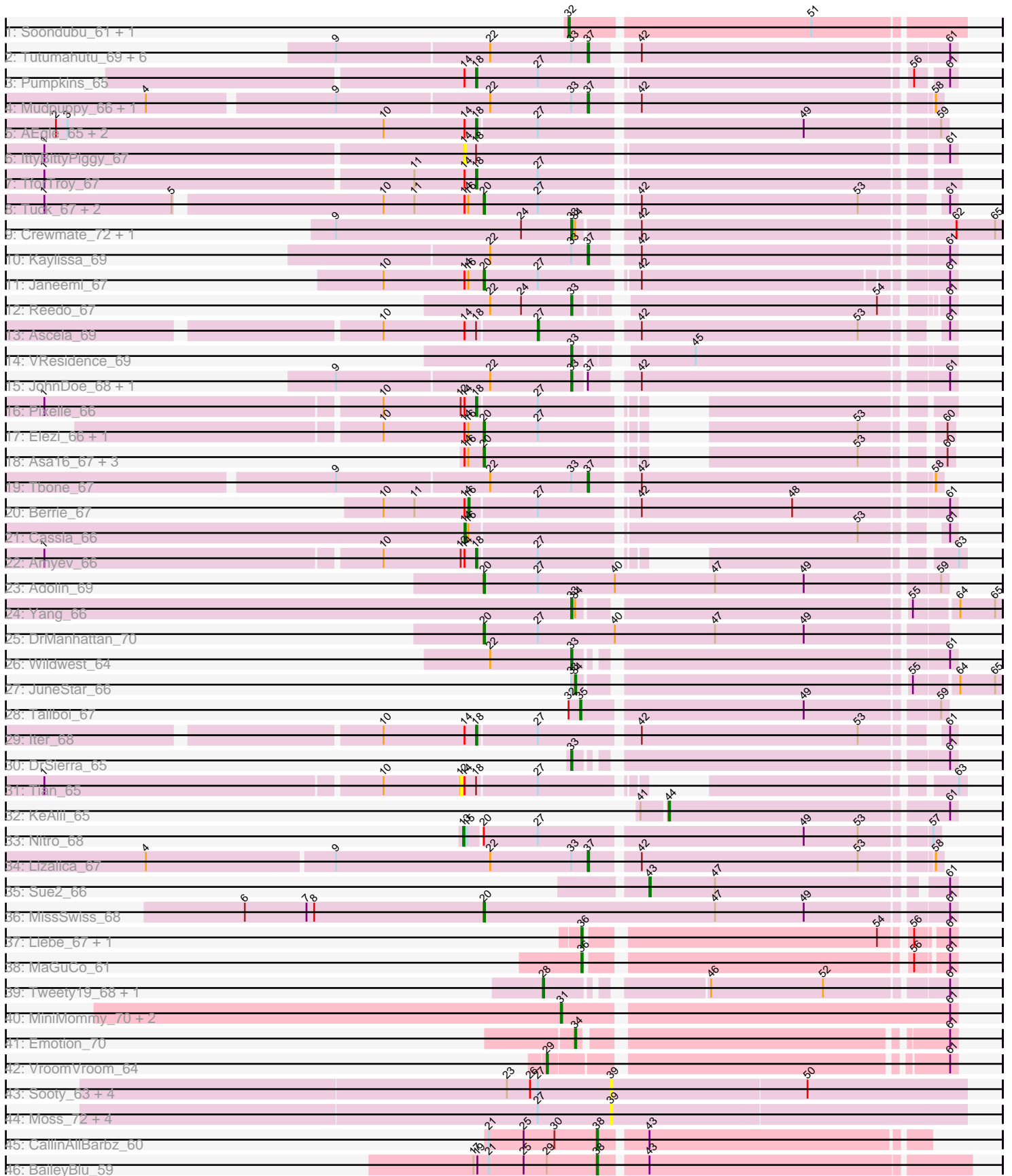


Pham 196490



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 196490 Report

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

Pham number 196490 has 76 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Soondubu_61, Exile_59
- Track 2 : Tutumahutu_69, Powerpuff_69, Joemato_69, YesChef_67, Lego_67, AGrandiflora_69, Cyan_68
- Track 3 : Pumpkins_65
- Track 4 : Mudpuppy_66, Warda_68
- Track 5 : AEgle_65, Adumb2043_66, Turab_66
- Track 6 : IttyBittyPiggy_67
- Track 7 : TforTroy_67
- Track 8 : Tuck_67, Phives_68, Community_67
- Track 9 : Crewmate_72, ObiToo_72
- Track 10 : Kaylissa_69
- Track 11 : Janeemi_67
- Track 12 : Reedo_67
- Track 13 : Ascela_69
- Track 14 : VResidence_69
- Track 15 : JohnDoe_68, Simpson_73
- Track 16 : Pixelle_66
- Track 17 : Elezi_66, Jstan_68
- Track 18 : Asa16_67, Eraser_67, London_67, Niobe_67
- Track 19 : Tbone_67
- Track 20 : Berrie_67
- Track 21 : Cassia_66
- Track 22 : Amyev_66
- Track 23 : Adolin_69
- Track 24 : Yang_66
- Track 25 : DrManhattan_70
- Track 26 : Wildwest_64
- Track 27 : JuneStar_66
- Track 28 : Tallboi_67
- Track 29 : Iter_68
- Track 30 : DrSierra_65
- Track 31 : Tian_65
- Track 32 : KeAlii_65
- Track 33 : Nitro_68
- Track 34 : Lizalica_67
- Track 35 : Sue2_66
- Track 36 : MissSwiss_68

- Track 37 : Liebe_67, Maureen_67
- Track 38 : MaGuCo_61
- Track 39 : Tweety19_68, Snek_67
- Track 40 : MiniMommy_70, ShakeltOph_69, JasmineDragon_67
- Track 41 : Emotion_70
- Track 42 : VroomVroom_64
- Track 43 : Sooty_63, Kalimba_62, Cappuccino_62, Donkey_63, Gambol_63
- Track 44 : Moss_72, Mysterium_63, Ashes_66, SpecialK_71, Halsey_75
- Track 45 : CallinAllBarbz_60
- Track 46 : BaileyBlu_59

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

