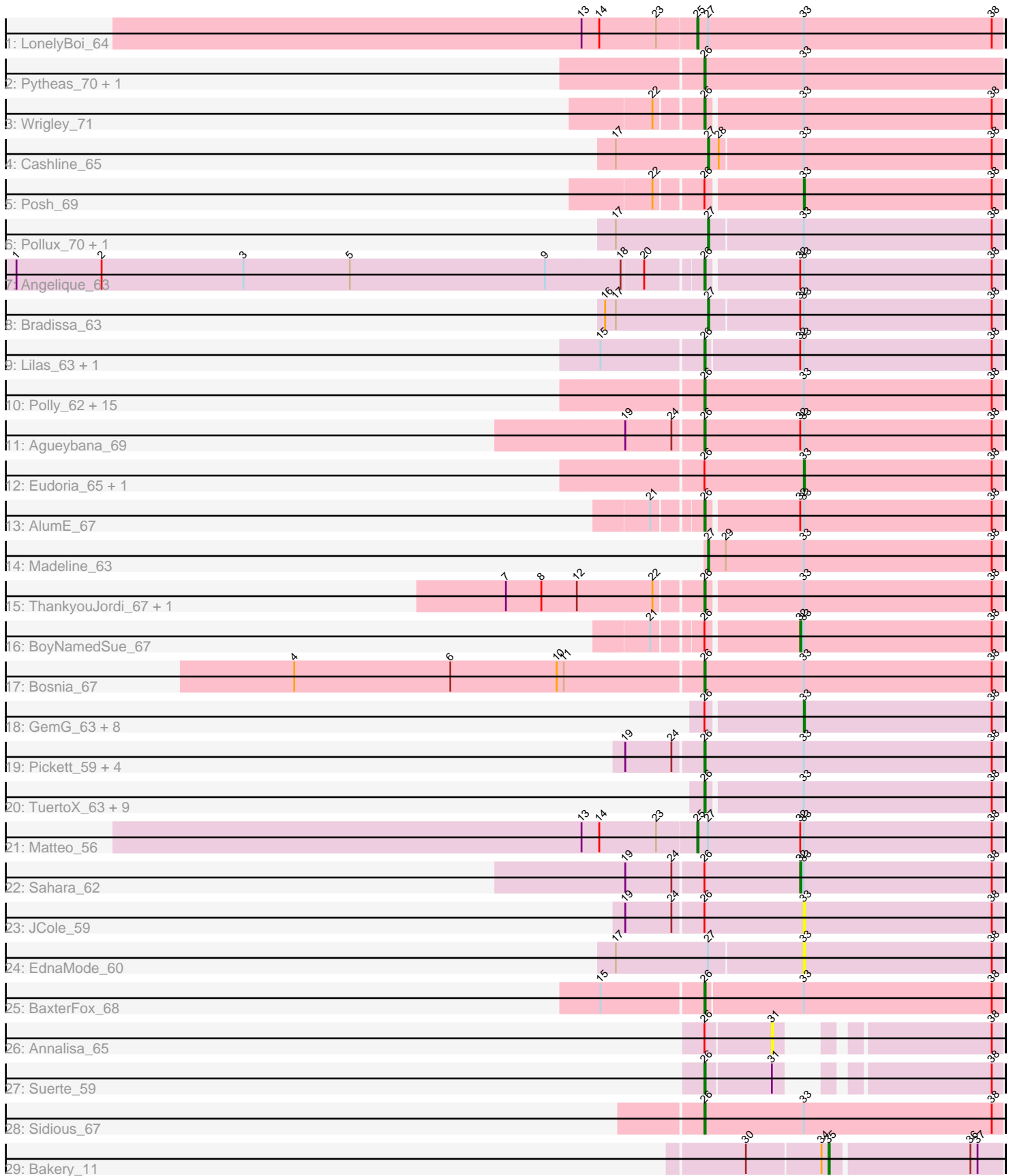


Pham 156347



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 156347 Report

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

Pham number 156347 has 70 members, 5 are drafts.

Phages represented in each track:

- Track 1 : LonelyBoi\_64
- Track 2 : Pytheas\_70, Jablanski\_70
- Track 3 : Wrigley\_71
- Track 4 : Cashline\_65
- Track 5 : Posh\_69
- Track 6 : Pollux\_70, Floral\_68
- Track 7 : Angelique\_63
- Track 8 : Bradissa\_63
- Track 9 : Lilas\_63, EnalisNailo\_62
- 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 : BoyNamedSue\_67
- Track 17 : Bosnia\_67
- Track 18 : GemG\_63, Ebert\_67, PantheRoc\_72, Sproutie\_63, Savage\_63, Hugley\_67, Whiteclaw\_63, Bialota\_63, Zirinka\_63
- Track 19 : Pickett\_59, Yeet412\_60, RavenCo17\_64, EMSquaredA\_66, Marteena\_65
- Track 20 : TuertoX\_63, Gizermo\_63, Haley23\_63, Bjanes7\_60, Mocha12\_63, Lamberg\_59, Nettuno\_59, Herod\_69, Clap\_63, Cynthia\_63
- Track 21 : Matteo\_56
- Track 22 : Sahara\_62
- Track 23 : JCole\_59
- Track 24 : EdnaMode\_60
- Track 25 : BaxterFox\_68
- Track 26 : Annalisa\_65
- Track 27 : Suerte\_59
- Track 28 : Sidious\_67
- Track 29 : Bakery\_11

