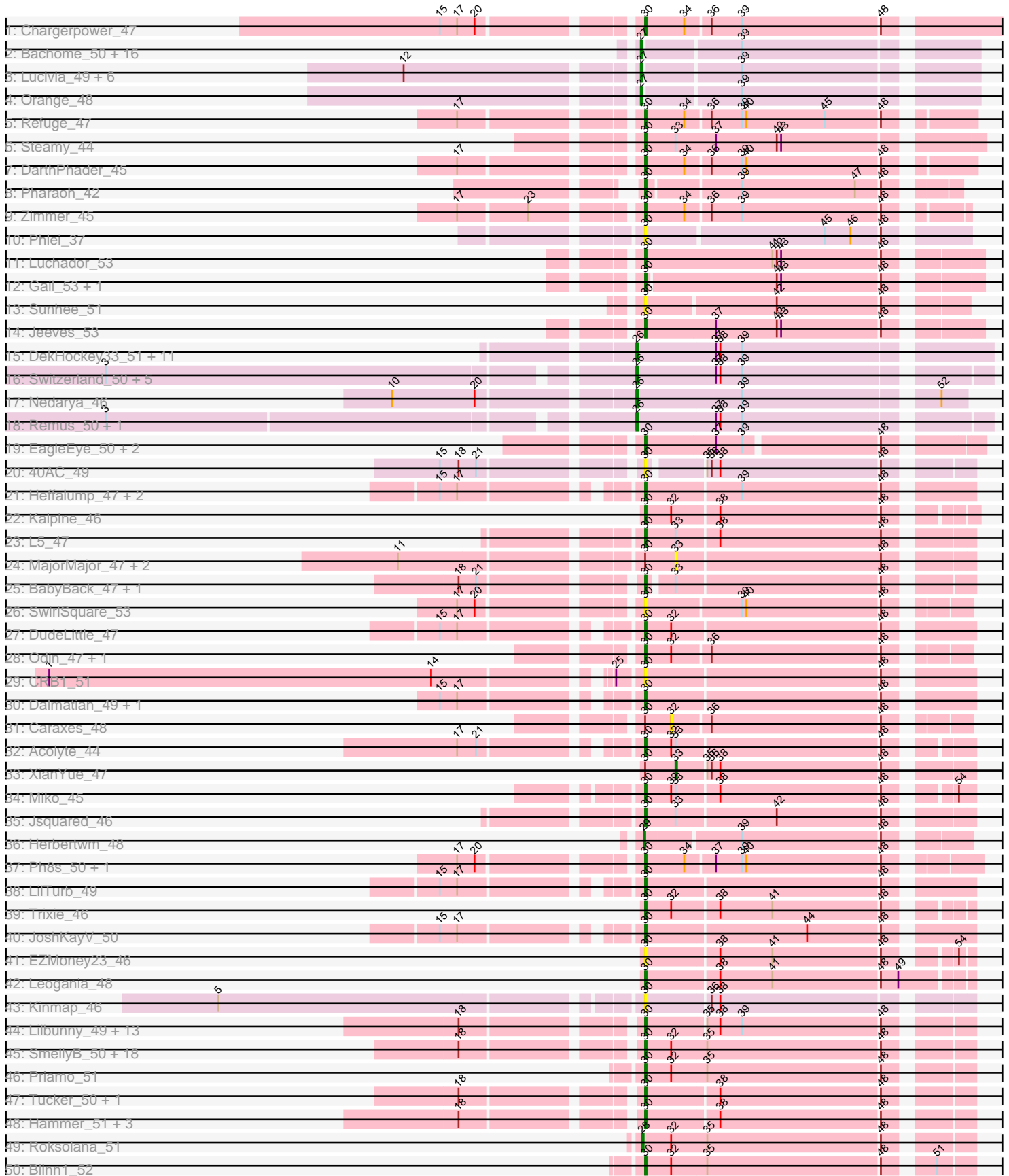
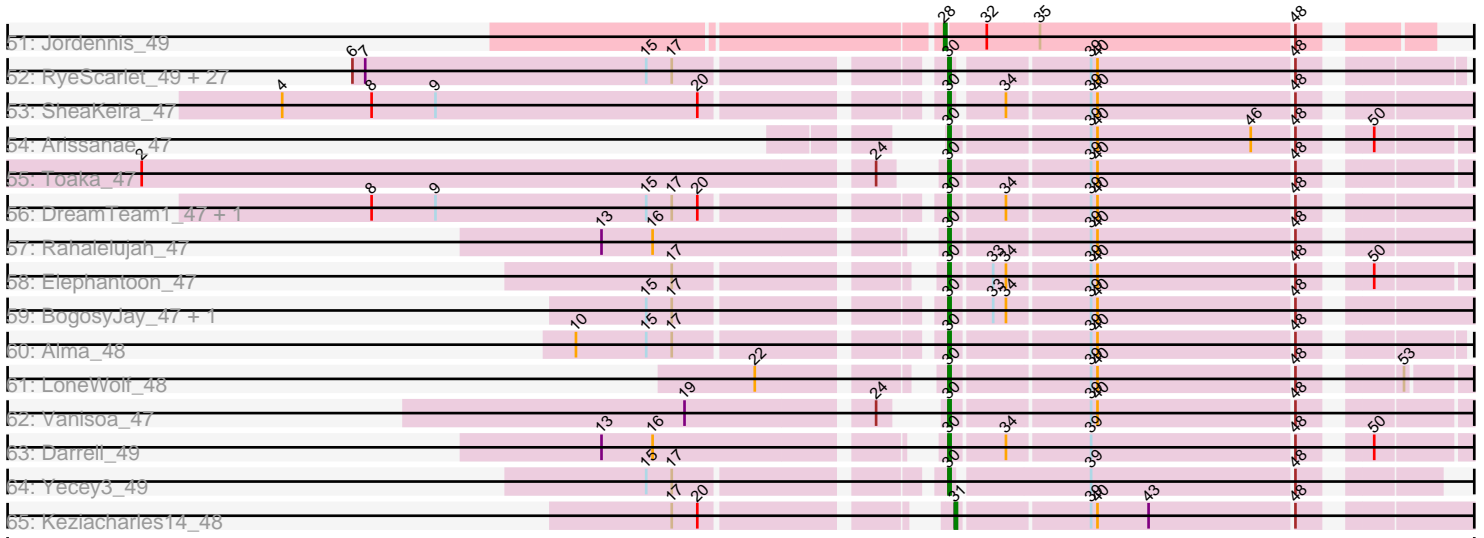


Pham 189380



Pham 189380



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 189380 Report

This analysis was run 11/02/24 on database version 579.

Pham number 189380 has 179 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_47
- Track 2 : Bachome_50, Sham4_48, Fibonacci_48, Petersenfast_47, Bud_48, Insomnia_49, Hutc2_48, Ebony_48, Mulciber_48, Snape_48, Mabel_48, MaCh_49, Jabith_49, Timothy_48, TinyTimmy_48, Salz_47, Et2Brutus_47
- Track 3 : Lucivia_49, Flaverint_49, Bowtie_49, Gilberta_49, Munch_49, Aneem_49, Joselito_49
- Track 4 : Orange_48
- Track 5 : Refuge_47
- Track 6 : Steamy_44
- Track 7 : DarthPhader_45
- Track 8 : Pharaoh_42
- Track 9 : Zimmer_45
- Track 10 : Phlei_37
- Track 11 : Luchador_53
- Track 12 : Gail_53, SororFago_51
- Track 13 : Sunhee_51
- Track 14 : Jeeves_53
- Track 15 : DekHockey33_51, Boohoo_51, ShayRa_52, Anaysia_51, LastResort_50, Oofda_51, Epsocamisio_49, Nebulosus_50, KatherineG_52, ReMo_50, Looper_51, Soups_51
- Track 16 : Switzerland_50, Rosalind_49, JSwag_49, Waits_50, Battleship_51, MinecraftSteve_51
- Track 17 : Nedarya_46
- Track 18 : Remus_50, Strosahl_50
- Track 19 : EagleEye_50, PainterBoy_49, Lucyedi_49
- Track 20 : 40AC_49
- Track 21 : Heffalump_47, QueenB2_47, Fameo_48
- Track 22 : Kalpine_46
- Track 23 : L5_47
- Track 24 : MajorMajor_47, Bradman_47, Quokka_46
- Track 25 : BabyBack_47, GaugeLDP_46
- Track 26 : SwirlSquare_53
- Track 27 : DudeLittle_47
- Track 28 : Odin_47, Superchunk_47
- Track 29 : CRB1_51
- Track 30 : Dalmatian_49, Anselm_49
- Track 31 : Caraxes_48

