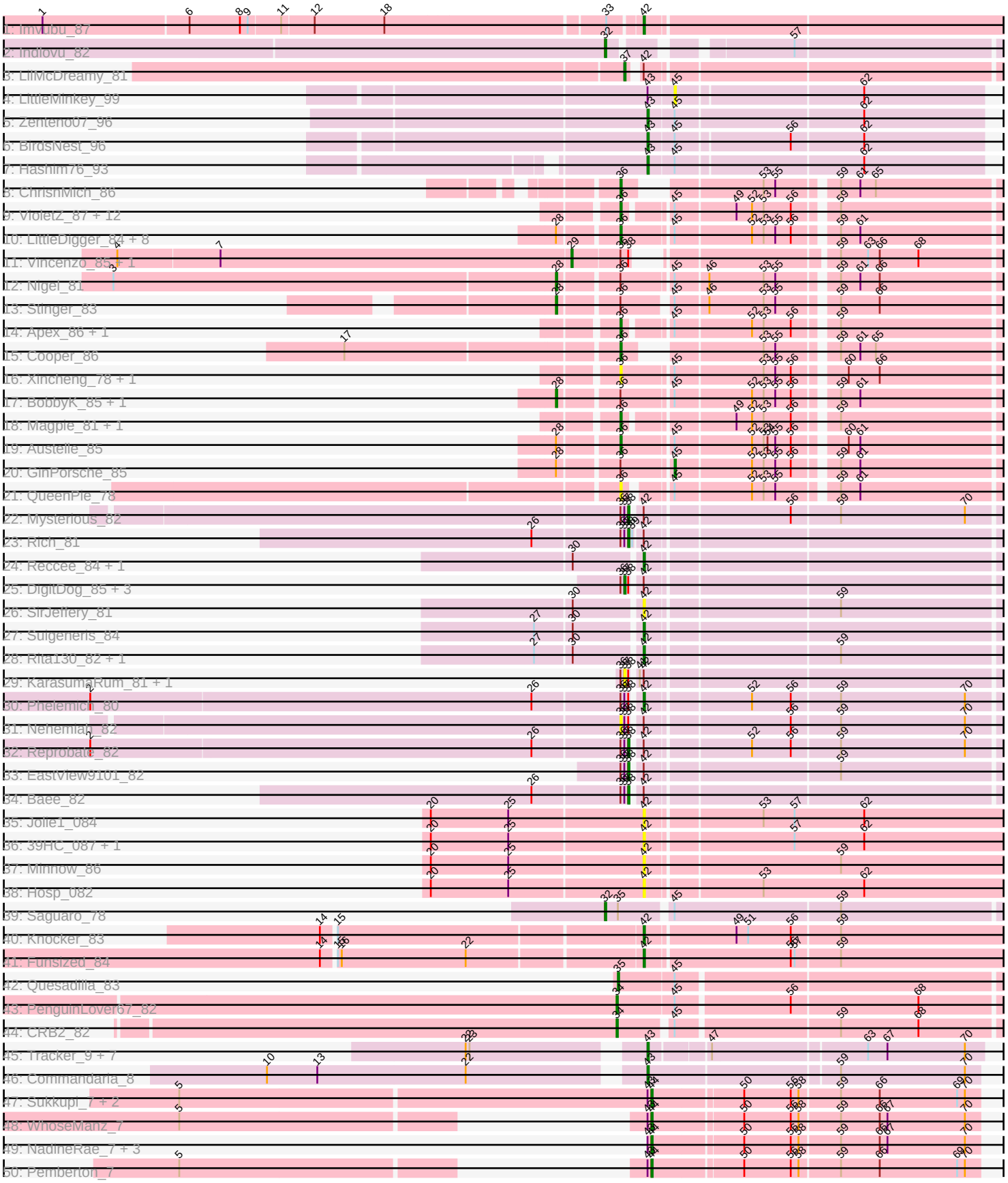
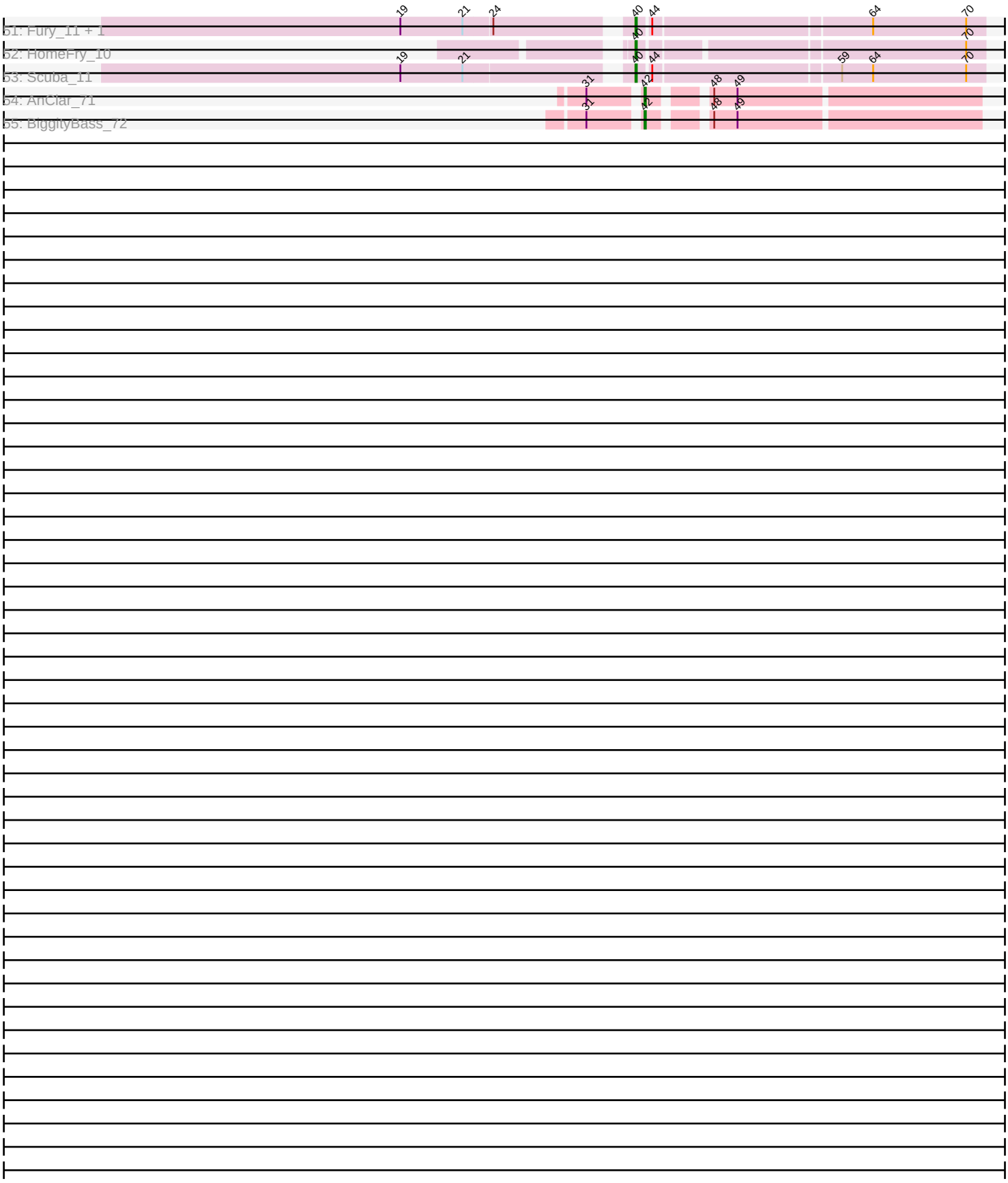
Pham 347457



