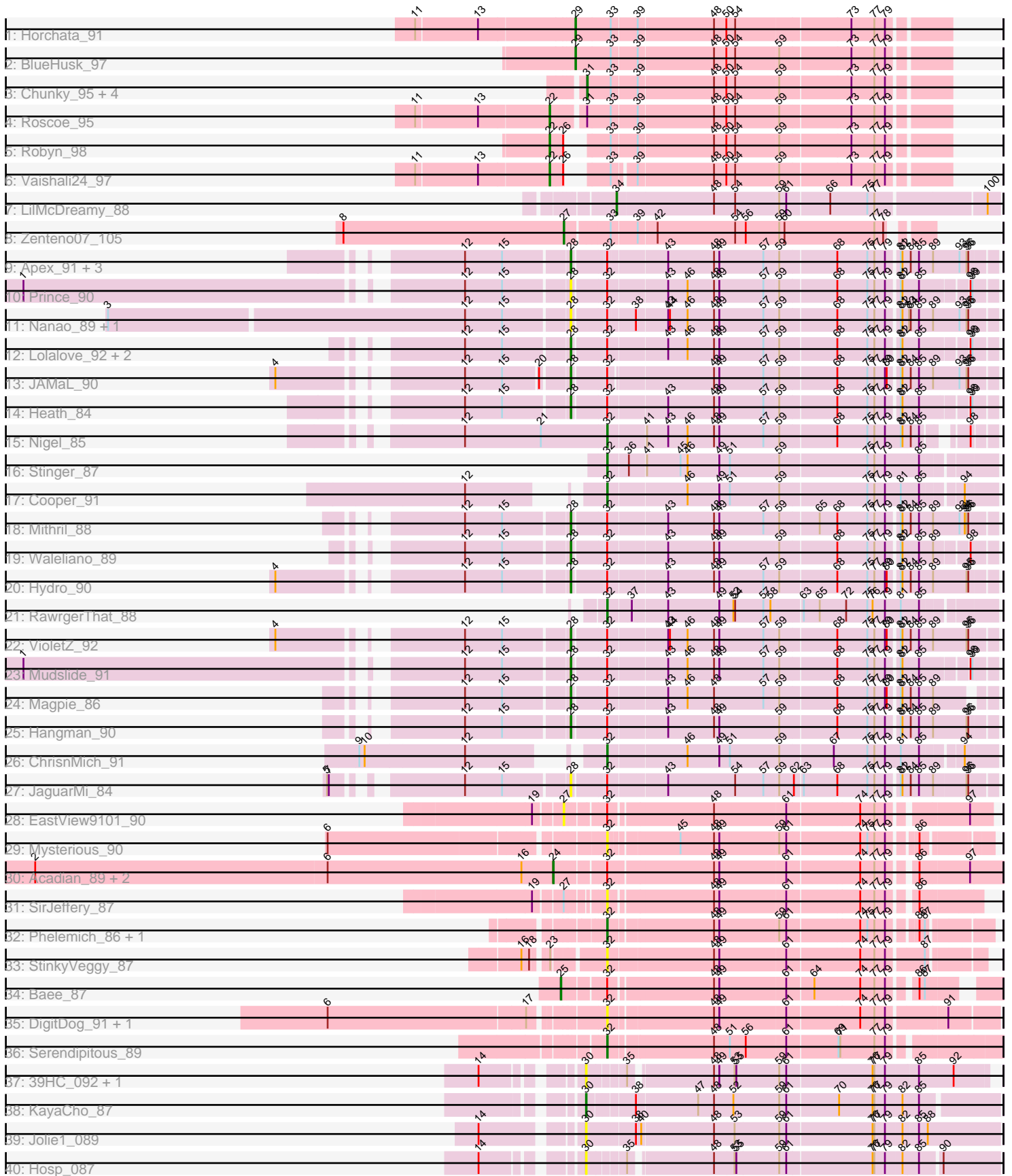


Pham 171507



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 171507 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171507 has 55 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Horchata_91
- Track 2 : BlueHusk_97
- Track 3 : Chunky_95, HSavage_94, Boehler_94, Gyarad_0095, Vivaldi_97
- Track 4 : Roscoe_95
- Track 5 : Robyn_98
- Track 6 : Vaishali24_97
- Track 7 : LilMcDreamy_88
- Track 8 : Zenteno07_105
- Track 9 : Apex_91, Frederick_88, BobbyK_90, Zemanar_88
- Track 10 : Prince_90
- Track 11 : Nanao_89, Poster_88
- Track 12 : Lolalove_92, BrownCNA_90, Austelle_90
- Track 13 : JAMaL_90
- Track 14 : Heath_84
- Track 15 : Nigel_85
- Track 16 : Stinger_87
- Track 17 : Cooper_91
- Track 18 : Mithril_88
- Track 19 : Waleliano_89
- Track 20 : Hydro_90
- Track 21 : RawrgerThat_88
- Track 22 : VioletZ_92
- Track 23 : Mudslide_91
- Track 24 : Magpie_86
- Track 25 : Hangman_90
- Track 26 : ChrisnMich_91
- Track 27 : JaguarMi_84
- Track 28 : EastView9101_90
- Track 29 : Mysterious_90
- Track 30 : Acadian_89, Suigeneris_90, Donny_89
- Track 31 : SirJeffery_87
- Track 32 : Phelemich_86, Reprobate_88
- Track 33 : StinkyVeggy_87
- Track 34 : Bae_87
- Track 35 : DigitDog_91, Nangang_90
- Track 36 : Serendipitous_89
- Track 37 : 39HC_092, 40BC_092

- Track 38 : KayaCho_87
- Track 39 : Jolie1_089
- Track 40 : Hosp_087

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

The start number called the most often in the published annotations is 28, it was called in 15 of the 40 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apex_91, Austelle_90, BobbyK_90, BrownCNA_90, Frederick_88, Hangman_90, Heath_84, Hydro_90, JAMaL_90, JaguarMi_84, Lolalove_92, Magpie_86, Mithril_88, Mudslide_91, Nanao_89, Poster_88, Prince_90, VioletZ_92, Waleliano_89, Zemanar_88,

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

-

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