The start number called the most often in the published annotations is 20, it was called in 11 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adolin_69, Asa16_67, Community_67, DrManhattan_70, Elezi_66, Eraser_67, Janeemi_67, Jstan_68, London_67, MissSwiss_68, Niobe_67, Phives_68, Tuck_67,

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

- Nitro_68,

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

- AEgle_65, AGrandiflora_69, Adumb2043_66, Amyev_66, Ascela_69, Ashes_66, BaileyBlu_59, Berrie_67, CallinAllBarbz_60, Cappuccino_62, Cassia_66, Crewmate_72, Cyan_68, Donkey_63, DrSierra_65, Emotion_70, Exile_59, Gambol_63, Halsey_75, Iter_68, IttyBittyPiggy_67, JasmineDragon_67, Joemato_69, JohnDoe_68, JuneStar_66, Kalimba_62, Kaylissa_69, KeAlii_65, Lego_67, Liebe_67, Lizalica_67, MaGuCo_61, Maureen_67, MiniMommy_70, Moss_72, Mudpuppy_66, Mysterium_63, ObiToo_72, Pixelle_66, Powerpuff_69, Pumpkins_65, Reedo_67, ShakeltOph_69, Simpson_73, Snek_67, Soondubu_61, Sooty_63, SpecialK_71, Sue2_66, Tallboi_67, Tbone_67, TforTroy_67, Tian_65, Turab_66, Tutumahutu_69, Tweety19_68, VResidence_69, VroomVroom_64, Warda_68, Wildwest_64, Yang_66, YesChef_67,

Summary by start number:

Start 12:

- Found in 3 of 76 (3.9%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Tian_65 (AZ1),

Start 13:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nitro_68 (AZ1),

Start 14:

- Found in 23 of 76 (30.3%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 8.7% of time when present
- Phage (with cluster) where this start called: Cassia_66 (AZ1), IttyBittyPiggy_67 (AZ1),

Start 16:

- Found in 12 of 76 (15.8%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Berrie_67 (AZ1),

Start 18:

- Found in 11 of 76 (14.5%) of genes in pham
- Manual Annotations of this start: 6 of 55
- Called 72.7% of time when present
- Phage (with cluster) where this start called: AEgle_65 (AZ1), Adumb2043_66 (AZ1), Amyev_66 (AZ1), Iter_68 (AZ1), Pixelle_66 (AZ1), Pumpkins_65 (AZ1), TforTroy_67 (AZ1), Turab_66 (AZ1),

