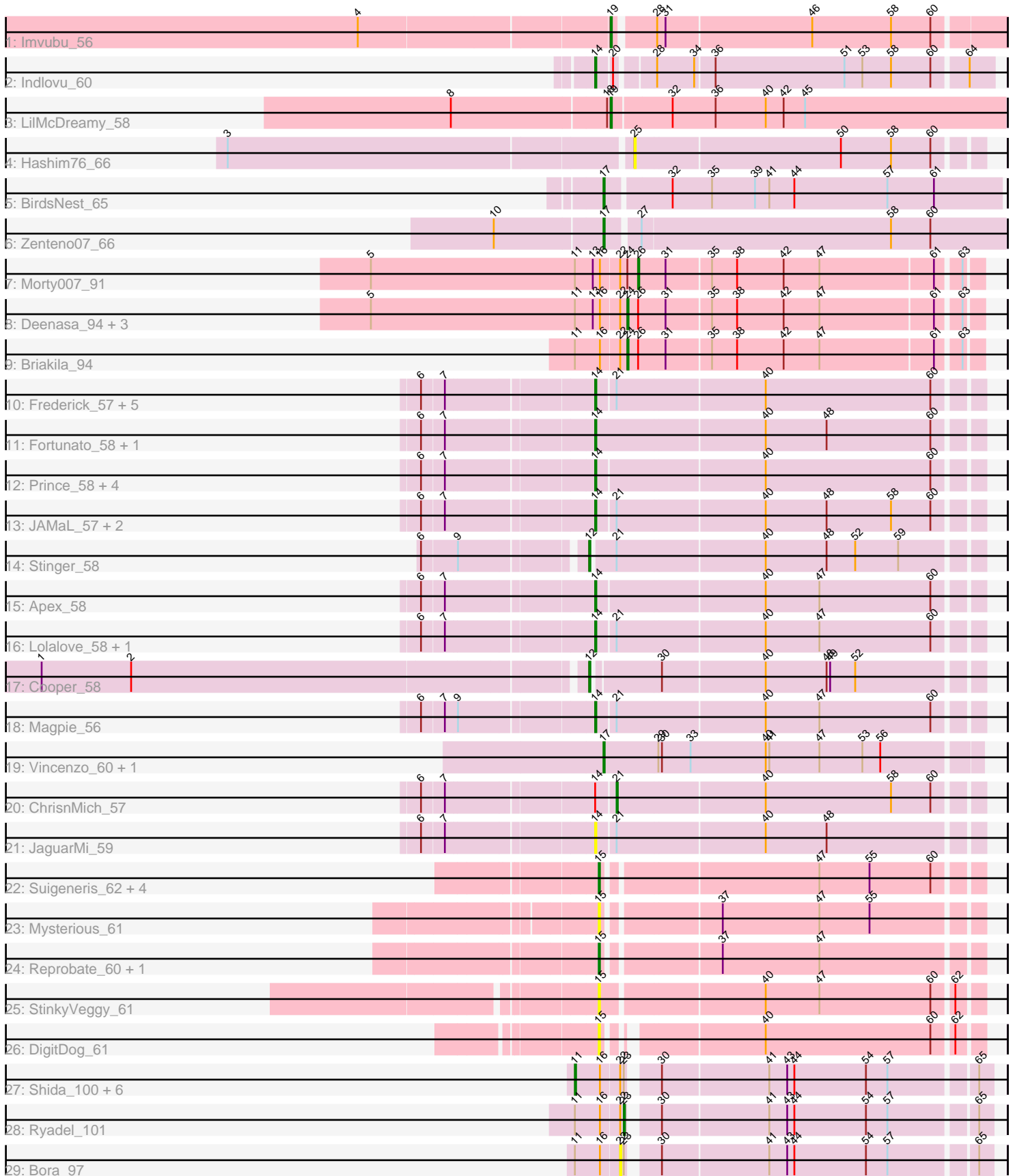


Pham 156404



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 156404 Report

This analysis was run 04/12/24 on database version 558.

