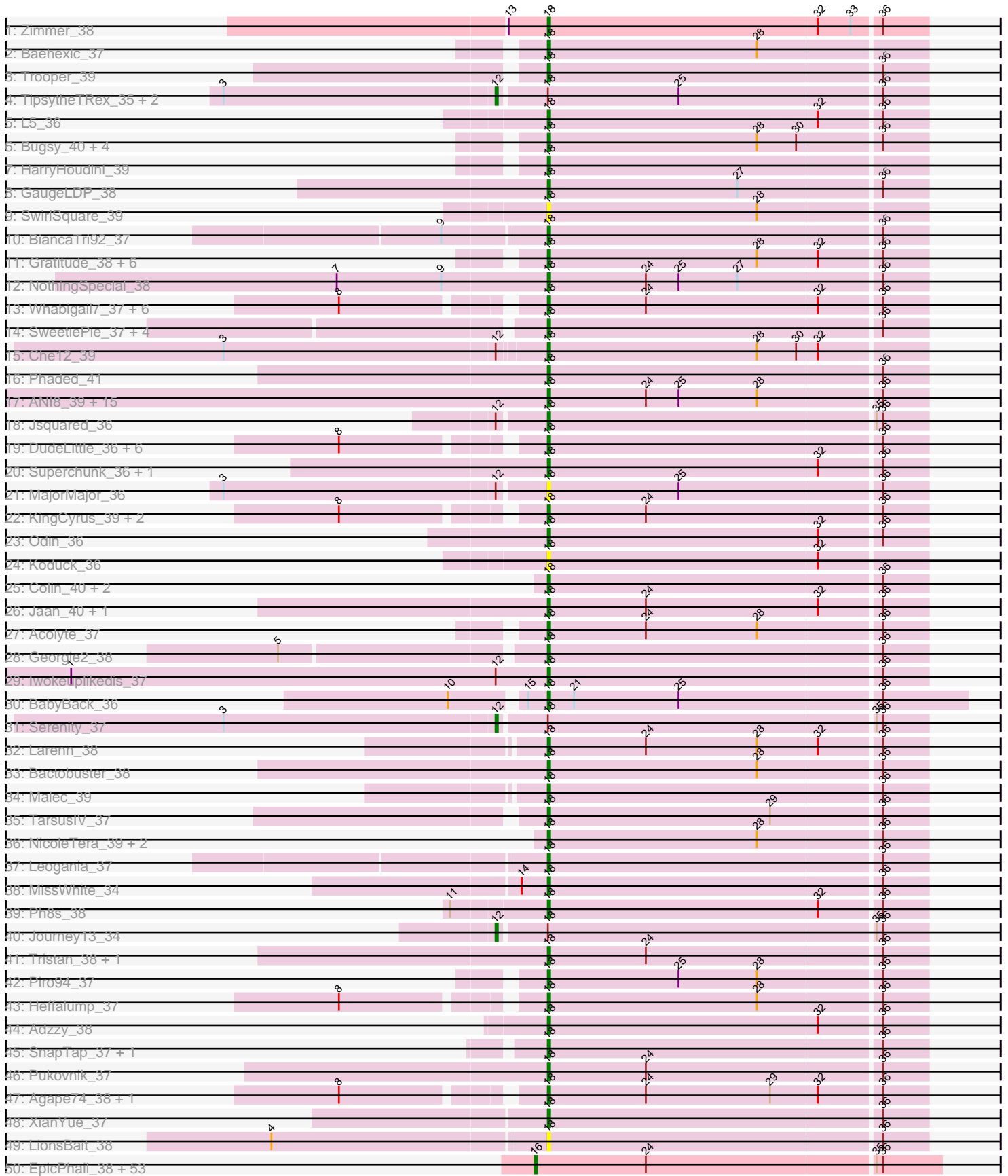
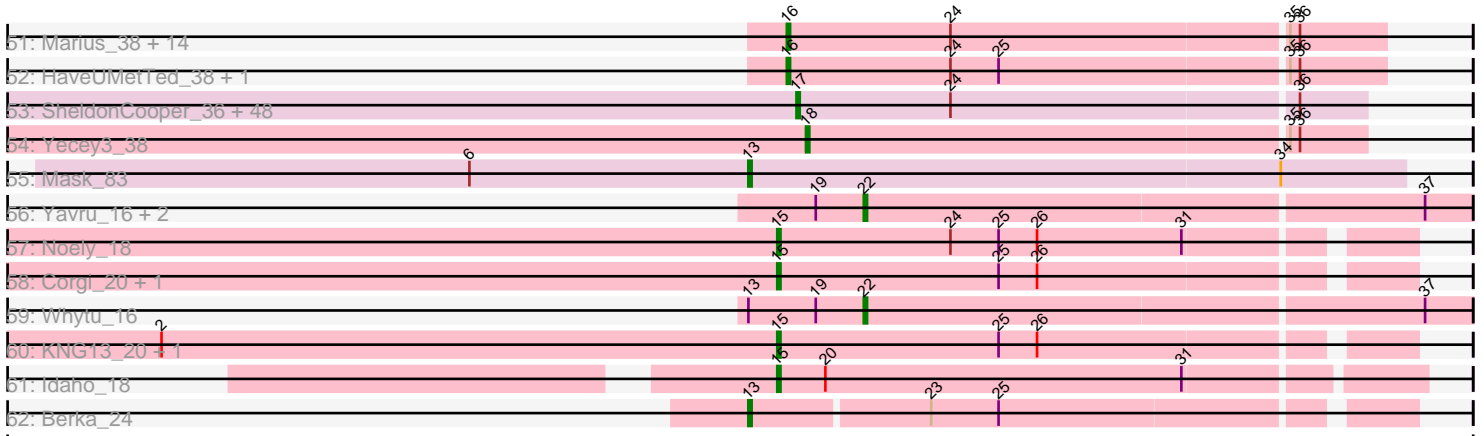


Pham 224268



Pham 224268



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 224268 Report

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

Pham number 224268 has 236 members, 28 are drafts.

Phages represented in each track:

- Track 1 : Zimmer_38
- Track 2 : Baehexic_37
- Track 3 : Trooper_39
- Track 4 : TopsytheTRex_35, Bradman_36, Quokka_35
- Track 5 : L5_36
- Track 6 : Buggy_40, Flare16_38, Sknot_40, NaSiaTalie_38, MiculUcigas_38
- Track 7 : HarryHoudini_39
- Track 8 : GaugeLDP_38
- Track 9 : SwirlSquare_39
- Track 10 : BiancaTri92_37
- Track 11 : Gratitude_38, Updawg_39, Equemioh13_39, Terrific_41, Centaur_39, Drake55_40, WideWale_39
- Track 12 : NothingSpecial_38
- Track 13 : Whabigail7_37, AbbyPaige_38, Jerm_38, Dignity_38, Leviathan_38, LilTurb_37, Smeagan_39
- Track 14 : SweetiePie_37, Crucio_37, QueenBeesly_37, FiringLine_37, Power_36
- Track 15 : Che12_39
- Track 16 : Phaded_41
- Track 17 : ANI8_39, StarStuff_39, Pomar16_39, Naji_39, C3_34, AN3_36, DBQu4n_39, Duplo_39, VC3_39, D29_36, Tomathan_39, AN9_39, Kerberos_39, D32_39, Travvers_39, VA6_36
- Track 18 : Jsquared_36
- Track 19 : DudeLittle_36, Retro23_38, Anselm_38, Fameo_37, QueenB2_37, Dalmatian_38, JoshKayV_38
- Track 20 : Superchunk_36, Caraxes_37
- Track 21 : MajorMajor_36
- Track 22 : KingCyrus_39, ChipMunk_39, EvilGenius_39
- Track 23 : Odin_36
- Track 24 : Koduck_36
- Track 25 : Colin_40, Kalpine_37, Trixie_37
- Track 26 : Jaan_40, IronMan_38
- Track 27 : Acolyte_37
- Track 28 : Georgie2_38
- Track 29 : Iwokeuplikedis_37
- Track 30 : BabyBack_36
- Track 31 : Serenity_37
- Track 32 : Larenn_38