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51: Fury_11 + 1
52: HomeFry_10
53: Scuba_11
54: AnClar_71
55: BiggityBass_72
19
21
24
40
44
64
70
59
31
42
48
49

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 347457 Report

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

Pham number 347457 has 100 members, 25 are drafts.

Phages represented in each track:
- Track 1 : Imvubu_87
- Track 2 : Indlovu_82
- Track 3 : LilMcDreamy_81
- Track 4 : LittleMinkey_99
- Track 5 : Zenteno07_96
- Track 6 : BirdsNest_96
- Track 7 : Hashim76_93
- Track 8 : ChrisnMich_86
- Track 9 : VioletZ_87, Fortunato_83, RawrgerThat_84, Hydro_85, JoyceMaria_85, Hangman_85, Waleliano_84, Lolalove_86, Zemanar_84, Mudslide_85, Frederick_86, Mithril_84, BrownCNA_86
- Track 10 : LittleDigger_84, Lambano_81, Nanao_83, Poster_82, Renkei_84, Epah_83, Hally898_81, Antihero_83, Ahwei_83
- Track 11 : Vincenzo_85, AlanGrant_86
- Track 12 : Nigel_81
- Track 13 : Stinger_83
- Track 14 : Apex_86, Prince_84
- Track 15 : Cooper_86
- Track 16 : Xincheng_78, JaguarMi_79
- Track 17 : BobbyK_85, JAMaL_84
- Track 18 : Magpie_81, Fanaw_80
- Track 19 : Austelle_85
- Track 20 : GinPorsche_85
- Track 21 : QueenPie_78
- Track 22 : Mysterious_82
- Track 23 : Rich_81
- Track 24 : Reccee_84, Donny_83
- Track 25 : DigitDog_85, Serendipitous_83, Nangang_84, Shenyu_84
- Track 26 : SirJeffery_81
- Track 27 : Suigeneris_84
- Track 28 : Rita130_82, Acadian_83
- Track 29 : KarasumaRum_81, StinkyVeggy_81
- Track 30 : Phelemich_80
- Track 31 : Nehemiah_82
- Track 32 : Reprobate_82
- Track 33 : EastView9101_82
- Track 34 : Baee_82

• Track 35 : Jolie1_084
• Track 36 : 39HC_087, 40BC_087
• Track 37 : Minnow_86
• Track 38 : Hosp_082
• Track 39 : Saguaro_78
• Track 40 : Knocker_83
• Track 41 : Funsized_84
• Track 42 : Quesadilla_83
• Track 43 : PenguinLover67_82
• Track 44 : CRB2_82
• Track 45 : Tracker_9, KidneyBean_9, Phomeo_8, Kurt_9, NatB6_9, Foxboro_9, Emianna_9, Jifall16_8
• Track 46 : Commandaria_8
• Track 47 : Sukkupi_7, BiPauneto_7, Yndexa_7
• Track 48 : WhoseManz_7
• Track 49 : NadineRae_7, HubbaBubba_7, IDyn_8, Marietta_7
• Track 50 : Pemberton_7
• Track 51 : Fury_11, Pleakley_11
• Track 52 : HomeFry_10
• Track 53 : Scuba_11
• Track 54 : AnClar_71
• Track 55 : BiggityBass_72

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

The start number called the most often in the published annotations is 36, it was called in 21 of the 75 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ahwei_83, Antihero_83, Apex_86, Austelle_85, BrownCNA_86, ChrisnMich_86, Cooper_86, Epah_83, Fanaw_80, Fortunato_83, Frederick_86, Hally898_81, Hangman_85, Hydro_85, JaguarMi_79, JoyceMaria_85, Lambano_81, LittleDigger_84, Lolalove_86, Magpie_81, Mithril_84, Mudslide_85, Nanao_83, Nehemiah_82, Poster_82, Prince_84, QueenPie_78, RawrgerThat_84, Renkei_84, VioletZ_87, Waleliano_84, Xincheng_78, Zemanar_84,

Genes that have the "Most Annotated" start but do not call it:
• AlanGrant_86, Baee_82, BobbyK_85, DigitDog_85, EastView9101_82, GinPorsche_85, JAMaL_84, KarasumaRum_81, Mysterious_82, Nangang_84, Nigel_81, Phelemich_80, Reprobate_82, Rich_81, Serendipitous_83, Shenyu_84, Stinger_83, StinkyVeggy_81, Vincenzo_85,

Genes that do not have the "Most Annotated" start:
• 39HC_087, 40BC_087, Acadian_83, AnClar_71, BiPauneto_7, BiggityBass_72, BirdsNest_96, CRB2_82, Commandaria_8, Donny_83, Emianna_9, Foxboro_9, Funsized_84, Fury_11, Hashim76_93, HomeFry_10, Hosp_082, HubbaBubba_7, IDyn_8, Imvubu_87, Indlovu_82, Jifall16_8, Jolie1_084, KidneyBean_9, Knocker_83, Kurt_9, LilMcDreamy_81, LittleMinkey_99, Marietta_7, Minnow_86, NadineRae_7, NatB6_9, Pemberton_7, PenguinLover67_82, Phomeo_8, Pleakley_11, Quesadilla_83, Reccee_84, Rita130_82, Saguaro_78, Scuba_11, SirJeffery_81,