Pham number 156404 has 57 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Imvubu_56
- Track 2 : Indlovu_60
- Track 3 : LilMcDreamy_58
- Track 4 : Hashim76_66
- Track 5 : BirdsNest_65
- Track 6 : Zenteno07_66
- Track 7 : Morty007_91
- Track 8 : Deenasa_94, RagingRooster_93, Neos5_92, SynergyX_94
- Track 9 : Briakila_94
- Track 10 : Frederick_57, BobbyK_57, Waleliano_57, Hangman_57, BrownCNA_59, Zemanar_58
- Track 11 : Fortunato_58, RawrgerThat_58
- Track 12 : Prince_58, Heath_56, Austelle_58, Hydro_57, Mudslide_57
- Track 13 : JAMaL_57, Poster_56, Nanao_56
- Track 14 : Stinger_58
- Track 15 : Apex_58
- Track 16 : Lolalove_58, VioletZ_59
- Track 17 : Cooper_58
- Track 18 : Magpie_56
- Track 19 : Vincenzo_60, AlanGrant_61
- Track 20 : ChrisnMich_57
- Track 21 : JaguarMi_59
- Track 22 : Suigeneris_62, SirJeffery_60, EastView9101_62, Donny_62, Acadian_61
- Track 23 : Mysterious_61
- Track 24 : Reprobate_60, Phelemich_59
- Track 25 : StinkyVeggy_61
- Track 26 : DigitDog_61
- Track 27 : Shida_100, Catdawg_99, Krili_100, SchoolBus_97, TelAviv_95, Idergollasper_100, Familton_99
- Track 28 : Ryadel_101
- Track 29 : Bora_97

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

The start number called the most often in the published annotations is 14, it was called in 16 of the 44 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apex_58, Austelle_58, BobbyK_57, BrownCNA_59, Fortunato_58, Frederick_57, Hangman_57, Heath_56, Hydro_57, Indlovu_60, JAMaL_57, JaguarMi_59, Lolalove_58, Magpie_56, Mudslide_57, Nanao_56, Poster_56, Prince_58, RawrgerThat_58, VioletZ_59, Waleliano_57, Zemanar_58,

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

- ChrisnMich_57,

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

- Acadian_61, AlanGrant_61, BirdsNest_65, Bora_97, Briakila_94, Catdawg_99, Cooper_58, Deenasa_94, DigitDog_61, Donny_62, EastView9101_62, Familton_99, Hashim76_66, Idergollasper_100, Imvubu_56, Krili_100, LilMcDreamy_58, Morty007_91, Mysterious_61, Neos5_92, Phelemich_59, RagingRooster_93, Reprobate_60, Ryadel_101, SchoolBus_97, Shida_100, SirJeffery_60, Stinger_58, StinkyVeggy_61, Suigeneris_62, SynergyX_94, TelAviv_95, Vincenzo_60, Zenteno07_66,

Summary by start number:

Start 11:

- Found in 15 of 57 (26.3%) of genes in pham
- Manual Annotations of this start: 7 of 44
- Called 46.7% of time when present
- Phage (with cluster) where this start called: Catdawg_99 (O), Familton_99 (O), Idergollasper_100 (O), Krili_100 (O), SchoolBus_97 (O), Shida_100 (O), TelAviv_95 (O),

Start 12:

- Found in 2 of 57 (3.5%) of genes in pham
- Manual Annotations of this start: 2 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cooper_58 (B4), Stinger_58 (B4),

Start 14:

- Found in 23 of 57 (40.4%) of genes in pham
- Manual Annotations of this start: 16 of 44
- Called 95.7% of time when present
- Phage (with cluster) where this start called: Apex_58 (B4), Austelle_58 (B4), BobbyK_57 (B4), BrownCNA_59 (B4), Fortunato_58 (B4), Frederick_57 (B4), Hangman_57 (B4), Heath_56 (B4), Hydro_57 (B4), Indlovu_60 (B11), JAMaL_57 (B4), JaguarMi_59 (B4), Lolalove_58 (B4), Magpie_56 (B4), Mudslide_57 (B4), Nanao_56 (B4), Poster_56 (B4), Prince_58 (B4), RawrgerThat_58 (B4), VioletZ_59 (B4), Waleliano_57 (B4), Zemanar_58 (B4),

