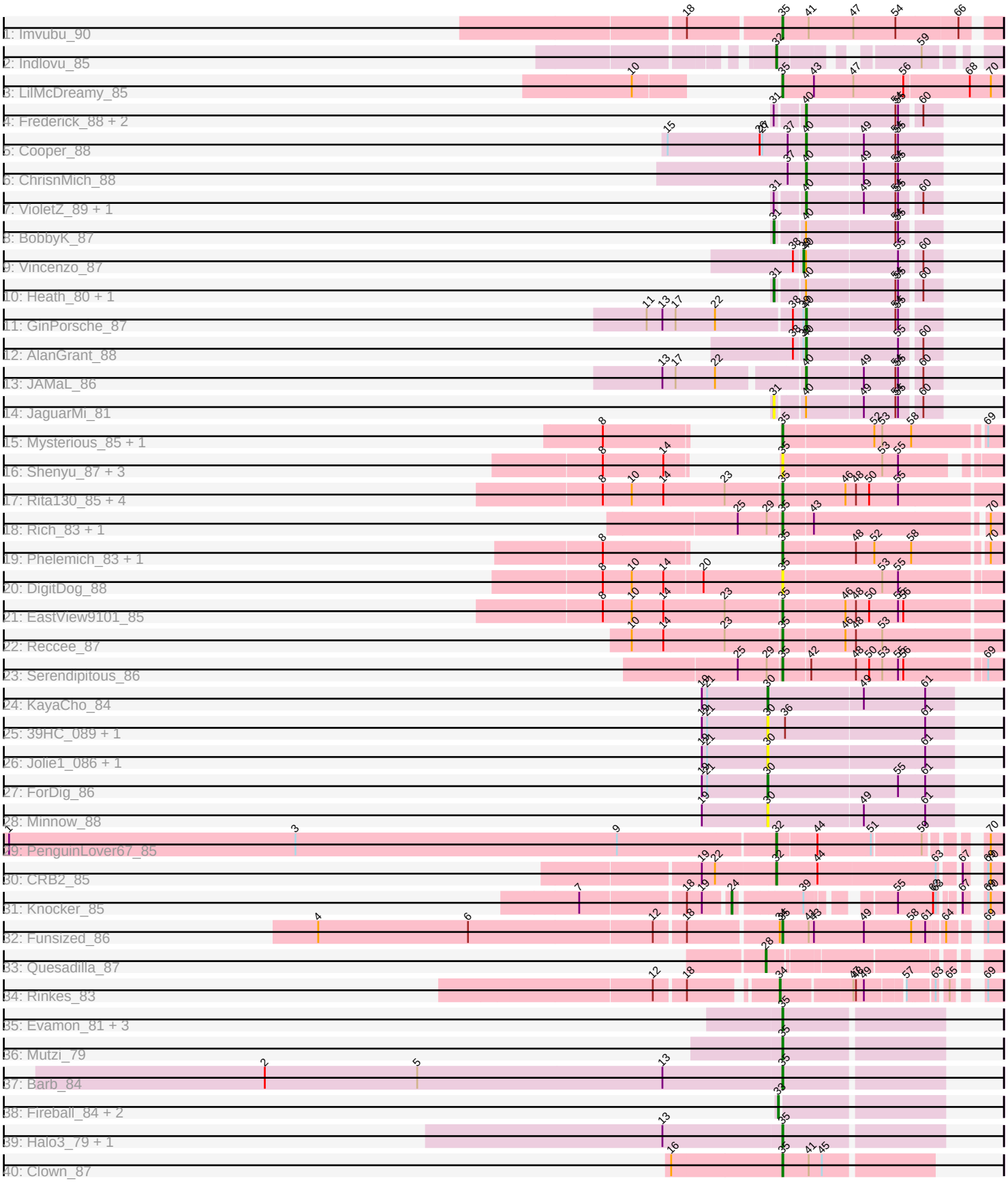
Pham 339702


1: Imvubu_90
2: Indlovu_85
3: LilMcDreamy_85
4: Frederick_88 + 2
5: Cooper_88
6: ChrisnMich_88
7: VioletZ_89 + 1
8: BobbyK_87
9: Vincenzo_87
10: Heath_80 + 1
11: GinPorsche_87
12: AlanGrant_88
13: JAMaL_86
14: JaguarMi_81
15: Mysterious_85 + 1
16: Shenyu_87 + 3
17: Rita130_85 + 4
18: Rich_83 + 1
19: Phelemich_83 + 1
20: DigitDog_88
21: EastView9101_85
22: Reccee_87
23: Serendipitous_86
24: KayaCho_84
25: 39HC_089 + 1
26: Jolie1_086 + 1
27: ForDig_86
28: Minnow_88
29: PenguinLover67_85
30: CRB2_85
31: Knocker_85
32: Funsized_86
33: Quesadilla_87
34: Rinkes_83
35: Evamon_81 + 3
36: Mutzi_79
37: Barb_84
38: Fireball_84 + 2
39: Halo3_79 + 1
40: Clown_87

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 339702 Report

This analysis was run 11/14/26 on database version 672.

Pham number 339702 has 62 members, 14 are drafts.

Phages represented in each track:
- Track 1 : Imvubu_90
- Track 2 : Indlovu_85
- Track 3 : LilMcDreamy_85
- Track 4 : Frederick_88, Mudslide_87, Apex_88
- Track 5 : Cooper_88
- Track 6 : ChrisnMich_88
- Track 7 : VioletZ_89, Prince_86
- Track 8 : BobbyK_87
- Track 9 : Vincenzo_87
- Track 10 : Heath_80, Lolalove_88
- Track 11 : GinPorsche_87
- Track 12 : AlanGrant_88
- Track 13 : JAMaL_86
- Track 14 : JaguarMi_81
- Track 15 : Mysterious_85, Nehemiah_85
- Track 16 : Shenyu_87, Nangang_87, StinkyVeggy_84, KarasumaRum_84
- Track 17 : Rita130_85, Donny_86, Acadian_86, SirJeffery_84, Suigeneris_87
- Track 18 : Rich_83, Baee_84
- Track 19 : Phelemich_83, Reprobate_85
- Track 20 : DigitDog_88
- Track 21 : EastView9101_85
