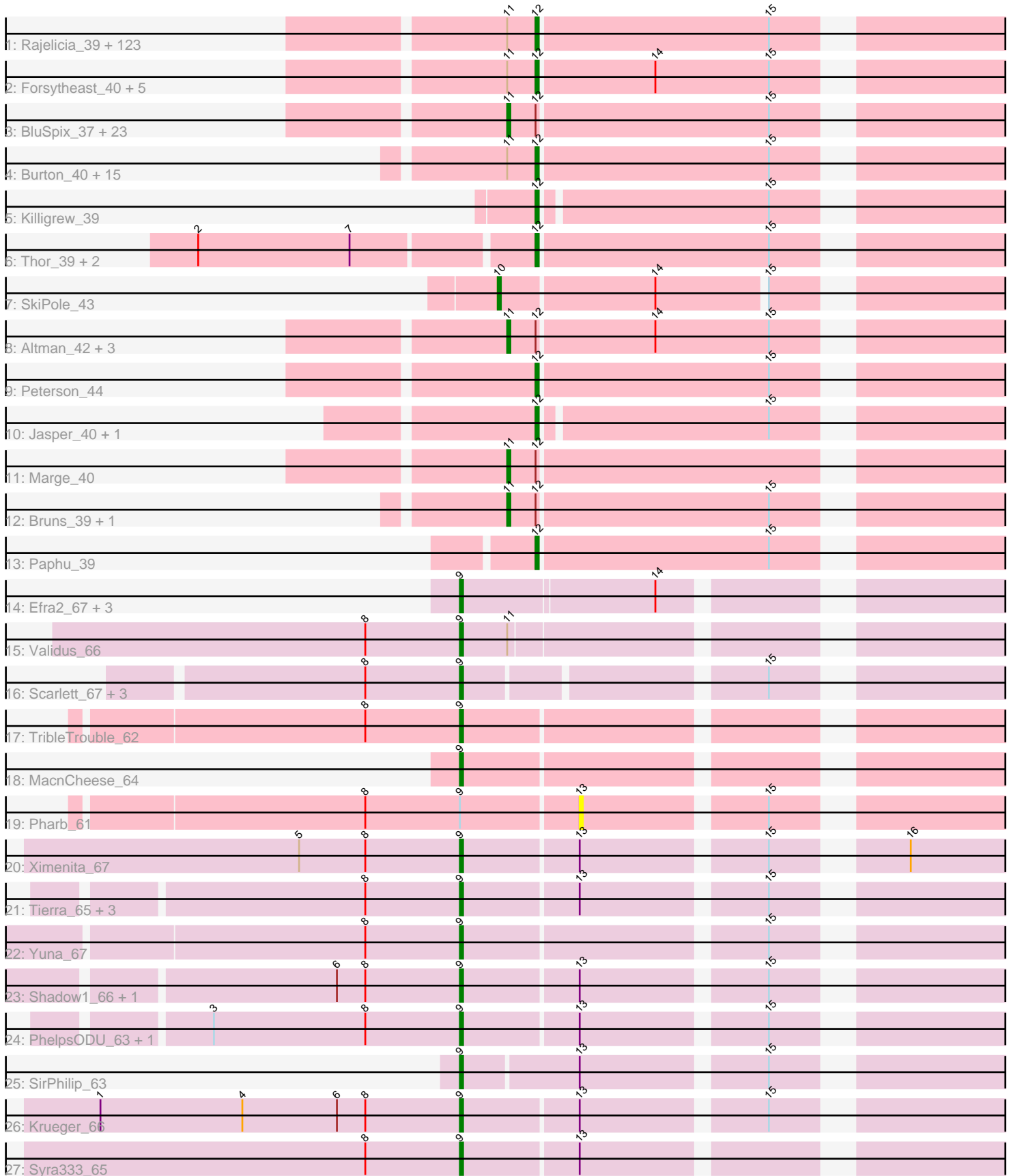


Pham 157585



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 157585 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157585 has 211 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Rajelicia_39, Seabiscuit_41, Kugel_42, Crispicious1_39, Fenn_41, Marcell_39, Michley_39, Tasp14_41, GrecoEtereo_41, ILeeKay_43, Naira_41, Wheeler_41, Carlyle_40, Fajezeel_42, Cueylyss_41, Seanderson_42, Greg_42, IgnatiusPatJac_39, Blue_40, Bexan_38, U2_39, PinkPlastic_38, Traft412_41, Snazzy_38, PascalRango_40, Trouble_41, BillKnuckles_40, Mryolo_38, Jorgensen_40, Paraselene_38, MaryBeth_40, Kykar_40, Zephyr_40, Eyeball_41, Arcanine_39, Parliament_39, SpikeBT_41, McGuire_40, MPlant7149_39, Ashballer_42, StewieG_39, Pinto_41, JuliaChild_41, AFIS_39, Gwendoluna_43, Switzer_40, Perseus_41, Ruotula_42, Nerujay_42, Norz_41, Pepe_37, Ciao_40, Hope4ever_41, DrFeelGood_39, Lopton_41, Doom_41, Rufus_41, Manatee_40, Gyzlar_37, DreamCatcher_42, Scowl_40, Oogway_38, Lesedi_38, Pippin_42, Abbyshoes_43, Bob3_38, Swole_41, Slagathor_40, Adahisdi_40, Treddle_42, Buttons_39, Barriga_40, Sibs6_41, Makemake_40, BeesKnees_40, TheloniousMonk_41, BaconJack_43, Papez_42, Tripl3t_40, Pelly_40, KyMonks1A_43, Anglerfish_41, Edtherson_41, Dulcie_39, Acme_43, Espresso_40, Rubeus_40, HarryOW_39, Petruccio_40, Ichabod_40, Sunshine924_41, Ajay_40, Rhynn_39, Dynamix_40, Lamina13_40, PSullivan_40, Target_41, Squee_40, NEHalo_39, Pita2_43, Briton15_41, Abrogate_400, Tote_36, Beatrix_39, RidgeCB_40, Ringer_41, Licorice_43, Gandalf20_41, Arlo_38, Nhonho_40, StrongArm_39, Hermia_41, PattyP_41, Atkinbua_41, GageAP_41, DD5_40, Topgun_40, Lockley_40, Smairt_42, MetalQZJ_40, STLscum_41, Kenmech_44, JC27_41, PherrisBueller_40
- Track 2 : Forsytheast_40, ConceptII_42, SwissCheese_42, Corvo_41, Kanely_41, Moose_40
- Track 3 : BluSpix_37, Bethlehem_39, Dussy_42, Euphoria_39, Bxb1_37, BigPaolini_40, Graduation_43, Fushigi_38, HanShotFirst_39, A6_37, Dexes_40, Alsfro_44, Aeneas_42, BK1_37, Rutherford_42, QTRlifeCrisis_44, Applejack_37, Pari_40, PhrostyMug_40, Monet_44, Zeuska_40, Mule_38, Solon_40, Watermelon_42
- Track 4 : Burton_40, Zeeculate_39, Big3_39, Museum_41, Magnito_38, BigMau_41, JackSparrow_42, Petp2012_41, Niza_42, Molly_41, LilBib_41, TwoPeat_39, Rohr_41, Jerm2_41, HermioneGrange_40, Turj99_38
- Track 5 : Killigrew_39
- Track 6 : Thor_39, SarFire_39, Smeagol_41
- Track 7 : SkiPole_43
- Track 8 : Altman_42, Violet_38, Chanagan_38, Teodoridan_38
- Track 9 : Peterson_44

- Track 10 : Jasper_40, Dreamboat_40
- Track 11 : Marge_40
- Track 12 : Bruns_39, MrGordo_39
- Track 13 : Paphu_39
- Track 14 : Efra2_67, Yunkel11_66, Guanica15_66, LastHope_66
- Track 15 : Validus_66
- Track 16 : Scarlett_67, KiSi_67, Oscar_66, LeMond_66
- Track 17 : TribbleTrouble_62
- Track 18 : MacnCheese_64
- Track 19 : Pharb_61
- Track 20 : Ximenita_67
- Track 21 : Tierra_65, Cain_65, Bryler_65, Phrank_65
- Track 22 : Yuna_67
- Track 23 : Shadow1_66, Sunflower1121_67
- Track 24 : PhelpsODU_63, Unicorn_63
- Track 25 : SirPhilip_63
- Track 26 : Krueger_66
- Track 27 : Syra333_65

