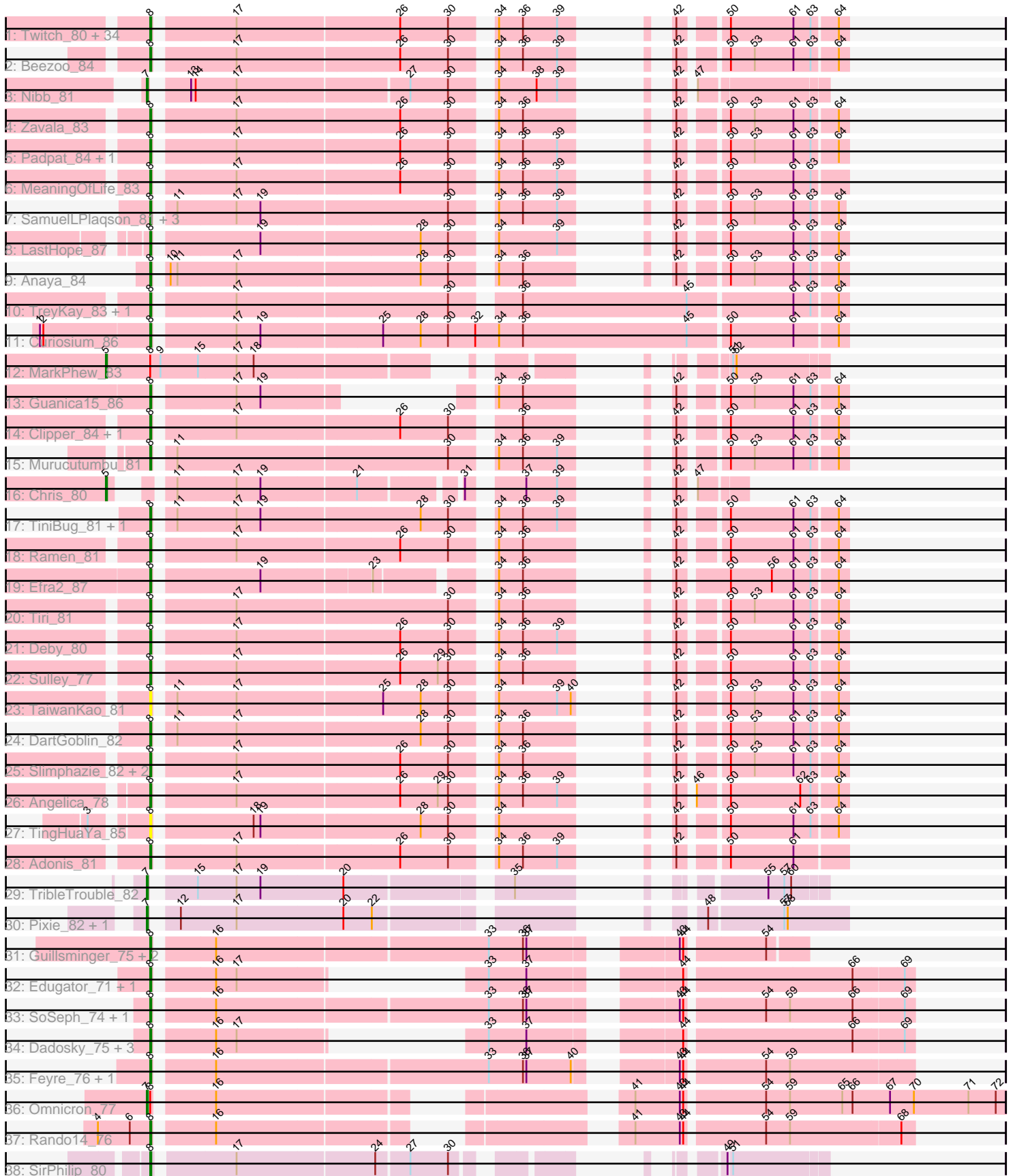


Pham 304908



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 304908 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304908 has 90 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Twitch_80, ShiaSurprise_81, Jeckyll_80, HedwigODU_80, Zabiza_76, Llorens_80, Joy99_81, Jarvi_80, Rosmarinus_80, Blizzard_80, Lunahalos_80, Durfee_80, Boiii_80, Hyperbowlee_79, Adephegia_79, Atiba_81, Homura_79, Spock_80, ActinUp_81, CaseJules_82, Piatt_79, BEEEST_80, BaghaKamala_79, TruffulaTree_82, Inky_80, Capricorn_80, CallaLilly_80, Asayake_80, Peel_80, Padfoot_80, Belladonna_80, CREW_79, Topper_80, Dalmuri_80, Tachez_80
- Track 2 : Beezoo_84
- Track 3 : Nibb_81
- Track 4 : Zavalá_83
- Track 5 : Padpat_84, Emerson_83
- Track 6 : MeaningOfLife_83
- Track 7 : SamuelLPlaqson_81, DrHayes_81, Urkel_81, Anma_81
- Track 8 : LastHope_87
- Track 9 : Anaya_84
- Track 10 : TreyKay_83, Prithvi_83
- Track 11 : Curiosium_86
- Track 12 : MarkPhew_83
- Track 13 : Guanica15_86
- Track 14 : Clipper_84, MacKat_76
- Track 15 : Murucutumbu_81
- Track 16 : Chris_80
- Track 17 : TiniBug_81, Bella96_82
- Track 18 : Ramen_81
- Track 19 : Efra2_87
- Track 20 : Tiri_81
- Track 21 : Deby_80
- Track 22 : Sulley_77
- Track 23 : TaiwanKao_81
- Track 24 : DartGoblin_82
- Track 25 : Slimphazie_82, JAWS_79, Veliki_81
- Track 26 : Angelica_78
- Track 27 : TingHuaYa_85
- Track 28 : Adonis_81
- Track 29 : TribbleTrouble_82
- Track 30 : Pixie_82, TBond007_79
- Track 31 : Guillsminger_75, Leston_74, Paola_74
- Track 32 : Edugator_71, AlleyCat_75

- Track 33 : SoSeph_74, Heftyboy_74
- Track 34 : Dadosky_75, Psycho_73, Larva_74, Neighly_75
- Track 35 : Feyre_76, Miryou_77
- Track 36 : Omnicron_77
- Track 37 : Rando14_76
- Track 38 : SirPhilip_80

