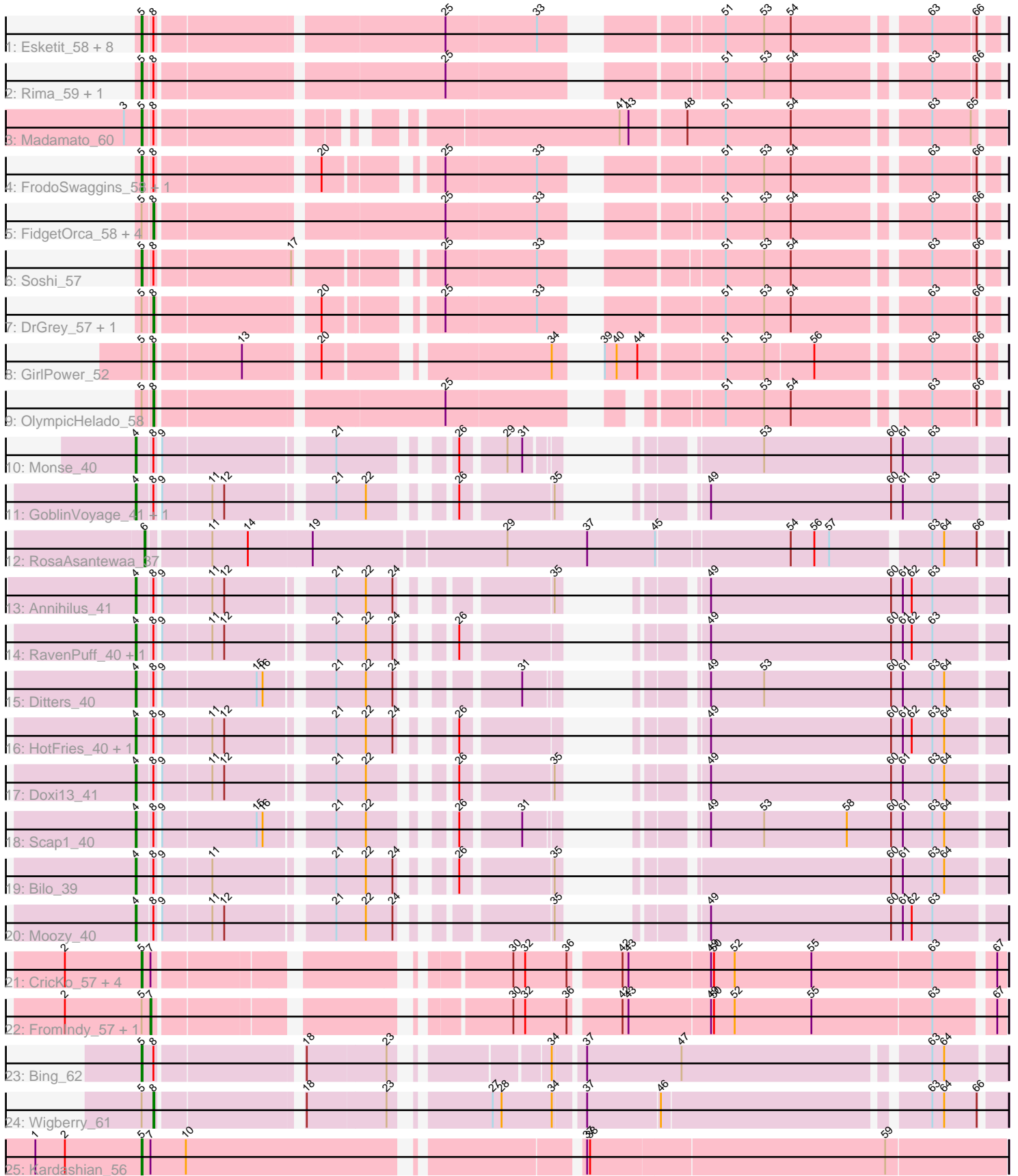


Pham 294837



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 294837 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294837 has 48 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Esketit_58, TaidaOne_58, Meibysrarus_56, TonyStarch_57, HazuAndZazu_57, Hoshi_57, Maya_58, TieDye_57, IceWarrior_57
- Track 2 : Rima_59, Namu_59
- Track 3 : Madamato_60
- Track 4 : FrodoSwaggins_58, Popy_58
- Track 5 : FidgetOrca_58, Jaylociraptor_58, Indigenous_58, Spectropatronm_58, CherryBlossom_58
- Track 6 : Soshi_57
- Track 7 : DrGrey_57, Espio_58
- Track 8 : GirlPower_52
- Track 9 : OlympicHelado_58
- Track 10 : Monse_40
- Track 11 : GoblinVoyage_41, Sangak_39
- Track 12 : RosaAsantewaa_37
- Track 13 : Annihilus_41
- Track 14 : RavenPuff_40, PherryCruz_40
- Track 15 : Ditters_40
- Track 16 : HotFries_40, SheRa_41
- Track 17 : Doxi13_41
- Track 18 : Scap1_40
- Track 19 : Bilo_39
- Track 20 : Moozy_40
- Track 21 : CricKo_57, Thiqqums_57, SendItCS_53, Regigigas_58, Miek_54
- Track 22 : FromIndy_57, Rainydai_55
- Track 23 : Bing_62
- Track 24 : Wigberry_61
- Track 25 : Kardashian_56

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

The start number called the most often in the published annotations is 5, it was called in 21 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bing_62, CricKo_57, Esketit_58, FrodoSwaggins_58, HazuAndZazu_57, Hoshi_57, IceWarrior_57, Kardashian_56, Madamoto_60, Maya_58, Meibysrarus_56, Miek_54, Namu_59, Popy_58, Regigigas_58, Rima_59, SendItCS_53, Soshi_57, TaidaOne_58, Thiqqums_57, TieDye_57, TonyStarch_57,

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