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

The start number called the most often in the published annotations is 12, it was called in 145 of the 196 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AFIS_39, Abbyshoes_43, Abrogate_400, Acme_43, Adahisdi_40, Ajay_40, Anglerfish_41, Arcanine_39, Arlo_38, Ashballer_42, Atkinbua_41, BaconJack_43, Barriga_40, Beatrix_39, BeesKnees_40, Bexan_38, Big3_39, BigMau_41, BillKnuckles_40, Blue_40, Bob3_38, Briton15_41, Burton_40, Buttons_39, Carlyle_40, Ciao_40, ConceptII_42, Corvo_41, Crispicious1_39, Cueylyss_41, DD5_40, Doom_41, DrFeelGood_39, DreamCatcher_42, Dreamboat_40, Dulcie_39, Dynamix_40, Edtherson_41, Espresso_40, Eyeball_41, Fajezeel_42, Fenn_41, Forsytheast_40, GageAP_41, Gandalf20_41, GrecoEtereo_41, Greg_42, Gwendoluna_43, Gyzlar_37, HarryOW_39, Hermia_41, HermioneGrange_40, Hope4ever_41, ILeeKay_43, Ichabod_40, IgnatiusPatJac_39, JC27_41, JackSparrow_42, Jasper_40, Jerm2_41, Jorgensen_40, JuliaChild_41, Kanely_41, Kenmech_44, Killigrew_39, Kugel_42, KyMonks1A_43, Kykar_40, Lamina13_40, Lesedi_38, Licorice_43, LilBib_41, Lockley_40, Lopton_41, MPlant7149_39, Magnito_38, Makemake_40, Manatee_40, Marcell_39, MaryBeth_40, McGuire_40, MetalQZJ_40, Michley_39, Molly_41, Moose_40, Mryolo_38, Museum_41, NEHalo_39, Naira_41, Nerujay_42, Nhonho_40, Niza_42, Norz_41, Oogway_38, PSullivan_40, Papez_42, Paphu_39, Paraselene_38, Parliament_39, PascalRango_40, PattyP_41, Pelly_40, Pepe_37, Perseus_41, Peterson_44, Petp2012_41, Petruccio_40, PherrisBueller_40, PinkPlastic_38, Pinto_41, Pippin_42, Pita2_43, Rajelicia_39, Rhynn_39, RidgeCB_40, Ringer_41, Rohr_41, Rubeus_40, Rufus_41, Ruotula_42, STLscum_41, SarFire_39, Scowl_40, Seabiscuit_41, Seanderson_42, Sibs6_41, Slagathor_40, Smairt_42, Smeagol_41, Snazzy_38, SpikeBT_41, Squee_40, StewieG_39, StrongArm_39, Sunshine924_41, SwissCheese_42, Switzer_40, Swole_41, Target_41, Tasp14_41, TheloniousMonk_41, Thor_39, Topgun_40, Tote_36, Traft412_41, Treddle_42,

Tripl3t_40, Trouble_41, Turj99_38, TwoPeat_39, U2_39, Wheeler_41, Zeeculate_39, Zephyr_40,

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

- A6_37, Aeneas_42, Alsfro_44, Altman_42, Applejack_37, BK1_37, Bethlehem_39, BigPaolini_40, BluSpix_37, Bruns_39, Bxb1_37, Chanagan_38, Dexes_40, Dussy_42, Euphoria_39, Fushigi_38, Graduation_43, HanShotFirst_39, Marge_40, Monet_44, MrGordo_39, Mule_38, Pari_40, PhrostyMug_40, QTRlifeCrisis_44, Rutherford_42, Solon_40, Teodoridan_38, Violet_38, Watermelon_42, Zeuska_40,

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

- Bryler_65, Cain_65, Efra2_67, Guanica15_66, KiSi_67, Krueger_66, LastHope_66, LeMond_66, MacnCheese_64, Oscar_66, Pharb_61, PhelpsODU_63, Phrank_65, Scarlett_67, Shadow1_66, SirPhilip_63, SkiPole_43, Sunflower1121_67, Syra333_65, Tierra_65, TripleTrouble_62, Unicorn_63, Validus_66, Ximenita_67, Yuna_67, Yunkel11_66,

Summary by start number:

Start 9:

- Found in 25 of 211 (11.8%) of genes in pham
- Manual Annotations of this start: 24 of 196
- Called 96.0% of time when present
- Phage (with cluster) where this start called: Bryler_65 (K6), Cain_65 (K6), Efra2_67 (K1), Guanica15_66 (K1), KiSi_67 (K1), Krueger_66 (K6), LastHope_66 (K1), LeMond_66 (K1), MacnCheese_64 (K3), Oscar_66 (K1), PhelpsODU_63 (K6), Phrank_65 (K6), Scarlett_67 (K1), Shadow1_66 (K6), SirPhilip_63 (K6), Sunflower1121_67 (K6), Syra333_65 (K6), Tierra_65 (K6), TripleTrouble_62 (K3), Unicorn_63 (K6), Validus_66 (K1), Ximenita_67 (K6), Yuna_67 (K6), Yunkel11_66 (K1),

Start 10:

- Found in 1 of 211 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 196
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SkiPole_43 (A1),

Start 11:

- Found in 178 of 211 (84.4%) of genes in pham
- Manual Annotations of this start: 26 of 196
- Called 17.4% of time when present
- Phage (with cluster) where this start called: A6_37 (A1), Aeneas_42 (A1), Alsfro_44 (A1), Altman_42 (A1), Applejack_37 (A1), BK1_37 (A1), Bethlehem_39 (A1), BigPaolini_40 (A1), BluSpix_37 (A1), Bruns_39 (A1), Bxb1_37 (A1), Chanagan_38 (A1), Dexes_40 (A1), Dussy_42 (A1), Euphoria_39 (A1), Fushigi_38 (A1), Graduation_43 (A1), HanShotFirst_39 (A1), Marge_40 (A1), Monet_44 (A1), MrGordo_39 (A1), Mule_38 (A1), Pari_40 (A1), PhrostyMug_40 (A1), QTRlifeCrisis_44 (A1), Rutherford_42 (A1), Solon_40 (A1), Teodoridan_38 (A1), Violet_38 (A1), Watermelon_42 (A1), Zeuska_40 (A1),

Start 12:

- Found in 185 of 211 (87.7%) of genes in pham
- Manual Annotations of this start: 145 of 196

- Called 83.2% of time when present
- Phage (with cluster) where this start called: AFIS_39 (A1), Abbyshoes_43 (A1), Abrogate_400 (A1), Acme_43 (A1), Adahisdi_40 (A1), Ajay_40 (A1), Anglerfish_41 (A1), Arcanine_39 (A1), Arlo_38 (A1), Ashballer_42 (A1), Atkinbua_41 (A1), BaconJack_43 (A1), Barriga_40 (A1), Beatrix_39 (A1), BeesKnees_40 (A1), Bexan_38 (A1), Big3_39 (A1), BigMau_41 (A1), BillKnuckles_40 (A1), Blue_40 (A1), Bob3_38 (A1), Briton15_41 (A1), Burton_40 (A1), Buttons_39 (A1), Carlyle_40 (A1), Ciao_40 (A1), Conceptll_42 (A1), Corvo_41 (A1), Crispicous1_39 (A1), Cueyllyss_41 (A1), DD5_40 (A1), Doom_41 (A1), DrFeelGood_39 (A1), DreamCatcher_42 (A1), Dreamboat_40 (A1), Dulcie_39 (A1), Dynamix_40 (A1), Edtherson_41 (A1), Espresso_40 (A1), Eyeball_41 (A1), Fajezeel_42 (A1), Fenn_41 (A1), Forsytheast_40 (A1), GageAP_41 (A1), Gandalf20_41 (A1), GrecoEtereo_41 (A1), Greg_42 (A1), Gwendoluna_43 (A1), Gyzlar_37 (A1), HarryOW_39 (A1), Hermia_41 (A1), HermioneGrange_40 (A1), Hope4ever_41 (A1), ILeeKay_43 (A1), Ichabod_40 (A1), IgnatiusPatJac_39 (A1), JC27_41 (A1), JackSparrow_42 (A1), Jasper_40 (A1), Jerm2_41 (A1), Jorgensen_40 (A1), JuliaChild_41 (A1), Kanely_41 (A1), Kenmech_44 (A1), Killigrew_39 (A1), Kugel_42 (A1), KyMonks1A_43 (A1), Kykar_40 (A1), Lamina13_40 (A1), Lesedi_38 (A1), Licorice_43 (A1), LilBib_41 (A1), Lockley_40 (A1), Lopton_41 (A1), MPlant7149_39 (A1), Magnito_38 (A1), Makemake_40 (A1), Manatee_40 (A1), Marcell_39 (A1), MaryBeth_40 (A1), McGuire_40 (A1), MetalQZJ_40 (A1), Michley_39 (A1), Molly_41 (A1), Moose_40 (A1), Mryolo_38 (A1), Museum_41 (A1), NEHalo_39 (A1), Naira_41 (A1), Nerujay_42 (A1), Nhonho_40 (A1), Niza_42 (A1), Norz_41 (A1), Oogway_38 (A1), PSullivan_40 (A1), Papez_42 (A1), Paphu_39 (A1), Paraselene_38 (A1), Parliament_39 (A1), PascalRango_40 (A1), PattyP_41 (A1), Pelly_40 (A1), Pepe_37 (A1), Perseus_41 (A1), Peterson_44 (A1), Petp2012_41 (A1), Petruchio_40 (A1), PherrisBueller_40 (A1), PinkPlastic_38 (A1), Pinto_41 (A1), Pippin_42 (A1), Pita2_43 (A1), Rajelicia_39 (A1), Rhynn_39 (A1), RidgeCB_40 (A1), Ringer_41 (A1), Rohr_41 (A1), Rubeus_40 (A1), Rufus_41 (A1), Ruotula_42 (A1), STLscum_41 (A1), SarFire_39 (A1), Scowl_40 (A1), Seabiscuit_41 (A1), Seanderson_42 (A1), Sibs6_41 (A1), Slagathor_40 (A1), Smairt_42 (A1), Smeagol_41 (A1), Snazzy_38 (A1), SpikeBT_41 (A1), Squee_40 (A1), StewieG_39 (A1), StrongArm_39 (A1), Sunshine924_41 (A1), SwissCheese_42 (A1), Switzer_40 (A1), Swole_41 (A1), Target_41 (A1), Tasp14_41 (A1), TheloniousMonk_41 (A1), Thor_39 (A1), Topgun_40 (A1), Tote_36 (A1), Traft412_41 (A1), Treddle_42 (A1), Tripl3t_40 (A1), Trouble_41 (A1), Turj99_38 (A1), TwoPeat_39 (A1), U2_39 (A1), Wheeler_41 (A1), Zeeculate_39 (A1), Zephyr_40 (A1),