Suigeneris_84, Sukkupi_7, Tracker_9, WhoseManz_7, Yndexa_7, Zenteno07_96,

Summary by start number:

Start 28:
• Found in 15 of 100 (15.0%) of genes in pham
• Manual Annotations of this start: 4 of 75
• Called 26.7% of time when present
• Phage (with cluster) where this start called: BobbyK_85 (B4), JAMaL_84 (B4), Nigel_81 (B4), Stinger_83 (B4),

Start 29:
• Found in 2 of 100 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 75
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AlanGrant_86 (B4), Vincenzo_85 (B4),

Start 32:
• Found in 2 of 100 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 75
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Indlovu_82 (B11), Saguaro_78 (B7),

Start 34:
• Found in 2 of 100 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 75
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CRB2_82 (B9), PenguinLover67_82 (B9),

Start 35:
• Found in 2 of 100 (2.0%) of genes in pham
• Manual Annotations of this start: 1 of 75
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Quesadilla_83 (B9),

Start 36:
• Found in 52 of 100 (52.0%) of genes in pham
• Manual Annotations of this start: 21 of 75
• Called 63.5% of time when present
• Phage (with cluster) where this start called: Ahwei_83 (B4), Antihero_83 (B4), Apex_86 (B4), Austelle_85 (B4), BrownCNA_86 (B4), ChrisnMich_86 (B4), Cooper_86 (B4), Epah_83 (B4), Fanaw_80 (B4), Fortunato_83 (B4), Frederick_86 (B4), Hally898_81 (B4), Hangman_85 (B4), Hydro_85 (B4), JaguarMi_79 (B4), JoyceMaria_85 (B4), Lambano_81 (B4), LittleDigger_84 (B4), Lolalove_86 (B4), Magpie_81 (B4), Mithril_84 (B4), Mudslide_85 (B4), Nanao_83 (B4), Nehemiah_82 (B5), Poster_82 (B4), Prince_84 (B4), QueenPie_78 (B4), RawrgerThat_84 (B4), Renkei_84 (B4), VioletZ_87 (B4), Waleliano_84 (B4), Xincheng_78 (B4), Zemanar_84 (B4),

Start 37:
• Found in 14 of 100 (14.0%) of genes in pham
• Manual Annotations of this start: 2 of 75

• Called 50.0% of time when present
• Phage (with cluster) where this start called: DigitDog_85 (B5), KarasumaRum_81 (B5), LilMcDreamy_81 (B12), Nangang_84 (B5), Serendipitous_83 (B5), Shenyu_84 (B5), StinkyVeggy_81 (B5),

Start 38:
• Found in 15 of 100 (15.0%) of genes in pham
• Manual Annotations of this start: 5 of 75
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Baee_82 (B5), EastView9101_82 (B5), Mysterious_82 (B5), Reprobate_82 (B5), Rich_81 (B5),

Start 40:
• Found in 4 of 100 (4.0%) of genes in pham
• Manual Annotations of this start: 4 of 75
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Fury_11 (CR5), HomeFry_10 (CR5), Pleakley_11 (CR5), Scuba_11 (CR5),

Start 42:
• Found in 30 of 100 (30.0%) of genes in pham
• Manual Annotations of this start: 10 of 75
• Called 56.7% of time when present
• Phage (with cluster) where this start called: 39HC_087 (B6), 40BC_087 (B6), Acadian_83 (B5), AnClar_71 (DR), BiggityBass_72 (DR), Donny_83 (B5), Funsized_84 (B9), Hosp_082 (B6), Imvubu_87 (B10), Jolie1_084 (B6), Knocker_83 (B9), Minnow_86 (B6), Phelemich_80 (B5), Reccee_84 (B5), Rita130_82 (B5), SirJeffery_81 (B5), Suigeneris_84 (B5),

Start 43:
• Found in 22 of 100 (22.0%) of genes in pham
• Manual Annotations of this start: 12 of 75
• Called 54.5% of time when present
• Phage (with cluster) where this start called: BirdsNest_96 (B13), Commandaria_8 (CR2), Emianna_9 (CR2), Foxboro_9 (CR2), Hashim76_93 (B13), Jifall16_8 (CR2), KidneyBean_9 (CR2), Kurt_9 (CR2), NatB6_9 (CR2), Phomeo_8 (CR2), Tracker_9 (CR2), Zenteno07_96 (B13),

Start 44:
• Found in 12 of 100 (12.0%) of genes in pham
• Manual Annotations of this start: 9 of 75
• Called 75.0% of time when present
• Phage (with cluster) where this start called: BiPauneto_7 (CR4), HubbaBubba_7 (CR4), IDyn_8 (CR4), Marietta_7 (CR4), NadineRae_7 (CR4), Pemberton_7 (CR4), Sukkupi_7 (CR4), WhoseManz_7 (CR4), Yndexa_7 (CR4),

Start 45:
• Found in 41 of 100 (41.0%) of genes in pham
• Manual Annotations of this start: 1 of 75
• Called 4.9% of time when present
• Phage (with cluster) where this start called: GinPorsche_85 (B4), LittleMinkey_99 (B13),

Summary by clusters:

There are 13 clusters represented in this pham: CR2, CR4, CR5, B4, B5, B6, B7, B12, B13, B10, B11, DR, B9,

Info for manual annotations of cluster B10:
•Start number 42 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 37 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:
•Start number 43 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B4:
•Start number 28 was manually annotated 4 times for cluster B4.
•Start number 29 was manually annotated 2 times for cluster B4.
•Start number 36 was manually annotated 21 times for cluster B4.
•Start number 45 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:
•Start number 37 was manually annotated 1 time for cluster B5.
•Start number 38 was manually annotated 5 times for cluster B5.
•Start number 42 was manually annotated 5 times for cluster B5.

Info for manual annotations of cluster B7:
•Start number 32 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:
•Start number 34 was manually annotated 2 times for cluster B9.
•Start number 35 was manually annotated 1 time for cluster B9.
•Start number 42 was manually annotated 2 times for cluster B9.

