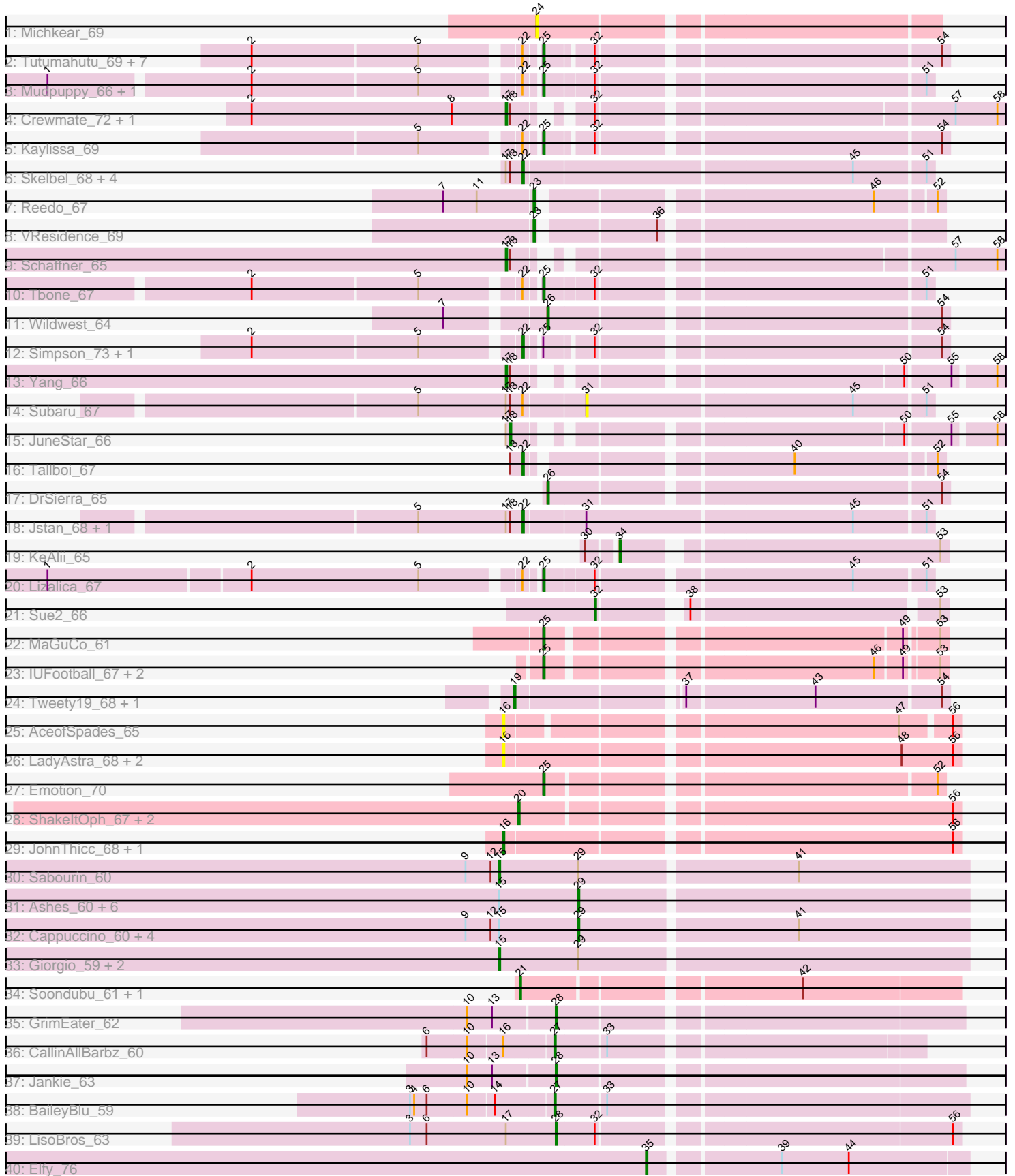


Pham 311526



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 311526 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311526 has 76 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Michkear_69
- Track 2 : Tutumahutu_69, Powerpuff_69, Flutur_67, Joemato_69, YesChef_67, Lego_67, AGrandiflora_69, Cyan_68
- Track 3 : Mudpuppy_66, Warda_68
- Track 4 : Crewmate_72, ObiToo_72
- Track 5 : Kaylissa_69
- Track 6 : Skelbel_68, Asa16_67, Eraser_67, London_67, Niobe_67
- Track 7 : Reedo_67
- Track 8 : VResidence_69
- Track 9 : Schaffner_65
- Track 10 : Tbone_67
- Track 11 : Wildwest_64
- Track 12 : Simpson_73, JohnDoe_68
- Track 13 : Yang_66
- Track 14 : Subaru_67
- Track 15 : JuneStar_66
- Track 16 : Tallboi_67
- Track 17 : DrSierra_65
- Track 18 : Jstan_68, Elezi_66
- Track 19 : KeAlii_65
- Track 20 : Lizalica_67
- Track 21 : Sue2_66
- Track 22 : MaGuCo_61
- Track 23 : IUFootball_67, Liebe_67, Maureen_67
- Track 24 : Tweety19_68, Snek_67
- Track 25 : AceofSpades_65
- Track 26 : LadyAstra_68, Origami_67, FiveHead_70
- Track 27 : Emotion_70
- Track 28 : ShakeltOph_67, MiniMommy_67, JasmineDragon_67
- Track 29 : JohnThicc_68, VroomVroom_64
- Track 30 : Sabourin_60
- Track 31 : Ashes_60, SpecialK_60, Halsey_60, RockScotty_59, Beaupre_59, Mysterium_59, Moss_60
- Track 32 : Cappuccino_60, Kalimba_60, Donkey_60, Gambol_61, Sooty_60
- Track 33 : Giorgio_59, Stuu_60, Gumpizza_59
- Track 34 : Soondubu_61, Exile_59
- Track 35 : GrimEater_62

- Track 36 : CallinAllBarbz_60
- Track 37 : Jankie_63
- Track 38 : BaileyBlu_59
- Track 39 : LisoBros_63
- Track 40 : Elfy_76

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

