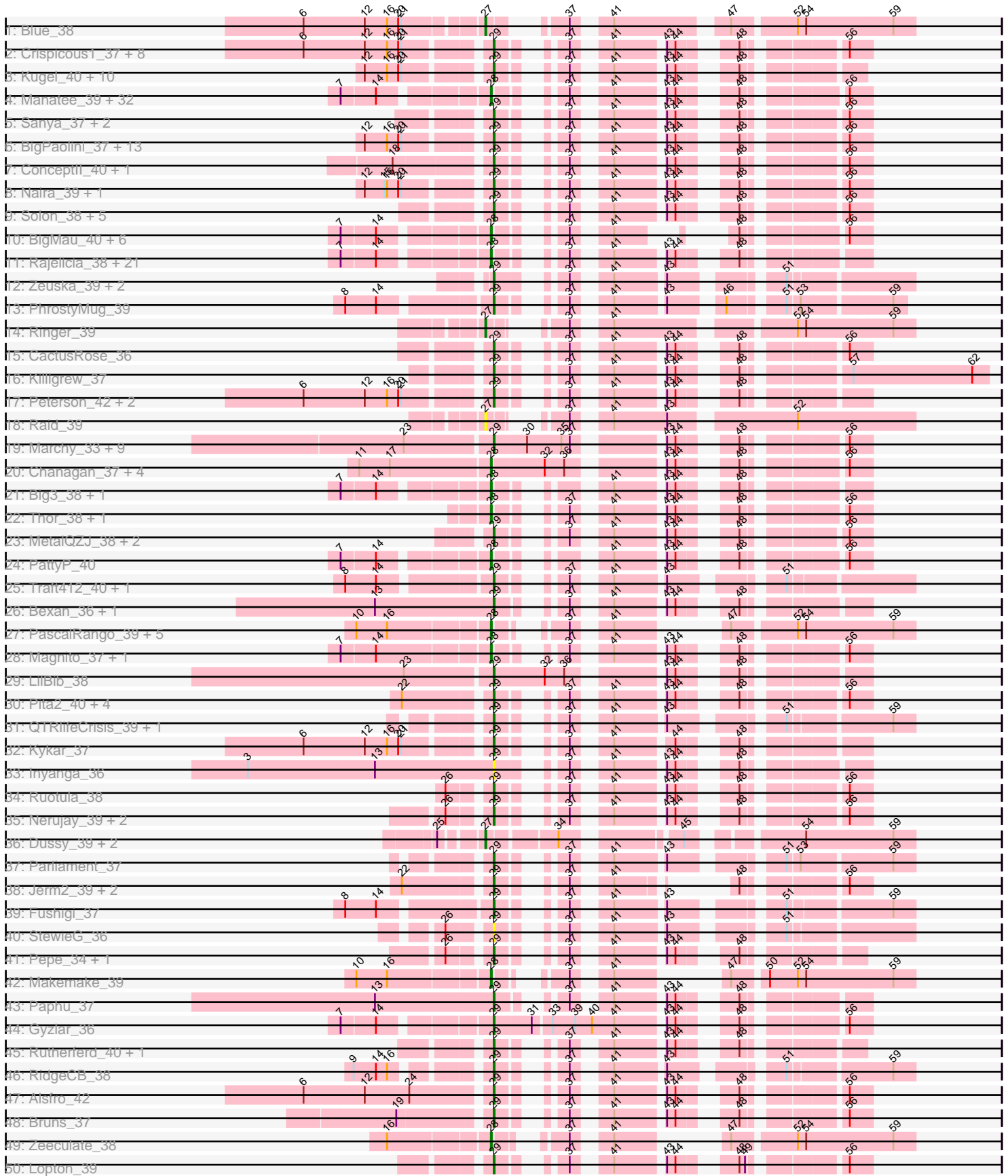
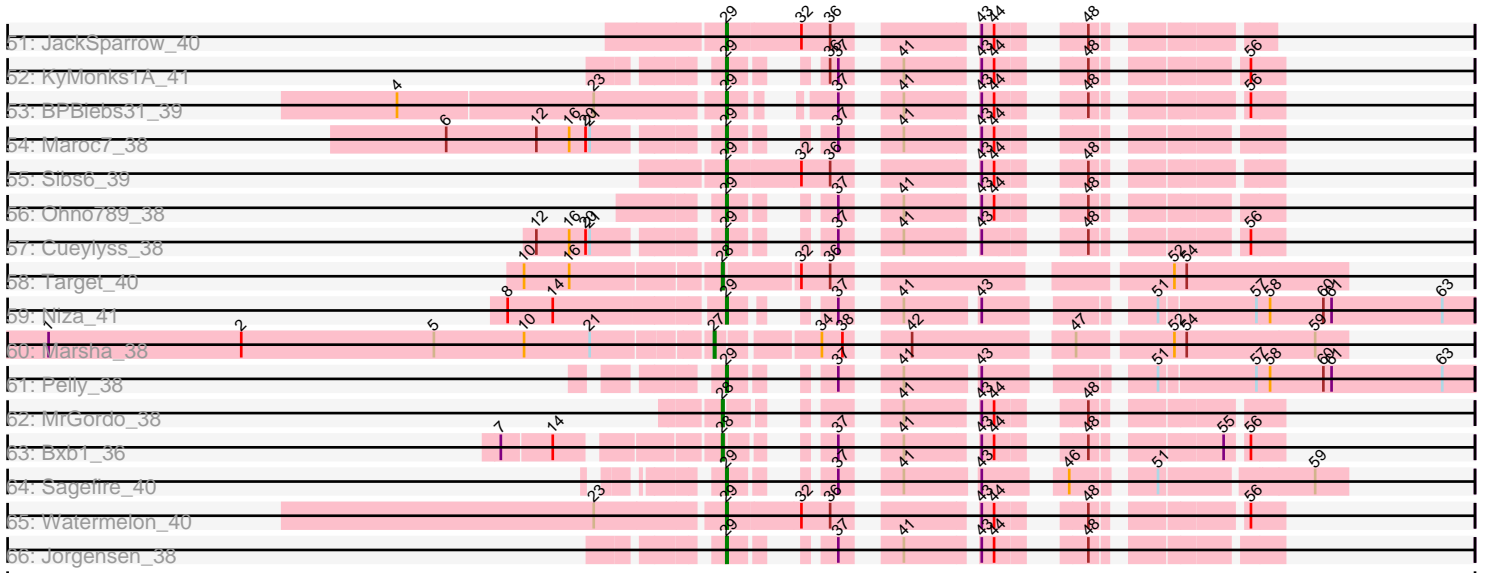


Pham 202685



Pham 202685



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 202685 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202685 has 207 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Blue_38
- Track 2 : Crispicous1_37, JC27_39, Fajezeel_40, Greg_40, Magnar_38, Acme_41, Ashballer_40, Fascinus_37, Wheeler_39
- Track 3 : Kugel_40, Nhonho_38, Bigfoot_36, Scowl_38, Bircsak_38, Bones_38, Gompeii16_38, Espresso_38, Doom_38, Papez_40, Barriga_38
- Track 4 : Manatee_39, Marcell_38, Euphoria_38, Snazzy_37, Marge_39, Switzer_39, SpikeBT_40, MPlant7149_38, Pinto_40, Violet_37, Gwendoluna_41, Norz_40, Rufus_40, JuliaChild_40, U2_38, Anglerfish_40, GMonster_37, Pari_39, Ichabod_39, McGuire_39, Dynamix_39, Rhynn_38, Mkhusei_39, Squee_39, Tripl3t_39, NEHalo_38, Smeagol_40, Tote_35, AFIS_38, Hermia_41, GageAP_40, BillKnuckles_39, Swole_40
- Track 5 : Sanya_37, Pippin_40, Ciao_38
- Track 6 : BigPaolini_37, Agaliana_36, Eyeball_38, A6_35, KBG_39, Froghopper_38, Wilkins_37, PacerPaul_39, Graduation_40, Topgun_37, BK1_35, Francis47_38, Smairt_39, Licorice_40
- Track 7 : ConceptII_40, Teodoridan_36
- Track 8 : Naira_39, Fenn_39
- Track 9 : Solon_38, DrFeelGood_37, Lamina13_38, Tasp14_39, Rubeus_38, Sumter_37
- Track 10 : BigMau_40, Bob3_37, Burton_39, Molly_40, TwoPeat_39, Museum_40, Petp2012_40
- Track 11 : Rajelicia_38, Michley_38, Lesedi_37, GrecoEtereo_40, PinkPlastic_37, Petruccio_39, Arcanine_38, DreamCatcher_41, Buttons_38, Seabiscuit_40, Treddle_41, BeesKnees_39, TheloniousMonk_40, Oogway_37, Aeneas_41, Edtherson_40, Zephyr_39, HarryOW_38, Slagathor_39, Adahisdi_39, Mule_37, Beatrix_38
- Track 12 : Zeuska_39, Applejack_35, Abrogate_390
- Track 13 : PhrostyMug_39
- Track 14 : Ringer_39
- Track 15 : CactusRose_36
- Track 16 : Killigrew_37
- Track 17 : Peterson_42, ILeeKay_40, Trouble_39
- Track 18 : Raid_39
- Track 19 : Marchy_33, Corvo_39, SwissCheese_40, Forsytheast_38, ShortQueendom_33, Altman_40, Payneful_38, HanShotFirst_37, Moose_38, Kanely_39
- Track 20 : Chanagan_37, Carlyle_39, PherrisBueller_39, Jasper_39, Dreamboat_39

- Track 21 : Big3_38, Ajay_39
- Track 22 : Thor_38, SarFire_38
- Track 23 : MetalQZJ_38, Mryolo_36, MaryBeth_38
- Track 24 : PattyP_40
- Track 25 : Traft412_40, Perseus_40
- Track 26 : Bexan_36, StrongArm_37
- Track 27 : PascalRango_39, ProMouse_36, Paraselene_37, Arlo_37, Atkinbua_40, Briton15_40
- Track 28 : Magnito_37, Turj99_37
- Track 29 : LilBib_38
- Track 30 : Pita2_40, Sandaddy_38, Sorpresa_38, BaconJack_41, PSullivan_37
- Track 31 : QTRlifeCrisis_39, Dexes_38
- Track 32 : Kykar_37
- Track 33 : Inyanga_36
- Track 34 : Ruotula_38
- Track 35 : Nerujay_39, Seanderson_39, Hope4ever_38
- Track 36 : Dussy_39, Abbyshoes_40, Kenmech_41
- Track 37 : Parliament_37
- Track 38 : Jerm2_39, Rohr_39, HermioneGrange_38
- Track 39 : Fushigi_37
- Track 40 : StewieG_36
- Track 41 : Pepe_34, Monet_41
- Track 42 : Makemake_39
- Track 43 : Paphu_37
- Track 44 : Gyzlar_36
- Track 45 : Rutherferd_40, Dulcie_37
- Track 46 : RidgeCB_38
- Track 47 : Alsfro_42
- Track 48 : Bruns_37
- Track 49 : Zeeculate_38
- Track 50 : Lopton_39
- Track 51 : JackSparrow_40
- Track 52 : KyMonks1A_41
- Track 53 : BPBiebs31_39
- Track 54 : Maroc7_38
- Track 55 : Sibs6_39
- Track 56 : Ohno789_38
- Track 57 : Cueylyss_38
- Track 58 : Target_40
- Track 59 : Niza_41
- Track 60 : Marsha_38
- Track 61 : Pelly_38
- Track 62 : MrGordo_38
- Track 63 : Bxb1_36
- Track 64 : Sagefire_40
- Track 65 : Watermelon_40
- Track 66 : Jorgensen_38