- Track 22 : Reccee_87
- Track 23 : Serendipitous_86
- Track 24 : KayaCho_84
- Track 25 : 39HC_089, 40BC_089
- Track 26 : Jolie1_086, Hosp_084
- Track 27 : ForDig_86
- Track 28 : Minnow_88
- Track 29 : PenguinLover67_85
- Track 30 : CRB2_85
- Track 31 : Knocker_85
- Track 32 : Funsized_86
- Track 33 : Quesadilla_87
- Track 34 : Rinkes_83
- Track 35 : Evamon_81, SmokingBunny_82, Salvador_81, Togo_81
- Track 36 : Mutzi_79
- Track 37 : Barb_84

• Track 38 : Fireball_84, TillyBobJoe_79, Nubi_83
• Track 39 : Halo3_79, CoveyB_82
• Track 40 : Clown_87

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

The start number called the most often in the published annotations is 35, it was called in 23 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acadian_86, Baee_84, Barb_84, Clown_87, CoveyB_82, DigitDog_88, Donny_86, EastView9101_85, Evamon_81, Funsized_86, Halo3_79, Imvubu_90, KarasumaRum_84, LilMcDreamy_85, Mutzi_79, Mysterious_85, Nangang_87, Nehemiah_85, Phelemich_83, Reccee_87, Reprobate_85, Rich_83, Rita130_85, Salvador_81, Serendipitous_86, Shenyu_87, SirJeffery_84, SmokingBunny_82, StinkyVeggy_84, Suigeneris_87, Togo_81,

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

Genes that do not have the "Most Annotated" start:
• 39HC_089, 40BC_089, AlanGrant_88, Apex_88, BobbyK_87, CRB2_85, ChrisnMich_88, Cooper_88, Fireball_84, ForDig_86, Frederick_88, GinPorsche_87, Heath_80, Hosp_084, Indlovu_85, JAMaL_86, JaguarMi_81, Jolie1_086, KayaCho_84, Knocker_85, Lolalove_88, Minnow_88, Mudslide_87, Nubi_83, PenguinLover67_85, Prince_86, Quesadilla_87, Rinkes_83, TillyBobJoe_79, Vincenzo_87, VioletZ_89,