Start 15:

- Found in 10 of 57 (17.5%) of genes in pham
- Manual Annotations of this start: 5 of 44
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Acadian_61 (B5), DigitDog_61 (B5), Donny_62 (B5), EastView9101_62 (B5), Mysterious_61 (B5), Phelemich_59 (B5), Reprobate_60 (B5), SirJeffery_60 (B5), StinkyVeggy_61 (B5), Suigeneris_62 (B5),

Start 17:

- Found in 4 of 57 (7.0%) of genes in pham
- Manual Annotations of this start: 4 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant_61 (B4), BirdsNest_65 (B13), Vincenzo_60 (B4), Zenteno07_66 (B13),

Start 19:

- Found in 2 of 57 (3.5%) of genes in pham
- Manual Annotations of this start: 2 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu_56 (B10), LilMcDreamy_58 (B12),

Start 21:

- Found in 15 of 57 (26.3%) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 6.7% of time when present
- Phage (with cluster) where this start called: ChrisnMich_57 (B4),

Start 22:

- Found in 15 of 57 (26.3%) of genes in pham
- No Manual Annotations of this start.
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Bora_97 (O),

Start 23:

- Found in 9 of 57 (15.8%) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Ryadel_101 (O),

Start 24:

- Found in 6 of 57 (10.5%) of genes in pham
- Manual Annotations of this start: 5 of 44
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Briakila_94 (B3), Deenasa_94 (B3), Neos5_92 (B3), RagingRooster_93 (B3), SynergyX_94 (B3),

Start 25:

- Found in 1 of 57 (1.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hashim76_66 (B13),

Start 26:

- Found in 6 of 57 (10.5%) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 16.7% of time when present

- Phage (with cluster) where this start called: Morty007_91 (B3),

Summary by clusters:

There are 8 clusters represented in this pham: B11, O, B4, B5, B12, B13, B10, B3,

Info for manual annotations of cluster B10:

- Start number 19 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 14 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 19 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 17 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B3:

- Start number 24 was manually annotated 5 times for cluster B3.
- Start number 26 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster B4:

- Start number 12 was manually annotated 2 times for cluster B4.
- Start number 14 was manually annotated 15 times for cluster B4.
- Start number 17 was manually annotated 2 times for cluster B4.
- Start number 21 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:

- Start number 15 was manually annotated 5 times for cluster B5.

Info for manual annotations of cluster O:

- Start number 11 was manually annotated 7 times for cluster O.
- Start number 23 was manually annotated 1 time for cluster O.

Gene Information:

Gene: Acadian_61 Start: 55866, Stop: 55570, Start Num: 15

Candidate Starts for Acadian_61:

(Start: 15 @55866 has 5 MA's), (47, 55698), (55, 55656), (60, 55605),

Gene: AlanGrant_61 Start: 57173, Stop: 56865, Start Num: 17

Candidate Starts for AlanGrant_61:

(Start: 17 @57173 has 4 MA's), (29, 57128), (30, 57125), (33, 57101), (40, 57038), (41, 57035), (47, 56993), (53, 56957), (56, 56942),

Gene: Apex_58 Start: 56278, Stop: 55970, Start Num: 14

Candidate Starts for Apex_58:

(6, 56410), (7, 56392), (Start: 14 @56278 has 16 MA's), (40, 56143), (47, 56098), (60, 56005),

Gene: Austelle_58 Start: 56734, Stop: 56426, Start Num: 14

Candidate Starts for Austelle_58:

(6, 56866), (7, 56848), (Start: 14 @56734 has 16 MA's), (40, 56599), (60, 56461),

Gene: BirdsNest_65 Start: 55857, Stop: 55531, Start Num: 17

Candidate Starts for BirdsNest_65:

(Start: 17 @55857 has 4 MA's), (32, 55806), (35, 55773), (39, 55737), (41, 55725), (44, 55704), (57, 55626), (61, 55587),

Gene: BobbyK_57 Start: 56044, Stop: 55736, Start Num: 14

Candidate Starts for BobbyK_57:

(6, 56176), (7, 56158), (Start: 14 @56044 has 16 MA's), (Start: 21 @56029 has 1 MA's), (40, 55909), (60, 55771),

Gene: Bora_97 Start: 61792, Stop: 61508, Start Num: 22

Candidate Starts for Bora_97:

(Start: 11 @61828 has 7 MA's), (16, 61807), (22, 61792), (Start: 23 @61789 has 1 MA's), (30, 61771), (41, 61684), (43, 61669), (44, 61663), (54, 61603), (57, 61585), (65, 61519),

Gene: Briakila_94 Start: 65038, Stop: 64757, Start Num: 24

Candidate Starts for Briakila_94:

(Start: 11 @65080 has 7 MA's), (16, 65059), (22, 65044), (Start: 24 @65038 has 5 MA's), (Start: 26 @65029 has 1 MA's), (31, 65008), (35, 64972), (38, 64951), (42, 64912), (47, 64882), (61, 64789), (63, 64771),

Gene: BrownCNA_59 Start: 56401, Stop: 56093, Start Num: 14

Candidate Starts for BrownCNA_59:

(6, 56533), (7, 56515), (Start: 14 @56401 has 16 MA's), (Start: 21 @56386 has 1 MA's), (40, 56266), (60, 56128),

Gene: Catdawg_99 Start: 62098, Stop: 61778, Start Num: 11

Candidate Starts for Catdawg_99:

(Start: 11 @62098 has 7 MA's), (16, 62077), (22, 62062), (Start: 23 @62059 has 1 MA's), (30, 62041), (41, 61954), (43, 61939), (44, 61933), (54, 61873), (57, 61855), (65, 61789),

Gene: ChrisnMich_57 Start: 55054, Stop: 54761, Start Num: 21

Candidate Starts for ChrisnMich_57:

(6, 55201), (7, 55183), (Start: 14 @55069 has 16 MA's), (Start: 21 @55054 has 1 MA's), (40, 54934), (58, 54829), (60, 54796),

Gene: Cooper_58 Start: 55230, Stop: 54922, Start Num: 12

Candidate Starts for Cooper_58:

(1, 55668), (2, 55593), (Start: 12 @55230 has 2 MA's), (30, 55179), (40, 55095), (48, 55044), (49, 55041), (52, 55020),

Gene: Deenasa_94 Start: 65761, Stop: 65480, Start Num: 24

Candidate Starts for Deenasa_94:

(5, 65974), (Start: 11 @65803 has 7 MA's), (13, 65788), (16, 65782), (22, 65767), (Start: 24 @65761 has 5 MA's), (Start: 26 @65752 has 1 MA's), (31, 65731), (35, 65695), (38, 65674), (42, 65635), (47, 65605), (61, 65512), (63, 65494),

Gene: DigitDog_61 Start: 55800, Stop: 55516, Start Num: 15

Candidate Starts for DigitDog_61:

(Start: 15 @55800 has 5 MA's), (40, 55689), (60, 55551), (62, 55536),

Gene: Donny_62 Start: 55912, Stop: 55616, Start Num: 15
Candidate Starts for Donny_62:
(Start: 15 @55912 has 5 MA's), (47, 55744), (55, 55702), (60, 55651),

Gene: EastView9101_62 Start: 55721, Stop: 55425, Start Num: 15
Candidate Starts for EastView9101_62:
(Start: 15 @55721 has 5 MA's), (47, 55553), (55, 55511), (60, 55460),

Gene: Familton_99 Start: 61510, Stop: 61190, Start Num: 11
Candidate Starts for Familton_99:
(Start: 11 @61510 has 7 MA's), (16, 61489), (22, 61474), (Start: 23 @61471 has 1 MA's), (30, 61453),
(41, 61366), (43, 61351), (44, 61345), (54, 61285), (57, 61267), (65, 61201),

Gene: Fortunato_58 Start: 56096, Stop: 55785, Start Num: 14
Candidate Starts for Fortunato_58:
(6, 56228), (7, 56210), (Start: 14 @56096 has 16 MA's), (40, 55958), (48, 55907), (60, 55820),