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

The start number called the most often in the published annotations is 8, it was called in 79 of the 86 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_81, Adephegia_79, Adonis_81, AlleyCat_75, Anaya_84, Angelica_78, Anna_81, Asayake_80, Atiba_81, BEEST_80, BaghaKamala_79, Beezoo_84, Bella96_82, Belladonna_80, Blizzard_80, Boiiii_80, CREW_79, CallaLilly_80, Capricorn_80, CaseJules_82, Clipper_84, Curiosium_86, Dadosky_75, Dalmuri_80, DartGoblin_82, Deby_80, DrHayes_81, Durfee_80, Edugator_71, Efra2_87, Emerson_83, Feyre_76, Guanica15_86, Guillsminger_75, HedwigODU_80, Heftyboy_74, Homura_79, Hyperbowlee_79, Inky_80, JAWS_79, Jarvi_80, Jeckyll_80, Joy99_81, Larva_74, LastHope_87, Leston_74, Llorens_80, Lunahalos_80, MacKat_76, MeaningOfLife_83, Miryou_77, Murucutumbu_81, Neighly_75, Padfoot_80, Padpat_84, Paola_74, Peel_80, Piatt_79, Prithvi_83, Psycho_73, Ramen_81, Rando14_76, Rosmarinus_80, SamuelLPlaqson_81, ShiaSurprise_81, SirPhilip_80, Slimphazie_82, SoSeph_74, Spock_80, Sulley_77, Tachez_80, TaiwanKao_81, TingHuaYa_85, TiniBug_81, Tiri_81, Topper_80, TreyKay_83, TruffulaTree_82, Twitch_80, Urkel_81, Veliki_81, Zabiza_76, Zavala_83,

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

- MarkPhew_83, Omnicron_77,

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

- Chris_80, Nibb_81, Pixie_82, TBond007_79, TribbleTrouble_82,

Summary by start number:

Start 5:

- Found in 2 of 90 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chris_80 (K1), MarkPhew_83 (K1),

Start 7:

- Found in 5 of 90 (5.6%) of genes in pham
- Manual Annotations of this start: 5 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nibb_81 (K1), Omnicron_77 (K5), Pixie_82 (K3), TBond007_79 (K3), TribbleTrouble_82 (K3),

Start 8:

