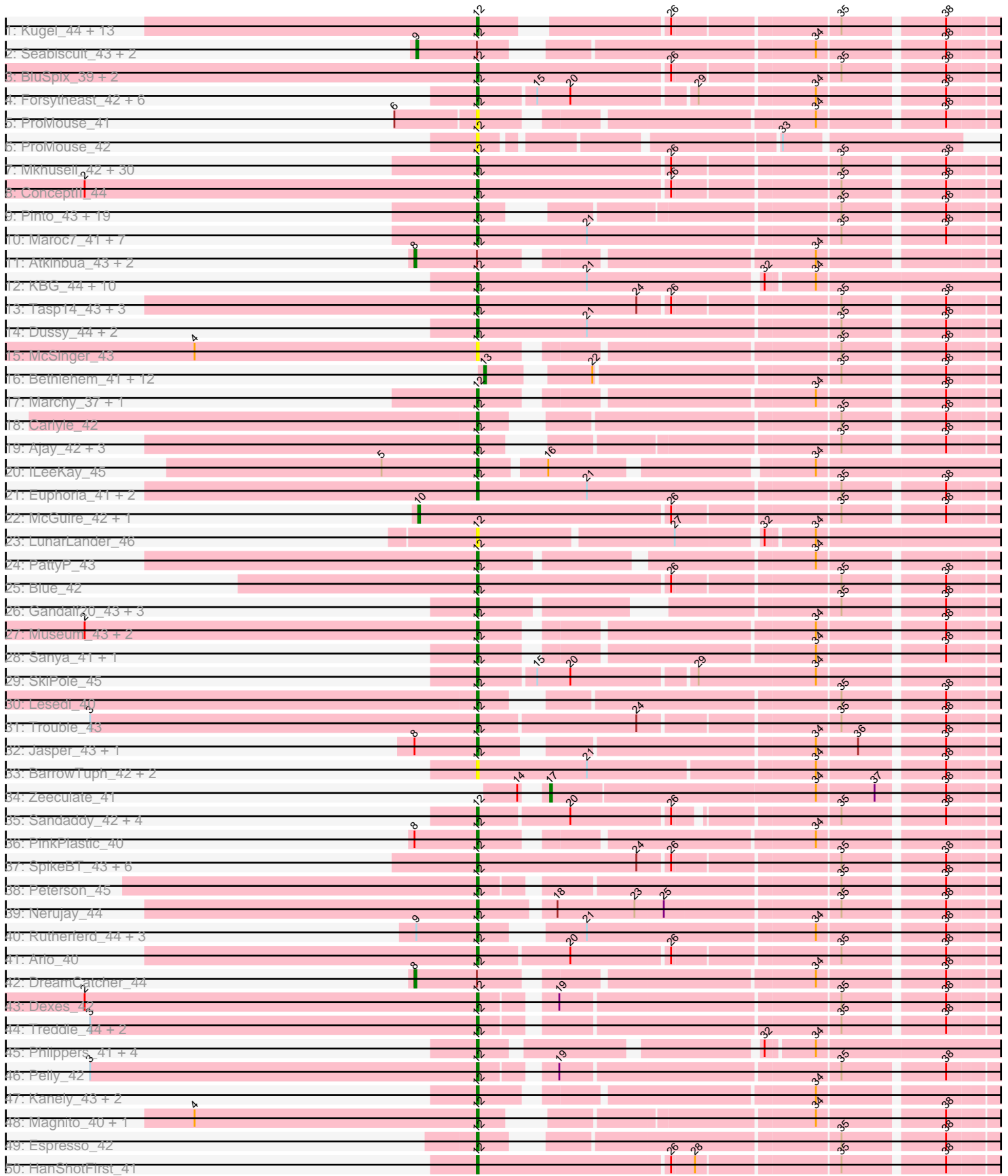
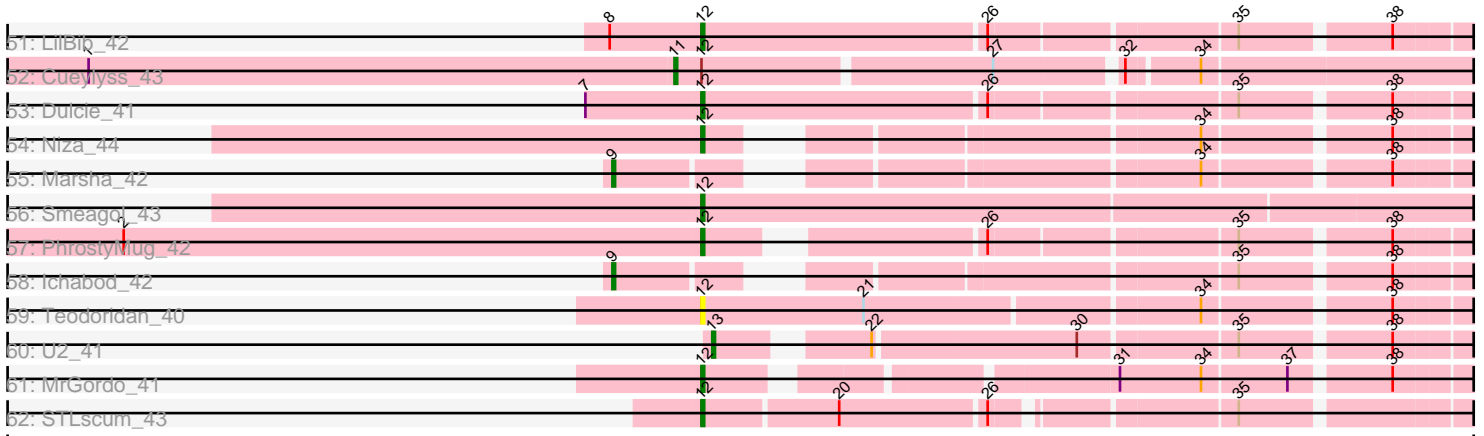


Pham 224295





A series of horizontal lines, including a red dashed line at the bottom, providing space for text entry or notes.

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 224295 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224295 has 208 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Kugel_44, Wheeler_43, Naira_43, Fajezeel_44, Greg_44, EnzoK_41, Zephyr_42, Buttons_41, Ohno789_43, Violet_40, Fenn_43, Acme_45, Pippin_44, Ciao_42
- Track 2 : Seabiscuit_43, BeesKnees_42, Dynamix_42
- Track 3 : BluSpix_39, Traft412_43, IgnatiusPatJac_41
- Track 4 : Forsytheast_42, Alsfro_46, Corvo_43, SwissCheese_44, GMonster_40, Bruns_41, Moose_42
- Track 5 : ProMouse_41
- Track 6 : ProMouse_42
- Track 7 : Mkhusei_42, GrecoEtereo_43, Hami1_37, Perseus_43, StrongArm_41, MaryBeth_42, Ashballer_44, Bexan_40, Inyanga_40, Gyzlar_39, Applejack_38, Papez_44, A6_39, Aeneas_44, Squee_42, Bxb1_39, BK1_39, Sunshine924_43, StewieG_41, HarryOW_41, QTRlifeCrisis_43, Abrogate_420, JC27_43, Mule_40, Iqorha_40, MetalQZJ_41, RidgeCB_42, Zeuska_42, Hermia_44, Magnar_41, Watermelon_44
- Track 8 : ConceptII_44
- Track 9 : Pinto_43, Swole_43, ILeeKay_46, Alvin_41, Marcell_41, Tote_38, Marge_42, Rohr_43, JuliaChild_43, Jerm2_43, Bob3_40, Crispicous1_41, BigMau_43, Lopton_43, Rufus_43, Froghopper_41, Petruccio_42, Molly_43, MPlant7149_41, HermioneGrange_42
- Track 10 : Maroc7_41, Bigfoot_39, CactusRose_40, Raid_43, Pepe_39, Rubeus_42, Solon_42, Ruotula_44
- Track 11 : Atkinbua_43, PascalRango_42, Briton15_43
- Track 12 : KBG_44, Bones_42, BigPaolini_42, Agaliana_39, Graduation_45, PacerPaul_43, Doom_43, Eyeball_43, Licorice_45, Francis47_42, Smairt_44
- Track 13 : Tasp14_43, Lamina13_42, Homines_35, Monet_46
- Track 14 : Dussy_44, Abbyshoes_45, Kenmech_46
- Track 15 : McSinger_43
- Track 16 : Bethlehem_41, Pari_42, Nhonho_42, Switzer_42, Hope4ever_43, Manatee_42, Slagathor_42, Barriga_42, Tripl3t_42, Rhynn_41, Anglerfish_42, Rajelicia_41, TwoPeat_42
- Track 17 : Marchy_37, Payneful_42
- Track 18 : Carlyle_42
- Track 19 : Ajay_42, AFIS_41, Sumter_40, Kykar_42
- Track 20 : ILeeKay_45
- Track 21 : Euphoria_41, NEHalo_41, Target_43
- Track 22 : McGuire_42, KSSJEB_40

