

Pham 169616



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 169616 Report

This analysis was run 07/09/24 on database version 566.

Pham number 169616 has 208 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Jorgensen_100, Ashballer_91, Applejack_88, Edtherson_87, Bob3_90, Abrogate_880, Sunshine924_93, Rutherferd_91, Topgun_89, Gandalf20_90, Wilkins_90, StewieG_86, SkiPole_98, RidgeCB_89, Solon_83, Paraselene_87
- Track 2 : Monet_92, Bxb1_84, Treddle_90, Homines_83, Fushigi_84, Crispicous1_86
- Track 3 : BaconJack_94
- Track 4 : Kugel_94, Petp2012_89, Arcanine_94, Pelly_91, Tripl3t_91, Arlo_96, Zephyr_92, Bigfoot_86, Ohno789_95, Kykar_88, Moose_95, Atkinbua_98, Kenmech_93, Ajay_84, NEHalo_88, Pepe_86, Rajelicia_89, Bruns_96, BillKnuckles_86, Turj99_86, Acme_91, MetalQZJ_88, GageAP_90, Ciao_94, DrFeelGood_85, Hermia_84, Maroc7_92, Sibs6_95, Magnar_91, Niza_89, Euphoria_95, Sorpresa_89, Greg_90, MaryBeth_91, Carlyle_91, MrGordo_92, Fajezeel_90, Fascinus_86, STLscum_100, DreamCatcher_102, Adahisdi_85, Oogway_87, Traft412_86, lLeeKay_91, Sanya_81, BigPaolini_85, Ruotula_94, ConceptII_97, SwissCheese_95, Alvin_86, Dussy_87, GrecoEtereo_92, Museum_90, Dexes_93, Forsytheast_96, AFIS_88, Rufus_93, Bethlehem_87, Corvo_94, Eyeball_94, Rubeus_88, TheloniousMonk_90, Hope4ever_88, Sandaddy_90, Abbyshoes_89, Burton_90, Chanagan_91, Lopton_88, Wheeler_96, CactusRose_96, Snazzy_92, SpikeBT_87, PattyP_92
- Track 5 : Violet_87
- Track 6 : KSSJEB_91, Altman_94, Kanely_93, Seanderson_89
- Track 7 : HanShotFirst_90
- Track 8 : Anglerfish_93
- Track 9 : Pippin_93
- Track 10 : Scowl_90
- Track 11 : Papez_93, Michley_91, Graduation_93
- Track 12 : Francis47_93, LilBib_80, Agaliana_87, Slagathor_92, Marcell_83, Pinto_87, Norz_90, PacerPaul_93, Seabiscuit_95
- Track 13 : Teodoridan_93, Espresso_87, Payneful_73, Mryolo_84, Marchy_77
- Track 14 : TwoPeat_88, Molly_89, PSullivan_87, Swole_88, KBG_87, JuliaChild_91, Tote_86, Pita2_91, Doom_84
- Track 15 : Parliament_90
- Track 16 : Squee_92, Naira_96, Fenn_97
- Track 17 : KyMonks1A_96, Licorice_91, Target_90
- Track 18 : Mule_92, PhrostyMug_94, Smairt_97, Trouble_90, Tasp14_87, Perseus_90, JackSparrow_92
- Track 19 : Ichabod_96, Thor_98, SarFire_98, BPBiebs31_97

- Track 20 : Sagefire_86, Barriga_101, Lamina13_93, HermioneGrange_94, Nerujay_93, JC27_94, Jerm2_90, Sumter_87, Nhonho_87, Marsha_93, HarryOW_91, Rohr_92, BigMau_91, Marge_87, Aeneas_96, Hami1_83, MPlant7149_90
- Track 21 : QTRlifeCrisis_86
- Track 22 : Dynamix_92, Briton15_95, Switzer_91
- Track 23 : Bones_86
- Track 24 : Ringer_90
- Track 25 : ShortQueendom_80
- Track 26 : BeesKnees_95, Jasper_93, Dreamboat_93, McGuire_92
- Track 27 : Smeagol_90
- Track 28 : Petruccio_88
- Track 29 : Watermelon_89
- Track 30 : Paphu_87
- Track 31 : Rhynn_85
- Track 32 : Magnito_91
- Track 33 : PascalRango_92, Manatee_92
- Track 34 : Gyzlar_83
- Track 35 : Peterson_90
- Track 36 : Frogopper_79
- Track 37 : Buttons_85
- Track 38 : Aneem_90, MaCh_89, TinyTimmy_87, Munch_88, Joselito_87, Bowtie_85, Ebony_88, Gilberta_87, Petersenfast_83, Orange_89, Mabel_89, Snape_89, Lucivia_90, Timothy_89
- Track 39 : Bud_82
- Track 40 : Flaverint_90
- Track 41 : HINdeR_81
- Track 42 : PP_04
- Track 43 : JacoRen57_68

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

The start number called the most often in the published annotations is 28, it was called in 122 of the 194 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AFIS_88, Abbyshoes_89, Acme_91, Adahisdi_85, Agaliana_87, Ajay_84, Altman_94, Alvin_86, Anglerfish_93, Arcanine_94, Arlo_96, Atkinbua_98, BeesKnees_95, Bethlehem_87, BigPaolini_85, Bigfoot_86, BillKnuckles_86, Bruns_96, Burton_90, Buttons_85, Bxb1_84, CactusRose_96, Carlyle_91, Chanagan_91, Ciao_94, ConceptII_97, Corvo_94, Crispicous1_86, Dexes_93, Doom_84, DrFeelGood_85, DreamCatcher_102, Dreamboat_93, Dussy_87, Espresso_87, Euphoria_95, Eyeball_94, Fajezeel_90, Fascinus_86, Fenn_97, Forsytheast_96, Francis47_93, Frogopper_79, Fushigi_84, GageAP_90, GrecoEtereo_92, Greg_90, Gyzlar_83, Hermia_84, Homines_83, Hope4ever_88, ILeeKay_91, Jasper_93, JuliaChild_91, KBG_87, KSSJEB_91, Kanely_93, Kenmech_93, Kugel_94, KyMonks1A_96, Kykar_88, Licorice_91, LilBib_80, Lopton_88, Magnar_91, Magnito_91, Manatee_92, Marcell_83, Marchy_77, Maroc7_92, MaryBeth_91, McGuire_92, MetalQZJ_88, Molly_89, Monet_92, Moose_95, MrGordo_92, Mryolo_84, Museum_90, NEHalo_88, Naira_96, Niza_89,

Norz_90, Ohno789_95, Oogway_87, PSullivan_87, PacerPaul_93, Paphu_87, PascalRango_92, PattyP_92, Payneful_73, Pelly_91, Pepe_86, Petp2012_89, Petruccio_88, Pinto_87, Pita2_91, QTRlifeCrisis_86, Rajelicia_89, Rhynn_85, Ringer_90, Rubeus_88, Rufus_93, Ruotula_94, STLscum_100, Sandaddy_90, Sanya_81, Scowl_90, Seabiscuit_95, Seanderson_89, ShortQueendom_80, Sibs6_95, Slagathor_92, Snazzy_92, Sorpresa_89, SpikeBT_87, Squee_92, SwissCheese_95, Swole_88, Target_90, Teodoridan_93, TheloniousMonk_90, Tote_86, Traft412_86, Treddle_90, Tripl3t_91, Turj99_86, TwoPeat_88, Violet_87, Watermelon_89, Wheeler_96, Zephyr_92,

