



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 283470 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283470 has 229 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Ruotula_56
- Track 2 : DirtDevil_54, Hermia_54, Greg_55, Ciao_53, Buttons_52, Fajezeel_55, KikiBouba_54, Marge_53, Ohno789_55, Pippin_55, GroundGoblin_54, Aldrich_53, Noxious_53, CatBus_53
- Track 3 : Kykar_53
- Track 4 : Jerm2_54, PSullivan_53, Rohr_54, Pita2_56, BigMau_54, HermioneGrange_53
- Track 5 : Gandalf20_56
- Track 6 : Beatrix_53
- Track 7 : Licorice_56, StewieG_52, Homines_46, McSinger_54, Sanya_51, HanShotFirst_54
- Track 8 : NEHalo_51
- Track 9 : Maroc7_51
- Track 10 : Fushigi_52, Trouble_56, Bircsak_52, Inyanga_50, Alvin_53, Hami1_47, BluSpix_52, Froghopper_51, PacerPaul_53, IgnatiusPatJac_54, Ajay_55, Francis47_52, MPlant7149_52, Gompeii16_52, DrFeelGood_51, Applejack_48, Bones_54, Agaliana_49, ChristmasHams_49, Iqorha_50, Acme_55
- Track 11 : EnzoK_52
- Track 12 : Bxb1_49
- Track 13 : MrGordo_53, Big3_53, Rutherferd_55
- Track 14 : SkiPole_58
- Track 15 : CartmannCramer_52, Fascinus_49, Bigchungu_53, Gyzlar_49, Phlippers_52
- Track 16 : Magnar_53, Blue_53
- Track 17 : JC27_55, Ashballer_55
- Track 18 : Sagefire_56, MetalQZJ_52, ILeeKay_57, MaryBeth_53, Rajelicia_54
- Track 19 : Moose_53, Corvo_54, SwissCheese_55, McGuire_55, PascalRango_54, KSSJEB_53, Papez_56, Forsytheast_53, Killigrew_54
- Track 20 : Squee_54, Fenn_56, Switzer_55, Naira_56
- Track 21 : Marco3_56
- Track 22 : Jasper_55, PherrisBueller_53, Dreamboat_55, Petruccio_53
- Track 23 : Paphu_51
- Track 24 : Seabiscuit_56, DreamCatcher_57, Briton15_57
- Track 25 : Kugel_54
- Track 26 : Conceptll_55
- Track 27 : Gachnar_53
- Track 28 : Swole_54, JuliaChild_54, Museum_54

- Track 29 : AFIS_51, Lesedi_50, SpikeBT_53, Crispicous1_51, GageAP_54
- Track 30 : Dussy_55, Abbysshoes_56, Espresso_53, Kenmech_57
- Track 31 : Michley_53
- Track 32 : Mryolo_51
- Track 33 : Whitspit_51
- Track 34 : GrecoEtereo_54, Magnito_52
- Track 35 : Carlyle_52, Wheeler_54, Levia_51, Rhynn_52, Anglerfish_55, Payneful_53, PhineBark_53, Marchy_48, Teodoridan_52, Zeuska_52, Manatee_55, Niza_56, Euphoria_51
- Track 36 : Mkhuseli_52, Monet_56, Edtherson_53, Treddle_54
- Track 37 : Seanderson_55
- Track 38 : Norz_54, Atkinbua_56
- Track 39 : BigPaolini_53
- Track 40 : BK1_49, A6_49
- Track 41 : Tote_49
- Track 42 : Solon_52, Target_54, U2_53
- Track 43 : Marcell_51
- Track 44 : Oogway_52
- Track 45 : Bethlehem_54
- Track 46 : Pari_55
- Track 47 : Rufus_54, Arlo_51, Sibs6_55, Bruns_52, TwoPeat_54
- Track 48 : Kanely_55, Altman_56
- Track 49 : Dexes_54
- Track 50 : JackSparrow_55
- Track 51 : Raid_54
- Track 52 : Blackflame_52, Parliament_53
- Track 53 : BarrowTuph_54
- Track 54 : Violet_51, Perseus_53, Zeeculate_51, Smairt_55, Makemake_53, Pelly_53, Mule_50, PhrostyMug_52, Aeneas_55
- Track 55 : Sandaddy_52, MilleFeuille_50, Ringer_54, Sorpresa_52
- Track 56 : Zephyr_53
- Track 57 : Graduation_57, Eyeball_55, LunarLander_55, Cueyllyss_55
- Track 58 : Scowl_54, Barriga_54
- Track 59 : Alsfro_57
- Track 60 : Chanagan_50
- Track 61 : TheloniousMonk_54, Peterson_58, Paraselene_51
- Track 62 : BPBiabs31_54
- Track 63 : Pinto_53
- Track 64 : Burton_53
- Track 65 : Gwendoluna_57
- Track 66 : Blesser_52
- Track 67 : Bob3_51
- Track 68 : GMonster_50
- Track 69 : Molly_54, Arcanine_54, Slagathor_55
- Track 70 : BeesKnees_56, Dynamix_55
- Track 71 : Watermelon_54
- Track 72 : Abrogate_520
- Track 73 : PinkPlastic_54
- Track 74 : Bigfoot_49
- Track 75 : Pepe_50
- Track 76 : Sumter_50
- Track 77 : Turj99_52
- Track 78 : Petp2012_54

- Track 79 : Snazzy_52, ShortQueendom_47
- Track 80 : Tripl3t_53
- Track 81 : RidgeCB_53
- Track 82 : Dulcie_54
- Track 83 : Rubeus_53, Ichabod_56
- Track 84 : ProMouse_55
- Track 85 : Adahisdi_53
- Track 86 : KyMonks1A_55
- Track 87 : Topgun_53, Wilkins_53
- Track 88 : Lockley_52, DD5_53
- Track 89 : Traft412_56
- Track 90 : Sunshine924_55
- Track 91 : Lamina13_54, Tasp14_55
- Track 92 : LilBib_53
- Track 93 : STLscum_56
- Track 94 : HarryOW_52
- Track 95 : Marsha_53
- Track 96 : Smeagol_55
- Track 97 : Thor_51, SarFire_51

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

The start number called the most often in the published annotations is 17, it was called in 167 of the 204 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6_49, AFIS_51, Abbyshoes_56, Acme_55, Agaliana_49, Ajay_55, Aldrich_53, Alsfro_57, Alvin_53, Anglerfish_55, Applejack_48, Arlo_51, BK1_49, BPBiebs31_54, Barriga_54, BarrowTuph_54, Beatrix_53, BeesKnees_56, Bethlehem_54, Big3_53, BigMau_54, BigPaolini_53, Bigfoot_49, Bircsak_52, Blackflame_52, Blesser_52, BluSpix_52, Blue_53, Bones_54, Briton15_57, Bruns_52, Burton_53, Buttons_52, Bxb1_49, Carlyle_52, CatBus_53, Chanagan_50, ChristmasHams_49, Ciao_53, Corvo_54, Crispicous1_51, Cueylyss_55, DD5_53, Dexes_54, DirtDevil_54, DrFeelGood_51, DreamCatcher_57, Dreamboat_55, Dulcie_54, Dussy_55, Dynamix_55, Edtherson_53, EnzoK_52, Espresso_53, Euphoria_51, Eyeball_55, Fajezeel_55, Fenn_56, Forsytheast_53, Francis47_52, Froghopper_51, Fushigi_52, GMonster_50, GageAP_54, Gandalf20_56, Gompeii16_52, Graduation_57, GrecoEtereo_54, Greg_55, GroundGoblin_54, Gwendoluna_57, Hami1_47, HanShotFirst_54, Hermia_54, HermioneGrange_53, Homines_46, ILeeKay_57, Ichabod_56, IgnatiusPatJac_54, Inyanga_50, Iqorha_50, Jasper_55, Jerm2_54, JuliaChild_54, KSSJEB_53, Kenmech_57, KikiBouba_54, Killigrew_54, Kugel_54, Kykar_53, Lamina13_54, Lesedi_50, Levia_51, Licorice_56, Lockley_52, LunarLander_55, MPlant7149_52, Magnar_53, Magnito_52, Manatee_55, Marcell_51, Marchy_48, Marge_53, Marsha_53, MaryBeth_53, McGuire_55, McSinger_54, MetalQZJ_52, Michley_53, MilleFeuille_50, Mkhuseleli_52, Monet_56, Moose_53, MrGordo_53, Mryolo_51, Museum_54, NEHalo_51, Naira_56, Niza_56, Noxious_53, Ohno789_55, PSullivan_53, PacerPaul_53, Papez_56, Paphu_51, Paraselene_51, Parliament_53, PascalRango_54, Payneful_53, Pepe_50, Peterson_58, Petruccio_53, PherrisBueller_53, PhineBark_53, PinkPlastic_54, Pinto_53, Pippin_55, Pita2_56, ProMouse_55, Raid_54, Rajelicia_54, Rhynn_52,

RidgeCB_53, Ringer_54, Rohr_54, Rubeus_53, Rufus_54, Ruotula_56, Rutherford_55, STLscum_56, Sagefire_56, Sandaddy_52, Sanya_51, SarFire_51, Scowl_54, Seabiscuit_56, Seanderson_55, Sibs6_55, SkiPole_58, Solon_52, Sorpresa_52, SpikeBT_53, Squee_54, StewieG_52, Sumter_50, Sunshine924_55, SwissCheese_55, Switzer_55, Swole_54, Target_54, Tasp14_55, Teodoridan_52, TheloniousMonk_54, Thor_51, Topgun_53, Traft412_56, Treddle_54, Tripl3t_53, Trouble_56, Turj99_52, TwoPeat_54, U2_53, Watermelon_54, Wheeler_54, Whitspit_51, Wilkins_53, Zephyr_53, Zeuska_52,

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

- Bob3_51, Pari_55, Smeagol_55, Tote_49,

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

- Abrogate_520, Adahisdi_53, Aeneas_55, Altman_56, Arcanine_54, Ashballer_55, Atkinbua_56, Bigchungji_53, CartmannCramer_52, ConceptII_55, Fascinus_49, Gachnar_53, Gyzlar_49, HarryOW_52, JC27_55, JackSparrow_55, Kanely_55, KyMonks1A_55, LilBib_53, Makemake_53, Marco3_56, Maroc7_51, Molly_54, Mule_50, Norz_54, Oogway_52, Pelly_53, Perseus_53, Petp2012_54, Phlippers_52, PhrostyMug_52, ShortQueendom_47, Slagathor_55, Smairt_55, Snazzy_52, Violet_51, Zeeculate_51,

Summary by start number:

Start 10:

- Found in 22 of 229 (9.6%) of genes in pham
- Manual Annotations of this start: 1 of 204
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Maroc7_51 (A1),

Start 14:

- Found in 28 of 229 (12.2%) of genes in pham
- Manual Annotations of this start: 4 of 204
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Bob3_51 (A1), Pari_55 (A1), Smeagol_55 (A1), Tote_49 (A1),

Start 16:

- Found in 33 of 229 (14.4%) of genes in pham
- Manual Annotations of this start: 28 of 204
- Called 97.0% of time when present
- Phage (with cluster) where this start called: Abrogate_520 (A1), Adahisdi_53 (A1), Aeneas_55 (A1), Altman_56 (A1), Ashballer_55 (A1), Atkinbua_56 (A1), Bigchungji_53 (A1), CartmannCramer_52 (A1), ConceptII_55 (A1), Fascinus_49 (A1), Gachnar_53 (A1), Gyzlar_49 (A1), HarryOW_52 (A1), JC27_55 (A1), JackSparrow_55 (A1), Kanely_55 (A1), KyMonks1A_55 (A1), LilBib_53 (A1), Makemake_53 (A1), Marco3_56 (A1), Mule_50 (A1), Norz_54 (A1), Oogway_52 (A1), Pelly_53 (A1), Perseus_53 (A1), Phlippers_52 (A1), PhrostyMug_52 (A1), ShortQueendom_47 (A1), Smairt_55 (A1), Snazzy_52 (A1), Violet_51 (A1), Zeeculate_51 (A1),

