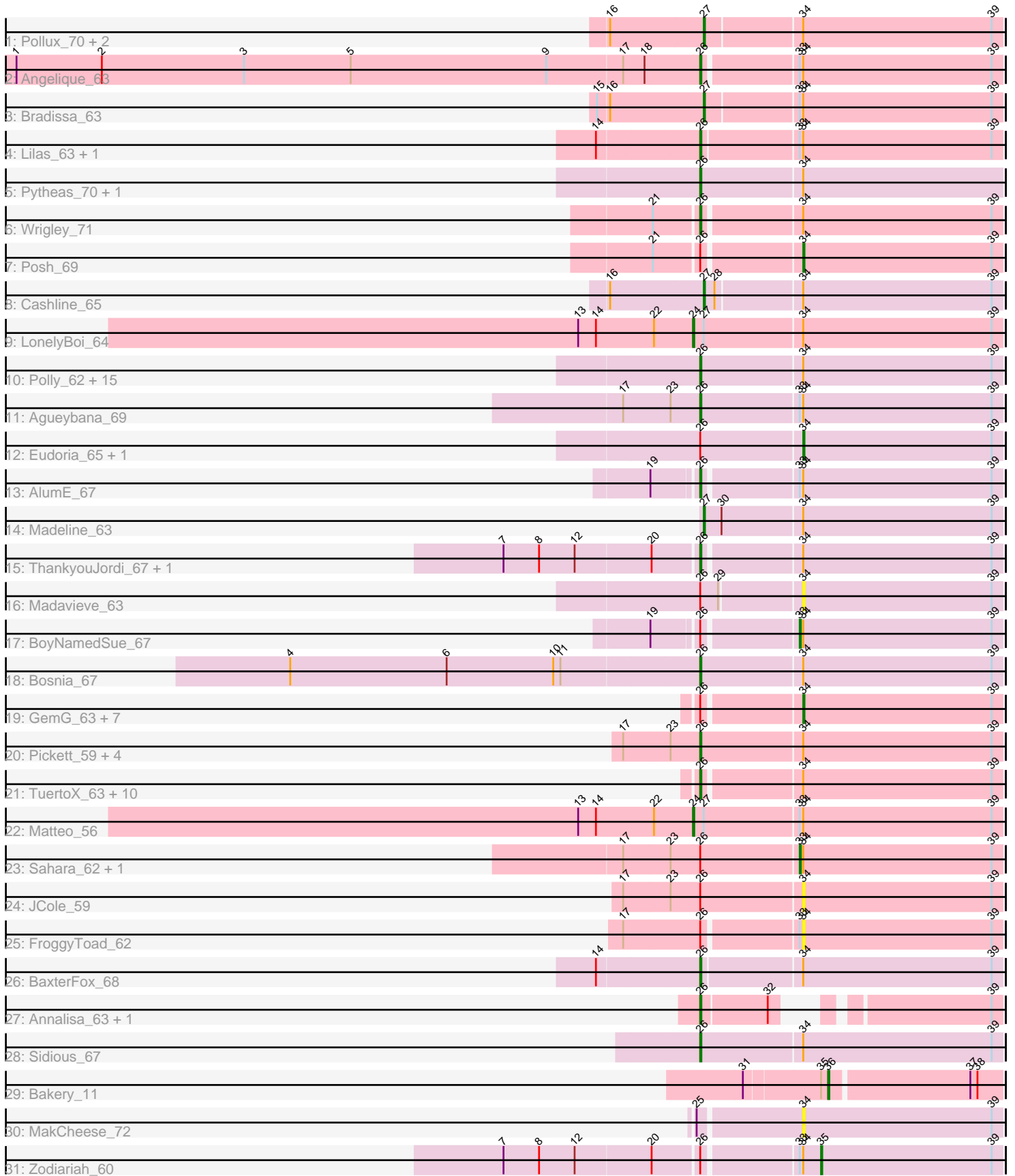


Pham 294676



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 294676 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294676 has 75 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Pollux_70, Floral_68, EdnaMode_60
- Track 2 : Angelique_63
- Track 3 : Bradissa_63
- Track 4 : Lilas_63, EnalisNailo_62
- Track 5 : Pytheas_70, Jablanski_70
- Track 6 : Wrigley_71
- Track 7 : Posh_69
- Track 8 : Cashline_65
- Track 9 : LonelyBoi_64
- Track 10 : Polly_62, Bunnybear_59, Suscepit_65, Manasvini_66, Nymphadora_69, Tayonia_65, Antonio_65, Maridalia_67, Trumpet_65, Eviarto_69, TimTam_69, BatStarr_68, Neobush_67, Zameen_65, BeeGee_71, Kita_66
- Track 11 : Agueybana_69
- Track 12 : Eudoria_65, Yeezy_66
- Track 13 : AlumE_67
- Track 14 : Madeline_63
- Track 15 : ThankyouJordi_67, WelcomeAyanna_67
- Track 16 : Madavieve_63
- Track 17 : BoyNamedSue_67
- Track 18 : Bosnia_67
- Track 19 : GemG_63, Ebert_67, Sproutie_63, Savage_63, Zirinka_63, Hugley_67, Whiteclaw_63, Bialota_63
- Track 20 : Pickett_59, Yeet412_60, RavenCo17_64, EMsquaredA_66, Marteena_65
- Track 21 : TuertoX_63, Gizermo_63, PantheRoc_71, Haley23_63, Bjanes7_60, Mocha12_63, Lamberg_59, Herod_69, Clap_63, Cynthia_63, Nettuno_59
- Track 22 : Matteo_56
- Track 23 : Sahara_62, Jalleen_66
- Track 24 : JCole_59
- Track 25 : FroggyToad_62
- Track 26 : BaxterFox_68
- Track 27 : Annalisa_63, Suerte_59
- Track 28 : Sidious_67
- Track 29 : Bakery_11
- Track 30 : MakCheese_72
