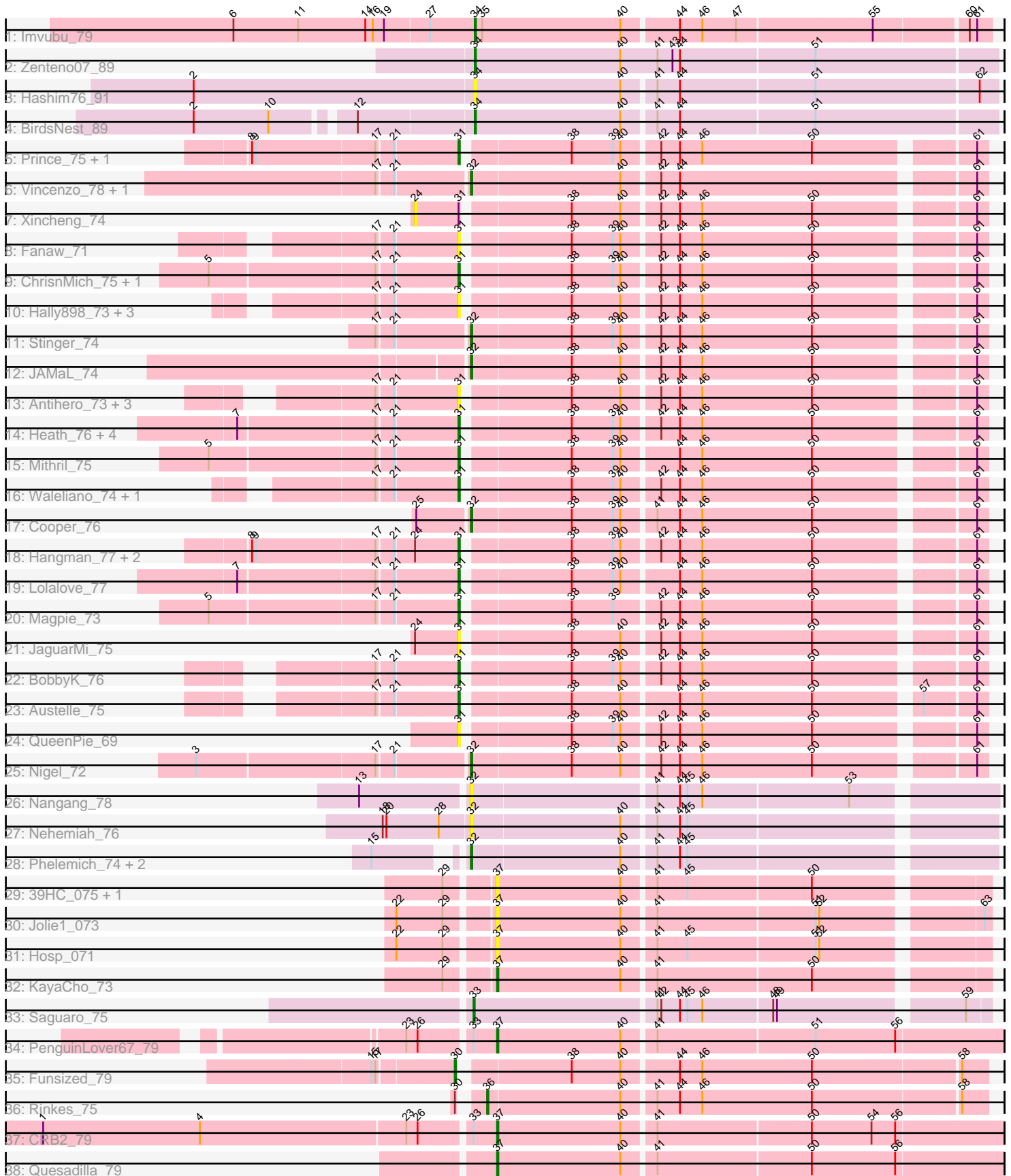


Pham 196570



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 196570 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196570 has 57 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Imvubu_79
- Track 2 : Zenteno07_89
- Track 3 : Hashim76_91
- Track 4 : BirdsNest_89
- Track 5 : Prince_75, Apex_77
- Track 6 : Vincenzo_78, AlanGrant_79
- Track 7 : Xincheng_74
- Track 8 : Fanaw_71
- Track 9 : ChrisnMich_75, Fortunato_75
- Track 10 : Hally898_73, Lambano_73, Poster_73, Nanao_74
- Track 11 : Stinger_74
- Track 12 : JAMaL_74
- Track 13 : Antihero_73, GinPorsche_73, Ahwei_73, Epah_73
- Track 14 : Heath_76, Zemanar_75, Frederick_77, RawrgerThat_75, Hydro_76
- Track 15 : Mithril_75
- Track 16 : Waleliano_74, BrownCNA_76
- Track 17 : Cooper_76
- Track 18 : Hangman_77, VioletZ_78, Mudslide_75
- Track 19 : Lolalove_77
- Track 20 : Magpie_73
- Track 21 : JaguarMi_75
- Track 22 : BobbyK_76
- Track 23 : Austelle_75
- Track 24 : QueenPie_69
- Track 25 : Nigel_72
- Track 26 : Nangang_78
- Track 27 : Nehemiah_76
- Track 28 : Phelemich_74, Mysterious_77, Reprobate_76
- Track 29 : 39HC_075, 40BC_075
- Track 30 : Jolie1_073
- Track 31 : Hosp_071
- Track 32 : KayaCho_73
- Track 33 : Saguaro_75
- Track 34 : PenguinLover67_79
- Track 35 : Funsized_79
- Track 36 : Rinkes_75
- Track 37 : CRB2_79

- Track 38 : Quesadilla_79

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