The start number called the most often in the published annotations is 25, it was called in 15 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AGrandiflora_69, Cyan_68, Emotion_70, Flutur_67, IUFootball_67, Joemato_69, Kaylissa_69, Lego_67, Liebe_67, Lizalica_67, MaGuCo_61, Maureen_67, Mudpuppy_66, Powerpuff_69, Tbone_67, Tutumahutu_69, Warda_68, YesChef_67,

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

- JohnDoe_68, Simpson_73,

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

- AceofSpades_65, Asa16_67, Ashes_60, BaileyBlu_59, Beaupre_59, CallinAllBarbz_60, Cappuccino_60, Crewmate_72, Donkey_60, DrSierra_65, Elezi_66, Elfy_76, Eraser_67, Exile_59, FiveHead_70, Gambol_61, Giorgio_59, GrimEater_62, Gumpizza_59, Halsey_60, Jankie_63, JasmineDragon_67, JohnThicc_68, Jstan_68, JuneStar_66, Kalimba_60, KeAlii_65, LadyAstra_68, LisoBros_63, London_67, Michkear_69, MiniMommy_67, Moss_60, Mysterium_59, Niobe_67, ObiToo_72, Origami_67, Reedo_67, RockScotty_59, Sabourin_60, Schaffner_65, ShakeltOph_67, Skelbel_68, Snek_67, Soondubu_61, Sooty_60, SpecialK_60, Stuu_60, Subaru_67, Sue2_66, Tallboi_67, Tweety19_68, VResidence_69, VroomVroom_64, Wildwest_64, Yang_66,

Summary by start number:

Start 15:

- Found in 16 of 76 (21.1%) of genes in pham
- Manual Annotations of this start: 4 of 62
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Giorgio_59 (AZ5), Gumpizza_59 (AZ5), Sabourin_60 (AZ5), Stuu_60 (AZ5),

Start 16:

- Found in 7 of 76 (9.2%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 85.7% of time when present
- Phage (with cluster) where this start called: AceofSpades_65 (AZ4), FiveHead_70 (AZ4), JohnThicc_68 (AZ4), LadyAstra_68 (AZ4), Origami_67 (AZ4), VroomVroom_64 (AZ4),