- Found in 85 of 90 (94.4%) of genes in pham
- Manual Annotations of this start: 79 of 86
- Called 97.6% of time when present
- Phage (with cluster) where this start called: ActinUp_81 (K1), Adephagia_79 (K1), Adonis_81 (K1), AlleyCat_75 (K5), Anaya_84 (K1), Angelica_78 (K1), Anma_81 (K1), Asayake_80 (K1), Atiba_81 (K1), BEEST_80 (K1), BaghaKamala_79 (K1), Beezoo_84 (K1), Bella96_82 (K1), Belladonna_80 (K1), Blizzard_80 (K1), Boiiii_80 (K1), CREW_79 (K1), CallaLilly_80 (K1), Capricorn_80 (K1), CaseJules_82 (K1), Clipper_84 (K1), Curiosium_86 (K1), Dadosky_75 (K5), Dalmuri_80 (K1), DartGoblin_82 (K1), Deby_80 (K1), DrHayes_81 (K1), Durfee_80 (K1), Edugator_71 (K5), Efra2_87 (K1), Emerson_83 (K1), Feyre_76 (K5), Guanica15_86 (K1), Guillsminger_75 (K5), HedwigODU_80 (K1), Heftyboy_74 (K5), Homura_79 (K1), Hyperbowlee_79 (K1), Inky_80 (K1), JAWS_79 (K1), Jarvi_80 (K1), Jeckyll_80 (K1), Joy99_81 (K1), Larva_74 (K5), LastHope_87 (K1), Leston_74 (K5), Llorens_80 (K1), Lunahalos_80 (K1), MacKat_76 (K1), MeaningOfLife_83 (K1), Miryou_77 (K5), Murucutumbu_81 (K1), Neighly_75 (K3), Padfoot_80 (K1), Padpat_84 (K1), Paola_74 (K5), Peel_80 (K1), Piatt_79 (K1), Prithvi_83 (K1), Psycho_73 (K5), Ramen_81 (K1), Rando14_76 (K5), Rosmarinus_80 (K1), SamuelLPlaqson_81 (K1), ShiaSurprise_81 (K1), SirPhilip_80 (K6), Slimphazie_82 (K1), SoSeph_74 (K5), Spock_80 (K1), Sulley_77 (K1), Tachez_80 (K1), TaiwanKao_81 (K1), TingHuaYa_85 (K1), TiniBug_81 (K1), Tiri_81 (K1), Topper_80 (K1), TreyKay_83 (K1), TruffulaTree_82 (K1), Twitch_80 (K1), Urkel_81 (K1), Veliki_81 (K1), Zabiza_76 (K1), Zavala_83 (K1),

Summary by clusters:

There are 4 clusters represented in this pham: K3, K1, K6, K5,

Info for manual annotations of cluster K1:

- Start number 5 was manually annotated 2 times for cluster K1.
- Start number 7 was manually annotated 1 time for cluster K1.
- Start number 8 was manually annotated 65 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 7 was manually annotated 3 times for cluster K3.

Info for manual annotations of cluster K5:

- Start number 7 was manually annotated 1 time for cluster K5.
- Start number 8 was manually annotated 13 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 8 was manually annotated 1 time for cluster K6.

Gene Information:

Gene: ActinUp_81 Start: 52478, Stop: 52954, Start Num: 8

Candidate Starts for ActinUp_81:

(Start: 8 @52478 has 79 MA's), (17, 52541), (26, 52679), (30, 52721), (34, 52748), (36, 52769), (39, 52799), (42, 52823), (50, 52856), (61, 52910), (63, 52925), (64, 52946),

Gene: Adephagia_79 Start: 52315, Stop: 52791, Start Num: 8

Candidate Starts for Adephagia_79:

(Start: 8 @52315 has 79 MA's), (17, 52378), (26, 52516), (30, 52558), (34, 52585), (36, 52606), (39, 52636), (42, 52660), (50, 52693), (61, 52747), (63, 52762), (64, 52783),

Gene: Adonis_81 Start: 52782, Stop: 53258, Start Num: 8

Candidate Starts for Adonis_81:

(Start: 8 @52782 has 79 MA's), (17, 52845), (26, 52983), (30, 53025), (34, 53052), (36, 53073), (39, 53103), (42, 53127), (50, 53160), (61, 53214),

Gene: AlleyCat_75 Start: 49520, Stop: 50002, Start Num: 8

Candidate Starts for AlleyCat_75:

(Start: 8 @49520 has 79 MA's), (16, 49565), (17, 49583), (33, 49679), (37, 49712), (44, 49814), (66, 49952), (69, 49994),

Gene: Anaya_84 Start: 53360, Stop: 53836, Start Num: 8

Candidate Starts for Anaya_84:

(Start: 8 @53360 has 79 MA's), (10, 53366), (11, 53372), (17, 53423), (28, 53579), (30, 53603), (34, 53630), (36, 53651), (42, 53705), (50, 53738), (53, 53759), (61, 53792), (63, 53807), (64, 53828),

Gene: Angelica_78 Start: 51899, Stop: 52375, Start Num: 8

Candidate Starts for Angelica_78:

(Start: 8 @51899 has 79 MA's), (17, 51962), (26, 52100), (29, 52133), (30, 52142), (34, 52169), (36, 52190), (39, 52220), (42, 52244), (46, 52253), (50, 52277), (62, 52337), (63, 52346), (64, 52367),

Gene: Anma_81 Start: 52928, Stop: 53401, Start Num: 8

Candidate Starts for Anma_81:

(Start: 8 @52928 has 79 MA's), (11, 52940), (17, 52991), (19, 53012), (30, 53171), (34, 53198), (36, 53219), (39, 53249), (42, 53273), (50, 53306), (53, 53327), (61, 53360), (63, 53375), (64, 53396),