- Track 33 : Bactobuster_38
- Track 34 : Malec_39
- Track 35 : TarsusIV_37
- Track 36 : NicoleTera_39, Pharaoh_35, WeiHuaDA_42
- Track 37 : Leogania_37
- Track 38 : MissWhite_34
- Track 39 : Ph8s_38
- Track 40 : Journey13_34
- Track 41 : Tristan_38, Landor_38
- Track 42 : Piro94_37
- Track 43 : Heffalump_37
- Track 44 : Adzzy_38
- Track 45 : SnapTap_37, SemperFi_38
- Track 46 : Pukovnik_37
- Track 47 : Agape74_38, Turbido_37
- Track 48 : XianYue_37
- Track 49 : LionsBait_38
- Track 50 : EpicPhail_38, SoYo_38, Grub_38, Vix_38, Microwolf_38, Taurus_38, Dieselweasel_38, Watson_38, LBerry_38, StepMih_38, MadMarie_38, PGHhamlin_40, Iowa_38, MuchMore_40, PotatoSplit_39, Bigflo_38, Malinsilva_40, Farber_38, Aglet_38, Wooldri_40, MarQuardt_38, Tiffany_38, Anubis_40, Colbster_38, DaHudson_38, GingkoMaracino_38, P28Green_38, Fernando_38, Grum1_38, Phoebe_38, Jobu08_37, AugsMagnumOpus_40, Zetzy_37, JenCasNa_38, Snickers_38, Mainiac_38, Pembroke_38, Ollie_38, LugYA_40, Cullens_38, BreSam8_38, JHC117_38, SoilDragon_37, GtownJaz_38, MoneyMay_38, Beauxregard13_38, Grif_38, Marie_38, Sabinator_37, Stagni_38, Sabia_38, Hercules11_38, Lilith_38, Penny1_38
- Track 51 : Marius_38, Kalb97_38, Reba_38, Phranny_38, Calvinny_38, ACFishhook_37, Groupthink_38, Heliosoles_37, PurpleHaze_37, Manu_38, JeppNRM_38, Gemma_37, Pawn_37, PhishRPhriends_36, Kalnoky_38
- Track 52 : HaveUMetTed_38, OlanP_37
- Track 53 : SheldonCooper_36, Rockstar_35, LeoAvram_35, TroyPia_35, BabyRay_35, BangNhom_35, Heathen_35, DropBear_35, Puppy_36, TinaFeyge_35, MK4_35, ChampagnePapi_36, Cerulean_36, Polymorphads_35, MA5_35, Maxo_35, Chiqui_34, BabyJohn_34, Bugatti_35, Commander_35, Fred313_35, BellusTerra_35, TNguyen7_35, Eurydice_35, Medusa_35, Kampy_35, Scout_35, Pistachio_36, JF4_35, Phantastic_35, JF2_35, Nebs_35, Giroux_35, Morrow_35, Eagle_34, BlueBird_36, HelDan_35, Melvin_36, Sparxx_35, Isca_35, Abdiel_34, SaturnRing_35, Obama12_36, Ohfah_35, Marchesa_35, LHTSCC_36, Idleandcovert_35, B1_33, Phelipe_35
- Track 54 : Yecey3_38
- Track 55 : Mask_83
- Track 56 : Yavru_16, Piku_16, Utopia_17
- Track 57 : Noely_18
- Track 58 : Corgi_20, CheeseDanish_20
- Track 59 : Whytu_16
- Track 60 : KNG13_20, CabbageMan_18
- Track 61 : Idaho_18
- Track 62 : Berka_24

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

The start number called the most often in the published annotations is 18, it was called in 87 of the 208 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AN3_36, AN9_39, AN18_39, AbbyPaige_38, Acolyte_37, Adzzy_38, Agape74_38, Anselm_38, BabyBack_36, Bactobuster_38, Baehexic_37, BiancaTri92_37, Buggy_40, C3_34, Caraxes_37, Centaur_39, Che12_39, ChipMunk_39, Colin_40, Crucio_37, D29_36, D32_39, DBQu4n_39, Dalmatian_38, Dignity_38, Drake55_40, DudeLittle_36, Duplo_39, Equemioh13_39, EvilGenius_39, Fameo_37, FiringLine_37, Flare16_38, GaugeLDP_38, Georgie2_38, Gratitude_38, HarryHoudini_39, Heffalump_37, IronMan_38, Iwokeuplikedis_37, Jaan_40, Jerm_38, JoshKayV_38, Jsquared_36, Kalpine_37, Kerberos_39, KingCyrus_39, Koduck_36, L5_36, Landor_38, Larenn_38, Leogania_37, Leviathan_38, LiITurb_37, LionsBait_38, MajorMajor_36, Malec_39, MiculUcigas_38, MissWhite_34, NaSiaTalie_38, Naji_39, NicoleTera_39, NothingSpecial_38, Odin_36, Ph8s_38, Phaded_41, Pharaoh_35, Piro94_37, Pomar16_39, Power_36, Pukovnik_37, QueenB2_37, QueenBeesly_37, Retro23_38, SemperFi_38, Sknot_40, Smeagan_39, SnapTap_37, StarStuff_39, Superchunk_36, SweetiePie_37, SwirlSquare_39, TarsusIV_37, Terrific_41, Tomathan_39, Travvers_39, Tristan_38, Trixie_37, Trooper_39, Turbido_37, Updawg_39, VA6_36, VC3_39, WeiHuaDA_42, Whabigail7_37, WideWale_39, XianYue_37, Yecey3_38, Zimmer_38,

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

- Bradman_36, Journey13_34, Quokka_35, Serenity_37, TipsytheTRex_35,

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

- ACFishhook_37, Abdiel_34, Aglet_38, Anubis_40, AugsMagnumOpus_40, B1_33, BabyJohn_34, BabyRay_35, BangNhom_35, Beauxregard13_38, BellusTerra_35, Berka_24, Bigflo_38, BlueBird_36, BreSam8_38, Bugatti_35, CabbageMan_18, Calvinny_38, Cerulean_36, ChampagnePapi_36, CheeseDanish_20, Chiqui_34, Colbster_38, Commander_35, Corgi_20, Cullens_38, DaHudson_38, Dieselweasel_38, DropBear_35, Eagle_34, EpicPhail_38, Eurydice_35, Farber_38, Fernando_38, Fred313_35, Gemma_37, GingkoMaracino_38, Giroux_35, Grif_38, Groupthink_38, Grub_38, Grum1_38, GtownJaz_38, HaveUMetTed_38, Heathen_35, HelDan_35, Heliosoles_37, Hercules11_38, Idaho_18, Idleandcovert_35, Isca_35, JF2_35, JF4_35, JHC117_38, JenCasNa_38, JeppNRM_38, Jobu08_37, KNG13_20, Kalb97_38, Kalnoky_38, Kamy_35, LBerry_38, LHTSCC_36, LeoAvram_35, Lilith_38, Lova_38, LugYA_40, MA5_35, MK4_35, MadMarie_38, Mainiac_38, Malinsilva_40, Manu_38, MarQuardt_38, Marchesa_35, Marie_38, Marius_38, Mask_83, Maxo_35, Medusa_35, Melvin_36, Microwolf_38, MoneyMay_38, Morrow_35, MuchMore_40, Nebs_35, Noely_18, Obama12_36, Ohfah_35, OlanP_37, Ollie_38, P28Green_38, PGHhamlin_40, Pawn_37, Pembroke_38, Penny1_38, Phantastic_35, Felipe_35, PhishRPhriends_36, Phoebe_38, Phranny_38, Piku_16, Pistachio_36, Polymorphads_35, PotatoSplit_39, Puppy_36, PurpleHaze_37, Reba_38, Rockstar_35, Sabia_38, Sabinator_37, SaturnRing_35, Scout_35, SheldonCooper_36, Snickers_38, SoYo_38, SoilDragon_37, Sparxx_35, Stagni_38, StepMih_38, TNguyen7_35, Taurus_38, Tiffany_38, TinaFeyge_35, TroyPia_35, Utopia_17, Vix_38, Watson_38, Whytu_16, Wooldri_40, Yavru_16, Zetty_37,

Summary by start number:

Start 12:

- Found in 9 of 236 (3.8%) of genes in pham
- Manual Annotations of this start: 3 of 208
- Called 55.6% of time when present
- Phage (with cluster) where this start called: Bradman_36 (A2), Journey13_34 (A2), Quokka_35 (A2), Serenity_37 (A2), TipsytheTRex_35 (A2),

Start 13:

- Found in 4 of 236 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 208
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Berka_24 (FE), Mask_83 (AD),

Start 15:

- Found in 7 of 236 (3.0%) of genes in pham
- Manual Annotations of this start: 4 of 208
- Called 85.7% of time when present
- Phage (with cluster) where this start called: CabbageMan_18 (FE), CheeseDanish_20 (FE), Corgi_20 (FE), Idaho_18 (FE), KNG13_20 (FE), Noely_18 (FE),

Start 16:

- Found in 71 of 236 (30.1%) of genes in pham
- Manual Annotations of this start: 67 of 208
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ACFishhook_37 (A3), Aglet_38 (A3), Anubis_40 (A3), AugsMagnumOpus_40 (A3), Beauxregard13_38 (A3), Bigflo_38 (A3), BreSam8_38 (A3), Calvinny_38 (A3), Colbster_38 (A3), Cullens_38 (A3), DaHudson_38 (A3), Dieselweasel_38 (A3), EpicPhail_38 (A3), Farber_38 (A3), Fernando_38 (A3), Gemma_37 (A3), GingkoMaracino_38 (A3), Grif_38 (A3), Groupthink_38 (A3), Grub_38 (A3), Grum1_38 (A3), GtownJaz_38 (A3), HaveUMetTed_38 (A3), Heliosoles_37 (A3), Hercules11_38 (A3), JHC117_38 (A3), JenCasNa_38 (A3), JeppNRM_38 (A3), Jobu08_37 (A3), Kalb97_38 (A3), Kalnoky_38 (A3), LBerry_38 (A3), Lilit_38 (A3), Iowa_38 (A3), LugYA_40 (A3), MadMarie_38 (A3), Mainiac_38 (A3), Malinsilva_40 (A3), Manu_38 (A3), MarQuardt_38 (A3), Marie_38 (A3), Marius_38 (A3), Microwolf_38 (A3), MoneyMay_38 (A3), MuchMore_40 (A3), OlanP_37 (A3), Ollie_38 (A3), P28Green_38 (A3), PGHhamlin_40 (A3), Pawn_37 (A3), Pembroke_38 (A3), Penny1_38 (A3), PhishRPhriends_36 (A3), Phoebe_38 (A3), Phranny_38 (A3), PotatoSplit_39 (A3), PurpleHaze_37 (A3), Reba_38 (A3), Sabia_38 (A3), Sabinator_37 (A3), Snickers_38 (A3), SoYo_38 (A3), SoilDragon_37 (A3), Stagni_38 (A3), StepMih_38 (A3), Taurus_38 (A3), Tiffany_38 (A3), Vix_38 (A3), Watson_38 (A3), Wooldri_40 (A3), Zetzy_37 (A3),