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

The start number called the most often in the published annotations is 29, it was called in 108 of the 196 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6_35, Abrogate_390, Acme_41, Agaliana_36, Alsfro_42, Altman_40, Applejack_35, Ashballer_40, BK1_35, BPBiebs31_39, BaconJack_41, Barriga_38, Bexan_36, BigPaolini_37, Bigfoot_36, Bircsak_38, Bones_38, Bruns_37, CactusRose_36, Ciao_38, ConceptII_40, Corvo_39, Crispicous1_37, Cueylyss_38, Dexes_38, Doom_38, DrFeelGood_37, Dulcie_37, Espresso_38, Eyeball_38, Fajezeel_40, Fascinus_37, Fenn_39, Forsytheast_38, Francis47_38, Froghopper_38, Fushigi_37, Gompeii16_38, Graduation_40, Greg_40, Gyzlar_36, HanShotFirst_37, HermioneGrange_38, Hope4ever_38, ILeeKay_40, Inyanga_36, JC27_39, JackSparrow_40, Jerm2_39, Jorgensen_38, KBG_39, Kanely_39, Killigrew_37, Kugel_40, KyMonks1A_41, Kykar_37, Lamina13_38, Licorice_40, LilBib_38, Lopton_39, Magnar_38, Marchy_33, Maroc7_38, MaryBeth_38, MetalQZJ_38, Monet_41, Moose_38, Mryolo_36, Naira_39, Nerujay_39, Nhonho_38, Niza_41, Ohno789_38, PSullivan_37, PacerPaul_39, Papez_40, Paphu_37, Parliament_37, Payneful_38, Pelly_38, Pepe_34, Perseus_40, Peterson_42, PhrostyMug_39, Pippin_40, Pita2_40, QTRlifeCrisis_39, RidgeCB_38, Rohr_39, Rubeus_38, Ruotula_38, Rutherford_40, Sagefire_40, Sandaddy_38, Sanya_37, Scowl_38, Seanderson_39, ShortQueendom_33, Sibs6_39, Smairt_39, Solon_38, Sorpresa_38, StewieG_36, StrongArm_37, Sumter_37, SwissCheese_40, Tasp14_39, Teodoridan_36, Topgun_37, Traft412_40, Trouble_39, Watermelon_40, Wheeler_39, Wilkins_37, Zeuska_39,

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

-

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

- AFIS_38, Abbyshoes_40, Adahisdi_39, Aeneas_41, Ajay_39, Anglerfish_40, Arcanine_38, Arlo_37, Atkinbua_40, Beatrix_38, BeesKnees_39, Big3_38, BigMau_40, BillKnuckles_39, Blue_38, Bob3_37, Briton15_40, Burton_39, Buttons_38, Bxb1_36, Carlyle_39, Chanagan_37, DreamCatcher_41, Dreamboat_39, Dussy_39, Dynamix_39, Edtherson_40, Euphoria_38, GMonster_37, GageAP_40, GrecoEtereo_40, Gwendoluna_41, HarryOW_38, Hermia_41, Ichabod_39, Jasper_39, JuliaChild_40, Kenmech_41, Lesedi_37, MPlant7149_38, Magnito_37, Makemake_39, Manatee_39, Marcell_38, Marge_39, Marsha_38, McGuire_39, Michley_38, Mkhuseleli_39, Molly_40, MrGordo_38, Mule_37, Museum_40, NEHalo_38, Norz_40, Oogway_37, Paraselene_37, Pari_39, PascalRango_39, PattyP_40, Petp2012_40, Petruchio_39, PherrisBueller_39, PinkPlastic_37, Pinto_40, ProMouse_36, Raid_39, Rajelicia_38, Rhynn_38, Ringer_39, Rufus_40, SarFire_38, Seabiscuit_40, Slagathor_39, Smeagol_40, Snazzy_37, SpikeBT_40, Squee_39, Switzer_39, Swole_40, Target_40, TheloniousMonk_40, Thor_38, Tote_35, Treddle_41, Trip13t_39, Turj99_37, TwoPeat_39, U2_38, Violet_37, Zeeculate_38, Zephyr_39,

Summary by start number:

Start 27:

- Found in 7 of 207 (3.4%) of genes in pham
- Manual Annotations of this start: 6 of 196
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Abbysshoes_40 (A1), Blue_38 (A1), Dussy_39 (A1), Kenmech_41 (A1), Marsha_38 (A1), Raid_39 (A1), Ringer_39 (A1),

Start 28:

- Found in 85 of 207 (41.1%) of genes in pham
- Manual Annotations of this start: 82 of 196
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AFIS_38 (A1), Adahisdi_39 (A1), Aeneas_41 (A1), Ajay_39 (A1), Anglerfish_40 (A1), Arcanine_38 (A1), Arlo_37 (A1), Atkinbua_40 (A1), Beatrix_38 (A1), BeesKnees_39 (A1), Big3_38 (A1), BigMau_40 (A1), BillKnuckles_39 (A1), Bob3_37 (A1), Briton15_40 (A1), Burton_39 (A1), Buttons_38 (A1), Bxb1_36 (A1), Carlyle_39 (A1), Chanagan_37 (A1), DreamCatcher_41 (A1), Dreamboat_39 (A1), Dynamix_39 (A1), Edtherson_40 (A1), Euphoria_38 (A1), GMonster_37 (A1), GageAP_40 (A1), GrecoEtereo_40 (A1), Gwendoluna_41 (A1), HarryOW_38 (A1), Hermia_41 (A1), Ichabod_39 (A1), Jasper_39 (A1), JuliaChild_40 (A1), Lesedi_37 (A1), MPlant7149_38 (A1), Magnito_37 (A1), Makemake_39 (A1), Manatee_39 (A1), Marcell_38 (A1), Marge_39 (A1), McGuire_39 (A1), Michley_38 (A1), Mkhusele_39 (A1), Molly_40 (A1), MrGordo_38 (A1), Mule_37 (A1), Museum_40 (A1), NEHalo_38 (A1), Norz_40 (A1), Oogway_37 (A1), Paraselene_37 (A1), Pari_39 (A1), PascalRango_39 (A1), PattyP_40 (A1), Petp2012_40 (A1), Petruccio_39 (A1), PherrisBueller_39 (A1), PinkPlastic_37 (A1), Pinto_40 (A1), ProMouse_36 (A1), Rajelicia_38 (A1), Rhynn_38 (A1), Rufus_40 (A1), SarFire_38 (A1), Seabiscuit_40 (A1), Slagathor_39 (A1), Smeagol_40 (A1), Snazzy_37 (A1), SpikeBT_40 (A1), Squee_39 (A1), Switzer_39 (A1), Swole_40 (A1), Target_40 (A1), TheloniousMonk_40 (A1), Thor_38 (A1), Tote_35 (A1), Treddle_41 (A1), Trip3t_39 (A1), Turj99_37 (A1), TwoPeat_39 (A1), U2_38 (A1), Violet_37 (A1), Zeeculate_38 (A1), Zephyr_39 (A1),

Start 29:

- Found in 115 of 207 (55.6%) of genes in pham
- Manual Annotations of this start: 108 of 196
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A6_35 (A1), Abrogate_390 (A1), Acme_41 (A1), Agaliana_36 (A1), Alsfro_42 (A1), Altman_40 (A1), Applejack_35 (A1), Ashballer_40 (A1), BK1_35 (A1), BPBiebs31_39 (A1), BaconJack_41 (A1), Barriga_38 (A1), Bexan_36 (A1), BigPaolini_37 (A1), Bigfoot_36 (A1), Bircsak_38 (A1), Bones_38 (A1), Bruns_37 (A1), CactusRose_36 (A1), Ciao_38 (A1), Conceptll_40 (A1), Corvo_39 (A1), Crispicous1_37 (A1), Cueylyss_38 (A1), Dexes_38 (A1), Doom_38 (A1), DrFeelGood_37 (A1), Dulcie_37 (A1), Espresso_38 (A1), Eyeball_38 (A1), Fajezeel_40 (A1), Fascinus_37 (A1), Fenn_39 (A1), Forsytheast_38 (A1), Francis47_38 (A1), Froghopper_38 (A1), Fushigi_37 (A1), Gompeii16_38 (A1), Graduation_40 (A1), Greg_40 (A1), Gyzlar_36 (A1), HanShotFirst_37 (A1), HermioneGrange_38 (A1), Hope4ever_38 (A1), ILeeKay_40 (A1), Inyanga_36 (A1), JC27_39 (A1), JackSparrow_40 (A1), Jerm2_39 (A1), Jorgensen_38 (A1), KBG_39 (A1), Kanely_39 (A1), Killigrew_37 (A1), Kugel_40 (A1), KyMonks1A_41 (A1), Kykar_37 (A1), Lamina13_38 (A1), Licorice_40 (A1), LilBib_38 (A1), Lopton_39 (A1), Magnar_38 (A1), Marchy_33 (A1), Maroc7_38 (A1), MaryBeth_38 (A1), MetalQZJ_38 (A1), Monet_41 (A1), Moose_38 (A1), Mryolo_36 (A1), Naira_39 (A1), Nerujay_39 (A1), Nhonho_38 (A1), Niza_41 (A1), Ohno789_38 (A1), PSullivan_37 (A1), PacerPaul_39 (A1), Papez_40 (A1), Paphu_37 (A1), Parliament_37 (A1), Payneful_38 (A1), Pelly_38 (A1), Pepe_34 (A1), Perseus_40 (A1), Peterson_42 (A1), PhrostyMug_39 (A1), Pippin_40 (A1), Pita2_40 (A1), QTRLifeCrisis_39 (A1), RidgeCB_38 (A1), Rohr_39 (A1), Rubeus_38 (A1),

Ruotula_38 (A1), Rutherferd_40 (A1), Sagefire_40 (A1), Sandaddy_38 (A1), Sanya_37 (A1), Scowl_38 (A1), Seanderson_39 (A1), ShortQueendom_33 (A1), Sibs6_39 (A1), Smairt_39 (A1), Solon_38 (A1), Sorpresa_38 (A1), StewieG_36 (A1), StrongArm_37 (A1), Sumter_37 (A1), SwissCheese_40 (A1), Tasp14_39 (A1), Teodoridan_36 (A1), Topgun_37 (A1), Traft412_40 (A1), Trouble_39 (A1), Watermelon_40 (A1), Wheeler_39 (A1), Wilkins_37 (A1), Zeuska_39 (A1),

Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

- Start number 27 was manually annotated 6 times for cluster A1.
- Start number 28 was manually annotated 82 times for cluster A1.
- Start number 29 was manually annotated 108 times for cluster A1.