Start 13:

- Found in 13 of 211 (6.2%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Pharb_61 (K3),

Summary by clusters:

There are 4 clusters represented in this pham: A1, K3, K1, K6,

Info for manual annotations of cluster A1:

- Start number 10 was manually annotated 1 time for cluster A1.
- Start number 11 was manually annotated 26 times for cluster A1.
- Start number 12 was manually annotated 145 times for cluster A1.

Info for manual annotations of cluster K1:

- Start number 9 was manually annotated 9 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 9 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K6:

- Start number 9 was manually annotated 13 times for cluster K6.

Gene Information:

Gene: A6_37 Start: 30984, Stop: 30805, Start Num: 11

Candidate Starts for A6_37:

(Start: 11 @30984 has 26 MA's), (Start: 12 @30975 has 145 MA's), (15, 30903),

Gene: AFIS_39 Start: 31765, Stop: 31595, Start Num: 12

Candidate Starts for AFIS_39:

(Start: 11 @31774 has 26 MA's), (Start: 12 @31765 has 145 MA's), (15, 31693),

Gene: Abbysshoes_43 Start: 32174, Stop: 32004, Start Num: 12

Candidate Starts for Abbysshoes_43:

(Start: 11 @32183 has 26 MA's), (Start: 12 @32174 has 145 MA's), (15, 32102),

Gene: Abrogate_400 Start: 32452, Stop: 32282, Start Num: 12

Candidate Starts for Abrogate_400:

(Start: 11 @32461 has 26 MA's), (Start: 12 @32452 has 145 MA's), (15, 32380),

Gene: Acme_43 Start: 32292, Stop: 32122, Start Num: 12

Candidate Starts for Acme_43:

(Start: 11 @32301 has 26 MA's), (Start: 12 @32292 has 145 MA's), (15, 32220),

Gene: Adahisdi_40 Start: 31815, Stop: 31645, Start Num: 12

Candidate Starts for Adahisdi_40:

(Start: 11 @31824 has 26 MA's), (Start: 12 @31815 has 145 MA's), (15, 31743),

Gene: Aeneas_42 Start: 31975, Stop: 31796, Start Num: 11

Candidate Starts for Aeneas_42:

(Start: 11 @31975 has 26 MA's), (Start: 12 @31966 has 145 MA's), (15, 31894),

Gene: Ajay_40 Start: 31606, Stop: 31436, Start Num: 12

Candidate Starts for Ajay_40:

(Start: 11 @31615 has 26 MA's), (Start: 12 @31606 has 145 MA's), (15, 31534),

Gene: Alsfro_44 Start: 32364, Stop: 32185, Start Num: 11

Candidate Starts for Alsfro_44:

(Start: 11 @32364 has 26 MA's), (Start: 12 @32355 has 145 MA's), (15, 32283),

Gene: Altman_42 Start: 32620, Stop: 32441, Start Num: 11

Candidate Starts for Altman_42:

(Start: 11 @32620 has 26 MA's), (Start: 12 @32611 has 145 MA's), (14, 32575), (15, 32539),

Gene: Anglerfish_41 Start: 31868, Stop: 31698, Start Num: 12
Candidate Starts for Anglerfish_41:
(Start: 11 @31877 has 26 MA's), (Start: 12 @31868 has 145 MA's), (15, 31796),

Gene: Applejack_37 Start: 28691, Stop: 28512, Start Num: 11
Candidate Starts for Applejack_37:
(Start: 11 @28691 has 26 MA's), (Start: 12 @28682 has 145 MA's), (15, 28610),

Gene: Arcanine_39 Start: 30988, Stop: 30818, Start Num: 12
Candidate Starts for Arcanine_39:
(Start: 11 @30997 has 26 MA's), (Start: 12 @30988 has 145 MA's), (15, 30916),

Gene: Arlo_38 Start: 31496, Stop: 31326, Start Num: 12
Candidate Starts for Arlo_38:
(Start: 11 @31505 has 26 MA's), (Start: 12 @31496 has 145 MA's), (15, 31424),

Gene: Ashballer_42 Start: 32748, Stop: 32578, Start Num: 12
Candidate Starts for Ashballer_42:
(Start: 11 @32757 has 26 MA's), (Start: 12 @32748 has 145 MA's), (15, 32676),

Gene: Atkinbua_41 Start: 31944, Stop: 31774, Start Num: 12
Candidate Starts for Atkinbua_41:
(Start: 11 @31953 has 26 MA's), (Start: 12 @31944 has 145 MA's), (15, 31872),

Gene: BK1_37 Start: 30984, Stop: 30805, Start Num: 11
Candidate Starts for BK1_37:
(Start: 11 @30984 has 26 MA's), (Start: 12 @30975 has 145 MA's), (15, 30903),

Gene: BaconJack_43 Start: 32721, Stop: 32551, Start Num: 12
Candidate Starts for BaconJack_43:
(Start: 11 @32730 has 26 MA's), (Start: 12 @32721 has 145 MA's), (15, 32649),

Gene: Barriga_40 Start: 31470, Stop: 31300, Start Num: 12
Candidate Starts for Barriga_40:
(Start: 11 @31479 has 26 MA's), (Start: 12 @31470 has 145 MA's), (15, 31398),

Gene: Beatrix_39 Start: 32941, Stop: 32771, Start Num: 12
Candidate Starts for Beatrix_39:
(Start: 11 @32950 has 26 MA's), (Start: 12 @32941 has 145 MA's), (15, 32869),

Gene: BeesKnees_40 Start: 31526, Stop: 31356, Start Num: 12
Candidate Starts for BeesKnees_40:
(Start: 11 @31535 has 26 MA's), (Start: 12 @31526 has 145 MA's), (15, 31454),

Gene: Bethlehem_39 Start: 32238, Stop: 32059, Start Num: 11
Candidate Starts for Bethlehem_39:
(Start: 11 @32238 has 26 MA's), (Start: 12 @32229 has 145 MA's), (15, 32157),

Gene: Bexan_38 Start: 32629, Stop: 32459, Start Num: 12
Candidate Starts for Bexan_38:
(Start: 11 @32638 has 26 MA's), (Start: 12 @32629 has 145 MA's), (15, 32557),

Gene: Big3_39 Start: 32107, Stop: 31937, Start Num: 12

Candidate Starts for Big3_39:

(Start: 11 @32116 has 26 MA's), (Start: 12 @32107 has 145 MA's), (15, 32035),

Gene: BigMau_41 Start: 31603, Stop: 31433, Start Num: 12

Candidate Starts for BigMau_41:

(Start: 11 @31612 has 26 MA's), (Start: 12 @31603 has 145 MA's), (15, 31531),

Gene: BigPaolini_40 Start: 30608, Stop: 30429, Start Num: 11

Candidate Starts for BigPaolini_40:

(Start: 11 @30608 has 26 MA's), (Start: 12 @30599 has 145 MA's), (15, 30527),

Gene: BillKnuckles_40 Start: 32329, Stop: 32159, Start Num: 12

Candidate Starts for BillKnuckles_40:

(Start: 11 @32338 has 26 MA's), (Start: 12 @32329 has 145 MA's), (15, 32257),

Gene: BluSpix_37 Start: 27712, Stop: 27533, Start Num: 11

Candidate Starts for BluSpix_37:

(Start: 11 @27712 has 26 MA's), (Start: 12 @27703 has 145 MA's), (15, 27631),

Gene: Blue_40 Start: 32387, Stop: 32217, Start Num: 12

Candidate Starts for Blue_40:

(Start: 11 @32396 has 26 MA's), (Start: 12 @32387 has 145 MA's), (15, 32315),

Gene: Bob3_38 Start: 30953, Stop: 30783, Start Num: 12

Candidate Starts for Bob3_38:

(Start: 11 @30962 has 26 MA's), (Start: 12 @30953 has 145 MA's), (15, 30881),

Gene: Briton15_41 Start: 31779, Stop: 31609, Start Num: 12

Candidate Starts for Briton15_41:

(Start: 11 @31788 has 26 MA's), (Start: 12 @31779 has 145 MA's), (15, 31707),

Gene: Bruns_39 Start: 31694, Stop: 31509, Start Num: 11

Candidate Starts for Bruns_39:

(Start: 11 @31694 has 26 MA's), (Start: 12 @31685 has 145 MA's), (15, 31613),

Gene: Bryler_65 Start: 41993, Stop: 42184, Start Num: 9

Candidate Starts for Bryler_65:

(8, 41963), (Start: 9 @41993 has 24 MA's), (13, 42029), (15, 42083),

Gene: Burton_40 Start: 31523, Stop: 31353, Start Num: 12

Candidate Starts for Burton_40:

(Start: 11 @31532 has 26 MA's), (Start: 12 @31523 has 145 MA's), (15, 31451),

Gene: Buttons_39 Start: 30491, Stop: 30321, Start Num: 12

Candidate Starts for Buttons_39:

(Start: 11 @30500 has 26 MA's), (Start: 12 @30491 has 145 MA's), (15, 30419),

Gene: Bxb1_37 Start: 31562, Stop: 31383, Start Num: 11

Candidate Starts for Bxb1_37:

(Start: 11 @31562 has 26 MA's), (Start: 12 @31553 has 145 MA's), (15, 31481),

Gene: Cain_65 Start: 41981, Stop: 42172, Start Num: 9

Candidate Starts for Cain_65:

(8, 41951), (Start: 9 @41981 has 24 MA's), (13, 42017), (15, 42071),

Gene: Carlyle_40 Start: 30235, Stop: 30065, Start Num: 12

Candidate Starts for Carlyle_40:

(Start: 11 @30244 has 26 MA's), (Start: 12 @30235 has 145 MA's), (15, 30163),

Gene: Chanagan_38 Start: 31084, Stop: 30905, Start Num: 11

Candidate Starts for Chanagan_38:

(Start: 11 @31084 has 26 MA's), (Start: 12 @31075 has 145 MA's), (14, 31039), (15, 31003),

Gene: Ciao_40 Start: 31748, Stop: 31578, Start Num: 12

Candidate Starts for Ciao_40:

(Start: 11 @31757 has 26 MA's), (Start: 12 @31748 has 145 MA's), (15, 31676),

Gene: ConceptII_42 Start: 32765, Stop: 32595, Start Num: 12

Candidate Starts for ConceptII_42:

(Start: 11 @32774 has 26 MA's), (Start: 12 @32765 has 145 MA's), (14, 32729), (15, 32693),

Gene: Corvo_41 Start: 32625, Stop: 32455, Start Num: 12

Candidate Starts for Corvo_41:

(Start: 11 @32634 has 26 MA's), (Start: 12 @32625 has 145 MA's), (14, 32589), (15, 32553),

Gene: Crispicous1_39 Start: 31389, Stop: 31219, Start Num: 12

Candidate Starts for Crispicous1_39:

(Start: 11 @31398 has 26 MA's), (Start: 12 @31389 has 145 MA's), (15, 31317),

Gene: Cueyllyss_41 Start: 32327, Stop: 32157, Start Num: 12

Candidate Starts for Cueyllyss_41:

(Start: 11 @32336 has 26 MA's), (Start: 12 @32327 has 145 MA's), (15, 32255),

Gene: DD5_40 Start: 32631, Stop: 32461, Start Num: 12

Candidate Starts for DD5_40:

(Start: 11 @32640 has 26 MA's), (Start: 12 @32631 has 145 MA's), (15, 32559),

Gene: Dexes_40 Start: 32374, Stop: 32195, Start Num: 11

Candidate Starts for Dexes_40:

(Start: 11 @32374 has 26 MA's), (Start: 12 @32365 has 145 MA's), (15, 32293),

Gene: Doom_41 Start: 32520, Stop: 32350, Start Num: 12

Candidate Starts for Doom_41:

(Start: 11 @32529 has 26 MA's), (Start: 12 @32520 has 145 MA's), (15, 32448),

Gene: DrFeelGood_39 Start: 32261, Stop: 32091, Start Num: 12

Candidate Starts for DrFeelGood_39:

(Start: 11 @32270 has 26 MA's), (Start: 12 @32261 has 145 MA's), (15, 32189),

Gene: DreamCatcher_42 Start: 32827, Stop: 32657, Start Num: 12

Candidate Starts for DreamCatcher_42:

(Start: 11 @32836 has 26 MA's), (Start: 12 @32827 has 145 MA's), (15, 32755),

Gene: Dreamboat_40 Start: 31450, Stop: 31283, Start Num: 12

Candidate Starts for Dreamboat_40:

(Start: 12 @31450 has 145 MA's), (15, 31381),

Gene: Dulcie_39 Start: 31502, Stop: 31332, Start Num: 12

Candidate Starts for Dulcie_39:

(Start: 11 @31511 has 26 MA's), (Start: 12 @31502 has 145 MA's), (15, 31430),

Gene: Dussy_42 Start: 32203, Stop: 32024, Start Num: 11

Candidate Starts for Dussy_42:

(Start: 11 @32203 has 26 MA's), (Start: 12 @32194 has 145 MA's), (15, 32122),

Gene: Dynamix_40 Start: 31512, Stop: 31342, Start Num: 12

Candidate Starts for Dynamix_40:

(Start: 11 @31521 has 26 MA's), (Start: 12 @31512 has 145 MA's), (15, 31440),

Gene: Edtherson_41 Start: 32705, Stop: 32535, Start Num: 12

Candidate Starts for Edtherson_41:

(Start: 11 @32714 has 26 MA's), (Start: 12 @32705 has 145 MA's), (15, 32633),

Gene: Efra2_67 Start: 42478, Stop: 42672, Start Num: 9

Candidate Starts for Efra2_67:

(Start: 9 @42478 has 24 MA's), (14, 42538),

Gene: Espresso_40 Start: 32082, Stop: 31912, Start Num: 12

Candidate Starts for Espresso_40:

(Start: 11 @32091 has 26 MA's), (Start: 12 @32082 has 145 MA's), (15, 32010),

Gene: Euphoria_39 Start: 31555, Stop: 31376, Start Num: 11

Candidate Starts for Euphoria_39:

(Start: 11 @31555 has 26 MA's), (Start: 12 @31546 has 145 MA's), (15, 31474),

Gene: Eyeball_41 Start: 31997, Stop: 31827, Start Num: 12

Candidate Starts for Eyeball_41:

(Start: 11 @32006 has 26 MA's), (Start: 12 @31997 has 145 MA's), (15, 31925),

Gene: Fajezeel_42 Start: 32121, Stop: 31951, Start Num: 12

Candidate Starts for Fajezeel_42:

(Start: 11 @32130 has 26 MA's), (Start: 12 @32121 has 145 MA's), (15, 32049),

Gene: Fenn_41 Start: 33445, Stop: 33275, Start Num: 12

Candidate Starts for Fenn_41:

(Start: 11 @33454 has 26 MA's), (Start: 12 @33445 has 145 MA's), (15, 33373),

Gene: Forsytheast_40 Start: 31903, Stop: 31733, Start Num: 12

Candidate Starts for Forsytheast_40:

(Start: 11 @31912 has 26 MA's), (Start: 12 @31903 has 145 MA's), (14, 31867), (15, 31831),

Gene: Fushigi_38 Start: 29740, Stop: 29561, Start Num: 11

Candidate Starts for Fushigi_38:

(Start: 11 @29740 has 26 MA's), (Start: 12 @29731 has 145 MA's), (15, 29659),

Gene: GageAP_41 Start: 31831, Stop: 31661, Start Num: 12

Candidate Starts for GageAP_41:

(Start: 11 @31840 has 26 MA's), (Start: 12 @31831 has 145 MA's), (15, 31759),

Gene: Gandalf20_41 Start: 32600, Stop: 32430, Start Num: 12
Candidate Starts for Gandalf20_41:
(Start: 11 @32609 has 26 MA's), (Start: 12 @32600 has 145 MA's), (15, 32528),

Gene: Graduation_43 Start: 32923, Stop: 32744, Start Num: 11
Candidate Starts for Graduation_43:
(Start: 11 @32923 has 26 MA's), (Start: 12 @32914 has 145 MA's), (15, 32842),

Gene: GrecoEtereo_41 Start: 32242, Stop: 32072, Start Num: 12
Candidate Starts for GrecoEtereo_41:
(Start: 11 @32251 has 26 MA's), (Start: 12 @32242 has 145 MA's), (15, 32170),

Gene: Greg_42 Start: 32121, Stop: 31951, Start Num: 12
Candidate Starts for Greg_42:
(Start: 11 @32130 has 26 MA's), (Start: 12 @32121 has 145 MA's), (15, 32049),

Gene: Guanica15_66 Start: 42219, Stop: 42413, Start Num: 9
Candidate Starts for Guanica15_66:
(Start: 9 @42219 has 24 MA's), (14, 42279),

Gene: Gwendoluna_43 Start: 33699, Stop: 33529, Start Num: 12
Candidate Starts for Gwendoluna_43:
(Start: 11 @33708 has 26 MA's), (Start: 12 @33699 has 145 MA's), (15, 33627),

Gene: Gyzlar_37 Start: 30222, Stop: 30052, Start Num: 12
Candidate Starts for Gyzlar_37:
(Start: 11 @30231 has 26 MA's), (Start: 12 @30222 has 145 MA's), (15, 30150),

Gene: HanShotFirst_39 Start: 31264, Stop: 31085, Start Num: 11
Candidate Starts for HanShotFirst_39:
(Start: 11 @31264 has 26 MA's), (Start: 12 @31255 has 145 MA's), (15, 31183),

Gene: HarryOW_39 Start: 31414, Stop: 31244, Start Num: 12
Candidate Starts for HarryOW_39:
(Start: 11 @31423 has 26 MA's), (Start: 12 @31414 has 145 MA's), (15, 31342),

Gene: Hermia_41 Start: 32970, Stop: 32800, Start Num: 12
Candidate Starts for Hermia_41:
(Start: 11 @32979 has 26 MA's), (Start: 12 @32970 has 145 MA's), (15, 32898),

Gene: HermioneGrange_40 Start: 32097, Stop: 31927, Start Num: 12
Candidate Starts for HermioneGrange_40:
(Start: 11 @32106 has 26 MA's), (Start: 12 @32097 has 145 MA's), (15, 32025),

Gene: Hope4ever_41 Start: 32288, Stop: 32118, Start Num: 12
Candidate Starts for Hope4ever_41:
(Start: 11 @32297 has 26 MA's), (Start: 12 @32288 has 145 MA's), (15, 32216),

Gene: ILeeKay_43 Start: 32364, Stop: 32194, Start Num: 12
Candidate Starts for ILeeKay_43:
(Start: 11 @32373 has 26 MA's), (Start: 12 @32364 has 145 MA's), (15, 32292),

Gene: Ichabod_40 Start: 31653, Stop: 31483, Start Num: 12

Candidate Starts for Ichabod_40:

(Start: 11 @31662 has 26 MA's), (Start: 12 @31653 has 145 MA's), (15, 31581),

Gene: IgnatiusPatJac_39 Start: 31648, Stop: 31478, Start Num: 12

Candidate Starts for IgnatiusPatJac_39:

(Start: 11 @31657 has 26 MA's), (Start: 12 @31648 has 145 MA's), (15, 31576),

Gene: JC27_41 Start: 32318, Stop: 32148, Start Num: 12

Candidate Starts for JC27_41:

(Start: 11 @32327 has 26 MA's), (Start: 12 @32318 has 145 MA's), (15, 32246),

Gene: JackSparrow_42 Start: 32628, Stop: 32458, Start Num: 12

Candidate Starts for JackSparrow_42:

(Start: 11 @32637 has 26 MA's), (Start: 12 @32628 has 145 MA's), (15, 32556),

Gene: Jasper_40 Start: 31336, Stop: 31169, Start Num: 12

Candidate Starts for Jasper_40:

(Start: 12 @31336 has 145 MA's), (15, 31267),

Gene: Jerm2_41 Start: 32352, Stop: 32182, Start Num: 12

Candidate Starts for Jerm2_41:

(Start: 11 @32361 has 26 MA's), (Start: 12 @32352 has 145 MA's), (15, 32280),

Gene: Jorgensen_40 Start: 31743, Stop: 31573, Start Num: 12

Candidate Starts for Jorgensen_40:

(Start: 11 @31752 has 26 MA's), (Start: 12 @31743 has 145 MA's), (15, 31671),

Gene: JuliaChild_41 Start: 32088, Stop: 31918, Start Num: 12

Candidate Starts for JuliaChild_41:

(Start: 11 @32097 has 26 MA's), (Start: 12 @32088 has 145 MA's), (15, 32016),

Gene: Kanely_41 Start: 32387, Stop: 32217, Start Num: 12

Candidate Starts for Kanely_41:

(Start: 11 @32396 has 26 MA's), (Start: 12 @32387 has 145 MA's), (14, 32351), (15, 32315),

Gene: Kenmech_44 Start: 33320, Stop: 33150, Start Num: 12

Candidate Starts for Kenmech_44:

(Start: 11 @33329 has 26 MA's), (Start: 12 @33320 has 145 MA's), (15, 33248),

Gene: KiSi_67 Start: 43442, Stop: 43639, Start Num: 9

Candidate Starts for KiSi_67:

(8, 43412), (Start: 9 @43442 has 24 MA's), (15, 43529),

Gene: Killigrew_39 Start: 31871, Stop: 31704, Start Num: 12

Candidate Starts for Killigrew_39:

(Start: 12 @31871 has 145 MA's), (15, 31802),

Gene: Krueger_66 Start: 42279, Stop: 42470, Start Num: 9

Candidate Starts for Krueger_66:

(1, 42165), (4, 42210), (6, 42240), (8, 42249), (Start: 9 @42279 has 24 MA's), (13, 42315), (15, 42369),

Gene: Kugel_42 Start: 32536, Stop: 32366, Start Num: 12

Candidate Starts for Kugel_42:
(Start: 11 @32545 has 26 MA's), (Start: 12 @32536 has 145 MA's), (15, 32464),

Gene: KyMonks1A_43 Start: 32408, Stop: 32238, Start Num: 12
Candidate Starts for KyMonks1A_43:
(Start: 11 @32417 has 26 MA's), (Start: 12 @32408 has 145 MA's), (15, 32336),

Gene: Kykar_40 Start: 31704, Stop: 31534, Start Num: 12
Candidate Starts for Kykar_40:
(Start: 11 @31713 has 26 MA's), (Start: 12 @31704 has 145 MA's), (15, 31632),

Gene: Lamina13_40 Start: 31497, Stop: 31327, Start Num: 12
Candidate Starts for Lamina13_40:
(Start: 11 @31506 has 26 MA's), (Start: 12 @31497 has 145 MA's), (15, 31425),

Gene: LastHope_66 Start: 41540, Stop: 41734, Start Num: 9
Candidate Starts for LastHope_66:
(Start: 9 @41540 has 24 MA's), (14, 41600),

Gene: LeMond_66 Start: 43076, Stop: 43273, Start Num: 9
Candidate Starts for LeMond_66:
(8, 43046), (Start: 9 @43076 has 24 MA's), (15, 43163),

Gene: Lesedi_38 Start: 31377, Stop: 31207, Start Num: 12
Candidate Starts for Lesedi_38:
(Start: 11 @31386 has 26 MA's), (Start: 12 @31377 has 145 MA's), (15, 31305),

Gene: Licorice_43 Start: 33195, Stop: 33025, Start Num: 12
Candidate Starts for Licorice_43:
(Start: 11 @33204 has 26 MA's), (Start: 12 @33195 has 145 MA's), (15, 33123),

Gene: LilBib_41 Start: 32462, Stop: 32292, Start Num: 12
Candidate Starts for LilBib_41:
(Start: 11 @32471 has 26 MA's), (Start: 12 @32462 has 145 MA's), (15, 32390),

Gene: Lockley_40 Start: 31793, Stop: 31623, Start Num: 12
Candidate Starts for Lockley_40:
(Start: 11 @31802 has 26 MA's), (Start: 12 @31793 has 145 MA's), (15, 31721),

Gene: Lopton_41 Start: 33294, Stop: 33112, Start Num: 12
Candidate Starts for Lopton_41:
(Start: 11 @33303 has 26 MA's), (Start: 12 @33294 has 145 MA's), (15, 33222),