Summary by start number:

Start 24:
• Found in 1 of 62 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Knocker_85 (B9),

Start 28:
• Found in 1 of 62 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Quesadilla_87 (B9),

Start 30:
• Found in 7 of 62 (11.3%) of genes in pham
• Manual Annotations of this start: 2 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 39HC_089 (B6), 40BC_089 (B6), ForDig_86 (B6), Hosp_084 (B6), Jolie1_086 (B6), KayaCho_84 (B6), Minnow_88 (B6),

Start 31:
• Found in 9 of 62 (14.5%) of genes in pham
• Manual Annotations of this start: 3 of 48
• Called 44.4% of time when present
• Phage (with cluster) where this start called: BobbyK_87 (B4), Heath_80 (B4), JaguarMi_81 (B4), Lolalove_88 (B4),

Start 32:
• Found in 3 of 62 (4.8%) of genes in pham
• Manual Annotations of this start: 3 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CRB2_85 (B9), Indlovu_85 (B11), PenguinLover67_85 (B9),

Start 33:
• Found in 3 of 62 (4.8%) of genes in pham
• Manual Annotations of this start: 3 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Fireball_84 (DC1), Nubi_83 (DC1), TillyBobJoe_79 (DC1),

Start 34:
• Found in 2 of 62 (3.2%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Rinkes_83 (B9),

Start 35:
• Found in 31 of 62 (50.0%) of genes in pham
• Manual Annotations of this start: 23 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acadian_86 (B5), Baee_84 (B5), Barb_84 (DC1), Clown_87 (DC2), CoveyB_82 (DC1), DigitDog_88 (B5), Donny_86 (B5), EastView9101_85 (B5), Evamon_81 (DC1), Funsized_86 (B9), Halo3_79 (DC1), Imvubu_90 (B10), KarasumaRum_84 (B5), LilMcDreamy_85 (B12), Mutzi_79 (DC1), Mysterious_85 (B5), Nangang_87 (B5), Nehemiah_85 (B5), Phelemich_83 (B5), Reccee_87 (B5), Reprobate_85 (B5), Rich_83 (B5), Rita130_85 (B5), Salvador_81 (DC1), Serendipitous_86 (B5), Shenyu_87 (B5), SirJeffery_84 (B5), SmokingBunny_82 (DC1), StinkyVeggy_84 (B5), Suigeneris_87 (B5), Togo_81 (DC1),

Start 39:
• Found in 4 of 62 (6.5%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Vincenzo_87 (B4),

Start 40:
• Found in 15 of 62 (24.2%) of genes in pham
• Manual Annotations of this start: 10 of 48
• Called 66.7% of time when present
• Phage (with cluster) where this start called: AlanGrant_88 (B4), Apex_88 (B4), ChrisnMich_88 (B4), Cooper_88 (B4), Frederick_88 (B4), GinPorsche_87 (B4),

JAMaL_86 (B4), Mudslide_87 (B4), Prince_86 (B4), VioletZ_89 (B4),

Summary by clusters:

There are 9 clusters represented in this pham: B4, B5, B6, B12, B10, B11, DC2, B9, DC1,

Info for manual annotations of cluster B10:
•Start number 35 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:
•Start number 32 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:
•Start number 35 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B4:
•Start number 31 was manually annotated 3 times for cluster B4.
•Start number 39 was manually annotated 1 time for cluster B4.
•Start number 40 was manually annotated 10 times for cluster B4.

Info for manual annotations of cluster B5:
•Start number 35 was manually annotated 11 times for cluster B5.

Info for manual annotations of cluster B6:
•Start number 30 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster B9:
•Start number 24 was manually annotated 1 time for cluster B9.
•Start number 28 was manually annotated 1 time for cluster B9.
•Start number 32 was manually annotated 2 times for cluster B9.
•Start number 34 was manually annotated 1 time for cluster B9.
•Start number 35 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster DC1:
•Start number 33 was manually annotated 3 times for cluster DC1.
•Start number 35 was manually annotated 8 times for cluster DC1.