Gene: Frederick_57 Start: 55987, Stop: 55679, Start Num: 14
Candidate Starts for Frederick_57:
(6, 56119), (7, 56101), (Start: 14 @55987 has 16 MA's), (Start: 21 @55972 has 1 MA's), (40, 55852),
(60, 55714),

Gene: Hangman_57 Start: 56144, Stop: 55836, Start Num: 14
Candidate Starts for Hangman_57:
(6, 56276), (7, 56258), (Start: 14 @56144 has 16 MA's), (Start: 21 @56129 has 1 MA's), (40, 56009),
(60, 55871),

Gene: Hashim76_66 Start: 56241, Stop: 55963, Start Num: 25
Candidate Starts for Hashim76_66:
(3, 56568), (25, 56241), (50, 56073), (58, 56031), (60, 55998),

Gene: Heath_56 Start: 55770, Stop: 55462, Start Num: 14
Candidate Starts for Heath_56:
(6, 55902), (7, 55884), (Start: 14 @55770 has 16 MA's), (40, 55635), (60, 55497),

Gene: Hydro_57 Start: 56121, Stop: 55813, Start Num: 14
Candidate Starts for Hydro_57:
(6, 56253), (7, 56235), (Start: 14 @56121 has 16 MA's), (40, 55986), (60, 55848),

Gene: Idergollasper_100 Start: 62058, Stop: 61738, Start Num: 11
Candidate Starts for Idergollasper_100:
(Start: 11 @62058 has 7 MA's), (16, 62037), (22, 62022), (Start: 23 @62019 has 1 MA's), (30, 62001),
(41, 61914), (43, 61899), (44, 61893), (54, 61833), (57, 61815), (65, 61749),

Gene: Imvubu_56 Start: 53913, Stop: 53602, Start Num: 19
Candidate Starts for Imvubu_56:
(4, 54114), (Start: 19 @53913 has 2 MA's), (28, 53883), (31, 53877), (46, 53757), (58, 53691), (60,
53658),

Gene: Indlovu_60 Start: 56251, Stop: 55940, Start Num: 14
Candidate Starts for Indlovu_60:

(Start: 14 @56251 has 16 MA's), (20, 56239), (28, 56212), (34, 56182), (36, 56167), (51, 56059), (53, 56044), (58, 56020), (60, 55987), (64, 55960),

Gene: JAMaL_57 Start: 56162, Stop: 55854, Start Num: 14

Candidate Starts for JAMaL_57:

(6, 56294), (7, 56276), (Start: 14 @56162 has 16 MA's), (Start: 21 @56147 has 1 MA's), (40, 56027), (48, 55976), (58, 55922), (60, 55889),

Gene: JaguarMi_59 Start: 57188, Stop: 56880, Start Num: 14

Candidate Starts for JaguarMi_59:

(6, 57320), (7, 57302), (Start: 14 @57188 has 16 MA's), (Start: 21 @57173 has 1 MA's), (40, 57053), (48, 57002),

Gene: Krili_100 Start: 61607, Stop: 61287, Start Num: 11

Candidate Starts for Krili_100:

(Start: 11 @61607 has 7 MA's), (16, 61586), (22, 61571), (Start: 23 @61568 has 1 MA's), (30, 61550), (41, 61463), (43, 61448), (44, 61442), (54, 61382), (57, 61364), (65, 61298),

Gene: LilMcDreamy_58 Start: 55359, Stop: 55033, Start Num: 19

Candidate Starts for LilMcDreamy_58:

(8, 55488), (18, 55362), (Start: 19 @55359 has 2 MA's), (32, 55311), (36, 55275), (40, 55233), (42, 55218), (45, 55200),

Gene: Lolalove_58 Start: 56101, Stop: 55793, Start Num: 14

Candidate Starts for Lolalove_58:

(6, 56233), (7, 56215), (Start: 14 @56101 has 16 MA's), (Start: 21 @56086 has 1 MA's), (40, 55966), (47, 55921), (60, 55828),

Gene: Magpie_56 Start: 56026, Stop: 55718, Start Num: 14

Candidate Starts for Magpie_56:

(6, 56158), (7, 56140), (9, 56131), (Start: 14 @56026 has 16 MA's), (Start: 21 @56011 has 1 MA's), (40, 55891), (47, 55846), (60, 55753),

Gene: Morty007_91 Start: 65294, Stop: 65022, Start Num: 26

Candidate Starts for Morty007_91:

(5, 65516), (Start: 11 @65345 has 7 MA's), (13, 65330), (16, 65324), (22, 65309), (Start: 24 @65303 has 5 MA's), (Start: 26 @65294 has 1 MA's), (31, 65273), (35, 65237), (38, 65216), (42, 65177), (47, 65147), (61, 65054), (63, 65036),

Gene: Mudslide_57 Start: 56366, Stop: 56058, Start Num: 14

Candidate Starts for Mudslide_57:

(6, 56498), (7, 56480), (Start: 14 @56366 has 16 MA's), (40, 56231), (60, 56093),

Gene: Mysterious_61 Start: 55986, Stop: 55690, Start Num: 15

Candidate Starts for Mysterious_61:

(Start: 15 @55986 has 5 MA's), (37, 55899), (47, 55818), (55, 55776),

Gene: Nanao_56 Start: 55060, Stop: 54752, Start Num: 14

Candidate Starts for Nanao_56:

(6, 55192), (7, 55174), (Start: 14 @55060 has 16 MA's), (Start: 21 @55045 has 1 MA's), (40, 54925), (48, 54874), (58, 54820), (60, 54787),

Gene: Neos5_92 Start: 64759, Stop: 64478, Start Num: 24

Candidate Starts for Neos5_92:

(5, 64972), (Start: 11 @64801 has 7 MA's), (13, 64786), (16, 64780), (22, 64765), (Start: 24 @64759 has 5 MA's), (Start: 26 @64750 has 1 MA's), (31, 64729), (35, 64693), (38, 64672), (42, 64633), (47, 64603), (61, 64510), (63, 64492),

Gene: Phelemich_59 Start: 55981, Stop: 55685, Start Num: 15

Candidate Starts for Phelemich_59:

(Start: 15 @55981 has 5 MA's), (37, 55894), (47, 55813),

Gene: Poster_56 Start: 55061, Stop: 54753, Start Num: 14

Candidate Starts for Poster_56:

(6, 55193), (7, 55175), (Start: 14 @55061 has 16 MA's), (Start: 21 @55046 has 1 MA's), (40, 54926), (48, 54875), (58, 54821), (60, 54788),

Gene: Prince_58 Start: 56279, Stop: 55971, Start Num: 14

Candidate Starts for Prince_58:

(6, 56411), (7, 56393), (Start: 14 @56279 has 16 MA's), (40, 56144), (60, 56006),

Gene: RagingRooster_93 Start: 64543, Stop: 64262, Start Num: 24

Candidate Starts for RagingRooster_93:

(5, 64756), (Start: 11 @64585 has 7 MA's), (13, 64570), (16, 64564), (22, 64549), (Start: 24 @64543 has 5 MA's), (Start: 26 @64534 has 1 MA's), (31, 64513), (35, 64477), (38, 64456), (42, 64417), (47, 64387), (61, 64294), (63, 64276),

Gene: RawrgerThat_58 Start: 56119, Stop: 55811, Start Num: 14

Candidate Starts for RawrgerThat_58:

(6, 56251), (7, 56233), (Start: 14 @56119 has 16 MA's), (40, 55984), (48, 55933), (60, 55846),

Gene: Reprobate_60 Start: 55986, Stop: 55690, Start Num: 15

Candidate Starts for Reprobate_60:

(Start: 15 @55986 has 5 MA's), (37, 55899), (47, 55818),

Gene: Ryadel_101 Start: 62070, Stop: 61789, Start Num: 23

Candidate Starts for Ryadel_101:

(Start: 11 @62109 has 7 MA's), (16, 62088), (22, 62073), (Start: 23 @62070 has 1 MA's), (30, 62052), (41, 61965), (43, 61950), (44, 61944), (54, 61884), (57, 61866), (65, 61800),

Gene: SchoolBus_97 Start: 61227, Stop: 60907, Start Num: 11

Candidate Starts for SchoolBus_97:

(Start: 11 @61227 has 7 MA's), (16, 61206), (22, 61191), (Start: 23 @61188 has 1 MA's), (30, 61170), (41, 61083), (43, 61068), (44, 61062), (54, 61002), (57, 60984), (65, 60918),

Gene: Shida_100 Start: 61728, Stop: 61408, Start Num: 11

Candidate Starts for Shida_100:

(Start: 11 @61728 has 7 MA's), (16, 61707), (22, 61692), (Start: 23 @61689 has 1 MA's), (30, 61671), (41, 61584), (43, 61569), (44, 61563), (54, 61503), (57, 61485), (65, 61419),

Gene: SirJeffery_60 Start: 55943, Stop: 55647, Start Num: 15

Candidate Starts for SirJeffery_60:

(Start: 15 @55943 has 5 MA's), (47, 55775), (55, 55733), (60, 55682),

Gene: Stinger_58 Start: 54992, Stop: 54681, Start Num: 12

Candidate Starts for Stinger_58:

(6, 55112), (9, 55085), (Start: 12 @54992 has 2 MA's), (Start: 21 @54974 has 1 MA's), (40, 54854), (48, 54803), (52, 54779), (59, 54743),

Gene: StinkyVeggy_61 Start: 55996, Stop: 55694, Start Num: 15

Candidate Starts for StinkyVeggy_61:

(Start: 15 @55996 has 5 MA's), (40, 55867), (47, 55822), (60, 55729), (62, 55714),

Gene: Suigeneris_62 Start: 56064, Stop: 55768, Start Num: 15

Candidate Starts for Suigeneris_62:

(Start: 15 @56064 has 5 MA's), (47, 55896), (55, 55854), (60, 55803),

Gene: SynergyX_94 Start: 64853, Stop: 64572, Start Num: 24

Candidate Starts for SynergyX_94:

(5, 65066), (Start: 11 @64895 has 7 MA's), (13, 64880), (16, 64874), (22, 64859), (Start: 24 @64853 has 5 MA's), (Start: 26 @64844 has 1 MA's), (31, 64823), (35, 64787), (38, 64766), (42, 64727), (47, 64697), (61, 64604), (63, 64586),

Gene: TelAviv_95 Start: 61453, Stop: 61133, Start Num: 11

Candidate Starts for TelAviv_95:

(Start: 11 @61453 has 7 MA's), (16, 61432), (22, 61417), (Start: 23 @61414 has 1 MA's), (30, 61396), (41, 61309), (43, 61294), (44, 61288), (54, 61228), (57, 61210), (65, 61144),

Gene: Vincenzo_60 Start: 57203, Stop: 56895, Start Num: 17

Candidate Starts for Vincenzo_60:

(Start: 17 @57203 has 4 MA's), (29, 57158), (30, 57155), (33, 57131), (40, 57068), (41, 57065), (47, 57023), (53, 56987), (56, 56972),

Gene: VioletZ_59 Start: 56192, Stop: 55884, Start Num: 14

Candidate Starts for VioletZ_59:

(6, 56324), (7, 56306), (Start: 14 @56192 has 16 MA's), (Start: 21 @56177 has 1 MA's), (40, 56057), (47, 56012), (60, 55919),

Gene: Waleliano_57 Start: 56133, Stop: 55825, Start Num: 14

Candidate Starts for Waleliano_57:

(6, 56265), (7, 56247), (Start: 14 @56133 has 16 MA's), (Start: 21 @56118 has 1 MA's), (40, 55998), (60, 55860),

Gene: Zemanar_58 Start: 55965, Stop: 55657, Start Num: 14

Candidate Starts for Zemanar_58:

(6, 56097), (7, 56079), (Start: 14 @55965 has 16 MA's), (Start: 21 @55950 has 1 MA's), (40, 55830), (60, 55692),

Gene: Zenteno07_66 Start: 55753, Stop: 55427, Start Num: 17

Candidate Starts for Zenteno07_66:

(10, 55840), (Start: 17 @55753 has 4 MA's), (27, 55729), (58, 55522), (60, 55489),