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

- BPBiebs31_97, Briton15_95, Dynamix_92, Graduation_93, HINdeR_81, HanShotFirst_90, Ichabod_96, Michley_91, PP_04, Papez_93, SarFire_98, Switzer_91, Thor_98,

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

- Abrogate_880, Aeneas_96, Aneem_90, Applejack_88, Ashballer_91, BaconJack_94, Barriga_101, BigMau_91, Bob3_90, Bones_86, Bowtie_85, Bud_82, Ebony_88, Edtherson_87, Flaverint_90, Gandalf20_90, Gilberta_87, Hami1_83, HarryOW_91, HermioneGrange_94, JC27_94, JackSparrow_92, JacoRen57_68, Jerm2_90, Jorgensen_100, Joselito_87, Lamina13_93, Lucivia_90, MPlant7149_90, MaCh_89, Mabel_89, Marge_87, Marsha_93, Mule_92, Munch_88, Nerujay_93, Nhonho_87, Orange_89, Paraselene_87, Parliament_90, Perseus_90, Petersenfast_83, Peterson_90, PhrostyMug_94, Pippin_93, RidgeCB_89, Rohr_92, Rutherford_91, Sagefire_86, SkiPole_98, Smairt_97, Smeagol_90, Snape_89, Solon_83, StewieG_86, Sumter_87, Sunshine924_93, Tasp14_87, Timothy_89, TinyTimmy_87, Topgun_89, Trouble_90, Wilkins_90,

Summary by start number:

Start 17:

- Found in 10 of 208 (4.8%) of genes in pham
- Manual Annotations of this start: 7 of 194
- Called 70.0% of time when present
- Phage (with cluster) where this start called: BPBiebs31_97 (A1), Briton15_95 (A1), Dynamix_92 (A1), Ichabod_96 (A1), SarFire_98 (A1), Switzer_91 (A1), Thor_98 (A1),

Start 18:

- Found in 3 of 208 (1.4%) of genes in pham
- Manual Annotations of this start: 3 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Graduation_93 (A1), Michley_91 (A1), Papez_93 (A1),

Start 22:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HINdeR_81 (A7),

Start 23:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 194

- Called 100.0% of time when present
- Phage (with cluster) where this start called: PP_04 (A7),

Start 24:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JacoRen57_68 (AB),

Start 25:

- Found in 2 of 208 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 50.0% of time when present
- Phage (with cluster) where this start called: HanShotFirst_90 (A1),

Start 26:

- Found in 44 of 208 (21.2%) of genes in pham
- Manual Annotations of this start: 42 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abrogate_880 (A1), Aeneas_96 (A1), Applejack_88 (A1), Ashballer_91 (A1), BaconJack_94 (A1), Barriga_101 (A1), BigMau_91 (A1), Bob3_90 (A1), Bones_86 (A1), Edtherson_87 (A1), Gandalf20_90 (A1), Hami1_83 (A1), HarryOW_91 (A1), HermioneGrange_94 (A1), JC27_94 (A1), JackSparrow_92 (A1), Jerm2_90 (A1), Jorgensen_100 (A1), Lamina13_93 (A1), MPlant7149_90 (A1), Marge_87 (A1), Marsha_93 (A1), Mule_92 (A1), Nerujay_93 (A1), Nhonho_87 (A1), Paraselene_87 (A1), Parliament_90 (A1), Perseus_90 (A1), PhrostyMug_94 (A1), Pippin_93 (A1), RidgeCB_89 (A1), Rohr_92 (A1), Rutherford_91 (A1), Sagefire_86 (A1), SkiPole_98 (A1), Smairt_97 (A1), Solon_83 (A1), StewieG_86 (A1), Sumter_87 (A1), Sunshine924_93 (A1), Tasp14_87 (A1), Topgun_89 (A1), Trouble_90 (A1), Wilkins_90 (A1),

Start 27:

- Found in 2 of 208 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Peterson_90 (A1), Smeagol_90 (A1),

Start 28:

- Found in 145 of 208 (69.7%) of genes in pham
- Manual Annotations of this start: 122 of 194
- Called 91.0% of time when present
- Phage (with cluster) where this start called: AFIS_88 (A1), Abbyshoes_89 (A1), Acme_91 (A1), Adahisdi_85 (A1), Agaliana_87 (A1), Ajay_84 (A1), Altman_94 (A1), Alvin_86 (A1), Anglerfish_93 (A1), Arcanine_94 (A1), Arlo_96 (A1), Atkinbua_98 (A1), BeesKnees_95 (A1), Bethlehem_87 (A1), BigPaolini_85 (A1), Bigfoot_86 (A1), BillKnuckles_86 (A1), Bruns_96 (A1), Burton_90 (A1), Buttons_85 (A1), Bxb1_84 (A1), CactusRose_96 (A1), Carlyle_91 (A1), Chanagan_91 (A1), Ciao_94 (A1), ConceptII_97 (A1), Corvo_94 (A1), Crispicous1_86 (A1), Dexes_93 (A1), Doom_84 (A1), DrFeelGood_85 (A1), DreamCatcher_102 (A1), Dreamboat_93 (A1), Dussy_87 (A1), Espresso_87 (A1), Euphoria_95 (A1), Eyeball_94 (A1), Fajezeel_90 (A1), Fascinus_86 (A1), Fenn_97 (A1), Forsytheast_96 (A1), Francis47_93 (A1), Froghopper_79 (A1), Fushigi_84 (A1), GageAP_90 (A1), GrecoEtereo_92 (A1), Greg_90 (A1), Gyzlar_83 (A1), Hermia_84 (A1), Homines_83 (A1), Hope4ever_88

(A1), ILeeKay_91 (A1), Jasper_93 (A1), JuliaChild_91 (A1), KBG_87 (A1), KSSJEB_91 (A1), Kanely_93 (A1), Kenmech_93 (A1), Kugel_94 (A1), KyMonks1A_96 (A1), Kykar_88 (A1), Licorice_91 (A1), LilBib_80 (A1), Lopton_88 (A1), Magnar_91 (A1), Magnito_91 (A1), Manatee_92 (A1), Marcell_83 (A1), Marchy_77 (A1), Maroc7_92 (A1), MaryBeth_91 (A1), McGuire_92 (A1), MetalQZJ_88 (A1), Molly_89 (A1), Monet_92 (A1), Moose_95 (A1), MrGordo_92 (A1), Mryolo_84 (A1), Museum_90 (A1), NEHalo_88 (A1), Naira_96 (A1), Niza_89 (A1), Norz_90 (A1), Ohno789_95 (A1), Oogway_87 (A1), PSullivan_87 (A1), PacerPaul_93 (A1), Paphu_87 (A1), PascalRango_92 (A1), PattyP_92 (A1), Payneful_73 (A1), Pelly_91 (A1), Pepe_86 (A1), Petp2012_89 (A1), Petruccio_88 (A1), Pinto_87 (A1), Pita2_91 (A1), QTRlifeCrisis_86 (A1), Rajelicia_89 (A1), Rhynn_85 (A1), Ringer_90 (A1), Rubeus_88 (A1), Rufus_93 (A1), Ruotula_94 (A1), STLscum_100 (A1), Sandaddy_90 (A1), Sanya_81 (A1), Scowl_90 (A1), Seabiscuit_95 (A1), Seanderson_89 (A1), ShortQueendom_80 (A1), Sibs6_95 (A1), Slagathor_92 (A1), Snazzy_92 (A1), Sorpresa_89 (A1), SpikeBT_87 (A1), Squee_92 (A1), SwissCheese_95 (A1), Swole_88 (A1), Target_90 (A1), Teodoridan_93 (A1), TheloniousMonk_90 (A1), Tote_86 (A1), Traft412_86 (A1), Treddle_90 (A1), Tripl3t_91 (A1), Turj99_86 (A1), TwoPeat_88 (A1), Violet_87 (A1), Watermelon_89 (A1), Wheeler_96 (A1), Zephyr_92 (A1),