The start number called the most often in the published annotations is 31, it was called in 19 of the 37 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ahwei_73, Antihero_73, Apex_77, Austelle_75, BobbyK_76, BrownCNA_76, ChrisnMich_75, Epah_73, Fanaw_71, Fortunato_75, Frederick_77, GinPorsche_73, Hally898_73, Hangman_77, Heath_76, Hydro_76, JaguarMi_75, Lambano_73, Lolalove_77, Magpie_73, Mithril_75, Mudslide_75, Nanao_74, Poster_73, Prince_75, QueenPie_69, RawrgerThat_75, VioletZ_78, Waleliano_74, Zemanar_75,

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

- Xincheng_74,

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

- 39HC_075, 40BC_075, AlanGrant_79, BirdsNest_89, CRB2_79, Cooper_76, Funsized_79, Hashim76_91, Hosp_071, Imvubu_79, JAMaL_74, Jolie1_073, KayaCho_73, Mysterious_77, Nangang_78, Nehemiah_76, Nigel_72, PenguinLover67_79, Phelemich_74, Quesadilla_79, Reprobate_76, Rinkes_75, Saguaro_75, Stinger_74, Vincenzo_78, Zenteno07_89,

Summary by start number:

Start 24:

- Found in 5 of 57 (8.8%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Xincheng_74 (B4),

Start 30:

- Found in 2 of 57 (3.5%) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Funsized_79 (B9),

Start 31:

- Found in 31 of 57 (54.4%) of genes in pham
- Manual Annotations of this start: 19 of 37
- Called 96.8% of time when present
- Phage (with cluster) where this start called: Ahwei_73 (B4), Antihero_73 (B4), Apex_77 (B4), Austelle_75 (B4), BobbyK_76 (B4), BrownCNA_76 (B4), ChrisnMich_75 (B4), Epah_73 (B4), Fanaw_71 (B4), Fortunato_75 (B4), Frederick_77 (B4), GinPorsche_73 (B4), Hally898_73 (B4), Hangman_77 (B4), Heath_76 (B4), Hydro_76 (B4), JaguarMi_75 (B4), Lambano_73 (B4), Lolalove_77 (B4), Magpie_73 (B4), Mithril_75 (B4), Mudslide_75 (B4), Nanao_74 (B4), Poster_73 (B4), Prince_75 (B4), QueenPie_69 (B4), RawrgerThat_75 (B4), VioletZ_78 (B4), Waleliano_74 (B4), Zemanar_75 (B4),

Start 32:

- Found in 11 of 57 (19.3%) of genes in pham
- Manual Annotations of this start: 8 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant_79 (B4), Cooper_76 (B4), JAMaL_74 (B4), Mysterious_77 (B5), Nangang_78 (B5), Nehemiah_76 (B5), Nigel_72 (B4), Phelemich_74 (B5), Reprobate_76 (B5), Stinger_74 (B4), Vincenzo_78 (B4),

Start 33:

- Found in 3 of 57 (5.3%) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Saguaro_75 (B7),

Start 34:

- Found in 4 of 57 (7.0%) of genes in pham
- Manual Annotations of this start: 3 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdsNest_89 (B13), Hashim76_91 (B13), Imvubu_79 (B10), Zenteno07_89 (B13),

Start 36:

- Found in 1 of 57 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rinkes_75 (B9),

Start 37:

- Found in 8 of 57 (14.0%) of genes in pham
- Manual Annotations of this start: 4 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_075 (B6), 40BC_075 (B6), CRB2_79 (B9), Hosp_071 (B6), Jolie1_073 (B6), KayaCho_73 (B6), PenguinLover67_79 (B9), Quesadilla_79 (B9),

Summary by clusters:

There are 7 clusters represented in this pham: B4, B5, B6, B7, B13, B10, B9,

Info for manual annotations of cluster B10:

- Start number 34 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B13:

- Start number 34 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B4:

- Start number 31 was manually annotated 19 times for cluster B4.
- Start number 32 was manually annotated 6 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 32 was manually annotated 2 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 37 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 33 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 30 was manually annotated 1 time for cluster B9.
- Start number 36 was manually annotated 1 time for cluster B9.
- Start number 37 was manually annotated 3 times for cluster B9.

Gene Information:

Gene: 39HC_075 Start: 62227, Stop: 61859, Start Num: 37

Candidate Starts for 39HC_075:

(29, 62260), (Start: 37 @62227 has 4 MA's), (40, 62128), (41, 62104), (45, 62080), (50, 61984),

Gene: 40BC_075 Start: 62227, Stop: 61859, Start Num: 37

Candidate Starts for 40BC_075:

(29, 62260), (Start: 37 @62227 has 4 MA's), (40, 62128), (41, 62104), (45, 62080), (50, 61984),

Gene: Ahwei_73 Start: 62187, Stop: 61801, Start Num: 31

Candidate Starts for Ahwei_73:

(17, 62247), (21, 62235), (Start: 31 @62187 has 19 MA's), (38, 62109), (40, 62070), (42, 62043), (44, 62028), (46, 62010), (50, 61923), (61, 61809),

Gene: AlanGrant_79 Start: 64544, Stop: 64158, Start Num: 32

Candidate Starts for AlanGrant_79:

(17, 64610), (21, 64598), (Start: 32 @64544 has 8 MA's), (40, 64427), (42, 64400), (44, 64385), (61, 64166),

Gene: Antihero_73 Start: 62122, Stop: 61736, Start Num: 31

Candidate Starts for Antihero_73:

(17, 62182), (21, 62170), (Start: 31 @62122 has 19 MA's), (38, 62044), (40, 62005), (42, 61978), (44, 61963), (46, 61945), (50, 61858), (61, 61744),

Gene: Apex_77 Start: 63483, Stop: 63097, Start Num: 31

Candidate Starts for Apex_77:

(8, 63639), (9, 63636), (17, 63543), (21, 63531), (Start: 31 @63483 has 19 MA's), (38, 63405), (39, 63372), (40, 63366), (42, 63339), (44, 63324), (46, 63306), (50, 63219), (61, 63105),

Gene: Austelle_75 Start: 63800, Stop: 63414, Start Num: 31

Candidate Starts for Austelle_75:

(17, 63860), (21, 63848), (Start: 31 @63800 has 19 MA's), (38, 63722), (40, 63683), (44, 63641), (46, 63623), (50, 63536), (57, 63461), (61, 63422),

Gene: BirdsNest_89 Start: 65386, Stop: 64982, Start Num: 34

Candidate Starts for BirdsNest_89:

(2, 65590), (10, 65530), (12, 65473), (Start: 34 @65386 has 3 MA's), (40, 65269), (41, 65245), (44, 65227), (51, 65122),