Info for manual annotations of cluster CR2:
•Start number 43 was manually annotated 9 times for cluster CR2.

Info for manual annotations of cluster CR4:
•Start number 44 was manually annotated 9 times for cluster CR4.

Info for manual annotations of cluster CR5:
•Start number 40 was manually annotated 4 times for cluster CR5.

Info for manual annotations of cluster DR:
•Start number 42 was manually annotated 2 times for cluster DR.

Gene Information:

Gene: 39HC_087 Start: 65341, Stop: 65051, Start Num: 42
Candidate Starts for 39HC_087:
(20, 65503), (25, 65443), (Start: 42 @65341 has 10 MA's), (57, 65233), (62, 65179),

Gene: 40BC_087 Start: 65341, Stop: 65051, Start Num: 42
Candidate Starts for 40BC_087:
(20, 65503), (25, 65443), (Start: 42 @65341 has 10 MA's), (57, 65233), (62, 65179),

Gene: Acadian_83 Start: 63798, Stop: 63526, Start Num: 42
Candidate Starts for Acadian_83:
(27, 63873), (30, 63846), (Start: 42 @63798 has 10 MA's), (59, 63657),

Gene: Ahwei_83 Start: 64624, Stop: 64340, Start Num: 36
Candidate Starts for Ahwei_83:
(Start: 28 @64666 has 4 MA's), (Start: 36 @64624 has 21 MA's), (Start: 45 @64588 has 1 MA's), (52, 64531), (53, 64522), (55, 64513), (56, 64501), (59, 64474), (61, 64459),

Gene: AlanGrant_86 Start: 66429, Stop: 66130, Start Num: 29
Candidate Starts for AlanGrant_86:
(4, 66777), (7, 66699), (Start: 29 @66429 has 2 MA's), (Start: 36 @66393 has 21 MA's), (Start: 38 @66387 has 5 MA's), (59, 66264), (63, 66243), (66, 66234), (68, 66204),

Gene: AnClar_71 Start: 57138, Stop: 56902, Start Num: 42
Candidate Starts for AnClar_71:
(31, 57174), (Start: 42 @57138 has 10 MA's), (48, 57102), (49, 57084),

Gene: Antihero_83 Start: 64547, Stop: 64263, Start Num: 36
Candidate Starts for Antihero_83:
(Start: 28 @64589 has 4 MA's), (Start: 36 @64547 has 21 MA's), (Start: 45 @64511 has 1 MA's), (52, 64454), (53, 64445), (55, 64436), (56, 64424), (59, 64397), (61, 64382),

Gene: Apex_86 Start: 65693, Stop: 65415, Start Num: 36
Candidate Starts for Apex_86:
(Start: 36 @65693 has 21 MA's), (Start: 45 @65663 has 1 MA's), (52, 65606), (53, 65597), (56, 65576), (59, 65549),

Gene: Austelle_85 Start: 66243, Stop: 65959, Start Num: 36
Candidate Starts for Austelle_85:
(Start: 28 @66285 has 4 MA's), (Start: 36 @66243 has 21 MA's), (Start: 45 @66207 has 1 MA's), (52, 66150), (53, 66141), (54, 66138), (55, 66132), (56, 66120), (60, 66087), (61, 66078),

Gene: Baee_82 Start: 64440, Stop: 64162, Start Num: 38
Candidate Starts for Baee_82:
(26, 64512), (Start: 36 @64446 has 21 MA's), (Start: 37 @64443 has 2 MA's), (Start: 38 @64440 has 5 MA's), (Start: 42 @64434 has 10 MA's),

Gene: BiPauneto_7 Start: 3671, Stop: 3916, Start Num: 44
Candidate Starts for BiPauneto_7:
(5, 3311), (Start: 43 @3668 has 12 MA's), (Start: 44 @3671 has 9 MA's), (50, 3737), (56, 3773), (58, 3779), (59, 3809), (66, 3839), (69, 3899), (70, 3905),

Gene: BiggityBass_72 Start: 56910, Stop: 56674, Start Num: 42
Candidate Starts for BiggityBass_72:

(31, 56946), (Start: 42 @56910 has 10 MA's), (48, 56874), (49, 56856),

Gene: BirdsNest_96 Start: 67441, Stop: 67193, Start Num: 43
Candidate Starts for BirdsNest_96:
(Start: 43 @67441 has 12 MA's), (Start: 45 @67423 has 1 MA's), (56, 67339), (62, 67285),

Gene: BobbyK_85 Start: 65257, Stop: 64931, Start Num: 28
Candidate Starts for BobbyK_85:
(Start: 28 @65257 has 4 MA's), (Start: 36 @65215 has 21 MA's), (Start: 45 @65179 has 1 MA's), (52, 65122), (53, 65113), (55, 65104), (56, 65092), (59, 65065), (61, 65050),

Gene: BrownCNA_86 Start: 65641, Stop: 65363, Start Num: 36
Candidate Starts for BrownCNA_86:
(Start: 36 @65641 has 21 MA's), (Start: 45 @65611 has 1 MA's), (49, 65566), (52, 65554), (53, 65545), (56, 65524), (59, 65497),

Gene: CRB2_82 Start: 65913, Stop: 65626, Start Num: 34
Candidate Starts for CRB2_82:
(Start: 34 @65913 has 2 MA's), (Start: 45 @65877 has 1 MA's), (59, 65757), (68, 65697),

Gene: ChrisnMich_86 Start: 64491, Stop: 64228, Start Num: 36
Candidate Starts for ChrisnMich_86:
(Start: 36 @64491 has 21 MA's), (53, 64410), (55, 64401), (59, 64362), (61, 64347), (65, 64335),

Gene: Commandaria_8 Start: 4772, Stop: 5020, Start Num: 43
Candidate Starts for Commandaria_8:
(10, 4496), (13, 4535), (22, 4649), (Start: 43 @4772 has 12 MA's), (59, 4913), (70, 5009),

Gene: Cooper_86 Start: 64991, Stop: 64728, Start Num: 36
Candidate Starts for Cooper_86:
(17, 65192), (Start: 36 @64991 has 21 MA's), (53, 64910), (55, 64901), (59, 64862), (61, 64847), (65, 64835),