Start 17:

- Found in 192 of 229 (83.8%) of genes in pham
- Manual Annotations of this start: 167 of 204

- Called 97.9% of time when present
- Phage (with cluster) where this start called: A6_49 (A1), AFIS_51 (A1), Abbysshoes_56 (A1), Acme_55 (A1), Agaliana_49 (A1), Ajay_55 (A1), Aldrich_53 (A1), Alsfro_57 (A1), Alvin_53 (A1), Anglerfish_55 (A1), Applejack_48 (A1), Arlo_51 (A1), BK1_49 (A1), BPBiabs31_54 (A1), Barriga_54 (A1), BarrowTuph_54 (A1), Beatrix_53 (A1), BeesKnees_56 (A1), Bethlehem_54 (A1), Big3_53 (A1), BigMau_54 (A1), BigPaolini_53 (A1), Bigfoot_49 (A1), Bircsak_52 (A1), Blackflame_52 (A1), Blesser_52 (A1), BluSpix_52 (A1), Blue_53 (A1), Bones_54 (A1), Briton15_57 (A1), Bruns_52 (A1), Burton_53 (A1), Buttons_52 (A1), Bxb1_49 (A1), Carlyle_52 (A1), CatBus_53 (A1), Chanagan_50 (A1), ChristmasHams_49 (A1), Ciao_53 (A1), Corvo_54 (A1), Crispicous1_51 (A1), Cueylyss_55 (A1), DD5_53 (A1), Dexes_54 (A1), DirtDevil_54 (A1), DrFeelGood_51 (A1), DreamCatcher_57 (A1), Dreamboat_55 (A1), Dulcie_54 (A1), Dussy_55 (A1), Dynamix_55 (A1), Edtherson_53 (A1), EnzoK_52 (A1), Espresso_53 (A1), Euphoria_51 (A1), Eyeball_55 (A1), Fajezeel_55 (A1), Fenn_56 (A1), Forsytheast_53 (A1), Francis47_52 (A1), FrogHopper_51 (A1), Fushigi_52 (A1), GMonster_50 (A1), GageAP_54 (A1), Gandalf20_56 (A1), Gompeii16_52 (A1), Graduation_57 (A1), GrecoEtereo_54 (A1), Greg_55 (A1), GroundGoblin_54 (A1), Gwendoluna_57 (A1), Hami1_47 (A1), HanShotFirst_54 (A1), Hermia_54 (A1), HermioneGrange_53 (A1), Homines_46 (A1), ILeeKay_57 (A1), Ichabod_56 (A1), IgnatiusPatJac_54 (A1), Inyanga_50 (A1), Iqorha_50 (A1), Jasper_55 (A1), Jerm2_54 (A1), JuliaChild_54 (A1), KSSJEB_53 (A1), Kenmech_57 (A1), KikiBouba_54 (A1), Killigrew_54 (A1), Kugel_54 (A1), Kykar_53 (A1), Lamina13_54 (A1), Lesedi_50 (A1), Levia_51 (A1), Licorice_56 (A1), Lockley_52 (A1), LunarLander_55 (A1), MPlant7149_52 (A1), Magnar_53 (A1), Magnito_52 (A1), Manatee_55 (A1), Marcell_51 (A1), Marchy_48 (A1), Marge_53 (A1), Marsha_53 (A1), MaryBeth_53 (A1), McGuire_55 (A1), McSinger_54 (A1), MetalQZJ_52 (A1), Michley_53 (A1), MilleFeuille_50 (A1), Mkhuseleli_52 (A1), Monet_56 (A1), Moose_53 (A1), MrGordo_53 (A1), Mryolo_51 (A1), Museum_54 (A1), NEHalo_51 (A1), Naira_56 (A1), Niza_56 (A1), Noxious_53 (A1), Ohno789_55 (A1), PSullivan_53 (A1), PacerPaul_53 (A1), Papez_56 (A1), Paphu_51 (A1), Paraselene_51 (A1), Parliament_53 (A1), PascalRango_54 (A1), Payneful_53 (A1), Pepe_50 (A1), Peterson_58 (A1), Petruchio_53 (A1), PherrisBueller_53 (A1), PhineBark_53 (A1), PinkPlastic_54 (A1), Pinto_53 (A1), Pippin_55 (A1), Pita2_56 (A1), ProMouse_55 (A1), Raid_54 (A1), Rajelicia_54 (A1), Rhynn_52 (A1), RidgeCB_53 (A1), Ringer_54 (A1), Rohr_54 (A1), Rubeus_53 (A1), Rufus_54 (A1), Ruotula_56 (A1), Rutherford_55 (A1), STLscum_56 (A1), Sagefire_56 (A1), Sandaddy_52 (A1), Sanya_51 (A1), SarFire_51 (A1), Scowl_54 (A1), Seabiscuit_56 (A1), Seanderson_55 (A1), Sibs6_55 (A1), SkiPole_58 (A1), Solon_52 (A1), Sorpresa_52 (A1), SpikeBT_53 (A1), Squee_54 (A1), StewieG_52 (A1), Sumter_50 (A1), Sunshine924_55 (A1), SwissCheese_55 (A1), Switzer_55 (A1), Swole_54 (A1), Target_54 (A1), Tasp14_55 (A1), Teodoridan_52 (A1), TheloniousMonk_54 (A1), Thor_51 (A1), Topgun_53 (A1), Traft412_56 (A1), Treddle_54 (A1), Tripl3t_53 (A1), Trouble_56 (A1), Turj99_52 (A1), TwoPeat_54 (A1), U2_53 (A1), Watermelon_54 (A1), Wheeler_54 (A1), Whitspit_51 (A1), Wilkins_53 (A1), Zephyr_53 (A1), Zeuska_52 (A1),

Start 18:

- Found in 4 of 229 (1.7%) of genes in pham
- Manual Annotations of this start: 4 of 204
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arcanine_54 (A1), Molly_54 (A1), Petp2012_54 (A1), Slagathor_55 (A1),

Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

- Start number 10 was manually annotated 1 time for cluster A1.
- Start number 14 was manually annotated 4 times for cluster A1.
- Start number 16 was manually annotated 28 times for cluster A1.
- Start number 17 was manually annotated 167 times for cluster A1.
- Start number 18 was manually annotated 4 times for cluster A1.

Gene Information:

Gene: A6_49 Start: 36945, Stop: 36379, Start Num: 17

Candidate Starts for A6_49:

(Start: 17 @36945 has 167 MA's), (20, 36846), (22, 36792), (24, 36768), (34, 36633), (36, 36597), (40, 36543), (43, 36522), (46, 36501), (57, 36417),

Gene: AFIS_51 Start: 37581, Stop: 37183, Start Num: 17

Candidate Starts for AFIS_51:

(Start: 17 @37581 has 167 MA's), (20, 37482), (22, 37428), (23, 37413), (24, 37404), (34, 37269), (35, 37242), (37, 37215),

Gene: Abbysshoes_56 Start: 39189, Stop: 38779, Start Num: 17

Candidate Starts for Abbysshoes_56:

(Start: 17 @39189 has 167 MA's), (20, 39090), (22, 39036), (23, 39021), (24, 39012), (34, 38877), (39, 38811),

Gene: Abrogate_520 Start: 39189, Stop: 38791, Start Num: 16

Candidate Starts for Abrogate_520:

(Start: 10 @39240 has 1 MA's), (Start: 16 @39189 has 28 MA's), (19, 39156), (20, 39090), (22, 39036), (23, 39021), (24, 39012), (34, 38877), (37, 38823),

Gene: Acme_55 Start: 38115, Stop: 37717, Start Num: 17

Candidate Starts for Acme_55:

(Start: 17 @38115 has 167 MA's), (20, 38016), (22, 37962), (23, 37947), (24, 37938), (34, 37803), (37, 37749),

Gene: Adahisdi_53 Start: 38922, Stop: 38521, Start Num: 16

Candidate Starts for Adahisdi_53:

(2, 39033), (Start: 16 @38922 has 28 MA's), (20, 38820), (22, 38766), (23, 38751), (24, 38742), (34, 38607), (35, 38580), (37, 38553),

Gene: Aeneas_55 Start: 39139, Stop: 38738, Start Num: 16

Candidate Starts for Aeneas_55:

(Start: 10 @39190 has 1 MA's), (Start: 16 @39139 has 28 MA's), (20, 39037), (22, 38983), (23, 38968), (24, 38959), (34, 38824), (37, 38770),

Gene: Agaliana_49 Start: 35783, Stop: 35385, Start Num: 17

Candidate Starts for Agaliana_49:

(Start: 17 @35783 has 167 MA's), (20, 35684), (22, 35630), (23, 35615), (24, 35606), (34, 35471), (37, 35417),

Gene: Ajay_55 Start: 39243, Stop: 38845, Start Num: 17

Candidate Starts for Ajay_55:

(Start: 17 @39243 has 167 MA's), (20, 39144), (22, 39090), (23, 39075), (24, 39066), (34, 38931), (37, 38877),

Gene: Aldrich_53 Start: 38813, Stop: 38196, Start Num: 17

Candidate Starts for Aldrich_53:

(Start: 17 @38813 has 167 MA's), (20, 38714), (22, 38660), (23, 38645), (24, 38636), (34, 38501), (36, 38465), (40, 38411), (43, 38390),

Gene: Alsfro_57 Start: 38448, Stop: 37891, Start Num: 17

Candidate Starts for Alsfro_57:

(13, 38475), (Start: 17 @38448 has 167 MA's), (19, 38415), (20, 38349), (22, 38295), (23, 38280), (24, 38271), (34, 38136), (36, 38100), (40, 38046), (43, 38025), (49, 37986),

Gene: Altman_56 Start: 39112, Stop: 38498, Start Num: 16

Candidate Starts for Altman_56:

(Start: 10 @39163 has 1 MA's), (Start: 16 @39112 has 28 MA's), (20, 39010), (22, 38956), (23, 38941), (24, 38932), (34, 38797), (36, 38761), (40, 38710), (43, 38689), (46, 38668), (48, 38653), (52, 38620),

Gene: Alvin_53 Start: 38568, Stop: 38170, Start Num: 17

Candidate Starts for Alvin_53:

(Start: 17 @38568 has 167 MA's), (20, 38469), (22, 38415), (23, 38400), (24, 38391), (34, 38256), (37, 38202),

Gene: Anglerfish_55 Start: 39478, Stop: 38999, Start Num: 17

Candidate Starts for Anglerfish_55:

(Start: 17 @39478 has 167 MA's), (20, 39379), (22, 39325), (23, 39310), (24, 39301), (34, 39085), (37, 39031),

Gene: Applejack_48 Start: 35405, Stop: 35007, Start Num: 17

Candidate Starts for Applejack_48:

(Start: 17 @35405 has 167 MA's), (20, 35306), (22, 35252), (23, 35237), (24, 35228), (34, 35093), (37, 35039),

Gene: Arcanine_54 Start: 38877, Stop: 38323, Start Num: 18

Candidate Starts for Arcanine_54:

(12, 38919), (15, 38889), (Start: 18 @38877 has 4 MA's), (20, 38778), (22, 38724), (23, 38709), (24, 38700), (34, 38565), (36, 38529), (40, 38478), (43, 38457), (49, 38418),

Gene: Arlo_51 Start: 37427, Stop: 37029, Start Num: 17

Candidate Starts for Arlo_51:

(11, 37469), (Start: 14 @37439 has 4 MA's), (Start: 17 @37427 has 167 MA's), (20, 37328), (22, 37274), (23, 37259), (24, 37250), (34, 37115), (37, 37061),

Gene: Ashballer_55 Start: 39002, Stop: 38520, Start Num: 16

Candidate Starts for Ashballer_55:

(Start: 10 @39053 has 1 MA's), (Start: 16 @39002 has 28 MA's), (20, 38900), (22, 38846), (23, 38831), (24, 38822), (26, 38702), (34, 38606), (37, 38552),

Gene: Atkinbua_56 Start: 38718, Stop: 38152, Start Num: 16

Candidate Starts for Atkinbua_56:

(2, 38829), (9, 38772), (Start: 16 @38718 has 28 MA's), (20, 38616), (22, 38562), (23, 38547), (24, 38538), (34, 38403), (36, 38367), (40, 38316), (43, 38295), (46, 38274), (57, 38190),

Gene: BK1_49 Start: 36945, Stop: 36379, Start Num: 17

Candidate Starts for BK1_49:

(Start: 17 @36945 has 167 MA's), (20, 36846), (22, 36792), (24, 36768), (34, 36633), (36, 36597), (40, 36543), (43, 36522), (46, 36501), (57, 36417),

Gene: BPBiebs31_54 Start: 39309, Stop: 38695, Start Num: 17

Candidate Starts for BPBiebs31_54:

(11, 39351), (Start: 14 @39321 has 4 MA's), (Start: 17 @39309 has 167 MA's), (20, 39210), (22, 39156), (23, 39141), (24, 39132), (34, 38997), (36, 38961), (40, 38907), (43, 38886), (49, 38847),

Gene: Barriga_54 Start: 37755, Stop: 37276, Start Num: 17

Candidate Starts for Barriga_54:

(Start: 17 @37755 has 167 MA's), (20, 37656), (22, 37602), (23, 37587), (24, 37578), (26, 37458), (34, 37362), (37, 37308),

Gene: BarrowTuph_54 Start: 38581, Stop: 38015, Start Num: 17

Candidate Starts for BarrowTuph_54:

(Start: 17 @38581 has 167 MA's), (20, 38482), (22, 38428), (23, 38413), (24, 38404), (34, 38269), (36, 38233), (40, 38179), (45, 38155), (58, 38026),

Gene: Beatrix_53 Start: 39461, Stop: 39000, Start Num: 17

Candidate Starts for Beatrix_53:

(Start: 17 @39461 has 167 MA's), (20, 39362), (22, 39308), (23, 39293), (24, 39284), (27, 39155), (33, 39110), (34, 39098), (37, 39032),

Gene: BeesKnees_56 Start: 38614, Stop: 38048, Start Num: 17

Candidate Starts for BeesKnees_56:

(Start: 17 @38614 has 167 MA's), (20, 38515), (22, 38461), (23, 38446), (24, 38437), (34, 38302), (36, 38266), (40, 38212), (43, 38191), (46, 38170), (55, 38113), (57, 38086),

Gene: Bethlehem_54 Start: 40112, Stop: 39468, Start Num: 17

Candidate Starts for Bethlehem_54:

(Start: 17 @40112 has 167 MA's), (20, 40013), (22, 39959), (23, 39944), (24, 39935), (26, 39815), (34, 39719), (36, 39683), (40, 39632), (43, 39611), (46, 39590), (55, 39533), (57, 39506),

Gene: Big3_53 Start: 39260, Stop: 38862, Start Num: 17

Candidate Starts for Big3_53:

(Start: 17 @39260 has 167 MA's), (20, 39161), (22, 39107), (23, 39092), (24, 39083), (34, 38948), (35, 38921), (39, 38894),

Gene: BigMau_54 Start: 37762, Stop: 37283, Start Num: 17

Candidate Starts for BigMau_54:

(11, 37804), (Start: 14 @37774 has 4 MA's), (Start: 17 @37762 has 167 MA's), (20, 37663), (22, 37609), (23, 37594), (24, 37585), (26, 37465), (34, 37369), (37, 37315),

Gene: BigPaolini_53 Start: 36840, Stop: 36442, Start Num: 17

Candidate Starts for BigPaolini_53:

(Start: 17 @36840 has 167 MA's), (20, 36741), (22, 36687), (23, 36672), (24, 36663), (34, 36528), (35, 36501), (37, 36474),

Gene: Bigchungj_53 Start: 37682, Stop: 37113, Start Num: 16

Candidate Starts for Bigchungj_53:

(Start: 10 @37733 has 1 MA's), (Start: 16 @37682 has 28 MA's), (20, 37580), (22, 37526), (23, 37511), (24, 37502), (34, 37367), (36, 37331), (40, 37277), (43, 37256), (46, 37235), (57, 37151),

Gene: Bigfoot_49 Start: 37265, Stop: 36663, Start Num: 17

Candidate Starts for Bigfoot_49:

(Start: 17 @37265 has 167 MA's), (20, 37166), (22, 37112), (23, 37097), (24, 37088), (34, 36953), (36, 36917), (40, 36863), (43, 36842), (47, 36809), (50, 36785), (58, 36701),

Gene: Bircsak_52 Start: 39359, Stop: 38961, Start Num: 17

Candidate Starts for Bircsak_52:

(Start: 17 @39359 has 167 MA's), (20, 39260), (22, 39206), (23, 39191), (24, 39182), (34, 39047), (37, 38993),

Gene: Blackflame_52 Start: 38321, Stop: 37674, Start Num: 17

Candidate Starts for Blackflame_52:

(Start: 17 @38321 has 167 MA's), (20, 38222), (22, 38168), (23, 38153), (24, 38144), (26, 38024), (34, 37928), (36, 37892), (40, 37838), (43, 37817), (46, 37796), (57, 37712),

Gene: Blesser_52 Start: 38226, Stop: 37630, Start Num: 17

Candidate Starts for Blesser_52:

(Start: 17 @38226 has 167 MA's), (20, 38127), (22, 38073), (23, 38058), (24, 38049), (34, 37914), (36, 37878), (40, 37824), (43, 37803), (44, 37800), (45, 37797), (51, 37743),

Gene: BluSpix_52 Start: 34621, Stop: 34223, Start Num: 17

Candidate Starts for BluSpix_52:

(Start: 17 @34621 has 167 MA's), (20, 34522), (22, 34468), (23, 34453), (24, 34444), (34, 34309), (37, 34255),

Gene: Blue_53 Start: 39272, Stop: 38880, Start Num: 17

Candidate Starts for Blue_53:

(Start: 17 @39272 has 167 MA's), (20, 39173), (22, 39119), (23, 39104), (24, 39095), (34, 38960), (39, 38912),

Gene: Bob3_51 Start: 37043, Stop: 36633, Start Num: 14

Candidate Starts for Bob3_51:

(11, 37073), (Start: 14 @37043 has 4 MA's), (Start: 17 @37031 has 167 MA's), (20, 36932), (22, 36878), (23, 36863), (24, 36854), (34, 36719), (37, 36665),

Gene: Bones_54 Start: 38722, Stop: 38324, Start Num: 17

Candidate Starts for Bones_54:

(Start: 17 @38722 has 167 MA's), (20, 38623), (22, 38569), (23, 38554), (24, 38545), (34, 38410), (37, 38356),

Gene: Briton15_57 Start: 38936, Stop: 38289, Start Num: 17

Candidate Starts for Briton15_57:

(Start: 17 @38936 has 167 MA's), (20, 38837), (22, 38783), (23, 38768), (24, 38759), (26, 38639), (34, 38543), (36, 38507), (40, 38453), (43, 38432), (46, 38411), (55, 38354), (57, 38327),

Gene: Bruns_52 Start: 37599, Stop: 37201, Start Num: 17

Candidate Starts for Bruns_52:

(11, 37641), (Start: 14 @37611 has 4 MA's), (Start: 17 @37599 has 167 MA's), (20, 37500), (22, 37446), (23, 37431), (24, 37422), (34, 37287), (37, 37233),

Gene: Burton_53 Start: 38704, Stop: 38138, Start Num: 17

Candidate Starts for Burton_53:

(4, 38788), (Start: 14 @38716 has 4 MA's), (Start: 17 @38704 has 167 MA's), (20, 38605), (22, 38551), (23, 38536), (24, 38527), (34, 38392), (36, 38356), (40, 38302), (43, 38281), (46, 38260), (55, 38203), (57, 38176),

Gene: Buttons_52 Start: 36766, Stop: 36149, Start Num: 17

Candidate Starts for Buttons_52:

(Start: 17 @36766 has 167 MA's), (20, 36667), (22, 36613), (23, 36598), (24, 36589), (34, 36454), (36, 36418), (40, 36364), (43, 36343),

Gene: Bxb1_49 Start: 37514, Stop: 36960, Start Num: 17

Candidate Starts for Bxb1_49:

(Start: 17 @37514 has 167 MA's), (20, 37415), (22, 37361), (23, 37346), (24, 37337), (34, 37202), (36, 37166), (40, 37115), (43, 37094), (49, 37055),

Gene: Carlyle_52 Start: 36053, Stop: 35655, Start Num: 17

Candidate Starts for Carlyle_52:

(Start: 17 @36053 has 167 MA's), (20, 35954), (22, 35900), (23, 35885), (24, 35876), (34, 35741), (37, 35687),

Gene: CartmannCramer_52 Start: 40075, Stop: 39509, Start Num: 16

Candidate Starts for CartmannCramer_52:

(Start: 10 @40126 has 1 MA's), (Start: 16 @40075 has 28 MA's), (20, 39973), (22, 39919), (23, 39904), (24, 39895), (34, 39760), (36, 39724), (40, 39673), (43, 39652), (46, 39631), (57, 39547),

Gene: CatBus_53 Start: 39005, Stop: 38388, Start Num: 17

Candidate Starts for CatBus_53:

(Start: 17 @39005 has 167 MA's), (20, 38906), (22, 38852), (23, 38837), (24, 38828), (34, 38693), (36, 38657), (40, 38603), (43, 38582),

Gene: Chanagan_50 Start: 36851, Stop: 36453, Start Num: 17

Candidate Starts for Chanagan_50:

(Start: 17 @36851 has 167 MA's), (20, 36752), (22, 36698), (23, 36683), (24, 36674), (34, 36539), (39, 36485),

Gene: ChristmasHams_49 Start: 36257, Stop: 35859, Start Num: 17

Candidate Starts for ChristmasHams_49:

(Start: 17 @36257 has 167 MA's), (20, 36158), (22, 36104), (23, 36089), (24, 36080), (34, 35945), (37, 35891),

Gene: Ciao_53 Start: 38224, Stop: 37607, Start Num: 17

Candidate Starts for Ciao_53:

(Start: 17 @38224 has 167 MA's), (20, 38125), (22, 38071), (23, 38056), (24, 38047), (34, 37912), (36, 37876), (40, 37822), (43, 37801),

Gene: ConceptII_55 Start: 39890, Stop: 39276, Start Num: 16

Candidate Starts for ConceptII_55:

(3, 40001), (9, 39944), (Start: 16 @39890 has 28 MA's), (20, 39788), (22, 39734), (23, 39719), (24, 39710), (34, 39575), (36, 39539), (40, 39488), (43, 39467), (46, 39446), (48, 39431), (52, 39398),

Gene: Corvo_54 Start: 39669, Stop: 39103, Start Num: 17

Candidate Starts for Corvo_54:

(Start: 17 @39669 has 167 MA's), (20, 39570), (22, 39516), (23, 39501), (24, 39492), (34, 39357), (36, 39321), (40, 39267), (43, 39246), (46, 39225), (55, 39168), (57, 39141),

Gene: Crispicious1_51 Start: 37176, Stop: 36778, Start Num: 17

Candidate Starts for Crispicious1_51:

(Start: 17 @37176 has 167 MA's), (20, 37077), (22, 37023), (23, 37008), (24, 36999), (34, 36864), (35, 36837), (37, 36810),

Gene: Cueyllyss_55 Start: 39855, Stop: 39457, Start Num: 17

Candidate Starts for Cueyllyss_55:

(Start: 17 @39855 has 167 MA's), (20, 39756), (22, 39702), (23, 39687), (24, 39678), (34, 39543), (39, 39489),