Start 29:

- Found in 16 of 208 (7.7%) of genes in pham
- Manual Annotations of this start: 14 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aneem_90 (A11), Bowtie_85 (A11), Bud_82 (A11), Ebony_88 (A11), Flaverint_90 (A11), Gilberta_87 (A11), Joselito_87 (A11), Lucivia_90 (A11), MaCh_89 (A11), Mabel_89 (A11), Munch_88 (A11), Orange_89 (A11), Petersenfast_83 (A11), Snape_89 (A11), Timothy_89 (A11), TinyTimmy_87 (A11),

Summary by clusters:

There are 4 clusters represented in this pham: A1, AB, A11, A7,

Info for manual annotations of cluster A1:

- Start number 17 was manually annotated 7 times for cluster A1.
- Start number 18 was manually annotated 3 times for cluster A1.
- Start number 25 was manually annotated 1 time for cluster A1.
- Start number 26 was manually annotated 42 times for cluster A1.
- Start number 27 was manually annotated 2 times for cluster A1.
- Start number 28 was manually annotated 122 times for cluster A1.

Info for manual annotations of cluster A11:

- Start number 29 was manually annotated 14 times for cluster A11.

Info for manual annotations of cluster A7:

- Start number 22 was manually annotated 1 time for cluster A7.
- Start number 23 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster AB:

- Start number 24 was manually annotated 1 time for cluster AB.

Gene Information:

Gene: AFIS_88 Start: 51338, Stop: 51135, Start Num: 28

Candidate Starts for AFIS_88:

(Start: 28 @51338 has 122 MA's), (38, 51203),

Gene: Abbyshoes_89 Start: 50942, Stop: 50739, Start Num: 28

Candidate Starts for Abbyshoes_89:

(Start: 28 @50942 has 122 MA's), (38, 50807),

Gene: Abrogate_880 Start: 50891, Stop: 51097, Start Num: 26

Candidate Starts for Abrogate_880:

(Start: 26 @50891 has 42 MA's), (38, 51029), (43, 51089),

Gene: Acme_91 Start: 51412, Stop: 51209, Start Num: 28

Candidate Starts for Acme_91:

(Start: 28 @51412 has 122 MA's), (38, 51277),

Gene: Adahisdi_85 Start: 51316, Stop: 51113, Start Num: 28

Candidate Starts for Adahisdi_85:

(Start: 28 @51316 has 122 MA's), (38, 51181),

Gene: Aeneas_96 Start: 52191, Stop: 52397, Start Num: 26

Candidate Starts for Aeneas_96:

(Start: 26 @52191 has 42 MA's), (38, 52329),

Gene: Agaliana_87 Start: 49294, Stop: 49091, Start Num: 28

Candidate Starts for Agaliana_87:

(Start: 28 @49294 has 122 MA's),

Gene: Ajay_84 Start: 49128, Stop: 48925, Start Num: 28

Candidate Starts for Ajay_84:

(Start: 28 @49128 has 122 MA's), (38, 48993),

Gene: Altman_94 Start: 52124, Stop: 51921, Start Num: 28

Candidate Starts for Altman_94:

(Start: 28 @52124 has 122 MA's), (38, 51989),

Gene: Alvin_86 Start: 49180, Stop: 48977, Start Num: 28

Candidate Starts for Alvin_86:

(Start: 28 @49180 has 122 MA's), (38, 49045),

Gene: Aneem_90 Start: 48299, Stop: 48102, Start Num: 29

Candidate Starts for Aneem_90:

(Start: 29 @48299 has 14 MA's), (39, 48170), (43, 48113),

Gene: Anglerfish_93 Start: 51993, Stop: 51790, Start Num: 28

Candidate Starts for Anglerfish_93:

(Start: 28 @51993 has 122 MA's), (38, 51858), (41, 51822),

Gene: Applejack_88 Start: 48130, Stop: 48336, Start Num: 26

Candidate Starts for Applejack_88:

(Start: 26 @48130 has 42 MA's), (38, 48268), (43, 48328),

Gene: Arcanine_94 Start: 51887, Stop: 51687, Start Num: 28
Candidate Starts for Arcanine_94:
(Start: 28 @51887 has 122 MA's), (38, 51755),

Gene: Arlo_96 Start: 52566, Stop: 52363, Start Num: 28
Candidate Starts for Arlo_96:
(Start: 28 @52566 has 122 MA's), (38, 52431),

Gene: Ashballer_91 Start: 50593, Stop: 50799, Start Num: 26
Candidate Starts for Ashballer_91:
(Start: 26 @50593 has 42 MA's), (38, 50731), (43, 50791),

Gene: Atkinbua_98 Start: 52558, Stop: 52355, Start Num: 28
Candidate Starts for Atkinbua_98:
(Start: 28 @52558 has 122 MA's), (38, 52423),

Gene: BPBiebs31_97 Start: 52824, Stop: 52570, Start Num: 17
Candidate Starts for BPBiebs31_97:
(Start: 17 @52824 has 7 MA's), (Start: 28 @52773 has 122 MA's), (38, 52638),

Gene: BaconJack_94 Start: 52144, Stop: 52350, Start Num: 26
Candidate Starts for BaconJack_94:
(Start: 26 @52144 has 42 MA's), (38, 52282), (43, 52342),

Gene: Barriga_101 Start: 51933, Stop: 52139, Start Num: 26
Candidate Starts for Barriga_101:
(Start: 26 @51933 has 42 MA's), (38, 52071),

Gene: BeesKnees_95 Start: 51081, Stop: 50878, Start Num: 28
Candidate Starts for BeesKnees_95:
(Start: 28 @51081 has 122 MA's), (38, 50946),

Gene: Bethlehem_87 Start: 51847, Stop: 51644, Start Num: 28
Candidate Starts for Bethlehem_87:
(Start: 28 @51847 has 122 MA's), (38, 51712),

Gene: BigMau_91 Start: 51153, Stop: 51362, Start Num: 26
Candidate Starts for BigMau_91:
(Start: 26 @51153 has 42 MA's), (38, 51291),

Gene: BigPaolini_85 Start: 49205, Stop: 49005, Start Num: 28
Candidate Starts for BigPaolini_85:
(Start: 28 @49205 has 122 MA's), (38, 49073),

Gene: Bigfoot_86 Start: 51251, Stop: 51048, Start Num: 28
Candidate Starts for Bigfoot_86:
(Start: 28 @51251 has 122 MA's), (38, 51116),

Gene: BillKnuckles_86 Start: 51482, Stop: 51279, Start Num: 28
Candidate Starts for BillKnuckles_86:
(Start: 28 @51482 has 122 MA's), (38, 51347),

Gene: Bob3_90 Start: 50587, Stop: 50793, Start Num: 26
Candidate Starts for Bob3_90:
(Start: 26 @50587 has 42 MA's), (38, 50725), (43, 50785),

Gene: Bones_86 Start: 51038, Stop: 51244, Start Num: 26
Candidate Starts for Bones_86:
(Start: 26 @51038 has 42 MA's), (38, 51176),