Gene: Asayake_80 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for Asayake_80:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: Atiba_81 Start: 52278, Stop: 52754, Start Num: 8

Candidate Starts for Atiba_81:

(Start: 8 @52278 has 79 MA's), (17, 52341), (26, 52479), (30, 52521), (34, 52548), (36, 52569), (39, 52599), (42, 52623), (50, 52656), (61, 52710), (63, 52725), (64, 52746),

Gene: BEEST_80 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for BEEST_80:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: BaghaKamala_79 Start: 51864, Stop: 52340, Start Num: 8

Candidate Starts for BaghaKamala_79:

(Start: 8 @51864 has 79 MA's), (17, 51927), (26, 52065), (30, 52107), (34, 52134), (36, 52155), (39, 52185), (42, 52209), (50, 52242), (61, 52296), (63, 52311), (64, 52332),

Gene: Beezoo_84 Start: 53443, Stop: 53919, Start Num: 8

Candidate Starts for Beezoo_84:

(Start: 8 @53443 has 79 MA's), (17, 53506), (26, 53644), (30, 53686), (34, 53713), (36, 53734), (39, 53764), (42, 53788), (50, 53821), (53, 53842), (61, 53875), (63, 53890), (64, 53911),

Gene: Bella96_82 Start: 52804, Stop: 53280, Start Num: 8

Candidate Starts for Bella96_82:

(Start: 8 @52804 has 79 MA's), (11, 52816), (17, 52867), (19, 52888), (28, 53023), (30, 53047), (34, 53074), (36, 53095), (39, 53125), (42, 53149), (50, 53182), (61, 53236), (63, 53251), (64, 53272),

Gene: Belladonna_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Belladonna_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: Blizzard_80 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for Blizzard_80:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: Boiiii_80 Start: 52632, Stop: 53108, Start Num: 8

Candidate Starts for Boiiii_80:

(Start: 8 @52632 has 79 MA's), (17, 52695), (26, 52833), (30, 52875), (34, 52902), (36, 52923), (39, 52953), (42, 52977), (50, 53010), (61, 53064), (63, 53079), (64, 53100),

Gene: CREW_79 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for CREW_79:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: CallaLilly_80 Start: 52356, Stop: 52832, Start Num: 8

Candidate Starts for CallaLilly_80:

(Start: 8 @52356 has 79 MA's), (17, 52419), (26, 52557), (30, 52599), (34, 52626), (36, 52647), (39, 52677), (42, 52701), (50, 52734), (61, 52788), (63, 52803), (64, 52824),

Gene: Capricorn_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Capricorn_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: CaseJules_82 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for CaseJules_82:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: Chris_80 Start: 52508, Stop: 52897, Start Num: 5

Candidate Starts for Chris_80:

(Start: 5 @52508 has 2 MA's), (11, 52535), (17, 52586), (19, 52607), (21, 52688), (31, 52763), (37, 52799), (39, 52826), (42, 52850), (47, 52859),

Gene: Clipper_84 Start: 52996, Stop: 53472, Start Num: 8

Candidate Starts for Clipper_84:

(Start: 8 @52996 has 79 MA's), (17, 53059), (26, 53197), (30, 53239), (36, 53287), (42, 53341), (50, 53374), (61, 53428), (63, 53443), (64, 53464),

Gene: Curiosium_86 Start: 52181, Stop: 52765, Start Num: 8

Candidate Starts for Curiosium_86:

(1, 52091), (2, 52094), (Start: 8 @52181 has 79 MA's), (17, 52244), (19, 52265), (25, 52367), (28, 52400), (30, 52424), (32, 52448), (34, 52469), (36, 52490), (45, 52634), (50, 52667), (61, 52721), (64, 52757),

Gene: Dadosky_75 Start: 49521, Stop: 50003, Start Num: 8

Candidate Starts for Dadosky_75:

(Start: 8 @49521 has 79 MA's), (16, 49566), (17, 49584), (33, 49680), (37, 49713), (44, 49815), (66, 49953), (69, 49995),

Gene: Dalmuri_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Dalmuri_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: DartGoblin_82 Start: 52767, Stop: 53243, Start Num: 8

Candidate Starts for DartGoblin_82:

(Start: 8 @52767 has 79 MA's), (11, 52779), (17, 52830), (28, 52986), (30, 53010), (34, 53037), (36, 53058), (42, 53112), (50, 53145), (53, 53166), (61, 53199), (63, 53214), (64, 53235),

Gene: Deby_80 Start: 52797, Stop: 53273, Start Num: 8

Candidate Starts for Deby_80:

(Start: 8 @52797 has 79 MA's), (17, 52860), (26, 52998), (30, 53040), (34, 53067), (36, 53088), (39, 53118), (42, 53142), (50, 53175), (61, 53229), (63, 53244), (64, 53265),