Info for manual annotations of cluster DC2:
•Start number 35 was manually annotated 1 time for cluster DC2.

Gene Information:

Gene: 39HC_089 Start: 65823, Stop: 65617, Start Num: 30
Candidate Starts for 39HC_089:
(19, 65898), (21, 65892), (Start: 30 @65823 has 2 MA's), (36, 65805), (61, 65649),

Gene: 40BC_089 Start: 65823, Stop: 65617, Start Num: 30
Candidate Starts for 40BC_089:
(19, 65898), (21, 65892), (Start: 30 @65823 has 2 MA's), (36, 65805), (61, 65649),

Gene: Acadian_86 Start: 64696, Stop: 64454, Start Num: 35
Candidate Starts for Acadian_86:
(8, 64897), (10, 64864), (14, 64828), (23, 64759), (Start: 35 @64696 has 23 MA's), (46, 64627), (48, 64615), (50, 64600), (55, 64567),

Gene: AlanGrant_88 Start: 66948, Stop: 66805, Start Num: 40
Candidate Starts for AlanGrant_88:
(38, 66960), (Start: 39 @66951 has 1 MA's), (Start: 40 @66948 has 10 MA's), (55, 66846), (60, 66825),

Gene: Apex_88 Start: 66270, Stop: 66127, Start Num: 40
Candidate Starts for Apex_88:
(Start: 31 @66297 has 3 MA's), (Start: 40 @66270 has 10 MA's), (54, 66171), (55, 66168), (60, 66147),

Gene: Baee_84 Start: 65056, Stop: 64823, Start Num: 35
Candidate Starts for Baee_84:
(25, 65104), (29, 65071), (Start: 35 @65056 has 23 MA's), (43, 65023), (70, 64837),

Gene: Barb_84 Start: 53980, Stop: 54156, Start Num: 35
Candidate Starts for Barb_84:
(2, 53392), (5, 53566), (13, 53845), (Start: 35 @53980 has 23 MA's),

Gene: BobbyK_87 Start: 65805, Stop: 65635, Start Num: 31
Candidate Starts for BobbyK_87:
(Start: 31 @65805 has 3 MA's), (Start: 40 @65778 has 10 MA's), (54, 65679), (55, 65676),

Gene: CRB2_85 Start: 66826, Stop: 66605, Start Num: 32
Candidate Starts for CRB2_85:
(19, 66907), (22, 66892), (Start: 32 @66826 has 3 MA's), (44, 66781), (63, 66652), (67, 66634), (69, 66622), (70, 66619),

Gene: ChrisnMich_88 Start: 65061, Stop: 64909, Start Num: 40
Candidate Starts for ChrisnMich_88:
(37, 65082), (Start: 40 @65061 has 10 MA's), (49, 64998), (54, 64962), (55, 64959),

Gene: Clown_87 Start: 55358, Stop: 55522, Start Num: 35
Candidate Starts for Clown_87:
(16, 55235), (Start: 35 @55358 has 23 MA's), (41, 55388), (45, 55403),

Gene: Cooper_88 Start: 65574, Stop: 65422, Start Num: 40
Candidate Starts for Cooper_88:
(15, 65730), (26, 65625), (27, 65622), (37, 65595), (Start: 40 @65574 has 10 MA's), (49, 65511), (54, 65475), (55, 65472),

Gene: CoveyB_82 Start: 53467, Stop: 53643, Start Num: 35
Candidate Starts for CoveyB_82:
(13, 53332), (Start: 35 @53467 has 23 MA's),

Gene: DigitDog_88 Start: 65196, Stop: 64957, Start Num: 35
Candidate Starts for DigitDog_88:
(8, 65397), (10, 65364), (14, 65328), (20, 65286), (Start: 35 @65196 has 23 MA's), (53, 65085), (55, 65067),

Gene: Donny_86 Start: 64530, Stop: 64288, Start Num: 35

Candidate Starts for Donny_86:
(8, 64731), (10, 64698), (14, 64662), (23, 64593), (Start: 35 @64530 has 23 MA's), (46, 64461), (48, 64449), (50, 64434), (55, 64401),