- Track 31 : Zodiariah_60

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

The start number called the most often in the published annotations is 26, it was called in 47 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana_69, AlumE_67, Angelique_63, Annalisa_63, Antonio_65, BatStarr_68, BaxterFox_68, BeeGee_71, Bjaner7_60, Bosnia_67, Bunnybear_59, Clap_63, Cynthia_63, EMSquaredA_66, EnalisNailo_62, Eviarto_69, Gizermo_63, Haley23_63, Herod_69, Jablanski_70, Kita_66, Lamberg_59, Lilas_63, Manasvini_66, Maridalia_67, Marteena_65, Mocha12_63, Neobush_67, Nettuno_59, Nymphadora_69, PantheRoc_71, Pickett_59, Polly_62, Pytheas_70, RavenCo17_64, Sidious_67, Suerte_59, Suscepit_65, Tayonia_65, ThankyouJordi_67, TimTam_69, Trumpet_65, TuertoX_63, WelcomeAyanna_67, Wrigley_71, Yeet412_60, Zameen_65,

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

- Bialota_63, BoyNamedSue_67, Ebert_67, Eudoria_65, FroggyToad_62, GemG_63, Hugley_67, JCole_59, Jalleen_66, Madavieve_63, Posh_69, Sahara_62, Savage_63, Sproutie_63, Whiteclaw_63, Yeezy_66, Zirinka_63, Zodiariah_60,

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

- Bakery_11, Bradissa_63, Cashline_65, EdnaMode_60, Floral_68, LonelyBoi_64, Madeline_63, MakCheese_72, Matteo_56, Pollux_70,

Summary by start number:

Start 24:

- Found in 2 of 75 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 69
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LonelyBoi_64 (CY7), Matteo_56 (CZ2),

Start 26:

- Found in 65 of 75 (86.7%) of genes in pham
- Manual Annotations of this start: 47 of 69
- Called 72.3% of time when present
- Phage (with cluster) where this start called: Agueybana_69 (CZ1), AlumE_67 (CZ1), Angelique_63 (CY1), Annalisa_63 (CZ4), Antonio_65 (CZ1), BatStarr_68 (CZ1), BaxterFox_68 (CZ3), BeeGee_71 (CY5), Bjaner7_60 (CZ2), Bosnia_67 (CZ1), Bunnybear_59 (CZ), Clap_63 (CZ2), Cynthia_63 (CZ2), EMSquaredA_66 (CY1), EnalisNailo_62 (CY1), Eviarto_69 (CZ1), Gizermo_63 (CZ2), Haley23_63 (CZ2), Herod_69 (CZ1), Jablanski_70 (CY3), Kita_66 (CZ1), Lamberg_59 (CZ2), Lilas_63 (CY1), Manasvini_66 (CZ1), Maridalia_67 (CZ1), Marteena_65 (CY1), Mocha12_63 (CZ2), Neobush_67 (CZ1), Nettuno_59 (CZ2), Nymphadora_69 (CZ1), PantheRoc_71 (CZ3), Pickett_59 (CZ2), Polly_62 (CZ1), Pytheas_70 (CY3), RavenCo17_64 (CZ8), Sidious_67 (CZ7), Suerte_59 (CZ4), Suscepit_65 (CZ1), Tayonia_65 (CZ1), ThankyouJordi_67 (CZ1), TimTam_69 (CZ1), Trumpet_65 (CZ1), TuertoX_63 (CZ2), WelcomeAyanna_67 (CZ1), Wrigley_71 (CY4), Yeet412_60 (CZ2), Zameen_65 (CZ1),

Start 27:

- Found in 8 of 75 (10.7%) of genes in pham
- Manual Annotations of this start: 6 of 69
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Bradissa_63 (CY1), Cashline_65 (CY6), EdnaMode_60 (CZ2), Floral_68 (CY1), Madeline_63 (CZ1), Pollux_70 (CY1),

Start 33:

- Found in 12 of 75 (16.0%) of genes in pham
- Manual Annotations of this start: 2 of 69
- Called 25.0% of time when present
- Phage (with cluster) where this start called: BoyNamedSue_67 (CZ1), Jalleen_66 (CZ2), Sahara_62 (CZ2),

Start 34:

- Found in 72 of 75 (96.0%) of genes in pham
- Manual Annotations of this start: 10 of 69
- Called 20.8% of time when present
- Phage (with cluster) where this start called: Bialota_63 (CZ1), Ebert_67 (CZ2), Eudoria_65 (CZ1), FroggyToad_62 (CZ2), GemG_63 (CZ2), Hugley_67 (CZ1), JCole_59 (CZ2), Madavieve_63 (CZ1), MakCheese_72 (DW), Posh_69 (CY4), Savage_63 (CZ2), Sproutie_63 (CZ2), Whiteclaw_63 (CZ2), Yeezy_66 (CZ3), Zirinka_63 (CZ1),

Start 35:

- Found in 2 of 75 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 69
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Zodiariah_60 (DW),

Start 36:

- Found in 1 of 75 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 69
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bakery_11 (DC1),

Summary by clusters:

There are 15 clusters represented in this pham: CY3, CY1, CY7, CY6, CY5, CY4, CZ2, CZ3, CZ1, CZ8, CZ4, CZ7, CZ, DW, DC1,

Info for manual annotations of cluster CY1:

- Start number 26 was manually annotated 5 times for cluster CY1.
- Start number 27 was manually annotated 3 times for cluster CY1.

Info for manual annotations of cluster CY3:

- Start number 26 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 26 was manually annotated 1 time for cluster CY4.
- Start number 34 was manually annotated 1 time for cluster CY4.