Start 20:

- Found in 14 of 76 (18.4%) of genes in pham
- Manual Annotations of this start: 11 of 55
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Adolin_69 (AZ1), Asa16_67 (AZ1), Community_67 (AZ1), DrManhattan_70 (AZ1), Elezi_66 (AZ1), Eraser_67 (AZ1), Janeemi_67 (AZ1), Jstan_68 (AZ1), London_67 (AZ1), MissSwiss_68 (AZ1), Niobe_67 (AZ1), Phives_68 (AZ1), Tuck_67 (AZ1),

Start 27:

- Found in 30 of 76 (39.5%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 3.3% of time when present
- Phage (with cluster) where this start called: Ascela_69 (AZ1),

Start 28:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sneek_67 (AZ3), Tweety19_68 (AZ3),

Start 29:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 50.0% of time when present
- Phage (with cluster) where this start called: VroomVroom_64 (AZ4),

Start 31:

- Found in 3 of 76 (3.9%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present

- Phage (with cluster) where this start called: JasmineDragon_67 (AZ4), MiniMommy_70 (AZ4), ShakeltOph_69 (AZ4),

Start 32:

- Found in 3 of 76 (3.9%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Exile_59 (AZ), Soondubu_61 (AZ),

Start 33:

- Found in 22 of 76 (28.9%) of genes in pham
- Manual Annotations of this start: 8 of 55
- Called 40.9% of time when present
- Phage (with cluster) where this start called: Crewmate_72 (AZ1), DrSierra_65 (AZ1), JohnDoe_68 (AZ1), ObiToo_72 (AZ1), Reedo_67 (AZ1), Simpson_73 (AZ1), VResidence_69 (AZ1), Wildwest_64 (AZ1), Yang_66 (AZ1),

Start 34:

- Found in 5 of 76 (6.6%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Emotion_70 (AZ4), JuneStar_66 (AZ1),

Start 35:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tallboi_67 (AZ1),

Start 36:

- Found in 3 of 76 (3.9%) of genes in pham
- Manual Annotations of this start: 3 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Liebe_67 (AZ2), MaGuCo_61 (AZ2), Maureen_67 (AZ2),

Start 37:

- Found in 14 of 76 (18.4%) of genes in pham
- Manual Annotations of this start: 11 of 55
- Called 85.7% of time when present
- Phage (with cluster) where this start called: AGrandiflora_69 (AZ1), Cyan_68 (AZ1), Joemato_69 (AZ1), Kaylissa_69 (AZ1), Lego_67 (AZ1), Lizalica_67 (AZ1), Mudpuppy_66 (AZ1), Powerpuff_69 (AZ1), Tbone_67 (AZ1), Tutumahutu_69 (AZ1), Warda_68 (AZ1), YesChef_67 (AZ1),

Start 38:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_59 (FP), CallinAllBarbz_60 (FP),

Start 39:

- Found in 10 of 76 (13.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashes_66 (AZ5), Cappuccino_62 (AZ5), Donkey_63 (AZ5), Gambol_63 (AZ5), Halsey_75 (AZ5), Kalimba_62 (AZ5), Moss_72 (AZ5), Mysterium_63 (AZ5), Sooty_63 (AZ5), SpecialK_71 (AZ5),

Start 43:

- Found in 3 of 76 (3.9%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sue2_66 (AZ1),

Start 44:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KeAlii_65 (AZ1),

Summary by clusters:

There are 7 clusters represented in this pham: FP, AZ, AZ1, AZ2, AZ3, AZ4, AZ5,

Info for manual annotations of cluster AZ:

- Start number 32 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 13 was manually annotated 1 time for cluster AZ1.
- Start number 14 was manually annotated 1 time for cluster AZ1.
- Start number 16 was manually annotated 1 time for cluster AZ1.
- Start number 18 was manually annotated 6 times for cluster AZ1.
- Start number 20 was manually annotated 11 times for cluster AZ1.
- Start number 27 was manually annotated 1 time for cluster AZ1.
- Start number 33 was manually annotated 8 times for cluster AZ1.
- Start number 34 was manually annotated 1 time for cluster AZ1.
- Start number 35 was manually annotated 1 time for cluster AZ1.
- Start number 37 was manually annotated 11 times for cluster AZ1.
- Start number 43 was manually annotated 1 time for cluster AZ1.
- Start number 44 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 36 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 28 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 29 was manually annotated 1 time for cluster AZ4.
- Start number 31 was manually annotated 1 time for cluster AZ4.
- Start number 34 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster FP:

- Start number 38 was manually annotated 2 times for cluster FP.