Start 17:

- Found in 14 of 76 (18.4%) of genes in pham

- Manual Annotations of this start: 4 of 62
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Crewmate_72 (AZ1), ObiToo_72 (AZ1), Schaffner_65 (AZ1), Yang_66 (AZ1),

Start 18:

- Found in 14 of 76 (18.4%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 7.1% of time when present
- Phage (with cluster) where this start called: JuneStar_66 (AZ1),

Start 19:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Snek_67 (AZ3), Tweety19_68 (AZ3),

Start 20:

- Found in 3 of 76 (3.9%) of genes in pham
- Manual Annotations of this start: 3 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JasmineDragon_67 (AZ4), MiniMommy_67 (AZ4), ShakeltOph_67 (AZ4),

Start 21:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Exile_59 (AZ6), Soondubu_61 (AZ6),

Start 22:

- Found in 24 of 76 (31.6%) of genes in pham
- Manual Annotations of this start: 7 of 62
- Called 41.7% of time when present
- Phage (with cluster) where this start called: Asa16_67 (AZ1), Elezi_66 (AZ1), Eraser_67 (AZ1), JohnDoe_68 (AZ1), Jstan_68 (AZ1), London_67 (AZ1), Niobe_67 (AZ1), Simpson_73 (AZ1), Skelbel_68 (AZ1), Tallboi_67 (AZ1),

Start 23:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reedo_67 (AZ1), VResidence_69 (AZ1),

Start 24:

- Found in 1 of 76 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Michkear_69 (AZ),

Start 25:

- Found in 20 of 76 (26.3%) of genes in pham
- Manual Annotations of this start: 15 of 62

- Called 90.0% of time when present
- Phage (with cluster) where this start called: AGrandiflora_69 (AZ1), Cyan_68 (AZ1), Emotion_70 (AZ4), Flutur_67 (AZ), IUFootball_67 (AZ2), Joemato_69 (AZ1), Kaylissa_69 (AZ1), Lego_67 (AZ1), Liebe_67 (AZ2), Lizalica_67 (AZ1), MaGuCo_61 (AZ2), Maureen_67 (AZ2), Mudpuppy_66 (AZ1), Powerpuff_69 (AZ1), Tbone_67 (AZ1), Tutumahutu_69 (AZ1), Warda_68 (AZ1), YesChef_67 (AZ1),

Start 26:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrSierra_65 (AZ1), Wildwest_64 (AZ1),

Start 27:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_59 (FP), CallinAllBarbz_60 (FP),

Start 28:

- Found in 3 of 76 (3.9%) of genes in pham
- Manual Annotations of this start: 3 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GrimEater_62 (FP), Jankie_63 (FP), LisoBros_63 (FP),

Start 29:

- Found in 16 of 76 (21.1%) of genes in pham
- Manual Annotations of this start: 12 of 62
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Ashes_60 (AZ5), Beauvre_59 (AZ5), Cappuccino_60 (AZ5), Donkey_60 (AZ5), Gambol_61 (AZ5), Halsey_60 (AZ5), Kalimba_60 (AZ5), Moss_60 (AZ5), Mysterium_59 (AZ5), RockScotty_59 (AZ5), Sooty_60 (AZ5), SpecialK_60 (AZ5),

Start 31:

- 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: Subaru_67 (AZ1),

Start 32:

- Found in 19 of 76 (25.0%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 5.3% of time when present
- Phage (with cluster) where this start called: Sue2_66 (AZ1),

Start 34:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KeAlii_65 (AZ1),

Start 35:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elfy_76 (FP),

Summary by clusters:

There are 8 clusters represented in this pham: FP, AZ, AZ1, AZ2, AZ3, AZ4, AZ5, AZ6,

Info for manual annotations of cluster AZ1:

- Start number 17 was manually annotated 4 times for cluster AZ1.
- Start number 18 was manually annotated 1 time for cluster AZ1.
- Start number 22 was manually annotated 7 times for cluster AZ1.
- Start number 23 was manually annotated 2 times for cluster AZ1.
- Start number 25 was manually annotated 11 times for cluster AZ1.
- Start number 26 was manually annotated 2 times for cluster AZ1.
- Start number 32 was manually annotated 1 time for cluster AZ1.
- Start number 34 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 25 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 19 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 16 was manually annotated 1 time for cluster AZ4.
- Start number 20 was manually annotated 3 times for cluster AZ4.
- Start number 25 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 15 was manually annotated 4 times for cluster AZ5.
- Start number 29 was manually annotated 12 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 21 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster FP:

- Start number 27 was manually annotated 2 times for cluster FP.
- Start number 28 was manually annotated 3 times for cluster FP.
- Start number 35 was manually annotated 1 time for cluster FP.