- 39HC_092, 40BC_092, Acadian_89, Bae_87, BlueHusk_97, Boehler_94, ChrisMich_91, Chunky_95, Cooper_91, DigitDog_91, Donny_89, EastView9101_90, Gyarad_0095, HSavage_94, Horchata_91, Hosp_087, Jolie1_089, KayaCho_87, LilMcDreamy_88, Mysterious_90, Nangang_90, Nigel_85, Phelemich_86, RawrgerThat_88, Reprobate_88, Robyn_98, Roscoe_95, Serendipitous_89, SirJeffery_87, Stinger_87, StinkyVeggy_87, Suigeneris_90, Vaishali24_97, Vivaldi_97, Zenteno07_105,

Summary by start number:

Start 22:

- Found in 3 of 55 (5.5%) of genes in pham
- Manual Annotations of this start: 3 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Robyn_98 (B1), Roscoe_95 (B1), Vaishali24_97 (B1),

Start 24:

- Found in 3 of 55 (5.5%) of genes in pham
- Manual Annotations of this start: 3 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acadian_89 (B5), Donny_89 (B5), Suigeneris_90 (B5),

Start 25:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bae_87 (B5),

Start 27:

- Found in 3 of 55 (5.5%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 66.7% of time when present
- Phage (with cluster) where this start called: EastView9101_90 (B5), Zenteno07_105 (B13),

Start 28:

- Found in 20 of 55 (36.4%) of genes in pham
- Manual Annotations of this start: 15 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apex_91 (B4), Austelle_90 (B4), BobbyK_90 (B4), BrownCNA_90 (B4), Frederick_88 (B4), Hangman_90 (B4), Heath_84 (B4), Hydro_90 (B4), JAMaL_90 (B4), JaguarMi_84 (B4), Lolalove_92 (B4), Magpie_86 (B4), Mithril_88 (B4), Mudslide_91 (B4), Nanao_89 (B4), Poster_88 (B4), Prince_90 (B4), VioletZ_92 (B4), Waleliano_89 (B4), Zemanar_88 (B4),

Start 29:

- Found in 2 of 55 (3.6%) of genes in pham
- Manual Annotations of this start: 2 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueHusk_97 (B1), Horchata_91 (B1),

Start 30:

- Found in 5 of 55 (9.1%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_092 (B6), 40BC_092 (B6), Hosp_087 (B6), Jolie1_089 (B6), KayaCho_87 (B6),

Start 31:

- Found in 6 of 55 (10.9%) of genes in pham
- Manual Annotations of this start: 5 of 40
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Boehler_94 (B1), Chunky_95 (B1), Gyarad_0095 (B1), HSavage_94 (B1), Vivaldi_97 (B1),

Start 32:

- Found in 38 of 55 (69.1%) of genes in pham
- Manual Annotations of this start: 8 of 40
- Called 34.2% of time when present
- Phage (with cluster) where this start called: ChrisnMich_91 (B4), Cooper_91 (B4), DigitDog_91 (B5), Mysterious_90 (B5), Nangang_90 (B5), Nigel_85 (B4), Phelemich_86 (B5), RawrgerThat_88 (B4), Reprobate_88 (B5), Serendipitous_89 (B5), SirJeffery_87 (B5), Stinger_87 (B4), StinkyVeggy_87 (B5),

Start 34:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMcDreamy_88 (B12),

Summary by clusters:

There are 6 clusters represented in this pham: B4, B5, B6, B12, B1, B13,

Info for manual annotations of cluster B1:

- Start number 22 was manually annotated 3 times for cluster B1.
- Start number 29 was manually annotated 2 times for cluster B1.
- Start number 31 was manually annotated 5 times for cluster B1.

Info for manual annotations of cluster B12:

- Start number 34 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 27 was manually annotated 1 time for cluster B13.

Info for manual annotations of cluster B4:

- Start number 28 was manually annotated 15 times for cluster B4.
- Start number 32 was manually annotated 5 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 24 was manually annotated 3 times for cluster B5.
- Start number 25 was manually annotated 1 time for cluster B5.
- Start number 32 was manually annotated 3 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 30 was manually annotated 1 time for cluster B6.

Gene Information:

Gene: 39HC_092 Start: 66926, Stop: 66300, Start Num: 30

Candidate Starts for 39HC_092:

(14, 67055), (Start: 30 @66926 has 1 MA's), (35, 66869), (48, 66740), (49, 66731), (53, 66710), (55, 66707), (59, 66638), (61, 66626), (76, 66485), (77, 66482), (79, 66464), (85, 66413), (92, 66356),

Gene: 40BC_092 Start: 66926, Stop: 66300, Start Num: 30

Candidate Starts for 40BC_092:

(14, 67055), (Start: 30 @66926 has 1 MA's), (35, 66869), (48, 66740), (49, 66731), (53, 66710), (55, 66707), (59, 66638), (61, 66626), (76, 66485), (77, 66482), (79, 66464), (85, 66413), (92, 66356),

Gene: Acadian_89 Start: 66018, Stop: 65326, Start Num: 24

Candidate Starts for Acadian_89:

(2, 66897), (6, 66402), (16, 66072), (Start: 24 @66018 has 3 MA's), (Start: 32 @65943 has 8 MA's), (48, 65772), (49, 65763), (61, 65655), (74, 65538), (77, 65514), (79, 65496), (86, 65460), (97, 65379),

Gene: Apex_91 Start: 67472, Stop: 66804, Start Num: 28

Candidate Starts for Apex_91:

(12, 67640), (15, 67577), (Start: 28 @67472 has 15 MA's), (Start: 32 @67421 has 8 MA's), (43, 67331), (48, 67253), (49, 67244), (57, 67172), (59, 67148), (68, 67055), (75, 67004), (77, 66992), (79, 66974), (81, 66956), (82, 66953), (84, 66941), (85, 66929), (89, 66905), (93, 66860), (95, 66848), (96, 66845),

Gene: Austelle_90 Start: 68073, Stop: 67420, Start Num: 28

Candidate Starts for Austelle_90:

(12, 68241), (15, 68178), (Start: 28 @68073 has 15 MA's), (Start: 32 @68022 has 8 MA's), (43, 67929), (46, 67896), (48, 67851), (49, 67842), (57, 67770), (59, 67746), (68, 67653), (75, 67602), (77, 67590), (79, 67572), (81, 67554), (82, 67551), (85, 67527), (98, 67455), (99, 67452),

Gene: Bae_87 Start: 66191, Stop: 65547, Start Num: 25

Candidate Starts for Bae_87:

(Start: 25 @66191 has 1 MA's), (Start: 32 @66128 has 8 MA's), (48, 65963), (49, 65954), (61, 65846), (64, 65804), (74, 65729), (77, 65705), (79, 65687), (86, 65651), (87, 65642),