Info for manual annotations of cluster CY5:

- Start number 26 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:

- Start number 27 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:

- Start number 24 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ:

- Start number 26 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 26 was manually annotated 20 times for cluster CZ1.
- Start number 27 was manually annotated 1 time for cluster CZ1.
- Start number 33 was manually annotated 1 time for cluster CZ1.
- Start number 34 was manually annotated 3 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 24 was manually annotated 1 time for cluster CZ2.
- Start number 26 was manually annotated 11 times for cluster CZ2.
- Start number 27 was manually annotated 1 time for cluster CZ2.
- Start number 33 was manually annotated 1 time for cluster CZ2.
- Start number 34 was manually annotated 5 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 26 was manually annotated 2 times for cluster CZ3.
- Start number 34 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 26 was manually annotated 2 times for cluster CZ4.

Info for manual annotations of cluster CZ7:

- Start number 26 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 26 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DC1:

- Start number 36 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster DW:

- Start number 35 was manually annotated 1 time for cluster DW.

Gene Information:

Gene: Agueybana_69 Start: 46506, Stop: 46757, Start Num: 26

Candidate Starts for Agueybana_69:

(17, 46443), (23, 46482), (Start: 26 @46506 has 47 MA's), (Start: 33 @46587 has 2 MA's), (Start: 34 @46590 has 10 MA's), (39, 46749),

Gene: AlumE_67 Start: 46787, Stop: 47032, Start Num: 26

Candidate Starts for AlumE_67:

(19, 46751), (Start: 26 @46787 has 47 MA's), (Start: 33 @46862 has 2 MA's), (Start: 34 @46865 has 10 MA's), (39, 47024),

Gene: Angelique_63 Start: 45248, Stop: 45493, Start Num: 26

Candidate Starts for Angelique_63:

(1, 44675), (2, 44747), (3, 44867), (5, 44957), (9, 45122), (17, 45185), (18, 45203), (Start: 26 @45248 has 47 MA's), (Start: 33 @45323 has 2 MA's), (Start: 34 @45326 has 10 MA's), (39, 45485),

Gene: Annalisa_63 Start: 42102, Stop: 42302, Start Num: 26

Candidate Starts for Annalisa_63:

(Start: 26 @42102 has 47 MA's), (32, 42156), (39, 42294),

Gene: Antonio_65 Start: 44009, Stop: 44260, Start Num: 26

Candidate Starts for Antonio_65:

(Start: 26 @44009 has 47 MA's), (Start: 34 @44093 has 10 MA's), (39, 44252),

Gene: Bakery_11 Start: 4737, Stop: 4877, Start Num: 36

Candidate Starts for Bakery_11:

(31, 4671), (Start: 35 @4731 has 1 MA's), (Start: 36 @4737 has 1 MA's), (37, 4851), (38, 4857),

Gene: BatStarr_68 Start: 47043, Stop: 47291, Start Num: 26

Candidate Starts for BatStarr_68:

(Start: 26 @47043 has 47 MA's), (Start: 34 @47124 has 10 MA's), (39, 47283),

Gene: BaxterFox_68 Start: 46523, Stop: 46771, Start Num: 26

Candidate Starts for BaxterFox_68:

(14, 46439), (Start: 26 @46523 has 47 MA's), (Start: 34 @46604 has 10 MA's), (39, 46763),

Gene: BeeGee_71 Start: 45992, Stop: 46243, Start Num: 26

Candidate Starts for BeeGee_71:

(Start: 26 @45992 has 47 MA's), (Start: 34 @46076 has 10 MA's), (39, 46235),

Gene: Bialota_63 Start: 45097, Stop: 45264, Start Num: 34

Candidate Starts for Bialota_63:

(Start: 26 @45019 has 47 MA's), (Start: 34 @45097 has 10 MA's), (39, 45256),

Gene: Bjaner7_60 Start: 40715, Stop: 40960, Start Num: 26

Candidate Starts for Bjaner7_60:

(Start: 26 @40715 has 47 MA's), (Start: 34 @40793 has 10 MA's), (39, 40952),

Gene: Bosnia_67 Start: 47305, Stop: 47556, Start Num: 26

Candidate Starts for Bosnia_67:

(4, 46963), (6, 47095), (10, 47185), (11, 47191), (Start: 26 @47305 has 47 MA's), (Start: 34 @47389 has 10 MA's), (39, 47548),