- Track 23 : LunarLander_46
- Track 24 : PattyP_43
- Track 25 : Blue_42
- Track 26 : Gandalf20_43, Killigrew_42, DD5_42, Lockley_42
- Track 27 : Museum_43, Burton_42, Petp2012_43
- Track 28 : Sanya_41, Chanagan_40
- Track 29 : SkiPole_45
- Track 30 : Lesedi_40
- Track 31 : Trouble_43
- Track 32 : Jasper_43, Dreamboat_43
- Track 33 : BarrowTuph_42, PhineBark_42, Levia_38
- Track 34 : Zeeculate_41
- Track 35 : Sandaddy_42, BPBiabs31_43, Mryolo_40, Beatrix_41, Sorpresa_42
- Track 36 : PinkPlastic_40
- Track 37 : SpikeBT_43, Norz_43, TheloniousMonk_43, BaconJack_45, Seanderson_44, Michley_41, GageAP_43
- Track 38 : Peterson_45
- Track 39 : Nerujay_44
- Track 40 : Rutherford_44, Paraselene_40, Marco3_43, Sagefire_44
- Track 41 : Arlo_40
- Track 42 : DreamCatcher_44
- Track 43 : Dexes_42
- Track 44 : Treddle_44, Edtherson_43, Ringer_43
- Track 45 : Phlippers_41, Gompeii16_42, Wilkins_42, Topgun_42, Bircsak_42
- Track 46 : Pelly_42
- Track 47 : Kanely_43, Altman_44, PherrisBueller_42
- Track 48 : Magnito_40, Turj99_40
- Track 49 : Espresso_42
- Track 50 : HanShotFirst_41
- Track 51 : LilBib_42
- Track 52 : Cueylyss_43
- Track 53 : Dulcie_41
- Track 54 : Niza_44
- Track 55 : Marsha_42
- Track 56 : Smeagol_43
- Track 57 : PhrostyMug_42
- Track 58 : Ichabod_42
- Track 59 : Teodoridan_40
- Track 60 : U2_41
- Track 61 : MrGordo_41
- Track 62 : STLscum_43

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 161 of the 188 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6_39, AFIS_41, Abbyshoes_45, Abrogate_420, Acme_45, Aeneas_44, Agaliana_39, Ajay_42, Alsfro_46, Altman_44, Alvin_41, Applejack_38, Arlo_40,

Ashballer_44, BK1_39, BPBiebs31_43, BaconJack_45, BarrowTuph_42, Beatrix_41, Bexan_40, BigMau_43, BigPaolini_42, Bigfoot_39, Bircsak_42, BluSpix_39, Blue_42, Bob3_40, Bones_42, Bruns_41, Burton_42, Buttons_41, Bxb1_39, CactusRose_40, Carlyle_42, Chanagan_40, Ciao_42, ConceptII_44, Corvo_43, Crispicous1_41, DD5_42, Dexes_42, Doom_43, Dreamboat_43, Dulcie_41, Dussy_44, Edtherson_43, EnzoK_41, Espresso_42, Euphoria_41, Eyeball_43, Fajezeel_44, Fenn_43, Forsytheast_42, Francis47_42, Froghopper_41, GMonster_40, GageAP_43, Gandalf20_43, Gompeii16_42, Graduation_45, GrecoEtereo_43, Greg_44, Gyzlar_39, Hami1_37, HanShotFirst_41, HarryOW_41, Hermia_44, HermioneGrange_42, Homines_35, ILeeKay_45, ILeeKay_46, IgnatiusPatJac_41, Inyanga_40, Iqorha_40, JC27_43, Jasper_43, Jerm2_43, JuliaChild_43, KBG_44, Kanely_43, Kenmech_46, Killigrew_42, Kugel_44, Kykar_42, Lamina13_42, Lesedi_40, Levia_38, Licorice_45, LilBib_42, Lockley_42, Lopton_43, LunarLander_46, MPlant7149_41, Magnar_41, Magnito_40, Marcell_41, Marchy_37, Marco3_43, Marge_42, Maroc7_41, MaryBeth_42, McSinger_43, MetalQZJ_41, Michley_41, Mkhuseli_42, Molly_43, Monet_46, Moose_42, MrGordo_41, Mryolo_40, Mule_40, Museum_43, NEHalo_41, Naira_43, Nerujay_44, Niza_44, Norz_43, Ohno789_43, PacerPaul_43, Papez_44, Paraselene_40, PattyP_43, Payneful_42, Pelly_42, Pepe_39, Perseus_43, Peterson_45, Petp2012_43, Petruchio_42, PherrisBueller_42, PhineBark_42, Phlippers_41, PhrostyMug_42, PinkPlastic_40, Pinto_43, Pippin_44, ProMouse_41, ProMouse_42, QTRlifeCrisis_43, Raid_43, RidgeCB_42, Ringer_43, Rohr_43, Rubeus_42, Rufus_43, Ruotula_44, Rutherford_44, STLscum_43, Sagefire_44, Sandaddy_42, Sanya_41, Seanderson_44, SkiPole_45, Smairt_44, Smeagol_43, Solon_42, Sorpresa_42, SpikeBT_43, Squee_42, StewieG_41, StrongArm_41, Sumter_40, Sunshine924_43, SwissCheese_44, Swole_43, Target_43, Tasp14_43, Teodoridan_40, TheloniousMonk_43, Topgun_42, Tote_38, Traft412_43, Treddle_44, Trouble_43, Turj99_40, Violet_40, Watermelon_44, Wheeler_43, Wilkins_42, Zephyr_42, Zeuska_42,

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

- Atkinbua_43, BeesKnees_42, Briton15_43, Cueyllyss_43, DreamCatcher_44, Dynamix_42, PascalRango_42, Seabiscuit_43,

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

- Anglerfish_42, Barriga_42, Bethlehem_41, Hope4ever_43, Ichabod_42, KSSJEB_40, Manatee_42, Marsha_42, McGuire_42, Nhonho_42, Pari_42, Rajelicia_41, Rhynn_41, Slagathor_42, Switzer_42, Trip13t_42, TwoPeat_42, U2_41, Zeeculate_41,

Summary by start number:

Start 8:

- Found in 8 of 208 (3.8%) of genes in pham
- Manual Annotations of this start: 4 of 188
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Atkinbua_43 (A1), Briton15_43 (A1), DreamCatcher_44 (A1), PascalRango_42 (A1),

Start 9:

- Found in 9 of 208 (4.3%) of genes in pham
- Manual Annotations of this start: 5 of 188
- Called 55.6% of time when present

- Phage (with cluster) where this start called: BeesKnees_42 (A1), Dynamix_42 (A1), Ichabod_42 (A1), Marsha_42 (A1), Seabiscuit_43 (A1),

Start 10:

- Found in 2 of 208 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 188
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KSSJEB_40 (A1), McGuire_42 (A1),

Start 11:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 188
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cueyllyss_43 (A1),

Start 12:

- Found in 189 of 208 (90.9%) of genes in pham
- Manual Annotations of this start: 161 of 188
- Called 95.8% of time when present
- Phage (with cluster) where this start called: A6_39 (A1), AFIS_41 (A1), Abbyshoes_45 (A1), Abrogate_420 (A1), Acme_45 (A1), Aeneas_44 (A1), Agaliana_39 (A1), Ajay_42 (A1), Alsfro_46 (A1), Altman_44 (A1), Alvin_41 (A1), Applejack_38 (A1), Arlo_40 (A1), Ashballer_44 (A1), BK1_39 (A1), BPBiebs31_43 (A1), BaconJack_45 (A1), BarrowTuph_42 (A1), Beatrix_41 (A1), Bexan_40 (A1), BigMau_43 (A1), BigPaolini_42 (A1), Bigfoot_39 (A1), Bircsak_42 (A1), BluSpix_39 (A1), Blue_42 (A1), Bob3_40 (A1), Bones_42 (A1), Bruns_41 (A1), Burton_42 (A1), Buttons_41 (A1), Bxb1_39 (A1), CactusRose_40 (A1), Carlyle_42 (A1), Chanagan_40 (A1), Ciao_42 (A1), Conceptll_44 (A1), Corvo_43 (A1), Crispicous1_41 (A1), DD5_42 (A1), Dexes_42 (A1), Doom_43 (A1), Dreamboat_43 (A1), Dulcie_41 (A1), Dussy_44 (A1), Edtherson_43 (A1), EnzoK_41 (A1), Espresso_42 (A1), Euphoria_41 (A1), Eyeball_43 (A1), Fajezeel_44 (A1), Fenn_43 (A1), Forsytheast_42 (A1), Francis47_42 (A1), Froghopper_41 (A1), GMonster_40 (A1), GageAP_43 (A1), Gandalf20_43 (A1), Gompeii16_42 (A1), Graduation_45 (A1), GrecoEtereo_43 (A1), Greg_44 (A1), Gyzlar_39 (A1), Hami1_37 (A1), HanShotFirst_41 (A1), HarryOW_41 (A1), Hermia_44 (A1), HermioneGrange_42 (A1), Homines_35 (A1), ILeeKay_45 (A1), ILeeKay_46 (A1), IgnatiusPatJac_41 (A1), Inyanga_40 (A1), Iqorha_40 (A1), JC27_43 (A1), Jasper_43 (A1), Jerm2_43 (A1), JuliaChild_43 (A1), KBG_44 (A1), Kanely_43 (A1), Kenmech_46 (A1), Killigrew_42 (A1), Kugel_44 (A1), Kykar_42 (A1), Lamina13_42 (A1), Lesedi_40 (A1), Levia_38 (A1), Licorice_45 (A1), LilBib_42 (A1), Lockley_42 (A1), Lopton_43 (A1), LunarLander_46 (A1), MPlant7149_41 (A1), Magnar_41 (A1), Magnito_40 (A1), Marcell_41 (A1), Marchy_37 (A1), Marco3_43 (A1), Marge_42 (A1), Maroc7_41 (A1), MaryBeth_42 (A1), McSinger_43 (A1), MetalQZJ_41 (A1), Michley_41 (A1), Mkhuseleli_42 (A1), Molly_43 (A1), Monet_46 (A1), Moose_42 (A1), MrGordo_41 (A1), Mryolo_40 (A1), Mule_40 (A1), Museum_43 (A1), NEHalo_41 (A1), Naira_43 (A1), Nerujay_44 (A1), Niza_44 (A1), Norz_43 (A1), Ohno789_43 (A1), PacerPaul_43 (A1), Papez_44 (A1), Paraselene_40 (A1), PattyP_43 (A1), Payneful_42 (A1), Pelly_42 (A1), Pepe_39 (A1), Perseus_43 (A1), Peterson_45 (A1), Petp2012_43 (A1), Petruccio_42 (A1), PherrisBueller_42 (A1), PhineBark_42 (A1), Phlippers_41 (A1), PhrostyMug_42 (A1), PinkPlastic_40 (A1), Pinto_43 (A1), Pippin_44 (A1), ProMouse_41 (A1), ProMouse_42 (A1), QTRLifeCrisis_43 (A1), Raid_43 (A1), RidgeCB_42 (A1), Ringer_43 (A1), Rohr_43 (A1), Rubeus_42 (A1), Rufus_43 (A1), Ruotula_44 (A1), Rutherford_44 (A1), STLscum_43 (A1), Sagefire_44 (A1), Sandaddy_42 (A1), Sanya_41 (A1),

Seanderson_44 (A1), SkiPole_45 (A1), Smairt_44 (A1), Smeagol_43 (A1), Solon_42 (A1), Sorpresa_42 (A1), SpikeBT_43 (A1), Squee_42 (A1), StewieG_41 (A1), StrongArm_41 (A1), Sumter_40 (A1), Sunshine924_43 (A1), SwissCheese_44 (A1), Swole_43 (A1), Target_43 (A1), Tasp14_43 (A1), Teodoridan_40 (A1), TheloniousMonk_43 (A1), Topgun_42 (A1), Tote_38 (A1), Traft412_43 (A1), Treddle_44 (A1), Trouble_43 (A1), Turj99_40 (A1), Violet_40 (A1), Watermelon_44 (A1), Wheeler_43 (A1), Wilkins_42 (A1), Zephyr_42 (A1), Zeuska_42 (A1),

Start 13:

- Found in 14 of 208 (6.7%) of genes in pham
- Manual Annotations of this start: 14 of 188
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anglerfish_42 (A1), Barriga_42 (A1), Bethlehem_41 (A1), Hope4ever_43 (A1), Manatee_42 (A1), Nhonho_42 (A1), Pari_42 (A1), Rajelicia_41 (A1), Rhynn_41 (A1), Slagathor_42 (A1), Switzer_42 (A1), Tripl3t_42 (A1), TwoPeat_42 (A1), U2_41 (A1),

Start 17:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 188
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zeeculate_41 (A1),

Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

- Start number 8 was manually annotated 4 times for cluster A1.
- Start number 9 was manually annotated 5 times for cluster A1.
- Start number 10 was manually annotated 2 times for cluster A1.
- Start number 11 was manually annotated 1 time for cluster A1.
- Start number 12 was manually annotated 161 times for cluster A1.
- Start number 13 was manually annotated 14 times for cluster A1.
- Start number 17 was manually annotated 1 time for cluster A1.

Gene Information:

Gene: A6_39 Start: 31351, Stop: 31064, Start Num: 12

Candidate Starts for A6_39:

(Start: 12 @31351 has 161 MA's), (26, 31249), (35, 31165), (38, 31114),

Gene: AFIS_41 Start: 32120, Stop: 31854, Start Num: 12

Candidate Starts for AFIS_41:

(Start: 12 @32120 has 161 MA's), (35, 31955), (38, 31904),

Gene: Abbyshoes_45 Start: 32556, Stop: 32263, Start Num: 12

Candidate Starts for Abbyshoes_45:

(Start: 12 @32556 has 161 MA's), (21, 32496), (35, 32364), (38, 32313),

Gene: Abrogate_420 Start: 32810, Stop: 32541, Start Num: 12

Candidate Starts for Abrogate_420:

(Start: 12 @32810 has 161 MA's), (26, 32726), (35, 32642), (38, 32591),

Gene: Acme_45 Start: 32668, Stop: 32381, Start Num: 12

Candidate Starts for Acme_45:

(Start: 12 @32668 has 161 MA's), (26, 32566), (35, 32482), (38, 32431),

Gene: Aeneas_44 Start: 32342, Stop: 32055, Start Num: 12

Candidate Starts for Aeneas_44:

(Start: 12 @32342 has 161 MA's), (26, 32240), (35, 32156), (38, 32105),

Gene: Agaliana_39 Start: 29400, Stop: 29104, Start Num: 12

Candidate Starts for Agaliana_39:

(Start: 12 @29400 has 161 MA's), (21, 29340), (32, 29250), (34, 29226),

Gene: Ajay_42 Start: 31958, Stop: 31695, Start Num: 12

Candidate Starts for Ajay_42:

(Start: 12 @31958 has 161 MA's), (35, 31796), (38, 31745),

Gene: Alsfro_46 Start: 32728, Stop: 32444, Start Num: 12

Candidate Starts for Alsfro_46:

(Start: 12 @32728 has 161 MA's), (15, 32698), (20, 32680), (29, 32617), (34, 32557), (38, 32494),

Gene: Altman_44 Start: 32975, Stop: 32700, Start Num: 12

Candidate Starts for Altman_44:

(Start: 12 @32975 has 161 MA's), (34, 32813),

Gene: Alvin_41 Start: 32479, Stop: 32210, Start Num: 12

Candidate Starts for Alvin_41:

(Start: 12 @32479 has 161 MA's), (35, 32311), (38, 32260),

Gene: Anglerfish_42 Start: 32229, Stop: 31957, Start Num: 13

Candidate Starts for Anglerfish_42:

(Start: 13 @32229 has 14 MA's), (22, 32184), (35, 32058), (38, 32007),

Gene: Applejack_38 Start: 29040, Stop: 28771, Start Num: 12

Candidate Starts for Applejack_38:

(Start: 12 @29040 has 161 MA's), (26, 28956), (35, 28872), (38, 28821),

Gene: Arlo_40 Start: 31869, Stop: 31585, Start Num: 12

Candidate Starts for Arlo_40:

(Start: 12 @31869 has 161 MA's), (20, 31821), (26, 31770), (35, 31686), (38, 31635),

Gene: Ashballer_44 Start: 33124, Stop: 32837, Start Num: 12

Candidate Starts for Ashballer_44:

(Start: 12 @33124 has 161 MA's), (26, 33022), (35, 32938), (38, 32887),

Gene: Atkinbua_43 Start: 32341, Stop: 32033, Start Num: 8

Candidate Starts for Atkinbua_43:

(Start: 8 @32341 has 4 MA's), (Start: 12 @32308 has 161 MA's), (34, 32146),

Gene: BK1_39 Start: 31351, Stop: 31064, Start Num: 12

Candidate Starts for BK1_39:

(Start: 12 @31351 has 161 MA's), (26, 31249), (35, 31165), (38, 31114),

Gene: BPBiebs31_43 Start: 32462, Stop: 32184, Start Num: 12

Candidate Starts for BPBiebs31_43:

(Start: 12 @32462 has 161 MA's), (20, 32414), (26, 32363), (35, 32285), (38, 32234),