Gene: BlueHusk_97 Start: 66586, Stop: 65990, Start Num: 29

Candidate Starts for BlueHusk_97:

(Start: 29 @66586 has 2 MA's), (33, 66529), (39, 66487), (48, 66361), (50, 66340), (54, 66328), (59, 66256), (73, 66142), (77, 66103), (79, 66085),

Gene: BobbyK_90 Start: 66980, Stop: 66312, Start Num: 28

Candidate Starts for BobbyK_90:

(12, 67148), (15, 67085), (Start: 28 @66980 has 15 MA's), (Start: 32 @66929 has 8 MA's), (43, 66839), (48, 66761), (49, 66752), (57, 66680), (59, 66656), (68, 66563), (75, 66512), (77, 66500), (79, 66482), (81, 66464), (82, 66461), (84, 66449), (85, 66437), (89, 66413), (93, 66368), (95, 66356), (96, 66353),

Gene: Boehler_94 Start: 66718, Stop: 66140, Start Num: 31

Candidate Starts for Boehler_94:

(Start: 31 @66718 has 5 MA's), (33, 66679), (39, 66637), (48, 66511), (50, 66490), (54, 66478), (59, 66406), (73, 66292), (77, 66253), (79, 66235),

Gene: BrownCNA_90 Start: 67488, Stop: 66835, Start Num: 28

Candidate Starts for BrownCNA_90:

(12, 67656), (15, 67593), (Start: 28 @67488 has 15 MA's), (Start: 32 @67437 has 8 MA's), (43, 67344), (46, 67311), (48, 67266), (49, 67257), (57, 67185), (59, 67161), (68, 67068), (75, 67017), (77, 67005), (79, 66987), (81, 66969), (82, 66966), (85, 66942), (98, 66870), (99, 66867),

Gene: ChrisnMich_91 Start: 66059, Stop: 65439, Start Num: 32

Candidate Starts for ChrisnMich_91:

(9, 66395), (10, 66386), (12, 66218), (Start: 32 @66059 has 8 MA's), (46, 65930), (49, 65876), (51, 65858), (59, 65780), (67, 65693), (75, 65636), (77, 65624), (79, 65606), (81, 65579), (85, 65552), (94, 65492),

Gene: Chunky_95 Start: 66380, Stop: 65802, Start Num: 31

Candidate Starts for Chunky_95:

(Start: 31 @66380 has 5 MA's), (33, 66341), (39, 66299), (48, 66173), (50, 66152), (54, 66140), (59, 66068), (73, 65954), (77, 65915), (79, 65897),

Gene: Cooper_91 Start: 66596, Stop: 65976, Start Num: 32

Candidate Starts for Cooper_91:

(12, 66749), (Start: 32 @66596 has 8 MA's), (46, 66467), (49, 66413), (51, 66395), (59, 66317), (75, 66173), (77, 66161), (79, 66143), (81, 66116), (85, 66089), (94, 66029),

Gene: DigitDog_91 Start: 66458, Stop: 65841, Start Num: 32

Candidate Starts for DigitDog_91:

(6, 66893), (17, 66563), (Start: 32 @66458 has 8 MA's), (48, 66290), (49, 66281), (61, 66173), (74, 66056), (77, 66032), (79, 66014), (91, 65921),

Gene: Donny_89 Start: 65845, Stop: 65159, Start Num: 24

Candidate Starts for Donny_89:

(2, 66724), (6, 66229), (16, 65899), (Start: 24 @65845 has 3 MA's), (Start: 32 @65770 has 8 MA's), (48, 65605), (49, 65596), (61, 65488), (74, 65371), (77, 65347), (79, 65329), (86, 65293), (97, 65212),

Gene: EastView9101_90 Start: 65729, Stop: 65082, Start Num: 27

Candidate Starts for EastView9101_90:

(19, 65771), (Start: 27 @65729 has 1 MA's), (Start: 32 @65675 has 8 MA's), (48, 65510), (61, 65393), (74, 65276), (77, 65252), (79, 65234), (97, 65117),

Gene: Frederick_88 Start: 67286, Stop: 66618, Start Num: 28

Candidate Starts for Frederick_88:

(12, 67454), (15, 67391), (Start: 28 @67286 has 15 MA's), (Start: 32 @67235 has 8 MA's), (43, 67145), (48, 67067), (49, 67058), (57, 66986), (59, 66962), (68, 66869), (75, 66818), (77, 66806), (79, 66788), (81, 66770), (82, 66767), (84, 66755), (85, 66743), (89, 66719), (93, 66674), (95, 66662), (96, 66659),

Gene: Gyarad_0095 Start: 66382, Stop: 65804, Start Num: 31

Candidate Starts for Gyarad_0095:

(Start: 31 @66382 has 5 MA's), (33, 66343), (39, 66301), (48, 66175), (50, 66154), (54, 66142), (59, 66070), (73, 65956), (77, 65917), (79, 65899),

Gene: HSavage_94 Start: 66365, Stop: 65787, Start Num: 31

Candidate Starts for HSavage_94:

(Start: 31 @66365 has 5 MA's), (33, 66326), (39, 66284), (48, 66158), (50, 66137), (54, 66125), (59, 66053), (73, 65939), (77, 65900), (79, 65882),

Gene: Hangman_90 Start: 67581, Stop: 66913, Start Num: 28

Candidate Starts for Hangman_90:

(12, 67749), (15, 67686), (Start: 28 @67581 has 15 MA's), (Start: 32 @67530 has 8 MA's), (43, 67440), (48, 67362), (49, 67353), (59, 67257), (68, 67164), (75, 67113), (77, 67101), (79, 67083), (81, 67065), (82, 67062), (84, 67050), (85, 67038), (89, 67014), (95, 66957), (96, 66954),

Gene: Heath_84 Start: 65351, Stop: 64701, Start Num: 28

Candidate Starts for Heath_84:

(12, 65519), (15, 65456), (Start: 28 @65351 has 15 MA's), (Start: 32 @65300 has 8 MA's), (43, 65210), (48, 65132), (49, 65123), (57, 65051), (59, 65027), (68, 64934), (75, 64883), (77, 64871), (79, 64853), (81, 64835), (82, 64832), (85, 64808), (98, 64736), (99, 64733),

Gene: Horchata_91 Start: 66558, Stop: 65962, Start Num: 29

Candidate Starts for Horchata_91:

(11, 66816), (13, 66714), (Start: 29 @66558 has 2 MA's), (33, 66501), (39, 66459), (48, 66333), (50, 66312), (54, 66300), (73, 66114), (77, 66075), (79, 66057),

Gene: Hosp_087 Start: 64231, Stop: 63587, Start Num: 30

Candidate Starts for Hosp_087:

(14, 64360), (Start: 30 @64231 has 1 MA's), (35, 64174), (48, 64045), (53, 64015), (55, 64012), (59, 63943), (61, 63931), (76, 63790), (77, 63787), (79, 63769), (82, 63742), (85, 63715), (90, 63682),

Gene: Hydro_90 Start: 67357, Stop: 66692, Start Num: 28

Candidate Starts for Hydro_90:

(4, 67777), (12, 67525), (15, 67462), (Start: 28 @67357 has 15 MA's), (Start: 32 @67306 has 8 MA's), (43, 67216), (48, 67138), (49, 67129), (57, 67057), (59, 67033), (68, 66940), (75, 66889), (77, 66877),

(79, 66859), (80, 66856), (81, 66841), (82, 66838), (84, 66826), (85, 66814), (89, 66790), (95, 66736), (96, 66733),

Gene: JAMaL_90 Start: 66895, Stop: 66227, Start Num: 28

Candidate Starts for JAMaL_90:

(4, 67309), (12, 67057), (15, 66994), (20, 66937), (Start: 28 @66895 has 15 MA's), (Start: 32 @66844 has 8 MA's), (48, 66676), (49, 66667), (57, 66595), (59, 66571), (68, 66478), (75, 66427), (77, 66415), (79, 66397), (80, 66394), (81, 66379), (82, 66376), (84, 66364), (85, 66352), (89, 66328), (93, 66283), (95, 66271), (96, 66268),

Gene: JaguarMi_84 Start: 67336, Stop: 66665, Start Num: 28

Candidate Starts for JaguarMi_84:

(5, 67675), (7, 67672), (12, 67504), (15, 67441), (Start: 28 @67336 has 15 MA's), (Start: 32 @67285 has 8 MA's), (43, 67195), (54, 67081), (57, 67033), (59, 67009), (62, 66985), (63, 66973), (68, 66916), (75, 66865), (77, 66853), (79, 66835), (81, 66817), (82, 66814), (84, 66802), (85, 66790), (89, 66766), (95, 66712), (96, 66709),