Gene: DigitDog_85 Start: 64306, Stop: 64025, Start Num: 37
Candidate Starts for DigitDog_85:
(Start: 36 @64309 has 21 MA's), (Start: 37 @64306 has 2 MA's), (Start: 38 @64303 has 5 MA's), (Start: 42 @64297 has 10 MA's),

Gene: Donny_83 Start: 63632, Stop: 63360, Start Num: 42
Candidate Starts for Donny_83:
(30, 63680), (Start: 42 @63632 has 10 MA's),

Gene: EastView9101_82 Start: 63548, Stop: 63270, Start Num: 38
Candidate Starts for EastView9101_82:
(Start: 36 @63554 has 21 MA's), (Start: 37 @63551 has 2 MA's), (Start: 38 @63548 has 5 MA's), (Start: 42 @63542 has 10 MA's), (59, 63401),

Gene: Emianna_9 Start: 5711, Stop: 5956, Start Num: 43
Candidate Starts for Emianna_9:
(22, 5591), (23, 5594), (Start: 43 @5711 has 12 MA's), (47, 5753), (63, 5867), (67, 5882), (70, 5942),

Gene: Epah_83 Start: 64547, Stop: 64263, Start Num: 36
Candidate Starts for Epah_83:

(Start: 28 @64589 has 4 MA's), (Start: 36 @64547 has 21 MA's), (Start: 45 @64511 has 1 MA's), (52, 64454), (53, 64445), (55, 64436), (56, 64424), (59, 64397), (61, 64382),

Gene: Fanaw_80 Start: 65228, Stop: 64950, Start Num: 36
Candidate Starts for Fanaw_80:
(Start: 36 @65228 has 21 MA's), (49, 65153), (52, 65141), (53, 65132), (56, 65111), (59, 65084),

Gene: Fortunato_83 Start: 65020, Stop: 64742, Start Num: 36
Candidate Starts for Fortunato_83:
(Start: 36 @65020 has 21 MA's), (Start: 45 @64990 has 1 MA's), (49, 64945), (52, 64933), (53, 64924), (56, 64903), (59, 64876),

Gene: Foxboro_9 Start: 5722, Stop: 5967, Start Num: 43
Candidate Starts for Foxboro_9:
(22, 5602), (23, 5605), (Start: 43 @5722 has 12 MA's), (47, 5764), (63, 5878), (67, 5893), (70, 5953),

Gene: Frederick_86 Start: 65507, Stop: 65229, Start Num: 36
Candidate Starts for Frederick_86:
(Start: 36 @65507 has 21 MA's), (Start: 45 @65477 has 1 MA's), (49, 65432), (52, 65420), (53, 65411), (56, 65390), (59, 65363),

Gene: Funsized_84 Start: 66820, Stop: 66524, Start Num: 42
Candidate Starts for Funsized_84:
(14, 67057), (15, 67048), (16, 67045), (22, 66949), (Start: 42 @66820 has 10 MA's), (56, 66712), (57, 66709), (59, 66676),

Gene: Fury_11 Start: 5184, Stop: 5441, Start Num: 40
Candidate Starts for Fury_11:
(19, 5022), (21, 5070), (24, 5091), (Start: 40 @5184 has 4 MA's), (Start: 44 @5193 has 9 MA's), (64, 5355), (70, 5427),

Gene: GinPorsche_85 Start: 64508, Stop: 64260, Start Num: 45
Candidate Starts for GinPorsche_85:
(Start: 28 @64586 has 4 MA's), (Start: 36 @64544 has 21 MA's), (Start: 45 @64508 has 1 MA's), (52, 64451), (53, 64442), (55, 64433), (56, 64421), (59, 64394), (61, 64379),

Gene: Hally898_81 Start: 64384, Stop: 64100, Start Num: 36
Candidate Starts for Hally898_81:
(Start: 28 @64426 has 4 MA's), (Start: 36 @64384 has 21 MA's), (Start: 45 @64348 has 1 MA's), (52, 64291), (53, 64282), (55, 64273), (56, 64261), (59, 64234), (61, 64219),

Gene: Hangman_85 Start: 65719, Stop: 65441, Start Num: 36
Candidate Starts for Hangman_85:
(Start: 36 @65719 has 21 MA's), (Start: 45 @65689 has 1 MA's), (49, 65644), (52, 65632), (53, 65623), (56, 65602), (59, 65575),

Gene: Hashim76_93 Start: 66930, Stop: 66682, Start Num: 43
Candidate Starts for Hashim76_93:
(Start: 43 @66930 has 12 MA's), (Start: 45 @66912 has 1 MA's), (62, 66774),

Gene: HomeFry_10 Start: 4695, Stop: 4946, Start Num: 40
Candidate Starts for HomeFry_10:
(Start: 40 @4695 has 4 MA's), (70, 4932),

Gene: Hosp_082 Start: 62629, Stop: 62333, Start Num: 42
Candidate Starts for Hosp_082:
(20, 62791), (25, 62731), (Start: 42 @62629 has 10 MA's), (53, 62545), (62, 62467),

Gene: HubbaBubba_7 Start: 3528, Stop: 3773, Start Num: 44
Candidate Starts for HubbaBubba_7:
(Start: 43 @3525 has 12 MA's), (Start: 44 @3528 has 9 MA's), (50, 3594), (56, 3630), (58, 3636), (59, 3666), (66, 3696), (67, 3702), (70, 3762),

Gene: Hydro_85 Start: 65594, Stop: 65316, Start Num: 36
Candidate Starts for Hydro_85:
(Start: 36 @65594 has 21 MA's), (Start: 45 @65564 has 1 MA's), (49, 65519), (52, 65507), (53, 65498), (56, 65477), (59, 65450),

Gene: IDyn_8 Start: 4449, Stop: 4694, Start Num: 44
Candidate Starts for IDyn_8:
(Start: 43 @4446 has 12 MA's), (Start: 44 @4449 has 9 MA's), (50, 4515), (56, 4551), (58, 4557), (59, 4587), (66, 4617), (67, 4623), (70, 4683),

Gene: Imvubu_87 Start: 64765, Stop: 64490, Start Num: 42
Candidate Starts for Imvubu_87:
(1, 65203), (6, 65092), (8, 65053), (9, 65047), (11, 65023), (12, 64999), (18, 64945), (33, 64783), (Start: 42 @64765 has 10 MA's),