- Track 32 : Acolyte_44
- Track 33 : XianYue_47
- Track 34 : Miko_45
- Track 35 : Jsquared_46
- Track 36 : Herbertwm_48
- Track 37 : Ph8s_50, Adzzy_50
- Track 38 : LilTurb_49
- Track 39 : Trixie_46
- Track 40 : JoshKayV_50
- Track 41 : EZMoney23_46
- Track 42 : Leogania_48
- Track 43 : Kinmap_46
- Track 44 : Lilbunny_49, Artemis2UCLA_50, ToneTone_47, Wiks_49, WunderPhul_50, Garak_52, Helmet_52, Zaka_50, Yokurt_50, Indra_53, Rifter_51, Hexamo_50, Gruunaga_50, Jeffabunny_50
- Track 45 : SmellyB_50, Isiphiwo_48, SuperAwesome_50, Candra_50, Kipper29_50, EricB_50, Gladiator_48, GreedyLawyer_50, SuperCallie99_49, VohminGhazi_50, Cookiedough_50, Newrala_50, McFly_50, Kazan_51, Dorothea_50, Pmask_50, Chartreuse_49, Neeharika16_49, DaVinci_49
- Track 46 : Priamo_51
- Track 47 : Tucker_50, Zulu_50
- Track 48 : Hammer_51, Blue7_52, CloudWang3_50, Koko_51
- Track 49 : Roksolana_51
- Track 50 : Blinn1_52
- Track 51 : Jordennis_49
- Track 52 : RyeScarlet_49, Eidsmoe_48, Holec_47, Fayely_48, Lilleskat_46, Priya_48, Myxus_48, ExplosioNervosa_48, EmyBug_47, PackMan_47, Ugenie5_45, Beemo_48, Onglai_46, HortumSL17_48, EdogawaKiddo_46, Conquerage_48, Scherzo_48, Phonnegut_48, Sachima_45, Jiawan_46, Qobbit_48, Tubs_48, Pioneer_48, Aliter_48, Hanray_46, Spouty_48, Catalina_49, Phaeder_48
- Track 53 : SheaKeira_47
- Track 54 : Arissanae_47
- Track 55 : Toaka_47
- Track 56 : DreamTeam1_47, Charm_47
- Track 57 : Rahalelujah_47
- Track 58 : Elephantoon_47
- Track 59 : BogosyJay_47, Maminiaina_47
- Track 60 : Alma_48
- Track 61 : LoneWolf_48
- Track 62 : Vanisoa_47
- Track 63 : Darrell_49
- Track 64 : Yecey3_49
- Track 65 : Keziacharles14_48

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

The start number called the most often in the published annotations is 30, it was called in 105 of the 154 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC_49, Acolyte_44, Adzzy_50, Aliter_48, Alma_48, Anselm_49, Arissanae_47, Artemis2UCLA_50, BabyBack_47, Beemo_48, Blinn1_52, Blue7_52, BogosyJay_47, CRB1_51, Candra_50, Catalina_49, Chargerpower_47, Charm_47, Chartreuse_49, CloudWang3_50, Conquerage_48, Cookiedough_50, DaVinci_49, Dalmatian_49, Darrell_49, DARTHPhader_45, Dorothea_50, DreamTeam1_47, DudeLittle_47, EZMoney23_46, EagleEye_50, EdogawaKiddo_46, Eidsmoe_48, Elephantoon_47, EmyBug_47, EricB_50, ExplosioNervosa_48, Fameo_48, Fayely_48, Gail_53, Garak_52, GaugeLDP_46, Gladiator_48, GreedyLawyer_50, Gruunaga_50, Hammer_51, Hanray_46, Heffalump_47, Helmet_52, Hexamo_50, Horex_47, HortumSL17_48, Indra_53, Isiphiwo_48, Jeeves_53, Jeffabunny_50, Jiawan_46, JoshKayV_50, Jsquared_46, Kalpine_46, Kazan_51, Kinmap_46, Kipper29_50, Koko_51, L5_47, Leogania_48, LilTurb_49, Lilbunny_49, Lilleskat_46, LoneWolf_48, Luchador_53, Lucyedi_49, Maminiaina_47, McFly_50, Miko_45, Myxus_48, Neeharika16_49, Newrala_50, Odin_47, Onglai_46, PackMan_47, PainterBoy_49, Ph8s_50, Phaeder_48, Pharaoh_42, Phlei_37, Phonnegut_48, Pioneer_48, Pmask_50, Priamo_51, Priya_48, Qobbit_48, QueenB2_47, Rahalelujah_47, Refuge_47, Rifter_51, RyeScarlet_49, Sachima_45, Scherzo_48, Sheakeira_47, SmellyB_50, SororFago_51, Spouty_48, Steamy_44, Sunhee_51, SuperAwesome_50, SuperCallie99_49, Superchunk_47, SwirlSquare_53, Toaka_47, ToneTone_47, Trixie_46, Tubs_48, Tucker_50, Ugenie5_45, Vanisoa_47, VohminGhazi_50, Wiks_49, WunderPhul_50, Yecey3_49, Yokurt_50, Zaka_50, Zimmer_45, Zulu_50,

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

- Bradman_47, Caraxes_48, MajorMajor_47, Quokka_46, XianYue_47,

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

- Anaysia_51, Aneem_49, Bachome_50, Battleship_51, Boohoo_51, Bowtie_49, Bud_48, DekHockey33_51, Ebony_48, Epsocamisio_49, Et2Brutus_47, Fibonacci_48, Flaverint_49, Gilberta_49, Herbertwm_48, Hutc2_48, Insomnia_49, JSwag_49, Jabith_49, Jordennis_49, Joselito_49, KatherineG_52, Keziacharles14_48, LastResort_50, Looper_51, Lucivia_49, MaCh_49, Mabel_48, MinecraftSteve_51, Mulciber_48, Munch_49, Nebulosus_50, Nedarya_46, Oofda_51, Orange_48, Petersenfast_47, ReMo_50, Remus_50, Roksolana_51, Rosalind_49, Salz_47, Sham4_48, ShayRa_52, Snape_48, Soups_51, Strosahl_50, Switzerland_50, Timothy_48, TinyTimmy_48, Waits_50,

Summary by start number:

Start 26:

- Found in 21 of 179 (11.7%) of genes in pham
- Manual Annotations of this start: 20 of 154
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anaysia_51 (A15), Battleship_51 (A15), Boohoo_51 (A15), DekHockey33_51 (A15), Epsocamisio_49 (A15), JSwag_49 (A15), KatherineG_52 (A15), LastResort_50 (A15), Looper_51 (A15), MinecraftSteve_51 (A15), Nebulosus_50 (A15), Nedarya_46 (A15), Oofda_51 (A15), ReMo_50 (A15), Remus_50 (A15), Rosalind_49 (A15), ShayRa_52 (A15), Soups_51 (A15), Strosahl_50 (A15), Switzerland_50 (A15), Waits_50 (A15),

Start 27:

- Found in 25 of 179 (14.0%) of genes in pham
- Manual Annotations of this start: 24 of 154

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aneem_49 (A11), Bachome_50 (A11), Bowtie_49 (A11), Bud_48 (A11), Ebony_48 (A11), Et2Brutus_47 (A11), Fibonacci_48 (A11), Flaverint_49 (A11), Gilberta_49 (A11), Hutc2_48 (A11), Insomnia_49 (A11), Jabith_49 (A11), Joselito_49 (A11), Lucivia_49 (A11), MaCh_49 (A11), Mabel_48 (A11), Mulciber_48 (A11), Munch_49 (A11), Orange_48 (A11), Petersenfast_47 (A11), Salz_47 (A11), Sham4_48 (A11), Snape_48 (A11), Timothy_48 (A11), TinyTimmy_48 (A11),

Start 28:

- Found in 2 of 179 (1.1%) of genes in pham
- Manual Annotations of this start: 2 of 154
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jordennis_49 (A6), Roksolana_51 (A6),

Start 29:

- Found in 1 of 179 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 154
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Herbertwm_48 (A2),

Start 30:

- Found in 129 of 179 (72.1%) of genes in pham
- Manual Annotations of this start: 105 of 154
- Called 96.1% of time when present
- Phage (with cluster) where this start called: 40AC_49 (A17), Acolyte_44 (A2), Adzzy_50 (A2), Aliter_48 (A9), Alma_48 (A9), Anselm_49 (A2), Arissanae_47 (A9), Artemis2UCLA_50 (A6), BabyBack_47 (A2), Beemo_48 (A9), Blinn1_52 (A6), Blue7_52 (A6), BogosyJay_47 (A9), CRB1_51 (A2), Candra_50 (A6), Catalina_49 (A9), Chargerpower_47 (A), Charm_47 (A9), Chartreuse_49 (A6), CloudWang3_50 (A6), Conquerage_48 (A9), Cookiedough_50 (A6), DaVinci_49 (A6), Dalmatian_49 (A2), Darrell_49 (A9), DarthPhader_45 (A12), Dorothea_50 (A6), DreamTeam1_47 (A9), DudeLittle_47 (A2), EZMoney23_46 (A2), EagleEye_50 (A16), EdogawaKiddo_46 (A9), Eidsmoe_48 (A9), Elephantoon_47 (A9), EmyBug_47 (A9), EricB_50 (A6), ExplosioNervosa_48 (A9), Fameo_48 (A2), Fayely_48 (A9), Gail_53 (A14), Garak_52 (A6), GaugeLDP_46 (A2), Gladiator_48 (A6), GreedyLawyer_50 (A6), Gruunaga_50 (A6), Hammer_51 (A6), Hanray_46 (A9), Heffalump_47 (A2), Helmet_52 (A6), Hexamo_50 (A6), Horex_47 (A9), HortumSL17_48 (A9), Indra_53 (A6), Isiphiwo_48 (A6), Jeeves_53 (A14), Jeffabunny_50 (A6), Jiawan_46 (A9), JoshKayV_50 (A2), Jsquared_46 (A2), Kalpine_46 (A2), Kazan_51 (A6), Kinmap_46 (A21), Kipper29_50 (A6), Koko_51 (A6), L5_47 (A2), Leogania_48 (A2), LilTurb_49 (A2), Lilbunny_49 (A6), Lilleskat_46 (A9), LoneWolf_48 (A9), Luchador_53 (A14), Lucyedi_49 (A16), Maminiaina_47 (A9), McFly_50 (A6), Miko_45 (A2), Myxus_48 (A9), Neeharika16_49 (A6), Newrala_50 (A6), Odin_47 (A2), Onglai_46 (A9), PackMan_47 (A9), PainterBoy_49 (A16), Ph8s_50 (A2), Phaeder_48 (A9), Pharaoh_42 (A12), Phlei_37 (A13), Phonnegut_48 (A9), Pioneer_48 (A9), Pmask_50 (A6), Priamo_51 (A6), Priya_48 (A9), Qobbit_48 (A9), QueenB2_47 (A2), Rahalelujah_47 (A9), Refuge_47 (A12), Rifter_51 (A6), RyeScarlet_49 (A9), Sachima_45 (A9), Scherzo_48 (A9), SheaKeira_47 (A9), SmellyB_50 (A6), SororFago_51 (A14), Spouty_48 (A9), Steamy_44 (A12), Sunhee_51 (A14), SuperAwesome_50 (A6), SuperCallie99_49 (A6), Superchunk_47 (A2), SwirlSquare_53 (A2), Toaka_47 (A9), ToneTone_47 (A6), Trixie_46 (A2), Tubs_48 (A9), Tucker_50 (A6), Ugenie5_45 (A9), Vanisoa_47 (A9), VohminGhazi_50 (A6),

Wiks_49 (A6), WunderPhul_50 (A6), Yecey3_49 (A9), Yokurt_50 (A6), Zaka_50 (A6), Zimmer_45 (A12), Zulu_50 (A6),

Start 31:

- Found in 1 of 179 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 154
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Keziacharles14_48 (A9),

Start 32:

- Found in 31 of 179 (17.3%) of genes in pham
- No Manual Annotations of this start.
- Called 3.2% of time when present
- Phage (with cluster) where this start called: Caraxes_48 (A2),

Start 33:

- Found in 14 of 179 (7.8%) of genes in pham
- Manual Annotations of this start: 1 of 154
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Bradman_47 (A2), MajorMajor_47 (A2), Quokka_46 (A2), XianYue_47 (A2),

Summary by clusters:

There are 12 clusters represented in this pham: A15, A21, A17, A14, A11, A13, A12, A2, A, A6, A9, A16,

Info for manual annotations of cluster A:

- Start number 30 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A11:

- Start number 27 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 30 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 30 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 26 was manually annotated 20 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 30 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 29 was manually annotated 1 time for cluster A2.
- Start number 30 was manually annotated 21 times for cluster A2.
- Start number 33 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A6:

- Start number 28 was manually annotated 2 times for cluster A6.
- Start number 30 was manually annotated 37 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 30 was manually annotated 34 times for cluster A9.
- Start number 31 was manually annotated 1 time for cluster A9.

Gene Information:

Gene: 40AC_49 Start: 33650, Stop: 33450, Start Num: 30

Candidate Starts for 40AC_49:

(15, 33770), (18, 33758), (21, 33746), (Start: 30 @33650 has 105 MA's), (35, 33617), (36, 33614), (38, 33608), (48, 33500),

Gene: Acolyte_44 Start: 31789, Stop: 31586, Start Num: 30

Candidate Starts for Acolyte_44:

(17, 31891), (21, 31879), (Start: 30 @31789 has 105 MA's), (32, 31771), (Start: 33 @31768 has 1 MA's), (48, 31633),

Gene: Adzzy_50 Start: 31273, Stop: 31064, Start Num: 30

Candidate Starts for Adzzy_50:

(17, 31381), (20, 31369), (Start: 30 @31273 has 105 MA's), (34, 31246), (37, 31228), (39, 31210), (40, 31207), (48, 31117),

Gene: Aliter_48 Start: 32246, Stop: 32034, Start Num: 30

Candidate Starts for Aliter_48:

(6, 32504), (7, 32498), (15, 32366), (17, 32354), (Start: 30 @32246 has 105 MA's), (39, 32189), (40, 32186), (48, 32096),

Gene: Alma_48 Start: 32372, Stop: 32157, Start Num: 30

Candidate Starts for Alma_48:

(10, 32525), (15, 32492), (17, 32480), (Start: 30 @32372 has 105 MA's), (39, 32312), (40, 32309), (48, 32219),

Gene: Anaysia_51 Start: 31080, Stop: 30850, Start Num: 26

Candidate Starts for Anaysia_51:

(Start: 26 @31080 has 20 MA's), (37, 31026), (38, 31023), (39, 31008),

Gene: Aneem_49 Start: 31910, Stop: 31698, Start Num: 27

Candidate Starts for Aneem_49:

(12, 32057), (Start: 27 @31910 has 24 MA's), (39, 31847),

Gene: Anselm_49 Start: 32738, Stop: 32529, Start Num: 30

Candidate Starts for Anselm_49:

(15, 32852), (17, 32840), (Start: 30 @32738 has 105 MA's), (48, 32582),

Gene: Arissanae_47 Start: 32905, Stop: 32687, Start Num: 30

Candidate Starts for Arissanae_47:

(Start: 30 @32905 has 105 MA's), (39, 32845), (40, 32842), (46, 32770), (48, 32752), (50, 32728),

Gene: Artemis2UCLA_50 Start: 31040, Stop: 30834, Start Num: 30
Candidate Starts for Artemis2UCLA_50:
(18, 31148), (Start: 30 @31040 has 105 MA's), (35, 31001), (38, 30992), (39, 30977), (48, 30884),

Gene: BabyBack_47 Start: 33062, Stop: 32862, Start Num: 30
Candidate Starts for BabyBack_47:
(18, 33170), (21, 33158), (Start: 30 @33062 has 105 MA's), (Start: 33 @33047 has 1 MA's), (48, 32912),

Gene: Bachome_50 Start: 31898, Stop: 31686, Start Num: 27
Candidate Starts for Bachome_50:
(Start: 27 @31898 has 24 MA's), (39, 31835),

Gene: Battleship_51 Start: 30813, Stop: 30583, Start Num: 26
Candidate Starts for Battleship_51:
(3, 31158), (Start: 26 @30813 has 20 MA's), (37, 30759), (38, 30756), (39, 30741),