- CherryBlossom_58, DrGrey_57, Espio_58, FidgetOrca_58, FromIndy_57, GirlPower_52, Indigenous_58, Jaylociraptor_58, OlympicHelado_58, Rainydai_55, Spectropatronm_58, Wigberry_61,

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

- Annihilus_41, Bilo_39, Ditters_40, Doxi13_41, GoblinVoyage_41, HotFries_40, Monse_40, Moozy_40, PherryCruz_40, RavenPuff_40, RosaAsantewaa_37, Sangak_39, Scap1_40, SheRa_41,

Summary by start number:

Start 4:

- Found in 13 of 48 (27.1%) of genes in pham
- Manual Annotations of this start: 12 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annihilus_41 (BI2), Bilo_39 (BI2), Ditters_40 (BI2), Doxi13_41 (BI2), GoblinVoyage_41 (BI2), HotFries_40 (BI2), Monse_40 (BI2), Moozy_40 (BI2), PherryCruz_40 (BI2), RavenPuff_40 (BI2), Sangak_39 (BI2), Scap1_40 (BI2), SheRa_41 (BI2),

Start 5:

- Found in 34 of 48 (70.8%) of genes in pham
- Manual Annotations of this start: 21 of 45
- Called 64.7% of time when present
- Phage (with cluster) where this start called: Bing_62 (BI5), CricKo_57 (BI4), Esketit_58 (BI1), FrodoSwaggins_58 (BI1), HazuAndZazu_57 (BI1), Hoshi_57 (BI1), IceWarrior_57 (BI1), Kardashian_56 (BI6), Madamoto_60 (BI1), Maya_58 (BI1), Meibysrarus_56 (BI1), Miek_54 (BI4), Namu_59 (BI1), Popy_58 (BI1), Regigigas_58 (BI4), Rima_59 (BI1), SendItCS_53 (BI4), Soshi_57 (BI1), TaidaOne_58 (BI1), Thiqqums_57 (BI4), TieDye_57 (BI1), TonyStarch_57 (BI1),

Start 6:

- Found in 1 of 48 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RosaAsantewaa_37 (BI2),

Start 7:

- Found in 8 of 48 (16.7%) of genes in pham
- Manual Annotations of this start: 1 of 45
- Called 25.0% of time when present
- Phage (with cluster) where this start called: FromIndy_57 (BI4), Rainydai_55 (BI4),