Gene Information:

Gene: AGrandiflora_69 Start: 42827, Stop: 43090, Start Num: 25
Candidate Starts for AGrandiflora_69:

(2, 42638), (5, 42755), (Start: 22 @42818 has 7 MA's), (Start: 25 @42827 has 15 MA's), (Start: 32 @42857 has 1 MA's), (54, 43085),

Gene: AceofSpades_65 Start: 42194, Stop: 42490, Start Num: 16

Candidate Starts for AceofSpades_65:

(Start: 16 @42194 has 1 MA's), (47, 42452), (56, 42485),

Gene: Asa16_67 Start: 42516, Stop: 42797, Start Num: 22

Candidate Starts for Asa16_67:

(Start: 17 @42504 has 4 MA's), (Start: 18 @42507 has 1 MA's), (Start: 22 @42516 has 7 MA's), (45, 42744), (51, 42792),

Gene: Ashes_60 Start: 38817, Stop: 39089, Start Num: 29

Candidate Starts for Ashes_60:

(Start: 15 @38760 has 4 MA's), (Start: 29 @38817 has 12 MA's),

Gene: BaileyBlu_59 Start: 39085, Stop: 39360, Start Num: 27

Candidate Starts for BaileyBlu_59:

(3, 38989), (4, 38992), (6, 39001), (10, 39028), (14, 39046), (Start: 27 @39085 has 2 MA's), (33, 39118),

Gene: Beaupre_59 Start: 38627, Stop: 38899, Start Num: 29

Candidate Starts for Beaupre_59:

(Start: 15 @38570 has 4 MA's), (Start: 29 @38627 has 12 MA's),

Gene: CallinAllBarbz_60 Start: 39859, Stop: 40101, Start Num: 27

Candidate Starts for CallinAllBarbz_60:

(6, 39775), (10, 39802), (Start: 16 @39826 has 1 MA's), (Start: 27 @39859 has 2 MA's), (33, 39892),

Gene: Cappuccino_60 Start: 38667, Stop: 38939, Start Num: 29

Candidate Starts for Cappuccino_60:

(9, 38586), (12, 38604), (Start: 15 @38610 has 4 MA's), (Start: 29 @38667 has 12 MA's), (41, 38817),

Gene: Crewmate_72 Start: 43229, Stop: 43537, Start Num: 17

Candidate Starts for Crewmate_72:

(2, 43046), (8, 43190), (Start: 17 @43229 has 4 MA's), (Start: 18 @43232 has 1 MA's), (Start: 32 @43268 has 1 MA's), (57, 43502), (58, 43532),

Gene: Cyan_68 Start: 42571, Stop: 42834, Start Num: 25

Candidate Starts for Cyan_68:

(2, 42382), (5, 42499), (Start: 22 @42562 has 7 MA's), (Start: 25 @42571 has 15 MA's), (Start: 32 @42601 has 1 MA's), (54, 42829),

Gene: Donkey_60 Start: 38657, Stop: 38929, Start Num: 29

Candidate Starts for Donkey_60:

(9, 38576), (12, 38594), (Start: 15 @38600 has 4 MA's), (Start: 29 @38657 has 12 MA's), (41, 38807),

Gene: DrSierra_65 Start: 41681, Stop: 41947, Start Num: 26

Candidate Starts for DrSierra_65:

(Start: 26 @41681 has 2 MA's), (54, 41942),

Gene: Elezi_66 Start: 42273, Stop: 42554, Start Num: 22

Candidate Starts for Elezi_66:

(5, 42198), (Start: 17 @42261 has 4 MA's), (Start: 18 @42264 has 1 MA's), (Start: 22 @42273 has 7 MA's), (31, 42315), (45, 42501), (51, 42549),

Gene: Elfy_76 Start: 43113, Stop: 43328, Start Num: 35

Candidate Starts for Elfy_76:

(Start: 35 @43113 has 1 MA's), (39, 43197), (44, 43245),

Gene: Emotion_70 Start: 43720, Stop: 43983, Start Num: 25

Candidate Starts for Emotion_70:

(Start: 25 @43720 has 15 MA's), (52, 43978),

Gene: Eraser_67 Start: 42523, Stop: 42804, Start Num: 22

Candidate Starts for Eraser_67:

(Start: 17 @42511 has 4 MA's), (Start: 18 @42514 has 1 MA's), (Start: 22 @42523 has 7 MA's), (45, 42751), (51, 42799),

Gene: Exile_59 Start: 43115, Stop: 43405, Start Num: 21

Candidate Starts for Exile_59:

(Start: 21 @43115 has 1 MA's), (42, 43295),

Gene: FiveHead_70 Start: 41853, Stop: 42158, Start Num: 16

Candidate Starts for FiveHead_70:

(Start: 16 @41853 has 1 MA's), (48, 42117), (56, 42153),

Gene: Flutur_67 Start: 42852, Stop: 43115, Start Num: 25

Candidate Starts for Flutur_67:

(2, 42663), (5, 42780), (Start: 22 @42843 has 7 MA's), (Start: 25 @42852 has 15 MA's), (Start: 32 @42882 has 1 MA's), (54, 43110),

Gene: Gambol_61 Start: 38676, Stop: 38948, Start Num: 29

Candidate Starts for Gambol_61:

(9, 38595), (12, 38613), (Start: 15 @38619 has 4 MA's), (Start: 29 @38676 has 12 MA's), (41, 38826),

Gene: Giorgio_59 Start: 38553, Stop: 38882, Start Num: 15

Candidate Starts for Giorgio_59:

(Start: 15 @38553 has 4 MA's), (Start: 29 @38610 has 12 MA's),

Gene: GrimEater_62 Start: 40339, Stop: 40611, Start Num: 28

Candidate Starts for GrimEater_62:

(10, 40279), (13, 40297), (Start: 28 @40339 has 3 MA's),

Gene: Gumpizza_59 Start: 38509, Stop: 38838, Start Num: 15

Candidate Starts for Gumpizza_59:

(Start: 15 @38509 has 4 MA's), (Start: 29 @38566 has 12 MA's),

Gene: Halsey_60 Start: 38807, Stop: 39079, Start Num: 29

Candidate Starts for Halsey_60:

(Start: 15 @38750 has 4 MA's), (Start: 29 @38807 has 12 MA's),

Gene: IUFootball_67 Start: 44555, Stop: 44812, Start Num: 25

Candidate Starts for IUFootball_67:

(Start: 25 @44555 has 15 MA's), (46, 44768), (49, 44786), (53, 44807),

Gene: Jankie_63 Start: 40521, Stop: 40793, Start Num: 28

Candidate Starts for Jankie_63:

(10, 40461), (13, 40479), (Start: 28 @40521 has 3 MA's),

Gene: JasmineDragon_67 Start: 42320, Stop: 42616, Start Num: 20

Candidate Starts for JasmineDragon_67:

(Start: 20 @42320 has 3 MA's), (56, 42611),

Gene: Joemato_69 Start: 42748, Stop: 43011, Start Num: 25

Candidate Starts for Joemato_69:

(2, 42559), (5, 42676), (Start: 22 @42739 has 7 MA's), (Start: 25 @42748 has 15 MA's), (Start: 32 @42778 has 1 MA's), (54, 43006),

Gene: JohnDoe_68 Start: 42656, Stop: 42928, Start Num: 22

Candidate Starts for JohnDoe_68:

(2, 42476), (5, 42593), (Start: 22 @42656 has 7 MA's), (Start: 25 @42665 has 15 MA's), (Start: 32 @42695 has 1 MA's), (54, 42923),