Gene: Bowtie_85 Start: 46906, Stop: 46709, Start Num: 29
Candidate Starts for Bowtie_85:
(Start: 29 @46906 has 14 MA's), (39, 46777), (43, 46720),

Gene: Briton15_95 Start: 52689, Stop: 52435, Start Num: 17
Candidate Starts for Briton15_95:
(Start: 17 @52689 has 7 MA's), (Start: 28 @52638 has 122 MA's),

Gene: Bruns_96 Start: 52614, Stop: 52411, Start Num: 28
Candidate Starts for Bruns_96:
(Start: 28 @52614 has 122 MA's), (38, 52479),

Gene: Bud_82 Start: 46736, Stop: 46539, Start Num: 29
Candidate Starts for Bud_82:
(1, 47042), (Start: 29 @46736 has 14 MA's), (39, 46607), (43, 46550),

Gene: Burton_90 Start: 52230, Stop: 52027, Start Num: 28
Candidate Starts for Burton_90:
(Start: 28 @52230 has 122 MA's), (38, 52095),

Gene: Buttons_85 Start: 48633, Stop: 48430, Start Num: 28
Candidate Starts for Buttons_85:
(Start: 28 @48633 has 122 MA's), (38, 48498), (43, 48438),

Gene: Bxb1_84 Start: 48903, Stop: 49112, Start Num: 28
Candidate Starts for Bxb1_84:
(Start: 28 @48903 has 122 MA's), (38, 49044), (43, 49104),

Gene: CactusRose_96 Start: 52264, Stop: 52061, Start Num: 28
Candidate Starts for CactusRose_96:
(Start: 28 @52264 has 122 MA's), (38, 52129),

Gene: Carlyle_91 Start: 50831, Stop: 50628, Start Num: 28
Candidate Starts for Carlyle_91:
(Start: 28 @50831 has 122 MA's), (38, 50696),

Gene: Chanagan_91 Start: 50342, Stop: 50139, Start Num: 28
Candidate Starts for Chanagan_91:
(Start: 28 @50342 has 122 MA's), (38, 50207),

Gene: Ciao_94 Start: 50559, Stop: 50362, Start Num: 28
Candidate Starts for Ciao_94:
(Start: 28 @50559 has 122 MA's), (38, 50430),

Gene: ConceptII_97 Start: 52890, Stop: 52687, Start Num: 28

Candidate Starts for ConceptII_97:
(Start: 28 @52890 has 122 MA's), (38, 52755),

Gene: Corvo_94 Start: 52995, Stop: 52792, Start Num: 28
Candidate Starts for Corvo_94:
(Start: 28 @52995 has 122 MA's), (38, 52860),

Gene: Crispicous1_86 Start: 49167, Stop: 49370, Start Num: 28
Candidate Starts for Crispicous1_86:
(Start: 28 @49167 has 122 MA's), (38, 49302), (43, 49362),

Gene: Dexes_93 Start: 53941, Stop: 53738, Start Num: 28
Candidate Starts for Dexes_93:
(Start: 28 @53941 has 122 MA's), (38, 53806),

Gene: Doom_84 Start: 50622, Stop: 50419, Start Num: 28
Candidate Starts for Doom_84:
(8, 50769), (10, 50757), (12, 50733), (Start: 28 @50622 has 122 MA's), (38, 50487), (43, 50427),

Gene: DrFeelGood_85 Start: 49766, Stop: 49563, Start Num: 28
Candidate Starts for DrFeelGood_85:
(Start: 28 @49766 has 122 MA's), (38, 49631),

Gene: DreamCatcher_102 Start: 53024, Stop: 52821, Start Num: 28
Candidate Starts for DreamCatcher_102:
(Start: 28 @53024 has 122 MA's), (38, 52889),

Gene: Dreamboat_93 Start: 50459, Stop: 50256, Start Num: 28
Candidate Starts for Dreamboat_93:
(Start: 28 @50459 has 122 MA's), (38, 50324),

Gene: Dussy_87 Start: 50962, Stop: 50759, Start Num: 28
Candidate Starts for Dussy_87:
(Start: 28 @50962 has 122 MA's), (38, 50827),

Gene: Dynamix_92 Start: 50284, Stop: 50030, Start Num: 17
Candidate Starts for Dynamix_92:
(Start: 17 @50284 has 7 MA's), (Start: 28 @50233 has 122 MA's),

Gene: Ebony_88 Start: 47870, Stop: 47673, Start Num: 29
Candidate Starts for Ebony_88:
(Start: 29 @47870 has 14 MA's), (39, 47741), (43, 47684),

Gene: Edtherson_87 Start: 49832, Stop: 50038, Start Num: 26
Candidate Starts for Edtherson_87:
(Start: 26 @49832 has 42 MA's), (38, 49970), (43, 50030),

Gene: Espresso_87 Start: 50463, Stop: 50666, Start Num: 28
Candidate Starts for Espresso_87:
(Start: 28 @50463 has 122 MA's), (38, 50598),

Gene: Euphoria_95 Start: 53188, Stop: 52985, Start Num: 28
Candidate Starts for Euphoria_95:

(Start: 28 @53188 has 122 MA's), (38, 53053),

Gene: Eyeball_94 Start: 51846, Stop: 51643, Start Num: 28

Candidate Starts for Eyeball_94:

(Start: 28 @51846 has 122 MA's), (38, 51711),

Gene: Fajezeel_90 Start: 50702, Stop: 50499, Start Num: 28

Candidate Starts for Fajezeel_90:

(Start: 28 @50702 has 122 MA's), (38, 50567),

Gene: Fascinus_86 Start: 51761, Stop: 51558, Start Num: 28

Candidate Starts for Fascinus_86:

(Start: 28 @51761 has 122 MA's), (38, 51626),

Gene: Fenn_97 Start: 52841, Stop: 52638, Start Num: 28

Candidate Starts for Fenn_97:

(Start: 28 @52841 has 122 MA's), (38, 52706),

Gene: Flaverint_90 Start: 48297, Stop: 48100, Start Num: 29

Candidate Starts for Flaverint_90:

(Start: 29 @48297 has 14 MA's), (39, 48168), (40, 48150), (43, 48111),

Gene: Forsytheast_96 Start: 52313, Stop: 52110, Start Num: 28

Candidate Starts for Forsytheast_96:

(Start: 28 @52313 has 122 MA's), (38, 52178),

Gene: Francis47_93 Start: 53565, Stop: 53362, Start Num: 28

Candidate Starts for Francis47_93:

(Start: 28 @53565 has 122 MA's),

Gene: Froghopper_79 Start: 47225, Stop: 47428, Start Num: 28

Candidate Starts for Froghopper_79:

(Start: 25 @47216 has 1 MA's), (Start: 28 @47225 has 122 MA's), (38, 47357),

Gene: Fushigi_84 Start: 48765, Stop: 48968, Start Num: 28

Candidate Starts for Fushigi_84:

(Start: 28 @48765 has 122 MA's), (38, 48900), (43, 48960),

Gene: GageAP_90 Start: 51509, Stop: 51306, Start Num: 28

Candidate Starts for GageAP_90:

(Start: 28 @51509 has 122 MA's), (38, 51374),

Gene: Gandalf20_90 Start: 50084, Stop: 50290, Start Num: 26

Candidate Starts for Gandalf20_90:

(Start: 26 @50084 has 42 MA's), (38, 50222), (43, 50282),

Gene: Gilberta_87 Start: 47173, Stop: 46976, Start Num: 29

Candidate Starts for Gilberta_87:

(Start: 29 @47173 has 14 MA's), (39, 47044), (43, 46987),

Gene: Graduation_93 Start: 51162, Stop: 50911, Start Num: 18

Candidate Starts for Graduation_93:

(Start: 18 @51162 has 3 MA's), (Start: 28 @51114 has 122 MA's), (38, 50979),

Gene: GrecoEtereo_92 Start: 51814, Stop: 51611, Start Num: 28

Candidate Starts for GrecoEtereo_92:

(Start: 28 @51814 has 122 MA's), (38, 51679),

Gene: Greg_90 Start: 50702, Stop: 50499, Start Num: 28

Candidate Starts for Greg_90:

(Start: 28 @50702 has 122 MA's), (38, 50567),

Gene: Gyzlar_83 Start: 47405, Stop: 47608, Start Num: 28

Candidate Starts for Gyzlar_83:

(13, 47294), (Start: 28 @47405 has 122 MA's), (38, 47540), (43, 47600),

Gene: HINdeR_81 Start: 50361, Stop: 50110, Start Num: 22

Candidate Starts for HINdeR_81:

(21, 50364), (Start: 22 @50361 has 1 MA's), (Start: 28 @50316 has 122 MA's), (32, 50265), (34, 50247), (39, 50175),

Gene: Hami1_83 Start: 46210, Stop: 46416, Start Num: 26

Candidate Starts for Hami1_83:

(Start: 26 @46210 has 42 MA's), (38, 46348),

Gene: HanShotFirst_90 Start: 51379, Stop: 51594, Start Num: 25

Candidate Starts for HanShotFirst_90:

(5, 51163), (Start: 25 @51379 has 1 MA's), (Start: 28 @51388 has 122 MA's), (38, 51523),

Gene: HarryOW_91 Start: 51434, Stop: 51640, Start Num: 26

Candidate Starts for HarryOW_91:

(Start: 26 @51434 has 42 MA's), (38, 51572),

Gene: Hermia_84 Start: 49274, Stop: 49071, Start Num: 28

Candidate Starts for Hermia_84:

(Start: 28 @49274 has 122 MA's), (38, 49139),

Gene: HermioneGrange_94 Start: 51648, Stop: 51857, Start Num: 26

Candidate Starts for HermioneGrange_94:

(Start: 26 @51648 has 42 MA's), (38, 51786),

Gene: Homines_83 Start: 46852, Stop: 47055, Start Num: 28

Candidate Starts for Homines_83:

(Start: 28 @46852 has 122 MA's), (38, 46987), (43, 47047),

Gene: Hope4ever_88 Start: 50126, Stop: 49923, Start Num: 28

Candidate Starts for Hope4ever_88:

(Start: 28 @50126 has 122 MA's), (38, 49991),

Gene: ILeeKay_91 Start: 50632, Stop: 50429, Start Num: 28

Candidate Starts for ILeeKay_91:

(Start: 28 @50632 has 122 MA's), (38, 50497),

Gene: Ichabod_96 Start: 52974, Stop: 52720, Start Num: 17

Candidate Starts for Ichabod_96:

(Start: 17 @52974 has 7 MA's), (Start: 28 @52923 has 122 MA's), (38, 52788),

Gene: JC27_94 Start: 50665, Stop: 50871, Start Num: 26

Candidate Starts for JC27_94:

(Start: 26 @50665 has 42 MA's), (38, 50803),

Gene: JackSparrow_92 Start: 50104, Stop: 50310, Start Num: 26

Candidate Starts for JackSparrow_92:

(Start: 26 @50104 has 42 MA's), (38, 50242),

Gene: JacoRen57_68 Start: 49553, Stop: 49792, Start Num: 24

Candidate Starts for JacoRen57_68:

(Start: 24 @49553 has 1 MA's), (31, 49622), (36, 49661), (41, 49754), (42, 49775),

Gene: Jasper_93 Start: 50345, Stop: 50142, Start Num: 28

Candidate Starts for Jasper_93:

(Start: 28 @50345 has 122 MA's), (38, 50210),

Gene: Jerm2_90 Start: 51717, Stop: 51926, Start Num: 26

Candidate Starts for Jerm2_90:

(Start: 26 @51717 has 42 MA's), (38, 51855),

Gene: Jorgensen_100 Start: 52124, Stop: 52330, Start Num: 26

Candidate Starts for Jorgensen_100:

(Start: 26 @52124 has 42 MA's), (38, 52262), (43, 52322),

Gene: Joselito_87 Start: 48051, Stop: 47854, Start Num: 29

Candidate Starts for Joselito_87:

(Start: 29 @48051 has 14 MA's), (39, 47922), (43, 47865),

Gene: JuliaChild_91 Start: 51435, Stop: 51232, Start Num: 28

Candidate Starts for JuliaChild_91:

(8, 51582), (10, 51570), (12, 51546), (Start: 28 @51435 has 122 MA's), (38, 51300), (43, 51240),

Gene: KBG_87 Start: 52193, Stop: 51990, Start Num: 28

Candidate Starts for KBG_87:

(8, 52340), (10, 52328), (12, 52304), (Start: 28 @52193 has 122 MA's), (38, 52058), (43, 51998),

Gene: KSSJEB_91 Start: 50745, Stop: 50542, Start Num: 28

Candidate Starts for KSSJEB_91:

(Start: 28 @50745 has 122 MA's), (38, 50610),

Gene: Kanely_93 Start: 51901, Stop: 51698, Start Num: 28

Candidate Starts for Kanely_93:

(Start: 28 @51901 has 122 MA's), (38, 51766),

Gene: Kenmech_93 Start: 52088, Stop: 51885, Start Num: 28

Candidate Starts for Kenmech_93:

(Start: 28 @52088 has 122 MA's), (38, 51953),

Gene: Kugel_94 Start: 51995, Stop: 51792, Start Num: 28

Candidate Starts for Kugel_94:

(Start: 28 @51995 has 122 MA's), (38, 51860),

Gene: KyMonks1A_96 Start: 51763, Stop: 51560, Start Num: 28
Candidate Starts for KyMonks1A_96:
(Start: 28 @51763 has 122 MA's), (38, 51628), (43, 51568),

Gene: Kykar_88 Start: 49910, Stop: 49701, Start Num: 28
Candidate Starts for Kykar_88:
(Start: 28 @49910 has 122 MA's), (38, 49769),

Gene: Lamina13_93 Start: 51757, Stop: 51963, Start Num: 26
Candidate Starts for Lamina13_93:
(Start: 26 @51757 has 42 MA's), (38, 51895),

Gene: Licorice_91 Start: 52878, Stop: 52678, Start Num: 28
Candidate Starts for Licorice_91:
(Start: 28 @52878 has 122 MA's), (38, 52746), (43, 52686),

Gene: LilBib_80 Start: 49937, Stop: 49734, Start Num: 28
Candidate Starts for LilBib_80:
(Start: 28 @49937 has 122 MA's),

Gene: Lopton_88 Start: 52012, Stop: 51809, Start Num: 28
Candidate Starts for Lopton_88:
(Start: 28 @52012 has 122 MA's), (38, 51877),

Gene: Lucivia_90 Start: 48330, Stop: 48133, Start Num: 29
Candidate Starts for Lucivia_90:
(Start: 29 @48330 has 14 MA's), (39, 48201), (43, 48144),

Gene: MPlant7149_90 Start: 49878, Stop: 50087, Start Num: 26
Candidate Starts for MPlant7149_90:
(Start: 26 @49878 has 42 MA's), (38, 50016),