Gene: Indlovu_82 Start: 65227, Stop: 64946, Start Num: 32
Candidate Starts for Indlovu_82:
(Start: 32 @65227 has 2 MA's), (57, 65110),

Gene: JAMaL_84 Start: 65126, Stop: 64800, Start Num: 28
Candidate Starts for JAMaL_84:
(Start: 28 @65126 has 4 MA's), (Start: 36 @65084 has 21 MA's), (Start: 45 @65048 has 1 MA's), (52, 64991), (53, 64982), (55, 64973), (56, 64961), (59, 64934), (61, 64919),

Gene: JaguarMi_79 Start: 65587, Stop: 65303, Start Num: 36
Candidate Starts for JaguarMi_79:
(Start: 36 @65587 has 21 MA's), (Start: 45 @65551 has 1 MA's), (53, 65485), (55, 65476), (56, 65464), (60, 65431), (66, 65407),

Gene: Jifall16_8 Start: 5183, Stop: 5428, Start Num: 43
Candidate Starts for Jifall16_8:
(22, 5063), (23, 5066), (Start: 43 @5183 has 12 MA's), (47, 5225), (63, 5339), (67, 5354), (70, 5414),

Gene: Jolie1_084 Start: 64656, Stop: 64360, Start Num: 42
Candidate Starts for Jolie1_084:
(20, 64818), (25, 64758), (Start: 42 @64656 has 10 MA's), (53, 64572), (57, 64548), (62, 64494),

Gene: JoyceMaria_85 Start: 65545, Stop: 65267, Start Num: 36
Candidate Starts for JoyceMaria_85:
(Start: 36 @65545 has 21 MA's), (Start: 45 @65515 has 1 MA's), (49, 65470), (52, 65458), (53, 65449), (56, 65428), (59, 65401),

Gene: KarasumaRum_81 Start: 63704, Stop: 63423, Start Num: 37

Candidate Starts for KarasumaRum_81:
(Start: 36 @63707 has 21 MA's), (Start: 37 @63704 has 2 MA's), (Start: 38 @63701 has 5 MA's), (41, 63698), (Start: 42 @63695 has 10 MA's),

Gene: KidneyBean_9 Start: 5528, Stop: 5773, Start Num: 43
Candidate Starts for KidneyBean_9:
(22, 5408), (23, 5411), (Start: 43 @5528 has 12 MA's), (47, 5570), (63, 5684), (67, 5699), (70, 5759),

Gene: Knocker_83 Start: 65702, Stop: 65406, Start Num: 42
Candidate Starts for Knocker_83:
(14, 65939), (15, 65930), (Start: 42 @65702 has 10 MA's), (49, 65636), (51, 65627), (56, 65594), (59, 65558),

Gene: Kurt_9 Start: 5711, Stop: 5956, Start Num: 43
Candidate Starts for Kurt_9:
(22, 5591), (23, 5594), (Start: 43 @5711 has 12 MA's), (47, 5753), (63, 5867), (67, 5882), (70, 5942),

Gene: Lambano_81 Start: 64384, Stop: 64100, Start Num: 36
Candidate Starts for Lambano_81:
(Start: 28 @64426 has 4 MA's), (Start: 36 @64384 has 21 MA's), (Start: 45 @64348 has 1 MA's), (52, 64291), (53, 64282), (55, 64273), (56, 64261), (59, 64234), (61, 64219),

Gene: LilMcDreamy_81 Start: 63946, Stop: 63668, Start Num: 37
Candidate Starts for LilMcDreamy_81:
(Start: 37 @63946 has 2 MA's), (Start: 42 @63940 has 10 MA's),

Gene: LittleDigger_84 Start: 64484, Stop: 64200, Start Num: 36
Candidate Starts for LittleDigger_84:
(Start: 28 @64526 has 4 MA's), (Start: 36 @64484 has 21 MA's), (Start: 45 @64448 has 1 MA's), (52, 64391), (53, 64382), (55, 64373), (56, 64361), (59, 64334), (61, 64319),

Gene: LittleMinkey_99 Start: 67387, Stop: 67157, Start Num: 45
Candidate Starts for LittleMinkey_99:
(Start: 43 @67405 has 12 MA's), (Start: 45 @67387 has 1 MA's), (62, 67249),

Gene: Lolalove_86 Start: 65538, Stop: 65260, Start Num: 36
Candidate Starts for Lolalove_86:
(Start: 36 @65538 has 21 MA's), (Start: 45 @65508 has 1 MA's), (49, 65463), (52, 65451), (53, 65442), (56, 65421), (59, 65394),

Gene: Magpie_81 Start: 65221, Stop: 64943, Start Num: 36
Candidate Starts for Magpie_81:
(Start: 36 @65221 has 21 MA's), (49, 65146), (52, 65134), (53, 65125), (56, 65104), (59, 65077),

Gene: Marietta_7 Start: 3861, Stop: 4106, Start Num: 44
Candidate Starts for Marietta_7:
(Start: 43 @3858 has 12 MA's), (Start: 44 @3861 has 9 MA's), (50, 3927), (56, 3963), (58, 3969), (59, 3999), (66, 4029), (67, 4035), (70, 4095),

Gene: Minnow_86 Start: 64769, Stop: 64485, Start Num: 42
Candidate Starts for Minnow_86:
(20, 64931), (25, 64871), (Start: 42 @64769 has 10 MA's), (59, 64625),

Gene: Mithril_84 Start: 65378, Stop: 65100, Start Num: 36
Candidate Starts for Mithril_84:
(Start: 36 @65378 has 21 MA's), (Start: 45 @65348 has 1 MA's), (49, 65303), (52, 65291), (53, 65282), (56, 65261), (59, 65234),

Gene: Mudslide_85 Start: 65768, Stop: 65490, Start Num: 36
Candidate Starts for Mudslide_85:
(Start: 36 @65768 has 21 MA's), (Start: 45 @65738 has 1 MA's), (49, 65693), (52, 65681), (53, 65672), (56, 65651), (59, 65624),

Gene: Mysterious_82 Start: 63888, Stop: 63610, Start Num: 38
Candidate Starts for Mysterious_82:
(Start: 36 @63894 has 21 MA's), (Start: 37 @63891 has 2 MA's), (Start: 38 @63888 has 5 MA's), (Start: 42 @63882 has 10 MA's), (56, 63777), (59, 63741), (70, 63645),