Gene: BobbyK_76 Start: 62954, Stop: 62568, Start Num: 31

Candidate Starts for BobbyK_76:

(17, 63014), (21, 63002), (Start: 31 @62954 has 19 MA's), (38, 62876), (39, 62843), (40, 62837), (42, 62810), (44, 62795), (46, 62777), (50, 62690), (61, 62576),

Gene: BrownCNA_76 Start: 63158, Stop: 62772, Start Num: 31

Candidate Starts for BrownCNA_76:

(17, 63218), (21, 63206), (Start: 31 @63158 has 19 MA's), (38, 63080), (39, 63047), (40, 63041), (42, 63014), (44, 62999), (46, 62981), (50, 62894), (61, 62780),

Gene: CRB2_79 Start: 65196, Stop: 64804, Start Num: 37

Candidate Starts for CRB2_79:

(1, 65547), (4, 65421), (23, 65259), (26, 65250), (Start: 33 @65214 has 1 MA's), (Start: 37 @65196 has 4 MA's), (40, 65097), (41, 65073), (50, 64953), (54, 64905), (56, 64887),

Gene: ChrisnMich_75 Start: 62154, Stop: 61768, Start Num: 31

Candidate Starts for ChrisnMich_75:

(5, 62343), (17, 62214), (21, 62202), (Start: 31 @62154 has 19 MA's), (38, 62076), (39, 62043), (40, 62037), (42, 62010), (44, 61995), (46, 61977), (50, 61890), (61, 61776),

Gene: Cooper_76 Start: 62632, Stop: 62246, Start Num: 32

Candidate Starts for Cooper_76:

(25, 62671), (Start: 32 @62632 has 8 MA's), (38, 62554), (39, 62521), (40, 62515), (41, 62491), (44, 62473), (46, 62455), (50, 62368), (61, 62254),

Gene: Epah_73 Start: 62122, Stop: 61736, Start Num: 31

Candidate Starts for Epah_73:

(17, 62182), (21, 62170), (Start: 31 @62122 has 19 MA's), (38, 62044), (40, 62005), (42, 61978), (44, 61963), (46, 61945), (50, 61858), (61, 61744),

Gene: Fanaw_71 Start: 62994, Stop: 62608, Start Num: 31

Candidate Starts for Fanaw_71:

(17, 63054), (21, 63042), (Start: 31 @62994 has 19 MA's), (38, 62916), (39, 62883), (40, 62877), (42, 62850), (44, 62835), (46, 62817), (50, 62730), (61, 62616),

Gene: Fortunato_75 Start: 62924, Stop: 62538, Start Num: 31

Candidate Starts for Fortunato_75:

(5, 63113), (17, 62984), (21, 62972), (Start: 31 @62924 has 19 MA's), (38, 62846), (39, 62813), (40, 62807), (42, 62780), (44, 62765), (46, 62747), (50, 62660), (61, 62546),

Gene: Frederick_77 Start: 63228, Stop: 62842, Start Num: 31

Candidate Starts for Frederick_77:

(7, 63393), (17, 63288), (21, 63276), (Start: 31 @63228 has 19 MA's), (38, 63150), (39, 63117), (40, 63111), (42, 63084), (44, 63069), (46, 63051), (50, 62964), (61, 62850),

Gene: Funsized_79 Start: 65641, Stop: 65243, Start Num: 30

Candidate Starts for Funsized_79:

(15, 65701), (17, 65698), (Start: 30 @65641 has 1 MA's), (38, 65563), (40, 65524), (44, 65482), (46, 65464), (50, 65377), (58, 65263),

Gene: GinPorsche_73 Start: 62119, Stop: 61733, Start Num: 31

Candidate Starts for GinPorsche_73:

(17, 62179), (21, 62167), (Start: 31 @62119 has 19 MA's), (38, 62041), (40, 62002), (42, 61975), (44, 61960), (46, 61942), (50, 61855), (61, 61741),

Gene: Hally898_73 Start: 62200, Stop: 61814, Start Num: 31

Candidate Starts for Hally898_73:

(17, 62260), (21, 62248), (Start: 31 @62200 has 19 MA's), (38, 62122), (40, 62083), (42, 62056), (44, 62041), (46, 62023), (50, 61936), (61, 61822),

Gene: Hangman_77 Start: 63694, Stop: 63308, Start Num: 31

Candidate Starts for Hangman_77:

(8, 63850), (9, 63847), (17, 63754), (21, 63742), (24, 63727), (Start: 31 @63694 has 19 MA's), (38, 63616), (39, 63583), (40, 63577), (42, 63550), (44, 63535), (46, 63517), (50, 63430), (61, 63316),

Gene: Hashim76_91 Start: 65419, Stop: 65015, Start Num: 34

Candidate Starts for Hashim76_91:

(2, 65641), (Start: 34 @65419 has 3 MA's), (40, 65302), (41, 65278), (44, 65260), (51, 65155), (62, 65029),

Gene: Heath_76 Start: 63439, Stop: 63053, Start Num: 31

Candidate Starts for Heath_76:

(7, 63604), (17, 63499), (21, 63487), (Start: 31 @63439 has 19 MA's), (38, 63361), (39, 63328), (40, 63322), (42, 63295), (44, 63280), (46, 63262), (50, 63175), (61, 63061),

Gene: Hosp_071 Start: 59697, Stop: 59329, Start Num: 37

Candidate Starts for Hosp_071:

(22, 59766), (29, 59730), (Start: 37 @59697 has 4 MA's), (40, 59598), (41, 59574), (45, 59550), (51, 59451), (52, 59448),

Gene: Hydro_76 Start: 63357, Stop: 62971, Start Num: 31

Candidate Starts for Hydro_76:

(7, 63522), (17, 63417), (21, 63405), (Start: 31 @63357 has 19 MA's), (38, 63279), (39, 63246), (40, 63240), (42, 63213), (44, 63198), (46, 63180), (50, 63093), (61, 62979),

Gene: Imvubu_79 Start: 62691, Stop: 62296, Start Num: 34

Candidate Starts for Imvubu_79:

(6, 62880), (11, 62829), (14, 62775), (16, 62769), (19, 62760), (27, 62727), (Start: 34 @62691 has 3 MA's), (35, 62685), (40, 62574), (44, 62532), (46, 62514), (47, 62487), (55, 62382), (60, 62313), (61, 62307),

Gene: JAMaL_74 Start: 62677, Stop: 62291, Start Num: 32

Candidate Starts for JAMaL_74:

(Start: 32 @62677 has 8 MA's), (38, 62599), (40, 62560), (42, 62533), (44, 62518), (46, 62500), (50, 62413), (61, 62299),

Gene: JaguarMi_75 Start: 64365, Stop: 63979, Start Num: 31

Candidate Starts for JaguarMi_75:

(24, 64398), (Start: 31 @64365 has 19 MA's), (38, 64287), (40, 64248), (42, 64221), (44, 64206), (46, 64188), (50, 64101), (61, 63987),

Gene: Jolie1_073 Start: 61731, Stop: 61363, Start Num: 37

Candidate Starts for Jolie1_073:

(22, 61800), (29, 61764), (Start: 37 @61731 has 4 MA's), (40, 61632), (41, 61608), (51, 61485), (52, 61482), (63, 61368),

Gene: KayaCho_73 Start: 61898, Stop: 61530, Start Num: 37

Candidate Starts for KayaCho_73:

(29, 61931), (Start: 37 @61898 has 4 MA's), (40, 61799), (41, 61775), (50, 61655),

Gene: Lambano_73 Start: 62200, Stop: 61814, Start Num: 31

Candidate Starts for Lambano_73:

(17, 62260), (21, 62248), (Start: 31 @62200 has 19 MA's), (38, 62122), (40, 62083), (42, 62056), (44, 62041), (46, 62023), (50, 61936), (61, 61822),

Gene: Lolalove_77 Start: 63280, Stop: 62894, Start Num: 31

Candidate Starts for Lolalove_77:

(7, 63445), (17, 63340), (21, 63328), (Start: 31 @63280 has 19 MA's), (38, 63202), (39, 63169), (40, 63163), (44, 63121), (46, 63103), (50, 63016), (61, 62902),