Gene: Beemo_48 Start: 32368, Stop: 32156, Start Num: 30
Candidate Starts for Beemo_48:
(6, 32626), (7, 32620), (15, 32488), (17, 32476), (Start: 30 @32368 has 105 MA's), (39, 32311), (40, 32308), (48, 32218),

Gene: Blinn1_52 Start: 31303, Stop: 31094, Start Num: 30
Candidate Starts for Blinn1_52:
(Start: 30 @31303 has 105 MA's), (32, 31285), (35, 31261), (48, 31144), (51, 31117),

Gene: Blue7_52 Start: 31136, Stop: 30930, Start Num: 30
Candidate Starts for Blue7_52:
(18, 31244), (Start: 30 @31136 has 105 MA's), (38, 31088), (48, 30980),

Gene: BogosyJay_47 Start: 32089, Stop: 31862, Start Num: 30
Candidate Starts for BogosyJay_47:
(15, 32209), (17, 32197), (Start: 30 @32089 has 105 MA's), (Start: 33 @32071 has 1 MA's), (34, 32065), (39, 32029), (40, 32026), (48, 31936),

Gene: Boohoo_51 Start: 31080, Stop: 30850, Start Num: 26
Candidate Starts for Boohoo_51:
(Start: 26 @31080 has 20 MA's), (37, 31026), (38, 31023), (39, 31008),

Gene: Bowtie_49 Start: 31917, Stop: 31705, Start Num: 27
Candidate Starts for Bowtie_49:
(12, 32064), (Start: 27 @31917 has 24 MA's), (39, 31854),

Gene: Bradman_47 Start: 31270, Stop: 31082, Start Num: 33
Candidate Starts for Bradman_47:
(11, 31444), (Start: 30 @31291 has 105 MA's), (Start: 33 @31270 has 1 MA's), (48, 31132),

Gene: Bud_48 Start: 31472, Stop: 31260, Start Num: 27
Candidate Starts for Bud_48:
(Start: 27 @31472 has 24 MA's), (39, 31409),

Gene: CRB1_51 Start: 32987, Stop: 32778, Start Num: 30
Candidate Starts for CRB1_51:

(1, 33368), (14, 33104), (25, 33002), (Start: 30 @32987 has 105 MA's), (48, 32831),

Gene: Candra_50 Start: 31382, Stop: 31173, Start Num: 30

Candidate Starts for Candra_50:

(18, 31490), (Start: 30 @31382 has 105 MA's), (32, 31364), (35, 31340), (48, 31223),

Gene: Caraxes_48 Start: 30908, Stop: 30723, Start Num: 32

Candidate Starts for Caraxes_48:

(Start: 30 @30926 has 105 MA's), (32, 30908), (36, 30884), (48, 30770),

Gene: Catalina_49 Start: 32319, Stop: 32107, Start Num: 30

Candidate Starts for Catalina_49:

(6, 32577), (7, 32571), (15, 32439), (17, 32427), (Start: 30 @32319 has 105 MA's), (39, 32262), (40, 32259), (48, 32169),

Gene: Chargerpower_47 Start: 31274, Stop: 31038, Start Num: 30

Candidate Starts for Chargerpower_47:

(15, 31394), (17, 31382), (20, 31370), (Start: 30 @31274 has 105 MA's), (34, 31247), (36, 31232), (39, 31211), (48, 31118),

Gene: Charm_47 Start: 32120, Stop: 31896, Start Num: 30

Candidate Starts for Charm_47:

(8, 32369), (9, 32339), (15, 32240), (17, 32228), (20, 32216), (Start: 30 @32120 has 105 MA's), (34, 32096), (39, 32060), (40, 32057), (48, 31967),

Gene: Chartreuse_49 Start: 30742, Stop: 30533, Start Num: 30

Candidate Starts for Chartreuse_49:

(18, 30850), (Start: 30 @30742 has 105 MA's), (32, 30724), (35, 30700), (48, 30583),

Gene: CloudWang3_50 Start: 31140, Stop: 30934, Start Num: 30

Candidate Starts for CloudWang3_50:

(18, 31248), (Start: 30 @31140 has 105 MA's), (38, 31092), (48, 30984),

Gene: Conquerage_48 Start: 32342, Stop: 32130, Start Num: 30

Candidate Starts for Conquerage_48:

(6, 32600), (7, 32594), (15, 32462), (17, 32450), (Start: 30 @32342 has 105 MA's), (39, 32285), (40, 32282), (48, 32192),

Gene: Cookiedough_50 Start: 31358, Stop: 31149, Start Num: 30

Candidate Starts for Cookiedough_50:

(18, 31466), (Start: 30 @31358 has 105 MA's), (32, 31340), (35, 31316), (48, 31199),

Gene: DaVinci_49 Start: 30796, Stop: 30587, Start Num: 30

Candidate Starts for DaVinci_49:

(18, 30904), (Start: 30 @30796 has 105 MA's), (32, 30778), (35, 30754), (48, 30637),

Gene: Dalmatian_49 Start: 32714, Stop: 32505, Start Num: 30

Candidate Starts for Dalmatian_49:

(15, 32828), (17, 32816), (Start: 30 @32714 has 105 MA's), (48, 32558),

Gene: Darrell_49 Start: 32708, Stop: 32490, Start Num: 30

Candidate Starts for Darrell_49:

(13, 32843), (16, 32819), (Start: 30 @32708 has 105 MA's), (34, 32684), (39, 32648), (48, 32555), (50, 32531),

Gene: DarthPhader_45 Start: 33153, Stop: 32947, Start Num: 30

Candidate Starts for DarthPhader_45:

(17, 33261), (Start: 30 @33153 has 105 MA's), (34, 33126), (36, 33111), (39, 33090), (40, 33087), (48, 32997),

Gene: DekHockey33_51 Start: 31295, Stop: 31065, Start Num: 26

Candidate Starts for DekHockey33_51:

(Start: 26 @31295 has 20 MA's), (37, 31241), (38, 31238), (39, 31223),

Gene: Dorothea_50 Start: 31365, Stop: 31156, Start Num: 30

Candidate Starts for Dorothea_50:

(18, 31473), (Start: 30 @31365 has 105 MA's), (32, 31347), (35, 31323), (48, 31206),

Gene: DreamTeam1_47 Start: 31994, Stop: 31770, Start Num: 30

Candidate Starts for DreamTeam1_47:

(8, 32243), (9, 32213), (15, 32114), (17, 32102), (20, 32090), (Start: 30 @31994 has 105 MA's), (34, 31970), (39, 31934), (40, 31931), (48, 31841),

Gene: DudeLittle_47 Start: 32456, Stop: 32247, Start Num: 30

Candidate Starts for DudeLittle_47:

(15, 32570), (17, 32558), (Start: 30 @32456 has 105 MA's), (32, 32438), (48, 32300),

Gene: EZMoney23_46 Start: 32252, Stop: 32052, Start Num: 30

Candidate Starts for EZMoney23_46:

(Start: 30 @32252 has 105 MA's), (38, 32204), (41, 32168), (48, 32096), (54, 32060),

Gene: EagleEye_50 Start: 31872, Stop: 31663, Start Num: 30

Candidate Starts for EagleEye_50:

(Start: 30 @31872 has 105 MA's), (37, 31824), (39, 31806), (48, 31719),

Gene: Ebony_48 Start: 31489, Stop: 31277, Start Num: 27

Candidate Starts for Ebony_48:

(Start: 27 @31489 has 24 MA's), (39, 31426),

Gene: EdogawaKiddo_46 Start: 32319, Stop: 32107, Start Num: 30

Candidate Starts for EdogawaKiddo_46:

(6, 32577), (7, 32571), (15, 32439), (17, 32427), (Start: 30 @32319 has 105 MA's), (39, 32262), (40, 32259), (48, 32169),

Gene: Eidsmoe_48 Start: 32382, Stop: 32170, Start Num: 30

Candidate Starts for Eidsmoe_48:

(6, 32640), (7, 32634), (15, 32502), (17, 32490), (Start: 30 @32382 has 105 MA's), (39, 32325), (40, 32322), (48, 32232),

Gene: Elephantoon_47 Start: 31688, Stop: 31470, Start Num: 30

Candidate Starts for Elephantoon_47:

(17, 31790), (Start: 30 @31688 has 105 MA's), (Start: 33 @31670 has 1 MA's), (34, 31664), (39, 31628), (40, 31625), (48, 31535), (50, 31511),