Gene: DD5_53 Start: 39005, Stop: 38370, Start Num: 17

Candidate Starts for DD5_53:

(Start: 17 @39005 has 167 MA's), (20, 38906), (22, 38852), (23, 38837), (24, 38828), (26, 38708), (34, 38612), (36, 38576), (43, 38513), (46, 38492), (57, 38408),

Gene: Dexes_54 Start: 39125, Stop: 38514, Start Num: 17

Candidate Starts for Dexes_54:

(Start: 17 @39125 has 167 MA's), (20, 39026), (22, 38972), (23, 38957), (24, 38948), (34, 38813), (36, 38777), (40, 38726), (43, 38705), (46, 38684), (47, 38672), (48, 38669), (52, 38636), (54, 38633), (61, 38525),

Gene: DirtDevil_54 Start: 38813, Stop: 38196, Start Num: 17

Candidate Starts for DirtDevil_54:

(Start: 17 @38813 has 167 MA's), (20, 38714), (22, 38660), (23, 38645), (24, 38636), (34, 38501), (36, 38465), (40, 38411), (43, 38390),

Gene: DrFeelGood_51 Start: 38016, Stop: 37618, Start Num: 17

Candidate Starts for DrFeelGood_51:

(Start: 17 @38016 has 167 MA's), (20, 37917), (22, 37863), (23, 37848), (24, 37839), (34, 37704), (37, 37650),

Gene: DreamCatcher_57 Start: 39673, Stop: 39026, Start Num: 17

Candidate Starts for DreamCatcher_57:

(Start: 17 @39673 has 167 MA's), (20, 39574), (22, 39520), (23, 39505), (24, 39496), (26, 39376), (34, 39280), (36, 39244), (40, 39190), (43, 39169), (46, 39148), (55, 39091), (57, 39064),

Gene: Dreamboat_55 Start: 37826, Stop: 37371, Start Num: 17

Candidate Starts for Dreamboat_55:

(Start: 17 @37826 has 167 MA's), (20, 37727), (22, 37673), (23, 37658), (24, 37649), (25, 37532), (29, 37502), (30, 37493), (31, 37481), (34, 37457), (37, 37403),

Gene: Dulcie_54 Start: 38438, Stop: 37827, Start Num: 17

Candidate Starts for Dulcie_54:

(Start: 17 @38438 has 167 MA's), (20, 38339), (22, 38285), (23, 38270), (24, 38261), (34, 38126), (36, 38096), (40, 38042), (43, 38021),

Gene: Dussy_55 Start: 39209, Stop: 38799, Start Num: 17

Candidate Starts for Dussy_55:

(Start: 17 @39209 has 167 MA's), (20, 39110), (22, 39056), (23, 39041), (24, 39032), (34, 38897), (39, 38831),

Gene: Dynamix_55 Start: 38412, Stop: 37846, Start Num: 17

Candidate Starts for Dynamix_55:

(Start: 17 @38412 has 167 MA's), (20, 38313), (22, 38259), (23, 38244), (24, 38235), (34, 38100), (36, 38064), (40, 38010), (43, 37989), (46, 37968), (55, 37911), (57, 37884),

Gene: Edtherson_53 Start: 38507, Stop: 38109, Start Num: 17

Candidate Starts for Edtherson_53:

(Start: 17 @38507 has 167 MA's), (20, 38408), (22, 38354), (23, 38339), (24, 38330), (34, 38195), (37, 38141),

Gene: EnzoK_52 Start: 36041, Stop: 35424, Start Num: 17

Candidate Starts for EnzoK_52:

(Start: 14 @36053 has 4 MA's), (Start: 17 @36041 has 167 MA's), (20, 35942), (22, 35888), (23, 35873), (24, 35864), (34, 35729), (36, 35693), (40, 35639), (43, 35618),

Gene: Espresso_53 Start: 39063, Stop: 38665, Start Num: 17

Candidate Starts for Espresso_53:

(Start: 17 @39063 has 167 MA's), (20, 38964), (22, 38910), (23, 38895), (24, 38886), (34, 38751), (39, 38697),

Gene: Euphoria_51 Start: 38314, Stop: 37916, Start Num: 17

Candidate Starts for Euphoria_51:

(Start: 17 @38314 has 167 MA's), (20, 38215), (22, 38161), (23, 38146), (24, 38137), (34, 38002), (37, 37948),

Gene: Eyeball_55 Start: 38602, Stop: 38204, Start Num: 17

Candidate Starts for Eyeball_55:

(Start: 17 @38602 has 167 MA's), (20, 38503), (22, 38449), (23, 38434), (24, 38425), (34, 38290), (39, 38236),

Gene: Fajezeel_55 Start: 38573, Stop: 37956, Start Num: 17

Candidate Starts for Fajezeel_55:

(Start: 17 @38573 has 167 MA's), (20, 38474), (22, 38420), (23, 38405), (24, 38396), (34, 38261), (36, 38225), (40, 38171), (43, 38150),

Gene: Fascinus_49 Start: 37456, Stop: 36887, Start Num: 16

Candidate Starts for Fascinus_49:

(Start: 10 @37507 has 1 MA's), (Start: 16 @37456 has 28 MA's), (20, 37354), (22, 37300), (23, 37285), (24, 37276), (34, 37141), (36, 37105), (40, 37054), (43, 37033), (46, 37012), (57, 36925),

Gene: Fenn_56 Start: 40358, Stop: 39792, Start Num: 17

Candidate Starts for Fenn_56:

(Start: 17 @40358 has 167 MA's), (20, 40259), (22, 40205), (23, 40190), (24, 40181), (34, 40046), (36, 40010), (40, 39956), (43, 39935), (46, 39914), (55, 39857), (57, 39830),

Gene: Forsytheast_53 Start: 37985, Stop: 37419, Start Num: 17

Candidate Starts for Forsytheast_53:

(Start: 17 @37985 has 167 MA's), (20, 37886), (22, 37832), (23, 37817), (24, 37808), (34, 37673), (36, 37637), (40, 37583), (43, 37562), (46, 37541), (55, 37484), (57, 37457),

Gene: Francis47_52 Start: 39627, Stop: 39229, Start Num: 17

Candidate Starts for Francis47_52:

(Start: 17 @39627 has 167 MA's), (20, 39528), (22, 39474), (23, 39459), (24, 39450), (34, 39315), (37, 39261),

Gene: Froghopper_51 Start: 37352, Stop: 36957, Start Num: 17

Candidate Starts for Froghopper_51:

(Start: 17 @37352 has 167 MA's), (20, 37253), (22, 37199), (23, 37184), (24, 37175), (34, 37040), (37, 36986),

Gene: Fushigi_52 Start: 36313, Stop: 35915, Start Num: 17

Candidate Starts for Fushigi_52:

(Start: 17 @36313 has 167 MA's), (20, 36214), (22, 36160), (23, 36145), (24, 36136), (34, 36001), (37, 35947),

Gene: GMonster_50 Start: 36829, Stop: 36272, Start Num: 17

Candidate Starts for GMonster_50:

(1, 37015), (7, 36895), (Start: 17 @36829 has 167 MA's), (19, 36796), (20, 36730), (22, 36676), (23, 36661), (24, 36652), (34, 36517), (36, 36481), (40, 36427), (43, 36406), (49, 36367),

Gene: Gachnar_53 Start: 37597, Stop: 37031, Start Num: 16

Candidate Starts for Gachnar_53:

(1, 37783), (6, 37663), (Start: 16 @37597 has 28 MA's), (19, 37564), (20, 37498), (22, 37444), (23, 37429), (24, 37420), (34, 37285), (36, 37249), (40, 37195), (43, 37174), (46, 37153), (55, 37096), (57, 37069),

Gene: GageAP_54 Start: 39103, Stop: 38705, Start Num: 17

Candidate Starts for GageAP_54:

(Start: 17 @39103 has 167 MA's), (20, 39004), (22, 38950), (23, 38935), (24, 38926), (34, 38791), (35, 38764), (37, 38737),

Gene: Gandalf20_56 Start: 40348, Stop: 39758, Start Num: 17

Candidate Starts for Gandalf20_56:

(Start: 17 @40348 has 167 MA's), (20, 40249), (22, 40195), (23, 40180), (24, 40171), (34, 40036), (36, 40000), (40, 39946), (43, 39925), (49, 39886), (53, 39853),

Gene: Gompeii16_52 Start: 39360, Stop: 38962, Start Num: 17

Candidate Starts for Gompeii16_52:

(Start: 17 @39360 has 167 MA's), (20, 39261), (22, 39207), (23, 39192), (24, 39183), (34, 39048), (37, 38994),

Gene: Graduation_57 Start: 39927, Stop: 39529, Start Num: 17

Candidate Starts for Graduation_57:

(Start: 17 @39927 has 167 MA's), (20, 39828), (22, 39774), (23, 39759), (24, 39750), (34, 39615), (39, 39561),

Gene: GrecoEtereo_54 Start: 38332, Stop: 37766, Start Num: 17

Candidate Starts for GrecoEtereo_54:

(Start: 17 @38332 has 167 MA's), (20, 38233), (22, 38179), (23, 38164), (24, 38155), (34, 38020), (36, 37984), (40, 37930), (43, 37909), (57, 37804),

Gene: Greg_55 Start: 38573, Stop: 37956, Start Num: 17

Candidate Starts for Greg_55:

(Start: 17 @38573 has 167 MA's), (20, 38474), (22, 38420), (23, 38405), (24, 38396), (34, 38261), (36, 38225), (40, 38171), (43, 38150),

Gene: GroundGoblin_54 Start: 38955, Stop: 38338, Start Num: 17

Candidate Starts for GroundGoblin_54:

(Start: 17 @38955 has 167 MA's), (20, 38856), (22, 38802), (23, 38787), (24, 38778), (34, 38643), (36, 38607), (40, 38553), (43, 38532),

Gene: Gwendoluna_57 Start: 40576, Stop: 39968, Start Num: 17

Candidate Starts for Gwendoluna_57:

(Start: 17 @40576 has 167 MA's), (20, 40477), (22, 40423), (23, 40408), (24, 40399), (34, 40264), (36, 40228), (40, 40177), (43, 40156),

Gene: Gyzlar_49 Start: 36249, Stop: 35680, Start Num: 16

Candidate Starts for Gyzlar_49:

(Start: 10 @36300 has 1 MA's), (Start: 16 @36249 has 28 MA's), (20, 36147), (22, 36093), (23, 36078), (24, 36069), (34, 35934), (36, 35898), (40, 35844), (43, 35823), (46, 35802), (57, 35718),

Gene: Hami1_47 Start: 33410, Stop: 33012, Start Num: 17

Candidate Starts for Hami1_47:

(Start: 17 @33410 has 167 MA's), (20, 33311), (22, 33257), (23, 33242), (24, 33233), (34, 33098), (37, 33044),

Gene: HanShotFirst_54 Start: 38872, Stop: 38306, Start Num: 17

Candidate Starts for HanShotFirst_54:

(Start: 17 @38872 has 167 MA's), (20, 38773), (22, 38719), (23, 38704), (24, 38695), (34, 38560), (36, 38524), (40, 38470), (43, 38449), (46, 38428), (57, 38344),

Gene: HarryOW_52 Start: 37507, Stop: 36938, Start Num: 16

Candidate Starts for HarryOW_52:

(2, 37618), (9, 37561), (Start: 16 @37507 has 28 MA's), (20, 37405), (22, 37351), (23, 37336), (24, 37327), (34, 37192), (36, 37156), (40, 37102), (43, 37081), (57, 36976),

Gene: Hermia_54 Start: 39005, Stop: 38388, Start Num: 17

Candidate Starts for Hermia_54:

(Start: 17 @39005 has 167 MA's), (20, 38906), (22, 38852), (23, 38837), (24, 38828), (34, 38693), (36, 38657), (40, 38603), (43, 38582),

Gene: HermioneGrange_53 Start: 38256, Stop: 37777, Start Num: 17

Candidate Starts for HermioneGrange_53:

(11, 38298), (Start: 14 @38268 has 4 MA's), (Start: 17 @38256 has 167 MA's), (20, 38157), (22, 38103), (23, 38088), (24, 38079), (26, 37959), (34, 37863), (37, 37809),

Gene: Homines_46 Start: 34514, Stop: 33951, Start Num: 17

Candidate Starts for Homines_46:

(Start: 17 @34514 has 167 MA's), (20, 34415), (22, 34361), (23, 34346), (24, 34337), (34, 34202), (36, 34166), (40, 34115), (43, 34094), (46, 34073), (57, 33989),

Gene: ILeeKay_57 Start: 39101, Stop: 38547, Start Num: 17

Candidate Starts for ILeeKay_57:

(Start: 17 @39101 has 167 MA's), (20, 39002), (22, 38948), (23, 38933), (24, 38924), (34, 38789), (36, 38753), (40, 38702), (43, 38681), (49, 38642),

Gene: Ichabod_56 Start: 39693, Stop: 39127, Start Num: 17

Candidate Starts for Ichabod_56:

(11, 39735), (Start: 14 @39705 has 4 MA's), (Start: 17 @39693 has 167 MA's), (20, 39594), (22, 39540), (23, 39525), (24, 39516), (34, 39381), (36, 39345), (40, 39291), (43, 39270), (46, 39249), (57, 39165),

Gene: IgnatiusPatJac_54 Start: 38566, Stop: 38168, Start Num: 17

Candidate Starts for IgnatiusPatJac_54:

(Start: 17 @38566 has 167 MA's), (20, 38467), (22, 38413), (23, 38398), (24, 38389), (34, 38254), (37, 38200),

Gene: Inyanga_50 Start: 36800, Stop: 36402, Start Num: 17

Candidate Starts for Inyanga_50:

(Start: 17 @36800 has 167 MA's), (20, 36701), (22, 36647), (23, 36632), (24, 36623), (34, 36488), (37, 36434),

Gene: Iqorha_50 Start: 36799, Stop: 36401, Start Num: 17

Candidate Starts for Iqorha_50:

(Start: 17 @36799 has 167 MA's), (20, 36700), (22, 36646), (23, 36631), (24, 36622), (34, 36487), (37, 36433),

Gene: JC27_55 Start: 38691, Stop: 38209, Start Num: 16

Candidate Starts for JC27_55:

(Start: 10 @38742 has 1 MA's), (Start: 16 @38691 has 28 MA's), (20, 38589), (22, 38535), (23, 38520), (24, 38511), (26, 38391), (34, 38295), (37, 38241),

Gene: JackSparrow_55 Start: 38752, Stop: 38186, Start Num: 16

Candidate Starts for JackSparrow_55:

(9, 38803), (Start: 16 @38752 has 28 MA's), (19, 38719), (20, 38653), (22, 38599), (23, 38584), (24, 38575), (34, 38440), (36, 38404), (40, 38350), (43, 38329), (46, 38308), (57, 38224),

Gene: Jasper_55 Start: 37712, Stop: 37257, Start Num: 17

Candidate Starts for Jasper_55:

(Start: 17 @37712 has 167 MA's), (20, 37613), (22, 37559), (23, 37544), (24, 37535), (25, 37418), (29, 37388), (30, 37379), (31, 37367), (34, 37343), (37, 37289),

Gene: Jerm2_54 Start: 38511, Stop: 38032, Start Num: 17

Candidate Starts for Jerm2_54:

(11, 38553), (Start: 14 @38523 has 4 MA's), (Start: 17 @38511 has 167 MA's), (20, 38412), (22, 38358), (23, 38343), (24, 38334), (26, 38214), (34, 38118), (37, 38064),

Gene: JuliaChild_54 Start: 38193, Stop: 37627, Start Num: 17

Candidate Starts for JuliaChild_54:

(11, 38235), (Start: 14 @38205 has 4 MA's), (Start: 17 @38193 has 167 MA's), (20, 38094), (22, 38040), (23, 38025), (24, 38016), (34, 37881), (36, 37845), (40, 37791), (43, 37770), (46, 37749), (55, 37692), (57, 37665),

Gene: KSSJEB_53 Start: 38192, Stop: 37626, Start Num: 17

Candidate Starts for KSSJEB_53:

(Start: 17 @38192 has 167 MA's), (20, 38093), (22, 38039), (23, 38024), (24, 38015), (34, 37880), (36, 37844), (40, 37790), (43, 37769), (46, 37748), (55, 37691), (57, 37664),

Gene: Kanely_55 Start: 38889, Stop: 38275, Start Num: 16

Candidate Starts for Kanely_55:

(Start: 10 @38940 has 1 MA's), (Start: 16 @38889 has 28 MA's), (20, 38787), (22, 38733), (23, 38718), (24, 38709), (34, 38574), (36, 38538), (40, 38487), (43, 38466), (46, 38445), (48, 38430), (52, 38397),

Gene: Kenmech_57 Start: 40335, Stop: 39925, Start Num: 17

Candidate Starts for Kenmech_57:

(Start: 17 @40335 has 167 MA's), (20, 40236), (22, 40182), (23, 40167), (24, 40158), (34, 40023), (39, 39957),

Gene: KikiBouba_54 Start: 38814, Stop: 38197, Start Num: 17

Candidate Starts for KikiBouba_54:

(Start: 17 @38814 has 167 MA's), (20, 38715), (22, 38661), (23, 38646), (24, 38637), (34, 38502), (36, 38466), (40, 38412), (43, 38391),

Gene: Killigrew_54 Start: 39392, Stop: 38826, Start Num: 17

Candidate Starts for Killigrew_54:

(Start: 17 @39392 has 167 MA's), (20, 39293), (22, 39239), (23, 39224), (24, 39215), (34, 39080), (36, 39044), (40, 38990), (43, 38969), (46, 38948), (55, 38891), (57, 38864),

Gene: Kugel_54 Start: 39457, Stop: 38903, Start Num: 17

Candidate Starts for Kugel_54:

(Start: 17 @39457 has 167 MA's), (20, 39358), (22, 39304), (23, 39289), (24, 39280), (34, 39145), (36, 39109), (40, 39058), (43, 39037), (49, 38998),

Gene: KyMonks1A_55 Start: 38450, Stop: 37833, Start Num: 16

Candidate Starts for KyMonks1A_55:

(Start: 10 @38501 has 1 MA's), (Start: 16 @38450 has 28 MA's), (20, 38348), (22, 38294), (23, 38279), (24, 38270), (34, 38135), (36, 38099), (40, 38045), (43, 38024), (48, 37988), (52, 37955),

Gene: Kykar_53 Start: 38219, Stop: 37605, Start Num: 17

Candidate Starts for Kykar_53:

(Start: 17 @38219 has 167 MA's), (20, 38120), (22, 38066), (23, 38051), (24, 38042), (34, 37907), (40, 37817), (43, 37796), (46, 37775), (48, 37760), (52, 37727),

Gene: Lamina13_54 Start: 38247, Stop: 37576, Start Num: 17

Candidate Starts for Lamina13_54:

(Start: 17 @38247 has 167 MA's), (20, 38148), (22, 38094), (23, 38079), (24, 38070), (26, 37950), (34, 37854), (36, 37818), (40, 37764), (43, 37743), (49, 37704), (53, 37671),

Gene: Lesedi_50 Start: 37197, Stop: 36799, Start Num: 17

Candidate Starts for Lesedi_50:

(Start: 17 @37197 has 167 MA's), (20, 37098), (22, 37044), (23, 37029), (24, 37020), (34, 36885), (35, 36858), (37, 36831),

Gene: Levia_51 Start: 38035, Stop: 37625, Start Num: 17

Candidate Starts for Levia_51:

(Start: 17 @38035 has 167 MA's), (20, 37936), (22, 37882), (23, 37867), (24, 37858), (34, 37723), (37, 37657),

Gene: Licorice_56 Start: 40561, Stop: 39995, Start Num: 17

Candidate Starts for Licorice_56:

(Start: 17 @40561 has 167 MA's), (20, 40462), (22, 40408), (23, 40393), (24, 40384), (34, 40249), (36, 40213), (40, 40159), (43, 40138), (46, 40117), (57, 40033),

Gene: LilBib_53 Start: 39658, Stop: 39053, Start Num: 16

Candidate Starts for LilBib_53:

(2, 39769), (8, 39721), (Start: 16 @39658 has 28 MA's), (20, 39556), (22, 39502), (23, 39487), (24, 39478), (34, 39343), (36, 39307), (42, 39247), (57, 39124), (60, 39064),

Gene: Lockley_52 Start: 38167, Stop: 37532, Start Num: 17

Candidate Starts for Lockley_52:

(Start: 17 @38167 has 167 MA's), (20, 38068), (22, 38014), (23, 37999), (24, 37990), (26, 37870), (34, 37774), (36, 37738), (43, 37675), (46, 37654), (57, 37570),

Gene: LunarLander_55 Start: 38494, Stop: 38096, Start Num: 17

Candidate Starts for LunarLander_55:

(Start: 17 @38494 has 167 MA's), (20, 38395), (22, 38341), (23, 38326), (24, 38317), (34, 38182), (39, 38128),

Gene: MPlant7149_52 Start: 37293, Stop: 36895, Start Num: 17

Candidate Starts for MPlant7149_52:

(Start: 17 @37293 has 167 MA's), (20, 37194), (22, 37140), (23, 37125), (24, 37116), (34, 36981), (37, 36927),

Gene: Magnar_53 Start: 38738, Stop: 38340, Start Num: 17

Candidate Starts for Magnar_53:

(Start: 17 @38738 has 167 MA's), (20, 38639), (22, 38585), (23, 38570), (24, 38561), (34, 38426), (39, 38372),

Gene: Magnito_52 Start: 38460, Stop: 37900, Start Num: 17

Candidate Starts for Magnito_52:

(Start: 17 @38460 has 167 MA's), (20, 38361), (22, 38307), (23, 38292), (24, 38283), (34, 38148), (36, 38112), (40, 38058), (43, 38037), (57, 37938),

Gene: Makemake_53 Start: 38800, Stop: 38399, Start Num: 16

Candidate Starts for Makemake_53:

(Start: 10 @38851 has 1 MA's), (Start: 16 @38800 has 28 MA's), (20, 38698), (22, 38644), (23, 38629), (24, 38620), (34, 38485), (37, 38431),

Gene: Manatee_55 Start: 38824, Stop: 38426, Start Num: 17

Candidate Starts for Manatee_55:

(Start: 17 @38824 has 167 MA's), (20, 38725), (22, 38671), (23, 38656), (24, 38647), (34, 38512), (37, 38458),

Gene: Marcell_51 Start: 37819, Stop: 37265, Start Num: 17

Candidate Starts for Marcell_51:

(Start: 17 @37819 has 167 MA's), (20, 37720), (22, 37666), (23, 37651), (24, 37642), (34, 37507), (36, 37471), (40, 37420), (43, 37399), (49, 37360),

Gene: Marchy_48 Start: 35728, Stop: 35330, Start Num: 17

Candidate Starts for Marchy_48:

(Start: 17 @35728 has 167 MA's), (20, 35629), (22, 35575), (23, 35560), (24, 35551), (34, 35416), (37, 35362),

Gene: Marco3_56 Start: 40086, Stop: 39685, Start Num: 16

Candidate Starts for Marco3_56:

(Start: 10 @40137 has 1 MA's), (Start: 16 @40086 has 28 MA's), (20, 39984), (22, 39930), (23, 39915), (24, 39906), (34, 39771), (35, 39744), (37, 39717),

Gene: Marge_53 Start: 38708, Stop: 38079, Start Num: 17

Candidate Starts for Marge_53:

(Start: 17 @38708 has 167 MA's), (20, 38609), (22, 38555), (23, 38540), (24, 38531), (34, 38396), (36, 38360), (40, 38306), (43, 38285),