Gene: DrHayes_81 Start: 52928, Stop: 53401, Start Num: 8

Candidate Starts for DrHayes_81:

(Start: 8 @52928 has 79 MA's), (11, 52940), (17, 52991), (19, 53012), (30, 53171), (34, 53198), (36, 53219), (39, 53249), (42, 53273), (50, 53306), (53, 53327), (61, 53360), (63, 53375), (64, 53396),

Gene: Durfee_80 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for Durfee_80:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: Edugator_71 Start: 50692, Stop: 51174, Start Num: 8

Candidate Starts for Edugator_71:

(Start: 8 @50692 has 79 MA's), (16, 50737), (17, 50755), (33, 50851), (37, 50884), (44, 50986), (66, 51124), (69, 51166),

Gene: Efra2_87 Start: 53234, Stop: 53698, Start Num: 8

Candidate Starts for Efra2_87:

(Start: 8 @53234 has 79 MA's), (19, 53318), (23, 53408), (34, 53486), (36, 53507), (42, 53561), (50, 53600), (56, 53636), (61, 53654), (63, 53669), (64, 53690),

Gene: Emerson_83 Start: 52849, Stop: 53325, Start Num: 8

Candidate Starts for Emerson_83:

(Start: 8 @52849 has 79 MA's), (17, 52912), (26, 53050), (30, 53092), (34, 53119), (36, 53140), (39, 53170), (42, 53194), (50, 53227), (53, 53248), (61, 53281), (63, 53296), (64, 53317),

Gene: Feyre_76 Start: 52938, Stop: 53537, Start Num: 8

Candidate Starts for Feyre_76:

(Start: 8 @52938 has 79 MA's), (16, 52983), (33, 53214), (36, 53244), (37, 53247), (40, 53286), (43, 53346), (44, 53349), (54, 53412), (59, 53433),

Gene: Guanica15_86 Start: 53021, Stop: 53395, Start Num: 8

Candidate Starts for Guanica15_86:

(Start: 8 @53021 has 79 MA's), (17, 53084), (19, 53105), (34, 53189), (36, 53210), (42, 53264), (50, 53297), (53, 53318), (61, 53351), (63, 53366), (64, 53387),

Gene: Guillsminger_75 Start: 51109, Stop: 51615, Start Num: 8

Candidate Starts for Guillsminger_75:

(Start: 8 @51109 has 79 MA's), (16, 51154), (33, 51385), (36, 51415), (37, 51418), (43, 51517), (44, 51520), (54, 51583),

Gene: HedwigODU_80 Start: 52478, Stop: 52954, Start Num: 8

Candidate Starts for HedwigODU_80:

(Start: 8 @52478 has 79 MA's), (17, 52541), (26, 52679), (30, 52721), (34, 52748), (36, 52769), (39, 52799), (42, 52823), (50, 52856), (61, 52910), (63, 52925), (64, 52946),

Gene: Heftyboy_74 Start: 51216, Stop: 51815, Start Num: 8

Candidate Starts for Heftyboy_74:

(Start: 8 @51216 has 79 MA's), (16, 51261), (33, 51492), (36, 51522), (37, 51525), (43, 51624), (44, 51627), (54, 51690), (59, 51711), (66, 51765), (69, 51807),

Gene: Homura_79 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Homura_79:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: Hyperbowlee_79 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for Hyperbowlee_79:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: Inky_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Inky_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: JAWS_79 Start: 52395, Stop: 52871, Start Num: 8

Candidate Starts for JAWS_79:

(Start: 8 @52395 has 79 MA's), (17, 52458), (26, 52596), (30, 52638), (34, 52665), (36, 52686), (42, 52740), (50, 52773), (53, 52794), (61, 52827), (63, 52842), (64, 52863),

Gene: Jarvi_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Jarvi_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: Jeckyll_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Jeckyll_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: Joy99_81 Start: 52562, Stop: 53038, Start Num: 8

Candidate Starts for Joy99_81:

(Start: 8 @52562 has 79 MA's), (17, 52625), (26, 52763), (30, 52805), (34, 52832), (36, 52853), (39, 52883), (42, 52907), (50, 52940), (61, 52994), (63, 53009), (64, 53030),

Gene: Larva_74 Start: 50393, Stop: 50875, Start Num: 8

Candidate Starts for Larva_74:

(Start: 8 @50393 has 79 MA's), (16, 50438), (17, 50456), (33, 50552), (37, 50585), (44, 50687), (66, 50825), (69, 50867),

Gene: LastHope_87 Start: 53015, Stop: 53491, Start Num: 8

Candidate Starts for LastHope_87:

(Start: 8 @53015 has 79 MA's), (19, 53099), (28, 53234), (30, 53258), (34, 53285), (39, 53336), (42, 53360), (50, 53393), (61, 53447), (63, 53462), (64, 53483),