Gene: EmyBug_47 Start: 32384, Stop: 32172, Start Num: 30

Candidate Starts for EmyBug_47:

(6, 32642), (7, 32636), (15, 32504), (17, 32492), (Start: 30 @32384 has 105 MA's), (39, 32327), (40, 32324), (48, 32234),

Gene: Epsocamisio_49 Start: 30615, Stop: 30388, Start Num: 26

Candidate Starts for Epsocamisio_49:

(Start: 26 @30615 has 20 MA's), (37, 30561), (38, 30558), (39, 30543),

Gene: EricB_50 Start: 31339, Stop: 31130, Start Num: 30

Candidate Starts for EricB_50:

(18, 31447), (Start: 30 @31339 has 105 MA's), (32, 31321), (35, 31297), (48, 31180),

Gene: Et2Brutus_47 Start: 31449, Stop: 31237, Start Num: 27

Candidate Starts for Et2Brutus_47:

(Start: 27 @31449 has 24 MA's), (39, 31386),

Gene: ExplosioNervosa_48 Start: 32402, Stop: 32190, Start Num: 30

Candidate Starts for ExplosioNervosa_48:

(6, 32660), (7, 32654), (15, 32522), (17, 32510), (Start: 30 @32402 has 105 MA's), (39, 32345), (40, 32342), (48, 32252),

Gene: Fameo_48 Start: 32632, Stop: 32423, Start Num: 30

Candidate Starts for Fameo_48:

(15, 32746), (17, 32734), (Start: 30 @32632 has 105 MA's), (39, 32569), (48, 32476),

Gene: Fayely_48 Start: 32351, Stop: 32139, Start Num: 30

Candidate Starts for Fayely_48:

(6, 32609), (7, 32603), (15, 32471), (17, 32459), (Start: 30 @32351 has 105 MA's), (39, 32294), (40, 32291), (48, 32201),

Gene: Fibonacci_48 Start: 31464, Stop: 31252, Start Num: 27

Candidate Starts for Fibonacci_48:

(Start: 27 @31464 has 24 MA's), (39, 31401),

Gene: Flaverint_49 Start: 31911, Stop: 31699, Start Num: 27

Candidate Starts for Flaverint_49:

(12, 32058), (Start: 27 @31911 has 24 MA's), (39, 31848),

Gene: Gail_53 Start: 34071, Stop: 33859, Start Num: 30

Candidate Starts for Gail_53:

(Start: 30 @34071 has 105 MA's), (42, 33984), (43, 33981), (48, 33915),

Gene: Garak_52 Start: 31507, Stop: 31301, Start Num: 30

Candidate Starts for Garak_52:

(18, 31615), (Start: 30 @31507 has 105 MA's), (35, 31468), (38, 31459), (39, 31444), (48, 31351),

Gene: GaugeLDP_46 Start: 32685, Stop: 32485, Start Num: 30

Candidate Starts for GaugeLDP_46:

(18, 32793), (21, 32781), (Start: 30 @32685 has 105 MA's), (Start: 33 @32670 has 1 MA's), (48, 32535),

Gene: Gilberta_49 Start: 31901, Stop: 31689, Start Num: 27

Candidate Starts for Gilberta_49:

(12, 32048), (Start: 27 @31901 has 24 MA's), (39, 31838),

Gene: Gladiator_48 Start: 30670, Stop: 30461, Start Num: 30

Candidate Starts for Gladiator_48:

(18, 30778), (Start: 30 @30670 has 105 MA's), (32, 30652), (35, 30628), (48, 30511),

Gene: GreedyLawyer_50 Start: 31346, Stop: 31137, Start Num: 30

Candidate Starts for GreedyLawyer_50:

(18, 31454), (Start: 30 @31346 has 105 MA's), (32, 31328), (35, 31304), (48, 31187),

Gene: Gruunaga_50 Start: 31343, Stop: 31137, Start Num: 30

Candidate Starts for Gruunaga_50:

(18, 31451), (Start: 30 @31343 has 105 MA's), (35, 31304), (38, 31295), (39, 31280), (48, 31187),

Gene: Hammer_51 Start: 30946, Stop: 30740, Start Num: 30

Candidate Starts for Hammer_51:

(18, 31054), (Start: 30 @30946 has 105 MA's), (38, 30898), (48, 30790),

Gene: Hanray_46 Start: 32323, Stop: 32111, Start Num: 30

Candidate Starts for Hanray_46:

(6, 32581), (7, 32575), (15, 32443), (17, 32431), (Start: 30 @32323 has 105 MA's), (39, 32266), (40, 32263), (48, 32173),

Gene: Heffalump_47 Start: 33100, Stop: 32891, Start Num: 30

Candidate Starts for Heffalump_47:

(15, 33214), (17, 33202), (Start: 30 @33100 has 105 MA's), (39, 33037), (48, 32944),

Gene: Helmet_52 Start: 31507, Stop: 31301, Start Num: 30

Candidate Starts for Helmet_52:

(18, 31615), (Start: 30 @31507 has 105 MA's), (35, 31468), (38, 31459), (39, 31444), (48, 31351),

Gene: Herbertwm_48 Start: 32176, Stop: 31973, Start Num: 29

Candidate Starts for Herbertwm_48:

(Start: 29 @32176 has 1 MA's), (39, 32113), (48, 32020),

Gene: Hexamo_50 Start: 31128, Stop: 30922, Start Num: 30

Candidate Starts for Hexamo_50:

(18, 31236), (Start: 30 @31128 has 105 MA's), (35, 31089), (38, 31080), (39, 31065), (48, 30972),

Gene: Horex_47 Start: 32342, Stop: 32130, Start Num: 30

Candidate Starts for Horex_47:

(6, 32600), (7, 32594), (15, 32462), (17, 32450), (Start: 30 @32342 has 105 MA's), (39, 32285), (40, 32282), (48, 32192),

Gene: HortumSL17_48 Start: 32318, Stop: 32106, Start Num: 30

Candidate Starts for HortumSL17_48:

(6, 32576), (7, 32570), (15, 32438), (17, 32426), (Start: 30 @32318 has 105 MA's), (39, 32261), (40, 32258), (48, 32168),

Gene: Hutc2_48 Start: 31464, Stop: 31252, Start Num: 27

Candidate Starts for Hutc2_48:

(Start: 27 @31464 has 24 MA's), (39, 31401),

Gene: Indra_53 Start: 31508, Stop: 31302, Start Num: 30
Candidate Starts for Indra_53:
(18, 31616), (Start: 30 @31508 has 105 MA's), (35, 31469), (38, 31460), (39, 31445), (48, 31352),

Gene: Insomnia_49 Start: 31969, Stop: 31757, Start Num: 27
Candidate Starts for Insomnia_49:
(Start: 27 @31969 has 24 MA's), (39, 31906),

Gene: Isiphiwo_48 Start: 30883, Stop: 30674, Start Num: 30
Candidate Starts for Isiphiwo_48:
(18, 30991), (Start: 30 @30883 has 105 MA's), (32, 30865), (35, 30841), (48, 30724),

Gene: JSwag_49 Start: 30553, Stop: 30326, Start Num: 26
Candidate Starts for JSwag_49:
(3, 30898), (Start: 26 @30553 has 20 MA's), (37, 30499), (38, 30496), (39, 30481),

Gene: Jabith_49 Start: 31970, Stop: 31758, Start Num: 27
Candidate Starts for Jabith_49:
(Start: 27 @31970 has 24 MA's), (39, 31907),

Gene: Jeeves_53 Start: 32846, Stop: 32631, Start Num: 30
Candidate Starts for Jeeves_53:
(Start: 30 @32846 has 105 MA's), (37, 32798), (42, 32756), (43, 32753), (48, 32687),

Gene: Jeffabunny_50 Start: 31164, Stop: 30958, Start Num: 30
Candidate Starts for Jeffabunny_50:
(18, 31272), (Start: 30 @31164 has 105 MA's), (35, 31125), (38, 31116), (39, 31101), (48, 31008),

Gene: Jiawan_46 Start: 32355, Stop: 32143, Start Num: 30
Candidate Starts for Jiawan_46:
(6, 32613), (7, 32607), (15, 32475), (17, 32463), (Start: 30 @32355 has 105 MA's), (39, 32298), (40, 32295), (48, 32205),

Gene: Jordennis_49 Start: 30803, Stop: 30594, Start Num: 28
Candidate Starts for Jordennis_49:
(Start: 28 @30803 has 2 MA's), (32, 30785), (35, 30761), (48, 30644),