Start 17:

- Found in 49 of 236 (20.8%) of genes in pham
- Manual Annotations of this start: 42 of 208
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abdiel_34 (A4), B1_33 (A3), BabyJohn_34 (A3), BabyRay_35 (A3), BangNhom_35 (A4), BellusTerra_35 (A4), BlueBird_36 (A3), Bugatti_35 (A3), Cerulean_36 (A4), ChampagnePapi_36 (A4), Chiqui_34 (A3), Commander_35 (A4), DropBear_35 (A3), Eagle_34 (A4), Eurydice_35 (A4), Fred313_35 (A3), Giroux_35 (A3), Heathen_35 (A3), HelDan_35

(A3), Idleandcovert_35 (A3), Isca_35 (A3), JF2_35 (A3), JF4_35 (A3), Kamy_35 (A4), LHTSCC_36 (A4), LeoAvram_35 (A4), MA5_35 (A3), MK4_35 (A3), Marchesa_35 (A3), Maxo_35 (A4), Medusa_35 (A4), Melvin_36 (A4), Morrow_35 (A4), Nebs_35 (A4), Obama12_36 (A4), Ohfah_35 (A4), Phantastic_35 (A3), Phelipe_35 (A4), Pistachio_36 (A3), Polymorphads_35 (A4), Puppy_36 (A3), Rockstar_35 (A3), SaturnRing_35 (A3), Scout_35 (A3), SheldonCooper_36 (A4), Sparxx_35 (A4), TNguyen7_35 (A3), TinaFeyge_35 (A4), TroyPia_35 (A4),

Start 18:

- Found in 104 of 236 (44.1%) of genes in pham
- Manual Annotations of this start: 87 of 208
- Called 95.2% of time when present
- Phage (with cluster) where this start called: AN3_36 (A2), AN9_39 (A2), ANI8_39 (A2), AbbyPaige_38 (A2), Acolyte_37 (A2), Adzzy_38 (A2), Agape74_38 (A2), Anselm_38 (A2), BabyBack_36 (A2), Bactobuster_38 (A2), Baehexic_37 (A2), BiancaTri92_37 (A2), Buggy_40 (A2), C3_34 (A2), Caraxes_37 (A2), Centaur_39 (A2), Che12_39 (A2), ChipMunk_39 (A2), Colin_40 (A2), Crucio_37 (A2), D29_36 (A2), D32_39 (A2), DBQu4n_39 (A2), Dalmatian_38 (A2), Dignity_38 (A2), Drake55_40 (A2), DudeLittle_36 (A2), Duplo_39 (A2), Equemioh13_39 (A2), EvilGenius_39 (A2), Fameo_37 (A2), FiringLine_37 (A2), Flare16_38 (A2), GaugeLDP_38 (A2), Georgie2_38 (A2), Gratitude_38 (A2), HarryHoudini_39 (A2), Heffalump_37 (A2), IronMan_38 (A2), Iwokeuplikedis_37 (A2), Jaan_40 (A2), Jerm_38 (A2), JoshKayV_38 (A2), Jsquared_36 (A2), Kalpine_37 (A2), Kerberos_39 (A2), KingCyrus_39 (A2), Koduck_36 (A2), L5_36 (A2), Landor_38 (A2), Larenn_38 (A2), Leogania_37 (A2), Leviathan_38 (A2), LiITurb_37 (A2), LionsBait_38 (A2), MajorMajor_36 (A2), Malec_39 (A2), MiculUcigas_38 (A2), MissWhite_34 (A2), NaSiaTalie_38 (A2), Naji_39 (A2), NicoleTera_39 (A2), NothingSpecial_38 (A2), Odin_36 (A2), Ph8s_38 (A2), Phaded_41 (A2), Pharaoh_35 (A12), Piro94_37 (A2), Pomar16_39 (A2), Power_36 (A2), Pukovnik_37 (A2), QueenB2_37 (A2), QueenBeesly_37 (A2), Retro23_38 (A2), SemperFi_38 (A2), Sknot_40 (A2), Smeagan_39 (A2), SnapTap_37 (A2), StarStuff_39 (A2), Superchunk_36 (A2), SweetiePie_37 (A2), SwirlSquare_39 (A2), TarsusIV_37 (A2), Terrific_41 (A2), Tomathan_39 (A2), Travvers_39 (A2), Tristan_38 (A2), Trixie_37 (A2), Trooper_39 (A2), Turbido_37 (A2), Updawg_39 (A2), VA6_36 (A2), VC3_39 (A2), WeiHuaDA_42 (A2), Whabigail7_37 (A2), WideWale_39 (A2), XianYue_37 (A2), Yecey3_38 (A9), Zimmer_38 (A12),

Start 22:

- Found in 4 of 236 (1.7%) of genes in pham
- Manual Annotations of this start: 3 of 208
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Piku_16 (FE), Utopia_17 (FE), Whytu_16 (FE), Yavru_16 (FE),

Summary by clusters:

There are 7 clusters represented in this pham: AD, A12, A3, A2, A4, A9, FE,

Info for manual annotations of cluster A12:

- Start number 18 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A2:

- Start number 12 was manually annotated 3 times for cluster A2.

- Start number 18 was manually annotated 84 times for cluster A2.

Info for manual annotations of cluster A3:

- Start number 16 was manually annotated 67 times for cluster A3.
- Start number 17 was manually annotated 18 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 17 was manually annotated 24 times for cluster A4.

Info for manual annotations of cluster A9:

- Start number 18 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster AD:

- Start number 13 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster FE:

- Start number 13 was manually annotated 1 time for cluster FE.
- Start number 15 was manually annotated 4 times for cluster FE.
- Start number 22 was manually annotated 3 times for cluster FE.

Gene Information:

Gene: ACFishhook_37 Start: 27807, Stop: 27625, Start Num: 16

Candidate Starts for ACFishhook_37:

(Start: 16 @27807 has 67 MA's), (24, 27756), (35, 27654), (36, 27651),

Gene: AN3_36 Start: 27680, Stop: 27510, Start Num: 18

Candidate Starts for AN3_36:

(Start: 18 @27680 has 87 MA's), (24, 27635), (25, 27620), (28, 27584), (36, 27530),

Gene: AN9_39 Start: 27665, Stop: 27495, Start Num: 18

Candidate Starts for AN9_39:

(Start: 18 @27665 has 87 MA's), (24, 27620), (25, 27605), (28, 27569), (36, 27515),

Gene: ANI8_39 Start: 27665, Stop: 27495, Start Num: 18

Candidate Starts for ANI8_39:

(Start: 18 @27665 has 87 MA's), (24, 27620), (25, 27605), (28, 27569), (36, 27515),

Gene: AbbyPaige_38 Start: 28214, Stop: 28044, Start Num: 18

Candidate Starts for AbbyPaige_38:

(8, 28295), (Start: 18 @28214 has 87 MA's), (24, 28169), (32, 28091), (36, 28064),

Gene: Abdiel_34 Start: 27322, Stop: 27149, Start Num: 17

Candidate Starts for Abdiel_34:

(Start: 17 @27322 has 42 MA's), (24, 27274), (36, 27169),

Gene: Acolyte_37 Start: 28346, Stop: 28176, Start Num: 18

Candidate Starts for Acolyte_37:

(Start: 18 @28346 has 87 MA's), (24, 28301), (28, 28250), (36, 28196),

Gene: Adzzy_38 Start: 26529, Stop: 26359, Start Num: 18

Candidate Starts for Adzzy_38:

(Start: 18 @26529 has 87 MA's), (32, 26406), (36, 26379),

Gene: Agape74_38 Start: 28199, Stop: 28029, Start Num: 18

Candidate Starts for Agape74_38:

(8, 28280), (Start: 18 @28199 has 87 MA's), (24, 28154), (29, 28097), (32, 28076), (36, 28049),

Gene: Aglet_38 Start: 27905, Stop: 27723, Start Num: 16

Candidate Starts for Aglet_38:

(Start: 16 @27905 has 67 MA's), (24, 27854), (35, 27752), (36, 27749),

Gene: Anselm_38 Start: 28317, Stop: 28147, Start Num: 18

Candidate Starts for Anselm_38:

(8, 28398), (Start: 18 @28317 has 87 MA's), (36, 28167),

Gene: Anubis_40 Start: 27790, Stop: 27608, Start Num: 16

Candidate Starts for Anubis_40:

(Start: 16 @27790 has 67 MA's), (24, 27739), (35, 27637), (36, 27634),

Gene: AugsMagnumOpus_40 Start: 27896, Stop: 27714, Start Num: 16

Candidate Starts for AugsMagnumOpus_40:

(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: B1_33 Start: 26932, Stop: 26753, Start Num: 17

Candidate Starts for B1_33:

(Start: 17 @26932 has 42 MA's), (24, 26884), (36, 26779),

Gene: BabyBack_36 Start: 28565, Stop: 28377, Start Num: 18

Candidate Starts for BabyBack_36:

(10, 28604), (Start: 15 @28574 has 4 MA's), (Start: 18 @28565 has 87 MA's), (21, 28553), (25, 28505), (36, 28415),

Gene: BabyJohn_34 Start: 27705, Stop: 27526, Start Num: 17

Candidate Starts for BabyJohn_34:

(Start: 17 @27705 has 42 MA's), (24, 27657), (36, 27552),

Gene: BabyRay_35 Start: 27483, Stop: 27304, Start Num: 17

Candidate Starts for BabyRay_35:

(Start: 17 @27483 has 42 MA's), (24, 27435), (36, 27330),

Gene: Bactobuster_38 Start: 29229, Stop: 29059, Start Num: 18

Candidate Starts for Bactobuster_38:

(Start: 18 @29229 has 87 MA's), (28, 29133), (36, 29079),

Gene: Baehexic_37 Start: 28367, Stop: 28197, Start Num: 18

Candidate Starts for Baehexic_37:

(Start: 18 @28367 has 87 MA's), (28, 28271),

Gene: BangNhom_35 Start: 27659, Stop: 27486, Start Num: 17

Candidate Starts for BangNhom_35:

(Start: 17 @27659 has 42 MA's), (24, 27611), (36, 27506),

Gene: Beauxregard13_38 Start: 27904, Stop: 27722, Start Num: 16

Candidate Starts for Beauxregard13_38:
(Start: 16 @27904 has 67 MA's), (24, 27853), (35, 27751), (36, 27748),

Gene: BellusTerra_35 Start: 27322, Stop: 27149, Start Num: 17
Candidate Starts for BellusTerra_35:
(Start: 17 @27322 has 42 MA's), (24, 27274), (36, 27169),

Gene: Berka_24 Start: 13339, Stop: 13533, Start Num: 13
Candidate Starts for Berka_24:
(Start: 13 @13339 has 2 MA's), (23, 13393), (25, 13414),

Gene: BiancaTri92_37 Start: 28784, Stop: 28614, Start Num: 18
Candidate Starts for BiancaTri92_37:
(9, 28829), (Start: 18 @28784 has 87 MA's), (36, 28634),

Gene: Bigflo_38 Start: 27903, Stop: 27721, Start Num: 16
Candidate Starts for Bigflo_38:
(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: BlueBird_36 Start: 27412, Stop: 27233, Start Num: 17
Candidate Starts for BlueBird_36:
(Start: 17 @27412 has 42 MA's), (24, 27364), (36, 27259),

Gene: Bradman_36 Start: 26740, Stop: 26549, Start Num: 12
Candidate Starts for Bradman_36:
(3, 26863), (Start: 12 @26740 has 3 MA's), (Start: 18 @26719 has 87 MA's), (25, 26659), (36, 26569),

Gene: BreSam8_38 Start: 27897, Stop: 27715, Start Num: 16
Candidate Starts for BreSam8_38:
(Start: 16 @27897 has 67 MA's), (24, 27846), (35, 27744), (36, 27741),

Gene: Bugatti_35 Start: 27412, Stop: 27233, Start Num: 17
Candidate Starts for Bugatti_35:
(Start: 17 @27412 has 42 MA's), (24, 27364), (36, 27259),

Gene: Buggy_40 Start: 28650, Stop: 28480, Start Num: 18
Candidate Starts for Buggy_40:
(Start: 18 @28650 has 87 MA's), (28, 28554), (30, 28536), (36, 28500),

Gene: C3_34 Start: 27665, Stop: 27495, Start Num: 18
Candidate Starts for C3_34:
(Start: 18 @27665 has 87 MA's), (24, 27620), (25, 27605), (28, 27569), (36, 27515),

Gene: CabbageMan_18 Start: 13371, Stop: 13559, Start Num: 15
Candidate Starts for CabbageMan_18:
(2, 13179), (Start: 15 @13371 has 4 MA's), (25, 13440), (26, 13452),

Gene: Calvinny_38 Start: 27732, Stop: 27550, Start Num: 16
Candidate Starts for Calvinny_38:
(Start: 16 @27732 has 67 MA's), (24, 27681), (35, 27579), (36, 27576),

Gene: Caraxes_37 Start: 26412, Stop: 26242, Start Num: 18
Candidate Starts for Caraxes_37:

(Start: 18 @26412 has 87 MA's), (32, 26289), (36, 26262),

Gene: Centaur_39 Start: 28483, Stop: 28313, Start Num: 18

Candidate Starts for Centaur_39:

(Start: 18 @28483 has 87 MA's), (28, 28387), (32, 28360), (36, 28333),

Gene: Cerulean_36 Start: 27660, Stop: 27487, Start Num: 17

Candidate Starts for Cerulean_36:

(Start: 17 @27660 has 42 MA's), (24, 27612), (36, 27507),

Gene: ChampagnePapi_36 Start: 27659, Stop: 27486, Start Num: 17

Candidate Starts for ChampagnePapi_36:

(Start: 17 @27659 has 42 MA's), (24, 27611), (36, 27506),

Gene: Che12_39 Start: 26775, Stop: 26605, Start Num: 18

Candidate Starts for Che12_39:

(3, 26919), (Start: 12 @26796 has 3 MA's), (Start: 18 @26775 has 87 MA's), (28, 26679), (30, 26661), (32, 26652),

Gene: CheeseDanish_20 Start: 13530, Stop: 13718, Start Num: 15

Candidate Starts for CheeseDanish_20:

(Start: 15 @13530 has 4 MA's), (25, 13599), (26, 13611),

Gene: ChipMunk_39 Start: 29644, Stop: 29474, Start Num: 18

Candidate Starts for ChipMunk_39:

(8, 29725), (Start: 18 @29644 has 87 MA's), (24, 29599), (36, 29494),

Gene: Chiqui_34 Start: 27714, Stop: 27535, Start Num: 17

Candidate Starts for Chiqui_34:

(Start: 17 @27714 has 42 MA's), (24, 27666), (36, 27561),

Gene: Colbster_38 Start: 27904, Stop: 27722, Start Num: 16

Candidate Starts for Colbster_38:

(Start: 16 @27904 has 67 MA's), (24, 27853), (35, 27751), (36, 27748),

Gene: Colin_40 Start: 28947, Stop: 28777, Start Num: 18

Candidate Starts for Colin_40:

(Start: 18 @28947 has 87 MA's), (36, 28797),

Gene: Commander_35 Start: 27323, Stop: 27150, Start Num: 17

Candidate Starts for Commander_35:

(Start: 17 @27323 has 42 MA's), (24, 27275), (36, 27170),

Gene: Corgi_20 Start: 13530, Stop: 13718, Start Num: 15

Candidate Starts for Corgi_20:

(Start: 15 @13530 has 4 MA's), (25, 13599), (26, 13611),

Gene: Crucio_37 Start: 27910, Stop: 27740, Start Num: 18

Candidate Starts for Crucio_37:

(Start: 18 @27910 has 87 MA's), (36, 27760),

Gene: Cullens_38 Start: 27903, Stop: 27721, Start Num: 16

Candidate Starts for Cullens_38:

(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: D29_36 Start: 27596, Stop: 27426, Start Num: 18

Candidate Starts for D29_36:

(Start: 18 @27596 has 87 MA's), (24, 27551), (25, 27536), (28, 27500), (36, 27446),

Gene: D32_39 Start: 27596, Stop: 27426, Start Num: 18

Candidate Starts for D32_39:

(Start: 18 @27596 has 87 MA's), (24, 27551), (25, 27536), (28, 27500), (36, 27446),

Gene: DBQu4n_39 Start: 27596, Stop: 27426, Start Num: 18

Candidate Starts for DBQu4n_39:

(Start: 18 @27596 has 87 MA's), (24, 27551), (25, 27536), (28, 27500), (36, 27446),

Gene: DaHudson_38 Start: 27896, Stop: 27714, Start Num: 16

Candidate Starts for DaHudson_38:

(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: Dalmatian_38 Start: 28293, Stop: 28123, Start Num: 18

Candidate Starts for Dalmatian_38:

(8, 28374), (Start: 18 @28293 has 87 MA's), (36, 28143),

Gene: Dieselweasel_38 Start: 27906, Stop: 27724, Start Num: 16

Candidate Starts for Dieselweasel_38:

(Start: 16 @27906 has 67 MA's), (24, 27855), (35, 27753), (36, 27750),

Gene: Dignity_38 Start: 28279, Stop: 28109, Start Num: 18

Candidate Starts for Dignity_38:

(8, 28360), (Start: 18 @28279 has 87 MA's), (24, 28234), (32, 28156), (36, 28129),

Gene: Drake55_40 Start: 28546, Stop: 28376, Start Num: 18

Candidate Starts for Drake55_40:

(Start: 18 @28546 has 87 MA's), (28, 28450), (32, 28423), (36, 28396),

Gene: DropBear_35 Start: 27479, Stop: 27300, Start Num: 17

Candidate Starts for DropBear_35:

(Start: 17 @27479 has 42 MA's), (24, 27431), (36, 27326),

Gene: DudeLittle_36 Start: 27959, Stop: 27789, Start Num: 18

Candidate Starts for DudeLittle_36:

(8, 28040), (Start: 18 @27959 has 87 MA's), (36, 27809),

Gene: Duplo_39 Start: 27634, Stop: 27464, Start Num: 18

Candidate Starts for Duplo_39:

(Start: 18 @27634 has 87 MA's), (24, 27589), (25, 27574), (28, 27538), (36, 27484),

Gene: Eagle_34 Start: 27346, Stop: 27173, Start Num: 17

Candidate Starts for Eagle_34:

(Start: 17 @27346 has 42 MA's), (24, 27298), (36, 27193),

Gene: EpicPhail_38 Start: 27904, Stop: 27722, Start Num: 16

Candidate Starts for EpicPhail_38:

(Start: 16 @27904 has 67 MA's), (24, 27853), (35, 27751), (36, 27748),

Gene: Equemioh13_39 Start: 28486, Stop: 28316, Start Num: 18
Candidate Starts for Equemioh13_39:
(Start: 18 @28486 has 87 MA's), (28, 28390), (32, 28363), (36, 28336),