Gene: BaconJack_45 Start: 33097, Stop: 32810, Start Num: 12

Candidate Starts for BaconJack_45:

(Start: 12 @33097 has 161 MA's), (24, 33010), (26, 32995), (35, 32911), (38, 32860),

Gene: Barriga_42 Start: 31831, Stop: 31559, Start Num: 13

Candidate Starts for Barriga_42:

(Start: 13 @31831 has 14 MA's), (22, 31786), (35, 31660), (38, 31609),

Gene: BarrowTuph_42 Start: 32304, Stop: 32014, Start Num: 12

Candidate Starts for BarrowTuph_42:

(Start: 12 @32304 has 161 MA's), (21, 32244), (34, 32127), (38, 32064),

Gene: Beatrix_41 Start: 33308, Stop: 33030, Start Num: 12

Candidate Starts for Beatrix_41:

(Start: 12 @33308 has 161 MA's), (20, 33260), (26, 33209), (35, 33131), (38, 33080),

Gene: BeesKnees_42 Start: 31917, Stop: 31615, Start Num: 9

Candidate Starts for BeesKnees_42:

(Start: 9 @31917 has 5 MA's), (Start: 12 @31884 has 161 MA's), (34, 31728), (38, 31665),

Gene: Bethlehem_41 Start: 32590, Stop: 32318, Start Num: 13

Candidate Starts for Bethlehem_41:

(Start: 13 @32590 has 14 MA's), (22, 32545), (35, 32419), (38, 32368),

Gene: Bexan_40 Start: 32987, Stop: 32718, Start Num: 12

Candidate Starts for Bexan_40:

(Start: 12 @32987 has 161 MA's), (26, 32903), (35, 32819), (38, 32768),

Gene: BigMau_43 Start: 31979, Stop: 31692, Start Num: 12

Candidate Starts for BigMau_43:

(Start: 12 @31979 has 161 MA's), (35, 31793), (38, 31742),

Gene: BigPaolini_42 Start: 30984, Stop: 30688, Start Num: 12

Candidate Starts for BigPaolini_42:

(Start: 12 @30984 has 161 MA's), (21, 30924), (32, 30834), (34, 30810),

Gene: Bigfoot_39 Start: 31627, Stop: 31334, Start Num: 12

Candidate Starts for Bigfoot_39:

(Start: 12 @31627 has 161 MA's), (21, 31567), (35, 31435), (38, 31384),

Gene: Bircsak_42 Start: 32977, Stop: 32699, Start Num: 12

Candidate Starts for Bircsak_42:

(Start: 12 @32977 has 161 MA's), (32, 32845), (34, 32821),

Gene: BluSpix_39 Start: 28079, Stop: 27792, Start Num: 12

Candidate Starts for BluSpix_39:

(Start: 12 @28079 has 161 MA's), (26, 27977), (35, 27893), (38, 27842),

Gene: Blue_42 Start: 32763, Stop: 32476, Start Num: 12

Candidate Starts for Blue_42:

(Start: 12 @32763 has 161 MA's), (26, 32661), (35, 32577), (38, 32526),

Gene: Bob3_40 Start: 31329, Stop: 31042, Start Num: 12

Candidate Starts for Bob3_40:

(Start: 12 @31329 has 161 MA's), (35, 31143), (38, 31092),

Gene: Bones_42 Start: 32480, Stop: 32184, Start Num: 12

Candidate Starts for Bones_42:

(Start: 12 @32480 has 161 MA's), (21, 32420), (32, 32330), (34, 32306),

Gene: Briton15_43 Start: 32176, Stop: 31868, Start Num: 8

Candidate Starts for Briton15_43:

(Start: 8 @32176 has 4 MA's), (Start: 12 @32143 has 161 MA's), (34, 31981),

Gene: Bruns_41 Start: 32058, Stop: 31774, Start Num: 12

Candidate Starts for Bruns_41:

(Start: 12 @32058 has 161 MA's), (15, 32028), (20, 32010), (29, 31947), (34, 31887), (38, 31824),

Gene: Burton_42 Start: 31887, Stop: 31612, Start Num: 12

Candidate Starts for Burton_42:

(2, 32100), (Start: 12 @31887 has 161 MA's), (34, 31725), (38, 31662),

Gene: Buttons_41 Start: 30867, Stop: 30580, Start Num: 12

Candidate Starts for Buttons_41:

(Start: 12 @30867 has 161 MA's), (26, 30765), (35, 30681), (38, 30630),

Gene: Bxb1_39 Start: 31929, Stop: 31642, Start Num: 12

Candidate Starts for Bxb1_39:

(Start: 12 @31929 has 161 MA's), (26, 31827), (35, 31743), (38, 31692),

Gene: CactusRose_40 Start: 31757, Stop: 31464, Start Num: 12

Candidate Starts for CactusRose_40:

(Start: 12 @31757 has 161 MA's), (21, 31697), (35, 31565), (38, 31514),

Gene: Carlyle_42 Start: 30593, Stop: 30324, Start Num: 12

Candidate Starts for Carlyle_42:

(Start: 12 @30593 has 161 MA's), (35, 30425), (38, 30374),

Gene: Chanagan_40 Start: 31424, Stop: 31164, Start Num: 12

Candidate Starts for Chanagan_40:

(Start: 12 @31424 has 161 MA's), (34, 31277), (38, 31214),

Gene: Ciao_42 Start: 32124, Stop: 31837, Start Num: 12

Candidate Starts for Ciao_42:

(Start: 12 @32124 has 161 MA's), (26, 32022), (35, 31938), (38, 31887),

Gene: ConceptII_44 Start: 33141, Stop: 32854, Start Num: 12

Candidate Starts for ConceptII_44:

(2, 33354), (Start: 12 @33141 has 161 MA's), (26, 33039), (35, 32955), (38, 32904),

Gene: Corvo_43 Start: 32998, Stop: 32714, Start Num: 12
Candidate Starts for Corvo_43:
(Start: 12 @32998 has 161 MA's), (15, 32968), (20, 32950), (29, 32887), (34, 32827), (38, 32764),

Gene: Crispicous1_41 Start: 31747, Stop: 31478, Start Num: 12
Candidate Starts for Crispicous1_41:
(Start: 12 @31747 has 161 MA's), (35, 31579), (38, 31528),

Gene: Cueyllyss_43 Start: 32715, Stop: 32416, Start Num: 11
Candidate Starts for Cueyllyss_43:
(1, 32931), (Start: 11 @32715 has 1 MA's), (Start: 12 @32706 has 161 MA's), (27, 32604), (32, 32562),
(34, 32538),

Gene: DD5_42 Start: 33007, Stop: 32720, Start Num: 12
Candidate Starts for DD5_42:
(Start: 12 @33007 has 161 MA's), (35, 32821), (38, 32770),

Gene: Dexes_42 Start: 32732, Stop: 32454, Start Num: 12
Candidate Starts for Dexes_42:
(2, 32945), (Start: 12 @32732 has 161 MA's), (19, 32699), (35, 32555), (38, 32504),

Gene: Doom_43 Start: 32905, Stop: 32609, Start Num: 12
Candidate Starts for Doom_43:
(Start: 12 @32905 has 161 MA's), (21, 32845), (32, 32755), (34, 32731),

Gene: DreamCatcher_44 Start: 33224, Stop: 32916, Start Num: 8
Candidate Starts for DreamCatcher_44:
(Start: 8 @33224 has 4 MA's), (Start: 12 @33191 has 161 MA's), (34, 33029), (38, 32966),

Gene: Dreamboat_43 Start: 31963, Stop: 31688, Start Num: 12
Candidate Starts for Dreamboat_43:
(Start: 8 @31996 has 4 MA's), (Start: 12 @31963 has 161 MA's), (34, 31801), (36, 31780), (38, 31738),

Gene: Dulcie_41 Start: 31878, Stop: 31591, Start Num: 12
Candidate Starts for Dulcie_41:
(7, 31920), (Start: 12 @31878 has 161 MA's), (26, 31776), (35, 31692), (38, 31641),

Gene: Dussy_44 Start: 32576, Stop: 32283, Start Num: 12
Candidate Starts for Dussy_44:
(Start: 12 @32576 has 161 MA's), (21, 32516), (35, 32384), (38, 32333),

Gene: Dynamix_42 Start: 31903, Stop: 31601, Start Num: 9
Candidate Starts for Dynamix_42:
(Start: 9 @31903 has 5 MA's), (Start: 12 @31870 has 161 MA's), (34, 31714), (38, 31651),

Gene: Edtherson_43 Start: 33072, Stop: 32794, Start Num: 12
Candidate Starts for Edtherson_43:
(3, 33282), (Start: 12 @33072 has 161 MA's), (35, 32895), (38, 32844),