Gene: Leston_74 Start: 51226, Stop: 51732, Start Num: 8

Candidate Starts for Leston_74:

(Start: 8 @51226 has 79 MA's), (16, 51271), (33, 51502), (36, 51532), (37, 51535), (43, 51634), (44, 51637), (54, 51700),

Gene: Llorens_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Llorens_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: Lunahalos_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Lunahalos_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: MacKat_76 Start: 47880, Stop: 48356, Start Num: 8

Candidate Starts for MacKat_76:

(Start: 8 @47880 has 79 MA's), (17, 47943), (26, 48081), (30, 48123), (36, 48171), (42, 48225), (50, 48258), (61, 48312), (63, 48327), (64, 48348),

Gene: MarkPhew_83 Start: 52994, Stop: 53452, Start Num: 5

Candidate Starts for MarkPhew_83:

(Start: 5 @52994 has 2 MA's), (Start: 8 @53033 has 79 MA's), (9, 53042), (15, 53075), (17, 53108), (18, 53123), (51, 53372), (52, 53375),

Gene: MeaningOfLife_83 Start: 53420, Stop: 53896, Start Num: 8

Candidate Starts for MeaningOfLife_83:

(Start: 8 @53420 has 79 MA's), (17, 53483), (26, 53621), (30, 53663), (34, 53690), (36, 53711), (39, 53741), (42, 53765), (50, 53798), (61, 53852), (63, 53867),

Gene: Miryou_77 Start: 53605, Stop: 54204, Start Num: 8

Candidate Starts for Miryou_77:

(Start: 8 @53605 has 79 MA's), (16, 53650), (33, 53881), (36, 53911), (37, 53914), (40, 53953), (43, 54013), (44, 54016), (54, 54079), (59, 54100),

Gene: Murucutumbu_81 Start: 53654, Stop: 54130, Start Num: 8

Candidate Starts for Murucutumbu_81:

(Start: 8 @53654 has 79 MA's), (11, 53666), (30, 53897), (34, 53924), (36, 53945), (39, 53975), (42, 53999), (50, 54032), (53, 54053), (61, 54086), (63, 54101), (64, 54122),

Gene: Neighly_75 Start: 50392, Stop: 50874, Start Num: 8

Candidate Starts for Neighly_75:

(Start: 8 @50392 has 79 MA's), (16, 50437), (17, 50455), (33, 50551), (37, 50584), (44, 50686), (66, 50824), (69, 50866),

Gene: Nibb_81 Start: 52309, Stop: 52764, Start Num: 7

Candidate Starts for Nibb_81:

(Start: 7 @52309 has 5 MA's), (13, 52333), (14, 52336), (17, 52372), (27, 52516), (30, 52549), (34, 52576), (38, 52609), (39, 52627), (42, 52651), (47, 52660),

Gene: Omnicron_77 Start: 52284, Stop: 52922, Start Num: 7

Candidate Starts for Omnicron_77:

(Start: 7 @52284 has 5 MA's), (Start: 8 @52287 has 79 MA's), (16, 52332), (41, 52608), (43, 52647), (44, 52650), (54, 52713), (59, 52734), (65, 52779), (66, 52788), (67, 52821), (70, 52842), (71, 52890), (72, 52914),

Gene: Padfoot_80 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for Padfoot_80:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: Padpat_84 Start: 52849, Stop: 53325, Start Num: 8

Candidate Starts for Padpat_84:

(Start: 8 @52849 has 79 MA's), (17, 52912), (26, 53050), (30, 53092), (34, 53119), (36, 53140), (39, 53170), (42, 53194), (50, 53227), (53, 53248), (61, 53281), (63, 53296), (64, 53317),

Gene: Paola_74 Start: 51109, Stop: 51615, Start Num: 8

Candidate Starts for Paola_74:

(Start: 8 @51109 has 79 MA's), (16, 51154), (33, 51385), (36, 51415), (37, 51418), (43, 51517), (44, 51520), (54, 51583),

Gene: Peel_80 Start: 52435, Stop: 52911, Start Num: 8

Candidate Starts for Peel_80:

(Start: 8 @52435 has 79 MA's), (17, 52498), (26, 52636), (30, 52678), (34, 52705), (36, 52726), (39, 52756), (42, 52780), (50, 52813), (61, 52867), (63, 52882), (64, 52903),

Gene: Piatt_79 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for Piatt_79:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: Pixie_82 Start: 53179, Stop: 53658, Start Num: 7

Candidate Starts for Pixie_82:

(Start: 7 @53179 has 5 MA's), (12, 53194), (17, 53242), (20, 53335), (22, 53359), (48, 53539), (57, 53602), (58, 53605),

Gene: Prithvi_83 Start: 52889, Stop: 53455, Start Num: 8

Candidate Starts for Prithvi_83:

(Start: 8 @52889 has 79 MA's), (17, 52952), (30, 53132), (36, 53180), (45, 53324), (61, 53411), (63, 53426), (64, 53447),

Gene: Psycho_73 Start: 49518, Stop: 50000, Start Num: 8

Candidate Starts for Psycho_73:

(Start: 8 @49518 has 79 MA's), (16, 49563), (17, 49581), (33, 49677), (37, 49710), (44, 49812), (66, 49950), (69, 49992),

Gene: Ramen_81 Start: 52203, Stop: 52679, Start Num: 8

Candidate Starts for Ramen_81:

(Start: 8 @52203 has 79 MA's), (17, 52266), (26, 52404), (30, 52446), (34, 52473), (36, 52494), (42, 52548), (50, 52581), (61, 52635), (63, 52650), (64, 52671),

Gene: Rando14_76 Start: 50969, Stop: 51520, Start Num: 8

Candidate Starts for Rando14_76:

(4, 50924), (6, 50951), (Start: 8 @50969 has 79 MA's), (16, 51014), (41, 51290), (43, 51329), (44, 51332), (54, 51395), (59, 51416), (68, 51509),

Gene: Rosmarinus_80 Start: 52421, Stop: 52897, Start Num: 8

Candidate Starts for Rosmarinus_80:

(Start: 8 @52421 has 79 MA's), (17, 52484), (26, 52622), (30, 52664), (34, 52691), (36, 52712), (39, 52742), (42, 52766), (50, 52799), (61, 52853), (63, 52868), (64, 52889),

Gene: SamuelLPlaqson_81 Start: 52928, Stop: 53401, Start Num: 8

Candidate Starts for SamuelLPlaqson_81:

(Start: 8 @52928 has 79 MA's), (11, 52940), (17, 52991), (19, 53012), (30, 53171), (34, 53198), (36, 53219), (39, 53249), (42, 53273), (50, 53306), (53, 53327), (61, 53360), (63, 53375), (64, 53396),

Gene: ShiaSurprise_81 Start: 52630, Stop: 53106, Start Num: 8

Candidate Starts for ShiaSurprise_81:

(Start: 8 @52630 has 79 MA's), (17, 52693), (26, 52831), (30, 52873), (34, 52900), (36, 52921), (39, 52951), (42, 52975), (50, 53008), (61, 53062), (63, 53077), (64, 53098),

Gene: SirPhilip_80 Start: 52804, Stop: 53241, Start Num: 8

Candidate Starts for SirPhilip_80:

(Start: 8 @52804 has 79 MA's), (17, 52867), (24, 52984), (27, 53011), (30, 53044), (49, 53158), (51, 53161),

Gene: Slimphazie_82 Start: 52845, Stop: 53321, Start Num: 8

Candidate Starts for Slimphazie_82:

(Start: 8 @52845 has 79 MA's), (17, 52908), (26, 53046), (30, 53088), (34, 53115), (36, 53136), (42, 53190), (50, 53223), (53, 53244), (61, 53277), (63, 53292), (64, 53313),

Gene: SoSeph_74 Start: 51216, Stop: 51815, Start Num: 8

Candidate Starts for SoSeph_74:

(Start: 8 @51216 has 79 MA's), (16, 51261), (33, 51492), (36, 51522), (37, 51525), (43, 51624), (44, 51627), (54, 51690), (59, 51711), (66, 51765), (69, 51807),

Gene: Spock_80 Start: 52434, Stop: 52910, Start Num: 8

Candidate Starts for Spock_80:

(Start: 8 @52434 has 79 MA's), (17, 52497), (26, 52635), (30, 52677), (34, 52704), (36, 52725), (39, 52755), (42, 52779), (50, 52812), (61, 52866), (63, 52881), (64, 52902),

Gene: Sulley_77 Start: 51894, Stop: 52370, Start Num: 8

Candidate Starts for Sulley_77:

(Start: 8 @51894 has 79 MA's), (17, 51957), (26, 52095), (29, 52128), (30, 52137), (34, 52164), (36, 52185), (42, 52239), (50, 52272), (61, 52326), (63, 52341), (64, 52362),

Gene: TBond007_79 Start: 53177, Stop: 53656, Start Num: 7

Candidate Starts for TBond007_79:

(Start: 7 @53177 has 5 MA's), (12, 53192), (17, 53240), (20, 53333), (22, 53357), (48, 53537), (57, 53600), (58, 53603),

Gene: Tachez_80 Start: 52278, Stop: 52754, Start Num: 8

Candidate Starts for Tachez_80:

(Start: 8 @52278 has 79 MA's), (17, 52341), (26, 52479), (30, 52521), (34, 52548), (36, 52569), (39, 52599), (42, 52623), (50, 52656), (61, 52710), (63, 52725), (64, 52746),