Gene: Joselito_49 Start: 31910, Stop: 31698, Start Num: 27
Candidate Starts for Joselito_49:
(12, 32057), (Start: 27 @31910 has 24 MA's), (39, 31847),

Gene: JoshKayV_50 Start: 32961, Stop: 32752, Start Num: 30
Candidate Starts for JoshKayV_50:
(15, 33075), (17, 33063), (Start: 30 @32961 has 105 MA's), (44, 32853), (48, 32805),

Gene: Jsquared_46 Start: 31228, Stop: 31022, Start Num: 30
Candidate Starts for Jsquared_46:
(Start: 30 @31228 has 105 MA's), (Start: 33 @31207 has 1 MA's), (42, 31141), (48, 31072),

Gene: Kalpine_46 Start: 32595, Stop: 32392, Start Num: 30
Candidate Starts for Kalpine_46:
(Start: 30 @32595 has 105 MA's), (32, 32577), (38, 32547), (48, 32439),

Gene: KatherineG_52 Start: 31295, Stop: 31065, Start Num: 26
Candidate Starts for KatherineG_52:
(Start: 26 @31295 has 20 MA's), (37, 31241), (38, 31238), (39, 31223),

Gene: Kazan_51 Start: 31352, Stop: 31143, Start Num: 30
Candidate Starts for Kazan_51:
(18, 31460), (Start: 30 @31352 has 105 MA's), (32, 31334), (35, 31310), (48, 31193),

Gene: Keziacharles14_48 Start: 33355, Stop: 33137, Start Num: 31
Candidate Starts for Keziacharles14_48:
(17, 33457), (20, 33445), (Start: 31 @33355 has 1 MA's), (39, 33298), (40, 33295), (43, 33271), (48, 33205),

Gene: Kinmap_46 Start: 31629, Stop: 31423, Start Num: 30
Candidate Starts for Kinmap_46:
(5, 31902), (Start: 30 @31629 has 105 MA's), (36, 31587), (38, 31581),

Gene: Kipper29_50 Start: 31365, Stop: 31156, Start Num: 30
Candidate Starts for Kipper29_50:
(18, 31473), (Start: 30 @31365 has 105 MA's), (32, 31347), (35, 31323), (48, 31206),

Gene: Koko_51 Start: 31485, Stop: 31279, Start Num: 30
Candidate Starts for Koko_51:
(18, 31593), (Start: 30 @31485 has 105 MA's), (38, 31437), (48, 31329),

Gene: L5_47 Start: 31595, Stop: 31386, Start Num: 30
Candidate Starts for L5_47:
(Start: 30 @31595 has 105 MA's), (Start: 33 @31574 has 1 MA's), (38, 31547), (48, 31436),

Gene: LastResort_50 Start: 30856, Stop: 30626, Start Num: 26
Candidate Starts for LastResort_50:
(Start: 26 @30856 has 20 MA's), (37, 30802), (38, 30799), (39, 30784),

Gene: Leogania_48 Start: 33507, Stop: 33295, Start Num: 30
Candidate Starts for Leogania_48:
(Start: 30 @33507 has 105 MA's), (38, 33459), (41, 33423), (48, 33351), (49, 33339),

Gene: LilTurb_49 Start: 32769, Stop: 32560, Start Num: 30
Candidate Starts for LilTurb_49:
(15, 32883), (17, 32871), (Start: 30 @32769 has 105 MA's), (48, 32613),

Gene: Lilbunny_49 Start: 31138, Stop: 30932, Start Num: 30
Candidate Starts for Lilbunny_49:
(18, 31246), (Start: 30 @31138 has 105 MA's), (35, 31099), (38, 31090), (39, 31075), (48, 30982),

Gene: Lilleskat_46 Start: 32272, Stop: 32060, Start Num: 30
Candidate Starts for Lilleskat_46:
(6, 32530), (7, 32524), (15, 32392), (17, 32380), (Start: 30 @32272 has 105 MA's), (39, 32215), (40, 32212), (48, 32122),

Gene: LoneWolf_48 Start: 32078, Stop: 31863, Start Num: 30
Candidate Starts for LoneWolf_48:
(22, 32144), (Start: 30 @32078 has 105 MA's), (39, 32018), (40, 32015), (48, 31925), (53, 31889),

Gene: Looper_51 Start: 30833, Stop: 30603, Start Num: 26
Candidate Starts for Looper_51:
(Start: 26 @30833 has 20 MA's), (37, 30779), (38, 30776), (39, 30761),

Gene: Luchador_53 Start: 34634, Stop: 34419, Start Num: 30
Candidate Starts for Luchador_53:
(Start: 30 @34634 has 105 MA's), (41, 34547), (42, 34544), (43, 34541), (48, 34475),

Gene: Lucivia_49 Start: 31959, Stop: 31747, Start Num: 27
Candidate Starts for Lucivia_49:
(12, 32106), (Start: 27 @31959 has 24 MA's), (39, 31896),

Gene: Lucyedi_49 Start: 32067, Stop: 31858, Start Num: 30
Candidate Starts for Lucyedi_49:
(Start: 30 @32067 has 105 MA's), (37, 32019), (39, 32001), (48, 31914),

Gene: MaCh_49 Start: 31897, Stop: 31685, Start Num: 27
Candidate Starts for MaCh_49:
(Start: 27 @31897 has 24 MA's), (39, 31834),

Gene: Mabel_48 Start: 31499, Stop: 31287, Start Num: 27
Candidate Starts for Mabel_48:
(Start: 27 @31499 has 24 MA's), (39, 31436),

Gene: MajorMajor_47 Start: 31270, Stop: 31082, Start Num: 33
Candidate Starts for MajorMajor_47:
(11, 31444), (Start: 30 @31291 has 105 MA's), (Start: 33 @31270 has 1 MA's), (48, 31132),

Gene: Maminiaina_47 Start: 32071, Stop: 31844, Start Num: 30
Candidate Starts for Maminiaina_47:
(15, 32191), (17, 32179), (Start: 30 @32071 has 105 MA's), (Start: 33 @32053 has 1 MA's), (34, 32047), (39, 32011), (40, 32008), (48, 31918),

Gene: McFly_50 Start: 31346, Stop: 31137, Start Num: 30
Candidate Starts for McFly_50:
(18, 31454), (Start: 30 @31346 has 105 MA's), (32, 31328), (35, 31304), (48, 31187),

Gene: Miko_45 Start: 32443, Stop: 32240, Start Num: 30
Candidate Starts for Miko_45:
(Start: 30 @32443 has 105 MA's), (32, 32425), (Start: 33 @32422 has 1 MA's), (38, 32395), (48, 32287), (54, 32251),

Gene: MinecraftSteve_51 Start: 30817, Stop: 30590, Start Num: 26
Candidate Starts for MinecraftSteve_51:
(3, 31162), (Start: 26 @30817 has 20 MA's), (37, 30763), (38, 30760), (39, 30745),

Gene: Mulciber_48 Start: 31461, Stop: 31249, Start Num: 27
Candidate Starts for Mulciber_48:
(Start: 27 @31461 has 24 MA's), (39, 31398),

Gene: Munch_49 Start: 31910, Stop: 31698, Start Num: 27
Candidate Starts for Munch_49:

(12, 32057), (Start: 27 @31910 has 24 MA's), (39, 31847),

Gene: Myxus_48 Start: 32318, Stop: 32106, Start Num: 30

Candidate Starts for Myxus_48:

(6, 32576), (7, 32570), (15, 32438), (17, 32426), (Start: 30 @32318 has 105 MA's), (39, 32261), (40, 32258), (48, 32168),

Gene: Nebulosus_50 Start: 30852, Stop: 30622, Start Num: 26

Candidate Starts for Nebulosus_50:

(Start: 26 @30852 has 20 MA's), (37, 30798), (38, 30795), (39, 30780),

Gene: Nedarya_46 Start: 30263, Stop: 30051, Start Num: 26

Candidate Starts for Nedarya_46:

(10, 30416), (20, 30359), (Start: 26 @30263 has 20 MA's), (39, 30191), (52, 30068),

Gene: Neeharika16_49 Start: 30806, Stop: 30597, Start Num: 30

Candidate Starts for Neeharika16_49:

(18, 30914), (Start: 30 @30806 has 105 MA's), (32, 30788), (35, 30764), (48, 30647),