Gene: EastView9101_85 Start: 64441, Stop: 64199, Start Num: 35
Candidate Starts for EastView9101_85:
(8, 64642), (10, 64609), (14, 64573), (23, 64504), (Start: 35 @64441 has 23 MA's), (46, 64372), (48, 64360), (50, 64345), (55, 64312), (56, 64306),

Gene: Evamon_81 Start: 53374, Stop: 53550, Start Num: 35
Candidate Starts for Evamon_81:
(Start: 35 @53374 has 23 MA's),

Gene: Fireball_84 Start: 53836, Stop: 54012, Start Num: 33
Candidate Starts for Fireball_84:
(Start: 33 @53836 has 3 MA's),

Gene: ForDig_86 Start: 65091, Stop: 64885, Start Num: 30
Candidate Starts for ForDig_86:
(19, 65166), (21, 65160), (Start: 30 @65091 has 2 MA's), (55, 64947), (61, 64917),

Gene: Frederick_88 Start: 66084, Stop: 65941, Start Num: 40
Candidate Starts for Frederick_88:
(Start: 31 @66111 has 3 MA's), (Start: 40 @66084 has 10 MA's), (54, 65985), (55, 65982), (60, 65961),

Gene: Funsized_86 Start: 67570, Stop: 67346, Start Num: 35
Candidate Starts for Funsized_86:
(4, 68083), (6, 67912), (12, 67705), (18, 67672), (Start: 34 @67573 has 1 MA's), (Start: 35 @67570 has 23 MA's), (41, 67540), (43, 67534), (49, 67477), (58, 67423), (61, 67408), (64, 67390), (69, 67363),

Gene: GinPorsche_87 Start: 65104, Stop: 64961, Start Num: 40
Candidate Starts for GinPorsche_87:
(11, 65281), (13, 65263), (17, 65248), (22, 65203), (38, 65119), (Start: 39 @65107 has 1 MA's), (Start: 40 @65104 has 10 MA's), (54, 65005), (55, 65002),

Gene: Halo3_79 Start: 53805, Stop: 53981, Start Num: 35
Candidate Starts for Halo3_79:
(13, 53670), (Start: 35 @53805 has 23 MA's),

Gene: Heath_80 Start: 64111, Stop: 63941, Start Num: 31
Candidate Starts for Heath_80:
(Start: 31 @64111 has 3 MA's), (Start: 40 @64084 has 10 MA's), (54, 63985), (55, 63982), (60, 63961),

Gene: Hosp_084 Start: 63115, Stop: 62909, Start Num: 30
Candidate Starts for Hosp_084:
(19, 63190), (21, 63184), (Start: 30 @63115 has 2 MA's), (61, 62941),

Gene: Imvubu_90 Start: 65577, Stop: 65344, Start Num: 35
Candidate Starts for Imvubu_90:
(18, 65679), (Start: 35 @65577 has 23 MA's), (41, 65547), (47, 65496), (54, 65448), (66, 65379),

Gene: Indlovu_85 Start: 66174, Stop: 65995, Start Num: 32
Candidate Starts for Indlovu_85:

(Start: 32 @66174 has 3 MA's), (59, 66054),

Gene: JAMaL_86 Start: 65643, Stop: 65500, Start Num: 40
Candidate Starts for JAMaL_86:
(13, 65790), (17, 65775), (22, 65730), (Start: 40 @65643 has 10 MA's), (49, 65580), (54, 65544), (55, 65541), (60, 65520),

Gene: JaguarMi_81 Start: 66176, Stop: 66006, Start Num: 31
Candidate Starts for JaguarMi_81:
(Start: 31 @66176 has 3 MA's), (Start: 40 @66149 has 10 MA's), (49, 66086), (54, 66050), (55, 66047), (60, 66026),

Gene: Jolie1_086 Start: 65142, Stop: 64936, Start Num: 30
Candidate Starts for Jolie1_086:
(19, 65217), (21, 65211), (Start: 30 @65142 has 2 MA's), (61, 64968),

Gene: KarasumaRum_84 Start: 64594, Stop: 64355, Start Num: 35
Candidate Starts for KarasumaRum_84:
(8, 64690), (14, 64621), (Start: 35 @64594 has 23 MA's), (53, 64483), (55, 64465),