Gene: Jolie1_089 Start: 66284, Stop: 65610, Start Num: 30

Candidate Starts for Jolie1_089:

(14, 66428), (Start: 30 @66284 has 1 MA's), (38, 66203), (40, 66194), (48, 66074), (53, 66044), (59, 65972), (61, 65960), (76, 65819), (77, 65816), (79, 65798), (82, 65771), (85, 65747), (88, 65732),

Gene: KayaCho_87 Start: 66154, Stop: 65498, Start Num: 30

Candidate Starts for KayaCho_87:

(Start: 30 @66154 has 1 MA's), (38, 66085), (47, 65983), (48, 65956), (52, 65926), (59, 65851), (61, 65839), (70, 65755), (76, 65698), (77, 65695), (79, 65677), (82, 65650), (85, 65623),

Gene: LilMcDreamy_88 Start: 66128, Stop: 65508, Start Num: 34

Candidate Starts for LilMcDreamy_88:

(Start: 34 @66128 has 1 MA's), (48, 65966), (54, 65933), (59, 65861), (61, 65849), (66, 65780), (75, 65717), (77, 65705), (100, 65528),

Gene: Lolalove_92 Start: 67385, Stop: 66732, Start Num: 28

Candidate Starts for Lolalove_92:

(12, 67553), (15, 67490), (Start: 28 @67385 has 15 MA's), (Start: 32 @67334 has 8 MA's), (43, 67241), (46, 67208), (48, 67163), (49, 67154), (57, 67082), (59, 67058), (68, 66965), (75, 66914), (77, 66902), (79, 66884), (81, 66866), (82, 66863), (85, 66839), (98, 66767), (99, 66764),

Gene: Magpie_86 Start: 67131, Stop: 66481, Start Num: 28

Candidate Starts for Magpie_86:

(12, 67299), (15, 67236), (Start: 28 @67131 has 15 MA's), (Start: 32 @67080 has 8 MA's), (43, 66990), (46, 66957), (48, 66912), (57, 66831), (59, 66807), (68, 66714), (75, 66663), (77, 66651), (79, 66633), (80, 66630), (81, 66615), (82, 66612), (84, 66600), (85, 66588), (89, 66564),

Gene: Mithril_88 Start: 67142, Stop: 66471, Start Num: 28

Candidate Starts for Mithril_88:

(12, 67310), (15, 67247), (Start: 28 @67142 has 15 MA's), (Start: 32 @67091 has 8 MA's), (43, 67001), (48, 66923), (49, 66914), (57, 66842), (59, 66818), (65, 66755), (68, 66725), (75, 66674), (77, 66662), (79, 66644), (81, 66626), (82, 66623), (84, 66611), (85, 66599), (89, 66575), (93, 66530), (94, 66521), (95, 66518), (96, 66515),

Gene: Mudslide_91 Start: 67615, Stop: 66962, Start Num: 28

Candidate Starts for Mudslide_91:

(1, 68467), (12, 67783), (15, 67720), (Start: 28 @67615 has 15 MA's), (Start: 32 @67564 has 8 MA's), (43, 67471), (46, 67438), (48, 67393), (49, 67384), (57, 67312), (59, 67288), (68, 67195), (75, 67144), (77, 67132), (79, 67114), (81, 67096), (82, 67093), (85, 67069), (98, 66997), (99, 66994),

Gene: Mysterious_90 Start: 65876, Stop: 65298, Start Num: 32

Candidate Starts for Mysterious_90:

(6, 66308), (Start: 32 @65876 has 8 MA's), (45, 65771), (48, 65714), (49, 65705), (59, 65609), (61, 65597), (74, 65480), (75, 65468), (77, 65456), (79, 65438), (86, 65399),

Gene: Nanao_89 Start: 66221, Stop: 65553, Start Num: 28

Candidate Starts for Nanao_89:

(3, 66983), (12, 66389), (15, 66326), (Start: 28 @66221 has 15 MA's), (Start: 32 @66170 has 8 MA's), (38, 66131), (43, 66080), (44, 66077), (46, 66047), (48, 66002), (49, 65993), (57, 65921), (59, 65897), (68, 65804), (75, 65753), (77, 65741), (79, 65723), (81, 65705), (82, 65702), (83, 65693), (84, 65690), (85, 65678), (89, 65654), (93, 65609), (95, 65597), (96, 65594),