Gene: Maroc7_51 Start: 37816, Stop: 37196, Start Num: 10

Candidate Starts for Maroc7_51:

(Start: 10 @37816 has 1 MA's), (Start: 16 @37765 has 28 MA's), (20, 37663), (22, 37609), (23, 37594), (24, 37585), (34, 37450), (36, 37414), (40, 37363), (43, 37342), (46, 37321), (57, 37234),

Gene: Marsha_53 Start: 39249, Stop: 38638, Start Num: 17

Candidate Starts for Marsha_53:

(Start: 17 @39249 has 167 MA's), (20, 39150), (22, 39096), (23, 39081), (24, 39072), (34, 38937), (36, 38901), (40, 38850), (43, 38829), (48, 38793), (52, 38760),

Gene: MaryBeth_53 Start: 39046, Stop: 38489, Start Num: 17

Candidate Starts for MaryBeth_53:

(Start: 17 @39046 has 167 MA's), (20, 38947), (22, 38893), (23, 38878), (24, 38869), (34, 38734), (36, 38698), (40, 38644), (43, 38623), (49, 38584),

Gene: McGuire_55 Start: 38290, Stop: 37724, Start Num: 17

Candidate Starts for McGuire_55:

(Start: 17 @38290 has 167 MA's), (20, 38191), (22, 38137), (23, 38122), (24, 38113), (34, 37978), (36, 37942), (40, 37888), (43, 37867), (46, 37846), (55, 37789), (57, 37762),

Gene: McSinger_54 Start: 38436, Stop: 37870, Start Num: 17

Candidate Starts for McSinger_54:

(Start: 17 @38436 has 167 MA's), (20, 38337), (22, 38283), (23, 38268), (24, 38259), (34, 38124), (36, 38088), (40, 38034), (43, 38013), (46, 37992), (57, 37908),

Gene: MetalQZJ_52 Start: 39046, Stop: 38489, Start Num: 17

Candidate Starts for MetalQZJ_52:

(Start: 17 @39046 has 167 MA's), (20, 38947), (22, 38893), (23, 38878), (24, 38869), (34, 38734), (36, 38698), (40, 38644), (43, 38623), (49, 38584),

Gene: Michley_53 Start: 37767, Stop: 37369, Start Num: 17

Candidate Starts for Michley_53:

(Start: 17 @37767 has 167 MA's), (20, 37668), (21, 37659), (22, 37614), (23, 37599), (24, 37590), (34, 37455), (37, 37401),

Gene: MilleFeuille_50 Start: 38205, Stop: 37639, Start Num: 17

Candidate Starts for MilleFeuille_50:

(Start: 17 @38205 has 167 MA's), (20, 38106), (22, 38052), (23, 38037), (24, 38028), (34, 37893), (36, 37857), (40, 37806), (43, 37785), (46, 37764), (57, 37677),

Gene: Mkhuseleli_52 Start: 37334, Stop: 36936, Start Num: 17

Candidate Starts for Mkhuseleli_52:

(Start: 17 @37334 has 167 MA's), (20, 37235), (22, 37181), (23, 37166), (24, 37157), (34, 37022), (37, 36968),

Gene: Molly_54 Start: 37493, Stop: 36939, Start Num: 18

Candidate Starts for Molly_54:

(12, 37535), (15, 37505), (Start: 18 @37493 has 4 MA's), (20, 37394), (22, 37340), (23, 37325), (24, 37316), (34, 37181), (36, 37145), (40, 37094), (43, 37073), (49, 37034),

Gene: Monet_56 Start: 39466, Stop: 39068, Start Num: 17

Candidate Starts for Monet_56:

(Start: 17 @39466 has 167 MA's), (20, 39367), (22, 39313), (23, 39298), (24, 39289), (34, 39154), (37, 39100),

Gene: Moose_53 Start: 37985, Stop: 37419, Start Num: 17

Candidate Starts for Moose_53:

(Start: 17 @37985 has 167 MA's), (20, 37886), (22, 37832), (23, 37817), (24, 37808), (34, 37673), (36, 37637), (40, 37583), (43, 37562), (46, 37541), (55, 37484), (57, 37457),

Gene: MrGordo_53 Start: 38500, Stop: 38102, Start Num: 17

Candidate Starts for MrGordo_53:

(Start: 17 @38500 has 167 MA's), (20, 38401), (22, 38347), (23, 38332), (24, 38323), (34, 38188), (35, 38161), (39, 38134),

Gene: Mryolo_51 Start: 38512, Stop: 37898, Start Num: 17

Candidate Starts for Mryolo_51:

(Start: 17 @38512 has 167 MA's), (20, 38413), (22, 38359), (23, 38344), (24, 38335), (34, 38200), (36, 38164), (40, 38110), (43, 38089), (46, 38068), (48, 38053), (52, 38020),

Gene: Mule_50 Start: 36434, Stop: 36033, Start Num: 16

Candidate Starts for Mule_50:

(Start: 10 @36485 has 1 MA's), (Start: 16 @36434 has 28 MA's), (20, 36332), (22, 36278), (23, 36263), (24, 36254), (34, 36119), (37, 36065),

Gene: Museum_54 Start: 38643, Stop: 38077, Start Num: 17

Candidate Starts for Museum_54:

(11, 38685), (Start: 14 @38655 has 4 MA's), (Start: 17 @38643 has 167 MA's), (20, 38544), (22, 38490), (23, 38475), (24, 38466), (34, 38331), (36, 38295), (40, 38241), (43, 38220), (46, 38199), (55, 38142), (57, 38115),

Gene: NEHalo_51 Start: 38428, Stop: 37814, Start Num: 17

Candidate Starts for NEHalo_51:

(11, 38470), (Start: 14 @38440 has 4 MA's), (Start: 17 @38428 has 167 MA's), (20, 38329), (22, 38275), (23, 38260), (24, 38251), (34, 38116), (36, 38080), (40, 38026), (43, 38005), (46, 37984), (48, 37969), (52, 37936),

Gene: Naira_56 Start: 40405, Stop: 39839, Start Num: 17

Candidate Starts for Naira_56:

(Start: 17 @40405 has 167 MA's), (20, 40306), (22, 40252), (23, 40237), (24, 40228), (34, 40093), (36, 40057), (40, 40003), (43, 39982), (46, 39961), (55, 39904), (57, 39877),

Gene: Niza_56 Start: 40289, Stop: 39891, Start Num: 17

Candidate Starts for Niza_56:

(Start: 17 @40289 has 167 MA's), (20, 40190), (22, 40136), (23, 40121), (24, 40112), (34, 39977), (37, 39923),

Gene: Norz_54 Start: 39632, Stop: 39066, Start Num: 16

Candidate Starts for Norz_54:

(2, 39743), (9, 39686), (Start: 16 @39632 has 28 MA's), (20, 39530), (22, 39476), (23, 39461), (24, 39452), (34, 39317), (36, 39281), (40, 39230), (43, 39209), (46, 39188), (57, 39104),

Gene: Noxious_53 Start: 39005, Stop: 38388, Start Num: 17

Candidate Starts for Noxious_53:

(Start: 17 @39005 has 167 MA's), (20, 38906), (22, 38852), (23, 38837), (24, 38828), (34, 38693), (36, 38657), (40, 38603), (43, 38582),

Gene: Ohno789_55 Start: 39227, Stop: 38613, Start Num: 17

Candidate Starts for Ohno789_55:

(Start: 17 @39227 has 167 MA's), (20, 39128), (22, 39074), (23, 39059), (24, 39050), (34, 38915), (36, 38879), (40, 38828), (43, 38807),

Gene: Oogway_52 Start: 38320, Stop: 37736, Start Num: 16

Candidate Starts for Oogway_52:

(2, 38431), (Start: 16 @38320 has 28 MA's), (20, 38218), (22, 38164), (23, 38149), (24, 38140), (32, 38020), (36, 37957), (40, 37903), (43, 37882), (46, 37861), (57, 37774),

Gene: PSullivan_53 Start: 37380, Stop: 36901, Start Num: 17

Candidate Starts for PSullivan_53:

(11, 37422), (Start: 14 @37392 has 4 MA's), (Start: 17 @37380 has 167 MA's), (20, 37281), (22, 37227), (23, 37212), (24, 37203), (26, 37083), (34, 36987), (37, 36933),

Gene: PacerPaul_53 Start: 38994, Stop: 38596, Start Num: 17

Candidate Starts for PacerPaul_53:

(Start: 17 @38994 has 167 MA's), (20, 38895), (22, 38841), (23, 38826), (24, 38817), (34, 38682), (37, 38628),

Gene: Papez_56 Start: 40588, Stop: 40022, Start Num: 17

Candidate Starts for Papez_56:

(Start: 17 @40588 has 167 MA's), (20, 40489), (22, 40435), (23, 40420), (24, 40411), (34, 40276), (36, 40240), (40, 40186), (43, 40165), (46, 40144), (55, 40087), (57, 40060),

Gene: Paphu_51 Start: 37777, Stop: 37160, Start Num: 17

Candidate Starts for Paphu_51:

(11, 37819), (Start: 14 @37789 has 4 MA's), (Start: 17 @37777 has 167 MA's), (20, 37678), (22, 37624), (23, 37609), (24, 37600), (34, 37465), (36, 37429), (40, 37375), (43, 37354),

Gene: Paraselene_51 Start: 39100, Stop: 38486, Start Num: 17

Candidate Starts for Paraselene_51:

(Start: 17 @39100 has 167 MA's), (20, 39001), (22, 38947), (23, 38932), (24, 38923), (34, 38788), (36, 38752), (40, 38698), (43, 38677), (46, 38656), (48, 38641), (52, 38608),

Gene: Pari_55 Start: 38216, Stop: 37557, Start Num: 14

Candidate Starts for Pari_55:

(Start: 14 @38216 has 4 MA's), (Start: 17 @38204 has 167 MA's), (20, 38105), (22, 38051), (23, 38036), (24, 38027), (26, 37907), (34, 37811), (36, 37775), (40, 37721), (43, 37700), (46, 37679), (55, 37622), (57, 37595),

Gene: Parliament_53 Start: 38723, Stop: 38079, Start Num: 17

Candidate Starts for Parliament_53:

(Start: 17 @38723 has 167 MA's), (20, 38624), (22, 38570), (23, 38555), (24, 38546), (26, 38426), (34, 38330), (36, 38294), (40, 38243), (43, 38222), (46, 38201), (57, 38117),

Gene: PascalRango_54 Start: 38941, Stop: 38375, Start Num: 17

Candidate Starts for PascalRango_54:

(Start: 17 @38941 has 167 MA's), (20, 38842), (22, 38788), (23, 38773), (24, 38764), (34, 38629), (36, 38593), (40, 38539), (43, 38518), (46, 38497), (55, 38440), (57, 38413),

Gene: Payneful_53 Start: 38445, Stop: 38047, Start Num: 17

Candidate Starts for Payneful_53:

(Start: 17 @38445 has 167 MA's), (20, 38346), (22, 38292), (23, 38277), (24, 38268), (34, 38133), (37, 38079),

Gene: Pelly_53 Start: 38399, Stop: 37998, Start Num: 16

Candidate Starts for Pelly_53:

(Start: 10 @38450 has 1 MA's), (Start: 16 @38399 has 28 MA's), (20, 38297), (22, 38243), (23, 38228), (24, 38219), (34, 38084), (37, 38030),

Gene: Pepe_50 Start: 37214, Stop: 36804, Start Num: 17

Candidate Starts for Pepe_50:

(Start: 17 @37214 has 167 MA's), (20, 37115), (22, 37061), (23, 37046), (24, 37037), (34, 36902), (37, 36836),

Gene: Perseus_53 Start: 39320, Stop: 38919, Start Num: 16

Candidate Starts for Perseus_53:

(Start: 10 @39371 has 1 MA's), (Start: 16 @39320 has 28 MA's), (20, 39218), (22, 39164), (23, 39149), (24, 39140), (34, 39005), (37, 38951),