Gene: TaiwanKao_81 Start: 52410, Stop: 52886, Start Num: 8

Candidate Starts for TaiwanKao_81:

(Start: 8 @52410 has 79 MA's), (11, 52422), (17, 52473), (25, 52596), (28, 52629), (30, 52653), (34, 52680), (39, 52731), (40, 52743), (42, 52755), (50, 52788), (53, 52809), (61, 52842), (63, 52857), (64, 52878),

Gene: TingHuaYa_85 Start: 53323, Stop: 53799, Start Num: 8

Candidate Starts for TingHuaYa_85:

(3, 53284), (Start: 8 @53323 has 79 MA's), (18, 53401), (19, 53407), (28, 53542), (30, 53566), (34, 53593), (42, 53668), (50, 53701), (61, 53755), (63, 53770), (64, 53791),

Gene: TiniBug_81 Start: 52936, Stop: 53412, Start Num: 8

Candidate Starts for TiniBug_81:

(Start: 8 @52936 has 79 MA's), (11, 52948), (17, 52999), (19, 53020), (28, 53155), (30, 53179), (34, 53206), (36, 53227), (39, 53257), (42, 53281), (50, 53314), (61, 53368), (63, 53383), (64, 53404),

Gene: Tiri_81 Start: 52363, Stop: 52839, Start Num: 8

Candidate Starts for Tiri_81:

(Start: 8 @52363 has 79 MA's), (17, 52426), (30, 52606), (34, 52633), (36, 52654), (42, 52708), (50, 52741), (53, 52762), (61, 52795), (63, 52810), (64, 52831),

Gene: Topper_80 Start: 52433, Stop: 52909, Start Num: 8

Candidate Starts for Topper_80:

(Start: 8 @52433 has 79 MA's), (17, 52496), (26, 52634), (30, 52676), (34, 52703), (36, 52724), (39, 52754), (42, 52778), (50, 52811), (61, 52865), (63, 52880), (64, 52901),

Gene: TreyKay_83 Start: 52889, Stop: 53455, Start Num: 8

Candidate Starts for TreyKay_83:

(Start: 8 @52889 has 79 MA's), (17, 52952), (30, 53132), (36, 53180), (45, 53324), (61, 53411), (63, 53426), (64, 53447),

Gene: TribbleTrouble_82 Start: 53396, Stop: 53845, Start Num: 7

Candidate Starts for TribbleTrouble_82:

(Start: 7 @53396 has 5 MA's), (15, 53426), (17, 53459), (19, 53480), (20, 53552), (35, 53678), (55, 53798), (57, 53810), (60, 53816),

Gene: TruffulaTree_82 Start: 52841, Stop: 53317, Start Num: 8

Candidate Starts for TruffulaTree_82:

(Start: 8 @52841 has 79 MA's), (17, 52904), (26, 53042), (30, 53084), (34, 53111), (36, 53132), (39, 53162), (42, 53186), (50, 53219), (61, 53273), (63, 53288), (64, 53309),

Gene: Twitch_80 Start: 52435, Stop: 52911, Start Num: 8

Candidate Starts for Twitch_80:

(Start: 8 @52435 has 79 MA's), (17, 52498), (26, 52636), (30, 52678), (34, 52705), (36, 52726), (39, 52756), (42, 52780), (50, 52813), (61, 52867), (63, 52882), (64, 52903),

Gene: Urkel_81 Start: 52928, Stop: 53401, Start Num: 8

Candidate Starts for Urkel_81:

(Start: 8 @52928 has 79 MA's), (11, 52940), (17, 52991), (19, 53012), (30, 53171), (34, 53198), (36, 53219), (39, 53249), (42, 53273), (50, 53306), (53, 53327), (61, 53360), (63, 53375), (64, 53396),

Gene: Veliki_81 Start: 52386, Stop: 52856, Start Num: 8

Candidate Starts for Veliki_81:

(Start: 8 @52386 has 79 MA's), (17, 52449), (26, 52581), (30, 52623), (34, 52650), (36, 52671), (42, 52725), (50, 52758), (53, 52779), (61, 52812), (63, 52827), (64, 52848),

Gene: Zabiza_76 Start: 48783, Stop: 49259, Start Num: 8

Candidate Starts for Zabiza_76:

(Start: 8 @48783 has 79 MA's), (17, 48846), (26, 48984), (30, 49026), (34, 49053), (36, 49074), (39, 49104), (42, 49128), (50, 49161), (61, 49215), (63, 49230), (64, 49251),

Gene: Zavala_83 Start: 52919, Stop: 53395, Start Num: 8

Candidate Starts for Zavala_83:

(Start: 8 @52919 has 79 MA's), (17, 52982), (26, 53120), (30, 53162), (34, 53189), (36, 53210), (42, 53264), (50, 53297), (53, 53318), (61, 53351), (63, 53366), (64, 53387),