Gene: Nangang_90 Start: 66354, Stop: 65737, Start Num: 32

Candidate Starts for Nangang_90:

(6, 66789), (17, 66459), (Start: 32 @66354 has 8 MA's), (48, 66186), (49, 66177), (61, 66069), (74, 65952), (77, 65928), (79, 65910), (91, 65817),

Gene: Nigel_85 Start: 65605, Stop: 65015, Start Num: 32

Candidate Starts for Nigel_85:

(12, 65845), (21, 65716), (Start: 32 @65605 has 8 MA's), (41, 65548), (43, 65512), (46, 65479), (48, 65434), (49, 65425), (57, 65353), (59, 65329), (68, 65236), (75, 65185), (77, 65173), (79, 65155), (81, 65128), (82, 65125), (84, 65113), (85, 65101), (98, 65050),

Gene: Phelemich_86 Start: 65786, Stop: 65199, Start Num: 32

Candidate Starts for Phelemich_86:

(Start: 32 @65786 has 8 MA's), (48, 65621), (49, 65612), (59, 65516), (61, 65504), (74, 65387), (75, 65375), (77, 65363), (79, 65345), (86, 65306), (87, 65297),

Gene: Poster_88 Start: 66222, Stop: 65554, Start Num: 28

Candidate Starts for Poster_88:

(3, 66984), (12, 66390), (15, 66327), (Start: 28 @66222 has 15 MA's), (Start: 32 @66171 has 8 MA's), (38, 66132), (43, 66081), (44, 66078), (46, 66048), (48, 66003), (49, 65994), (57, 65922), (59, 65898), (68, 65805), (75, 65754), (77, 65742), (79, 65724), (81, 65706), (82, 65703), (83, 65694), (84, 65691), (85, 65679), (89, 65655), (93, 65610), (95, 65598), (96, 65595),

Gene: Prince_90 Start: 67482, Stop: 66829, Start Num: 28

Candidate Starts for Prince_90:

(1, 68334), (12, 67650), (15, 67587), (Start: 28 @67482 has 15 MA's), (Start: 32 @67431 has 8 MA's), (43, 67338), (46, 67305), (48, 67260), (49, 67251), (57, 67179), (59, 67155), (68, 67062), (75, 67011), (77, 66999), (79, 66981), (81, 66963), (82, 66960), (85, 66936), (98, 66864), (99, 66861),

Gene: RawrgerThat_88 Start: 66936, Stop: 66319, Start Num: 32

Candidate Starts for RawrgerThat_88:

(Start: 32 @66936 has 8 MA's), (37, 66900), (43, 66843), (49, 66756), (52, 66735), (54, 66732), (57, 66684), (58, 66672), (63, 66624), (65, 66597), (72, 66552), (75, 66516), (76, 66507), (79, 66486), (81, 66459), (85, 66432),

Gene: Reprobate_88 Start: 65791, Stop: 65204, Start Num: 32

Candidate Starts for Reprobate_88:

(Start: 32 @65791 has 8 MA's), (48, 65626), (49, 65617), (59, 65521), (61, 65509), (74, 65392), (75, 65380), (77, 65368), (79, 65350), (86, 65311), (87, 65302),

Gene: Robyn_98 Start: 67147, Stop: 66548, Start Num: 22

Candidate Starts for Robyn_98:

(Start: 22 @67147 has 3 MA's), (26, 67126), (33, 67087), (39, 67045), (48, 66919), (50, 66898), (54, 66886), (59, 66814), (73, 66700), (77, 66661), (79, 66643),

Gene: Roscoe_95 Start: 67027, Stop: 66401, Start Num: 22

Candidate Starts for Roscoe_95:

(11, 67246), (13, 67144), (Start: 22 @67027 has 3 MA's), (Start: 31 @66979 has 5 MA's), (33, 66940), (39, 66898), (48, 66772), (50, 66751), (54, 66739), (59, 66667), (73, 66553), (77, 66514), (79, 66496),

Gene: Serendipitous_89 Start: 65633, Stop: 65031, Start Num: 32

Candidate Starts for Serendipitous_89:

(Start: 32 @65633 has 8 MA's), (48, 65468), (51, 65444), (56, 65420), (61, 65354), (69, 65273), (71, 65270), (77, 65213), (79, 65195),