Gene: NadineRae_7 Start: 3565, Stop: 3810, Start Num: 44
Candidate Starts for NadineRae_7:
(Start: 43 @3562 has 12 MA's), (Start: 44 @3565 has 9 MA's), (50, 3631), (56, 3667), (58, 3673), (59, 3703), (66, 3733), (67, 3739), (70, 3799),

Gene: Nanao_83 Start: 64397, Stop: 64113, Start Num: 36
Candidate Starts for Nanao_83:
(Start: 28 @64439 has 4 MA's), (Start: 36 @64397 has 21 MA's), (Start: 45 @64361 has 1 MA's), (52, 64304), (53, 64295), (55, 64286), (56, 64274), (59, 64247), (61, 64232),

Gene: Nangang_84 Start: 64289, Stop: 64008, Start Num: 37
Candidate Starts for Nangang_84:
(Start: 36 @64292 has 21 MA's), (Start: 37 @64289 has 2 MA's), (Start: 38 @64286 has 5 MA's), (Start: 42 @64280 has 10 MA's),

Gene: NatB6_9 Start: 5790, Stop: 6035, Start Num: 43
Candidate Starts for NatB6_9:
(22, 5670), (23, 5673), (Start: 43 @5790 has 12 MA's), (47, 5832), (63, 5946), (67, 5961), (70, 6021),

Gene: Nehemiah_82 Start: 63774, Stop: 63490, Start Num: 36
Candidate Starts for Nehemiah_82:
(Start: 36 @63774 has 21 MA's), (Start: 37 @63771 has 2 MA's), (Start: 38 @63768 has 5 MA's), (Start: 42 @63762 has 10 MA's), (56, 63657), (59, 63621), (70, 63525),

Gene: Nigel_81 Start: 63962, Stop: 63636, Start Num: 28
Candidate Starts for Nigel_81:
(3, 64301), (Start: 28 @63962 has 4 MA's), (Start: 36 @63920 has 21 MA's), (Start: 45 @63884 has 1 MA's), (46, 63860), (53, 63818), (55, 63809), (59, 63770), (61, 63755), (66, 63740),

Gene: Pemberton_7 Start: 3521, Stop: 3766, Start Num: 44
Candidate Starts for Pemberton_7:
(5, 3296), (Start: 43 @3518 has 12 MA's), (Start: 44 @3521 has 9 MA's), (50, 3587), (56, 3623), (58, 3629), (59, 3659), (66, 3689), (69, 3749), (70, 3755),

Gene: PenguinLover67_82 Start: 63644, Stop: 63351, Start Num: 34
Candidate Starts for PenguinLover67_82:
(Start: 34 @63644 has 2 MA's), (Start: 45 @63602 has 1 MA's), (56, 63518), (68, 63422),

Gene: Phelemich_80 Start: 63840, Stop: 63568, Start Num: 42
Candidate Starts for Phelemich_80:
(2, 64257), (26, 63918), (Start: 36 @63852 has 21 MA's), (Start: 37 @63849 has 2 MA's), (Start: 38 @63846 has 5 MA's), (Start: 42 @63840 has 10 MA's), (52, 63765), (56, 63735), (59, 63699), (70, 63603),

Gene: Phomeo_8 Start: 5364, Stop: 5609, Start Num: 43
Candidate Starts for Phomeo_8:
(22, 5244), (23, 5247), (Start: 43 @5364 has 12 MA's), (47, 5406), (63, 5520), (67, 5535), (70, 5595),

Gene: Pleakley_11 Start: 5184, Stop: 5441, Start Num: 40
Candidate Starts for Pleakley_11:
(19, 5022), (21, 5070), (24, 5091), (Start: 40 @5184 has 4 MA's), (Start: 44 @5193 has 9 MA's), (64, 5355), (70, 5427),

Gene: Poster_82 Start: 64398, Stop: 64114, Start Num: 36
Candidate Starts for Poster_82:
(Start: 28 @64440 has 4 MA's), (Start: 36 @64398 has 21 MA's), (Start: 45 @64362 has 1 MA's), (52, 64305), (53, 64296), (55, 64287), (56, 64275), (59, 64248), (61, 64233),

Gene: Prince_84 Start: 65635, Stop: 65357, Start Num: 36
Candidate Starts for Prince_84:
(Start: 36 @65635 has 21 MA's), (Start: 45 @65605 has 1 MA's), (52, 65548), (53, 65539), (56, 65518), (59, 65491),

Gene: QueenPie_78 Start: 64138, Stop: 63863, Start Num: 36
Candidate Starts for QueenPie_78:
(Start: 36 @64138 has 21 MA's), (Start: 45 @64111 has 1 MA's), (52, 64054), (53, 64045), (55, 64036), (59, 63997), (61, 63982),

Gene: Quesadilla_83 Start: 64272, Stop: 63979, Start Num: 35
Candidate Starts for Quesadilla_83:
(Start: 35 @64272 has 1 MA's), (Start: 45 @64230 has 1 MA's),

Gene: RawrgerThat_84 Start: 65226, Stop: 64948, Start Num: 36
Candidate Starts for RawrgerThat_84:
(Start: 36 @65226 has 21 MA's), (Start: 45 @65196 has 1 MA's), (49, 65151), (52, 65139), (53, 65130), (56, 65109), (59, 65082),

Gene: Reccee_84 Start: 64102, Stop: 63830, Start Num: 42
Candidate Starts for Reccee_84:
(30, 64150), (Start: 42 @64102 has 10 MA's),

Gene: Renkei_84 Start: 64478, Stop: 64194, Start Num: 36
Candidate Starts for Renkei_84:
(Start: 28 @64520 has 4 MA's), (Start: 36 @64478 has 21 MA's), (Start: 45 @64442 has 1 MA's), (52, 64385), (53, 64376), (55, 64367), (56, 64355), (59, 64328), (61, 64313),

Gene: Reprobate_82 Start: 63851, Stop: 63573, Start Num: 38
Candidate Starts for Reprobate_82:
(2, 64262), (26, 63923), (Start: 36 @63857 has 21 MA's), (Start: 37 @63854 has 2 MA's), (Start: 38 @63851 has 5 MA's), (Start: 42 @63845 has 10 MA's), (52, 63770), (56, 63740), (59, 63704), (70, 63608),