Gene Information:

Gene: AEgle_65 Start: 41928, Stop: 42272, Start Num: 18

Candidate Starts for AEgle_65:

(2, 41601), (3, 41610), (10, 41856), (Start: 14 @41919 has 1 MA's), (Start: 18 @41928 has 6 MA's), (Start: 27 @41973 has 1 MA's), (49, 42171), (59, 42267),

Gene: AGrandiflora_69 Start: 42827, Stop: 43090, Start Num: 37

Candidate Starts for AGrandiflora_69:

(9, 42638), (22, 42755), (Start: 33 @42818 has 8 MA's), (Start: 37 @42827 has 11 MA's), (42, 42857), (61, 43085),

Gene: Adolin_69 Start: 41878, Stop: 42228, Start Num: 20

Candidate Starts for Adolin_69:

(Start: 20 @41878 has 11 MA's), (Start: 27 @41920 has 1 MA's), (40, 41980), (47, 42058), (49, 42127), (59, 42223),

Gene: Adumb2043_66 Start: 41952, Stop: 42296, Start Num: 18

Candidate Starts for Adumb2043_66:

(2, 41625), (3, 41634), (10, 41880), (Start: 14 @41943 has 1 MA's), (Start: 18 @41952 has 6 MA's), (Start: 27 @41997 has 1 MA's), (49, 42195), (59, 42291),

Gene: Amyev_66 Start: 43156, Stop: 43452, Start Num: 18

Candidate Starts for Amyev_66:

(1, 42829), (10, 43084), (12, 43144), (Start: 14 @43147 has 1 MA's), (Start: 18 @43156 has 6 MA's), (Start: 27 @43201 has 1 MA's), (63, 43447),

Gene: Asa16_67 Start: 42516, Stop: 42797, Start Num: 20

Candidate Starts for Asa16_67:

(Start: 14 @42504 has 1 MA's), (Start: 16 @42507 has 1 MA's), (Start: 20 @42516 has 11 MA's), (53, 42744), (60, 42792),

Gene: Ascela_69 Start: 43040, Stop: 43333, Start Num: 27

Candidate Starts for Ascela_69:

(10, 42923), (Start: 14 @42986 has 1 MA's), (Start: 18 @42995 has 6 MA's), (Start: 27 @43040 has 1 MA's), (42, 43112), (53, 43280), (61, 43328),

Gene: Ashes_66 Start: 38817, Stop: 39089, Start Num: 39

Candidate Starts for Ashes_66:

(Start: 27 @38760 has 1 MA's), (39, 38817),

Gene: BaileyBlu_59 Start: 39085, Stop: 39360, Start Num: 38

Candidate Starts for BaileyBlu_59:

(17, 38989), (19, 38992), (21, 39001), (25, 39028), (Start: 29 @39046 has 1 MA's), (Start: 38 @39085 has 2 MA's), (Start: 43 @39118 has 1 MA's),

Gene: Berrie_67 Start: 42601, Stop: 42954, Start Num: 16

Candidate Starts for Berrie_67:

(10, 42535), (11, 42559), (Start: 14 @42598 has 1 MA's), (Start: 16 @42601 has 1 MA's), (Start: 27 @42652 has 1 MA's), (42, 42721), (48, 42838), (61, 42949),

Gene: CallinAllBarbz_60 Start: 39859, Stop: 40101, Start Num: 38

Candidate Starts for CallinAllBarbz_60:

(21, 39775), (25, 39802), (30, 39826), (Start: 38 @39859 has 2 MA's), (Start: 43 @39892 has 1 MA's),

Gene: Cappuccino_62 Start: 38667, Stop: 38939, Start Num: 39

Candidate Starts for Cappuccino_62:

(23, 38586), (26, 38604), (Start: 27 @38610 has 1 MA's), (39, 38667), (50, 38817),

Gene: Cassia_66 Start: 42270, Stop: 42614, Start Num: 14

Candidate Starts for Cassia_66:

(Start: 14 @42270 has 1 MA's), (Start: 16 @42273 has 1 MA's), (53, 42561), (61, 42609),

Gene: Community_67 Start: 42884, Stop: 43216, Start Num: 20

Candidate Starts for Community_67:

(1, 42557), (5, 42656), (10, 42809), (11, 42833), (Start: 14 @42872 has 1 MA's), (Start: 16 @42875 has 1 MA's), (Start: 20 @42884 has 11 MA's), (Start: 27 @42926 has 1 MA's), (42, 42995), (53, 43163), (61, 43211),

Gene: Crewmate_72 Start: 43229, Stop: 43537, Start Num: 33

Candidate Starts for Crewmate_72:

(9, 43046), (24, 43190), (Start: 33 @43229 has 8 MA's), (Start: 34 @43232 has 2 MA's), (42, 43268), (62, 43502), (65, 43532),

Gene: Cyan_68 Start: 42571, Stop: 42834, Start Num: 37

Candidate Starts for Cyan_68:

(9, 42382), (22, 42499), (Start: 33 @42562 has 8 MA's), (Start: 37 @42571 has 11 MA's), (42, 42601), (61, 42829),

Gene: Donkey_63 Start: 38657, Stop: 38929, Start Num: 39

Candidate Starts for Donkey_63:

(23, 38576), (26, 38594), (Start: 27 @38600 has 1 MA's), (39, 38657), (50, 38807),

Gene: DrManhattan_70 Start: 41432, Stop: 41782, Start Num: 20

Candidate Starts for DrManhattan_70:

(Start: 20 @41432 has 11 MA's), (Start: 27 @41474 has 1 MA's), (40, 41534), (47, 41612), (49, 41681),

Gene: DrSierra_65 Start: 41681, Stop: 41947, Start Num: 33

Candidate Starts for DrSierra_65:

(Start: 33 @41681 has 8 MA's), (61, 41942),

Gene: Elezi_66 Start: 42273, Stop: 42554, Start Num: 20

Candidate Starts for Elezi_66:

(10, 42198), (Start: 14 @42261 has 1 MA's), (Start: 16 @42264 has 1 MA's), (Start: 20 @42273 has 11 MA's), (Start: 27 @42315 has 1 MA's), (53, 42501), (60, 42549),

Gene: Emotion_70 Start: 43720, Stop: 43983, Start Num: 34

Candidate Starts for Emotion_70:

(Start: 34 @43720 has 2 MA's), (61, 43978),

Gene: Eraser_67 Start: 42523, Stop: 42804, Start Num: 20
Candidate Starts for Eraser_67:
(Start: 14 @42511 has 1 MA's), (Start: 16 @42514 has 1 MA's), (Start: 20 @42523 has 11 MA's), (53, 42751), (60, 42799),

Gene: Exile_59 Start: 43115, Stop: 43405, Start Num: 32
Candidate Starts for Exile_59:
(Start: 32 @43115 has 1 MA's), (51, 43295),

Gene: Gambol_63 Start: 38676, Stop: 38948, Start Num: 39
Candidate Starts for Gambol_63:
(23, 38595), (26, 38613), (Start: 27 @38619 has 1 MA's), (39, 38676), (50, 38826),

Gene: Halsey_75 Start: 38807, Stop: 39079, Start Num: 39
Candidate Starts for Halsey_75:
(Start: 27 @38750 has 1 MA's), (39, 38807),

Gene: Iter_68 Start: 42766, Stop: 43104, Start Num: 18
Candidate Starts for Iter_68:
(10, 42694), (Start: 14 @42757 has 1 MA's), (Start: 18 @42766 has 6 MA's), (Start: 27 @42811 has 1 MA's), (42, 42883), (53, 43051), (61, 43099),

Gene: IttyBittyPiggy_67 Start: 40991, Stop: 41344, Start Num: 14
Candidate Starts for IttyBittyPiggy_67:
(1, 40670), (Start: 14 @40991 has 1 MA's), (Start: 18 @41000 has 6 MA's), (61, 41339),

Gene: Janeemi_67 Start: 42677, Stop: 43015, Start Num: 20
Candidate Starts for Janeemi_67:
(10, 42602), (Start: 14 @42665 has 1 MA's), (Start: 16 @42668 has 1 MA's), (Start: 20 @42677 has 11 MA's), (Start: 27 @42719 has 1 MA's), (42, 42788), (61, 43010),

Gene: JasmineDragon_67 Start: 42320, Stop: 42616, Start Num: 31
Candidate Starts for JasmineDragon_67:
(Start: 31 @42320 has 1 MA's), (61, 42611),