Gene Information:

Gene: A6_35 Start: 30422, Stop: 30150, Start Num: 29

Candidate Starts for A6_35:

(12, 30536), (16, 30512), (20, 30500), (21, 30497), (Start: 29 @30422 has 108 MA's), (37, 30380), (41, 30353), (43, 30308), (44, 30299), (48, 30260), (56, 30173),

Gene: AFIS_38 Start: 31598, Stop: 31326, Start Num: 28

Candidate Starts for AFIS_38:

(7, 31733), (14, 31700), (Start: 28 @31598 has 82 MA's), (37, 31556), (41, 31529), (43, 31484), (44, 31475), (48, 31436), (56, 31349),

Gene: Abbyshoes_40 Start: 31568, Stop: 31185, Start Num: 27

Candidate Starts for Abbyshoes_40:

(25, 31604), (Start: 27 @31568 has 6 MA's), (34, 31502), (45, 31400), (54, 31301), (59, 31208),

Gene: Abrogate_390 Start: 32285, Stop: 31953, Start Num: 29

Candidate Starts for Abrogate_390:

(Start: 29 @32285 has 108 MA's), (37, 32243), (41, 32216), (43, 32168), (51, 32075),

Gene: Acme_41 Start: 31739, Stop: 31467, Start Num: 29

Candidate Starts for Acme_41:

(6, 31919), (12, 31853), (16, 31829), (20, 31817), (21, 31814), (Start: 29 @31739 has 108 MA's), (37, 31697), (41, 31670), (43, 31625), (44, 31616), (48, 31577), (56, 31490),

Gene: Adahisdi_39 Start: 31648, Stop: 31376, Start Num: 28

Candidate Starts for Adahisdi_39:

(7, 31783), (14, 31750), (Start: 28 @31648 has 82 MA's), (37, 31606), (41, 31579), (43, 31534), (44, 31525), (48, 31486),

Gene: Aeneas_41 Start: 31799, Stop: 31530, Start Num: 28

Candidate Starts for Aeneas_41:

(7, 31934), (14, 31901), (Start: 28 @31799 has 82 MA's), (37, 31760), (41, 31733), (43, 31688), (44, 31679), (48, 31640),

Gene: Agaliana_36 Start: 28180, Stop: 27908, Start Num: 29

Candidate Starts for Agaliana_36:

(12, 28294), (16, 28270), (20, 28258), (21, 28255), (Start: 29 @28180 has 108 MA's), (37, 28138), (41, 28111), (43, 28066), (44, 28057), (48, 28018), (56, 27931),

Gene: Ajay_39 Start: 31439, Stop: 31167, Start Num: 28

Candidate Starts for Ajay_39:

(7, 31574), (14, 31541), (Start: 28 @31439 has 82 MA's), (41, 31370), (43, 31325), (44, 31316), (48, 31277),

Gene: Alsfro_42 Start: 31790, Stop: 31518, Start Num: 29

Candidate Starts for Alsfro_42:

(6, 31982), (12, 31916), (24, 31868), (Start: 29 @31790 has 108 MA's), (37, 31748), (41, 31721), (43, 31676), (44, 31667), (48, 31628), (56, 31541),

Gene: Altman_40 Start: 32259, Stop: 31951, Start Num: 29

Candidate Starts for Altman_40:

(23, 32346), (Start: 29 @32259 has 108 MA's), (30, 32226), (35, 32190), (37, 32181), (43, 32109), (44, 32100), (48, 32061), (56, 31974),

Gene: Anglerfish_40 Start: 31701, Stop: 31429, Start Num: 28

Candidate Starts for Anglerfish_40:

(7, 31836), (14, 31803), (Start: 28 @31701 has 82 MA's), (37, 31659), (41, 31632), (43, 31587), (44, 31578), (48, 31539), (56, 31452),

Gene: Applejack_35 Start: 28515, Stop: 28180, Start Num: 29

Candidate Starts for Applejack_35:

(Start: 29 @28515 has 108 MA's), (37, 28470), (41, 28443), (43, 28395), (51, 28302),

Gene: Arcanine_38 Start: 30821, Stop: 30549, Start Num: 28

Candidate Starts for Arcanine_38:

(7, 30956), (14, 30923), (Start: 28 @30821 has 82 MA's), (37, 30779), (41, 30752), (43, 30707), (44, 30698), (48, 30659),

Gene: Arlo_37 Start: 31329, Stop: 31018, Start Num: 28

Candidate Starts for Arlo_37:

(10, 31464), (16, 31431), (Start: 28 @31329 has 82 MA's), (37, 31287), (41, 31260), (47, 31206), (52, 31143), (54, 31134), (59, 31041),

Gene: Ashballer_40 Start: 32195, Stop: 31923, Start Num: 29

Candidate Starts for Ashballer_40:

(6, 32375), (12, 32309), (16, 32285), (20, 32273), (21, 32270), (Start: 29 @32195 has 108 MA's), (37, 32153), (41, 32126), (43, 32081), (44, 32072), (48, 32033), (56, 31946),

Gene: Atkinbua_40 Start: 31777, Stop: 31466, Start Num: 28

Candidate Starts for Atkinbua_40:

(10, 31912), (16, 31879), (Start: 28 @31777 has 82 MA's), (37, 31735), (41, 31708), (47, 31654), (52, 31591), (54, 31582), (59, 31489),

Gene: BK1_35 Start: 30422, Stop: 30150, Start Num: 29

Candidate Starts for BK1_35:

(12, 30536), (16, 30512), (20, 30500), (21, 30497), (Start: 29 @30422 has 108 MA's), (37, 30380), (41, 30353), (43, 30308), (44, 30299), (48, 30260), (56, 30173),

Gene: BPBiebs31_39 Start: 31743, Stop: 31468, Start Num: 29

Candidate Starts for BPBiebs31_39:

(4, 31971), (23, 31830), (Start: 29 @31743 has 108 MA's), (37, 31698), (41, 31671), (43, 31626), (44, 31617), (48, 31578), (56, 31491),

Gene: BaconJack_41 Start: 31798, Stop: 31526, Start Num: 29

Candidate Starts for BaconJack_41:

(22, 31882), (Start: 29 @31798 has 108 MA's), (37, 31756), (41, 31729), (43, 31684), (44, 31675), (48, 31636), (56, 31549),

Gene: Barriga_38 Start: 30917, Stop: 30645, Start Num: 29

Candidate Starts for Barriga_38:

(12, 31031), (16, 31007), (20, 30995), (21, 30992), (Start: 29 @30917 has 108 MA's), (37, 30875), (41, 30848), (43, 30803), (44, 30794), (48, 30755),

Gene: Beatrix_38 Start: 32774, Stop: 32502, Start Num: 28

Candidate Starts for Beatrix_38:

(7, 32909), (14, 32876), (Start: 28 @32774 has 82 MA's), (37, 32732), (41, 32705), (43, 32660), (44, 32651), (48, 32612),

Gene: BeesKnees_39 Start: 31359, Stop: 31087, Start Num: 28

Candidate Starts for BeesKnees_39:

(7, 31494), (14, 31461), (Start: 28 @31359 has 82 MA's), (37, 31317), (41, 31290), (43, 31245), (44, 31236), (48, 31197),

Gene: Bexan_36 Start: 32268, Stop: 31996, Start Num: 29

Candidate Starts for Bexan_36:

(13, 32394), (Start: 29 @32268 has 108 MA's), (37, 32226), (41, 32199), (43, 32154), (44, 32145), (48, 32106),

Gene: Big3_38 Start: 31940, Stop: 31668, Start Num: 28

Candidate Starts for Big3_38:

(7, 32075), (14, 32042), (Start: 28 @31940 has 82 MA's), (41, 31871), (43, 31826), (44, 31817), (48, 31778),

Gene: BigMau_40 Start: 31436, Stop: 31206, Start Num: 28

Candidate Starts for BigMau_40:

(7, 31571), (14, 31538), (Start: 28 @31436 has 82 MA's), (37, 31394), (41, 31367), (48, 31316), (56, 31229),

Gene: BigPaolini_37 Start: 29684, Stop: 29412, Start Num: 29

Candidate Starts for BigPaolini_37:

(12, 29798), (16, 29774), (20, 29762), (21, 29759), (Start: 29 @29684 has 108 MA's), (37, 29642), (41, 29615), (43, 29570), (44, 29561), (48, 29522), (56, 29435),

Gene: Bigfoot_36 Start: 30710, Stop: 30438, Start Num: 29

Candidate Starts for Bigfoot_36:

(12, 30824), (16, 30800), (20, 30788), (21, 30785), (Start: 29 @30710 has 108 MA's), (37, 30668), (41, 30641), (43, 30596), (44, 30587), (48, 30548),

Gene: BillKnuckles_39 Start: 32162, Stop: 31890, Start Num: 28

Candidate Starts for BillKnuckles_39:

(7, 32297), (14, 32264), (Start: 28 @32162 has 82 MA's), (37, 32120), (41, 32093), (43, 32048), (44, 32039), (48, 32000), (56, 31913),

Gene: Bircsak_38 Start: 31775, Stop: 31503, Start Num: 29

Candidate Starts for Bircsak_38:

(12, 31889), (16, 31865), (20, 31853), (21, 31850), (Start: 29 @31775 has 108 MA's), (37, 31733), (41, 31706), (43, 31661), (44, 31652), (48, 31613),

Gene: Blue_38 Start: 31834, Stop: 31469, Start Num: 27

Candidate Starts for Blue_38:

(6, 32014), (12, 31948), (16, 31924), (20, 31912), (21, 31909), (Start: 27 @31834 has 6 MA's), (37, 31789), (41, 31762), (47, 31657), (52, 31594), (54, 31585), (59, 31492),

Gene: Bob3_37 Start: 30786, Stop: 30556, Start Num: 28

Candidate Starts for Bob3_37:

(7, 30921), (14, 30888), (Start: 28 @30786 has 82 MA's), (37, 30744), (41, 30717), (48, 30666), (56, 30579),