Start 8:

- Found in 39 of 48 (81.2%) of genes in pham
- Manual Annotations of this start: 10 of 45
- Called 25.6% of time when present

- Phage (with cluster) where this start called: CherryBlossom_58 (BI1), DrGrey_57 (BI1), Espio_58 (BI1), FidgetOrca_58 (BI1), GirlPower_52 (BI1), Indigenous_58 (BI1), Jaylociraptor_58 (BI1), OlympicHelado_58 (BI1), Spectropatronm_58 (BI1), Wigberry_61 (BI5),

Summary by clusters:

There are 5 clusters represented in this pham: BI6, BI4, BI5, BI2, BI1,

Info for manual annotations of cluster BI1:

- Start number 5 was manually annotated 15 times for cluster BI1.
- Start number 8 was manually annotated 9 times for cluster BI1.

Info for manual annotations of cluster BI2:

- Start number 4 was manually annotated 12 times for cluster BI2.
- Start number 6 was manually annotated 1 time for cluster BI2.

Info for manual annotations of cluster BI4:

- Start number 5 was manually annotated 4 times for cluster BI4.
- Start number 7 was manually annotated 1 time for cluster BI4.

Info for manual annotations of cluster BI5:

- Start number 5 was manually annotated 1 time for cluster BI5.
- Start number 8 was manually annotated 1 time for cluster BI5.

Info for manual annotations of cluster BI6:

- Start number 5 was manually annotated 1 time for cluster BI6.

Gene Information:

Gene: Annihilus_41 Start: 29092, Stop: 29790, Start Num: 4

Candidate Starts for Annihilus_41:

(Start: 4 @29092 has 12 MA's), (Start: 8 @29107 has 10 MA's), (9, 29110), (11, 29158), (12, 29170), (21, 29266), (22, 29296), (24, 29323), (35, 29437), (49, 29500), (60, 29683), (61, 29695), (62, 29704), (63, 29725),

Gene: Bilo_39 Start: 29209, Stop: 29907, Start Num: 4

Candidate Starts for Bilo_39:

(Start: 4 @29209 has 12 MA's), (Start: 8 @29224 has 10 MA's), (9, 29227), (11, 29275), (21, 29383), (22, 29413), (24, 29440), (26, 29470), (35, 29554), (60, 29800), (61, 29812), (63, 29842), (64, 29854),

Gene: Bing_62 Start: 37589, Stop: 38362, Start Num: 5

Candidate Starts for Bing_62:

(Start: 5 @37589 has 21 MA's), (Start: 8 @37601 has 10 MA's), (18, 37733), (23, 37811), (34, 37937), (37, 37964), (47, 38060), (63, 38294), (64, 38306),

Gene: CherryBlossom_58 Start: 36769, Stop: 37482, Start Num: 8

Candidate Starts for CherryBlossom_58:

(Start: 5 @36760 has 21 MA's), (Start: 8 @36769 has 10 MA's), (25, 37006), (33, 37096), (51, 37237), (53, 37276), (54, 37303), (63, 37426), (66, 37468),

Gene: CricKo_57 Start: 35630, Stop: 36406, Start Num: 5

Candidate Starts for CricKo_57:

(2, 35552), (Start: 5 @35630 has 21 MA's), (Start: 7 @35639 has 1 MA's), (30, 35936), (32, 35948), (36, 35990), (42, 36035), (43, 36041), (49, 36122), (50, 36125), (52, 36146), (55, 36224), (63, 36344), (67, 36398),

Gene: Ditters_40 Start: 29545, Stop: 30240, Start Num: 4

Candidate Starts for Ditters_40:

(Start: 4 @29545 has 12 MA's), (Start: 8 @29560 has 10 MA's), (9, 29563), (15, 29656), (16, 29662), (21, 29719), (22, 29749), (24, 29776), (31, 29860), (49, 29950), (53, 30004), (60, 30133), (61, 30145), (63, 30175), (64, 30187),

Gene: Doxi13_41 Start: 29065, Stop: 29763, Start Num: 4

Candidate Starts for Doxi13_41:

(Start: 4 @29065 has 12 MA's), (Start: 8 @29080 has 10 MA's), (9, 29083), (11, 29131), (12, 29143), (21, 29239), (22, 29269), (26, 29326), (35, 29410), (49, 29473), (60, 29656), (61, 29668), (63, 29698), (64, 29710),

Gene: DrGrey_57 Start: 37134, Stop: 37850, Start Num: 8

Candidate Starts for DrGrey_57:

(Start: 5 @37125 has 21 MA's), (Start: 8 @37134 has 10 MA's), (20, 37281), (25, 37371), (33, 37461), (51, 37605), (53, 37644), (54, 37671), (63, 37794), (66, 37836),

Gene: Esketit_58 Start: 36870, Stop: 37625, Start Num: 5

Candidate Starts for Esketit_58:

(Start: 5 @36870 has 21 MA's), (Start: 8 @36879 has 10 MA's), (25, 37149), (33, 37239), (51, 37380), (53, 37419), (54, 37446), (63, 37569), (66, 37611),

Gene: Espio_58 Start: 37529, Stop: 38245, Start Num: 8

Candidate Starts for Espio_58:

(Start: 5 @37520 has 21 MA's), (Start: 8 @37529 has 10 MA's), (20, 37676), (25, 37766), (33, 37856), (51, 38000), (53, 38039), (54, 38066), (63, 38189), (66, 38231),

Gene: FidgetOrca_58 Start: 36869, Stop: 37615, Start Num: 8

Candidate Starts for FidgetOrca_58:

(Start: 5 @36860 has 21 MA's), (Start: 8 @36869 has 10 MA's), (25, 37139), (33, 37229), (51, 37370), (53, 37409), (54, 37436), (63, 37559), (66, 37601),

Gene: FrodoSwaggins_58 Start: 37519, Stop: 38244, Start Num: 5

Candidate Starts for FrodoSwaggins_58:

(Start: 5 @37519 has 21 MA's), (Start: 8 @37528 has 10 MA's), (20, 37675), (25, 37765), (33, 37855), (51, 37999), (53, 38038), (54, 38065), (63, 38188), (66, 38230),

Gene: FromIndy_57 Start: 35245, Stop: 36012, Start Num: 7

Candidate Starts for FromIndy_57:

(2, 35158), (Start: 5 @35236 has 21 MA's), (Start: 7 @35245 has 1 MA's), (30, 35542), (32, 35554), (36, 35596), (42, 35641), (43, 35647), (49, 35728), (50, 35731), (52, 35752), (55, 35830), (63, 35950), (67, 36004),

Gene: GirlPower_52 Start: 37115, Stop: 37828, Start Num: 8

Candidate Starts for GirlPower_52:

(Start: 5 @37106 has 21 MA's), (Start: 8 @37115 has 10 MA's), (13, 37196), (20, 37262), (34, 37460), (39, 37475), (40, 37487), (44, 37508), (51, 37589), (53, 37628), (56, 37676), (63, 37775), (66, 37817),

Gene: GoblinVoyage_41 Start: 29065, Stop: 29763, Start Num: 4

Candidate Starts for GoblinVoyage_41:

(Start: 4 @29065 has 12 MA's), (Start: 8 @29080 has 10 MA's), (9, 29083), (11, 29131), (12, 29143), (21, 29239), (22, 29269), (26, 29326), (35, 29410), (49, 29473), (60, 29656), (61, 29668), (63, 29698),

Gene: HazuAndZazu_57 Start: 37120, Stop: 37878, Start Num: 5

Candidate Starts for HazuAndZazu_57:

(Start: 5 @37120 has 21 MA's), (Start: 8 @37129 has 10 MA's), (25, 37399), (33, 37489), (51, 37633), (53, 37672), (54, 37699), (63, 37822), (66, 37864),

Gene: Hoshi_57 Start: 36467, Stop: 37222, Start Num: 5

Candidate Starts for Hoshi_57:

(Start: 5 @36467 has 21 MA's), (Start: 8 @36476 has 10 MA's), (25, 36746), (33, 36836), (51, 36977), (53, 37016), (54, 37043), (63, 37166), (66, 37208),

Gene: HotFries_40 Start: 29110, Stop: 29808, Start Num: 4

Candidate Starts for HotFries_40:

(Start: 4 @29110 has 12 MA's), (Start: 8 @29125 has 10 MA's), (9, 29128), (11, 29176), (12, 29188), (21, 29284), (22, 29314), (24, 29341), (26, 29371), (49, 29518), (60, 29701), (61, 29713), (62, 29722), (63, 29743), (64, 29755),

Gene: IceWarrior_57 Start: 36546, Stop: 37301, Start Num: 5

Candidate Starts for IceWarrior_57:

(Start: 5 @36546 has 21 MA's), (Start: 8 @36555 has 10 MA's), (25, 36825), (33, 36915), (51, 37056), (53, 37095), (54, 37122), (63, 37245), (66, 37287),

Gene: Indigenous_58 Start: 36873, Stop: 37619, Start Num: 8

Candidate Starts for Indigenous_58:

(Start: 5 @36864 has 21 MA's), (Start: 8 @36873 has 10 MA's), (25, 37143), (33, 37233), (51, 37374), (53, 37413), (54, 37440), (63, 37563), (66, 37605),

Gene: Jaylociraptor_58 Start: 36872, Stop: 37618, Start Num: 8

Candidate Starts for Jaylociraptor_58:

(Start: 5 @36863 has 21 MA's), (Start: 8 @36872 has 10 MA's), (25, 37142), (33, 37232), (51, 37373), (53, 37412), (54, 37439), (63, 37562), (66, 37604),

Gene: Kardashian_56 Start: 37105, Stop: 37929, Start Num: 5

Candidate Starts for Kardashian_56:

(1, 36997), (2, 37027), (Start: 5 @37105 has 21 MA's), (Start: 7 @37114 has 1 MA's), (10, 37150), (37, 37513), (38, 37516), (59, 37810),

Gene: Madamoto_60 Start: 37006, Stop: 37764, Start Num: 5

Candidate Starts for Madamoto_60:

(3, 36988), (Start: 5 @37006 has 21 MA's), (Start: 8 @37015 has 10 MA's), (41, 37408), (43, 37417), (48, 37471), (51, 37510), (54, 37576), (63, 37699), (65, 37738),

Gene: Maya_58 Start: 36877, Stop: 37632, Start Num: 5

Candidate Starts for Maya_58:

(Start: 5 @36877 has 21 MA's), (Start: 8 @36886 has 10 MA's), (25, 37156), (33, 37246), (51, 37387), (53, 37426), (54, 37453), (63, 37576), (66, 37618),

Gene: Meibysrarus_56 Start: 36240, Stop: 36995, Start Num: 5

Candidate Starts for Meibysrarus_56:

(Start: 5 @36240 has 21 MA's), (Start: 8 @36249 has 10 MA's), (25, 36519), (33, 36609), (51, 36750), (53, 36789), (54, 36816), (63, 36939), (66, 36981),

Gene: Miek_54 Start: 34955, Stop: 35731, Start Num: 5

Candidate Starts for Miek_54:

(2, 34877), (Start: 5 @34955 has 21 MA's), (Start: 7 @34964 has 1 MA's), (30, 35261), (32, 35273), (36, 35315), (42, 35360), (43, 35366), (49, 35447), (50, 35450), (52, 35471), (55, 35549), (63, 35669), (67, 35723),

Gene: Monse_40 Start: 28988, Stop: 29677, Start Num: 4

Candidate Starts for Monse_40:

(Start: 4 @28988 has 12 MA's), (Start: 8 @29003 has 10 MA's), (9, 29006), (21, 29162), (26, 29249), (29, 29288), (31, 29303), (53, 29441), (60, 29570), (61, 29582), (63, 29612),

Gene: Moozy_40 Start: 29067, Stop: 29765, Start Num: 4

Candidate Starts for Moozy_40:

(Start: 4 @29067 has 12 MA's), (Start: 8 @29082 has 10 MA's), (9, 29085), (11, 29133), (12, 29145), (21, 29241), (22, 29271), (24, 29298), (35, 29412), (49, 29475), (60, 29658), (61, 29670), (62, 29679), (63, 29700),

Gene: Namo_59 Start: 37214, Stop: 37969, Start Num: 5

Candidate Starts for Namo_59:

(Start: 5 @37214 has 21 MA's), (Start: 8 @37223 has 10 MA's), (25, 37493), (51, 37724), (53, 37763), (54, 37790), (63, 37913), (66, 37955),

Gene: OlympicHelado_58 Start: 36900, Stop: 37625, Start Num: 8

Candidate Starts for OlympicHelado_58:

(Start: 5 @36891 has 21 MA's), (Start: 8 @36900 has 10 MA's), (25, 37170), (51, 37380), (53, 37419), (54, 37446), (63, 37569), (66, 37611),

Gene: PherryCruz_40 Start: 29061, Stop: 29759, Start Num: 4

Candidate Starts for PherryCruz_40:

(Start: 4 @29061 has 12 MA's), (Start: 8 @29076 has 10 MA's), (9, 29079), (11, 29127), (12, 29139), (21, 29235), (22, 29265), (24, 29292), (26, 29322), (49, 29469), (60, 29652), (61, 29664), (62, 29673), (63, 29694),

Gene: Popy_58 Start: 37519, Stop: 38244, Start Num: 5

Candidate Starts for Popy_58:

(Start: 5 @37519 has 21 MA's), (Start: 8 @37528 has 10 MA's), (20, 37675), (25, 37765), (33, 37855), (51, 37999), (53, 38038), (54, 38065), (63, 38188), (66, 38230),

Gene: Rainydai_55 Start: 35639, Stop: 36406, Start Num: 7

Candidate Starts for Rainydai_55:

(2, 35552), (Start: 5 @35630 has 21 MA's), (Start: 7 @35639 has 1 MA's), (30, 35936), (32, 35948), (36, 35990), (42, 36035), (43, 36041), (49, 36122), (50, 36125), (52, 36146), (55, 36224), (63, 36344), (67, 36398),

Gene: RavenPuff_40 Start: 29061, Stop: 29759, Start Num: 4

Candidate Starts for RavenPuff_40:

(Start: 4 @29061 has 12 MA's), (Start: 8 @29076 has 10 MA's), (9, 29079), (11, 29127), (12, 29139), (21, 29235), (22, 29265), (24, 29292), (26, 29322), (49, 29469), (60, 29652), (61, 29664), (62, 29673), (63, 29694),

Gene: Regigigas_58 Start: 35631, Stop: 36407, Start Num: 5

Candidate Starts for Regigigas_58:

(2, 35553), (Start: 5 @35631 has 21 MA's), (Start: 7 @35640 has 1 MA's), (30, 35937), (32, 35949), (36, 35991), (42, 36036), (43, 36042), (49, 36123), (50, 36126), (52, 36147), (55, 36225), (63, 36345), (67, 36399),

Gene: Rima_59 Start: 37214, Stop: 37969, Start Num: 5

Candidate Starts for Rima_59:

(Start: 5 @37214 has 21 MA's), (Start: 8 @37223 has 10 MA's), (25, 37493), (51, 37724), (53, 37763), (54, 37790), (63, 37913), (66, 37955),

Gene: RosaAsantewaa_37 Start: 28089, Stop: 28907, Start Num: 6

Candidate Starts for RosaAsantewaa_37:

(Start: 6 @28089 has 1 MA's), (11, 28146), (14, 28182), (19, 28245), (29, 28434), (37, 28515), (45, 28584), (54, 28713), (56, 28737), (57, 28752), (63, 28845), (64, 28857), (66, 28890),

Gene: Sangak_39 Start: 28619, Stop: 29317, Start Num: 4

Candidate Starts for Sangak_39:

(Start: 4 @28619 has 12 MA's), (Start: 8 @28634 has 10 MA's), (9, 28637), (11, 28685), (12, 28697), (21, 28793), (22, 28823), (26, 28880), (35, 28964), (49, 29027), (60, 29210), (61, 29222), (63, 29252),