Gene: Joemato_69 Start: 42748, Stop: 43011, Start Num: 37
Candidate Starts for Joemato_69:
(9, 42559), (22, 42676), (Start: 33 @42739 has 8 MA's), (Start: 37 @42748 has 11 MA's), (42, 42778), (61, 43006),

Gene: JohnDoe_68 Start: 42656, Stop: 42928, Start Num: 33
Candidate Starts for JohnDoe_68:
(9, 42476), (22, 42593), (Start: 33 @42656 has 8 MA's), (Start: 37 @42665 has 11 MA's), (42, 42695), (61, 42923),

Gene: Jstan_68 Start: 42277, Stop: 42558, Start Num: 20
Candidate Starts for Jstan_68:
(10, 42202), (Start: 14 @42265 has 1 MA's), (Start: 16 @42268 has 1 MA's), (Start: 20 @42277 has 11 MA's), (Start: 27 @42319 has 1 MA's), (53, 42505), (60, 42553),

Gene: JuneStar_66 Start: 43398, Stop: 43697, Start Num: 34
Candidate Starts for JuneStar_66:
(Start: 33 @43395 has 8 MA's), (Start: 34 @43398 has 2 MA's), (55, 43635), (64, 43665), (65, 43692),

Gene: Kalimba_62 Start: 38654, Stop: 38926, Start Num: 39

Candidate Starts for Kalimba_62:

(23, 38573), (26, 38591), (Start: 27 @38597 has 1 MA's), (39, 38654), (50, 38804),

Gene: Kaylissa_69 Start: 43024, Stop: 43287, Start Num: 37

Candidate Starts for Kaylissa_69:

(22, 42952), (Start: 33 @43015 has 8 MA's), (Start: 37 @43024 has 11 MA's), (42, 43054), (61, 43282),

Gene: KeAlii_65 Start: 40879, Stop: 41094, Start Num: 44

Candidate Starts for KeAlii_65:

(41, 40861), (Start: 44 @40879 has 1 MA's), (61, 41089),

Gene: Lego_67 Start: 42346, Stop: 42609, Start Num: 37

Candidate Starts for Lego_67:

(9, 42157), (22, 42274), (Start: 33 @42337 has 8 MA's), (Start: 37 @42346 has 11 MA's), (42, 42376), (61, 42604),

Gene: Liebe_67 Start: 44554, Stop: 44811, Start Num: 36

Candidate Starts for Liebe_67:

(Start: 36 @44554 has 3 MA's), (54, 44767), (56, 44785), (61, 44806),

Gene: Lizalica_67 Start: 41945, Stop: 42199, Start Num: 37

Candidate Starts for Lizalica_67:

(4, 41612), (9, 41753), (22, 41873), (Start: 33 @41936 has 8 MA's), (Start: 37 @41945 has 11 MA's), (42, 41978), (53, 42146), (58, 42194),

Gene: London_67 Start: 42514, Stop: 42795, Start Num: 20

Candidate Starts for London_67:

(Start: 14 @42502 has 1 MA's), (Start: 16 @42505 has 1 MA's), (Start: 20 @42514 has 11 MA's), (53, 42742), (60, 42790),

Gene: MaGuCo_61 Start: 42675, Stop: 42932, Start Num: 36

Candidate Starts for MaGuCo_61:

(Start: 36 @42675 has 3 MA's), (56, 42906), (61, 42927),

Gene: Maureen_67 Start: 44553, Stop: 44810, Start Num: 36

Candidate Starts for Maureen_67:

(Start: 36 @44553 has 3 MA's), (54, 44766), (56, 44784), (61, 44805),

Gene: MiniMommy_70 Start: 42328, Stop: 42624, Start Num: 31

Candidate Starts for MiniMommy_70:

(Start: 31 @42328 has 1 MA's), (61, 42619),

Gene: MissSwiss_68 Start: 41433, Stop: 41789, Start Num: 20

Candidate Starts for MissSwiss_68:

(6, 41250), (7, 41298), (8, 41304), (Start: 20 @41433 has 11 MA's), (47, 41613), (49, 41682), (61, 41784),

Gene: Moss_72 Start: 38754, Stop: 39026, Start Num: 39

Candidate Starts for Moss_72:

(Start: 27 @38697 has 1 MA's), (39, 38754),

Gene: Mudpuppy_66 Start: 42711, Stop: 42965, Start Num: 37
Candidate Starts for Mudpuppy_66:
(4, 42384), (9, 42522), (22, 42639), (Start: 33 @42702 has 8 MA's), (Start: 37 @42711 has 11 MA's),
(42, 42744), (58, 42960),

Gene: Mysterium_63 Start: 38595, Stop: 38867, Start Num: 39
Candidate Starts for Mysterium_63:
(Start: 27 @38538 has 1 MA's), (39, 38595),

Gene: Niobe_67 Start: 42517, Stop: 42798, Start Num: 20
Candidate Starts for Niobe_67:
(Start: 14 @42505 has 1 MA's), (Start: 16 @42508 has 1 MA's), (Start: 20 @42517 has 11 MA's), (53,
42745), (60, 42793),

Gene: Nitro_68 Start: 43178, Stop: 43525, Start Num: 13
Candidate Starts for Nitro_68:
(Start: 13 @43178 has 1 MA's), (15, 43181), (Start: 20 @43190 has 11 MA's), (Start: 27 @43232 has
1 MA's), (49, 43430), (53, 43472), (57, 43520),

Gene: ObiToo_72 Start: 42845, Stop: 43153, Start Num: 33
Candidate Starts for ObiToo_72:
(9, 42662), (24, 42806), (Start: 33 @42845 has 8 MA's), (Start: 34 @42848 has 2 MA's), (42, 42884),
(62, 43118), (65, 43148),

Gene: Phives_68 Start: 42999, Stop: 43331, Start Num: 20
Candidate Starts for Phives_68:
(1, 42672), (5, 42771), (10, 42924), (11, 42948), (Start: 14 @42987 has 1 MA's), (Start: 16 @42990
has 1 MA's), (Start: 20 @42999 has 11 MA's), (Start: 27 @43041 has 1 MA's), (42, 43110), (53,
43278), (61, 43326),

Gene: Pixelle_66 Start: 43257, Stop: 43547, Start Num: 18
Candidate Starts for Pixelle_66:
(1, 42930), (10, 43185), (12, 43245), (Start: 14 @43248 has 1 MA's), (Start: 18 @43257 has 6 MA's),
(Start: 27 @43302 has 1 MA's),

Gene: Powerpuff_69 Start: 43550, Stop: 43813, Start Num: 37
Candidate Starts for Powerpuff_69:
(9, 43361), (22, 43478), (Start: 33 @43541 has 8 MA's), (Start: 37 @43550 has 11 MA's), (42, 43580),
(61, 43808),

Gene: Pumpkins_65 Start: 42797, Stop: 43141, Start Num: 18
Candidate Starts for Pumpkins_65:
(Start: 14 @42788 has 1 MA's), (Start: 18 @42797 has 6 MA's), (Start: 27 @42845 has 1 MA's), (56,
43115), (61, 43136),

Gene: Reedo_67 Start: 40786, Stop: 41046, Start Num: 33
Candidate Starts for Reedo_67:
(22, 40723), (24, 40747), (Start: 33 @40786 has 8 MA's), (54, 41002), (61, 41041),

Gene: ShakeltOph_69 Start: 42320, Stop: 42616, Start Num: 31
Candidate Starts for ShakeltOph_69:
(Start: 31 @42320 has 1 MA's), (61, 42611),

Gene: Simpson_73 Start: 42743, Stop: 43015, Start Num: 33

Candidate Starts for Simpson_73:

(9, 42563), (22, 42680), (Start: 33 @42743 has 8 MA's), (Start: 37 @42752 has 11 MA's), (42, 42782), (61, 43010),

Gene: Snek_67 Start: 39932, Stop: 40216, Start Num: 28

Candidate Starts for Snek_67:

(Start: 28 @39932 has 2 MA's), (46, 40037), (52, 40124), (61, 40211),

Gene: Soondubu_61 Start: 44124, Stop: 44414, Start Num: 32

Candidate Starts for Soondubu_61:

(Start: 32 @44124 has 1 MA's), (51, 44304),

Gene: Sooty_63 Start: 38669, Stop: 38941, Start Num: 39

Candidate Starts for Sooty_63:

(23, 38588), (26, 38606), (Start: 27 @38612 has 1 MA's), (39, 38669), (50, 38819),

Gene: SpecialK_71 Start: 38663, Stop: 38935, Start Num: 39

Candidate Starts for SpecialK_71:

(Start: 27 @38606 has 1 MA's), (39, 38663),

Gene: Sue2_66 Start: 41273, Stop: 41494, Start Num: 43

Candidate Starts for Sue2_66:

(Start: 43 @41273 has 1 MA's), (47, 41324), (61, 41489),

Gene: Tallboi_67 Start: 42522, Stop: 42788, Start Num: 35

Candidate Starts for Tallboi_67:

(Start: 32 @42513 has 1 MA's), (Start: 35 @42522 has 1 MA's), (49, 42687), (59, 42783),

Gene: Tbone_67 Start: 42998, Stop: 43252, Start Num: 37

Candidate Starts for Tbone_67:

(9, 42809), (22, 42926), (Start: 33 @42989 has 8 MA's), (Start: 37 @42998 has 11 MA's), (42, 43031), (58, 43247),

Gene: TforTroy_67 Start: 42451, Stop: 42801, Start Num: 18

Candidate Starts for TforTroy_67:

(1, 42121), (11, 42403), (Start: 14 @42442 has 1 MA's), (Start: 18 @42451 has 6 MA's), (Start: 27 @42499 has 1 MA's),

Gene: Tian_65 Start: 43143, Stop: 43451, Start Num: 12

Candidate Starts for Tian_65:

(1, 42828), (10, 43083), (12, 43143), (Start: 14 @43146 has 1 MA's), (Start: 18 @43155 has 6 MA's), (Start: 27 @43200 has 1 MA's), (63, 43446),

Gene: Tuck_67 Start: 42787, Stop: 43119, Start Num: 20

Candidate Starts for Tuck_67:

(1, 42460), (5, 42559), (10, 42712), (11, 42736), (Start: 14 @42775 has 1 MA's), (Start: 16 @42778 has 1 MA's), (Start: 20 @42787 has 11 MA's), (Start: 27 @42829 has 1 MA's), (42, 42898), (53, 43066), (61, 43114),

Gene: Turab_66 Start: 41972, Stop: 42316, Start Num: 18

Candidate Starts for Turab_66:

(2, 41645), (3, 41654), (10, 41900), (Start: 14 @41963 has 1 MA's), (Start: 18 @41972 has 6 MA's), (Start: 27 @42017 has 1 MA's), (49, 42215), (59, 42311),

Gene: Tutumahutu_69 Start: 42593, Stop: 42856, Start Num: 37

Candidate Starts for Tutumahutu_69:

(9, 42404), (22, 42521), (Start: 33 @42584 has 8 MA's), (Start: 37 @42593 has 11 MA's), (42, 42623), (61, 42851),

Gene: Tweety19_68 Start: 39933, Stop: 40217, Start Num: 28

Candidate Starts for Tweety19_68:

(Start: 28 @39933 has 2 MA's), (46, 40038), (52, 40125), (61, 40212),

Gene: VResidence_69 Start: 40961, Stop: 41224, Start Num: 33

Candidate Starts for VResidence_69:

(Start: 33 @40961 has 8 MA's), (45, 41036),

Gene: VroomVroom_64 Start: 41876, Stop: 42163, Start Num: 29

Candidate Starts for VroomVroom_64:

(Start: 29 @41876 has 1 MA's), (61, 42158),

Gene: Warda_68 Start: 42724, Stop: 42978, Start Num: 37

Candidate Starts for Warda_68:

(4, 42397), (9, 42535), (22, 42652), (Start: 33 @42715 has 8 MA's), (Start: 37 @42724 has 11 MA's), (42, 42757), (58, 42973),

Gene: Wildwest_64 Start: 42676, Stop: 42942, Start Num: 33

Candidate Starts for Wildwest_64:

(22, 42613), (Start: 33 @42676 has 8 MA's), (61, 42937),

Gene: Yang_66 Start: 42085, Stop: 42387, Start Num: 33

Candidate Starts for Yang_66:

(Start: 33 @42085 has 8 MA's), (Start: 34 @42088 has 2 MA's), (55, 42325), (64, 42355), (65, 42382),

Gene: YesChef_67 Start: 42409, Stop: 42672, Start Num: 37

Candidate Starts for YesChef_67:

(9, 42220), (22, 42337), (Start: 33 @42400 has 8 MA's), (Start: 37 @42409 has 11 MA's), (42, 42439), (61, 42667),