Gene: Eurydice_35 Start: 27321, Stop: 27148, Start Num: 17
Candidate Starts for Eurydice_35:
(Start: 17 @27321 has 42 MA's), (24, 27273), (36, 27168),

Gene: EvilGenius_39 Start: 29648, Stop: 29478, Start Num: 18
Candidate Starts for EvilGenius_39:
(8, 29729), (Start: 18 @29648 has 87 MA's), (24, 29603), (36, 29498),

Gene: Fameo_37 Start: 28087, Stop: 27917, Start Num: 18
Candidate Starts for Fameo_37:
(8, 28168), (Start: 18 @28087 has 87 MA's), (36, 27937),

Gene: Farber_38 Start: 27897, Stop: 27715, Start Num: 16
Candidate Starts for Farber_38:
(Start: 16 @27897 has 67 MA's), (24, 27846), (35, 27744), (36, 27741),

Gene: Fernando_38 Start: 27903, Stop: 27721, Start Num: 16
Candidate Starts for Fernando_38:
(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: FiringLine_37 Start: 27891, Stop: 27721, Start Num: 18
Candidate Starts for FiringLine_37:
(Start: 18 @27891 has 87 MA's), (36, 27741),

Gene: Flare16_38 Start: 28158, Stop: 27988, Start Num: 18
Candidate Starts for Flare16_38:
(Start: 18 @28158 has 87 MA's), (28, 28062), (30, 28044), (36, 28008),

Gene: Fred313_35 Start: 27164, Stop: 26985, Start Num: 17
Candidate Starts for Fred313_35:
(Start: 17 @27164 has 42 MA's), (24, 27116), (36, 27011),

Gene: GaugeLDP_38 Start: 28708, Stop: 28538, Start Num: 18
Candidate Starts for GaugeLDP_38:
(Start: 18 @28708 has 87 MA's), (27, 28621), (36, 28558),

Gene: Gemma_37 Start: 27728, Stop: 27546, Start Num: 16
Candidate Starts for Gemma_37:
(Start: 16 @27728 has 67 MA's), (24, 27677), (35, 27575), (36, 27572),

Gene: Georgie2_38 Start: 27936, Stop: 27766, Start Num: 18
Candidate Starts for Georgie2_38:
(5, 28050), (Start: 18 @27936 has 87 MA's), (36, 27786),

Gene: GingkoMaracino_38 Start: 27790, Stop: 27608, Start Num: 16
Candidate Starts for GingkoMaracino_38:
(Start: 16 @27790 has 67 MA's), (24, 27739), (35, 27637), (36, 27634),

Gene: Giroux_35 Start: 27411, Stop: 27232, Start Num: 17

Candidate Starts for Giroux_35:

(Start: 17 @27411 has 42 MA's), (24, 27363), (36, 27258),

Gene: Gratitude_38 Start: 28486, Stop: 28316, Start Num: 18

Candidate Starts for Gratitude_38:

(Start: 18 @28486 has 87 MA's), (28, 28390), (32, 28363), (36, 28336),

Gene: Grif_38 Start: 27978, Stop: 27796, Start Num: 16

Candidate Starts for Grif_38:

(Start: 16 @27978 has 67 MA's), (24, 27927), (35, 27825), (36, 27822),

Gene: Groupthink_38 Start: 27732, Stop: 27550, Start Num: 16

Candidate Starts for Groupthink_38:

(Start: 16 @27732 has 67 MA's), (24, 27681), (35, 27579), (36, 27576),

Gene: Grub_38 Start: 27896, Stop: 27714, Start Num: 16

Candidate Starts for Grub_38:

(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: Grum1_38 Start: 27903, Stop: 27721, Start Num: 16

Candidate Starts for Grum1_38:

(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: GtownJaz_38 Start: 27905, Stop: 27723, Start Num: 16

Candidate Starts for GtownJaz_38:

(Start: 16 @27905 has 67 MA's), (24, 27854), (35, 27752), (36, 27749),

Gene: HarryHoudini_39 Start: 28432, Stop: 28262, Start Num: 18

Candidate Starts for HarryHoudini_39:

(Start: 18 @28432 has 87 MA's),

Gene: HaveUMetTed_38 Start: 27725, Stop: 27543, Start Num: 16

Candidate Starts for HaveUMetTed_38:

(Start: 16 @27725 has 67 MA's), (24, 27674), (25, 27659), (35, 27572), (36, 27569),

Gene: Heathen_35 Start: 27220, Stop: 27041, Start Num: 17

Candidate Starts for Heathen_35:

(Start: 17 @27220 has 42 MA's), (24, 27172), (36, 27067),

Gene: Heffalump_37 Start: 28819, Stop: 28649, Start Num: 18

Candidate Starts for Heffalump_37:

(8, 28900), (Start: 18 @28819 has 87 MA's), (28, 28723), (36, 28669),

Gene: HelDan_35 Start: 27472, Stop: 27293, Start Num: 17

Candidate Starts for HelDan_35:

(Start: 17 @27472 has 42 MA's), (24, 27424), (36, 27319),

Gene: Heliosoles_37 Start: 27732, Stop: 27550, Start Num: 16

Candidate Starts for Heliosoles_37:

(Start: 16 @27732 has 67 MA's), (24, 27681), (35, 27579), (36, 27576),

Gene: Hercules11_38 Start: 27912, Stop: 27730, Start Num: 16

Candidate Starts for Hercules11_38:
(Start: 16 @27912 has 67 MA's), (24, 27861), (35, 27759), (36, 27756),

Gene: Idaho_18 Start: 13771, Stop: 13965, Start Num: 15
Candidate Starts for Idaho_18:
(Start: 15 @13771 has 4 MA's), (20, 13786), (31, 13897),

Gene: Idleandcovert_35 Start: 27412, Stop: 27233, Start Num: 17
Candidate Starts for Idleandcovert_35:
(Start: 17 @27412 has 42 MA's), (24, 27364), (36, 27259),

Gene: IronMan_38 Start: 29131, Stop: 28961, Start Num: 18
Candidate Starts for IronMan_38:
(Start: 18 @29131 has 87 MA's), (24, 29086), (32, 29008), (36, 28981),

Gene: Isca_35 Start: 27181, Stop: 27002, Start Num: 17
Candidate Starts for Isca_35:
(Start: 17 @27181 has 42 MA's), (24, 27133), (36, 27028),

Gene: Iwokeuplikedis_37 Start: 27530, Stop: 27360, Start Num: 18
Candidate Starts for Iwokeuplikedis_37:
(1, 27749), (Start: 12 @27554 has 3 MA's), (Start: 18 @27530 has 87 MA's), (36, 27380),

Gene: JF2_35 Start: 26932, Stop: 26753, Start Num: 17
Candidate Starts for JF2_35:
(Start: 17 @26932 has 42 MA's), (24, 26884), (36, 26779),

Gene: JF4_35 Start: 26932, Stop: 26753, Start Num: 17
Candidate Starts for JF4_35:
(Start: 17 @26932 has 42 MA's), (24, 26884), (36, 26779),

Gene: JHC117_38 Start: 27902, Stop: 27720, Start Num: 16
Candidate Starts for JHC117_38:
(Start: 16 @27902 has 67 MA's), (24, 27851), (35, 27749), (36, 27746),

Gene: Jaan_40 Start: 29710, Stop: 29540, Start Num: 18
Candidate Starts for Jaan_40:
(Start: 18 @29710 has 87 MA's), (24, 29665), (32, 29587), (36, 29560),

Gene: JenCasNa_38 Start: 27903, Stop: 27721, Start Num: 16
Candidate Starts for JenCasNa_38:
(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: JeppNRM_38 Start: 27730, Stop: 27548, Start Num: 16
Candidate Starts for JeppNRM_38:
(Start: 16 @27730 has 67 MA's), (24, 27679), (35, 27577), (36, 27574),

Gene: Jerm_38 Start: 28272, Stop: 28102, Start Num: 18
Candidate Starts for Jerm_38:
(8, 28353), (Start: 18 @28272 has 87 MA's), (24, 28227), (32, 28149), (36, 28122),

Gene: Jobu08_37 Start: 27733, Stop: 27551, Start Num: 16
Candidate Starts for Jobu08_37:

(Start: 16 @27733 has 67 MA's), (24, 27682), (35, 27580), (36, 27577),

Gene: JoshKayV_38 Start: 28235, Stop: 28065, Start Num: 18

Candidate Starts for JoshKayV_38:

(8, 28316), (Start: 18 @28235 has 87 MA's), (36, 28085),

Gene: Journey13_34 Start: 26962, Stop: 26771, Start Num: 12

Candidate Starts for Journey13_34:

(Start: 12 @26962 has 3 MA's), (Start: 18 @26941 has 87 MA's), (35, 26794), (36, 26791),

Gene: Jsquared_36 Start: 26790, Stop: 26620, Start Num: 18

Candidate Starts for Jsquared_36:

(Start: 12 @26811 has 3 MA's), (Start: 18 @26790 has 87 MA's), (35, 26643), (36, 26640),

Gene: KNG13_20 Start: 13527, Stop: 13715, Start Num: 15

Candidate Starts for KNG13_20:

(2, 13335), (Start: 15 @13527 has 4 MA's), (25, 13596), (26, 13608),

Gene: Kalb97_38 Start: 27731, Stop: 27549, Start Num: 16

Candidate Starts for Kalb97_38:

(Start: 16 @27731 has 67 MA's), (24, 27680), (35, 27578), (36, 27575),

Gene: Kalnoky_38 Start: 27732, Stop: 27550, Start Num: 16

Candidate Starts for Kalnoky_38:

(Start: 16 @27732 has 67 MA's), (24, 27681), (35, 27579), (36, 27576),

Gene: Kalpine_37 Start: 28631, Stop: 28461, Start Num: 18

Candidate Starts for Kalpine_37:

(Start: 18 @28631 has 87 MA's), (36, 28481),

Gene: Kamy_35 Start: 27323, Stop: 27150, Start Num: 17

Candidate Starts for Kamy_35:

(Start: 17 @27323 has 42 MA's), (24, 27275), (36, 27170),

Gene: Kerberos_39 Start: 27596, Stop: 27426, Start Num: 18

Candidate Starts for Kerberos_39:

(Start: 18 @27596 has 87 MA's), (24, 27551), (25, 27536), (28, 27500), (36, 27446),

Gene: KingCyrus_39 Start: 29643, Stop: 29473, Start Num: 18

Candidate Starts for KingCyrus_39:

(8, 29724), (Start: 18 @29643 has 87 MA's), (24, 29598), (36, 29493),

Gene: Koduck_36 Start: 26767, Stop: 26597, Start Num: 18

Candidate Starts for Koduck_36:

(Start: 18 @26767 has 87 MA's), (32, 26644),

Gene: L5_36 Start: 26727, Stop: 26557, Start Num: 18

Candidate Starts for L5_36:

(Start: 18 @26727 has 87 MA's), (32, 26604), (36, 26577),

Gene: LBerry_38 Start: 27904, Stop: 27722, Start Num: 16

Candidate Starts for LBerry_38:

(Start: 16 @27904 has 67 MA's), (24, 27853), (35, 27751), (36, 27748),

Gene: LHTSCC_36 Start: 27659, Stop: 27486, Start Num: 17

Candidate Starts for LHTSCC_36:

(Start: 17 @27659 has 42 MA's), (24, 27611), (36, 27506),

Gene: Landor_38 Start: 29245, Stop: 29075, Start Num: 18

Candidate Starts for Landor_38:

(Start: 18 @29245 has 87 MA's), (24, 29200), (36, 29095),

Gene: Larenn_38 Start: 28329, Stop: 28159, Start Num: 18

Candidate Starts for Larenn_38:

(Start: 18 @28329 has 87 MA's), (24, 28284), (28, 28233), (32, 28206), (36, 28179),

Gene: LeoAvram_35 Start: 27321, Stop: 27148, Start Num: 17

Candidate Starts for LeoAvram_35:

(Start: 17 @27321 has 42 MA's), (24, 27273), (36, 27168),

Gene: Leogania_37 Start: 29148, Stop: 28978, Start Num: 18

Candidate Starts for Leogania_37:

(Start: 18 @29148 has 87 MA's), (36, 28998),

Gene: Leviathan_38 Start: 28328, Stop: 28158, Start Num: 18

Candidate Starts for Leviathan_38:

(8, 28409), (Start: 18 @28328 has 87 MA's), (24, 28283), (32, 28205), (36, 28178),

Gene: LilTurb_37 Start: 28161, Stop: 27991, Start Num: 18

Candidate Starts for LilTurb_37:

(8, 28242), (Start: 18 @28161 has 87 MA's), (24, 28116), (32, 28038), (36, 28011),

Gene: Lilith_38 Start: 27897, Stop: 27715, Start Num: 16

Candidate Starts for Lilith_38:

(Start: 16 @27897 has 67 MA's), (24, 27846), (35, 27744), (36, 27741),

Gene: LionsBait_38 Start: 29242, Stop: 29072, Start Num: 18

Candidate Starts for LionsBait_38:

(4, 29365), (Start: 18 @29242 has 87 MA's), (36, 29092),

Gene: Lowa_38 Start: 27896, Stop: 27714, Start Num: 16

Candidate Starts for Lowa_38:

(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: LugYA_40 Start: 27904, Stop: 27722, Start Num: 16

Candidate Starts for LugYA_40:

(Start: 16 @27904 has 67 MA's), (24, 27853), (35, 27751), (36, 27748),

Gene: MA5_35 Start: 27064, Stop: 26885, Start Num: 17

Candidate Starts for MA5_35:

(Start: 17 @27064 has 42 MA's), (24, 27016), (36, 26911),

Gene: MK4_35 Start: 27166, Stop: 26987, Start Num: 17

Candidate Starts for MK4_35:

(Start: 17 @27166 has 42 MA's), (24, 27118), (36, 27013),

Gene: MadMarie_38 Start: 27906, Stop: 27724, Start Num: 16
Candidate Starts for MadMarie_38:
(Start: 16 @27906 has 67 MA's), (24, 27855), (35, 27753), (36, 27750),

Gene: Mainiac_38 Start: 27897, Stop: 27715, Start Num: 16
Candidate Starts for Mainiac_38:
(Start: 16 @27897 has 67 MA's), (24, 27846), (35, 27744), (36, 27741),

Gene: MajorMajor_36 Start: 26719, Stop: 26549, Start Num: 18
Candidate Starts for MajorMajor_36:
(3, 26863), (Start: 12 @26740 has 3 MA's), (Start: 18 @26719 has 87 MA's), (25, 26659), (36, 26569),

Gene: Malec_39 Start: 28893, Stop: 28723, Start Num: 18
Candidate Starts for Malec_39:
(Start: 18 @28893 has 87 MA's), (36, 28743),

Gene: Malinsilva_40 Start: 27896, Stop: 27714, Start Num: 16
Candidate Starts for Malinsilva_40:
(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: Manu_38 Start: 27732, Stop: 27550, Start Num: 16
Candidate Starts for Manu_38:
(Start: 16 @27732 has 67 MA's), (24, 27681), (35, 27579), (36, 27576),

Gene: MarQuardt_38 Start: 27905, Stop: 27723, Start Num: 16
Candidate Starts for MarQuardt_38:
(Start: 16 @27905 has 67 MA's), (24, 27854), (35, 27752), (36, 27749),

Gene: Marchesa_35 Start: 27470, Stop: 27291, Start Num: 17
Candidate Starts for Marchesa_35:
(Start: 17 @27470 has 42 MA's), (24, 27422), (36, 27317),

Gene: Marie_38 Start: 27903, Stop: 27721, Start Num: 16
Candidate Starts for Marie_38:
(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: Marius_38 Start: 27732, Stop: 27550, Start Num: 16
Candidate Starts for Marius_38:
(Start: 16 @27732 has 67 MA's), (24, 27681), (35, 27579), (36, 27576),

Gene: Mask_83 Start: 58809, Stop: 59012, Start Num: 13
Candidate Starts for Mask_83:
(6, 58722), (Start: 13 @58809 has 2 MA's), (34, 58974),

Gene: Maxo_35 Start: 27323, Stop: 27150, Start Num: 17
Candidate Starts for Maxo_35:
(Start: 17 @27323 has 42 MA's), (24, 27275), (36, 27170),

Gene: Medusa_35 Start: 27323, Stop: 27150, Start Num: 17
Candidate Starts for Medusa_35:
(Start: 17 @27323 has 42 MA's), (24, 27275), (36, 27170),

Gene: Melvin_36 Start: 27322, Stop: 27149, Start Num: 17

Candidate Starts for Melvin_36:

(Start: 17 @27322 has 42 MA's), (24, 27274), (36, 27169),

Gene: Microwolf_38 Start: 27905, Stop: 27723, Start Num: 16

Candidate Starts for Microwolf_38:

(Start: 16 @27905 has 67 MA's), (24, 27854), (35, 27752), (36, 27749),

Gene: MiculUcigas_38 Start: 28157, Stop: 27987, Start Num: 18

Candidate Starts for MiculUcigas_38:

(Start: 18 @28157 has 87 MA's), (28, 28061), (30, 28043), (36, 28007),

Gene: MissWhite_34 Start: 26128, Stop: 25958, Start Num: 18

Candidate Starts for MissWhite_34:

(14, 26140), (Start: 18 @26128 has 87 MA's), (36, 25978),

Gene: MoneyMay_38 Start: 27903, Stop: 27721, Start Num: 16

Candidate Starts for MoneyMay_38:

(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: Morrow_35 Start: 27327, Stop: 27154, Start Num: 17

Candidate Starts for Morrow_35:

(Start: 17 @27327 has 42 MA's), (24, 27279), (36, 27174),

Gene: MuchMore_40 Start: 27896, Stop: 27714, Start Num: 16

Candidate Starts for MuchMore_40:

(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: NaSiaTalie_38 Start: 28155, Stop: 27985, Start Num: 18

Candidate Starts for NaSiaTalie_38:

(Start: 18 @28155 has 87 MA's), (28, 28059), (30, 28041), (36, 28005),

Gene: Naji_39 Start: 27596, Stop: 27426, Start Num: 18

Candidate Starts for Naji_39:

(Start: 18 @27596 has 87 MA's), (24, 27551), (25, 27536), (28, 27500), (36, 27446),

Gene: Nebs_35 Start: 27321, Stop: 27148, Start Num: 17

Candidate Starts for Nebs_35:

(Start: 17 @27321 has 42 MA's), (24, 27273), (36, 27168),

Gene: NicoleTera_39 Start: 28870, Stop: 28700, Start Num: 18

Candidate Starts for NicoleTera_39:

(Start: 18 @28870 has 87 MA's), (28, 28774), (36, 28720),

Gene: Noely_18 Start: 12900, Stop: 13088, Start Num: 15

Candidate Starts for Noely_18:

(Start: 15 @12900 has 4 MA's), (24, 12954), (25, 12969), (26, 12981), (31, 13026),

Gene: NothingSpecial_38 Start: 29153, Stop: 28983, Start Num: 18

Candidate Starts for NothingSpecial_38:

(7, 29249), (9, 29201), (Start: 18 @29153 has 87 MA's), (24, 29108), (25, 29093), (27, 29066), (36, 29003),

Gene: Obama12_36 Start: 27661, Stop: 27488, Start Num: 17

Candidate Starts for Obama12_36:
(Start: 17 @27661 has 42 MA's), (24, 27613), (36, 27508),

Gene: Odin_36 Start: 26579, Stop: 26409, Start Num: 18
Candidate Starts for Odin_36:
(Start: 18 @26579 has 87 MA's), (32, 26456), (36, 26429),

Gene: Ohfah_35 Start: 27321, Stop: 27148, Start Num: 17
Candidate Starts for Ohfah_35:
(Start: 17 @27321 has 42 MA's), (24, 27273), (36, 27168),

Gene: OlanP_37 Start: 27913, Stop: 27731, Start Num: 16
Candidate Starts for OlanP_37:
(Start: 16 @27913 has 67 MA's), (24, 27862), (25, 27847), (35, 27760), (36, 27757),

Gene: Ollie_38 Start: 27775, Stop: 27593, Start Num: 16
Candidate Starts for Ollie_38:
(Start: 16 @27775 has 67 MA's), (24, 27724), (35, 27622), (36, 27619),

Gene: P28Green_38 Start: 27906, Stop: 27724, Start Num: 16
Candidate Starts for P28Green_38:
(Start: 16 @27906 has 67 MA's), (24, 27855), (35, 27753), (36, 27750),

Gene: PGHhamlin_40 Start: 27896, Stop: 27714, Start Num: 16
Candidate Starts for PGHhamlin_40:
(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: Pawn_37 Start: 27733, Stop: 27551, Start Num: 16
Candidate Starts for Pawn_37:
(Start: 16 @27733 has 67 MA's), (24, 27682), (35, 27580), (36, 27577),

Gene: Pembroke_38 Start: 27905, Stop: 27723, Start Num: 16
Candidate Starts for Pembroke_38:
(Start: 16 @27905 has 67 MA's), (24, 27854), (35, 27752), (36, 27749),

Gene: Penny1_38 Start: 27904, Stop: 27722, Start Num: 16
Candidate Starts for Penny1_38:
(Start: 16 @27904 has 67 MA's), (24, 27853), (35, 27751), (36, 27748),

Gene: Ph8s_38 Start: 26829, Stop: 26659, Start Num: 18
Candidate Starts for Ph8s_38:
(11, 26871), (Start: 18 @26829 has 87 MA's), (32, 26706), (36, 26679),

Gene: Phaded_41 Start: 29586, Stop: 29416, Start Num: 18
Candidate Starts for Phaded_41:
(Start: 18 @29586 has 87 MA's), (36, 29436),

Gene: Phantastic_35 Start: 27197, Stop: 27018, Start Num: 17
Candidate Starts for Phantastic_35:
(Start: 17 @27197 has 42 MA's), (24, 27149), (36, 27044),

Gene: Pharaoh_35 Start: 28307, Stop: 28137, Start Num: 18
Candidate Starts for Pharaoh_35:

(Start: 18 @28307 has 87 MA's), (28, 28211), (36, 28157),

Gene: Phelipe_35 Start: 27324, Stop: 27151, Start Num: 17

Candidate Starts for Phelipe_35:

(Start: 17 @27324 has 42 MA's), (24, 27276), (36, 27171),

Gene: PhishRPhriends_36 Start: 26910, Stop: 26728, Start Num: 16

Candidate Starts for PhishRPhriends_36:

(Start: 16 @26910 has 67 MA's), (24, 26859), (35, 26757), (36, 26754),

Gene: Phoebe_38 Start: 27896, Stop: 27714, Start Num: 16

Candidate Starts for Phoebe_38:

(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: Phranny_38 Start: 27718, Stop: 27536, Start Num: 16

Candidate Starts for Phranny_38:

(Start: 16 @27718 has 67 MA's), (24, 27667), (35, 27565), (36, 27562),

Gene: Piku_16 Start: 12727, Stop: 12912, Start Num: 22

Candidate Starts for Piku_16:

(19, 12712), (Start: 22 @12727 has 3 MA's), (37, 12898),

Gene: Piro94_37 Start: 28335, Stop: 28165, Start Num: 18

Candidate Starts for Piro94_37:

(Start: 18 @28335 has 87 MA's), (25, 28275), (28, 28239), (36, 28185),

Gene: Pistachio_36 Start: 26959, Stop: 26780, Start Num: 17

Candidate Starts for Pistachio_36:

(Start: 17 @26959 has 42 MA's), (24, 26911), (36, 26806),

Gene: Polymorphads_35 Start: 27320, Stop: 27147, Start Num: 17

Candidate Starts for Polymorphads_35:

(Start: 17 @27320 has 42 MA's), (24, 27272), (36, 27167),

Gene: Pomar16_39 Start: 27637, Stop: 27467, Start Num: 18

Candidate Starts for Pomar16_39:

(Start: 18 @27637 has 87 MA's), (24, 27592), (25, 27577), (28, 27541), (36, 27487),

Gene: PotatoSplit_39 Start: 27904, Stop: 27722, Start Num: 16

Candidate Starts for PotatoSplit_39:

(Start: 16 @27904 has 67 MA's), (24, 27853), (35, 27751), (36, 27748),

Gene: Power_36 Start: 27944, Stop: 27774, Start Num: 18

Candidate Starts for Power_36:

(Start: 18 @27944 has 87 MA's), (36, 27794),

Gene: Pukovnik_37 Start: 28796, Stop: 28626, Start Num: 18

Candidate Starts for Pukovnik_37:

(Start: 18 @28796 has 87 MA's), (24, 28751), (36, 28646),

Gene: Puppy_36 Start: 27029, Stop: 26850, Start Num: 17

Candidate Starts for Puppy_36:

(Start: 17 @27029 has 42 MA's), (24, 26981), (36, 26876),

Gene: PurpleHaze_37 Start: 27731, Stop: 27549, Start Num: 16
Candidate Starts for PurpleHaze_37:
(Start: 16 @27731 has 67 MA's), (24, 27680), (35, 27578), (36, 27575),

Gene: QueenB2_37 Start: 28005, Stop: 27835, Start Num: 18
Candidate Starts for QueenB2_37:
(8, 28086), (Start: 18 @28005 has 87 MA's), (36, 27855),

Gene: QueenBeesly_37 Start: 27891, Stop: 27721, Start Num: 18
Candidate Starts for QueenBeesly_37:
(Start: 18 @27891 has 87 MA's), (36, 27741),

Gene: Quokka_35 Start: 26740, Stop: 26549, Start Num: 12
Candidate Starts for Quokka_35:
(3, 26863), (Start: 12 @26740 has 3 MA's), (Start: 18 @26719 has 87 MA's), (25, 26659), (36, 26569),

Gene: Reba_38 Start: 27391, Stop: 27209, Start Num: 16
Candidate Starts for Reba_38:
(Start: 16 @27391 has 67 MA's), (24, 27340), (35, 27238), (36, 27235),

Gene: Retro23_38 Start: 28289, Stop: 28119, Start Num: 18
Candidate Starts for Retro23_38:
(8, 28370), (Start: 18 @28289 has 87 MA's), (36, 28139),

Gene: Rockstar_35 Start: 27173, Stop: 26994, Start Num: 17
Candidate Starts for Rockstar_35:
(Start: 17 @27173 has 42 MA's), (24, 27125), (36, 27020),

Gene: Sabia_38 Start: 27897, Stop: 27715, Start Num: 16
Candidate Starts for Sabia_38:
(Start: 16 @27897 has 67 MA's), (24, 27846), (35, 27744), (36, 27741),

Gene: Sabinator_37 Start: 27902, Stop: 27720, Start Num: 16
Candidate Starts for Sabinator_37:
(Start: 16 @27902 has 67 MA's), (24, 27851), (35, 27749), (36, 27746),

Gene: SaturnRing_35 Start: 27412, Stop: 27233, Start Num: 17
Candidate Starts for SaturnRing_35:
(Start: 17 @27412 has 42 MA's), (24, 27364), (36, 27259),

Gene: Scout_35 Start: 26719, Stop: 26540, Start Num: 17
Candidate Starts for Scout_35:
(Start: 17 @26719 has 42 MA's), (24, 26671), (36, 26566),

Gene: SemperFi_38 Start: 28159, Stop: 27989, Start Num: 18
Candidate Starts for SemperFi_38:
(Start: 18 @28159 has 87 MA's), (36, 28009),

Gene: Serenity_37 Start: 26863, Stop: 26672, Start Num: 12
Candidate Starts for Serenity_37:
(3, 26986), (Start: 12 @26863 has 3 MA's), (Start: 18 @26842 has 87 MA's), (35, 26695), (36, 26692),

Gene: SheldonCooper_36 Start: 27660, Stop: 27487, Start Num: 17
Candidate Starts for SheldonCooper_36:
(Start: 17 @27660 has 42 MA's), (24, 27612), (36, 27507),

Gene: Sknot_40 Start: 28158, Stop: 27988, Start Num: 18
Candidate Starts for Sknot_40:
(Start: 18 @28158 has 87 MA's), (28, 28062), (30, 28044), (36, 28008),