Gene: BoyNamedSue_67 Start: 46862, Stop: 47032, Start Num: 33

Candidate Starts for BoyNamedSue_67:

(19, 46751), (Start: 26 @46787 has 47 MA's), (Start: 33 @46862 has 2 MA's), (Start: 34 @46865 has 10 MA's), (39, 47024),

Gene: Bradissa_63 Start: 45371, Stop: 45616, Start Num: 27

Candidate Starts for Bradissa_63:

(15, 45284), (16, 45293), (Start: 27 @45371 has 6 MA's), (Start: 33 @45446 has 2 MA's), (Start: 34 @45449 has 10 MA's), (39, 45608),

Gene: Bunnybear_59 Start: 43728, Stop: 43979, Start Num: 26

Candidate Starts for Bunnybear_59:

(Start: 26 @43728 has 47 MA's), (Start: 34 @43812 has 10 MA's), (39, 43971),

Gene: Cashline_65 Start: 46170, Stop: 46415, Start Num: 27

Candidate Starts for Cashline_65:

(16, 46092), (Start: 27 @46170 has 6 MA's), (28, 46179), (Start: 34 @46248 has 10 MA's), (39, 46407),

Gene: Clap_63 Start: 40894, Stop: 41139, Start Num: 26

Candidate Starts for Clap_63:

(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: Cynthia_63 Start: 40892, Stop: 41137, Start Num: 26

Candidate Starts for Cynthia_63:

(Start: 26 @40892 has 47 MA's), (Start: 34 @40970 has 10 MA's), (39, 41129),

Gene: EMSquaredA_66 Start: 45093, Stop: 45344, Start Num: 26

Candidate Starts for EMSquaredA_66:

(17, 45030), (23, 45069), (Start: 26 @45093 has 47 MA's), (Start: 34 @45177 has 10 MA's), (39, 45336),

Gene: Ebert_67 Start: 41404, Stop: 41571, Start Num: 34

Candidate Starts for Ebert_67:

(Start: 26 @41326 has 47 MA's), (Start: 34 @41404 has 10 MA's), (39, 41563),

Gene: EdnaMode_60 Start: 40159, Stop: 40404, Start Num: 27

Candidate Starts for EdnaMode_60:

(16, 40081), (Start: 27 @40159 has 6 MA's), (Start: 34 @40237 has 10 MA's), (39, 40396),

Gene: EnalisNailo_62 Start: 44902, Stop: 45150, Start Num: 26

Candidate Starts for EnalisNailo_62:

(14, 44818), (Start: 26 @44902 has 47 MA's), (Start: 33 @44980 has 2 MA's), (Start: 34 @44983 has 10 MA's), (39, 45142),

Gene: Eudoria_65 Start: 44093, Stop: 44260, Start Num: 34

Candidate Starts for Eudoria_65:

(Start: 26 @44009 has 47 MA's), (Start: 34 @44093 has 10 MA's), (39, 44252),

Gene: Eviarto_69 Start: 47018, Stop: 47266, Start Num: 26

Candidate Starts for Eviarto_69:

(Start: 26 @47018 has 47 MA's), (Start: 34 @47099 has 10 MA's), (39, 47258),

Gene: Floral_68 Start: 47328, Stop: 47573, Start Num: 27

Candidate Starts for Floral_68:

(16, 47250), (Start: 27 @47328 has 6 MA's), (Start: 34 @47406 has 10 MA's), (39, 47565),

Gene: FroggyToad_62 Start: 41920, Stop: 42087, Start Num: 34

Candidate Starts for FroggyToad_62:

(17, 41779), (Start: 26 @41842 has 47 MA's), (Start: 33 @41917 has 2 MA's), (Start: 34 @41920 has 10 MA's), (39, 42079),

Gene: GemG_63 Start: 40976, Stop: 41143, Start Num: 34
Candidate Starts for GemG_63:
(Start: 26 @40898 has 47 MA's), (Start: 34 @40976 has 10 MA's), (39, 41135),