Gene: Magpie_73 Start: 62892, Stop: 62506, Start Num: 31

Candidate Starts for Magpie_73:

(5, 63081), (17, 62952), (21, 62940), (Start: 31 @62892 has 19 MA's), (38, 62814), (39, 62781), (42, 62748), (44, 62733), (46, 62715), (50, 62628), (61, 62514),

Gene: Mithril_75 Start: 63279, Stop: 62893, Start Num: 31

Candidate Starts for Mithril_75:

(5, 63468), (17, 63339), (21, 63327), (Start: 31 @63279 has 19 MA's), (38, 63201), (39, 63168), (40, 63162), (44, 63120), (46, 63102), (50, 63015), (61, 62901),

Gene: Mudslide_75 Start: 63316, Stop: 62930, Start Num: 31

Candidate Starts for Mudslide_75:

(8, 63472), (9, 63469), (17, 63376), (21, 63364), (24, 63349), (Start: 31 @63316 has 19 MA's), (38, 63238), (39, 63205), (40, 63199), (42, 63172), (44, 63157), (46, 63139), (50, 63052), (61, 62938),

Gene: Mysterious_77 Start: 62158, Stop: 61763, Start Num: 32

Candidate Starts for Mysterious_77:

(15, 62212), (Start: 32 @62158 has 8 MA's), (40, 62041), (41, 62017), (44, 61999), (45, 61993),

Gene: Nanao_74 Start: 62190, Stop: 61804, Start Num: 31

Candidate Starts for Nanao_74:

(17, 62250), (21, 62238), (Start: 31 @62190 has 19 MA's), (38, 62112), (40, 62073), (42, 62046), (44, 62031), (46, 62013), (50, 61926), (61, 61812),

Gene: Nangang_78 Start: 62728, Stop: 62333, Start Num: 32

Candidate Starts for Nangang_78:

(13, 62809), (Start: 32 @62728 has 8 MA's), (41, 62587), (44, 62569), (45, 62563), (46, 62551), (53, 62437),

Gene: Nehemiah_76 Start: 62221, Stop: 61826, Start Num: 32

Candidate Starts for Nehemiah_76:

(18, 62290), (20, 62287), (28, 62245), (Start: 32 @62221 has 8 MA's), (40, 62104), (41, 62080), (44, 62062), (45, 62056),

Gene: Nigel_72 Start: 61700, Stop: 61314, Start Num: 32

Candidate Starts for Nigel_72:

(3, 61904), (17, 61766), (21, 61754), (Start: 32 @61700 has 8 MA's), (38, 61622), (40, 61583), (42, 61556), (44, 61541), (46, 61523), (50, 61436), (61, 61322),

Gene: PenguinLover67_79 Start: 62948, Stop: 62556, Start Num: 37

Candidate Starts for PenguinLover67_79:

(23, 63011), (26, 63002), (Start: 33 @62966 has 1 MA's), (Start: 37 @62948 has 4 MA's), (40, 62849), (41, 62825), (51, 62702), (56, 62639),

Gene: Phelemich_74 Start: 62284, Stop: 61889, Start Num: 32

Candidate Starts for Phelemich_74:

(15, 62338), (Start: 32 @62284 has 8 MA's), (40, 62167), (41, 62143), (44, 62125), (45, 62119),

Gene: Poster_73 Start: 62191, Stop: 61805, Start Num: 31

Candidate Starts for Poster_73:

(17, 62251), (21, 62239), (Start: 31 @62191 has 19 MA's), (38, 62113), (40, 62074), (42, 62047), (44, 62032), (46, 62014), (50, 61927), (61, 61813),

Gene: Prince_75 Start: 63386, Stop: 63000, Start Num: 31

Candidate Starts for Prince_75:

(8, 63542), (9, 63539), (17, 63446), (21, 63434), (Start: 31 @63386 has 19 MA's), (38, 63308), (39, 63275), (40, 63269), (42, 63242), (44, 63227), (46, 63209), (50, 63122), (61, 63008),

Gene: QueenPie_69 Start: 61924, Stop: 61538, Start Num: 31

Candidate Starts for QueenPie_69:

(Start: 31 @61924 has 19 MA's), (38, 61846), (39, 61813), (40, 61807), (42, 61780), (44, 61765), (46, 61747), (50, 61660), (61, 61546),

Gene: Quesadilla_79 Start: 63413, Stop: 63021, Start Num: 37

Candidate Starts for Quesadilla_79:

(Start: 37 @63413 has 4 MA's), (40, 63314), (41, 63290), (50, 63170), (56, 63104),

Gene: RawrgerThat_75 Start: 62971, Stop: 62585, Start Num: 31

Candidate Starts for RawrgerThat_75:

(7, 63136), (17, 63031), (21, 63019), (Start: 31 @62971 has 19 MA's), (38, 62893), (39, 62860), (40, 62854), (42, 62827), (44, 62812), (46, 62794), (50, 62707), (61, 62593),

Gene: Reprobate_76 Start: 62289, Stop: 61894, Start Num: 32

Candidate Starts for Reprobate_76:

(15, 62343), (Start: 32 @62289 has 8 MA's), (40, 62172), (41, 62148), (44, 62130), (45, 62124),

Gene: Rinkes_75 Start: 63331, Stop: 62945, Start Num: 36

Candidate Starts for Rinkes_75:

(Start: 30 @63343 has 1 MA's), (Start: 36 @63331 has 1 MA's), (40, 63226), (41, 63202), (44, 63184), (46, 63166), (50, 63079), (58, 62965),

Gene: Saguaro_75 Start: 62202, Stop: 61816, Start Num: 33

Candidate Starts for Saguaro_75:

(Start: 33 @62202 has 1 MA's), (41, 62061), (42, 62058), (44, 62043), (45, 62037), (46, 62025), (48, 61971), (49, 61968), (59, 61833),

Gene: Stinger_74 Start: 61821, Stop: 61435, Start Num: 32

Candidate Starts for Stinger_74:

(17, 61887), (21, 61875), (Start: 32 @61821 has 8 MA's), (38, 61743), (39, 61710), (40, 61704), (42, 61677), (44, 61662), (46, 61644), (50, 61557), (61, 61443),

Gene: Vincenzo_78 Start: 64574, Stop: 64188, Start Num: 32

Candidate Starts for Vincenzo_78:

(17, 64640), (21, 64628), (Start: 32 @64574 has 8 MA's), (40, 64457), (42, 64430), (44, 64415), (61, 64196),

Gene: VioletZ_78 Start: 63482, Stop: 63096, Start Num: 31

Candidate Starts for VioletZ_78:

(8, 63638), (9, 63635), (17, 63542), (21, 63530), (24, 63515), (Start: 31 @63482 has 19 MA's), (38, 63404), (39, 63371), (40, 63365), (42, 63338), (44, 63323), (46, 63305), (50, 63218), (61, 63104),

Gene: Waleliano_74 Start: 62911, Stop: 62525, Start Num: 31

Candidate Starts for Waleliano_74:

(17, 62971), (21, 62959), (Start: 31 @62911 has 19 MA's), (38, 62833), (39, 62800), (40, 62794), (42, 62767), (44, 62752), (46, 62734), (50, 62647), (61, 62533),

Gene: Xincheng_74 Start: 64349, Stop: 63930, Start Num: 24

Candidate Starts for Xincheng_74:

(24, 64349), (Start: 31 @64316 has 19 MA's), (38, 64238), (40, 64199), (42, 64172), (44, 64157), (46, 64139), (50, 64052), (61, 63938),

Gene: Zemanar_75 Start: 63148, Stop: 62762, Start Num: 31

Candidate Starts for Zemanar_75:

(7, 63313), (17, 63208), (21, 63196), (Start: 31 @63148 has 19 MA's), (38, 63070), (39, 63037), (40, 63031), (42, 63004), (44, 62989), (46, 62971), (50, 62884), (61, 62770),

Gene: Zenteno07_89 Start: 65034, Stop: 64624, Start Num: 34

Candidate Starts for Zenteno07_89:

(Start: 34 @65034 has 3 MA's), (40, 64917), (41, 64887), (43, 64875), (44, 64869), (51, 64764),