Gene: Newrala_50 Start: 31357, Stop: 31148, Start Num: 30

Candidate Starts for Newrala_50:

(18, 31465), (Start: 30 @31357 has 105 MA's), (32, 31339), (35, 31315), (48, 31198),

Gene: Odin_47 Start: 31075, Stop: 30872, Start Num: 30

Candidate Starts for Odin_47:

(Start: 30 @31075 has 105 MA's), (32, 31057), (36, 31033), (48, 30919),

Gene: Onglai_46 Start: 30659, Stop: 30447, Start Num: 30

Candidate Starts for Onglai_46:

(6, 30917), (7, 30911), (15, 30779), (17, 30767), (Start: 30 @30659 has 105 MA's), (39, 30602), (40, 30599), (48, 30509),

Gene: Oofda_51 Start: 30708, Stop: 30481, Start Num: 26

Candidate Starts for Oofda_51:

(Start: 26 @30708 has 20 MA's), (37, 30654), (38, 30651), (39, 30636),

Gene: Orange_48 Start: 31459, Stop: 31247, Start Num: 27

Candidate Starts for Orange_48:

(Start: 27 @31459 has 24 MA's), (39, 31396),

Gene: PackMan_47 Start: 32318, Stop: 32106, Start Num: 30

Candidate Starts for PackMan_47:

(6, 32576), (7, 32570), (15, 32438), (17, 32426), (Start: 30 @32318 has 105 MA's), (39, 32261), (40, 32258), (48, 32168),

Gene: PainterBoy_49 Start: 32003, Stop: 31794, Start Num: 30

Candidate Starts for PainterBoy_49:

(Start: 30 @32003 has 105 MA's), (37, 31955), (39, 31937), (48, 31850),

Gene: Petersenfast_47 Start: 31466, Stop: 31254, Start Num: 27

Candidate Starts for Petersenfast_47:

(Start: 27 @31466 has 24 MA's), (39, 31403),

Gene: Ph8s_50 Start: 31708, Stop: 31499, Start Num: 30
Candidate Starts for Ph8s_50:
(17, 31816), (20, 31804), (Start: 30 @31708 has 105 MA's), (34, 31681), (37, 31663), (39, 31645), (40, 31642), (48, 31552),

Gene: Phaeder_48 Start: 32318, Stop: 32106, Start Num: 30
Candidate Starts for Phaeder_48:
(6, 32576), (7, 32570), (15, 32438), (17, 32426), (Start: 30 @32318 has 105 MA's), (39, 32261), (40, 32258), (48, 32168),

Gene: Pharaoh_42 Start: 31876, Stop: 31682, Start Num: 30
Candidate Starts for Pharaoh_42:
(Start: 30 @31876 has 105 MA's), (39, 31816), (47, 31738), (48, 31723),

Gene: Phlei_37 Start: 31812, Stop: 31606, Start Num: 30
Candidate Starts for Phlei_37:
(Start: 30 @31812 has 105 MA's), (45, 31692), (46, 31674), (48, 31656),

Gene: Phonnegut_48 Start: 32367, Stop: 32155, Start Num: 30
Candidate Starts for Phonnegut_48:
(6, 32625), (7, 32619), (15, 32487), (17, 32475), (Start: 30 @32367 has 105 MA's), (39, 32310), (40, 32307), (48, 32217),

Gene: Pioneer_48 Start: 32367, Stop: 32155, Start Num: 30
Candidate Starts for Pioneer_48:
(6, 32625), (7, 32619), (15, 32487), (17, 32475), (Start: 30 @32367 has 105 MA's), (39, 32310), (40, 32307), (48, 32217),

Gene: Pmask_50 Start: 31358, Stop: 31149, Start Num: 30
Candidate Starts for Pmask_50:
(18, 31466), (Start: 30 @31358 has 105 MA's), (32, 31340), (35, 31316), (48, 31199),

Gene: Priamo_51 Start: 30975, Stop: 30766, Start Num: 30
Candidate Starts for Priamo_51:
(Start: 30 @30975 has 105 MA's), (32, 30957), (35, 30933), (48, 30816),

Gene: Priya_48 Start: 32385, Stop: 32173, Start Num: 30
Candidate Starts for Priya_48:
(6, 32643), (7, 32637), (15, 32505), (17, 32493), (Start: 30 @32385 has 105 MA's), (39, 32328), (40, 32325), (48, 32235),

Gene: Qobbit_48 Start: 32347, Stop: 32135, Start Num: 30
Candidate Starts for Qobbit_48:
(6, 32605), (7, 32599), (15, 32467), (17, 32455), (Start: 30 @32347 has 105 MA's), (39, 32290), (40, 32287), (48, 32197),

Gene: QueenB2_47 Start: 32316, Stop: 32107, Start Num: 30
Candidate Starts for QueenB2_47:
(15, 32430), (17, 32418), (Start: 30 @32316 has 105 MA's), (39, 32253), (48, 32160),

Gene: Quokka_46 Start: 31270, Stop: 31082, Start Num: 33
Candidate Starts for Quokka_46:
(11, 31444), (Start: 30 @31291 has 105 MA's), (Start: 33 @31270 has 1 MA's), (48, 31132),

Gene: Rahalelujah_47 Start: 31625, Stop: 31404, Start Num: 30
Candidate Starts for Rahalelujah_47:
(13, 31760), (16, 31736), (Start: 30 @31625 has 105 MA's), (39, 31565), (40, 31562), (48, 31472),

Gene: ReMo_50 Start: 30853, Stop: 30623, Start Num: 26
Candidate Starts for ReMo_50:
(Start: 26 @30853 has 20 MA's), (37, 30799), (38, 30796), (39, 30781),

Gene: Refuge_47 Start: 33529, Stop: 33323, Start Num: 30
Candidate Starts for Refuge_47:
(17, 33637), (Start: 30 @33529 has 105 MA's), (34, 33502), (36, 33487), (39, 33466), (40, 33463), (45, 33409), (48, 33373),

Gene: Remus_50 Start: 30533, Stop: 30306, Start Num: 26
Candidate Starts for Remus_50:
(3, 30875), (Start: 26 @30533 has 20 MA's), (37, 30479), (38, 30476), (39, 30461),

Gene: Riffer_51 Start: 30909, Stop: 30703, Start Num: 30
Candidate Starts for Riffer_51:
(18, 31017), (Start: 30 @30909 has 105 MA's), (35, 30870), (38, 30861), (39, 30846), (48, 30753),

Gene: Roksolana_51 Start: 31394, Stop: 31185, Start Num: 28
Candidate Starts for Roksolana_51:
(Start: 28 @31394 has 2 MA's), (32, 31376), (35, 31352), (48, 31235),

Gene: Rosalind_49 Start: 30736, Stop: 30509, Start Num: 26
Candidate Starts for Rosalind_49:
(3, 31081), (Start: 26 @30736 has 20 MA's), (37, 30682), (38, 30679), (39, 30664),

Gene: RyeScarlet_49 Start: 32342, Stop: 32130, Start Num: 30
Candidate Starts for RyeScarlet_49:
(6, 32600), (7, 32594), (15, 32462), (17, 32450), (Start: 30 @32342 has 105 MA's), (39, 32285), (40, 32282), (48, 32192),

Gene: Sachima_45 Start: 32252, Stop: 32040, Start Num: 30
Candidate Starts for Sachima_45:
(6, 32510), (7, 32504), (15, 32372), (17, 32360), (Start: 30 @32252 has 105 MA's), (39, 32195), (40, 32192), (48, 32102),

Gene: Salz_47 Start: 31437, Stop: 31225, Start Num: 27
Candidate Starts for Salz_47:
(Start: 27 @31437 has 24 MA's), (39, 31374),

Gene: Scherzo_48 Start: 32556, Stop: 32344, Start Num: 30
Candidate Starts for Scherzo_48:
(6, 32814), (7, 32808), (15, 32676), (17, 32664), (Start: 30 @32556 has 105 MA's), (39, 32499), (40, 32496), (48, 32406),

Gene: Sham4_48 Start: 31465, Stop: 31253, Start Num: 27
Candidate Starts for Sham4_48:
(Start: 27 @31465 has 24 MA's), (39, 31402),

Gene: ShayRa_52 Start: 31057, Stop: 30827, Start Num: 26
Candidate Starts for ShayRa_52:
(Start: 26 @31057 has 20 MA's), (37, 31003), (38, 31000), (39, 30985),