Gene: EnzoK_41 Start: 30176, Stop: 29889, Start Num: 12
Candidate Starts for EnzoK_41:
(Start: 12 @30176 has 161 MA's), (26, 30074), (35, 29990), (38, 29939),

Gene: Espresso_42 Start: 32440, Stop: 32171, Start Num: 12

Candidate Starts for Espresso_42:

(Start: 12 @32440 has 161 MA's), (35, 32272), (38, 32221),

Gene: Euphoria_41 Start: 31928, Stop: 31635, Start Num: 12

Candidate Starts for Euphoria_41:

(Start: 12 @31928 has 161 MA's), (21, 31868), (35, 31736), (38, 31685),

Gene: Eyeball_43 Start: 32382, Stop: 32086, Start Num: 12

Candidate Starts for Eyeball_43:

(Start: 12 @32382 has 161 MA's), (21, 32322), (32, 32232), (34, 32208),

Gene: Fajezeel_44 Start: 32497, Stop: 32210, Start Num: 12

Candidate Starts for Fajezeel_44:

(Start: 12 @32497 has 161 MA's), (26, 32395), (35, 32311), (38, 32260),

Gene: Fenn_43 Start: 33821, Stop: 33534, Start Num: 12

Candidate Starts for Fenn_43:

(Start: 12 @33821 has 161 MA's), (26, 33719), (35, 33635), (38, 33584),

Gene: Forsytheast_42 Start: 32276, Stop: 31992, Start Num: 12

Candidate Starts for Forsytheast_42:

(Start: 12 @32276 has 161 MA's), (15, 32246), (20, 32228), (29, 32165), (34, 32105), (38, 32042),

Gene: Francis47_42 Start: 33244, Stop: 32948, Start Num: 12

Candidate Starts for Francis47_42:

(Start: 12 @33244 has 161 MA's), (21, 33184), (32, 33094), (34, 33070),

Gene: Froghopper_41 Start: 31912, Stop: 31643, Start Num: 12

Candidate Starts for Froghopper_41:

(Start: 12 @31912 has 161 MA's), (35, 31744), (38, 31693),

Gene: GMonster_40 Start: 31221, Stop: 30937, Start Num: 12

Candidate Starts for GMonster_40:

(Start: 12 @31221 has 161 MA's), (15, 31191), (20, 31173), (29, 31110), (34, 31050), (38, 30987),

Gene: GageAP_43 Start: 32207, Stop: 31920, Start Num: 12

Candidate Starts for GageAP_43:

(Start: 12 @32207 has 161 MA's), (24, 32120), (26, 32105), (35, 32021), (38, 31970),

Gene: Gandalf20_43 Start: 32955, Stop: 32689, Start Num: 12

Candidate Starts for Gandalf20_43:

(Start: 12 @32955 has 161 MA's), (35, 32790), (38, 32739),

Gene: Gompeii16_42 Start: 32978, Stop: 32700, Start Num: 12

Candidate Starts for Gompeii16_42:

(Start: 12 @32978 has 161 MA's), (32, 32846), (34, 32822),

Gene: Graduation_45 Start: 33299, Stop: 33003, Start Num: 12

Candidate Starts for Graduation_45:

(Start: 12 @33299 has 161 MA's), (21, 33239), (32, 33149), (34, 33125),

Gene: GrecoEtereo_43 Start: 32600, Stop: 32331, Start Num: 12

Candidate Starts for GrecoEtereo_43:
(Start: 12 @32600 has 161 MA's), (26, 32516), (35, 32432), (38, 32381),

Gene: Greg_44 Start: 32497, Stop: 32210, Start Num: 12
Candidate Starts for Greg_44:
(Start: 12 @32497 has 161 MA's), (26, 32395), (35, 32311), (38, 32260),

Gene: Gyzlar_39 Start: 30598, Stop: 30311, Start Num: 12
Candidate Starts for Gyzlar_39:
(Start: 12 @30598 has 161 MA's), (26, 30496), (35, 30412), (38, 30361),

Gene: Hami1_37 Start: 27036, Stop: 26749, Start Num: 12
Candidate Starts for Hami1_37:
(Start: 12 @27036 has 161 MA's), (26, 26934), (35, 26850), (38, 26799),

Gene: HanShotFirst_41 Start: 31631, Stop: 31344, Start Num: 12
Candidate Starts for HanShotFirst_41:
(Start: 12 @31631 has 161 MA's), (26, 31529), (28, 31517), (35, 31445), (38, 31394),

Gene: HarryOW_41 Start: 31772, Stop: 31503, Start Num: 12
Candidate Starts for HarryOW_41:
(Start: 12 @31772 has 161 MA's), (26, 31688), (35, 31604), (38, 31553),

Gene: Hermia_44 Start: 33346, Stop: 33059, Start Num: 12
Candidate Starts for Hermia_44:
(Start: 12 @33346 has 161 MA's), (26, 33244), (35, 33160), (38, 33109),

Gene: HermioneGrange_42 Start: 32473, Stop: 32186, Start Num: 12
Candidate Starts for HermioneGrange_42:
(Start: 12 @32473 has 161 MA's), (35, 32287), (38, 32236),

Gene: Homines_35 Start: 28560, Stop: 28273, Start Num: 12
Candidate Starts for Homines_35:
(Start: 12 @28560 has 161 MA's), (24, 28473), (26, 28458), (35, 28374), (38, 28323),

Gene: Hope4ever_43 Start: 32649, Stop: 32377, Start Num: 13
Candidate Starts for Hope4ever_43:
(Start: 13 @32649 has 14 MA's), (22, 32604), (35, 32478), (38, 32427),

Gene: ILeeKay_46 Start: 33003, Stop: 32734, Start Num: 12
Candidate Starts for ILeeKay_46:
(Start: 12 @33003 has 161 MA's), (35, 32835), (38, 32784),

Gene: ILeeKay_45 Start: 32737, Stop: 32453, Start Num: 12
Candidate Starts for ILeeKay_45:
(5, 32788), (Start: 12 @32737 has 161 MA's), (16, 32704), (34, 32575),

Gene: Ichabod_42 Start: 32035, Stop: 31742, Start Num: 9
Candidate Starts for Ichabod_42:
(Start: 9 @32035 has 5 MA's), (35, 31843), (38, 31792),

Gene: IgnatiusPatJac_41 Start: 32024, Stop: 31737, Start Num: 12
Candidate Starts for IgnatiusPatJac_41:

(Start: 12 @32024 has 161 MA's), (26, 31922), (35, 31838), (38, 31787),

Gene: Inyanga_40 Start: 31370, Stop: 31083, Start Num: 12

Candidate Starts for Inyanga_40:

(Start: 12 @31370 has 161 MA's), (26, 31268), (35, 31184), (38, 31133),

Gene: Iqorha_40 Start: 31369, Stop: 31082, Start Num: 12

Candidate Starts for Iqorha_40:

(Start: 12 @31369 has 161 MA's), (26, 31267), (35, 31183), (38, 31132),

Gene: JC27_43 Start: 32694, Stop: 32407, Start Num: 12

Candidate Starts for JC27_43:

(Start: 12 @32694 has 161 MA's), (26, 32592), (35, 32508), (38, 32457),

Gene: Jasper_43 Start: 31849, Stop: 31574, Start Num: 12

Candidate Starts for Jasper_43:

(Start: 8 @31882 has 4 MA's), (Start: 12 @31849 has 161 MA's), (34, 31687), (36, 31666), (38, 31624),

Gene: Jerm2_43 Start: 32728, Stop: 32441, Start Num: 12

Candidate Starts for Jerm2_43:

(Start: 12 @32728 has 161 MA's), (35, 32542), (38, 32491),

Gene: JuliaChild_43 Start: 32464, Stop: 32177, Start Num: 12

Candidate Starts for JuliaChild_43:

(Start: 12 @32464 has 161 MA's), (35, 32278), (38, 32227),

Gene: KBG_44 Start: 33689, Stop: 33393, Start Num: 12

Candidate Starts for KBG_44:

(Start: 12 @33689 has 161 MA's), (21, 33629), (32, 33539), (34, 33515),

Gene: KSSJEB_40 Start: 31672, Stop: 31355, Start Num: 10

Candidate Starts for KSSJEB_40:

(Start: 10 @31672 has 2 MA's), (26, 31540), (35, 31456), (38, 31405),

Gene: Kanely_43 Start: 32751, Stop: 32476, Start Num: 12

Candidate Starts for Kanely_43:

(Start: 12 @32751 has 161 MA's), (34, 32589),

Gene: Kenmech_46 Start: 33702, Stop: 33409, Start Num: 12

Candidate Starts for Kenmech_46:

(Start: 12 @33702 has 161 MA's), (21, 33642), (35, 33510), (38, 33459),

Gene: Killigrew_42 Start: 32390, Stop: 32124, Start Num: 12

Candidate Starts for Killigrew_42:

(Start: 12 @32390 has 161 MA's), (35, 32225), (38, 32174),

Gene: Kugel_44 Start: 32894, Stop: 32625, Start Num: 12

Candidate Starts for Kugel_44:

(Start: 12 @32894 has 161 MA's), (26, 32810), (35, 32726), (38, 32675),

Gene: Kykar_42 Start: 32080, Stop: 31793, Start Num: 12

Candidate Starts for Kykar_42:

(Start: 12 @32080 has 161 MA's), (35, 31894), (38, 31843),

Gene: Lamina13_42 Start: 31873, Stop: 31586, Start Num: 12

Candidate Starts for Lamina13_42:

(Start: 12 @31873 has 161 MA's), (24, 31786), (26, 31771), (35, 31687), (38, 31636),

Gene: Lesedi_40 Start: 31735, Stop: 31466, Start Num: 12

Candidate Starts for Lesedi_40:

(Start: 12 @31735 has 161 MA's), (35, 31567), (38, 31516),

Gene: Levia_38 Start: 31925, Stop: 31635, Start Num: 12

Candidate Starts for Levia_38:

(Start: 12 @31925 has 161 MA's), (21, 31865), (34, 31748), (38, 31685),

Gene: Licorice_45 Start: 33580, Stop: 33284, Start Num: 12

Candidate Starts for Licorice_45:

(Start: 12 @33580 has 161 MA's), (21, 33520), (32, 33430), (34, 33406),

Gene: LilBib_42 Start: 32838, Stop: 32551, Start Num: 12

Candidate Starts for LilBib_42:

(Start: 8 @32871 has 4 MA's), (Start: 12 @32838 has 161 MA's), (26, 32736), (35, 32652), (38, 32601),

Gene: Lockley_42 Start: 32169, Stop: 31882, Start Num: 12

Candidate Starts for Lockley_42:

(Start: 12 @32169 has 161 MA's), (35, 31983), (38, 31932),

Gene: Lopton_43 Start: 33670, Stop: 33383, Start Num: 12

Candidate Starts for Lopton_43:

(Start: 12 @33670 has 161 MA's), (35, 33484), (38, 33433),

Gene: LunarLander_46 Start: 32700, Stop: 32410, Start Num: 12

Candidate Starts for LunarLander_46:

(Start: 12 @32700 has 161 MA's), (27, 32598), (32, 32556), (34, 32532),

Gene: MPlant7149_41 Start: 31538, Stop: 31251, Start Num: 12

Candidate Starts for MPlant7149_41:

(Start: 12 @31538 has 161 MA's), (35, 31352), (38, 31301),

Gene: Magnar_41 Start: 32111, Stop: 31824, Start Num: 12

Candidate Starts for Magnar_41:

(Start: 12 @32111 has 161 MA's), (26, 32009), (35, 31925), (38, 31874),

Gene: Magnito_40 Start: 31519, Stop: 31256, Start Num: 12

Candidate Starts for Magnito_40:

(4, 31672), (Start: 12 @31519 has 161 MA's), (34, 31369), (38, 31306),

Gene: Manatee_42 Start: 31549, Stop: 31277, Start Num: 13

Candidate Starts for Manatee_42:

(Start: 13 @31549 has 14 MA's), (22, 31504), (35, 31378), (38, 31327),

Gene: Marcell_41 Start: 32228, Stop: 31941, Start Num: 12

Candidate Starts for Marcell_41:

(Start: 12 @32228 has 161 MA's), (35, 32042), (38, 31991),

Gene: Marchy_37 Start: 28991, Stop: 28716, Start Num: 12

Candidate Starts for Marchy_37:

(Start: 12 @28991 has 161 MA's), (34, 28829), (38, 28766),

Gene: Marco3_43 Start: 32597, Stop: 32304, Start Num: 12

Candidate Starts for Marco3_43:

(Start: 9 @32630 has 5 MA's), (Start: 12 @32597 has 161 MA's), (21, 32537), (34, 32417), (38, 32354),

Gene: Marge_42 Start: 32616, Stop: 32329, Start Num: 12

Candidate Starts for Marge_42:

(Start: 12 @32616 has 161 MA's), (35, 32430), (38, 32379),

Gene: Maroc7_41 Start: 32085, Stop: 31792, Start Num: 12

Candidate Starts for Maroc7_41:

(Start: 12 @32085 has 161 MA's), (21, 32025), (35, 31893), (38, 31842),

Gene: Marsha_42 Start: 33305, Stop: 33012, Start Num: 9

Candidate Starts for Marsha_42:

(Start: 9 @33305 has 5 MA's), (34, 33125), (38, 33062),

Gene: MaryBeth_42 Start: 32218, Stop: 31931, Start Num: 12

Candidate Starts for MaryBeth_42:

(Start: 12 @32218 has 161 MA's), (26, 32116), (35, 32032), (38, 31981),

Gene: McGuire_42 Start: 31890, Stop: 31573, Start Num: 10

Candidate Starts for McGuire_42:

(Start: 10 @31890 has 2 MA's), (26, 31758), (35, 31674), (38, 31623),

Gene: McSinger_43 Start: 32592, Stop: 32317, Start Num: 12

Candidate Starts for McSinger_43:

(4, 32745), (Start: 12 @32592 has 161 MA's), (35, 32418), (38, 32367),

Gene: MetalQZJ_41 Start: 32218, Stop: 31931, Start Num: 12

Candidate Starts for MetalQZJ_41:

(Start: 12 @32218 has 161 MA's), (26, 32116), (35, 32032), (38, 31981),

Gene: Michley_41 Start: 31705, Stop: 31418, Start Num: 12

Candidate Starts for Michley_41:

(Start: 12 @31705 has 161 MA's), (24, 31618), (26, 31603), (35, 31519), (38, 31468),

Gene: Mkhuseleli_42 Start: 31904, Stop: 31617, Start Num: 12

Candidate Starts for Mkhuseleli_42:

(Start: 12 @31904 has 161 MA's), (26, 31802), (35, 31718), (38, 31667),

Gene: Molly_43 Start: 31772, Stop: 31485, Start Num: 12

Candidate Starts for Molly_43:

(Start: 12 @31772 has 161 MA's), (35, 31586), (38, 31535),

Gene: Monet_46 Start: 34034, Stop: 33747, Start Num: 12

Candidate Starts for Monet_46:

(Start: 12 @34034 has 161 MA's), (24, 33947), (26, 33932), (35, 33848), (38, 33797),

Gene: Moose_42 Start: 32276, Stop: 31992, Start Num: 12

Candidate Starts for Moose_42:
(Start: 12 @32276 has 161 MA's), (15, 32246), (20, 32228), (29, 32165), (34, 32105), (38, 32042),

Gene: MrGordo_41 Start: 31553, Stop: 31281, Start Num: 12
Candidate Starts for MrGordo_41:
(Start: 12 @31553 has 161 MA's), (31, 31424), (34, 31394), (37, 31364), (38, 31331),

Gene: Mryolo_40 Start: 31754, Stop: 31476, Start Num: 12
Candidate Starts for Mryolo_40:
(Start: 12 @31754 has 161 MA's), (20, 31706), (26, 31655), (35, 31577), (38, 31526),

Gene: Mule_40 Start: 30066, Stop: 29797, Start Num: 12
Candidate Starts for Mule_40:
(Start: 12 @30066 has 161 MA's), (26, 29982), (35, 29898), (38, 29847),

Gene: Museum_43 Start: 31826, Stop: 31551, Start Num: 12
Candidate Starts for Museum_43:
(2, 32039), (Start: 12 @31826 has 161 MA's), (34, 31664), (38, 31601),

Gene: NEHalo_41 Start: 31803, Stop: 31510, Start Num: 12
Candidate Starts for NEHalo_41:
(Start: 12 @31803 has 161 MA's), (21, 31743), (35, 31611), (38, 31560),

Gene: Naira_43 Start: 33868, Stop: 33581, Start Num: 12
Candidate Starts for Naira_43:
(Start: 12 @33868 has 161 MA's), (26, 33766), (35, 33682), (38, 33631),

Gene: Nerujay_44 Start: 32902, Stop: 32618, Start Num: 12
Candidate Starts for Nerujay_44:
(Start: 12 @32902 has 161 MA's), (18, 32866), (23, 32824), (25, 32809), (35, 32719), (38, 32668),

Gene: Nhonho_42 Start: 32575, Stop: 32303, Start Num: 13
Candidate Starts for Nhonho_42:
(Start: 13 @32575 has 14 MA's), (22, 32530), (35, 32404), (38, 32353),

Gene: Niza_44 Start: 33243, Stop: 32980, Start Num: 12
Candidate Starts for Niza_44:
(Start: 12 @33243 has 161 MA's), (34, 33093), (38, 33030),