Gene: MPlant7149_39 Start: 31162, Stop: 30992, Start Num: 12
Candidate Starts for MPlant7149_39:
(Start: 11 @31171 has 26 MA's), (Start: 12 @31162 has 145 MA's), (15, 31090),

Gene: MacnCheese_64 Start: 43048, Stop: 43242, Start Num: 9
Candidate Starts for MacnCheese_64:
(Start: 9 @43048 has 24 MA's),

Gene: Magnito_38 Start: 31167, Stop: 30985, Start Num: 12
Candidate Starts for Magnito_38:

(Start: 11 @31176 has 26 MA's), (Start: 12 @31167 has 145 MA's), (15, 31095),

Gene: Makemake_40 Start: 32809, Stop: 32639, Start Num: 12

Candidate Starts for Makemake_40:

(Start: 11 @32818 has 26 MA's), (Start: 12 @32809 has 145 MA's), (15, 32737),

Gene: Manatee_40 Start: 31188, Stop: 31018, Start Num: 12

Candidate Starts for Manatee_40:

(Start: 11 @31197 has 26 MA's), (Start: 12 @31188 has 145 MA's), (15, 31116),

Gene: Marcell_39 Start: 31852, Stop: 31682, Start Num: 12

Candidate Starts for Marcell_39:

(Start: 11 @31861 has 26 MA's), (Start: 12 @31852 has 145 MA's), (15, 31780),

Gene: Marge_40 Start: 32249, Stop: 32070, Start Num: 11

Candidate Starts for Marge_40:

(Start: 11 @32249 has 26 MA's), (Start: 12 @32240 has 145 MA's),

Gene: MaryBeth_40 Start: 31842, Stop: 31672, Start Num: 12

Candidate Starts for MaryBeth_40:

(Start: 11 @31851 has 26 MA's), (Start: 12 @31842 has 145 MA's), (15, 31770),

Gene: McGuire_40 Start: 31484, Stop: 31314, Start Num: 12

Candidate Starts for McGuire_40:

(Start: 11 @31493 has 26 MA's), (Start: 12 @31484 has 145 MA's), (15, 31412),

Gene: MetalQZJ_40 Start: 31842, Stop: 31672, Start Num: 12

Candidate Starts for MetalQZJ_40:

(Start: 11 @31851 has 26 MA's), (Start: 12 @31842 has 145 MA's), (15, 31770),

Gene: Michley_39 Start: 31329, Stop: 31159, Start Num: 12

Candidate Starts for Michley_39:

(Start: 11 @31338 has 26 MA's), (Start: 12 @31329 has 145 MA's), (15, 31257),

Gene: Molly_41 Start: 31396, Stop: 31226, Start Num: 12

Candidate Starts for Molly_41:

(Start: 11 @31405 has 26 MA's), (Start: 12 @31396 has 145 MA's), (15, 31324),

Gene: Monet_44 Start: 33667, Stop: 33488, Start Num: 11

Candidate Starts for Monet_44:

(Start: 11 @33667 has 26 MA's), (Start: 12 @33658 has 145 MA's), (15, 33586),

Gene: Moose_40 Start: 31903, Stop: 31733, Start Num: 12

Candidate Starts for Moose_40:

(Start: 11 @31912 has 26 MA's), (Start: 12 @31903 has 145 MA's), (14, 31867), (15, 31831),

Gene: MrGordo_39 Start: 31201, Stop: 31022, Start Num: 11

Candidate Starts for MrGordo_39:

(Start: 11 @31201 has 26 MA's), (Start: 12 @31192 has 145 MA's), (15, 31120),

Gene: Mryolo_38 Start: 31387, Stop: 31217, Start Num: 12

Candidate Starts for Mryolo_38:

(Start: 11 @31396 has 26 MA's), (Start: 12 @31387 has 145 MA's), (15, 31315),

Gene: Mule_38 Start: 29717, Stop: 29538, Start Num: 11
Candidate Starts for Mule_38:
(Start: 11 @29717 has 26 MA's), (Start: 12 @29708 has 145 MA's), (15, 29636),

Gene: Museum_41 Start: 31462, Stop: 31292, Start Num: 12
Candidate Starts for Museum_41:
(Start: 11 @31471 has 26 MA's), (Start: 12 @31462 has 145 MA's), (15, 31390),

Gene: NEHalo_39 Start: 31421, Stop: 31251, Start Num: 12
Candidate Starts for NEHalo_39:
(Start: 11 @31430 has 26 MA's), (Start: 12 @31421 has 145 MA's), (15, 31349),

Gene: Naira_41 Start: 33492, Stop: 33322, Start Num: 12
Candidate Starts for Naira_41:
(Start: 11 @33501 has 26 MA's), (Start: 12 @33492 has 145 MA's), (15, 33420),

Gene: Nerujay_42 Start: 32529, Stop: 32359, Start Num: 12
Candidate Starts for Nerujay_42:
(Start: 11 @32538 has 26 MA's), (Start: 12 @32529 has 145 MA's), (15, 32457),

Gene: Nhonho_40 Start: 32214, Stop: 32044, Start Num: 12
Candidate Starts for Nhonho_40:
(Start: 11 @32223 has 26 MA's), (Start: 12 @32214 has 145 MA's), (15, 32142),

Gene: Niza_42 Start: 32891, Stop: 32709, Start Num: 12
Candidate Starts for Niza_42:
(Start: 11 @32900 has 26 MA's), (Start: 12 @32891 has 145 MA's), (15, 32819),

Gene: Norz_41 Start: 32339, Stop: 32169, Start Num: 12
Candidate Starts for Norz_41:
(Start: 11 @32348 has 26 MA's), (Start: 12 @32339 has 145 MA's), (15, 32267),

Gene: Oogway_38 Start: 31022, Stop: 30852, Start Num: 12
Candidate Starts for Oogway_38:
(Start: 11 @31031 has 26 MA's), (Start: 12 @31022 has 145 MA's), (15, 30950),

Gene: Oscar_66 Start: 42993, Stop: 43190, Start Num: 9
Candidate Starts for Oscar_66:
(8, 42963), (Start: 9 @42993 has 24 MA's), (15, 43080),

Gene: PSullivan_40 Start: 31416, Stop: 31246, Start Num: 12
Candidate Starts for PSullivan_40:
(Start: 11 @31425 has 26 MA's), (Start: 12 @31416 has 145 MA's), (15, 31344),

Gene: Papez_42 Start: 33553, Stop: 33383, Start Num: 12
Candidate Starts for Papez_42:
(Start: 11 @33562 has 26 MA's), (Start: 12 @33553 has 145 MA's), (15, 33481),

Gene: Paphu_39 Start: 31605, Stop: 31435, Start Num: 12
Candidate Starts for Paphu_39:
(Start: 12 @31605 has 145 MA's), (15, 31533),

Gene: Paraselene_38 Start: 31889, Stop: 31719, Start Num: 12
Candidate Starts for Paraselene_38:
(Start: 11 @31898 has 26 MA's), (Start: 12 @31889 has 145 MA's), (15, 31817),

Gene: Pari_40 Start: 31263, Stop: 31084, Start Num: 11
Candidate Starts for Pari_40:
(Start: 11 @31263 has 26 MA's), (Start: 12 @31254 has 145 MA's), (15, 31182),

Gene: Parliament_39 Start: 32031, Stop: 31861, Start Num: 12
Candidate Starts for Parliament_39:
(Start: 11 @32040 has 26 MA's), (Start: 12 @32031 has 145 MA's), (15, 31959),

Gene: PascalRango_40 Start: 31562, Stop: 31392, Start Num: 12
Candidate Starts for PascalRango_40:
(Start: 11 @31571 has 26 MA's), (Start: 12 @31562 has 145 MA's), (15, 31490),

Gene: PattyP_41 Start: 31752, Stop: 31582, Start Num: 12
Candidate Starts for PattyP_41:
(Start: 11 @31761 has 26 MA's), (Start: 12 @31752 has 145 MA's), (15, 31680),

Gene: Pelly_40 Start: 32286, Stop: 32116, Start Num: 12
Candidate Starts for Pelly_40:
(Start: 11 @32295 has 26 MA's), (Start: 12 @32286 has 145 MA's), (15, 32214),

Gene: Pepe_37 Start: 30001, Stop: 29831, Start Num: 12
Candidate Starts for Pepe_37:
(Start: 11 @30010 has 26 MA's), (Start: 12 @30001 has 145 MA's), (15, 29929),

Gene: Perseus_41 Start: 32568, Stop: 32398, Start Num: 12
Candidate Starts for Perseus_41:
(Start: 11 @32577 has 26 MA's), (Start: 12 @32568 has 145 MA's), (15, 32496),

Gene: Peterson_44 Start: 34140, Stop: 33970, Start Num: 12
Candidate Starts for Peterson_44:
(Start: 12 @34140 has 145 MA's), (15, 34068),