Gene: Peterson_58 Start: 40881, Stop: 40273, Start Num: 17

Candidate Starts for Peterson_58:

(Start: 17 @40881 has 167 MA's), (20, 40782), (22, 40728), (23, 40713), (24, 40704), (34, 40569), (36, 40539), (40, 40485), (43, 40464), (46, 40443), (48, 40428), (52, 40395),

Gene: Petp2012_54 Start: 38452, Stop: 37898, Start Num: 18

Candidate Starts for Petp2012_54:

(5, 38536), (12, 38494), (15, 38464), (Start: 18 @38452 has 4 MA's), (20, 38353), (22, 38299), (23, 38284), (24, 38275), (34, 38140), (36, 38104), (40, 38053), (43, 38032), (49, 37993),

Gene: Petruchio_53 Start: 38090, Stop: 37635, Start Num: 17

Candidate Starts for Petruchio_53:

(Start: 17 @38090 has 167 MA's), (20, 37991), (22, 37937), (23, 37922), (24, 37913), (25, 37796), (29, 37766), (30, 37757), (31, 37745), (34, 37721), (37, 37667),

Gene: PherrisBueller_53 Start: 37363, Stop: 36890, Start Num: 17

Candidate Starts for PherrisBueller_53:

(Start: 17 @37363 has 167 MA's), (20, 37264), (22, 37210), (23, 37195), (24, 37186), (25, 37069), (29, 37021), (30, 37012), (31, 37000), (34, 36976), (37, 36922),

Gene: PhineBark_53 Start: 39053, Stop: 38643, Start Num: 17

Candidate Starts for PhineBark_53:

(Start: 17 @39053 has 167 MA's), (20, 38954), (22, 38900), (23, 38885), (24, 38876), (34, 38741), (37, 38675),

Gene: Phlippers_52 Start: 39121, Stop: 38552, Start Num: 16

Candidate Starts for Phlippers_52:

(Start: 10 @39172 has 1 MA's), (Start: 16 @39121 has 28 MA's), (20, 39019), (22, 38965), (23, 38950), (24, 38941), (34, 38806), (36, 38770), (40, 38719), (43, 38698), (46, 38677), (57, 38590),

Gene: PhrostyMug_52 Start: 38599, Stop: 38198, Start Num: 16

Candidate Starts for PhrostyMug_52:

(Start: 10 @38650 has 1 MA's), (Start: 16 @38599 has 28 MA's), (20, 38497), (22, 38443), (23, 38428), (24, 38419), (34, 38284), (37, 38230),

Gene: PinkPlastic_54 Start: 38325, Stop: 37675, Start Num: 17

Candidate Starts for PinkPlastic_54:

(Start: 17 @38325 has 167 MA's), (20, 38226), (22, 38172), (23, 38157), (24, 38148), (26, 38028), (34, 37932), (36, 37896), (40, 37842), (43, 37821), (46, 37800), (57, 37713),

Gene: Pinto_53 Start: 38711, Stop: 38067, Start Num: 17

Candidate Starts for Pinto_53:

(11, 38753), (Start: 14 @38723 has 4 MA's), (Start: 17 @38711 has 167 MA's), (20, 38612), (22, 38558), (23, 38543), (24, 38534), (26, 38414), (34, 38318), (36, 38282), (40, 38231), (43, 38210), (46, 38189), (57, 38105),

Gene: Pippin_55 Start: 38617, Stop: 38000, Start Num: 17

Candidate Starts for Pippin_55:

(Start: 17 @38617 has 167 MA's), (20, 38518), (22, 38464), (23, 38449), (24, 38440), (34, 38305), (36, 38269), (40, 38215), (43, 38194),

Gene: Pita2_56 Start: 38877, Stop: 38398, Start Num: 17

Candidate Starts for Pita2_56:

(11, 38919), (Start: 14 @38889 has 4 MA's), (Start: 17 @38877 has 167 MA's), (20, 38778), (22, 38724), (23, 38709), (24, 38700), (26, 38580), (34, 38484), (37, 38430),

Gene: ProMouse_55 Start: 38872, Stop: 38312, Start Num: 17

Candidate Starts for ProMouse_55:

(Start: 17 @38872 has 167 MA's), (20, 38773), (22, 38719), (23, 38704), (24, 38695), (34, 38560), (36, 38524), (40, 38470), (45, 38446),

Gene: Raid_54 Start: 38288, Stop: 37695, Start Num: 17

Candidate Starts for Raid_54:

(Start: 17 @38288 has 167 MA's), (20, 38189), (22, 38135), (23, 38120), (24, 38111), (34, 37976), (41, 37880),

Gene: Rajelicia_54 Start: 39566, Stop: 39009, Start Num: 17

Candidate Starts for Rajelicia_54:

(Start: 17 @39566 has 167 MA's), (20, 39467), (22, 39413), (23, 39398), (24, 39389), (34, 39254), (36, 39218), (40, 39164), (43, 39143), (49, 39104),

Gene: Rhynn_52 Start: 37733, Stop: 37335, Start Num: 17

Candidate Starts for Rhynn_52:

(Start: 17 @37733 has 167 MA's), (20, 37634), (22, 37580), (23, 37565), (24, 37556), (34, 37421), (37, 37367),

Gene: RidgeCB_53 Start: 38830, Stop: 38195, Start Num: 17

Candidate Starts for RidgeCB_53:

(Start: 17 @38830 has 167 MA's), (20, 38731), (22, 38677), (23, 38662), (24, 38653), (26, 38533), (34, 38437), (36, 38401), (40, 38350), (43, 38329), (49, 38290),

Gene: Ringer_54 Start: 39883, Stop: 39317, Start Num: 17

Candidate Starts for Ringer_54:

(Start: 17 @39883 has 167 MA's), (20, 39784), (22, 39730), (23, 39715), (24, 39706), (34, 39571), (36, 39535), (40, 39481), (43, 39460), (46, 39439), (57, 39355),

Gene: Rohr_54 Start: 38557, Stop: 38078, Start Num: 17

Candidate Starts for Rohr_54:

(11, 38599), (Start: 14 @38569 has 4 MA's), (Start: 17 @38557 has 167 MA's), (20, 38458), (22, 38404), (23, 38389), (24, 38380), (26, 38260), (34, 38164), (37, 38110),

Gene: Rubeus_53 Start: 36498, Stop: 35935, Start Num: 17

Candidate Starts for Rubeus_53:

(11, 36540), (Start: 14 @36510 has 4 MA's), (Start: 17 @36498 has 167 MA's), (20, 36399), (22, 36345), (23, 36330), (24, 36321), (34, 36186), (36, 36150), (40, 36099), (43, 36078), (46, 36057), (57, 35973),

Gene: Rufus_54 Start: 38103, Stop: 37705, Start Num: 17

Candidate Starts for Rufus_54:

(11, 38145), (Start: 14 @38115 has 4 MA's), (Start: 17 @38103 has 167 MA's), (20, 38004), (22, 37950), (23, 37935), (24, 37926), (34, 37791), (37, 37737),

Gene: Ruotula_56 Start: 39803, Stop: 39174, Start Num: 17

Candidate Starts for Ruotula_56:

(Start: 17 @39803 has 167 MA's), (20, 39704), (22, 39650), (23, 39635), (24, 39626), (34, 39491), (36, 39455), (40, 39401), (43, 39380),

Gene: Rutherferd_55 Start: 38949, Stop: 38551, Start Num: 17

Candidate Starts for Rutherferd_55:

(Start: 17 @38949 has 167 MA's), (20, 38850), (22, 38796), (23, 38781), (24, 38772), (34, 38637), (35, 38610), (39, 38583),

Gene: STLscum_56 Start: 39588, Stop: 38947, Start Num: 17

Candidate Starts for STLscum_56:

(Start: 17 @39588 has 167 MA's), (20, 39489), (22, 39435), (23, 39420), (24, 39411), (28, 39282), (33, 39237), (34, 39225), (36, 39189), (40, 39135), (43, 39114), (49, 39075), (53, 39042),

Gene: Sagefire_56 Start: 39529, Stop: 38915, Start Num: 17

Candidate Starts for Sagefire_56:

(Start: 17 @39529 has 167 MA's), (20, 39430), (22, 39376), (23, 39361), (24, 39352), (34, 39217), (36, 39181), (40, 39127), (43, 39106), (49, 39067),

Gene: Sandaddy_52 Start: 38282, Stop: 37716, Start Num: 17

Candidate Starts for Sandaddy_52:

(Start: 17 @38282 has 167 MA's), (20, 38183), (22, 38129), (23, 38114), (24, 38105), (34, 37970), (36, 37934), (40, 37880), (43, 37859), (46, 37838), (57, 37754),

Gene: Sanya_51 Start: 38572, Stop: 38009, Start Num: 17

Candidate Starts for Sanya_51:

(Start: 17 @38572 has 167 MA's), (20, 38473), (22, 38419), (23, 38404), (24, 38395), (34, 38260), (36, 38224), (40, 38173), (43, 38152), (46, 38131), (57, 38047),

Gene: SarFire_51 Start: 37844, Stop: 37278, Start Num: 17

Candidate Starts for SarFire_51:

(Start: 17 @37844 has 167 MA's), (20, 37745), (22, 37691), (23, 37676), (24, 37667), (34, 37532), (40, 37442), (43, 37421), (46, 37400), (57, 37316),

Gene: Scowl_54 Start: 38673, Stop: 38194, Start Num: 17

Candidate Starts for Scowl_54:

(Start: 17 @38673 has 167 MA's), (20, 38574), (22, 38520), (23, 38505), (24, 38496), (26, 38376), (34, 38280), (37, 38226),

Gene: Seabiscuit_56 Start: 38458, Stop: 37811, Start Num: 17

Candidate Starts for Seabiscuit_56:

(Start: 17 @38458 has 167 MA's), (20, 38359), (22, 38305), (23, 38290), (24, 38281), (26, 38161), (34, 38065), (36, 38029), (40, 37975), (43, 37954), (46, 37933), (55, 37876), (57, 37849),

Gene: Seanderson_55 Start: 40050, Stop: 39571, Start Num: 17

Candidate Starts for Seanderson_55:

(Start: 17 @40050 has 167 MA's), (20, 39951), (22, 39897), (23, 39882), (24, 39873), (26, 39753), (34, 39657), (39, 39603),

Gene: ShortQueendom_47 Start: 35302, Stop: 34736, Start Num: 16

Candidate Starts for ShortQueendom_47:

(1, 35488), (6, 35368), (Start: 16 @35302 has 28 MA's), (19, 35269), (20, 35203), (22, 35149), (23, 35134), (24, 35125), (34, 34990), (36, 34954), (40, 34900), (43, 34879), (46, 34858), (57, 34774),

Gene: Sibs6_55 Start: 37137, Stop: 36739, Start Num: 17

Candidate Starts for Sibs6_55:

(11, 37179), (Start: 14 @37149 has 4 MA's), (Start: 17 @37137 has 167 MA's), (20, 37038), (22, 36984), (23, 36969), (24, 36960), (34, 36825), (37, 36771),

Gene: SkiPole_58 Start: 39258, Stop: 38668, Start Num: 17

Candidate Starts for SkiPole_58:

(Start: 17 @39258 has 167 MA's), (20, 39159), (22, 39105), (23, 39090), (24, 39081), (34, 38946), (36, 38910), (40, 38856), (43, 38835), (49, 38796), (53, 38763),

Gene: Slagathor_55 Start: 39464, Stop: 38910, Start Num: 18

Candidate Starts for Slagathor_55:

(12, 39506), (15, 39476), (Start: 18 @39464 has 4 MA's), (20, 39365), (22, 39311), (23, 39296), (24, 39287), (34, 39152), (36, 39116), (40, 39065), (43, 39044), (49, 39005),

Gene: Smairt_55 Start: 39592, Stop: 39191, Start Num: 16

Candidate Starts for Smairt_55:

(Start: 10 @39643 has 1 MA's), (Start: 16 @39592 has 28 MA's), (20, 39490), (22, 39436), (23, 39421), (24, 39412), (34, 39277), (37, 39223),

Gene: Smeagol_55 Start: 39706, Stop: 39155, Start Num: 14

Candidate Starts for Smeagol_55:

(Start: 14 @39706 has 4 MA's), (Start: 17 @39694 has 167 MA's), (20, 39595), (22, 39541), (23, 39526), (24, 39517), (34, 39382), (36, 39346), (40, 39322), (43, 39301), (46, 39280), (57, 39193),

Gene: Snazzy_52 Start: 37911, Stop: 37345, Start Num: 16

Candidate Starts for Snazzy_52:

(1, 38097), (6, 37977), (Start: 16 @37911 has 28 MA's), (19, 37878), (20, 37812), (22, 37758), (23, 37743), (24, 37734), (34, 37599), (36, 37563), (40, 37509), (43, 37488), (46, 37467), (57, 37383),

Gene: Solon_52 Start: 38166, Stop: 37603, Start Num: 17

Candidate Starts for Solon_52:

(Start: 17 @38166 has 167 MA's), (20, 38067), (22, 38013), (23, 37998), (24, 37989), (34, 37854), (36, 37818), (40, 37767), (43, 37746), (46, 37725), (57, 37641),

Gene: Sorpresa_52 Start: 38284, Stop: 37718, Start Num: 17

Candidate Starts for Sorpresa_52:

(Start: 17 @38284 has 167 MA's), (20, 38185), (22, 38131), (23, 38116), (24, 38107), (34, 37972), (36, 37936), (40, 37882), (43, 37861), (46, 37840), (57, 37756),

Gene: SpikeBT_53 Start: 38361, Stop: 37963, Start Num: 17

Candidate Starts for SpikeBT_53:

(Start: 17 @38361 has 167 MA's), (20, 38262), (22, 38208), (23, 38193), (24, 38184), (34, 38049), (35, 38022), (37, 37995),

Gene: Squee_54 Start: 38872, Stop: 38306, Start Num: 17

Candidate Starts for Squee_54:

(Start: 17 @38872 has 167 MA's), (20, 38773), (22, 38719), (23, 38704), (24, 38695), (34, 38560), (36, 38524), (40, 38470), (43, 38449), (46, 38428), (55, 38371), (57, 38344),

Gene: StewieG_52 Start: 35689, Stop: 35123, Start Num: 17

Candidate Starts for StewieG_52:

(Start: 17 @35689 has 167 MA's), (20, 35590), (22, 35536), (23, 35521), (24, 35512), (34, 35377), (36, 35341), (40, 35290), (43, 35269), (46, 35248), (57, 35161),

Gene: Sumter_50 Start: 38825, Stop: 38259, Start Num: 17

Candidate Starts for Sumter_50:

(Start: 17 @38825 has 167 MA's), (20, 38726), (22, 38672), (23, 38657), (24, 38648), (34, 38513), (36, 38477), (40, 38423), (43, 38402), (46, 38381), (55, 38324), (57, 38297),

Gene: Sunshine924_55 Start: 37963, Stop: 37409, Start Num: 17

Candidate Starts for Sunshine924_55:

(Start: 17 @37963 has 167 MA's), (20, 37864), (22, 37810), (23, 37795), (24, 37786), (34, 37651), (36, 37615), (40, 37564), (43, 37543), (49, 37504), (59, 37426),

Gene: SwissCheese_55 Start: 38485, Stop: 37919, Start Num: 17

Candidate Starts for SwissCheese_55:

(Start: 17 @38485 has 167 MA's), (20, 38386), (22, 38332), (23, 38317), (24, 38308), (34, 38173), (36, 38137), (40, 38083), (43, 38062), (46, 38041), (55, 37984), (57, 37957),

Gene: Switzer_55 Start: 39397, Stop: 38831, Start Num: 17

Candidate Starts for Switzer_55:

(Start: 17 @39397 has 167 MA's), (20, 39298), (22, 39244), (23, 39229), (24, 39220), (34, 39085), (36, 39049), (40, 38995), (43, 38974), (46, 38953), (55, 38896), (57, 38869),

Gene: Swole_54 Start: 37668, Stop: 37102, Start Num: 17

Candidate Starts for Swole_54:

(11, 37710), (Start: 14 @37680 has 4 MA's), (Start: 17 @37668 has 167 MA's), (20, 37569), (22, 37515), (23, 37500), (24, 37491), (34, 37356), (36, 37320), (40, 37266), (43, 37245), (46, 37224), (55, 37167), (57, 37140),

Gene: Target_54 Start: 37073, Stop: 36507, Start Num: 17

Candidate Starts for Target_54:

(Start: 17 @37073 has 167 MA's), (20, 36974), (22, 36920), (23, 36905), (24, 36896), (34, 36761), (36, 36725), (40, 36671), (43, 36650), (46, 36629), (57, 36545),

Gene: Tasp14_55 Start: 38871, Stop: 38200, Start Num: 17

Candidate Starts for Tasp14_55:

(Start: 17 @38871 has 167 MA's), (20, 38772), (22, 38718), (23, 38703), (24, 38694), (26, 38574), (34, 38478), (36, 38442), (40, 38388), (43, 38367), (49, 38328), (53, 38295),

Gene: Teodoridan_52 Start: 37810, Stop: 37400, Start Num: 17

Candidate Starts for Teodoridan_52:

(Start: 17 @37810 has 167 MA's), (20, 37711), (22, 37657), (23, 37642), (24, 37633), (34, 37498), (37, 37432),

Gene: TheloniousMonk_54 Start: 40538, Stop: 39924, Start Num: 17

Candidate Starts for TheloniousMonk_54:

(Start: 17 @40538 has 167 MA's), (20, 40439), (22, 40385), (23, 40370), (24, 40361), (34, 40226), (36, 40190), (40, 40136), (43, 40115), (46, 40094), (48, 40079), (52, 40046),

Gene: Thor_51 Start: 37202, Stop: 36636, Start Num: 17

Candidate Starts for Thor_51:

(Start: 17 @37202 has 167 MA's), (20, 37103), (22, 37049), (23, 37034), (24, 37025), (34, 36890), (40, 36800), (43, 36779), (46, 36758), (57, 36674),

Gene: Topgun_53 Start: 38055, Stop: 37489, Start Num: 17

Candidate Starts for Topgun_53:

(Start: 17 @38055 has 167 MA's), (20, 37956), (22, 37902), (23, 37887), (24, 37878), (34, 37743), (36, 37707), (40, 37656), (43, 37635), (46, 37614), (57, 37527),

Gene: Tote_49 Start: 34947, Stop: 34369, Start Num: 14

Candidate Starts for Tote_49:

(11, 34977), (Start: 14 @34947 has 4 MA's), (Start: 17 @34935 has 167 MA's), (20, 34836), (22, 34782), (23, 34767), (24, 34758), (34, 34623), (36, 34587), (40, 34533), (43, 34512), (46, 34491), (55, 34434), (57, 34407),

Gene: Traft412_56 Start: 39446, Stop: 38832, Start Num: 17

Candidate Starts for Traft412_56:

(Start: 17 @39446 has 167 MA's), (20, 39347), (22, 39293), (23, 39278), (24, 39269), (34, 39134), (36, 39098), (40, 39044), (43, 39023), (46, 39002), (48, 38987), (52, 38954),

Gene: Treddle_54 Start: 38978, Stop: 38580, Start Num: 17

Candidate Starts for Treddle_54:

(Start: 17 @38978 has 167 MA's), (20, 38879), (22, 38825), (23, 38810), (24, 38801), (34, 38666), (37, 38612),

Gene: Tripl3t_53 Start: 39615, Stop: 39205, Start Num: 17

Candidate Starts for Tripl3t_53:

(Start: 14 @39627 has 4 MA's), (Start: 17 @39615 has 167 MA's), (20, 39516), (22, 39462), (23, 39447), (24, 39438), (34, 39303), (38, 39237),

Gene: Trouble_56 Start: 39709, Stop: 39311, Start Num: 17

Candidate Starts for Trouble_56:

(Start: 17 @39709 has 167 MA's), (20, 39610), (22, 39556), (23, 39541), (24, 39532), (34, 39397), (37, 39343),

Gene: Turj99_52 Start: 38730, Stop: 38170, Start Num: 17

Candidate Starts for Turj99_52:

(Start: 17 @38730 has 167 MA's), (20, 38631), (22, 38577), (23, 38562), (24, 38553), (34, 38418), (36, 38382), (40, 38328), (43, 38307), (57, 38208),

Gene: TwoPeat_54 Start: 38091, Stop: 37693, Start Num: 17

Candidate Starts for TwoPeat_54:

(11, 38133), (Start: 14 @38103 has 4 MA's), (Start: 17 @38091 has 167 MA's), (20, 37992), (22, 37938), (23, 37923), (24, 37914), (34, 37779), (37, 37725),

Gene: U2_53 Start: 39377, Stop: 38811, Start Num: 17

Candidate Starts for U2_53:

(Start: 17 @39377 has 167 MA's), (20, 39278), (22, 39224), (23, 39209), (24, 39200), (34, 39065), (36, 39029), (40, 38975), (43, 38954), (46, 38933), (57, 38849),

Gene: Violet_51 Start: 38989, Stop: 38588, Start Num: 16

Candidate Starts for Violet_51:

(Start: 10 @39040 has 1 MA's), (Start: 16 @38989 has 28 MA's), (20, 38887), (22, 38833), (23, 38818), (24, 38809), (34, 38674), (37, 38620),

Gene: Watermelon_54 Start: 38595, Stop: 38029, Start Num: 17

Candidate Starts for Watermelon_54:

(Start: 17 @38595 has 167 MA's), (20, 38496), (22, 38442), (23, 38427), (24, 38418), (34, 38283), (36, 38247), (40, 38193), (43, 38172), (46, 38151), (56, 38085), (57, 38067),

Gene: Wheeler_54 Start: 38471, Stop: 38073, Start Num: 17

Candidate Starts for Wheeler_54:

(Start: 17 @38471 has 167 MA's), (20, 38372), (22, 38318), (23, 38303), (24, 38294), (34, 38159), (37, 38105),

Gene: Whitspit_51 Start: 36041, Stop: 35406, Start Num: 17

Candidate Starts for Whitspit_51:

(Start: 17 @36041 has 167 MA's), (20, 35942), (22, 35888), (23, 35873), (24, 35864), (26, 35744), (34, 35648), (36, 35612), (40, 35561), (43, 35540), (49, 35501),

Gene: Wilkins_53 Start: 37985, Stop: 37419, Start Num: 17

Candidate Starts for Wilkins_53:

(Start: 17 @37985 has 167 MA's), (20, 37886), (22, 37832), (23, 37817), (24, 37808), (34, 37673), (36, 37637), (40, 37586), (43, 37565), (46, 37544), (57, 37457),

Gene: Zeeculate_51 Start: 39028, Stop: 38627, Start Num: 16

Candidate Starts for Zeeculate_51:

(Start: 10 @39079 has 1 MA's), (Start: 16 @39028 has 28 MA's), (20, 38926), (22, 38872), (23, 38857), (24, 38848), (34, 38713), (37, 38659),

Gene: Zephyr_53 Start: 38133, Stop: 37516, Start Num: 17

Candidate Starts for Zephyr_53:

(4, 38217), (Start: 14 @38145 has 4 MA's), (Start: 17 @38133 has 167 MA's), (20, 38034), (22, 37980), (23, 37965), (24, 37956), (34, 37821), (36, 37785), (40, 37731), (43, 37710),

Gene: Zeuska_52 Start: 38962, Stop: 38564, Start Num: 17

Candidate Starts for Zeuska_52:

(Start: 17 @38962 has 167 MA's), (20, 38863), (22, 38809), (23, 38794), (24, 38785), (34, 38650), (37, 38596),