Gene: Gizermo_63 Start: 40894, Stop: 41139, Start Num: 26
Candidate Starts for Gizermo_63:
(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: Haley23_63 Start: 40894, Stop: 41139, Start Num: 26
Candidate Starts for Haley23_63:
(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: Herod_69 Start: 47729, Stop: 47974, Start Num: 26
Candidate Starts for Herod_69:
(Start: 26 @47729 has 47 MA's), (Start: 34 @47807 has 10 MA's), (39, 47966),

Gene: Hugley_67 Start: 47787, Stop: 47954, Start Num: 34
Candidate Starts for Hugley_67:
(Start: 26 @47709 has 47 MA's), (Start: 34 @47787 has 10 MA's), (39, 47946),

Gene: JCole_59 Start: 38911, Stop: 39078, Start Num: 34
Candidate Starts for JCole_59:
(17, 38764), (23, 38803), (Start: 26 @38827 has 47 MA's), (Start: 34 @38911 has 10 MA's), (39, 39070),

Gene: Jablanski_70 Start: 47824, Stop: 48075, Start Num: 26
Candidate Starts for Jablanski_70:
(Start: 26 @47824 has 47 MA's), (Start: 34 @47908 has 10 MA's),

Gene: Jalleen_66 Start: 41280, Stop: 41450, Start Num: 33
Candidate Starts for Jalleen_66:
(17, 41136), (23, 41175), (Start: 26 @41199 has 47 MA's), (Start: 33 @41280 has 2 MA's), (Start: 34 @41283 has 10 MA's), (39, 41442),

Gene: Kita_66 Start: 44018, Stop: 44269, Start Num: 26
Candidate Starts for Kita_66:
(Start: 26 @44018 has 47 MA's), (Start: 34 @44102 has 10 MA's), (39, 44261),

Gene: Lamberg_59 Start: 39403, Stop: 39648, Start Num: 26
Candidate Starts for Lamberg_59:
(Start: 26 @39403 has 47 MA's), (Start: 34 @39481 has 10 MA's), (39, 39640),

Gene: Lilas_63 Start: 46440, Stop: 46688, Start Num: 26
Candidate Starts for Lilas_63:
(14, 46356), (Start: 26 @46440 has 47 MA's), (Start: 33 @46518 has 2 MA's), (Start: 34 @46521 has 10 MA's), (39, 46680),

Gene: LonelyBoi_64 Start: 46993, Stop: 47250, Start Num: 24
Candidate Starts for LonelyBoi_64:
(13, 46897), (14, 46912), (22, 46960), (Start: 24 @46993 has 2 MA's), (Start: 27 @47002 has 6 MA's), (Start: 34 @47083 has 10 MA's), (39, 47242),

Gene: Madavieve_63 Start: 45345, Stop: 45512, Start Num: 34
Candidate Starts for Madavieve_63:
(Start: 26 @45264 has 47 MA's), (29, 45279), (Start: 34 @45345 has 10 MA's), (39, 45504),

Gene: Madeline_63 Start: 46342, Stop: 46590, Start Num: 27
Candidate Starts for Madeline_63:
(Start: 27 @46342 has 6 MA's), (30, 46357), (Start: 34 @46423 has 10 MA's), (39, 46582),

Gene: MakCheese_72 Start: 47314, Stop: 47481, Start Num: 34
Candidate Starts for MakCheese_72:
(25, 47230), (Start: 34 @47314 has 10 MA's), (39, 47473),

Gene: Manasvini_66 Start: 44033, Stop: 44284, Start Num: 26
Candidate Starts for Manasvini_66:
(Start: 26 @44033 has 47 MA's), (Start: 34 @44117 has 10 MA's), (39, 44276),

Gene: Maridalia_67 Start: 45387, Stop: 45638, Start Num: 26
Candidate Starts for Maridalia_67:
(Start: 26 @45387 has 47 MA's), (Start: 34 @45471 has 10 MA's), (39, 45630),