Gene: Bones_38 Start: 31179, Stop: 30907, Start Num: 29

Candidate Starts for Bones_38:

(12, 31293), (16, 31269), (20, 31257), (21, 31254), (Start: 29 @31179 has 108 MA's), (37, 31137), (41, 31110), (43, 31065), (44, 31056), (48, 31017),

Gene: Briton15_40 Start: 31612, Stop: 31301, Start Num: 28

Candidate Starts for Briton15_40:

(10, 31747), (16, 31714), (Start: 28 @31612 has 82 MA's), (37, 31570), (41, 31543), (47, 31489), (52, 31426), (54, 31417), (59, 31324),

Gene: Bruns_37 Start: 31253, Stop: 30981, Start Num: 29

Candidate Starts for Bruns_37:

(19, 31340), (Start: 29 @31253 has 108 MA's), (37, 31211), (41, 31184), (43, 31139), (44, 31130), (48, 31091), (56, 31004),

Gene: Burton_39 Start: 31356, Stop: 31126, Start Num: 28

Candidate Starts for Burton_39:

(7, 31491), (14, 31458), (Start: 28 @31356 has 82 MA's), (37, 31314), (41, 31287), (48, 31236), (56, 31149),

Gene: Buttons_38 Start: 30324, Stop: 30052, Start Num: 28

Candidate Starts for Buttons_38:

(7, 30459), (14, 30426), (Start: 28 @30324 has 82 MA's), (37, 30282), (41, 30255), (43, 30210), (44, 30201), (48, 30162),

Gene: Bxb1_36 Start: 31386, Stop: 31114, Start Num: 28

Candidate Starts for Bxb1_36:

(7, 31521), (14, 31488), (Start: 28 @31386 has 82 MA's), (37, 31344), (41, 31317), (43, 31272), (44, 31263), (48, 31224), (55, 31149), (56, 31137),

Gene: CactusRose_36 Start: 30823, Stop: 30551, Start Num: 29

Candidate Starts for CactusRose_36:

(Start: 29 @30823 has 108 MA's), (37, 30781), (41, 30754), (43, 30709), (44, 30700), (48, 30661), (56, 30574),

Gene: Carlyle_39 Start: 30068, Stop: 29760, Start Num: 28

Candidate Starts for Carlyle_39:

(11, 30203), (17, 30170), (Start: 28 @30068 has 82 MA's), (32, 30017), (36, 29996), (43, 29918), (44, 29909), (48, 29870), (56, 29783),

Gene: Chanagan_37 Start: 30908, Stop: 30600, Start Num: 28

Candidate Starts for Chanagan_37:

(11, 31043), (17, 31010), (Start: 28 @30908 has 82 MA's), (32, 30857), (36, 30836), (43, 30758), (44, 30749), (48, 30710), (56, 30623),

Gene: Ciao_38 Start: 31210, Stop: 30938, Start Num: 29

Candidate Starts for Ciao_38:

(Start: 29 @31210 has 108 MA's), (37, 31168), (41, 31141), (43, 31096), (44, 31087), (48, 31048), (56, 30961),

Gene: ConceptII_40 Start: 32357, Stop: 32085, Start Num: 29

Candidate Starts for ConceptII_40:

(18, 32447), (Start: 29 @32357 has 108 MA's), (37, 32315), (41, 32288), (43, 32243), (44, 32234), (48, 32195), (56, 32108),

Gene: Corvo_39 Start: 32273, Stop: 31965, Start Num: 29

Candidate Starts for Corvo_39:

(23, 32360), (Start: 29 @32273 has 108 MA's), (30, 32240), (35, 32204), (37, 32195), (43, 32123), (44, 32114), (48, 32075), (56, 31988),

Gene: Crispicious1_37 Start: 30836, Stop: 30564, Start Num: 29

Candidate Starts for Crispicious1_37:

(6, 31016), (12, 30950), (16, 30926), (20, 30914), (21, 30911), (Start: 29 @30836 has 108 MA's), (37, 30794), (41, 30767), (43, 30722), (44, 30713), (48, 30674), (56, 30587),

Gene: Cueyllyss_38 Start: 31412, Stop: 31140, Start Num: 29

Candidate Starts for Cueyllyss_38:

(12, 31526), (16, 31502), (20, 31490), (21, 31487), (Start: 29 @31412 has 108 MA's), (37, 31370), (41, 31343), (43, 31298), (48, 31250), (56, 31163),

Gene: Dexes_38 Start: 31800, Stop: 31477, Start Num: 29

Candidate Starts for Dexes_38:

(Start: 29 @31800 has 108 MA's), (37, 31758), (41, 31731), (43, 31683), (51, 31590), (59, 31491),

Gene: Doom_38 Start: 31605, Stop: 31333, Start Num: 29

Candidate Starts for Doom_38:

(12, 31719), (16, 31695), (20, 31683), (21, 31680), (Start: 29 @31605 has 108 MA's), (37, 31563), (41, 31536), (43, 31491), (44, 31482), (48, 31443),

Gene: DrFeelGood_37 Start: 31699, Stop: 31427, Start Num: 29

Candidate Starts for DrFeelGood_37:

(Start: 29 @31699 has 108 MA's), (37, 31657), (41, 31630), (43, 31585), (44, 31576), (48, 31537), (56, 31450),

Gene: DreamCatcher_41 Start: 32660, Stop: 32388, Start Num: 28

Candidate Starts for DreamCatcher_41:

(7, 32795), (14, 32762), (Start: 28 @32660 has 82 MA's), (37, 32618), (41, 32591), (43, 32546), (44, 32537), (48, 32498),

Gene: Dreamboat_39 Start: 31286, Stop: 30978, Start Num: 28

Candidate Starts for Dreamboat_39:

(11, 31421), (17, 31388), (Start: 28 @31286 has 82 MA's), (32, 31235), (36, 31214), (43, 31136), (44, 31127), (48, 31088), (56, 31001),

Gene: Dulcie_37 Start: 30943, Stop: 30671, Start Num: 29

Candidate Starts for Dulcie_37:

(Start: 29 @30943 has 108 MA's), (37, 30901), (41, 30874), (43, 30829), (44, 30820), (48, 30781),

Gene: Dussy_39 Start: 31588, Stop: 31205, Start Num: 27

Candidate Starts for Dussy_39:

(25, 31624), (Start: 27 @31588 has 6 MA's), (34, 31522), (45, 31420), (54, 31321), (59, 31228),

Gene: Dynamix_39 Start: 31345, Stop: 31073, Start Num: 28

Candidate Starts for Dynamix_39:

(7, 31480), (14, 31447), (Start: 28 @31345 has 82 MA's), (37, 31303), (41, 31276), (43, 31231), (44, 31222), (48, 31183), (56, 31096),

Gene: Edtherson_40 Start: 32538, Stop: 32272, Start Num: 28

Candidate Starts for Edtherson_40:

(7, 32673), (14, 32640), (Start: 28 @32538 has 82 MA's), (37, 32496), (41, 32469), (43, 32424), (44, 32415), (48, 32376),

Gene: Espresso_38 Start: 31529, Stop: 31257, Start Num: 29

Candidate Starts for Espresso_38:

(12, 31643), (16, 31619), (20, 31607), (21, 31604), (Start: 29 @31529 has 108 MA's), (37, 31487), (41, 31460), (43, 31415), (44, 31406), (48, 31367),

Gene: Euphoria_38 Start: 31379, Stop: 31107, Start Num: 28

Candidate Starts for Euphoria_38:

(7, 31514), (14, 31481), (Start: 28 @31379 has 82 MA's), (37, 31337), (41, 31310), (43, 31265), (44, 31256), (48, 31217), (56, 31130),

Gene: Eyeball_38 Start: 31085, Stop: 30813, Start Num: 29

Candidate Starts for Eyeball_38:

(12, 31199), (16, 31175), (20, 31163), (21, 31160), (Start: 29 @31085 has 108 MA's), (37, 31043), (41, 31016), (43, 30971), (44, 30962), (48, 30923), (56, 30836),

Gene: Fajezeel_40 Start: 31568, Stop: 31296, Start Num: 29

Candidate Starts for Fajezeel_40:

(6, 31748), (12, 31682), (16, 31658), (20, 31646), (21, 31643), (Start: 29 @31568 has 108 MA's), (37, 31526), (41, 31499), (43, 31454), (44, 31445), (48, 31406), (56, 31319),

Gene: Fascinus_37 Start: 30859, Stop: 30587, Start Num: 29

Candidate Starts for Fascinus_37:

(6, 31039), (12, 30973), (16, 30949), (20, 30937), (21, 30934), (Start: 29 @30859 has 108 MA's), (37, 30817), (41, 30790), (43, 30745), (44, 30736), (48, 30697), (56, 30610),

Gene: Fenn_39 Start: 32892, Stop: 32620, Start Num: 29

Candidate Starts for Fenn_39:

(12, 33006), (15, 32985), (16, 32982), (20, 32970), (21, 32967), (Start: 29 @32892 has 108 MA's), (37, 32850), (41, 32823), (43, 32778), (44, 32769), (48, 32730), (56, 32643),

Gene: Forsytheast_38 Start: 31551, Stop: 31243, Start Num: 29

Candidate Starts for Forsytheast_38:

(23, 31638), (Start: 29 @31551 has 108 MA's), (30, 31518), (35, 31482), (37, 31473), (43, 31401), (44, 31392), (48, 31353), (56, 31266),

Gene: Francis47_38 Start: 31946, Stop: 31674, Start Num: 29

Candidate Starts for Francis47_38:

(12, 32060), (16, 32036), (20, 32024), (21, 32021), (Start: 29 @31946 has 108 MA's), (37, 31904), (41, 31877), (43, 31832), (44, 31823), (48, 31784), (56, 31697),

Gene: Froghopper_38 Start: 30873, Stop: 30601, Start Num: 29

Candidate Starts for Froghopper_38:

(12, 30987), (16, 30963), (20, 30951), (21, 30948), (Start: 29 @30873 has 108 MA's), (37, 30831), (41, 30804), (43, 30759), (44, 30750), (48, 30711), (56, 30624),

Gene: Fushigi_37 Start: 29564, Stop: 29232, Start Num: 29

Candidate Starts for Fushigi_37:

(8, 29699), (14, 29666), (Start: 29 @29564 has 108 MA's), (37, 29522), (41, 29495), (43, 29447), (51, 29354), (59, 29255),

Gene: GMonster_37 Start: 30681, Stop: 30409, Start Num: 28

Candidate Starts for GMonster_37:

(7, 30816), (14, 30783), (Start: 28 @30681 has 82 MA's), (37, 30639), (41, 30612), (43, 30567), (44, 30558), (48, 30519), (56, 30432),