Gene: SirJeffery_87 Start: 65697, Stop: 65122, Start Num: 32

Candidate Starts for SirJeffery_87:

(19, 65790), (Start: 27 @65748 has 1 MA's), (Start: 32 @65697 has 8 MA's), (48, 65532), (49, 65523), (61, 65415), (74, 65298), (77, 65274), (79, 65256), (86, 65220),

Gene: Stinger_87 Start: 65601, Stop: 64981, Start Num: 32

Candidate Starts for Stinger_87:

(Start: 32 @65601 has 8 MA's), (36, 65568), (41, 65541), (45, 65484), (46, 65472), (49, 65418), (51, 65400), (59, 65322), (75, 65178), (77, 65166), (79, 65148), (85, 65094),

Gene: StinkyVeggy_87 Start: 65724, Stop: 65134, Start Num: 32

Candidate Starts for StinkyVeggy_87:

(16, 65826), (18, 65814), (23, 65796), (Start: 32 @65724 has 8 MA's), (48, 65550), (49, 65541), (61, 65433), (74, 65316), (77, 65292), (79, 65274), (87, 65217),

Gene: Suigeneris_90 Start: 66233, Stop: 65547, Start Num: 24

Candidate Starts for Suigeneris_90:

(2, 67112), (6, 66617), (16, 66287), (Start: 24 @66233 has 3 MA's), (Start: 32 @66158 has 8 MA's), (48, 65993), (49, 65984), (61, 65876), (74, 65759), (77, 65735), (79, 65717), (86, 65681), (97, 65600),

Gene: Vaishali24_97 Start: 66820, Stop: 66230, Start Num: 22

Candidate Starts for Vaishali24_97:

(11, 67039), (13, 66937), (Start: 22 @66820 has 3 MA's), (26, 66799), (33, 66760), (39, 66727), (48, 66601), (50, 66580), (54, 66568), (59, 66496), (73, 66382), (77, 66343), (79, 66325),

Gene: VioletZ_92 Start: 67510, Stop: 66836, Start Num: 28

Candidate Starts for VioletZ_92:

(4, 67930), (12, 67678), (15, 67615), (Start: 28 @67510 has 15 MA's), (Start: 32 @67459 has 8 MA's), (43, 67363), (44, 67360), (46, 67330), (48, 67285), (49, 67276), (57, 67204), (59, 67180), (68, 67087), (75, 67036), (77, 67024), (79, 67006), (80, 67003), (81, 66988), (82, 66985), (84, 66973), (85, 66961), (89, 66937), (95, 66880), (96, 66877),

Gene: Vivaldi_97 Start: 67032, Stop: 66454, Start Num: 31

Candidate Starts for Vivaldi_97:

(Start: 31 @67032 has 5 MA's), (33, 66993), (39, 66951), (48, 66825), (50, 66804), (54, 66792), (59, 66720), (73, 66606), (77, 66567), (79, 66549),

Gene: Waleliano_89 Start: 67237, Stop: 66587, Start Num: 28

Candidate Starts for Waleliano_89:

(12, 67405), (15, 67342), (Start: 28 @67237 has 15 MA's), (Start: 32 @67186 has 8 MA's), (43, 67096), (48, 67018), (49, 67009), (59, 66913), (68, 66820), (75, 66769), (77, 66757), (79, 66739), (81, 66721), (82, 66718), (85, 66694), (89, 66670), (98, 66622),

Gene: Zemanar_88 Start: 67185, Stop: 66517, Start Num: 28

Candidate Starts for Zemanar_88:

(12, 67353), (15, 67290), (Start: 28 @67185 has 15 MA's), (Start: 32 @67134 has 8 MA's), (43, 67044), (48, 66966), (49, 66957), (57, 66885), (59, 66861), (68, 66768), (75, 66717), (77, 66705), (79, 66687), (81, 66669), (82, 66666), (84, 66654), (85, 66642), (89, 66618), (93, 66573), (95, 66561), (96, 66558),

Gene: Zenteno07_105 Start: 69900, Stop: 69328, Start Num: 27

Candidate Starts for Zenteno07_105:

(8, 70275), (Start: 27 @69900 has 1 MA's), (33, 69834), (39, 69792), (42, 69762), (54, 69633), (56, 69615), (59, 69558), (60, 69549), (77, 69399), (78, 69384),