Gene: MaCh_89 Start: 48294, Stop: 48097, Start Num: 29
Candidate Starts for MaCh_89:
(Start: 29 @48294 has 14 MA's), (39, 48165), (43, 48108),

Gene: Mabel_89 Start: 48295, Stop: 48098, Start Num: 29
Candidate Starts for Mabel_89:
(Start: 29 @48295 has 14 MA's), (39, 48166), (43, 48109),

Gene: Magnar_91 Start: 51040, Stop: 50837, Start Num: 28
Candidate Starts for Magnar_91:
(Start: 28 @51040 has 122 MA's), (38, 50905),

Gene: Magnito_91 Start: 51185, Stop: 50982, Start Num: 28
Candidate Starts for Magnito_91:
(11, 51299), (19, 51236), (Start: 28 @51185 has 122 MA's), (38, 51050),

Gene: Manatee_92 Start: 50646, Stop: 50443, Start Num: 28
Candidate Starts for Manatee_92:
(Start: 17 @50697 has 7 MA's), (Start: 28 @50646 has 122 MA's),

Gene: Marcell_83 Start: 48789, Stop: 48586, Start Num: 28

Candidate Starts for Marcell_83:
(Start: 28 @48789 has 122 MA's),

Gene: Marchy_77 Start: 47255, Stop: 47052, Start Num: 28
Candidate Starts for Marchy_77:
(Start: 28 @47255 has 122 MA's), (38, 47120),

Gene: Marge_87 Start: 49768, Stop: 49974, Start Num: 26
Candidate Starts for Marge_87:
(Start: 26 @49768 has 42 MA's), (38, 49906),

Gene: Maroc7_92 Start: 52980, Stop: 52777, Start Num: 28
Candidate Starts for Maroc7_92:
(Start: 28 @52980 has 122 MA's), (38, 52845),

Gene: Marsha_93 Start: 52954, Stop: 53160, Start Num: 26
Candidate Starts for Marsha_93:
(Start: 26 @52954 has 42 MA's), (38, 53092),

Gene: MaryBeth_91 Start: 51469, Stop: 51266, Start Num: 28
Candidate Starts for MaryBeth_91:
(Start: 28 @51469 has 122 MA's), (38, 51334),

Gene: McGuire_92 Start: 50898, Stop: 50695, Start Num: 28
Candidate Starts for McGuire_92:
(Start: 28 @50898 has 122 MA's), (38, 50763),

Gene: MetalQZJ_88 Start: 51469, Stop: 51266, Start Num: 28
Candidate Starts for MetalQZJ_88:
(Start: 28 @51469 has 122 MA's), (38, 51334),

Gene: Michley_91 Start: 50597, Stop: 50346, Start Num: 18
Candidate Starts for Michley_91:
(Start: 18 @50597 has 3 MA's), (Start: 28 @50549 has 122 MA's), (38, 50414),

Gene: Molly_89 Start: 49678, Stop: 49475, Start Num: 28
Candidate Starts for Molly_89:
(8, 49825), (10, 49813), (12, 49789), (Start: 28 @49678 has 122 MA's), (38, 49543), (43, 49483),

Gene: Monet_92 Start: 51735, Stop: 51938, Start Num: 28
Candidate Starts for Monet_92:
(Start: 28 @51735 has 122 MA's), (38, 51870), (43, 51930),

Gene: Moose_95 Start: 52313, Stop: 52110, Start Num: 28
Candidate Starts for Moose_95:
(Start: 28 @52313 has 122 MA's), (38, 52178),

Gene: MrGordo_92 Start: 50603, Stop: 50400, Start Num: 28
Candidate Starts for MrGordo_92:
(Start: 28 @50603 has 122 MA's), (38, 50468),

Gene: Mryolo_84 Start: 48769, Stop: 48972, Start Num: 28
Candidate Starts for Mryolo_84:

(Start: 28 @48769 has 122 MA's), (38, 48904),

Gene: Mule_92 Start: 49973, Stop: 50179, Start Num: 26

Candidate Starts for Mule_92:

(Start: 26 @49973 has 42 MA's), (38, 50111),

Gene: Munch_88 Start: 48299, Stop: 48102, Start Num: 29

Candidate Starts for Munch_88:

(Start: 29 @48299 has 14 MA's), (39, 48170), (43, 48113),

Gene: Museum_90 Start: 51040, Stop: 50837, Start Num: 28

Candidate Starts for Museum_90:

(Start: 28 @51040 has 122 MA's), (38, 50905),

Gene: NEHalo_88 Start: 50148, Stop: 49945, Start Num: 28

Candidate Starts for NEHalo_88:

(Start: 28 @50148 has 122 MA's), (38, 50013),

Gene: Naira_96 Start: 52973, Stop: 52770, Start Num: 28

Candidate Starts for Naira_96:

(Start: 28 @52973 has 122 MA's), (38, 52838),

Gene: Nerujay_93 Start: 51720, Stop: 51926, Start Num: 26

Candidate Starts for Nerujay_93:

(Start: 26 @51720 has 42 MA's), (38, 51858),

Gene: Nhonho_87 Start: 50646, Stop: 50852, Start Num: 26

Candidate Starts for Nhonho_87:

(Start: 26 @50646 has 42 MA's), (38, 50784),

Gene: Niza_89 Start: 51286, Stop: 51083, Start Num: 28

Candidate Starts for Niza_89:

(Start: 28 @51286 has 122 MA's), (38, 51151),

Gene: Norz_90 Start: 53476, Stop: 53273, Start Num: 28

Candidate Starts for Norz_90:

(Start: 28 @53476 has 122 MA's),

Gene: Ohno789_95 Start: 52428, Stop: 52225, Start Num: 28

Candidate Starts for Ohno789_95:

(Start: 28 @52428 has 122 MA's), (38, 52293),

Gene: Oogway_87 Start: 51358, Stop: 51155, Start Num: 28

Candidate Starts for Oogway_87:

(Start: 28 @51358 has 122 MA's), (38, 51223),

Gene: Orange_89 Start: 47849, Stop: 47652, Start Num: 29

Candidate Starts for Orange_89:

(Start: 29 @47849 has 14 MA's), (39, 47720), (43, 47663),

Gene: PP_04 Start: 1143, Stop: 901, Start Num: 23

Candidate Starts for PP_04:

(Start: 23 @1143 has 1 MA's), (Start: 28 @1104 has 122 MA's), (30, 1074), (33, 1035), (35, 1026), (39, 966),

Gene: PSullivan_87 Start: 49195, Stop: 48992, Start Num: 28

Candidate Starts for PSullivan_87:

(8, 49342), (10, 49330), (12, 49306), (Start: 28 @49195 has 122 MA's), (38, 49060), (43, 49000),

Gene: PacerPaul_93 Start: 52361, Stop: 52158, Start Num: 28

Candidate Starts for PacerPaul_93:

(Start: 28 @52361 has 122 MA's),

Gene: Papez_93 Start: 51585, Stop: 51337, Start Num: 18

Candidate Starts for Papez_93:

(Start: 18 @51585 has 3 MA's), (Start: 28 @51537 has 122 MA's), (38, 51405),

Gene: Paphu_87 Start: 49638, Stop: 49841, Start Num: 28

Candidate Starts for Paphu_87:

(Start: 28 @49638 has 122 MA's), (38, 49773),

Gene: Paraselene_87 Start: 49509, Stop: 49715, Start Num: 26

Candidate Starts for Paraselene_87:

(Start: 26 @49509 has 42 MA's), (38, 49647), (43, 49707),

Gene: Parliament_90 Start: 52239, Stop: 52445, Start Num: 26

Candidate Starts for Parliament_90:

(Start: 26 @52239 has 42 MA's), (38, 52377),

Gene: PascalRango_92 Start: 52074, Stop: 51871, Start Num: 28

Candidate Starts for PascalRango_92:

(Start: 17 @52125 has 7 MA's), (Start: 28 @52074 has 122 MA's),

Gene: PattyP_92 Start: 51679, Stop: 51476, Start Num: 28

Candidate Starts for PattyP_92:

(Start: 28 @51679 has 122 MA's), (38, 51544),

Gene: Payneful_73 Start: 46347, Stop: 46144, Start Num: 28

Candidate Starts for Payneful_73:

(Start: 28 @46347 has 122 MA's), (38, 46212),

Gene: Pelly_91 Start: 53346, Stop: 53143, Start Num: 28

Candidate Starts for Pelly_91:

(Start: 28 @53346 has 122 MA's), (38, 53211),

Gene: Pepe_86 Start: 50134, Stop: 49931, Start Num: 28

Candidate Starts for Pepe_86:

(Start: 28 @50134 has 122 MA's), (38, 49999),

Gene: Perseus_90 Start: 51769, Stop: 51975, Start Num: 26

Candidate Starts for Perseus_90:

(Start: 26 @51769 has 42 MA's), (38, 51907),

Gene: Petersenfast_83 Start: 46730, Stop: 46533, Start Num: 29

Candidate Starts for Petersenfast_83:

(Start: 29 @46730 has 14 MA's), (39, 46601), (43, 46544),

Gene: Peterson_90 Start: 51816, Stop: 51607, Start Num: 27

Candidate Starts for Peterson_90:

(2, 52101), (3, 52062), (4, 52059), (5, 52044), (6, 51996), (7, 51975), (9, 51960), (14, 51915), (15, 51909), (16, 51903), (Start: 27 @51816 has 2 MA's), (30, 51783), (37, 51711), (43, 51615),

Gene: Petp2012_89 Start: 51326, Stop: 51123, Start Num: 28

Candidate Starts for Petp2012_89:

(Start: 28 @51326 has 122 MA's), (38, 51191),

Gene: Petruccio_88 Start: 48718, Stop: 48515, Start Num: 28

Candidate Starts for Petruccio_88:

(Start: 28 @48718 has 122 MA's), (38, 48583), (43, 48523),

Gene: PhrostyMug_94 Start: 52143, Stop: 52349, Start Num: 26

Candidate Starts for PhrostyMug_94:

(Start: 26 @52143 has 42 MA's), (38, 52281),

Gene: Pinto_87 Start: 50214, Stop: 50011, Start Num: 28

Candidate Starts for Pinto_87:

(Start: 28 @50214 has 122 MA's),

Gene: Pippin_93 Start: 50646, Stop: 50852, Start Num: 26

Candidate Starts for Pippin_93:

(Start: 26 @50646 has 42 MA's), (38, 50784),

Gene: Pita2_91 Start: 50691, Stop: 50488, Start Num: 28

Candidate Starts for Pita2_91:

(8, 50838), (10, 50826), (12, 50802), (Start: 28 @50691 has 122 MA's), (38, 50556), (43, 50496),

Gene: QTRlifeCrisis_86 Start: 49246, Stop: 49043, Start Num: 28

Candidate Starts for QTRlifeCrisis_86:

(Start: 17 @49297 has 7 MA's), (Start: 28 @49246 has 122 MA's), (38, 49111),

Gene: Rajelicia_89 Start: 52457, Stop: 52257, Start Num: 28

Candidate Starts for Rajelicia_89:

(Start: 28 @52457 has 122 MA's), (38, 52325),

Gene: Rhynn_85 Start: 50726, Stop: 50926, Start Num: 28

Candidate Starts for Rhynn_85:

(Start: 28 @50726 has 122 MA's),

Gene: RidgeCB_89 Start: 49216, Stop: 49422, Start Num: 26

Candidate Starts for RidgeCB_89:

(Start: 26 @49216 has 42 MA's), (38, 49354), (43, 49414),

Gene: Ringer_90 Start: 51410, Stop: 51210, Start Num: 28

Candidate Starts for Ringer_90:

(Start: 28 @51410 has 122 MA's), (38, 51278),

Gene: Rohr_92 Start: 51968, Stop: 52177, Start Num: 26

Candidate Starts for Rohr_92:

(Start: 26 @51968 has 42 MA's), (38, 52106),

Gene: Rubeus_88 Start: 48657, Stop: 48454, Start Num: 28

Candidate Starts for Rubeus_88:

(Start: 28 @48657 has 122 MA's), (38, 48522),

Gene: Rufus_93 Start: 51974, Stop: 51771, Start Num: 28

Candidate Starts for Rufus_93:

(Start: 28 @51974 has 122 MA's), (38, 51839),

Gene: Ruotula_94 Start: 52218, Stop: 52015, Start Num: 28

Candidate Starts for Ruotula_94:

(Start: 28 @52218 has 122 MA's), (38, 52083),

Gene: Rutherferd_91 Start: 50676, Stop: 50882, Start Num: 26

Candidate Starts for Rutherferd_91:

(Start: 26 @50676 has 42 MA's), (38, 50814), (43, 50874),

Gene: STLscum_100 Start: 51894, Stop: 51691, Start Num: 28

Candidate Starts for STLscum_100:

(Start: 28 @51894 has 122 MA's), (38, 51759),

Gene: Sagefire_86 Start: 50112, Stop: 50318, Start Num: 26

Candidate Starts for Sagefire_86:

(Start: 26 @50112 has 42 MA's), (38, 50250),

Gene: Sandaddy_90 Start: 51546, Stop: 51343, Start Num: 28

Candidate Starts for Sandaddy_90:

(Start: 28 @51546 has 122 MA's), (38, 51411),

Gene: Sanya_81 Start: 50361, Stop: 50158, Start Num: 28

Candidate Starts for Sanya_81:

(Start: 28 @50361 has 122 MA's), (38, 50226),

Gene: SarFire_98 Start: 53353, Stop: 53099, Start Num: 17

Candidate Starts for SarFire_98:

(Start: 17 @53353 has 7 MA's), (Start: 28 @53302 has 122 MA's), (38, 53167),

Gene: Scowl_90 Start: 50695, Stop: 50898, Start Num: 28

Candidate Starts for Scowl_90:

(Start: 28 @50695 has 122 MA's), (38, 50827),

Gene: Seabiscuit_95 Start: 51387, Stop: 51184, Start Num: 28

Candidate Starts for Seabiscuit_95:

(Start: 28 @51387 has 122 MA's),

Gene: Seanderson_89 Start: 52624, Stop: 52421, Start Num: 28

Candidate Starts for Seanderson_89:

(Start: 28 @52624 has 122 MA's), (38, 52489),

Gene: ShortQueendom_80 Start: 48241, Stop: 48038, Start Num: 28

Candidate Starts for ShortQueendom_80:

(20, 48289), (Start: 28 @48241 has 122 MA's), (38, 48106),

Gene: Sibs6_95 Start: 49833, Stop: 49630, Start Num: 28
Candidate Starts for Sibs6_95:
(Start: 28 @49833 has 122 MA's), (38, 49698),

Gene: SkiPole_98 Start: 51505, Stop: 51711, Start Num: 26
Candidate Starts for SkiPole_98:
(Start: 26 @51505 has 42 MA's), (38, 51643), (43, 51703),