Gene: Marteena_65 Start: 45093, Stop: 45344, Start Num: 26
Candidate Starts for Marteena_65:
(17, 45030), (23, 45069), (Start: 26 @45093 has 47 MA's), (Start: 34 @45177 has 10 MA's), (39, 45336),

Gene: Matteo_56 Start: 38069, Stop: 38326, Start Num: 24
Candidate Starts for Matteo_56:
(13, 37973), (14, 37988), (22, 38036), (Start: 24 @38069 has 2 MA's), (Start: 27 @38078 has 6 MA's),
(Start: 33 @38156 has 2 MA's), (Start: 34 @38159 has 10 MA's), (39, 38318),

Gene: Mocha12_63 Start: 40894, Stop: 41139, Start Num: 26
Candidate Starts for Mocha12_63:
(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: Neobush_67 Start: 44577, Stop: 44828, Start Num: 26
Candidate Starts for Neobush_67:
(Start: 26 @44577 has 47 MA's), (Start: 34 @44661 has 10 MA's), (39, 44820),

Gene: Nettuno_59 Start: 39403, Stop: 39651, Start Num: 26
Candidate Starts for Nettuno_59:
(Start: 26 @39403 has 47 MA's), (Start: 34 @39481 has 10 MA's), (39, 39640),

Gene: Nymphadora_69 Start: 47042, Stop: 47290, Start Num: 26
Candidate Starts for Nymphadora_69:
(Start: 26 @47042 has 47 MA's), (Start: 34 @47123 has 10 MA's), (39, 47282),

Gene: PantheRoc_71 Start: 47028, Stop: 47273, Start Num: 26
Candidate Starts for PantheRoc_71:
(Start: 26 @47028 has 47 MA's), (Start: 34 @47106 has 10 MA's), (39, 47265),

Gene: Pickett_59 Start: 38758, Stop: 39009, Start Num: 26
Candidate Starts for Pickett_59:

(17, 38695), (23, 38734), (Start: 26 @38758 has 47 MA's), (Start: 34 @38842 has 10 MA's), (39, 39001),

Gene: Pollux_70 Start: 47328, Stop: 47573, Start Num: 27

Candidate Starts for Pollux_70:

(16, 47250), (Start: 27 @47328 has 6 MA's), (Start: 34 @47406 has 10 MA's), (39, 47565),

Gene: Polly_62 Start: 43452, Stop: 43703, Start Num: 26

Candidate Starts for Polly_62:

(Start: 26 @43452 has 47 MA's), (Start: 34 @43536 has 10 MA's), (39, 43695),

Gene: Posh_69 Start: 47283, Stop: 47450, Start Num: 34

Candidate Starts for Posh_69:

(21, 47169), (Start: 26 @47205 has 47 MA's), (Start: 34 @47283 has 10 MA's), (39, 47442),

Gene: Pytheas_70 Start: 47823, Stop: 48074, Start Num: 26

Candidate Starts for Pytheas_70:

(Start: 26 @47823 has 47 MA's), (Start: 34 @47907 has 10 MA's),

Gene: RavenCo17_64 Start: 45276, Stop: 45527, Start Num: 26

Candidate Starts for RavenCo17_64:

(17, 45213), (23, 45252), (Start: 26 @45276 has 47 MA's), (Start: 34 @45360 has 10 MA's), (39, 45519),

Gene: Sahara_62 Start: 40374, Stop: 40544, Start Num: 33

Candidate Starts for Sahara_62:

(17, 40230), (23, 40269), (Start: 26 @40293 has 47 MA's), (Start: 33 @40374 has 2 MA's), (Start: 34 @40377 has 10 MA's), (39, 40536),

Gene: Savage_63 Start: 40972, Stop: 41139, Start Num: 34

Candidate Starts for Savage_63:

(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: Sidious_67 Start: 46609, Stop: 46860, Start Num: 26

Candidate Starts for Sidious_67:

(Start: 26 @46609 has 47 MA's), (Start: 34 @46693 has 10 MA's), (39, 46852),

Gene: Sproutie_63 Start: 40972, Stop: 41139, Start Num: 34

Candidate Starts for Sproutie_63:

(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: Suerte_59 Start: 41651, Stop: 41851, Start Num: 26

Candidate Starts for Suerte_59:

(Start: 26 @41651 has 47 MA's), (32, 41705), (39, 41843),

Gene: Suscepit_65 Start: 44010, Stop: 44261, Start Num: 26

Candidate Starts for Suscepit_65:

(Start: 26 @44010 has 47 MA's), (Start: 34 @44094 has 10 MA's), (39, 44253),

Gene: Tayonia_65 Start: 44009, Stop: 44260, Start Num: 26

Candidate Starts for Tayonia_65:

(Start: 26 @44009 has 47 MA's), (Start: 34 @44093 has 10 MA's), (39, 44252),

Gene: ThankyouJordi_67 Start: 47522, Stop: 47767, Start Num: 26
Candidate Starts for ThankyouJordi_67:
(7, 47363), (8, 47393), (12, 47423), (20, 47486), (Start: 26 @47522 has 47 MA's), (Start: 34 @47600 has 10 MA's), (39, 47759),

Gene: TimTam_69 Start: 47042, Stop: 47290, Start Num: 26
Candidate Starts for TimTam_69:
(Start: 26 @47042 has 47 MA's), (Start: 34 @47123 has 10 MA's), (39, 47282),

Gene: Trumpet_65 Start: 44010, Stop: 44261, Start Num: 26
Candidate Starts for Trumpet_65:
(Start: 26 @44010 has 47 MA's), (Start: 34 @44094 has 10 MA's), (39, 44253),

Gene: TuertoX_63 Start: 40894, Stop: 41139, Start Num: 26
Candidate Starts for TuertoX_63:
(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: WelcomeAyanna_67 Start: 47669, Stop: 47914, Start Num: 26
Candidate Starts for WelcomeAyanna_67:
(7, 47510), (8, 47540), (12, 47570), (20, 47633), (Start: 26 @47669 has 47 MA's), (Start: 34 @47747 has 10 MA's), (39, 47906),

Gene: Whiteclaw_63 Start: 40972, Stop: 41139, Start Num: 34
Candidate Starts for Whiteclaw_63:
(Start: 26 @40894 has 47 MA's), (Start: 34 @40972 has 10 MA's), (39, 41131),

Gene: Wrigley_71 Start: 46788, Stop: 47033, Start Num: 26
Candidate Starts for Wrigley_71:
(21, 46752), (Start: 26 @46788 has 47 MA's), (Start: 34 @46866 has 10 MA's), (39, 47025),

Gene: Yeet412_60 Start: 41044, Stop: 41295, Start Num: 26
Candidate Starts for Yeet412_60:
(17, 40981), (23, 41020), (Start: 26 @41044 has 47 MA's), (Start: 34 @41128 has 10 MA's), (39, 41287),

Gene: Yeezy_66 Start: 43272, Stop: 43439, Start Num: 34
Candidate Starts for Yeezy_66:
(Start: 26 @43188 has 47 MA's), (Start: 34 @43272 has 10 MA's), (39, 43431),

Gene: Zameen_65 Start: 44009, Stop: 44260, Start Num: 26
Candidate Starts for Zameen_65:
(Start: 26 @44009 has 47 MA's), (Start: 34 @44093 has 10 MA's), (39, 44252),

Gene: Zirinka_63 Start: 45085, Stop: 45252, Start Num: 34
Candidate Starts for Zirinka_63:
(Start: 26 @45007 has 47 MA's), (Start: 34 @45085 has 10 MA's), (39, 45244),

Gene: Zodiariah_60 Start: 46352, Stop: 46504, Start Num: 35
Candidate Starts for Zodiariah_60:
(7, 46100), (8, 46130), (12, 46160), (20, 46223), (Start: 26 @46259 has 47 MA's), (Start: 33 @46334 has 2 MA's), (Start: 34 @46337 has 10 MA's), (Start: 35 @46352 has 1 MA's), (39, 46496),