Gene: JohnThicc_68 Start: 41852, Stop: 42160, Start Num: 16

Candidate Starts for JohnThicc_68:

(Start: 16 @41852 has 1 MA's), (56, 42155),

Gene: Jstan_68 Start: 42277, Stop: 42558, Start Num: 22

Candidate Starts for Jstan_68:

(5, 42202), (Start: 17 @42265 has 4 MA's), (Start: 18 @42268 has 1 MA's), (Start: 22 @42277 has 7 MA's), (31, 42319), (45, 42505), (51, 42553),

Gene: JuneStar_66 Start: 43398, Stop: 43697, Start Num: 18

Candidate Starts for JuneStar_66:

(Start: 17 @43395 has 4 MA's), (Start: 18 @43398 has 1 MA's), (50, 43635), (55, 43665), (58, 43692),

Gene: Kalimba_60 Start: 38654, Stop: 38926, Start Num: 29

Candidate Starts for Kalimba_60:

(9, 38573), (12, 38591), (Start: 15 @38597 has 4 MA's), (Start: 29 @38654 has 12 MA's), (41, 38804),

Gene: Kaylissa_69 Start: 43024, Stop: 43287, Start Num: 25

Candidate Starts for Kaylissa_69:

(5, 42952), (Start: 22 @43015 has 7 MA's), (Start: 25 @43024 has 15 MA's), (Start: 32 @43054 has 1 MA's), (54, 43282),

Gene: KeAlii_65 Start: 40879, Stop: 41094, Start Num: 34

Candidate Starts for KeAlii_65:

(30, 40861), (Start: 34 @40879 has 1 MA's), (53, 41089),

Gene: LadyAstra_68 Start: 41952, Stop: 42257, Start Num: 16

Candidate Starts for LadyAstra_68:

(Start: 16 @41952 has 1 MA's), (48, 42216), (56, 42252),

Gene: Lego_67 Start: 42346, Stop: 42609, Start Num: 25

Candidate Starts for Lego_67:

(2, 42157), (5, 42274), (Start: 22 @42337 has 7 MA's), (Start: 25 @42346 has 15 MA's), (Start: 32 @42376 has 1 MA's), (54, 42604),

Gene: Liebe_67 Start: 44554, Stop: 44811, Start Num: 25
Candidate Starts for Liebe_67:
(Start: 25 @44554 has 15 MA's), (46, 44767), (49, 44785), (53, 44806),

Gene: LisoBros_63 Start: 43444, Stop: 43713, Start Num: 28
Candidate Starts for LisoBros_63:
(3, 43339), (6, 43351), (Start: 17 @43408 has 4 MA's), (Start: 28 @43444 has 3 MA's), (Start: 32 @43471 has 1 MA's), (56, 43708),

Gene: Lizalica_67 Start: 41945, Stop: 42199, Start Num: 25
Candidate Starts for Lizalica_67:
(1, 41612), (2, 41753), (5, 41873), (Start: 22 @41936 has 7 MA's), (Start: 25 @41945 has 15 MA's),
(Start: 32 @41978 has 1 MA's), (45, 42146), (51, 42194),

Gene: London_67 Start: 42514, Stop: 42795, Start Num: 22
Candidate Starts for London_67:
(Start: 17 @42502 has 4 MA's), (Start: 18 @42505 has 1 MA's), (Start: 22 @42514 has 7 MA's), (45, 42742), (51, 42790),

Gene: MaGuCo_61 Start: 42675, Stop: 42932, Start Num: 25
Candidate Starts for MaGuCo_61:
(Start: 25 @42675 has 15 MA's), (49, 42906), (53, 42927),

Gene: Maureen_67 Start: 44553, Stop: 44810, Start Num: 25
Candidate Starts for Maureen_67:
(Start: 25 @44553 has 15 MA's), (46, 44766), (49, 44784), (53, 44805),

Gene: Michkear_69 Start: 45045, Stop: 45314, Start Num: 24
Candidate Starts for Michkear_69:
(24, 45045),

Gene: MiniMommy_67 Start: 42328, Stop: 42624, Start Num: 20
Candidate Starts for MiniMommy_67:
(Start: 20 @42328 has 3 MA's), (56, 42619),