Gene: GageAP_40 Start: 31664, Stop: 31392, Start Num: 28

Candidate Starts for GageAP_40:

(7, 31799), (14, 31766), (Start: 28 @31664 has 82 MA's), (37, 31622), (41, 31595), (43, 31550), (44, 31541), (48, 31502), (56, 31415),

Gene: Gompeii16_38 Start: 31776, Stop: 31504, Start Num: 29

Candidate Starts for Gompeii16_38:

(12, 31890), (16, 31866), (20, 31854), (21, 31851), (Start: 29 @31776 has 108 MA's), (37, 31734), (41, 31707), (43, 31662), (44, 31653), (48, 31614),

Gene: Graduation_40 Start: 31999, Stop: 31727, Start Num: 29

Candidate Starts for Graduation_40:

(12, 32113), (16, 32089), (20, 32077), (21, 32074), (Start: 29 @31999 has 108 MA's), (37, 31957), (41, 31930), (43, 31885), (44, 31876), (48, 31837), (56, 31750),

Gene: GrecoEtereo_40 Start: 32075, Stop: 31803, Start Num: 28

Candidate Starts for GrecoEtereo_40:

(7, 32210), (14, 32177), (Start: 28 @32075 has 82 MA's), (37, 32033), (41, 32006), (43, 31961), (44, 31952), (48, 31913),

Gene: Greg_40 Start: 31568, Stop: 31296, Start Num: 29

Candidate Starts for Greg_40:

(6, 31748), (12, 31682), (16, 31658), (20, 31646), (21, 31643), (Start: 29 @31568 has 108 MA's), (37, 31526), (41, 31499), (43, 31454), (44, 31445), (48, 31406), (56, 31319),

Gene: Gwendoluna_41 Start: 33532, Stop: 33128, Start Num: 28

Candidate Starts for Gwendoluna_41:

(7, 33667), (14, 33634), (Start: 28 @33532 has 82 MA's), (37, 33490), (41, 33463), (43, 33418), (44, 33409), (48, 33370), (56, 33277),

Gene: Gyzlar_36 Start: 30052, Stop: 29726, Start Num: 29

Candidate Starts for Gyzlar_36:

(7, 30190), (14, 30157), (Start: 29 @30052 has 108 MA's), (31, 30013), (33, 29995), (39, 29971), (40, 29953), (41, 29929), (43, 29884), (44, 29875), (48, 29836), (56, 29749),

Gene: HanShotFirst_37 Start: 30903, Stop: 30595, Start Num: 29

Candidate Starts for HanShotFirst_37:

(23, 30990), (Start: 29 @30903 has 108 MA's), (30, 30870), (35, 30834), (37, 30825), (43, 30753), (44, 30744), (48, 30705), (56, 30618),

Gene: HarryOW_38 Start: 31247, Stop: 30975, Start Num: 28

Candidate Starts for HarryOW_38:

(7, 31382), (14, 31349), (Start: 28 @31247 has 82 MA's), (37, 31205), (41, 31178), (43, 31133), (44, 31124), (48, 31085),

Gene: Hermia_41 Start: 32803, Stop: 32531, Start Num: 28

Candidate Starts for Hermia_41:

(7, 32938), (14, 32905), (Start: 28 @32803 has 82 MA's), (37, 32761), (41, 32734), (43, 32689), (44, 32680), (48, 32641), (56, 32554),

Gene: HermioneGrange_38 Start: 31174, Stop: 30944, Start Num: 29

Candidate Starts for HermioneGrange_38:

(22, 31258), (Start: 29 @31174 has 108 MA's), (37, 31132), (41, 31105), (48, 31054), (56, 30967),

Gene: Hope4ever_38 Start: 31682, Stop: 31410, Start Num: 29

Candidate Starts for Hope4ever_38:

(26, 31718), (Start: 29 @31682 has 108 MA's), (37, 31640), (41, 31613), (43, 31568), (44, 31559), (48, 31520), (56, 31433),

Gene: ILeeKay_40 Start: 31449, Stop: 31177, Start Num: 29

Candidate Starts for ILeeKay_40:

(6, 31629), (12, 31563), (16, 31539), (20, 31527), (21, 31524), (Start: 29 @31449 has 108 MA's), (37, 31407), (41, 31380), (43, 31335), (44, 31326), (48, 31287),

Gene: Ichabod_39 Start: 31486, Stop: 31214, Start Num: 28

Candidate Starts for Ichabod_39:

(7, 31621), (14, 31588), (Start: 28 @31486 has 82 MA's), (37, 31444), (41, 31417), (43, 31372), (44, 31363), (48, 31324), (56, 31237),

Gene: Inyanga_36 Start: 30633, Stop: 30358, Start Num: 29

Candidate Starts for Inyanga_36:

(3, 30894), (13, 30759), (Start: 29 @30633 has 108 MA's), (37, 30588), (41, 30561), (43, 30516), (44, 30507), (48, 30468),

Gene: JC27_39 Start: 31765, Stop: 31493, Start Num: 29

Candidate Starts for JC27_39:

(6, 31945), (12, 31879), (16, 31855), (20, 31843), (21, 31840), (Start: 29 @31765 has 108 MA's), (37, 31723), (41, 31696), (43, 31651), (44, 31642), (48, 31603), (56, 31516),

Gene: JackSparrow_40 Start: 32093, Stop: 31791, Start Num: 29

Candidate Starts for JackSparrow_40:

(Start: 29 @32093 has 108 MA's), (32, 32042), (36, 32021), (43, 31943), (44, 31934), (48, 31895),

Gene: Jasper_39 Start: 31172, Stop: 30864, Start Num: 28

Candidate Starts for Jasper_39:

(11, 31307), (17, 31274), (Start: 28 @31172 has 82 MA's), (32, 31121), (36, 31100), (43, 31022), (44, 31013), (48, 30974), (56, 30887),

Gene: Jerm2_39 Start: 31429, Stop: 31199, Start Num: 29

Candidate Starts for Jerm2_39:

(22, 31513), (Start: 29 @31429 has 108 MA's), (37, 31387), (41, 31360), (48, 31309), (56, 31222),

Gene: Jorgensen_38 Start: 31181, Stop: 30909, Start Num: 29

Candidate Starts for Jorgensen_38:

(Start: 29 @31181 has 108 MA's), (37, 31139), (41, 31112), (43, 31067), (44, 31058), (48, 31019),

Gene: JuliaChild_40 Start: 31921, Stop: 31649, Start Num: 28

Candidate Starts for JuliaChild_40:

(7, 32056), (14, 32023), (Start: 28 @31921 has 82 MA's), (37, 31879), (41, 31852), (43, 31807), (44, 31798), (48, 31759), (56, 31672),

Gene: KBG_39 Start: 32392, Stop: 32120, Start Num: 29

Candidate Starts for KBG_39:

(12, 32506), (16, 32482), (20, 32470), (21, 32467), (Start: 29 @32392 has 108 MA's), (37, 32350), (41, 32323), (43, 32278), (44, 32269), (48, 32230), (56, 32143),

Gene: Kanely_39 Start: 32035, Stop: 31727, Start Num: 29

Candidate Starts for Kanely_39:

(23, 32122), (Start: 29 @32035 has 108 MA's), (30, 32002), (35, 31966), (37, 31957), (43, 31885), (44, 31876), (48, 31837), (56, 31750),

Gene: Kenmech_41 Start: 32714, Stop: 32331, Start Num: 27

Candidate Starts for Kenmech_41:

(25, 32750), (Start: 27 @32714 has 6 MA's), (34, 32648), (45, 32546), (54, 32447), (59, 32354),

Gene: Killigrew_37 Start: 31321, Stop: 30923, Start Num: 29

Candidate Starts for Killigrew_37:

(Start: 29 @31321 has 108 MA's), (37, 31279), (41, 31252), (43, 31207), (44, 31198), (48, 31159), (57, 31066), (62, 30940),

Gene: Kugel_40 Start: 31983, Stop: 31717, Start Num: 29

Candidate Starts for Kugel_40:

(12, 32097), (16, 32073), (20, 32061), (21, 32058), (Start: 29 @31983 has 108 MA's), (37, 31941), (41, 31914), (43, 31869), (44, 31860), (48, 31821),

Gene: KyMonks1A_41 Start: 31846, Stop: 31574, Start Num: 29

Candidate Starts for KyMonks1A_41:

(Start: 29 @31846 has 108 MA's), (36, 31810), (37, 31804), (41, 31777), (43, 31732), (44, 31723), (48, 31684), (56, 31597),

Gene: Kykar_37 Start: 30822, Stop: 30550, Start Num: 29

Candidate Starts for Kykar_37:

(6, 31002), (12, 30936), (16, 30912), (20, 30900), (21, 30897), (Start: 29 @30822 has 108 MA's), (37, 30780), (41, 30753), (44, 30699), (48, 30660),

Gene: Lamina13_38 Start: 30935, Stop: 30663, Start Num: 29

Candidate Starts for Lamina13_38:

(Start: 29 @30935 has 108 MA's), (37, 30893), (41, 30866), (43, 30821), (44, 30812), (48, 30773), (56, 30686),

Gene: Lesedi_37 Start: 31210, Stop: 30938, Start Num: 28

Candidate Starts for Lesedi_37:

(7, 31345), (14, 31312), (Start: 28 @31210 has 82 MA's), (37, 31168), (41, 31141), (43, 31096), (44, 31087), (48, 31048),

Gene: Licorice_40 Start: 32280, Stop: 32008, Start Num: 29

Candidate Starts for Licorice_40:

(12, 32394), (16, 32370), (20, 32358), (21, 32355), (Start: 29 @32280 has 108 MA's), (37, 32238), (41, 32211), (43, 32166), (44, 32157), (48, 32118), (56, 32031),

Gene: LilBib_38 Start: 32107, Stop: 31799, Start Num: 29

Candidate Starts for LilBib_38:

(23, 32194), (Start: 29 @32107 has 108 MA's), (32, 32056), (36, 32035), (43, 31957), (44, 31948), (48, 31909),

Gene: Lopton_39 Start: 32717, Stop: 32445, Start Num: 29

Candidate Starts for Lopton_39:

(Start: 29 @32717 has 108 MA's), (37, 32675), (41, 32648), (43, 32603), (44, 32594), (48, 32555), (49, 32549), (56, 32468),

Gene: MPlant7149_38 Start: 30995, Stop: 30723, Start Num: 28

Candidate Starts for MPlant7149_38:

(7, 31130), (14, 31097), (Start: 28 @30995 has 82 MA's), (37, 30953), (41, 30926), (43, 30881), (44, 30872), (48, 30833), (56, 30746),

Gene: Magnar_38 Start: 31184, Stop: 30912, Start Num: 29

Candidate Starts for Magnar_38:

(6, 31364), (12, 31298), (16, 31274), (20, 31262), (21, 31259), (Start: 29 @31184 has 108 MA's), (37, 31142), (41, 31115), (43, 31070), (44, 31061), (48, 31022), (56, 30935),

Gene: Magnito_37 Start: 30988, Stop: 30716, Start Num: 28

Candidate Starts for Magnito_37:

(7, 31135), (14, 31102), (Start: 28 @30988 has 82 MA's), (37, 30946), (41, 30919), (43, 30874), (44, 30865), (48, 30826), (56, 30739),

Gene: Makemake_39 Start: 32642, Stop: 32331, Start Num: 28

Candidate Starts for Makemake_39:

(10, 32777), (16, 32744), (Start: 28 @32642 has 82 MA's), (37, 32600), (41, 32573), (47, 32519), (50, 32486), (52, 32456), (54, 32447), (59, 32354),

Gene: Manatee_39 Start: 31021, Stop: 30749, Start Num: 28

Candidate Starts for Manatee_39:

(7, 31156), (14, 31123), (Start: 28 @31021 has 82 MA's), (37, 30979), (41, 30952), (43, 30907), (44, 30898), (48, 30859), (56, 30772),

Gene: Marcell_38 Start: 31685, Stop: 31413, Start Num: 28

Candidate Starts for Marcell_38:

(7, 31820), (14, 31787), (Start: 28 @31685 has 82 MA's), (37, 31643), (41, 31616), (43, 31571), (44, 31562), (48, 31523), (56, 31436),

Gene: Marchy_33 Start: 28275, Stop: 27967, Start Num: 29

Candidate Starts for Marchy_33:

(23, 28362), (Start: 29 @28275 has 108 MA's), (30, 28242), (35, 28206), (37, 28197), (43, 28125), (44, 28116), (48, 28077), (56, 27990),

Gene: Marge_39 Start: 32073, Stop: 31798, Start Num: 28

Candidate Starts for Marge_39:

(7, 32208), (14, 32175), (Start: 28 @32073 has 82 MA's), (37, 32028), (41, 32001), (43, 31956), (44, 31947), (48, 31908), (56, 31821),

Gene: Maroc7_38 Start: 31169, Stop: 30897, Start Num: 29

Candidate Starts for Maroc7_38:

(6, 31349), (12, 31283), (16, 31259), (20, 31247), (21, 31244), (Start: 29 @31169 has 108 MA's), (37, 31127), (41, 31100), (43, 31055), (44, 31046),

Gene: Marsha_38 Start: 32325, Stop: 31924, Start Num: 27

Candidate Starts for Marsha_38:

(1, 32799), (2, 32658), (5, 32517), (10, 32451), (21, 32403), (Start: 27 @32325 has 6 MA's), (34, 32259), (38, 32244), (42, 32214), (47, 32112), (52, 32049), (54, 32040), (59, 31947),

Gene: MaryBeth_38 Start: 31490, Stop: 31218, Start Num: 29

Candidate Starts for MaryBeth_38:

(Start: 29 @31490 has 108 MA's), (37, 31448), (41, 31421), (43, 31376), (44, 31367), (48, 31328), (56, 31241),

Gene: McGuire_39 Start: 31317, Stop: 31045, Start Num: 28

Candidate Starts for McGuire_39:

(7, 31452), (14, 31419), (Start: 28 @31317 has 82 MA's), (37, 31275), (41, 31248), (43, 31203), (44, 31194), (48, 31155), (56, 31068),

Gene: MetalQZJ_38 Start: 31490, Stop: 31218, Start Num: 29

Candidate Starts for MetalQZJ_38:

(Start: 29 @31490 has 108 MA's), (37, 31448), (41, 31421), (43, 31376), (44, 31367), (48, 31328), (56, 31241),

Gene: Michley_38 Start: 31162, Stop: 30890, Start Num: 28

Candidate Starts for Michley_38:

(7, 31297), (14, 31264), (Start: 28 @31162 has 82 MA's), (37, 31120), (41, 31093), (43, 31048), (44, 31039), (48, 31000),

Gene: Mkhuseli_39 Start: 31361, Stop: 31089, Start Num: 28

Candidate Starts for Mkhuseli_39:

(7, 31496), (14, 31463), (Start: 28 @31361 has 82 MA's), (37, 31319), (41, 31292), (43, 31247), (44, 31238), (48, 31199), (56, 31112),

Gene: Molly_40 Start: 31229, Stop: 30999, Start Num: 28

Candidate Starts for Molly_40:

(7, 31364), (14, 31331), (Start: 28 @31229 has 82 MA's), (37, 31187), (41, 31160), (48, 31109), (56, 31022),

Gene: Monet_41 Start: 33055, Stop: 32789, Start Num: 29

Candidate Starts for Monet_41:

(26, 33091), (Start: 29 @33055 has 108 MA's), (37, 33013), (41, 32986), (43, 32941), (44, 32932), (48, 32893),

Gene: Moose_38 Start: 31551, Stop: 31243, Start Num: 29

Candidate Starts for Moose_38:

(23, 31638), (Start: 29 @31551 has 108 MA's), (30, 31518), (35, 31482), (37, 31473), (43, 31401), (44, 31392), (48, 31353), (56, 31266),

Gene: MrGordo_38 Start: 31025, Stop: 30753, Start Num: 28

Candidate Starts for MrGordo_38:

(Start: 28 @31025 has 82 MA's), (41, 30956), (43, 30911), (44, 30902), (48, 30863),

Gene: Mryolo_36 Start: 31035, Stop: 30763, Start Num: 29

Candidate Starts for Mryolo_36:

(Start: 29 @31035 has 108 MA's), (37, 30993), (41, 30966), (43, 30921), (44, 30912), (48, 30873), (56, 30786),

Gene: Mule_37 Start: 29541, Stop: 29269, Start Num: 28

Candidate Starts for Mule_37:

(7, 29676), (14, 29643), (Start: 28 @29541 has 82 MA's), (37, 29499), (41, 29472), (43, 29427), (44, 29418), (48, 29379),

Gene: Museum_40 Start: 31295, Stop: 31065, Start Num: 28

Candidate Starts for Museum_40:

(7, 31430), (14, 31397), (Start: 28 @31295 has 82 MA's), (37, 31253), (41, 31226), (48, 31175), (56, 31088),

Gene: NEHalo_38 Start: 31254, Stop: 30982, Start Num: 28

Candidate Starts for NEHalo_38:

(7, 31389), (14, 31356), (Start: 28 @31254 has 82 MA's), (37, 31212), (41, 31185), (43, 31140), (44, 31131), (48, 31092), (56, 31005),

Gene: Naira_39 Start: 32939, Stop: 32667, Start Num: 29

Candidate Starts for Naira_39:

(12, 33053), (15, 33032), (16, 33029), (20, 33017), (21, 33014), (Start: 29 @32939 has 108 MA's), (37, 32897), (41, 32870), (43, 32825), (44, 32816), (48, 32777), (56, 32690),

Gene: Nerujay_39 Start: 31923, Stop: 31651, Start Num: 29

Candidate Starts for Nerujay_39:

(26, 31959), (Start: 29 @31923 has 108 MA's), (37, 31881), (41, 31854), (43, 31809), (44, 31800), (48, 31761), (56, 31674),

Gene: Nhonho_38 Start: 31661, Stop: 31389, Start Num: 29

Candidate Starts for Nhonho_38:

(12, 31775), (16, 31751), (20, 31739), (21, 31736), (Start: 29 @31661 has 108 MA's), (37, 31619), (41, 31592), (43, 31547), (44, 31538), (48, 31499),

Gene: Niza_41 Start: 32712, Stop: 32281, Start Num: 29

Candidate Starts for Niza_41:

(8, 32859), (14, 32826), (Start: 29 @32712 has 108 MA's), (37, 32673), (41, 32646), (43, 32598), (51, 32505), (57, 32439), (58, 32430), (60, 32391), (61, 32385), (63, 32304),

Gene: Norz_40 Start: 32172, Stop: 31900, Start Num: 28

Candidate Starts for Norz_40:

(7, 32307), (14, 32274), (Start: 28 @32172 has 82 MA's), (37, 32130), (41, 32103), (43, 32058), (44, 32049), (48, 32010), (56, 31923),

Gene: Ohno789_38 Start: 31317, Stop: 31045, Start Num: 29

Candidate Starts for Ohno789_38:

(Start: 29 @31317 has 108 MA's), (37, 31275), (41, 31248), (43, 31203), (44, 31194), (48, 31155),

Gene: Oogway_37 Start: 30855, Stop: 30583, Start Num: 28

Candidate Starts for Oogway_37:

(7, 30990), (14, 30957), (Start: 28 @30855 has 82 MA's), (37, 30813), (41, 30786), (43, 30741), (44, 30732), (48, 30693),

Gene: PSullivan_37 Start: 30492, Stop: 30220, Start Num: 29

Candidate Starts for PSullivan_37:

(22, 30576), (Start: 29 @30492 has 108 MA's), (37, 30450), (41, 30423), (43, 30378), (44, 30369), (48, 30330), (56, 30243),

Gene: PacerPaul_39 Start: 31313, Stop: 31041, Start Num: 29

Candidate Starts for PacerPaul_39:

(12, 31427), (16, 31403), (20, 31391), (21, 31388), (Start: 29 @31313 has 108 MA's), (37, 31271), (41, 31244), (43, 31199), (44, 31190), (48, 31151), (56, 31064),

Gene: Papez_40 Start: 33003, Stop: 32731, Start Num: 29

Candidate Starts for Papez_40:

(12, 33117), (16, 33093), (20, 33081), (21, 33078), (Start: 29 @33003 has 108 MA's), (37, 32961), (41, 32934), (43, 32889), (44, 32880), (48, 32841),

Gene: Paphu_37 Start: 31244, Stop: 30972, Start Num: 29

Candidate Starts for Paphu_37:

(13, 31370), (Start: 29 @31244 has 108 MA's), (37, 31202), (41, 31175), (43, 31130), (44, 31121), (48, 31082),

Gene: Paraselene_37 Start: 31722, Stop: 31354, Start Num: 28

Candidate Starts for Paraselene_37:

(10, 31857), (16, 31824), (Start: 28 @31722 has 82 MA's), (37, 31677), (41, 31650), (47, 31542), (52, 31479), (54, 31470), (59, 31377),

Gene: Pari_39 Start: 31087, Stop: 30815, Start Num: 28

Candidate Starts for Pari_39:

(7, 31222), (14, 31189), (Start: 28 @31087 has 82 MA's), (37, 31045), (41, 31018), (43, 30973), (44, 30964), (48, 30925), (56, 30838),

Gene: Parliament_37 Start: 31469, Stop: 31134, Start Num: 29

Candidate Starts for Parliament_37:

(Start: 29 @31469 has 108 MA's), (37, 31427), (41, 31400), (43, 31352), (51, 31259), (53, 31247), (59, 31157),

Gene: PascalRango_39 Start: 31395, Stop: 31084, Start Num: 28

Candidate Starts for PascalRango_39:

(10, 31530), (16, 31497), (Start: 28 @31395 has 82 MA's), (37, 31353), (41, 31326), (47, 31272), (52, 31209), (54, 31200), (59, 31107),

Gene: PattyP_40 Start: 31585, Stop: 31313, Start Num: 28

Candidate Starts for PattyP_40:

(7, 31720), (14, 31687), (Start: 28 @31585 has 82 MA's), (41, 31516), (43, 31471), (44, 31462), (48, 31423), (56, 31336),

Gene: Payneful_38 Start: 30992, Stop: 30684, Start Num: 29

Candidate Starts for Payneful_38:

(23, 31079), (Start: 29 @30992 has 108 MA's), (30, 30959), (35, 30923), (37, 30914), (43, 30842), (44, 30833), (48, 30794), (56, 30707),

Gene: Pelly_38 Start: 31718, Stop: 31284, Start Num: 29

Candidate Starts for Pelly_38:

(Start: 29 @31718 has 108 MA's), (37, 31676), (41, 31649), (43, 31601), (51, 31508), (57, 31442), (58, 31433), (60, 31394), (61, 31388), (63, 31307),

Gene: Pepe_34 Start: 29170, Stop: 28904, Start Num: 29

Candidate Starts for Pepe_34:

(26, 29206), (Start: 29 @29170 has 108 MA's), (37, 29128), (41, 29101), (43, 29056), (44, 29047), (48, 29008),

Gene: Perseus_40 Start: 32401, Stop: 32072, Start Num: 29

Candidate Starts for Perseus_40:

(8, 32536), (14, 32503), (Start: 29 @32401 has 108 MA's), (37, 32362), (41, 32335), (43, 32287), (51, 32194),

Gene: Peterson_42 Start: 33587, Stop: 33315, Start Num: 29

Candidate Starts for Peterson_42:

(6, 33767), (12, 33701), (16, 33677), (20, 33665), (21, 33662), (Start: 29 @33587 has 108 MA's), (37, 33545), (41, 33518), (43, 33473), (44, 33464), (48, 33425),

Gene: Petp2012_40 Start: 32213, Stop: 31983, Start Num: 28

Candidate Starts for Petp2012_40:

(7, 32348), (14, 32315), (Start: 28 @32213 has 82 MA's), (37, 32171), (41, 32144), (48, 32093), (56, 32006),

Gene: Petruccio_39 Start: 31567, Stop: 31298, Start Num: 28

Candidate Starts for Petruccio_39:

(7, 31702), (14, 31669), (Start: 28 @31567 has 82 MA's), (37, 31528), (41, 31501), (43, 31456), (44, 31447), (48, 31408),

Gene: PherrisBueller_39 Start: 31183, Stop: 30875, Start Num: 28

Candidate Starts for PherrisBueller_39:

(11, 31318), (17, 31285), (Start: 28 @31183 has 82 MA's), (32, 31132), (36, 31111), (43, 31033), (44, 31024), (48, 30985), (56, 30898),

Gene: PhrostyMug_39 Start: 31697, Stop: 31371, Start Num: 29

Candidate Starts for PhrostyMug_39:

(8, 31832), (14, 31799), (Start: 29 @31697 has 108 MA's), (37, 31655), (41, 31628), (43, 31580), (46, 31535), (51, 31487), (53, 31475), (59, 31385),

Gene: PinkPlastic_37 Start: 31097, Stop: 30825, Start Num: 28

Candidate Starts for PinkPlastic_37:

(7, 31232), (14, 31199), (Start: 28 @31097 has 82 MA's), (37, 31055), (41, 31028), (43, 30983), (44, 30974), (48, 30935),

Gene: Pinto_40 Start: 31529, Stop: 31257, Start Num: 28

Candidate Starts for Pinto_40:

(7, 31664), (14, 31631), (Start: 28 @31529 has 82 MA's), (37, 31487), (41, 31460), (43, 31415), (44, 31406), (48, 31367), (56, 31280),

Gene: Pippin_40 Start: 31627, Stop: 31355, Start Num: 29

Candidate Starts for Pippin_40:

(Start: 29 @31627 has 108 MA's), (37, 31585), (41, 31558), (43, 31513), (44, 31504), (48, 31465), (56, 31378),

Gene: Pita2_40 Start: 31989, Stop: 31717, Start Num: 29

Candidate Starts for Pita2_40:

(22, 32073), (Start: 29 @31989 has 108 MA's), (37, 31947), (41, 31920), (43, 31875), (44, 31866), (48, 31827), (56, 31740),

Gene: ProMouse_36 Start: 31549, Stop: 31166, Start Num: 28

Candidate Starts for ProMouse_36:

(10, 31684), (16, 31651), (Start: 28 @31549 has 82 MA's), (37, 31507), (41, 31480), (47, 31354), (52, 31291), (54, 31282), (59, 31189),

Gene: QTRlifeCrisis_39 Start: 32125, Stop: 31793, Start Num: 29

Candidate Starts for QTRlifeCrisis_39:

(Start: 29 @32125 has 108 MA's), (37, 32083), (41, 32056), (43, 32008), (51, 31915), (59, 31816),

Gene: Raid_39 Start: 31585, Stop: 31214, Start Num: 27

Candidate Starts for Raid_39:

(Start: 27 @31585 has 6 MA's), (37, 31543), (41, 31516), (43, 31459), (52, 31339),

Gene: Rajelicia_38 Start: 31483, Stop: 31211, Start Num: 28

Candidate Starts for Rajelicia_38:

(7, 31618), (14, 31585), (Start: 28 @31483 has 82 MA's), (37, 31441), (41, 31414), (43, 31369), (44, 31360), (48, 31321),

Gene: Rhynn_38 Start: 31498, Stop: 31226, Start Num: 28

Candidate Starts for Rhynn_38:

(7, 31633), (14, 31600), (Start: 28 @31498 has 82 MA's), (37, 31456), (41, 31429), (43, 31384), (44, 31375), (48, 31336), (56, 31249),

Gene: RidgeCB_38 Start: 31144, Stop: 30812, Start Num: 29

Candidate Starts for RidgeCB_38:

(9, 31258), (14, 31234), (16, 31222), (Start: 29 @31144 has 108 MA's), (37, 31102), (41, 31075), (43, 31027), (51, 30934), (59, 30835),

Gene: Ringer_39 Start: 31985, Stop: 31623, Start Num: 27

Candidate Starts for Ringer_39:

(Start: 27 @31985 has 6 MA's), (37, 31943), (41, 31916), (52, 31748), (54, 31739), (59, 31646),

Gene: Rohr_39 Start: 31475, Stop: 31245, Start Num: 29

Candidate Starts for Rohr_39:

(22, 31559), (Start: 29 @31475 has 108 MA's), (37, 31433), (41, 31406), (48, 31355), (56, 31268),

Gene: Rubeus_38 Start: 29616, Stop: 29344, Start Num: 29

Candidate Starts for Rubeus_38:

(Start: 29 @29616 has 108 MA's), (37, 29574), (41, 29547), (43, 29502), (44, 29493), (48, 29454), (56, 29367),

Gene: Rufus_40 Start: 31854, Stop: 31582, Start Num: 28

Candidate Starts for Rufus_40:

(7, 31989), (14, 31956), (Start: 28 @31854 has 82 MA's), (37, 31812), (41, 31785), (43, 31740), (44, 31731), (48, 31692), (56, 31605),

Gene: Ruotula_38 Start: 32043, Stop: 31771, Start Num: 29

Candidate Starts for Ruotula_38:

(26, 32079), (Start: 29 @32043 has 108 MA's), (37, 32001), (41, 31974), (43, 31929), (44, 31920), (48, 31881), (56, 31794),

Gene: Rutherferd_40 Start: 32367, Stop: 32101, Start Num: 29

Candidate Starts for Rutherferd_40:

(Start: 29 @32367 has 108 MA's), (37, 32325), (41, 32298), (43, 32253), (44, 32244), (48, 32205),

Gene: Sagefire_40 Start: 32355, Stop: 32020, Start Num: 29

Candidate Starts for Sagefire_40:

(Start: 29 @32355 has 108 MA's), (37, 32313), (41, 32286), (43, 32238), (46, 32193), (51, 32145), (59, 32043),

Gene: Sandaddy_38 Start: 31382, Stop: 31110, Start Num: 29

Candidate Starts for Sandaddy_38:

(22, 31466), (Start: 29 @31382 has 108 MA's), (37, 31340), (41, 31313), (43, 31268), (44, 31259), (48, 31220), (56, 31133),

Gene: Sanya_37 Start: 32063, Stop: 31791, Start Num: 29

Candidate Starts for Sanya_37:

(Start: 29 @32063 has 108 MA's), (37, 32021), (41, 31994), (43, 31949), (44, 31940), (48, 31901), (56, 31814),

Gene: SarFire_38 Start: 31557, Stop: 31285, Start Num: 28

Candidate Starts for SarFire_38:

(Start: 28 @31557 has 82 MA's), (37, 31515), (41, 31488), (43, 31443), (44, 31434), (48, 31395), (56, 31308),

Gene: Scowl_38 Start: 31823, Stop: 31551, Start Num: 29

Candidate Starts for Scowl_38:

(12, 31937), (16, 31913), (20, 31901), (21, 31898), (Start: 29 @31823 has 108 MA's), (37, 31781), (41, 31754), (43, 31709), (44, 31700), (48, 31661),

Gene: Seabiscuit_40 Start: 31328, Stop: 31056, Start Num: 28

Candidate Starts for Seabiscuit_40:

(7, 31463), (14, 31430), (Start: 28 @31328 has 82 MA's), (37, 31286), (41, 31259), (43, 31214), (44, 31205), (48, 31166),

Gene: Seanderson_39 Start: 31957, Stop: 31685, Start Num: 29

Candidate Starts for Seanderson_39:

(26, 31993), (Start: 29 @31957 has 108 MA's), (37, 31915), (41, 31888), (43, 31843), (44, 31834), (48, 31795), (56, 31708),

Gene: ShortQueendom_33 Start: 28032, Stop: 27724, Start Num: 29

Candidate Starts for ShortQueendom_33:

(23, 28119), (Start: 29 @28032 has 108 MA's), (30, 27999), (35, 27963), (37, 27954), (43, 27882), (44, 27873), (48, 27834), (56, 27747),

Gene: Sibs6_39 Start: 30489, Stop: 30181, Start Num: 29

Candidate Starts for Sibs6_39:

(Start: 29 @30489 has 108 MA's), (32, 30438), (36, 30417), (43, 30339), (44, 30330), (48, 30291),

Gene: Slagathor_39 Start: 31408, Stop: 31136, Start Num: 28

Candidate Starts for Slagathor_39:

(7, 31543), (14, 31510), (Start: 28 @31408 has 82 MA's), (37, 31366), (41, 31339), (43, 31294), (44, 31285), (48, 31246),

Gene: Smairt_39 Start: 31500, Stop: 31228, Start Num: 29

Candidate Starts for Smairt_39:

(12, 31614), (16, 31590), (20, 31578), (21, 31575), (Start: 29 @31500 has 108 MA's), (37, 31458), (41, 31431), (43, 31386), (44, 31377), (48, 31338), (56, 31251),

Gene: Smeagol_40 Start: 32730, Stop: 32458, Start Num: 28

Candidate Starts for Smeagol_40:

(7, 32865), (14, 32832), (Start: 28 @32730 has 82 MA's), (37, 32688), (41, 32661), (43, 32616), (44, 32607), (48, 32568), (56, 32481),

Gene: Snazzy_37 Start: 31284, Stop: 31012, Start Num: 28

Candidate Starts for Snazzy_37:

(7, 31419), (14, 31386), (Start: 28 @31284 has 82 MA's), (37, 31242), (41, 31215), (43, 31170), (44, 31161), (48, 31122), (56, 31035),

Gene: Solon_38 Start: 31615, Stop: 31343, Start Num: 29

Candidate Starts for Solon_38:

(Start: 29 @31615 has 108 MA's), (37, 31573), (41, 31546), (43, 31501), (44, 31492), (48, 31453), (56, 31366),

Gene: Sorpresa_38 Start: 31384, Stop: 31112, Start Num: 29

Candidate Starts for Sorpresa_38:

(22, 31468), (Start: 29 @31384 has 108 MA's), (37, 31342), (41, 31315), (43, 31270), (44, 31261), (48, 31222), (56, 31135),

Gene: SpikeBT_40 Start: 32361, Stop: 32089, Start Num: 28

Candidate Starts for SpikeBT_40:

(7, 32496), (14, 32463), (Start: 28 @32361 has 82 MA's), (37, 32319), (41, 32292), (43, 32247), (44, 32238), (48, 32199), (56, 32112),

Gene: Squee_39 Start: 32135, Stop: 31863, Start Num: 28

Candidate Starts for Squee_39:

(7, 32270), (14, 32237), (Start: 28 @32135 has 82 MA's), (37, 32093), (41, 32066), (43, 32021), (44, 32012), (48, 31973), (56, 31886),

Gene: StewieG_36 Start: 29129, Stop: 28797, Start Num: 29

Candidate Starts for StewieG_36:

(26, 29165), (Start: 29 @29129 has 108 MA's), (37, 29087), (41, 29060), (43, 29012), (51, 28919),

Gene: StrongArm_37 Start: 32396, Stop: 32124, Start Num: 29

Candidate Starts for StrongArm_37:

(13, 32522), (Start: 29 @32396 has 108 MA's), (37, 32354), (41, 32327), (43, 32282), (44, 32273), (48, 32234),

Gene: Sumter_37 Start: 31344, Stop: 31072, Start Num: 29

Candidate Starts for Sumter_37:

(Start: 29 @31344 has 108 MA's), (37, 31302), (41, 31275), (43, 31230), (44, 31221), (48, 31182), (56, 31095),

Gene: SwissCheese_40 Start: 32051, Stop: 31743, Start Num: 29

Candidate Starts for SwissCheese_40:

(23, 32138), (Start: 29 @32051 has 108 MA's), (30, 32018), (35, 31982), (37, 31973), (43, 31901), (44, 31892), (48, 31853), (56, 31766),

Gene: Switzer_39 Start: 31424, Stop: 31152, Start Num: 28

Candidate Starts for Switzer_39:

(7, 31559), (14, 31526), (Start: 28 @31424 has 82 MA's), (37, 31382), (41, 31355), (43, 31310), (44, 31301), (48, 31262), (56, 31175),

Gene: Swole_40 Start: 31396, Stop: 31124, Start Num: 28

Candidate Starts for Swole_40:

(7, 31531), (14, 31498), (Start: 28 @31396 has 82 MA's), (37, 31354), (41, 31327), (43, 31282), (44, 31273), (48, 31234), (56, 31147),

Gene: Target_40 Start: 30793, Stop: 30395, Start Num: 28

Candidate Starts for Target_40:

(10, 30928), (16, 30895), (Start: 28 @30793 has 82 MA's), (32, 30742), (36, 30721), (52, 30520), (54, 30511),

Gene: Tasp14_39 Start: 31559, Stop: 31287, Start Num: 29

Candidate Starts for Tasp14_39:

(Start: 29 @31559 has 108 MA's), (37, 31517), (41, 31490), (43, 31445), (44, 31436), (48, 31397), (56, 31310),

Gene: Teodoridan_36 Start: 30785, Stop: 30513, Start Num: 29

Candidate Starts for Teodoridan_36:

(18, 30875), (Start: 29 @30785 has 108 MA's), (37, 30743), (41, 30716), (43, 30671), (44, 30662), (48, 30623), (56, 30536),

Gene: TheloniousMonk_40 Start: 32966, Stop: 32694, Start Num: 28

Candidate Starts for TheloniousMonk_40:

(7, 33101), (14, 33068), (Start: 28 @32966 has 82 MA's), (37, 32924), (41, 32897), (43, 32852), (44, 32843), (48, 32804),

Gene: Thor_38 Start: 30915, Stop: 30643, Start Num: 28

Candidate Starts for Thor_38:

(Start: 28 @30915 has 82 MA's), (37, 30873), (41, 30846), (43, 30801), (44, 30792), (48, 30753), (56, 30666),

Gene: Topgun_37 Start: 30806, Stop: 30534, Start Num: 29

Candidate Starts for Topgun_37:

(12, 30920), (16, 30896), (20, 30884), (21, 30881), (Start: 29 @30806 has 108 MA's), (37, 30764), (41, 30737), (43, 30692), (44, 30683), (48, 30644), (56, 30557),

Gene: Tote_35 Start: 28663, Stop: 28391, Start Num: 28

Candidate Starts for Tote_35:

(7, 28798), (14, 28765), (Start: 28 @28663 has 82 MA's), (37, 28621), (41, 28594), (43, 28549), (44, 28540), (48, 28501), (56, 28414),

Gene: Traft412_40 Start: 32486, Stop: 32154, Start Num: 29

Candidate Starts for Traft412_40:

(8, 32621), (14, 32588), (Start: 29 @32486 has 108 MA's), (37, 32444), (41, 32417), (43, 32369), (51, 32276),

Gene: Treddle_41 Start: 33009, Stop: 32743, Start Num: 28

Candidate Starts for Treddle_41:

(7, 33144), (14, 33111), (Start: 28 @33009 has 82 MA's), (37, 32967), (41, 32940), (43, 32895), (44, 32886), (48, 32847),

Gene: Tripl3t_39 Start: 32414, Stop: 32145, Start Num: 28

Candidate Starts for Tripl3t_39:

(7, 32549), (14, 32516), (Start: 28 @32414 has 82 MA's), (37, 32369), (41, 32342), (43, 32297), (44, 32288), (48, 32249), (56, 32162),

Gene: Trouble_39 Start: 32267, Stop: 31995, Start Num: 29

Candidate Starts for Trouble_39:

(6, 32447), (12, 32381), (16, 32357), (20, 32345), (21, 32342), (Start: 29 @32267 has 108 MA's), (37, 32225), (41, 32198), (43, 32153), (44, 32144), (48, 32105),

Gene: Turj99_37 Start: 31258, Stop: 30986, Start Num: 28

Candidate Starts for Turj99_37:

(7, 31405), (14, 31372), (Start: 28 @31258 has 82 MA's), (37, 31216), (41, 31189), (43, 31144), (44, 31135), (48, 31096), (56, 31009),

Gene: TwoPeat_39 Start: 31714, Stop: 31484, Start Num: 28

Candidate Starts for TwoPeat_39:

(7, 31849), (14, 31816), (Start: 28 @31714 has 82 MA's), (37, 31672), (41, 31645), (48, 31594), (56, 31507),

Gene: U2_38 Start: 31407, Stop: 31135, Start Num: 28

Candidate Starts for U2_38:

(7, 31542), (14, 31509), (Start: 28 @31407 has 82 MA's), (37, 31365), (41, 31338), (43, 31293), (44, 31284), (48, 31245), (56, 31158),

Gene: Violet_37 Start: 31832, Stop: 31560, Start Num: 28

Candidate Starts for Violet_37:

(7, 31967), (14, 31934), (Start: 28 @31832 has 82 MA's), (37, 31790), (41, 31763), (43, 31718), (44, 31709), (48, 31670), (56, 31583),

Gene: Watermelon_40 Start: 32252, Stop: 31944, Start Num: 29

Candidate Starts for Watermelon_40:

(23, 32339), (Start: 29 @32252 has 108 MA's), (32, 32201), (36, 32180), (43, 32102), (44, 32093), (48, 32054), (56, 31967),

Gene: Wheeler_39 Start: 31744, Stop: 31472, Start Num: 29

Candidate Starts for Wheeler_39:

(6, 31924), (12, 31858), (16, 31834), (20, 31822), (21, 31819), (Start: 29 @31744 has 108 MA's), (37, 31702), (41, 31675), (43, 31630), (44, 31621), (48, 31582), (56, 31495),

Gene: Wilkins_37 Start: 30739, Stop: 30467, Start Num: 29

Candidate Starts for Wilkins_37:

(12, 30853), (16, 30829), (20, 30817), (21, 30814), (Start: 29 @30739 has 108 MA's), (37, 30697), (41, 30670), (43, 30625), (44, 30616), (48, 30577), (56, 30490),

Gene: Zeeculate_38 Start: 32108, Stop: 31794, Start Num: 28

Candidate Starts for Zeeculate_38:

(16, 32210), (Start: 28 @32108 has 82 MA's), (37, 32063), (41, 32036), (47, 31982), (52, 31919), (54, 31910), (59, 31817),

Gene: Zephyr_39 Start: 31816, Stop: 31544, Start Num: 28

Candidate Starts for Zephyr_39:

(7, 31951), (14, 31918), (Start: 28 @31816 has 82 MA's), (37, 31774), (41, 31747), (43, 31702), (44, 31693), (48, 31654),

Gene: Zeuska_39 Start: 32058, Stop: 31723, Start Num: 29

Candidate Starts for Zeuska_39:

(Start: 29 @32058 has 108 MA's), (37, 32013), (41, 31986), (43, 31938), (51, 31845),