Gene: Scap1_40 Start: 28953, Stop: 29648, Start Num: 4

Candidate Starts for Scap1_40:

(Start: 4 @28953 has 12 MA's), (Start: 8 @28968 has 10 MA's), (9, 28971), (15, 29064), (16, 29070), (21, 29127), (22, 29157), (26, 29214), (31, 29268), (49, 29358), (53, 29412), (58, 29496), (60, 29541), (61, 29553), (63, 29583), (64, 29595),

Gene: SendItCS_53 Start: 34943, Stop: 35719, Start Num: 5

Candidate Starts for SendItCS_53:

(2, 34865), (Start: 5 @34943 has 21 MA's), (Start: 7 @34952 has 1 MA's), (30, 35249), (32, 35261), (36, 35303), (42, 35348), (43, 35354), (49, 35435), (50, 35438), (52, 35459), (55, 35537), (63, 35657), (67, 35711),

Gene: SheRa_41 Start: 29108, Stop: 29806, Start Num: 4

Candidate Starts for SheRa_41:

(Start: 4 @29108 has 12 MA's), (Start: 8 @29123 has 10 MA's), (9, 29126), (11, 29174), (12, 29186), (21, 29282), (22, 29312), (24, 29339), (26, 29369), (49, 29516), (60, 29699), (61, 29711), (62, 29720), (63, 29741), (64, 29753),

Gene: Soshi_57 Start: 37138, Stop: 37860, Start Num: 5

Candidate Starts for Soshi_57:

(Start: 5 @37138 has 21 MA's), (Start: 8 @37147 has 10 MA's), (17, 37276), (25, 37384), (33, 37474), (51, 37615), (53, 37654), (54, 37681), (63, 37804), (66, 37846),

Gene: Spectropatronm_58 Start: 36879, Stop: 37625, Start Num: 8

Candidate Starts for Spectropatronm_58:

(Start: 5 @36870 has 21 MA's), (Start: 8 @36879 has 10 MA's), (25, 37149), (33, 37239), (51, 37380), (53, 37419), (54, 37446), (63, 37569), (66, 37611),

Gene: TaidaOne_58 Start: 37373, Stop: 38128, Start Num: 5

Candidate Starts for TaidaOne_58:

(Start: 5 @37373 has 21 MA's), (Start: 8 @37382 has 10 MA's), (25, 37652), (33, 37742), (51, 37883), (53, 37922), (54, 37949), (63, 38072), (66, 38114),

Gene: Thiqqums_57 Start: 35630, Stop: 36406, Start Num: 5

Candidate Starts for Thiqqums_57:

(2, 35552), (Start: 5 @35630 has 21 MA's), (Start: 7 @35639 has 1 MA's), (30, 35936), (32, 35948), (36, 35990), (42, 36035), (43, 36041), (49, 36122), (50, 36125), (52, 36146), (55, 36224), (63, 36344), (67, 36398),

Gene: TieDye_57 Start: 36461, Stop: 37204, Start Num: 5

Candidate Starts for TieDye_57:

(Start: 5 @36461 has 21 MA's), (Start: 8 @36470 has 10 MA's), (25, 36728), (33, 36818), (51, 36959), (53, 36998), (54, 37025), (63, 37148), (66, 37190),

Gene: TonyStarch_57 Start: 36612, Stop: 37367, Start Num: 5

Candidate Starts for TonyStarch_57:

(Start: 5 @36612 has 21 MA's), (Start: 8 @36621 has 10 MA's), (25, 36891), (33, 36981), (51, 37122), (53, 37161), (54, 37188), (63, 37311), (66, 37353),

Gene: Wigberry_61 Start: 37059, Stop: 37826, Start Num: 8

Candidate Starts for Wigberry_61:

(Start: 5 @37047 has 21 MA's), (Start: 8 @37059 has 10 MA's), (18, 37191), (23, 37269), (27, 37347), (28, 37356), (34, 37407), (37, 37434), (46, 37506), (63, 37758), (64, 37770), (66, 37803),