Gene: Rich_81 Start: 64507, Stop: 64226, Start Num: 38
Candidate Starts for Rich_81:
(26, 64579), (Start: 36 @64513 has 21 MA's), (Start: 37 @64510 has 2 MA's), (Start: 38 @64507 has 5 MA's), (39, 64504), (Start: 42 @64498 has 10 MA's),

Gene: Rita130_82 Start: 63772, Stop: 63500, Start Num: 42
Candidate Starts for Rita130_82:
(27, 63847), (30, 63820), (Start: 42 @63772 has 10 MA's), (59, 63631),

Gene: Saguaro_78 Start: 62799, Stop: 62497, Start Num: 32
Candidate Starts for Saguaro_78:
(Start: 32 @62799 has 2 MA's), (Start: 35 @62790 has 1 MA's), (Start: 45 @62754 has 1 MA's), (59, 62628),

Gene: Scuba_11 Start: 5282, Stop: 5539, Start Num: 40
Candidate Starts for Scuba_11:
(19, 5120), (21, 5168), (Start: 40 @5282 has 4 MA's), (Start: 44 @5291 has 9 MA's), (59, 5429), (64, 5453), (70, 5525),

Gene: Serendipitous_83 Start: 63637, Stop: 63356, Start Num: 37
Candidate Starts for Serendipitous_83:
(Start: 36 @63640 has 21 MA's), (Start: 37 @63637 has 2 MA's), (Start: 38 @63634 has 5 MA's), (Start: 42 @63628 has 10 MA's),

Gene: Shenyu_84 Start: 64305, Stop: 64024, Start Num: 37
Candidate Starts for Shenyu_84:
(Start: 36 @64308 has 21 MA's), (Start: 37 @64305 has 2 MA's), (Start: 38 @64302 has 5 MA's), (Start: 42 @64296 has 10 MA's),

Gene: SirJeffery_81 Start: 63582, Stop: 63310, Start Num: 42
Candidate Starts for SirJeffery_81:
(30, 63630), (Start: 42 @63582 has 10 MA's), (59, 63441),

Gene: Stinger_83 Start: 64081, Stop: 63758, Start Num: 28
Candidate Starts for Stinger_83:
(Start: 28 @64081 has 4 MA's), (Start: 36 @64039 has 21 MA's), (Start: 45 @64006 has 1 MA's), (46, 63982), (53, 63940), (55, 63931), (59, 63892), (66, 63862),

Gene: StinkyVeggy_81 Start: 63704, Stop: 63423, Start Num: 37
Candidate Starts for StinkyVeggy_81:
(Start: 36 @63707 has 21 MA's), (Start: 37 @63704 has 2 MA's), (Start: 38 @63701 has 5 MA's), (41, 63698), (Start: 42 @63695 has 10 MA's),

Gene: Suigeneris_84 Start: 64020, Stop: 63748, Start Num: 42
Candidate Starts for Suigeneris_84:
(27, 64095), (30, 64068), (Start: 42 @64020 has 10 MA's),

Gene: Sukkupi_7 Start: 3562, Stop: 3807, Start Num: 44
Candidate Starts for Sukkupi_7:
(5, 3202), (Start: 43 @3559 has 12 MA's), (Start: 44 @3562 has 9 MA's), (50, 3628), (56, 3664), (58, 3670), (59, 3700), (66, 3730), (69, 3790), (70, 3796),

Gene: Tracker_9 Start: 5503, Stop: 5748, Start Num: 43
Candidate Starts for Tracker_9:
(22, 5383), (23, 5386), (Start: 43 @5503 has 12 MA's), (47, 5545), (63, 5659), (67, 5674), (70, 5734),

Gene: Vincenzo_85 Start: 66459, Stop: 66160, Start Num: 29
Candidate Starts for Vincenzo_85:
(4, 66807), (7, 66729), (Start: 29 @66459 has 2 MA's), (Start: 36 @66423 has 21 MA's), (Start: 38 @66417 has 5 MA's), (59, 66294), (63, 66273), (66, 66264), (68, 66234),

Gene: VioletZ_87 Start: 65725, Stop: 65447, Start Num: 36
Candidate Starts for VioletZ_87:
(Start: 36 @65725 has 21 MA's), (Start: 45 @65695 has 1 MA's), (49, 65650), (52, 65638), (53, 65629), (56, 65608), (59, 65581),

Gene: Waleliano_84 Start: 65393, Stop: 65115, Start Num: 36
Candidate Starts for Waleliano_84:
(Start: 36 @65393 has 21 MA's), (Start: 45 @65363 has 1 MA's), (49, 65318), (52, 65306), (53, 65297), (56, 65276), (59, 65249),

Gene: WhoseManz_7 Start: 3472, Stop: 3717, Start Num: 44
Candidate Starts for WhoseManz_7:
(5, 3247), (Start: 43 @3469 has 12 MA's), (Start: 44 @3472 has 9 MA's), (50, 3538), (56, 3574), (58, 3580), (59, 3610), (66, 3640), (67, 3646), (70, 3706),

Gene: Xincheng_78 Start: 65538, Stop: 65254, Start Num: 36
Candidate Starts for Xincheng_78:
(Start: 36 @65538 has 21 MA's), (Start: 45 @65502 has 1 MA's), (53, 65436), (55, 65427), (56, 65415), (60, 65382), (66, 65358),

Gene: Yndexa_7 Start: 3562, Stop: 3807, Start Num: 44
Candidate Starts for Yndexa_7:
(5, 3202), (Start: 43 @3559 has 12 MA's), (Start: 44 @3562 has 9 MA's), (50, 3628), (56, 3664), (58, 3670), (59, 3700), (66, 3730), (69, 3790), (70, 3796),

Gene: Zemanar_84 Start: 65406, Stop: 65128, Start Num: 36
Candidate Starts for Zemanar_84:
(Start: 36 @65406 has 21 MA's), (Start: 45 @65376 has 1 MA's), (49, 65331), (52, 65319), (53, 65310), (56, 65289), (59, 65262),

Gene: Zenteno07_96 Start: 67053, Stop: 66802, Start Num: 43
Candidate Starts for Zenteno07_96:
(Start: 43 @67053 has 12 MA's), (Start: 45 @67035 has 1 MA's), (62, 66894),