Gene: SheaKeira_47 Start: 31905, Stop: 31681, Start Num: 30
Candidate Starts for SheaKeira_47:
(4, 32196), (8, 32154), (9, 32124), (20, 32001), (Start: 30 @31905 has 105 MA's), (34, 31884), (39, 31848), (40, 31845), (48, 31755),

Gene: SmellyB_50 Start: 31346, Stop: 31137, Start Num: 30
Candidate Starts for SmellyB_50:
(18, 31454), (Start: 30 @31346 has 105 MA's), (32, 31328), (35, 31304), (48, 31187),

Gene: Snape_48 Start: 31463, Stop: 31251, Start Num: 27
Candidate Starts for Snape_48:
(Start: 27 @31463 has 24 MA's), (39, 31400),

Gene: SororFago_51 Start: 33958, Stop: 33743, Start Num: 30
Candidate Starts for SororFago_51:
(Start: 30 @33958 has 105 MA's), (42, 33868), (43, 33865), (48, 33799),

Gene: Soups_51 Start: 31056, Stop: 30826, Start Num: 26
Candidate Starts for Soups_51:
(Start: 26 @31056 has 20 MA's), (37, 31002), (38, 30999), (39, 30984),

Gene: Spouty_48 Start: 32384, Stop: 32172, Start Num: 30
Candidate Starts for Spouty_48:
(6, 32642), (7, 32636), (15, 32504), (17, 32492), (Start: 30 @32384 has 105 MA's), (39, 32327), (40, 32324), (48, 32234),

Gene: Steamy_44 Start: 31813, Stop: 31595, Start Num: 30
Candidate Starts for Steamy_44:
(Start: 30 @31813 has 105 MA's), (Start: 33 @31792 has 1 MA's), (37, 31765), (42, 31723), (43, 31720),

Gene: Strosahl_50 Start: 30533, Stop: 30306, Start Num: 26
Candidate Starts for Strosahl_50:
(3, 30875), (Start: 26 @30533 has 20 MA's), (37, 30479), (38, 30476), (39, 30461),

Gene: Sunhee_51 Start: 32274, Stop: 32071, Start Num: 30
Candidate Starts for Sunhee_51:
(Start: 30 @32274 has 105 MA's), (42, 32187), (48, 32118),

Gene: SuperAwesome_50 Start: 31357, Stop: 31148, Start Num: 30
Candidate Starts for SuperAwesome_50:
(18, 31465), (Start: 30 @31357 has 105 MA's), (32, 31339), (35, 31315), (48, 31198),

Gene: SuperCallie99_49 Start: 31230, Stop: 31021, Start Num: 30
Candidate Starts for SuperCallie99_49:
(18, 31338), (Start: 30 @31230 has 105 MA's), (32, 31212), (35, 31188), (48, 31071),

Gene: Superchunk_47 Start: 30926, Stop: 30723, Start Num: 30
Candidate Starts for Superchunk_47:

(Start: 30 @30926 has 105 MA's), (32, 30908), (36, 30884), (48, 30770),

Gene: SwirlSquare_53 Start: 31593, Stop: 31390, Start Num: 30

Candidate Starts for SwirlSquare_53:

(17, 31701), (20, 31689), (Start: 30 @31593 has 105 MA's), (39, 31530), (40, 31527), (48, 31437),

Gene: Switzerland_50 Start: 30916, Stop: 30689, Start Num: 26

Candidate Starts for Switzerland_50:

(3, 31261), (Start: 26 @30916 has 20 MA's), (37, 30862), (38, 30859), (39, 30844),

Gene: Timothy_48 Start: 31440, Stop: 31228, Start Num: 27

Candidate Starts for Timothy_48:

(Start: 27 @31440 has 24 MA's), (39, 31377),

Gene: TinyTimmy_48 Start: 31483, Stop: 31271, Start Num: 27

Candidate Starts for TinyTimmy_48:

(Start: 27 @31483 has 24 MA's), (39, 31420),

Gene: Toaka_47 Start: 31887, Stop: 31669, Start Num: 30

Candidate Starts for Toaka_47:

(2, 32235), (24, 31899), (Start: 30 @31887 has 105 MA's), (39, 31827), (40, 31824), (48, 31734),

Gene: ToneTone_47 Start: 31070, Stop: 30864, Start Num: 30

Candidate Starts for ToneTone_47:

(18, 31178), (Start: 30 @31070 has 105 MA's), (35, 31031), (38, 31022), (39, 31007), (48, 30914),

Gene: Trixie_46 Start: 32430, Stop: 32230, Start Num: 30

Candidate Starts for Trixie_46:

(Start: 30 @32430 has 105 MA's), (32, 32412), (38, 32382), (41, 32346), (48, 32274),

Gene: Tubs_48 Start: 32318, Stop: 32106, Start Num: 30

Candidate Starts for Tubs_48:

(6, 32576), (7, 32570), (15, 32438), (17, 32426), (Start: 30 @32318 has 105 MA's), (39, 32261), (40, 32258), (48, 32168),

Gene: Tucker_50 Start: 30957, Stop: 30751, Start Num: 30

Candidate Starts for Tucker_50:

(18, 31065), (Start: 30 @30957 has 105 MA's), (38, 30909), (48, 30801),

Gene: Ugenie5_45 Start: 32555, Stop: 32343, Start Num: 30

Candidate Starts for Ugenie5_45:

(6, 32813), (7, 32807), (15, 32675), (17, 32663), (Start: 30 @32555 has 105 MA's), (39, 32498), (40, 32495), (48, 32405),

Gene: Vanisoa_47 Start: 32916, Stop: 32698, Start Num: 30

Candidate Starts for Vanisoa_47:

(19, 33006), (24, 32925), (Start: 30 @32916 has 105 MA's), (39, 32856), (40, 32853), (48, 32763),

Gene: VohminGhazi_50 Start: 31347, Stop: 31138, Start Num: 30

Candidate Starts for VohminGhazi_50:

(18, 31455), (Start: 30 @31347 has 105 MA's), (32, 31329), (35, 31305), (48, 31188),

Gene: Waits_50 Start: 30705, Stop: 30478, Start Num: 26

Candidate Starts for Waits_50:

(3, 31050), (Start: 26 @30705 has 20 MA's), (37, 30651), (38, 30648), (39, 30633),

Gene: Wiks_49 Start: 31138, Stop: 30932, Start Num: 30

Candidate Starts for Wiks_49:

(18, 31246), (Start: 30 @31138 has 105 MA's), (35, 31099), (38, 31090), (39, 31075), (48, 30982),

Gene: WunderPhul_50 Start: 31136, Stop: 30930, Start Num: 30

Candidate Starts for WunderPhul_50:

(18, 31244), (Start: 30 @31136 has 105 MA's), (35, 31097), (38, 31088), (39, 31073), (48, 30980),

Gene: XianYue_47 Start: 32071, Stop: 31886, Start Num: 33

Candidate Starts for XianYue_47:

(Start: 30 @32092 has 105 MA's), (Start: 33 @32071 has 1 MA's), (35, 32053), (36, 32050), (38, 32044), (48, 31936),

Gene: Yecey3_49 Start: 31785, Stop: 31579, Start Num: 30

Candidate Starts for Yecey3_49:

(15, 31905), (17, 31893), (Start: 30 @31785 has 105 MA's), (39, 31725), (48, 31632),

Gene: Yokurt_50 Start: 31138, Stop: 30932, Start Num: 30

Candidate Starts for Yokurt_50:

(18, 31246), (Start: 30 @31138 has 105 MA's), (35, 31099), (38, 31090), (39, 31075), (48, 30982),

Gene: Zaka_50 Start: 31138, Stop: 30932, Start Num: 30

Candidate Starts for Zaka_50:

(18, 31246), (Start: 30 @31138 has 105 MA's), (35, 31099), (38, 31090), (39, 31075), (48, 30982),

Gene: Zimmer_45 Start: 33020, Stop: 32820, Start Num: 30

Candidate Starts for Zimmer_45:

(17, 33128), (23, 33083), (Start: 30 @33020 has 105 MA's), (34, 32993), (36, 32978), (39, 32957), (48, 32864),

Gene: Zulu_50 Start: 30938, Stop: 30732, Start Num: 30

Candidate Starts for Zulu_50:

(18, 31046), (Start: 30 @30938 has 105 MA's), (38, 30890), (48, 30782),