Gene: Norz_43 Start: 32715, Stop: 32428, Start Num: 12
Candidate Starts for Norz_43:
(Start: 12 @32715 has 161 MA's), (24, 32628), (26, 32613), (35, 32529), (38, 32478),

Gene: Ohno789_43 Start: 32978, Stop: 32691, Start Num: 12
Candidate Starts for Ohno789_43:
(Start: 12 @32978 has 161 MA's), (26, 32876), (35, 32792), (38, 32741),

Gene: PacerPaul_43 Start: 32611, Stop: 32315, Start Num: 12
Candidate Starts for PacerPaul_43:
(Start: 12 @32611 has 161 MA's), (21, 32551), (32, 32461), (34, 32437),

Gene: Papez_44 Start: 33929, Stop: 33642, Start Num: 12
Candidate Starts for Papez_44:

(Start: 12 @33929 has 161 MA's), (26, 33827), (35, 33743), (38, 33692),

Gene: Paraselene_40 Start: 32250, Stop: 31978, Start Num: 12

Candidate Starts for Paraselene_40:

(Start: 9 @32283 has 5 MA's), (Start: 12 @32250 has 161 MA's), (21, 32211), (34, 32091), (38, 32028),

Gene: Pari_42 Start: 31615, Stop: 31343, Start Num: 13

Candidate Starts for Pari_42:

(Start: 13 @31615 has 14 MA's), (22, 31570), (35, 31444), (38, 31393),

Gene: PascalRango_42 Start: 31959, Stop: 31651, Start Num: 8

Candidate Starts for PascalRango_42:

(Start: 8 @31959 has 4 MA's), (Start: 12 @31926 has 161 MA's), (34, 31764),

Gene: PattyP_43 Start: 32119, Stop: 31841, Start Num: 12

Candidate Starts for PattyP_43:

(Start: 12 @32119 has 161 MA's), (34, 31954),

Gene: Payneful_42 Start: 31708, Stop: 31433, Start Num: 12

Candidate Starts for Payneful_42:

(Start: 12 @31708 has 161 MA's), (34, 31546), (38, 31483),

Gene: Pelly_42 Start: 32653, Stop: 32375, Start Num: 12

Candidate Starts for Pelly_42:

(3, 32863), (Start: 12 @32653 has 161 MA's), (19, 32620), (35, 32476), (38, 32425),

Gene: Pepe_39 Start: 30383, Stop: 30090, Start Num: 12

Candidate Starts for Pepe_39:

(Start: 12 @30383 has 161 MA's), (21, 30323), (35, 30191), (38, 30140),

Gene: Perseus_43 Start: 32944, Stop: 32657, Start Num: 12

Candidate Starts for Perseus_43:

(Start: 12 @32944 has 161 MA's), (26, 32842), (35, 32758), (38, 32707),

Gene: Peterson_45 Start: 34507, Stop: 34229, Start Num: 12

Candidate Starts for Peterson_45:

(Start: 12 @34507 has 161 MA's), (35, 34330), (38, 34279),

Gene: Petp2012_43 Start: 32744, Stop: 32469, Start Num: 12

Candidate Starts for Petp2012_43:

(2, 32957), (Start: 12 @32744 has 161 MA's), (34, 32582), (38, 32519),

Gene: Petruccio_42 Start: 32089, Stop: 31823, Start Num: 12

Candidate Starts for Petruccio_42:

(Start: 12 @32089 has 161 MA's), (35, 31924), (38, 31873),

Gene: PherrisBueller_42 Start: 31714, Stop: 31439, Start Num: 12

Candidate Starts for PherrisBueller_42:

(Start: 12 @31714 has 161 MA's), (34, 31552),

Gene: PhineBark_42 Start: 32943, Stop: 32653, Start Num: 12

Candidate Starts for PhineBark_42:

(Start: 12 @32943 has 161 MA's), (21, 32883), (34, 32766), (38, 32703),

Gene: Phlippers_41 Start: 33149, Stop: 32871, Start Num: 12

Candidate Starts for Phlippers_41:

(Start: 12 @33149 has 161 MA's), (32, 33017), (34, 32993),

Gene: PhrostyMug_42 Start: 32222, Stop: 31953, Start Num: 12

Candidate Starts for PhrostyMug_42:

(2, 32435), (Start: 12 @32222 has 161 MA's), (26, 32138), (35, 32054), (38, 32003),

Gene: PinkPlastic_40 Start: 31628, Stop: 31353, Start Num: 12

Candidate Starts for PinkPlastic_40:

(Start: 8 @31661 has 4 MA's), (Start: 12 @31628 has 161 MA's), (34, 31466),

Gene: Pinto_43 Start: 32048, Stop: 31785, Start Num: 12

Candidate Starts for Pinto_43:

(Start: 12 @32048 has 161 MA's), (35, 31886), (38, 31835),

Gene: Pippin_44 Start: 32541, Stop: 32254, Start Num: 12

Candidate Starts for Pippin_44:

(Start: 12 @32541 has 161 MA's), (26, 32439), (35, 32355), (38, 32304),

Gene: ProMouse_41 Start: 32226, Stop: 31951, Start Num: 12

Candidate Starts for ProMouse_41:

(6, 32268), (Start: 12 @32226 has 161 MA's), (34, 32064), (38, 32001),

Gene: ProMouse_42 Start: 32459, Stop: 32223, Start Num: 12

Candidate Starts for ProMouse_42:

(Start: 12 @32459 has 161 MA's), (33, 32315),

Gene: QTRlifeCrisis_43 Start: 33063, Stop: 32776, Start Num: 12

Candidate Starts for QTRlifeCrisis_43:

(Start: 12 @33063 has 161 MA's), (26, 32961), (35, 32877), (38, 32826),

Gene: Raid_43 Start: 32526, Stop: 32233, Start Num: 12

Candidate Starts for Raid_43:

(Start: 12 @32526 has 161 MA's), (21, 32466), (35, 32334), (38, 32283),

Gene: Rajelicia_41 Start: 32011, Stop: 31739, Start Num: 13

Candidate Starts for Rajelicia_41:

(Start: 13 @32011 has 14 MA's), (22, 31966), (35, 31840), (38, 31789),

Gene: Rhynn_41 Start: 32026, Stop: 31754, Start Num: 13

Candidate Starts for Rhynn_41:

(Start: 13 @32026 has 14 MA's), (22, 31981), (35, 31855), (38, 31804),

Gene: RidgeCB_42 Start: 32076, Stop: 31789, Start Num: 12

Candidate Starts for RidgeCB_42:

(Start: 12 @32076 has 161 MA's), (26, 31974), (35, 31890), (38, 31839),

Gene: Ringer_43 Start: 32905, Stop: 32642, Start Num: 12

Candidate Starts for Ringer_43:

(3, 33115), (Start: 12 @32905 has 161 MA's), (35, 32743), (38, 32692),

Gene: Rohr_43 Start: 32774, Stop: 32487, Start Num: 12

Candidate Starts for Rohr_43:

(Start: 12 @32774 has 161 MA's), (35, 32588), (38, 32537),

Gene: Rubeus_42 Start: 30560, Stop: 30267, Start Num: 12

Candidate Starts for Rubeus_42:

(Start: 12 @30560 has 161 MA's), (21, 30500), (35, 30368), (38, 30317),

Gene: Rufus_43 Start: 32397, Stop: 32110, Start Num: 12

Candidate Starts for Rufus_43:

(Start: 12 @32397 has 161 MA's), (35, 32211), (38, 32160),

Gene: Ruotula_44 Start: 33384, Stop: 33091, Start Num: 12

Candidate Starts for Ruotula_44:

(Start: 12 @33384 has 161 MA's), (21, 33324), (35, 33192), (38, 33141),

Gene: Rutherferd_44 Start: 33293, Stop: 33021, Start Num: 12

Candidate Starts for Rutherferd_44:

(Start: 9 @33326 has 5 MA's), (Start: 12 @33293 has 161 MA's), (21, 33254), (34, 33134), (38, 33071),

Gene: STLscum_43 Start: 33104, Stop: 32826, Start Num: 12

Candidate Starts for STLscum_43:

(Start: 12 @33104 has 161 MA's), (20, 33056), (26, 33005), (35, 32927),

Gene: Sagefire_44 Start: 33226, Stop: 32954, Start Num: 12

Candidate Starts for Sagefire_44:

(Start: 9 @33259 has 5 MA's), (Start: 12 @33226 has 161 MA's), (21, 33187), (34, 33067), (38, 33004),

Gene: Sandaddy_42 Start: 32672, Stop: 32394, Start Num: 12

Candidate Starts for Sandaddy_42:

(Start: 12 @32672 has 161 MA's), (20, 32624), (26, 32573), (35, 32495), (38, 32444),