Gene: KayaCho_84 Start: 65033, Stop: 64827, Start Num: 30
Candidate Starts for KayaCho_84:
(19, 65108), (21, 65102), (Start: 30 @65033 has 2 MA's), (49, 64928), (61, 64859),

Gene: Knocker_85 Start: 66543, Stop: 66316, Start Num: 24
Candidate Starts for Knocker_85:
(7, 66699), (18, 66585), (19, 66570), (Start: 24 @66543 has 1 MA's), (Start: 39 @66474 has 1 MA's), (55, 66402), (62, 66363), (63, 66360), (67, 66345), (69, 66333), (70, 66330),

Gene: LilMcDreamy_85 Start: 64982, Stop: 64734, Start Num: 35
Candidate Starts for LilMcDreamy_85:
(10, 65042), (Start: 35 @64982 has 23 MA's), (43, 64946), (47, 64901), (56, 64844), (68, 64772), (70, 64748),

Gene: Lolalove_88 Start: 66142, Stop: 65972, Start Num: 31
Candidate Starts for Lolalove_88:
(Start: 31 @66142 has 3 MA's), (Start: 40 @66115 has 10 MA's), (54, 66016), (55, 66013), (60, 65992),

Gene: Minnow_88 Start: 65254, Stop: 65048, Start Num: 30
Candidate Starts for Minnow_88:
(19, 65329), (Start: 30 @65254 has 2 MA's), (49, 65149), (61, 65080),

Gene: Mudslide_87 Start: 66345, Stop: 66202, Start Num: 40
Candidate Starts for Mudslide_87:
(Start: 31 @66372 has 3 MA's), (Start: 40 @66345 has 10 MA's), (54, 66246), (55, 66243), (60, 66222),

Gene: Mutzi_79 Start: 53940, Stop: 54116, Start Num: 35
Candidate Starts for Mutzi_79:
(Start: 35 @53940 has 23 MA's),

Gene: Mysterious_85 Start: 64739, Stop: 64503, Start Num: 35
Candidate Starts for Mysterious_85:
(8, 64835), (Start: 35 @64739 has 23 MA's), (52, 64637), (53, 64628), (58, 64595), (69, 64520),

Gene: Nangang_87 Start: 65197, Stop: 64958, Start Num: 35
Candidate Starts for Nangang_87:
(8, 65293), (14, 65224), (Start: 35 @65197 has 23 MA's), (53, 65086), (55, 65068),

Gene: Nehemiah_85 Start: 64619, Stop: 64383, Start Num: 35
Candidate Starts for Nehemiah_85:
(8, 64715), (Start: 35 @64619 has 23 MA's), (52, 64517), (53, 64508), (58, 64475), (69, 64400),

Gene: Nubi_83 Start: 53251, Stop: 53427, Start Num: 33
Candidate Starts for Nubi_83:
(Start: 33 @53251 has 3 MA's),

Gene: PenguinLover67_85 Start: 64569, Stop: 64360, Start Num: 32
Candidate Starts for PenguinLover67_85:
(1, 65436), (3, 65109), (9, 64743), (Start: 32 @64569 has 3 MA's), (44, 64527), (51, 64467), (59, 64416), (70, 64374),

Gene: Phelemich_83 Start: 64664, Stop: 64428, Start Num: 35
Candidate Starts for Phelemich_83:
(8, 64760), (Start: 35 @64664 has 23 MA's), (48, 64583), (52, 64562), (58, 64520), (70, 64442),

Gene: Prince_86 Start: 66212, Stop: 66069, Start Num: 40
Candidate Starts for Prince_86:
(Start: 31 @66239 has 3 MA's), (Start: 40 @66212 has 10 MA's), (49, 66149), (54, 66113), (55, 66110), (60, 66089),

Gene: Quesadilla_87 Start: 65727, Stop: 65512, Start Num: 28
Candidate Starts for Quesadilla_87:
(Start: 28 @65727 has 1 MA's),