Gene: Slagathor_92 Start: 51592, Stop: 51389, Start Num: 28
Candidate Starts for Slagathor_92:
(Start: 28 @51592 has 122 MA's),

Gene: Smairt_97 Start: 53160, Stop: 53366, Start Num: 26
Candidate Starts for Smairt_97:
(Start: 26 @53160 has 42 MA's), (38, 53298),

Gene: Smeagol_90 Start: 52545, Stop: 52336, Start Num: 27
Candidate Starts for Smeagol_90:
(6, 52725), (7, 52704), (9, 52689), (14, 52644), (15, 52638), (16, 52632), (Start: 27 @52545 has 2 MA's), (30, 52512), (37, 52440), (43, 52344),

Gene: Snape_89 Start: 47838, Stop: 47641, Start Num: 29
Candidate Starts for Snape_89:
(Start: 29 @47838 has 14 MA's), (39, 47709), (43, 47652),

Gene: Snazzy_92 Start: 51835, Stop: 51632, Start Num: 28
Candidate Starts for Snazzy_92:
(Start: 28 @51835 has 122 MA's), (38, 51700),

Gene: Solon_83 Start: 47822, Stop: 48028, Start Num: 26
Candidate Starts for Solon_83:
(Start: 26 @47822 has 42 MA's), (38, 47960), (43, 48020),

Gene: Sorpresa_89 Start: 51552, Stop: 51349, Start Num: 28
Candidate Starts for Sorpresa_89:
(Start: 28 @51552 has 122 MA's), (38, 51417),

Gene: SpikeBT_87 Start: 49792, Stop: 49589, Start Num: 28
Candidate Starts for SpikeBT_87:
(Start: 28 @49792 has 122 MA's), (38, 49657),

Gene: Squee_92 Start: 51943, Stop: 51740, Start Num: 28
Candidate Starts for Squee_92:
(Start: 28 @51943 has 122 MA's), (38, 51808),

Gene: StewieG_86 Start: 47748, Stop: 47954, Start Num: 26
Candidate Starts for StewieG_86:
(Start: 26 @47748 has 42 MA's), (38, 47886), (43, 47946),

Gene: Sumter_87 Start: 51154, Stop: 51363, Start Num: 26
Candidate Starts for Sumter_87:
(Start: 26 @51154 has 42 MA's), (38, 51292),

Gene: Sunshine924_93 Start: 49690, Stop: 49896, Start Num: 26

Candidate Starts for Sunshine924_93:

(Start: 26 @49690 has 42 MA's), (38, 49828), (43, 49888),

Gene: SwissCheese_95 Start: 51439, Stop: 51236, Start Num: 28

Candidate Starts for SwissCheese_95:

(Start: 28 @51439 has 122 MA's), (38, 51304),

Gene: Switzer_91 Start: 51956, Stop: 51702, Start Num: 17

Candidate Starts for Switzer_91:

(Start: 17 @51956 has 7 MA's), (Start: 28 @51905 has 122 MA's),

Gene: Swole_88 Start: 50909, Stop: 50706, Start Num: 28

Candidate Starts for Swole_88:

(8, 51056), (10, 51044), (12, 51020), (Start: 28 @50909 has 122 MA's), (38, 50774), (43, 50714),

Gene: Target_90 Start: 48713, Stop: 48510, Start Num: 28

Candidate Starts for Target_90:

(Start: 28 @48713 has 122 MA's), (38, 48578), (43, 48518),

Gene: Tasp14_87 Start: 49921, Stop: 50127, Start Num: 26

Candidate Starts for Tasp14_87:

(Start: 26 @49921 has 42 MA's), (38, 50059),

Gene: Teodoridan_93 Start: 50495, Stop: 50698, Start Num: 28

Candidate Starts for Teodoridan_93:

(Start: 28 @50495 has 122 MA's), (38, 50630),

Gene: TheloniousMonk_90 Start: 51663, Stop: 51460, Start Num: 28

Candidate Starts for TheloniousMonk_90:

(Start: 28 @51663 has 122 MA's), (38, 51528),

Gene: Thor_98 Start: 52711, Stop: 52457, Start Num: 17

Candidate Starts for Thor_98:

(Start: 17 @52711 has 7 MA's), (Start: 28 @52660 has 122 MA's), (38, 52525),

Gene: Timothy_89 Start: 47815, Stop: 47618, Start Num: 29

Candidate Starts for Timothy_89:

(Start: 29 @47815 has 14 MA's), (39, 47686), (43, 47629),

Gene: TinyTimmy_87 Start: 47544, Stop: 47347, Start Num: 29

Candidate Starts for TinyTimmy_87:

(Start: 29 @47544 has 14 MA's), (39, 47415), (43, 47358),

Gene: Topgun_89 Start: 49318, Stop: 49524, Start Num: 26

Candidate Starts for Topgun_89:

(Start: 26 @49318 has 42 MA's), (38, 49456), (43, 49516),

Gene: Tote_86 Start: 48177, Stop: 47974, Start Num: 28

Candidate Starts for Tote_86:

(8, 48324), (10, 48312), (12, 48288), (Start: 28 @48177 has 122 MA's), (38, 48042), (43, 47982),

Gene: Traft412_86 Start: 50830, Stop: 50627, Start Num: 28
Candidate Starts for Traft412_86:
(Start: 28 @50830 has 122 MA's), (38, 50695),

Gene: Treddle_90 Start: 51379, Stop: 51582, Start Num: 28
Candidate Starts for Treddle_90:
(Start: 28 @51379 has 122 MA's), (38, 51514), (43, 51574),

Gene: Tripl3t_91 Start: 53185, Stop: 52982, Start Num: 28
Candidate Starts for Tripl3t_91:
(Start: 28 @53185 has 122 MA's), (38, 53050),

Gene: Trouble_90 Start: 50598, Stop: 50804, Start Num: 26
Candidate Starts for Trouble_90:
(Start: 26 @50598 has 42 MA's), (38, 50736),

Gene: Turj99_86 Start: 50763, Stop: 50560, Start Num: 28
Candidate Starts for Turj99_86:
(Start: 28 @50763 has 122 MA's), (38, 50628),

Gene: TwoPeat_88 Start: 50371, Stop: 50168, Start Num: 28
Candidate Starts for TwoPeat_88:
(8, 50518), (10, 50506), (12, 50482), (Start: 28 @50371 has 122 MA's), (38, 50236), (43, 50176),

Gene: Violet_87 Start: 50920, Stop: 51123, Start Num: 28
Candidate Starts for Violet_87:
(Start: 28 @50920 has 122 MA's), (38, 51055), (43, 51115),

Gene: Watermelon_89 Start: 50581, Stop: 50378, Start Num: 28
Candidate Starts for Watermelon_89:
(Start: 28 @50581 has 122 MA's), (38, 50446),

Gene: Wheeler_96 Start: 53218, Stop: 53015, Start Num: 28
Candidate Starts for Wheeler_96:
(Start: 28 @53218 has 122 MA's), (38, 53083),

Gene: Wilkins_90 Start: 49248, Stop: 49454, Start Num: 26
Candidate Starts for Wilkins_90:
(Start: 26 @49248 has 42 MA's), (38, 49386), (43, 49446),

Gene: Zephyr_92 Start: 51932, Stop: 51723, Start Num: 28
Candidate Starts for Zephyr_92:
(Start: 28 @51932 has 122 MA's), (38, 51791),