Gene: Petp2012_41 Start: 32380, Stop: 32210, Start Num: 12
Candidate Starts for Petp2012_41:
(Start: 11 @32389 has 26 MA's), (Start: 12 @32380 has 145 MA's), (15, 32308),

Gene: Petruccio_40 Start: 31734, Stop: 31564, Start Num: 12
Candidate Starts for Petruccio_40:
(Start: 11 @31743 has 26 MA's), (Start: 12 @31734 has 145 MA's), (15, 31662),

Gene: Pharb_61 Start: 41817, Stop: 41975, Start Num: 13
Candidate Starts for Pharb_61:
(8, 41751), (Start: 9 @41781 has 24 MA's), (13, 41817), (15, 41871),

Gene: PhelpsODU_63 Start: 41907, Stop: 42098, Start Num: 9
Candidate Starts for PhelpsODU_63:
(3, 41829), (8, 41877), (Start: 9 @41907 has 24 MA's), (13, 41943), (15, 41997),

Gene: PherrisBueller_40 Start: 31350, Stop: 31180, Start Num: 12

Candidate Starts for PherrisBueller_40:
(Start: 11 @31359 has 26 MA's), (Start: 12 @31350 has 145 MA's), (15, 31278),

Gene: Phrank_65 Start: 41971, Stop: 42162, Start Num: 9
Candidate Starts for Phrank_65:
(8, 41941), (Start: 9 @41971 has 24 MA's), (13, 42007), (15, 42061),

Gene: PhrostyMug_40 Start: 31873, Stop: 31694, Start Num: 11
Candidate Starts for PhrostyMug_40:
(Start: 11 @31873 has 26 MA's), (Start: 12 @31864 has 145 MA's), (15, 31792),

Gene: PinkPlastic_38 Start: 31264, Stop: 31094, Start Num: 12
Candidate Starts for PinkPlastic_38:
(Start: 11 @31273 has 26 MA's), (Start: 12 @31264 has 145 MA's), (15, 31192),

Gene: Pinto_41 Start: 31696, Stop: 31526, Start Num: 12
Candidate Starts for Pinto_41:
(Start: 11 @31705 has 26 MA's), (Start: 12 @31696 has 145 MA's), (15, 31624),

Gene: Pippin_42 Start: 32165, Stop: 31995, Start Num: 12
Candidate Starts for Pippin_42:
(Start: 11 @32174 has 26 MA's), (Start: 12 @32165 has 145 MA's), (15, 32093),

Gene: Pita2_43 Start: 32913, Stop: 32743, Start Num: 12
Candidate Starts for Pita2_43:
(Start: 11 @32922 has 26 MA's), (Start: 12 @32913 has 145 MA's), (15, 32841),

Gene: QTRlifeCrisis_44 Start: 32696, Stop: 32517, Start Num: 11
Candidate Starts for QTRlifeCrisis_44:
(Start: 11 @32696 has 26 MA's), (Start: 12 @32687 has 145 MA's), (15, 32615),

Gene: Rajelicia_39 Start: 31650, Stop: 31480, Start Num: 12
Candidate Starts for Rajelicia_39:
(Start: 11 @31659 has 26 MA's), (Start: 12 @31650 has 145 MA's), (15, 31578),

Gene: Rhynn_39 Start: 31665, Stop: 31495, Start Num: 12
Candidate Starts for Rhynn_39:
(Start: 11 @31674 has 26 MA's), (Start: 12 @31665 has 145 MA's), (15, 31593),

Gene: RidgeCB_40 Start: 31700, Stop: 31530, Start Num: 12
Candidate Starts for RidgeCB_40:
(Start: 11 @31709 has 26 MA's), (Start: 12 @31700 has 145 MA's), (15, 31628),

Gene: Ringer_41 Start: 32553, Stop: 32383, Start Num: 12
Candidate Starts for Ringer_41:
(Start: 11 @32562 has 26 MA's), (Start: 12 @32553 has 145 MA's), (15, 32481),

Gene: Rohr_41 Start: 32398, Stop: 32228, Start Num: 12
Candidate Starts for Rohr_41:
(Start: 11 @32407 has 26 MA's), (Start: 12 @32398 has 145 MA's), (15, 32326),

Gene: Rubeus_40 Start: 30178, Stop: 30008, Start Num: 12
Candidate Starts for Rubeus_40:

(Start: 11 @30187 has 26 MA's), (Start: 12 @30178 has 145 MA's), (15, 30106),

Gene: Rufus_41 Start: 32021, Stop: 31851, Start Num: 12

Candidate Starts for Rufus_41:

(Start: 11 @32030 has 26 MA's), (Start: 12 @32021 has 145 MA's), (15, 31949),

Gene: Ruotula_42 Start: 33002, Stop: 32832, Start Num: 12

Candidate Starts for Ruotula_42:

(Start: 11 @33011 has 26 MA's), (Start: 12 @33002 has 145 MA's), (15, 32930),

Gene: Rutherferd_42 Start: 32941, Stop: 32762, Start Num: 11

Candidate Starts for Rutherferd_42:

(Start: 11 @32941 has 26 MA's), (Start: 12 @32932 has 145 MA's), (15, 32860),

Gene: STLscum_41 Start: 32737, Stop: 32531, Start Num: 12

Candidate Starts for STLscum_41:

(Start: 11 @32746 has 26 MA's), (Start: 12 @32737 has 145 MA's), (15, 32665),

Gene: SarFire_39 Start: 31724, Stop: 31554, Start Num: 12

Candidate Starts for SarFire_39:

(2, 31826), (7, 31778), (Start: 12 @31724 has 145 MA's), (15, 31652),

Gene: Scarlett_67 Start: 43320, Stop: 43517, Start Num: 9

Candidate Starts for Scarlett_67:

(8, 43290), (Start: 9 @43320 has 24 MA's), (15, 43407),

Gene: Scowl_40 Start: 32373, Stop: 32203, Start Num: 12

Candidate Starts for Scowl_40:

(Start: 11 @32382 has 26 MA's), (Start: 12 @32373 has 145 MA's), (15, 32301),

Gene: Seabiscuit_41 Start: 31495, Stop: 31325, Start Num: 12

Candidate Starts for Seabiscuit_41:

(Start: 11 @31504 has 26 MA's), (Start: 12 @31495 has 145 MA's), (15, 31423),

Gene: Seanderson_42 Start: 32707, Stop: 32537, Start Num: 12

Candidate Starts for Seanderson_42:

(Start: 11 @32716 has 26 MA's), (Start: 12 @32707 has 145 MA's), (15, 32635),

Gene: Shadow1_66 Start: 42432, Stop: 42623, Start Num: 9

Candidate Starts for Shadow1_66:

(6, 42393), (8, 42402), (Start: 9 @42432 has 24 MA's), (13, 42468), (15, 42522),

Gene: Sibs6_41 Start: 31048, Stop: 30878, Start Num: 12

Candidate Starts for Sibs6_41:

(Start: 11 @31057 has 26 MA's), (Start: 12 @31048 has 145 MA's), (15, 30976),

Gene: SirPhilip_63 Start: 43069, Stop: 43278, Start Num: 9

Candidate Starts for SirPhilip_63:

(Start: 9 @43069 has 24 MA's), (13, 43105), (15, 43159),

Gene: SkiPole_43 Start: 32265, Stop: 32086, Start Num: 10

Candidate Starts for SkiPole_43:

(Start: 10 @32265 has 1 MA's), (14, 32217), (15, 32184),

Gene: Slagathor_40 Start: 31575, Stop: 31405, Start Num: 12
Candidate Starts for Slagathor_40:
(Start: 11 @31584 has 26 MA's), (Start: 12 @31575 has 145 MA's), (15, 31503),

Gene: Smairt_42 Start: 32415, Stop: 32245, Start Num: 12
Candidate Starts for Smairt_42:
(Start: 11 @32424 has 26 MA's), (Start: 12 @32415 has 145 MA's), (15, 32343),

Gene: Smeagol_41 Start: 32897, Stop: 32727, Start Num: 12
Candidate Starts for Smeagol_41:
(2, 32999), (7, 32951), (Start: 12 @32897 has 145 MA's), (15, 32825),

Gene: Snazzy_38 Start: 31451, Stop: 31281, Start Num: 12
Candidate Starts for Snazzy_38:
(Start: 11 @31460 has 26 MA's), (Start: 12 @31451 has 145 MA's), (15, 31379),

Gene: Solon_40 Start: 32186, Stop: 32007, Start Num: 11
Candidate Starts for Solon_40:
(Start: 11 @32186 has 26 MA's), (Start: 12 @32177 has 145 MA's), (15, 32105),