Gene: Reccee_87 Start: 65000, Stop: 64758, Start Num: 35
Candidate Starts for Reccee_87:
(10, 65168), (14, 65132), (23, 65063), (Start: 35 @65000 has 23 MA's), (46, 64931), (48, 64919), (53, 64889),

Gene: Reprobate_85 Start: 64669, Stop: 64433, Start Num: 35
Candidate Starts for Reprobate_85:
(8, 64765), (Start: 35 @64669 has 23 MA's), (48, 64588), (52, 64567), (58, 64525), (70, 64447),

Gene: Rich_83 Start: 65123, Stop: 64890, Start Num: 35
Candidate Starts for Rich_83:
(25, 65171), (29, 65138), (Start: 35 @65123 has 23 MA's), (43, 65090), (70, 64904),

Gene: Rinkes_83 Start: 65423, Stop: 65226, Start Num: 34
Candidate Starts for Rinkes_83:
(12, 65543), (18, 65510), (Start: 34 @65423 has 1 MA's), (47, 65348), (48, 65345), (49, 65336), (57, 65297), (63, 65270), (65, 65261), (69, 65243),

Gene: Rita130_85 Start: 64670, Stop: 64428, Start Num: 35
Candidate Starts for Rita130_85:
(8, 64871), (10, 64838), (14, 64802), (23, 64733), (Start: 35 @64670 has 23 MA's), (46, 64601), (48, 64589), (50, 64574), (55, 64541),

Gene: Salvador_81 Start: 53372, Stop: 53548, Start Num: 35
Candidate Starts for Salvador_81:
(Start: 35 @53372 has 23 MA's),

Gene: Serendipitous_86 Start: 64542, Stop: 64303, Start Num: 35
Candidate Starts for Serendipitous_86:
(25, 64590), (29, 64557), (Start: 35 @64542 has 23 MA's), (42, 64512), (48, 64461), (50, 64446), (53, 64431), (55, 64413), (56, 64407), (69, 64320),

Gene: Shenyu_87 Start: 65195, Stop: 64974, Start Num: 35
Candidate Starts for Shenyu_87:
(8, 65291), (14, 65222), (Start: 35 @65195 has 23 MA's), (53, 65084), (55, 65066),

Gene: SirJeffery_84 Start: 64480, Stop: 64238, Start Num: 35
Candidate Starts for SirJeffery_84:
(8, 64681), (10, 64648), (14, 64612), (23, 64543), (Start: 35 @64480 has 23 MA's), (46, 64411), (48, 64399), (50, 64384), (55, 64351),

Gene: SmokingBunny_82 Start: 54368, Stop: 54544, Start Num: 35
Candidate Starts for SmokingBunny_82:
(Start: 35 @54368 has 23 MA's),

Gene: StinkyVeggy_84 Start: 64594, Stop: 64355, Start Num: 35
Candidate Starts for StinkyVeggy_84:
(8, 64690), (14, 64621), (Start: 35 @64594 has 23 MA's), (53, 64483), (55, 64465),

Gene: Suigeneris_87 Start: 64918, Stop: 64676, Start Num: 35
Candidate Starts for Suigeneris_87:
(8, 65119), (10, 65086), (14, 65050), (23, 64981), (Start: 35 @64918 has 23 MA's), (46, 64849), (48, 64837), (50, 64822), (55, 64789),

Gene: TillyBobJoe_79 Start: 53254, Stop: 53430, Start Num: 33
Candidate Starts for TillyBobJoe_79:
(Start: 33 @53254 has 3 MA's),

Gene: Togo_81 Start: 54368, Stop: 54544, Start Num: 35
Candidate Starts for Togo_81:
(Start: 35 @54368 has 23 MA's),

Gene: Vincenzo_87 Start: 66981, Stop: 66835, Start Num: 39
Candidate Starts for Vincenzo_87:
(38, 66990), (Start: 39 @66981 has 1 MA's), (Start: 40 @66978 has 10 MA's), (55, 66876), (60, 66855),

Gene: VioletZ_89 Start: 66302, Stop: 66159, Start Num: 40
Candidate Starts for VioletZ_89:
(Start: 31 @66329 has 3 MA's), (Start: 40 @66302 has 10 MA's), (49, 66239), (54, 66203), (55, 66200), (60, 66179),