Gene: Moss_60 Start: 38754, Stop: 39026, Start Num: 29
Candidate Starts for Moss_60:
(Start: 15 @38697 has 4 MA's), (Start: 29 @38754 has 12 MA's),

Gene: Mudpuppy_66 Start: 42711, Stop: 42965, Start Num: 25
Candidate Starts for Mudpuppy_66:
(1, 42384), (2, 42522), (5, 42639), (Start: 22 @42702 has 7 MA's), (Start: 25 @42711 has 15 MA's),
(Start: 32 @42744 has 1 MA's), (51, 42960),

Gene: Mysterium_59 Start: 38595, Stop: 38867, Start Num: 29
Candidate Starts for Mysterium_59:
(Start: 15 @38538 has 4 MA's), (Start: 29 @38595 has 12 MA's),

Gene: Niobe_67 Start: 42517, Stop: 42798, Start Num: 22
Candidate Starts for Niobe_67:
(Start: 17 @42505 has 4 MA's), (Start: 18 @42508 has 1 MA's), (Start: 22 @42517 has 7 MA's), (45, 42745), (51, 42793),

Gene: ObiToo_72 Start: 42845, Stop: 43153, Start Num: 17

Candidate Starts for ObiToo_72:

(2, 42662), (8, 42806), (Start: 17 @42845 has 4 MA's), (Start: 18 @42848 has 1 MA's), (Start: 32 @42884 has 1 MA's), (57, 43118), (58, 43148),

Gene: Origami_67 Start: 41744, Stop: 42049, Start Num: 16

Candidate Starts for Origami_67:

(Start: 16 @41744 has 1 MA's), (48, 42008), (56, 42044),

Gene: Powerpuff_69 Start: 43550, Stop: 43813, Start Num: 25

Candidate Starts for Powerpuff_69:

(2, 43361), (5, 43478), (Start: 22 @43541 has 7 MA's), (Start: 25 @43550 has 15 MA's), (Start: 32 @43580 has 1 MA's), (54, 43808),

Gene: Reedo_67 Start: 40786, Stop: 41046, Start Num: 23

Candidate Starts for Reedo_67:

(7, 40723), (11, 40747), (Start: 23 @40786 has 2 MA's), (46, 41002), (52, 41041),

Gene: RockScotty_59 Start: 38590, Stop: 38862, Start Num: 29

Candidate Starts for RockScotty_59:

(Start: 15 @38533 has 4 MA's), (Start: 29 @38590 has 12 MA's),

Gene: Sabourin_60 Start: 38598, Stop: 38927, Start Num: 15

Candidate Starts for Sabourin_60:

(9, 38574), (12, 38592), (Start: 15 @38598 has 4 MA's), (Start: 29 @38655 has 12 MA's), (41, 38805),

Gene: Schaffner_65 Start: 42471, Stop: 42779, Start Num: 17

Candidate Starts for Schaffner_65:

(Start: 17 @42471 has 4 MA's), (Start: 18 @42474 has 1 MA's), (57, 42744), (58, 42774),

Gene: ShakeltOph_67 Start: 42320, Stop: 42616, Start Num: 20

Candidate Starts for ShakeltOph_67:

(Start: 20 @42320 has 3 MA's), (56, 42611),

Gene: Simpson_73 Start: 42743, Stop: 43015, Start Num: 22

Candidate Starts for Simpson_73:

(2, 42563), (5, 42680), (Start: 22 @42743 has 7 MA's), (Start: 25 @42752 has 15 MA's), (Start: 32 @42782 has 1 MA's), (54, 43010),

Gene: Skelbel_68 Start: 42517, Stop: 42798, Start Num: 22

Candidate Starts for Skelbel_68:

(Start: 17 @42505 has 4 MA's), (Start: 18 @42508 has 1 MA's), (Start: 22 @42517 has 7 MA's), (45, 42745), (51, 42793),

Gene: Snek_67 Start: 39932, Stop: 40216, Start Num: 19

Candidate Starts for Snek_67:

(Start: 19 @39932 has 2 MA's), (37, 40037), (43, 40124), (54, 40211),

Gene: Soondubu_61 Start: 44124, Stop: 44414, Start Num: 21

Candidate Starts for Soondubu_61:

(Start: 21 @44124 has 1 MA's), (42, 44304),

Gene: Sooty_60 Start: 38669, Stop: 38941, Start Num: 29

Candidate Starts for Sooty_60:

(9, 38588), (12, 38606), (Start: 15 @38612 has 4 MA's), (Start: 29 @38669 has 12 MA's), (41, 38819),

Gene: SpecialK_60 Start: 38663, Stop: 38935, Start Num: 29

Candidate Starts for SpecialK_60:

(Start: 15 @38606 has 4 MA's), (Start: 29 @38663 has 12 MA's),

Gene: Stuu_60 Start: 38715, Stop: 39044, Start Num: 15

Candidate Starts for Stuu_60:

(Start: 15 @38715 has 4 MA's), (Start: 29 @38772 has 12 MA's),

Gene: Subaru_67 Start: 42315, Stop: 42554, Start Num: 31

Candidate Starts for Subaru_67:

(5, 42198), (Start: 17 @42261 has 4 MA's), (Start: 18 @42264 has 1 MA's), (Start: 22 @42273 has 7 MA's), (31, 42315), (45, 42501), (51, 42549),

Gene: Sue2_66 Start: 41273, Stop: 41494, Start Num: 32

Candidate Starts for Sue2_66:

(Start: 32 @41273 has 1 MA's), (38, 41324), (53, 41489),

Gene: Tallboi_67 Start: 42522, Stop: 42788, Start Num: 22

Candidate Starts for Tallboi_67:

(Start: 18 @42513 has 1 MA's), (Start: 22 @42522 has 7 MA's), (40, 42687), (52, 42783),

Gene: Tbone_67 Start: 42998, Stop: 43252, Start Num: 25

Candidate Starts for Tbone_67:

(2, 42809), (5, 42926), (Start: 22 @42989 has 7 MA's), (Start: 25 @42998 has 15 MA's), (Start: 32 @43031 has 1 MA's), (51, 43247),

Gene: Tutumahutu_69 Start: 42593, Stop: 42856, Start Num: 25

Candidate Starts for Tutumahutu_69:

(2, 42404), (5, 42521), (Start: 22 @42584 has 7 MA's), (Start: 25 @42593 has 15 MA's), (Start: 32 @42623 has 1 MA's), (54, 42851),

Gene: Tweety19_68 Start: 39933, Stop: 40217, Start Num: 19

Candidate Starts for Tweety19_68:

(Start: 19 @39933 has 2 MA's), (37, 40038), (43, 40125), (54, 40212),

Gene: VResidence_69 Start: 40961, Stop: 41224, Start Num: 23

Candidate Starts for VResidence_69:

(Start: 23 @40961 has 2 MA's), (36, 41036),

Gene: VroomVroom_64 Start: 41876, Stop: 42163, Start Num: 16

Candidate Starts for VroomVroom_64:

(Start: 16 @41876 has 1 MA's), (56, 42158),

Gene: Warda_68 Start: 42724, Stop: 42978, Start Num: 25

Candidate Starts for Warda_68:

(1, 42397), (2, 42535), (5, 42652), (Start: 22 @42715 has 7 MA's), (Start: 25 @42724 has 15 MA's), (Start: 32 @42757 has 1 MA's), (51, 42973),

Gene: Wildwest_64 Start: 42676, Stop: 42942, Start Num: 26

Candidate Starts for Wildwest_64:

(7, 42613), (Start: 26 @42676 has 2 MA's), (54, 42937),

Gene: Yang_66 Start: 42085, Stop: 42387, Start Num: 17

Candidate Starts for Yang_66:

(Start: 17 @42085 has 4 MA's), (Start: 18 @42088 has 1 MA's), (50, 42325), (55, 42355), (58, 42382),

Gene: YesChef_67 Start: 42409, Stop: 42672, Start Num: 25

Candidate Starts for YesChef_67:

(2, 42220), (5, 42337), (Start: 22 @42400 has 7 MA's), (Start: 25 @42409 has 15 MA's), (Start: 32 @42439 has 1 MA's), (54, 42667),