Gene: Sanya_41 Start: 32962, Stop: 32687, Start Num: 12

Candidate Starts for Sanya_41:

(Start: 12 @32962 has 161 MA's), (34, 32800), (38, 32737),

Gene: Seabiscuit_43 Start: 31886, Stop: 31584, Start Num: 9

Candidate Starts for Seabiscuit_43:

(Start: 9 @31886 has 5 MA's), (Start: 12 @31853 has 161 MA's), (34, 31697), (38, 31634),

Gene: Seanderson_44 Start: 33065, Stop: 32796, Start Num: 12

Candidate Starts for Seanderson_44:

(Start: 12 @33065 has 161 MA's), (24, 32996), (26, 32981), (35, 32897), (38, 32846),

Gene: SkiPole_45 Start: 33095, Stop: 32808, Start Num: 12

Candidate Starts for SkiPole_45:

(Start: 12 @33095 has 161 MA's), (15, 33065), (20, 33047), (29, 32984), (34, 32921),

Gene: Slagathor_42 Start: 31936, Stop: 31664, Start Num: 13

Candidate Starts for Slagathor_42:

(Start: 13 @31936 has 14 MA's), (22, 31891), (35, 31765), (38, 31714),

Gene: Smairt_44 Start: 32800, Stop: 32504, Start Num: 12

Candidate Starts for Smairt_44:
(Start: 12 @32800 has 161 MA's), (21, 32740), (32, 32650), (34, 32626),

Gene: Smeagol_43 Start: 33429, Stop: 33124, Start Num: 12
Candidate Starts for Smeagol_43:
(Start: 12 @33429 has 161 MA's),

Gene: Solon_42 Start: 32559, Stop: 32266, Start Num: 12
Candidate Starts for Solon_42:
(Start: 12 @32559 has 161 MA's), (21, 32499), (35, 32367), (38, 32316),

Gene: Sorpresa_42 Start: 32674, Stop: 32396, Start Num: 12
Candidate Starts for Sorpresa_42:
(Start: 12 @32674 has 161 MA's), (20, 32626), (26, 32575), (35, 32497), (38, 32446),

Gene: SpikeBT_43 Start: 32904, Stop: 32617, Start Num: 12
Candidate Starts for SpikeBT_43:
(Start: 12 @32904 has 161 MA's), (24, 32817), (26, 32802), (35, 32718), (38, 32667),

Gene: Squee_42 Start: 32648, Stop: 32391, Start Num: 12
Candidate Starts for Squee_42:
(Start: 12 @32648 has 161 MA's), (26, 32576), (35, 32492), (38, 32441),

Gene: StewieG_41 Start: 30093, Stop: 29824, Start Num: 12
Candidate Starts for StewieG_41:
(Start: 12 @30093 has 161 MA's), (26, 30009), (35, 29925), (38, 29874),

Gene: StrongArm_41 Start: 33115, Stop: 32846, Start Num: 12
Candidate Starts for StrongArm_41:
(Start: 12 @33115 has 161 MA's), (26, 33031), (35, 32947), (38, 32896),

Gene: Sumter_40 Start: 32264, Stop: 31995, Start Num: 12
Candidate Starts for Sumter_40:
(Start: 12 @32264 has 161 MA's), (35, 32096), (38, 32045),

Gene: Sunshine924_43 Start: 31944, Stop: 31675, Start Num: 12
Candidate Starts for Sunshine924_43:
(Start: 12 @31944 has 161 MA's), (26, 31860), (35, 31776), (38, 31725),

Gene: SwissCheese_44 Start: 32776, Stop: 32492, Start Num: 12
Candidate Starts for SwissCheese_44:
(Start: 12 @32776 has 161 MA's), (15, 32746), (20, 32728), (29, 32665), (34, 32605), (38, 32542),

Gene: Switzer_42 Start: 31952, Stop: 31680, Start Num: 13
Candidate Starts for Switzer_42:
(Start: 13 @31952 has 14 MA's), (22, 31907), (35, 31781), (38, 31730),

Gene: Swole_43 Start: 31939, Stop: 31652, Start Num: 12
Candidate Starts for Swole_43:
(Start: 12 @31939 has 161 MA's), (35, 31753), (38, 31702),

Gene: Target_43 Start: 31342, Stop: 31049, Start Num: 12
Candidate Starts for Target_43:

(Start: 12 @31342 has 161 MA's), (21, 31282), (35, 31150), (38, 31099),

Gene: Tasp14_43 Start: 32497, Stop: 32210, Start Num: 12

Candidate Starts for Tasp14_43:

(Start: 12 @32497 has 161 MA's), (24, 32410), (26, 32395), (35, 32311), (38, 32260),

Gene: Teodoridan_40 Start: 31572, Stop: 31282, Start Num: 12

Candidate Starts for Teodoridan_40:

(Start: 12 @31572 has 161 MA's), (21, 31512), (34, 31395), (38, 31332),

Gene: TheloniousMonk_43 Start: 33509, Stop: 33222, Start Num: 12

Candidate Starts for TheloniousMonk_43:

(Start: 12 @33509 has 161 MA's), (24, 33422), (26, 33407), (35, 33323), (38, 33272),

Gene: Topgun_42 Start: 32088, Stop: 31810, Start Num: 12

Candidate Starts for Topgun_42:

(Start: 12 @32088 has 161 MA's), (32, 31956), (34, 31932),

Gene: Tote_38 Start: 29206, Stop: 28919, Start Num: 12

Candidate Starts for Tote_38:

(Start: 12 @29206 has 161 MA's), (35, 29020), (38, 28969),

Gene: Traft412_43 Start: 33023, Stop: 32742, Start Num: 12

Candidate Starts for Traft412_43:

(Start: 12 @33023 has 161 MA's), (26, 32921), (35, 32843), (38, 32792),

Gene: Treddle_44 Start: 33543, Stop: 33265, Start Num: 12

Candidate Starts for Treddle_44:

(3, 33753), (Start: 12 @33543 has 161 MA's), (35, 33366), (38, 33315),

Gene: Tripl3t_42 Start: 32942, Stop: 32670, Start Num: 13

Candidate Starts for Tripl3t_42:

(Start: 13 @32942 has 14 MA's), (22, 32897), (35, 32771), (38, 32720),

Gene: Trouble_43 Start: 33193, Stop: 32909, Start Num: 12

Candidate Starts for Trouble_43:

(3, 33403), (Start: 12 @33193 has 161 MA's), (24, 33109), (35, 33010), (38, 32959),

Gene: Turj99_40 Start: 31789, Stop: 31526, Start Num: 12

Candidate Starts for Turj99_40:

(4, 31942), (Start: 12 @31789 has 161 MA's), (34, 31639), (38, 31576),

Gene: TwoPeat_42 Start: 32242, Stop: 31970, Start Num: 13

Candidate Starts for TwoPeat_42:

(Start: 13 @32242 has 14 MA's), (22, 32197), (35, 32071), (38, 32020),

Gene: U2_41 Start: 31935, Stop: 31663, Start Num: 13

Candidate Starts for U2_41:

(Start: 13 @31935 has 14 MA's), (22, 31890), (30, 31818), (35, 31764), (38, 31713),

Gene: Violet_40 Start: 32375, Stop: 32088, Start Num: 12

Candidate Starts for Violet_40:

(Start: 12 @32375 has 161 MA's), (26, 32273), (35, 32189), (38, 32138),

Gene: Watermelon_44 Start: 32965, Stop: 32696, Start Num: 12
Candidate Starts for Watermelon_44:
(Start: 12 @32965 has 161 MA's), (26, 32881), (35, 32797), (38, 32746),

Gene: Wheeler_43 Start: 32673, Stop: 32386, Start Num: 12
Candidate Starts for Wheeler_43:
(Start: 12 @32673 has 161 MA's), (26, 32571), (35, 32487), (38, 32436),

Gene: Wilkins_42 Start: 32021, Stop: 31743, Start Num: 12
Candidate Starts for Wilkins_42:
(Start: 12 @32021 has 161 MA's), (32, 31889), (34, 31865),

Gene: Zeeculate_41 Start: 32615, Stop: 32361, Start Num: 17
Candidate Starts for Zeeculate_41:
(14, 32621), (Start: 17 @32615 has 1 MA's), (34, 32474), (37, 32444), (38, 32411),

Gene: Zephyr_42 Start: 32359, Stop: 32072, Start Num: 12
Candidate Starts for Zephyr_42:
(Start: 12 @32359 has 161 MA's), (26, 32257), (35, 32173), (38, 32122),

Gene: Zeuska_42 Start: 32583, Stop: 32314, Start Num: 12
Candidate Starts for Zeuska_42:
(Start: 12 @32583 has 161 MA's), (26, 32499), (35, 32415), (38, 32364),