Gene: SpikeBT_41 Start: 32528, Stop: 32358, Start Num: 12
Candidate Starts for SpikeBT_41:
(Start: 11 @32537 has 26 MA's), (Start: 12 @32528 has 145 MA's), (15, 32456),

Gene: Squee_40 Start: 32302, Stop: 32132, Start Num: 12
Candidate Starts for Squee_40:
(Start: 11 @32311 has 26 MA's), (Start: 12 @32302 has 145 MA's), (15, 32230),

Gene: StewieG_39 Start: 29735, Stop: 29565, Start Num: 12
Candidate Starts for StewieG_39:
(Start: 11 @29744 has 26 MA's), (Start: 12 @29735 has 145 MA's), (15, 29663),

Gene: StrongArm_39 Start: 32757, Stop: 32587, Start Num: 12
Candidate Starts for StrongArm_39:
(Start: 11 @32766 has 26 MA's), (Start: 12 @32757 has 145 MA's), (15, 32685),

Gene: Sunflower1121_67 Start: 42578, Stop: 42769, Start Num: 9
Candidate Starts for Sunflower1121_67:
(6, 42539), (8, 42548), (Start: 9 @42578 has 24 MA's), (13, 42614), (15, 42668),

Gene: Sunshine924_41 Start: 31586, Stop: 31416, Start Num: 12
Candidate Starts for Sunshine924_41:
(Start: 11 @31595 has 26 MA's), (Start: 12 @31586 has 145 MA's), (15, 31514),

Gene: SwissCheese_42 Start: 32403, Stop: 32233, Start Num: 12
Candidate Starts for SwissCheese_42:
(Start: 11 @32412 has 26 MA's), (Start: 12 @32403 has 145 MA's), (14, 32367), (15, 32331),

Gene: Switzer_40 Start: 31591, Stop: 31421, Start Num: 12
Candidate Starts for Switzer_40:
(Start: 11 @31600 has 26 MA's), (Start: 12 @31591 has 145 MA's), (15, 31519),

Gene: Swole_41 Start: 31563, Stop: 31393, Start Num: 12
Candidate Starts for Swole_41:
(Start: 11 @31572 has 26 MA's), (Start: 12 @31563 has 145 MA's), (15, 31491),

Gene: Syra333_65 Start: 42291, Stop: 42482, Start Num: 9
Candidate Starts for Syra333_65:
(8, 42261), (Start: 9 @42291 has 24 MA's), (13, 42327),

Gene: Target_41 Start: 30960, Stop: 30790, Start Num: 12
Candidate Starts for Target_41:
(Start: 11 @30969 has 26 MA's), (Start: 12 @30960 has 145 MA's), (15, 30888),

Gene: Tasp14_41 Start: 32121, Stop: 31951, Start Num: 12
Candidate Starts for Tasp14_41:
(Start: 11 @32130 has 26 MA's), (Start: 12 @32121 has 145 MA's), (15, 32049),

Gene: Teodoridan_38 Start: 31202, Stop: 31023, Start Num: 11
Candidate Starts for Teodoridan_38:
(Start: 11 @31202 has 26 MA's), (Start: 12 @31193 has 145 MA's), (14, 31157), (15, 31121),

Gene: TheloniousMonk_41 Start: 33133, Stop: 32963, Start Num: 12
Candidate Starts for TheloniousMonk_41:
(Start: 11 @33142 has 26 MA's), (Start: 12 @33133 has 145 MA's), (15, 33061),

Gene: Thor_39 Start: 31082, Stop: 30912, Start Num: 12
Candidate Starts for Thor_39:
(2, 31184), (7, 31136), (Start: 12 @31082 has 145 MA's), (15, 31010),

Gene: Tierra_65 Start: 42782, Stop: 42973, Start Num: 9
Candidate Starts for Tierra_65:
(8, 42752), (Start: 9 @42782 has 24 MA's), (13, 42818), (15, 42872),

Gene: Topgun_40 Start: 31721, Stop: 31551, Start Num: 12
Candidate Starts for Topgun_40:
(Start: 11 @31730 has 26 MA's), (Start: 12 @31721 has 145 MA's), (15, 31649),

Gene: Tote_36 Start: 28830, Stop: 28660, Start Num: 12
Candidate Starts for Tote_36:
(Start: 11 @28839 has 26 MA's), (Start: 12 @28830 has 145 MA's), (15, 28758),

Gene: Traft412_41 Start: 32653, Stop: 32483, Start Num: 12
Candidate Starts for Traft412_41:
(Start: 11 @32662 has 26 MA's), (Start: 12 @32653 has 145 MA's), (15, 32581),

Gene: Treddle_42 Start: 33176, Stop: 33006, Start Num: 12
Candidate Starts for Treddle_42:
(Start: 11 @33185 has 26 MA's), (Start: 12 @33176 has 145 MA's), (15, 33104),

Gene: TribelTrouble_62 Start: 42947, Stop: 43141, Start Num: 9
Candidate Starts for TribelTrouble_62:
(8, 42917), (Start: 9 @42947 has 24 MA's),

Gene: Tripl3t_40 Start: 32581, Stop: 32411, Start Num: 12

Candidate Starts for Trip13t_40:
(Start: 11 @32590 has 26 MA's), (Start: 12 @32581 has 145 MA's), (15, 32509),

Gene: Trouble_41 Start: 32820, Stop: 32650, Start Num: 12
Candidate Starts for Trouble_41:
(Start: 11 @32829 has 26 MA's), (Start: 12 @32820 has 145 MA's), (15, 32748),

Gene: Turj99_38 Start: 31437, Stop: 31255, Start Num: 12
Candidate Starts for Turj99_38:
(Start: 11 @31446 has 26 MA's), (Start: 12 @31437 has 145 MA's), (15, 31365),

Gene: TwoPeat_39 Start: 31881, Stop: 31711, Start Num: 12
Candidate Starts for TwoPeat_39:
(Start: 11 @31890 has 26 MA's), (Start: 12 @31881 has 145 MA's), (15, 31809),

Gene: U2_39 Start: 31574, Stop: 31404, Start Num: 12
Candidate Starts for U2_39:
(Start: 11 @31583 has 26 MA's), (Start: 12 @31574 has 145 MA's), (15, 31502),

Gene: Unicorn_63 Start: 41907, Stop: 42098, Start Num: 9
Candidate Starts for Unicorn_63:
(3, 41829), (8, 41877), (Start: 9 @41907 has 24 MA's), (13, 41943), (15, 41997),

Gene: Validus_66 Start: 42988, Stop: 43194, Start Num: 9
Candidate Starts for Validus_66:
(8, 42958), (Start: 9 @42988 has 24 MA's), (Start: 11 @43003 has 26 MA's),

Gene: Violet_38 Start: 32008, Stop: 31829, Start Num: 11
Candidate Starts for Violet_38:
(Start: 11 @32008 has 26 MA's), (Start: 12 @31999 has 145 MA's), (14, 31963), (15, 31927),

Gene: Watermelon_42 Start: 32616, Stop: 32437, Start Num: 11
Candidate Starts for Watermelon_42:
(Start: 11 @32616 has 26 MA's), (Start: 12 @32607 has 145 MA's), (15, 32535),

Gene: Wheeler_41 Start: 32297, Stop: 32127, Start Num: 12
Candidate Starts for Wheeler_41:
(Start: 11 @32306 has 26 MA's), (Start: 12 @32297 has 145 MA's), (15, 32225),

Gene: Ximenita_67 Start: 42617, Stop: 42808, Start Num: 9
Candidate Starts for Ximenita_67:
(5, 42566), (8, 42587), (Start: 9 @42617 has 24 MA's), (13, 42653), (15, 42707), (16, 42740),

Gene: Yuna_67 Start: 43685, Stop: 43879, Start Num: 9
Candidate Starts for Yuna_67:
(8, 43655), (Start: 9 @43685 has 24 MA's), (15, 43775),

Gene: Yunkel11_66 Start: 42224, Stop: 42418, Start Num: 9
Candidate Starts for Yunkel11_66:
(Start: 9 @42224 has 24 MA's), (14, 42284),

Gene: Zeeculate_39 Start: 32272, Stop: 32105, Start Num: 12
Candidate Starts for Zeeculate_39:

(Start: 11 @32281 has 26 MA's), (Start: 12 @32272 has 145 MA's), (15, 32203),

Gene: Zephyr_40 Start: 31983, Stop: 31813, Start Num: 12

Candidate Starts for Zephyr_40:

(Start: 11 @31992 has 26 MA's), (Start: 12 @31983 has 145 MA's), (15, 31911),

Gene: Zeuska_40 Start: 32234, Stop: 32055, Start Num: 11

Candidate Starts for Zeuska_40:

(Start: 11 @32234 has 26 MA's), (Start: 12 @32225 has 145 MA's), (15, 32153),