Gene: Smeagan_39 Start: 28415, Stop: 28245, Start Num: 18
Candidate Starts for Smeagan_39:
(8, 28496), (Start: 18 @28415 has 87 MA's), (24, 28370), (32, 28292), (36, 28265),

Gene: SnapTap_37 Start: 27970, Stop: 27800, Start Num: 18
Candidate Starts for SnapTap_37:
(Start: 18 @27970 has 87 MA's), (36, 27820),

Gene: Snickers_38 Start: 27877, Stop: 27695, Start Num: 16
Candidate Starts for Snickers_38:
(Start: 16 @27877 has 67 MA's), (24, 27826), (35, 27724), (36, 27721),

Gene: SoYo_38 Start: 27815, Stop: 27633, Start Num: 16
Candidate Starts for SoYo_38:
(Start: 16 @27815 has 67 MA's), (24, 27764), (35, 27662), (36, 27659),

Gene: SoilDragon_37 Start: 27349, Stop: 27167, Start Num: 16
Candidate Starts for SoilDragon_37:
(Start: 16 @27349 has 67 MA's), (24, 27298), (35, 27196), (36, 27193),

Gene: Sparxx_35 Start: 27322, Stop: 27149, Start Num: 17
Candidate Starts for Sparxx_35:
(Start: 17 @27322 has 42 MA's), (24, 27274), (36, 27169),

Gene: Stagni_38 Start: 27906, Stop: 27724, Start Num: 16
Candidate Starts for Stagni_38:
(Start: 16 @27906 has 67 MA's), (24, 27855), (35, 27753), (36, 27750),

Gene: StarStuff_39 Start: 27599, Stop: 27429, Start Num: 18
Candidate Starts for StarStuff_39:
(Start: 18 @27599 has 87 MA's), (24, 27554), (25, 27539), (28, 27503), (36, 27449),

Gene: StepMih_38 Start: 27897, Stop: 27715, Start Num: 16
Candidate Starts for StepMih_38:
(Start: 16 @27897 has 67 MA's), (24, 27846), (35, 27744), (36, 27741),

Gene: Superchunk_36 Start: 26412, Stop: 26242, Start Num: 18
Candidate Starts for Superchunk_36:
(Start: 18 @26412 has 87 MA's), (32, 26289), (36, 26262),

Gene: SweetiePie_37 Start: 27970, Stop: 27800, Start Num: 18
Candidate Starts for SweetiePie_37:
(Start: 18 @27970 has 87 MA's), (36, 27820),

Gene: SwirlSquare_39 Start: 26439, Stop: 26269, Start Num: 18

Candidate Starts for SwirlSquare_39:
(Start: 18 @26439 has 87 MA's), (28, 26343),

Gene: TNguyen7_35 Start: 27376, Stop: 27197, Start Num: 17
Candidate Starts for TNguyen7_35:
(Start: 17 @27376 has 42 MA's), (24, 27328), (36, 27223),

Gene: TarsusIV_37 Start: 28077, Stop: 27907, Start Num: 18
Candidate Starts for TarsusIV_37:
(Start: 18 @28077 has 87 MA's), (29, 27975), (36, 27927),

Gene: Taurus_38 Start: 27903, Stop: 27721, Start Num: 16
Candidate Starts for Taurus_38:
(Start: 16 @27903 has 67 MA's), (24, 27852), (35, 27750), (36, 27747),

Gene: Terrific_41 Start: 28498, Stop: 28328, Start Num: 18
Candidate Starts for Terrific_41:
(Start: 18 @28498 has 87 MA's), (28, 28402), (32, 28375), (36, 28348),

Gene: Tiffany_38 Start: 27789, Stop: 27607, Start Num: 16
Candidate Starts for Tiffany_38:
(Start: 16 @27789 has 67 MA's), (24, 27738), (35, 27636), (36, 27633),

Gene: TinaFeyge_35 Start: 27319, Stop: 27146, Start Num: 17
Candidate Starts for TinaFeyge_35:
(Start: 17 @27319 has 42 MA's), (24, 27271), (36, 27166),

Gene: TipsytheTRex_35 Start: 27089, Stop: 26898, Start Num: 12
Candidate Starts for TipsytheTRex_35:
(3, 27212), (Start: 12 @27089 has 3 MA's), (Start: 18 @27068 has 87 MA's), (25, 27008), (36, 26918),

Gene: Tomathan_39 Start: 27596, Stop: 27426, Start Num: 18
Candidate Starts for Tomathan_39:
(Start: 18 @27596 has 87 MA's), (24, 27551), (25, 27536), (28, 27500), (36, 27446),

Gene: Travvers_39 Start: 27596, Stop: 27426, Start Num: 18
Candidate Starts for Travvers_39:
(Start: 18 @27596 has 87 MA's), (24, 27551), (25, 27536), (28, 27500), (36, 27446),

Gene: Tristan_38 Start: 29381, Stop: 29211, Start Num: 18
Candidate Starts for Tristan_38:
(Start: 18 @29381 has 87 MA's), (24, 29336), (36, 29231),

Gene: Trixie_37 Start: 28496, Stop: 28326, Start Num: 18
Candidate Starts for Trixie_37:
(Start: 18 @28496 has 87 MA's), (36, 28346),

Gene: Trooper_39 Start: 28311, Stop: 28141, Start Num: 18
Candidate Starts for Trooper_39:
(Start: 18 @28311 has 87 MA's), (36, 28161),

Gene: TroyPia_35 Start: 27322, Stop: 27149, Start Num: 17
Candidate Starts for TroyPia_35:

(Start: 17 @27322 has 42 MA's), (24, 27274), (36, 27169),

Gene: Turbido_37 Start: 28155, Stop: 27985, Start Num: 18

Candidate Starts for Turbido_37:

(8, 28236), (Start: 18 @28155 has 87 MA's), (24, 28110), (29, 28053), (32, 28032), (36, 28005),

Gene: Updawg_39 Start: 28486, Stop: 28316, Start Num: 18

Candidate Starts for Updawg_39:

(Start: 18 @28486 has 87 MA's), (28, 28390), (32, 28363), (36, 28336),

Gene: Utopia_17 Start: 12698, Stop: 12883, Start Num: 22

Candidate Starts for Utopia_17:

(19, 12683), (Start: 22 @12698 has 3 MA's), (37, 12869),

Gene: VA6_36 Start: 27677, Stop: 27507, Start Num: 18

Candidate Starts for VA6_36:

(Start: 18 @27677 has 87 MA's), (24, 27632), (25, 27617), (28, 27581), (36, 27527),

Gene: VC3_39 Start: 27665, Stop: 27495, Start Num: 18

Candidate Starts for VC3_39:

(Start: 18 @27665 has 87 MA's), (24, 27620), (25, 27605), (28, 27569), (36, 27515),

Gene: Vix_38 Start: 27986, Stop: 27804, Start Num: 16

Candidate Starts for Vix_38:

(Start: 16 @27986 has 67 MA's), (24, 27935), (35, 27833), (36, 27830),

Gene: Watson_38 Start: 27896, Stop: 27714, Start Num: 16

Candidate Starts for Watson_38:

(Start: 16 @27896 has 67 MA's), (24, 27845), (35, 27743), (36, 27740),

Gene: WeiHuaDA_42 Start: 29572, Stop: 29402, Start Num: 18

Candidate Starts for WeiHuaDA_42:

(Start: 18 @29572 has 87 MA's), (28, 29476), (36, 29422),

Gene: Whabigail7_37 Start: 28143, Stop: 27973, Start Num: 18

Candidate Starts for Whabigail7_37:

(8, 28224), (Start: 18 @28143 has 87 MA's), (24, 28098), (32, 28020), (36, 27993),

Gene: Whytu_16 Start: 12793, Stop: 12978, Start Num: 22

Candidate Starts for Whytu_16:

(Start: 13 @12757 has 2 MA's), (19, 12778), (Start: 22 @12793 has 3 MA's), (37, 12964),

Gene: WideWale_39 Start: 28486, Stop: 28316, Start Num: 18

Candidate Starts for WideWale_39:

(Start: 18 @28486 has 87 MA's), (28, 28390), (32, 28363), (36, 28336),

Gene: Wooldri_40 Start: 27815, Stop: 27633, Start Num: 16

Candidate Starts for Wooldri_40:

(Start: 16 @27815 has 67 MA's), (24, 27764), (35, 27662), (36, 27659),

Gene: XianYue_37 Start: 27771, Stop: 27601, Start Num: 18

Candidate Starts for XianYue_37:

(Start: 18 @27771 has 87 MA's), (36, 27621),

Gene: Yavru_16 Start: 12688, Stop: 12873, Start Num: 22

Candidate Starts for Yavru_16:

(19, 12673), (Start: 22 @12688 has 3 MA's), (37, 12859),

Gene: Yecey3_38 Start: 27629, Stop: 27459, Start Num: 18

Candidate Starts for Yecey3_38:

(Start: 18 @27629 has 87 MA's), (35, 27482), (36, 27479),

Gene: Zetzy_37 Start: 27467, Stop: 27285, Start Num: 16

Candidate Starts for Zetzy_37:

(Start: 16 @27467 has 67 MA's), (24, 27416), (35, 27314), (36, 27311),

Gene: Zimmer_38 Start: 29474, Stop: 29304, Start Num: 18

Candidate Starts for Zimmer_38:

(Start: 13 @29492 has 2 MA's), (Start: 18 @29474 has 87 MA's), (32, 29351), (33, 29336), (36, 29324),