (96, 15427), (125, 15532), (140, 15559), (167, 15664), (176, 15706), (197, 15772), (216, 15832), (217, 15844), (229, 15901), (244, 15946), (252, 15967), (296, 16120), (297, 16123),

Gene: SunnyD_18 Start: 12861, Stop: 13715, Start Num: 48

Candidate Starts for SunnyD_18:

(Start: 48 @12861 has 22 MA's), (82, 12960), (107, 13053), (122, 13107), (182, 13296), (198, 13353), (209, 13380), (254, 13548), (260, 13563), (280, 13647), (296, 13704), (297, 13707),

Gene: SunsetPointe_19 Start: 14983, Stop: 15840, Start Num: 45

Candidate Starts for SunsetPointe_19:

(Start: 45 @14983 has 111 MA's), (73, 15055), (77, 15073), (87, 15103), (96, 15136), (125, 15241), (140, 15268), (166, 15370), (176, 15415), (197, 15481), (198, 15487), (216, 15541), (217, 15553), (244, 15655), (248, 15667), (252, 15676), (296, 15829), (297, 15832),

Gene: Supernova_15 Start: 11301, Stop: 12242, Start Num: 32

Candidate Starts for Supernova_15:

(22, 11283), (Start: 32 @11301 has 42 MA's), (36, 11334), (38, 11340), (41, 11352), (56, 11379), (59, 11388), (71, 11415), (73, 11418), (74, 11421), (75, 11424), (77, 11436), (79, 11445), (95, 11490), (99, 11520), (103, 11535), (107, 11547), (108, 11550), (109, 11553), (115, 11577), (123, 11601), (131, 11619), (141, 11655), (144, 11661), (149, 11688), (154, 11712), (158, 11730), (160, 11739), (168, 11766), (171, 11772), (184, 11835), (198, 11889), (199, 11892), (200, 11895), (204, 11907), (215, 11946), (217, 11961), (221, 11982), (224, 11997), (227, 12012), (229, 12018), (259, 12090), (260, 12093), (262, 12111), (263, 12114), (266, 12123), (278, 12171), (282, 12183), (285, 12192), (289, 12207), (291, 12213), (295, 12228),

Gene: Superstar_22 Start: 16683, Stop: 17540, Start Num: 45

Candidate Starts for Superstar_22:

(Start: 45 @16683 has 111 MA's), (54, 16701), (70, 16749), (77, 16773), (89, 16812), (147, 16986), (176, 17115), (195, 17175), (197, 17181), (216, 17241), (217, 17253), (252, 17376), (253, 17379), (262, 17412), (281, 17475), (296, 17529), (297, 17532),

Gene: Swervy_17 Start: 13097, Stop: 13951, Start Num: 47

Candidate Starts for Swervy_17:

(Start: 47 @13097 has 66 MA's), (74, 13172), (82, 13202), (85, 13211), (113, 13310), (116, 13325), (140, 13382), (164, 13478), (167, 13487), (175, 13520), (202, 13604), (209, 13619), (212, 13625), (276, 13871), (280, 13883), (297, 13943),

Gene: TZGordon_23 Start: 15781, Stop: 16614, Start Num: 60

Candidate Starts for TZGordon_23:

(Start: 60 @15781 has 6 MA's), (Start: 62 @15784 has 5 MA's), (72, 15799), (84, 15838), (90, 15859), (91, 15862), (133, 16006), (180, 16192), (208, 16279), (226, 16363), (254, 16444), (274, 16528), (276, 16534), (280, 16546), (281, 16549), (287, 16573),

Gene: TagePighther_20 Start: 14969, Stop: 15826, Start Num: 45

Candidate Starts for TagePighther_20:

(Start: 45 @14969 has 111 MA's), (73, 15041), (77, 15059), (125, 15227), (140, 15254), (197, 15467), (198, 15473), (217, 15539), (229, 15596), (244, 15641), (252, 15662), (296, 15815), (297, 15818),

Gene: Teagster_19 Start: 14372, Stop: 15349, Start Num: 14

Candidate Starts for Teagster_19:

(14, 14372), (82, 14594), (107, 14687), (122, 14741), (137, 14768), (198, 14987), (213, 15023), (268, 15236), (270, 15245), (280, 15281), (290, 15317), (297, 15341),

Gene: Tedro_30 Start: 17259, Stop: 18149, Start Num: 43

Candidate Starts for Tedro_30:

(Start: 43 @17259 has 31 MA's), (143, 17583), (149, 17607), (156, 17640), (198, 17796), (217, 17862), (245, 17970), (283, 18090), (297, 18141), (298, 18144),

Gene: Tefunt_19 Start: 15480, Stop: 16337, Start Num: 45

Candidate Starts for Tefunt_19:

(10, 15354), (11, 15357), (12, 15363), (Start: 45 @15480 has 111 MA's), (54, 15498), (77, 15570), (125, 15738), (151, 15801), (176, 15912), (197, 15978), (216, 16038), (217, 16050), (219, 16059), (229, 16107), (252, 16173), (262, 16209), (281, 16272), (296, 16326), (297, 16329),

Gene: Teng_23 Start: 14262, Stop: 15125, Start Num: 47

Candidate Starts for Teng_23:

(Start: 45 @14259 has 111 MA's), (Start: 47 @14262 has 66 MA's), (79, 14352), (82, 14358), (85, 14367), (102, 14436), (105, 14445), (107, 14451), (127, 14517), (152, 14583), (157, 14610), (167, 14649), (195, 14760), (197, 14766), (198, 14772), (209, 14799), (215, 14823), (244, 14940), (246,

14949), (278, 15051), (287, 15084), (295, 15111),

Gene: Thestral_20 Start: 14942, Stop: 15796, Start Num: 45

Candidate Starts for Thestral_20:

(Start: 45 @14942 has 111 MA's), (52, 14957), (65, 14996), (77, 15032), (151, 15263), (179, 15383), (197, 15437), (296, 15785), (297, 15788),

Gene: TinaBelcher_19 Start: 14890, Stop: 15744, Start Num: 45

Candidate Starts for TinaBelcher_19:

(Start: 45 @14890 has 111 MA's), (65, 14944), (77, 14980), (151, 15211), (197, 15385), (296, 15733), (297, 15736),

Gene: TinaLin_24 Start: 16616, Stop: 17446, Start Num: 62

Candidate Starts for TinaLin_24:

(Start: 60 @16613 has 6 MA's), (Start: 62 @16616 has 5 MA's), (72, 16631), (81, 16661), (84, 16670), (91, 16694), (121, 16808), (124, 16814), (128, 16826), (133, 16838), (159, 16937), (180, 17024), (187, 17048), (214, 17132), (217, 17156), (218, 17159), (226, 17195), (254, 17276), (270, 17342), (276, 17366), (280, 17378), (281, 17381),

Gene: TinyMiny_31 Start: 17599, Stop: 18483, Start Num: 45

Candidate Starts for TinyMiny_31:

(17, 17500), (Start: 45 @17599 has 111 MA's), (78, 17695), (85, 17716), (107, 17800), (109, 17806), (151, 17947), (217, 18196), (222, 18226), (245, 18304), (251, 18316), (252, 18319), (260, 18337), (276, 18403), (277, 18406), (278, 18409), (297, 18475), (298, 18478),

Gene: Toma_19 Start: 14982, Stop: 15839, Start Num: 45

Candidate Starts for Toma_19:

(Start: 45 @14982 has 111 MA's), (73, 15054), (96, 15135), (125, 15240), (126, 15243), (140, 15267), (176, 15414), (194, 15471), (195, 15474), (197, 15480), (217, 15552), (229, 15609), (252, 15675), (296, 15828), (297, 15831),

Gene: Triste_19 Start: 14960, Stop: 15817, Start Num: 45

Candidate Starts for Triste_19:

(Start: 45 @14960 has 111 MA's), (73, 15032), (77, 15050), (125, 15218), (140, 15245), (191, 15440), (197, 15458), (198, 15464), (216, 15518), (244, 15632), (252, 15653), (296, 15806), (297, 15809),

Gene: Triumph_21 Start: 14890, Stop: 15744, Start Num: 45

Candidate Starts for Triumph_21:

(Start: 45 @14890 has 111 MA's), (65, 14944), (77, 14980), (96, 15043), (119, 15127), (194, 15376), (197, 15385), (209, 15418), (219, 15466), (238, 15541), (252, 15580), (296, 15733), (297, 15736),

Gene: TrvxScott_18 Start: 14892, Stop: 15746, Start Num: 45

Candidate Starts for TrvxScott_18:

(Start: 45 @14892 has 111 MA's), (65, 14946), (77, 14982), (151, 15213), (195, 15381), (197, 15387), (296, 15735), (297, 15738),

Gene: TuanPN_19 Start: 14966, Stop: 15823, Start Num: 45

Candidate Starts for TuanPN_19:

(Start: 45 @14966 has 111 MA's), (73, 15038), (77, 15056), (125, 15224), (140, 15251), (197, 15464), (198, 15470), (217, 15536), (229, 15593), (244, 15638), (252, 15659), (288, 15785), (296, 15812), (297, 15815),

Gene: TukTuk_17 Start: 13155, Stop: 14009, Start Num: 47

Candidate Starts for TukTuk_17:

(Start: 47 @13155 has 66 MA's), (74, 13230), (82, 13260), (85, 13269), (113, 13368), (116, 13383), (140, 13440), (164, 13536), (167, 13545), (175, 13578), (202, 13662), (209, 13677), (276, 13929), (280, 13941), (297, 14001),

Gene: TurboVicky_20 Start: 15338, Stop: 16231, Start Num: 48

Candidate Starts for TurboVicky_20:

(Start: 48 @15338 has 22 MA's), (82, 15431), (85, 15440), (105, 15518), (116, 15569), (137, 15629), (151, 15683), (152, 15686), (153, 15692), (223, 15974), (224, 15977), (244, 16046), (252, 16067), (253, 16070), (271, 16130), (289, 16196),

Gene: Typher_22 Start: 15468, Stop: 16361, Start Num: 48

Candidate Starts for Typher_22:

(Start: 48 @15468 has 22 MA's), (82, 15561), (85, 15570), (105, 15648), (116, 15699), (137, 15759), (151, 15813), (152, 15816), (153, 15822), (223, 16104), (224, 16107), (244, 16176), (252, 16197), (253, 16200), (271, 16260), (289, 16326),

Gene: Unstoppable_19 Start: 14984, Stop: 15841, Start Num: 45

Candidate Starts for Unstoppable_19:

(Start: 45 @14984 has 111 MA's), (73, 15056), (77, 15074), (87, 15104), (96, 15137), (125, 15242), (140, 15269), (166, 15371), (176, 15416), (197, 15482), (198, 15488), (216, 15542), (217, 15554), (244, 15656), (248, 15668), (252, 15677), (296, 15830), (297, 15833),

Gene: Urza_19 Start: 15351, Stop: 16208, Start Num: 45

Candidate Starts for Urza_19:

(Start: 45 @15351 has 111 MA's), (64, 15402), (73, 15423), (77, 15441), (85, 15465), (96, 15504), (198, 15855), (209, 15882), (217, 15921), (230, 15981), (288, 16170), (296, 16197), (297, 16200),

Gene: UtzChips_15 Start: 12272, Stop: 13138, Start Num: 44

Candidate Starts for UtzChips_15:

(Start: 44 @12272 has 10 MA's), (54, 12293), (87, 12398), (107, 12476), (170, 12683), (197, 12785), (238, 12935), (262, 13010), (280, 13070), (294, 13121),

Gene: Vanseggelen_24 Start: 15333, Stop: 16190, Start Num: 45

Candidate Starts for Vanseggelen_24:

(6, 15054), (Start: 45 @15333 has 111 MA's), (57, 15369), (73, 15405), (77, 15423), (85, 15447), (125, 15591), (153, 15663), (167, 15723), (176, 15765), (191, 15813), (244, 16005), (252, 16026), (289, 16155), (296, 16179), (297, 16182),

Gene: Vendetta_21 Start: 15645, Stop: 16475, Start Num: 62

Candidate Starts for Vendetta_21:

(Start: 60 @15642 has 6 MA's), (Start: 62 @15645 has 5 MA's), (72, 15660), (84, 15699), (90, 15720), (91, 15723), (133, 15867), (180, 16053), (199, 16122), (226, 16224), (254, 16305), (256, 16308), (274, 16389), (276, 16395), (280, 16407), (281, 16410), (287, 16434),

Gene: Verabelle_20 Start: 15664, Stop: 16521, Start Num: 45

Candidate Starts for Verabelle_20:

(Start: 45 @15664 has 111 MA's), (52, 15679), (57, 15700), (73, 15736), (77, 15754), (85, 15778), (124, 15919), (125, 15922), (140, 15949), (176, 16096), (195, 16156), (198, 16168), (204, 16186), (244, 16336), (252, 16357), (289, 16486), (296, 16510), (297, 16513),

Gene: Verse_19 Start: 15963, Stop: 16820, Start Num: 45

Candidate Starts for Verse_19:

(Start: 45 @15963 has 111 MA's), (57, 15999), (73, 16035), (85, 16077), (125, 16221), (167, 16353), (195, 16455), (197, 16461), (244, 16635), (252, 16656), (278, 16746), (289, 16785), (296, 16809), (297, 16812),

Gene: VieEnRose_19 Start: 15417, Stop: 16274, Start Num: 45

Candidate Starts for VieEnRose_19:

(Start: 45 @15417 has 111 MA's), (64, 15468), (73, 15489), (85, 15531), (96, 15570), (155, 15762), (198, 15921), (209, 15948), (217, 15987), (288, 16236), (296, 16263), (297, 16266),

Gene: Vitas_16 Start: 11609, Stop: 12466, Start Num: 47

Candidate Starts for Vitas_16:

(Start: 47 @11609 has 66 MA's), (58, 11648), (74, 11684), (82, 11714), (86, 11726), (113, 11822), (140, 11894), (159, 11969), (164, 11990), (215, 12158), (240, 12269),

Gene: WalkingDead_17 Start: 13121, Stop: 13978, Start Num: 47

Candidate Starts for WalkingDead_17:

(Start: 47 @13121 has 66 MA's), (61, 13166), (74, 13196), (82, 13226), (113, 13334), (116, 13349), (140, 13406), (164, 13502), (167, 13511), (175, 13544), (237, 13763), (276, 13898), (280, 13910), (297, 13970),

Gene: Warren_23 Start: 13763, Stop: 14623, Start Num: 48

Candidate Starts for Warren_23:

(Start: 48 @13763 has 22 MA's), (61, 13799), (Start: 63 @13802 has 1 MA's), (73, 13823), (75, 13829), (82, 13856), (99, 13922), (107, 13949), (116, 13979), (126, 14012), (157, 14105), (163, 14132), (195, 14255), (197, 14261), (209, 14294), (225, 14372), (295, 14609), (296, 14612),

Gene: Werner_19 Start: 14970, Stop: 15827, Start Num: 45

Candidate Starts for Werner_19:

(Start: 45 @14970 has 111 MA's), (73, 15042), (77, 15060), (125, 15228), (140, 15255), (191, 15450), (197, 15468), (198, 15474), (216, 15528), (244, 15642), (252, 15663), (296, 15816), (297, 15819),

Gene: Whatever_19 Start: 14970, Stop: 15827, Start Num: 45

Candidate Starts for Whatever_19:

(Start: 45 @14970 has 111 MA's), (73, 15042), (77, 15060), (125, 15228), (140, 15255), (191, 15450), (197, 15468), (198, 15474), (216, 15528), (244, 15642), (252, 15663), (296, 15816), (297, 15819),

Gene: Wizzo_15 Start: 11316, Stop: 12257, Start Num: 32

Candidate Starts for Wizzo_15:

(Start: 29 @11307 has 1 MA's), (30, 11310), (Start: 32 @11316 has 42 MA's), (36, 11349), (38, 11355), (41, 11367), (56, 11394), (59, 11403), (73, 11433), (74, 11436), (75, 11439), (95, 11505), (99, 11535), (103, 11550), (107, 11562), (108, 11565), (109, 11568), (115, 11592), (123, 11616), (129, 11631), (131, 11634), (141, 11670), (144, 11676), (149, 11703), (150, 11706), (160, 11754), (167, 11778), (168, 11781), (171, 11787), (184, 11850), (187, 11862), (195, 11892), (198, 11904), (199, 11907), (200, 11910), (215, 11961), (217, 11976), (221, 11997), (224, 12012), (227, 12027), (229, 12033), (259, 12105), (260, 12108), (262, 12126), (263, 12129), (266, 12138), (278, 12186), (282, 12198), (285, 12207), (288, 12219), (289, 12222), (291, 12228), (295, 12243),

Gene: Yasdni1_19 Start: 14962, Stop: 15819, Start Num: 45

Candidate Starts for Yasdni1_19:

(Start: 45 @14962 has 111 MA's), (73, 15034), (77, 15052), (125, 15220), (140, 15247), (197, 15460), (198, 15466), (217, 15532), (229, 15589), (244, 15634), (252, 15655), (288, 15781), (296, 15808), (297, 15811),

Gene: Yosif_20 Start: 15949, Stop: 16794, Start Num: 45

Candidate Starts for Yosif_20:

(Start: 45 @15949 has 111 MA's), (73, 16021), (77, 16039), (143, 16240), (151, 16270), (158, 16300), (167, 16327), (197, 16435), (198, 16441), (280, 16726), (296, 16783), (297, 16786),

Gene: Zainub_21 Start: 15320, Stop: 16177, Start Num: 45

Candidate Starts for Zainub_21:

(Start: 45 @15320 has 111 MA's), (151, 15641), (158, 15677), (197, 15818), (252, 16013), (296, 16166), (297, 16169),

Gene: Zanella_20 Start: 15341, Stop: 16234, Start Num: 48

Candidate Starts for Zanella_20:

(Start: 48 @15341 has 22 MA's), (82, 15434), (85, 15443), (105, 15521), (116, 15572), (137, 15632), (143, 15644), (151, 15686), (152, 15689), (153, 15695), (223, 15977), (224, 15980), (244, 16049), (252, 16070), (253, 16073), (271, 16133), (289, 16199),

Gene: Zemlya_20 Start: 14993, Stop: 15850, Start Num: 45

Candidate Starts for Zemlya_20:

(Start: 45 @14993 has 111 MA's), (73, 15065), (96, 15146), (125, 15251), (140, 15278), (194, 15482), (195, 15485), (197, 15491), (217, 15563), (229, 15620), (252, 15686), (296, 15839), (297, 15842),

Gene: Zucker_19 Start: 14495, Stop: 15337, Start Num: 48

Candidate Starts for Zucker_19:

(Start: 26 @14426 has 9 MA's), (31, 14435), (34, 14453), (35, 14456), (37, 14471), (Start: 48 @14495 has 22 MA's), (50, 14498), (66, 14552), (79, 14582), (82, 14588), (95, 14627), (98, 14654), (99, 14657), (103, 14672), (120, 14720), (135, 14762), (144, 14780), (153, 14825), (160, 14861), (161, 14864), (168, 14888), (190, 14981), (212, 15026), (217, 15059), (222, 15089), (229, 15116), (233, 15128), (235, 15149), (241, 15176), (264, 15206), (278, 15260), (280, 15266), (284, 15278),

Gene: phiCAM_20 Start: 17629, Stop: 18483, Start Num: 45

Candidate Starts for phiCAM_20:

(Start: 45 @17629 has 111 MA's), (57, 17665), (73, 17701), (77, 17719), (85, 17743), (110, 17836), (125, 17887), (167, 18019), (191, 18106), (195, 18118), (197, 18124), (204, 18148), (244, 18298), (252, 18319), (289, 18448), (296, 18472), (297, 18475),

Gene: phiHau3_21 Start: 15666, Stop: 16520, Start Num: 45

Candidate Starts for phiHau3_21:

(8, 15513), (Start: 45 @15666 has 111 MA's), (85, 15780), (96, 15819), (126, 15927), (147, 15969), (158, 16023), (239, 16326), (296, 16509), (297, 16512), (298, 16515),