***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 45 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana\_69, AlumE\_67, Angelique\_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, 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:

- Annalisa\_65, Bialota\_63, BoyNamedSue\_67, Ebert\_67, Eudoria\_65, GemG\_63, Hugley\_67, JCole\_59, PantheRoc\_72, Posh\_69, Sahara\_62, Savage\_63, Sproutie\_63, Whiteclaw\_63, Yeezy\_66, Zirinka\_63,

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

- Bakery\_11, Bradissa\_63, Cashline\_65, EdnaMode\_60, Floral\_68, LonelyBoi\_64, Madeline\_63, Matteo\_56, Pollux\_70,

### Summary by start number:

Start 25:

- Found in 2 of 70 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 2 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LonelyBoi\_64 (CY), Matteo\_56 (CZ2),

Start 26:

- Found in 61 of 70 ( 87.1% ) of genes in pham
- Manual Annotations of this start: 45 of 65
- Called 73.8% of time when present
- Phage (with cluster) where this start called: Agueybana\_69 (CZ1), AlumE\_67 (CZ1), Angelique\_63 (CY1), Antonio\_65 (CZ1), BatStarr\_68 (CZ1), BaxterFox\_68 (CZ3), BeeGee\_71 (CY), 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 (CY), 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), Pickett\_59 (CZ2), Polly\_62 (CZ1), Pytheas\_70 (CY), 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 (CY), Yeet412\_60 (CZ2), Zameen\_65 (CZ1),

Start 27:

- Found in 8 of 70 ( 11.4% ) of genes in pham
- Manual Annotations of this start: 5 of 65
- Called 62.5% of time when present

- Phage (with cluster) where this start called: Bradissa\_63 (CY1), Cashline\_65 (CY), Floral\_68 (CY1), Madeline\_63 (CZ1), Pollux\_70 (CY1),

Start 31:

- Found in 2 of 70 ( 2.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Annalisa\_65 (CZ4),

Start 32:

- Found in 9 of 70 ( 12.9% ) of genes in pham
- Manual Annotations of this start: 2 of 65
- Called 22.2% of time when present
- Phage (with cluster) where this start called: BoyNamedSue\_67 (CZ1), Sahara\_62 (CZ2),

Start 33:

- Found in 67 of 70 ( 95.7% ) of genes in pham
- Manual Annotations of this start: 10 of 65
- Called 20.9% of time when present
- Phage (with cluster) where this start called: Bialota\_63 (CZ1), Ebert\_67 (CZ2), EdnaMode\_60 (CZ2), Eudoria\_65 (CZ1), GemG\_63 (CZ2), Hugley\_67 (CZ1), JCole\_59 (CZ2), PantheRoc\_72 (CZ3), Posh\_69 (CY), Savage\_63 (CZ2), Sproutie\_63 (CZ2), Whiteclaw\_63 (CZ2), Yeezy\_66 (CZ3), Zirinka\_63 (CZ1),

Start 35:

- Found in 1 of 70 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bakery\_11 (DC1),

### **Summary by clusters:**

There are 10 clusters represented in this pham: CY1, CZ2, CZ3, CZ1, CZ8, CZ4, CZ7, CZ, CY, DC1,

Info for manual annotations of cluster CY:

- Start number 25 was manually annotated 1 time for cluster CY.
- Start number 26 was manually annotated 4 times for cluster CY.
- Start number 27 was manually annotated 1 time for cluster CY.
- Start number 33 was manually annotated 1 time for cluster CY.

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 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 32 was manually annotated 1 time for cluster CZ1.

- Start number 33 was manually annotated 3 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 25 was manually annotated 1 time for cluster CZ2.
- Start number 26 was manually annotated 11 times for cluster CZ2.
- Start number 32 was manually annotated 1 time for cluster CZ2.
- Start number 33 was manually annotated 5 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 26 was manually annotated 1 time for cluster CZ3.
- Start number 33 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 26 was manually annotated 1 time 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 35 was manually annotated 1 time for cluster DC1.

### ***Gene Information:***

Gene: Agueybana\_69 Start: 46506, Stop: 46757, Start Num: 26

Candidate Starts for Agueybana\_69:

(19, 46443), (24, 46482), (Start: 26 @46506 has 45 MA's), (Start: 32 @46587 has 2 MA's), (Start: 33 @46590 has 10 MA's), (38, 46749),

Gene: AlumE\_67 Start: 46787, Stop: 47032, Start Num: 26

Candidate Starts for AlumE\_67:

(21, 46751), (Start: 26 @46787 has 45 MA's), (Start: 32 @46862 has 2 MA's), (Start: 33 @46865 has 10 MA's), (38, 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), (18, 45185), (20, 45203), (Start: 26 @45248 has 45 MA's), (Start: 32 @45323 has 2 MA's), (Start: 33 @45326 has 10 MA's), (38, 45485),

Gene: Annalisa\_65 Start: 42156, Stop: 42302, Start Num: 31

Candidate Starts for Annalisa\_65:

(Start: 26 @42102 has 45 MA's), (31, 42156), (38, 42294),

Gene: Antonio\_65 Start: 44009, Stop: 44260, Start Num: 26

Candidate Starts for Antonio\_65:

(Start: 26 @44009 has 45 MA's), (Start: 33 @44093 has 10 MA's), (38, 44252),

Gene: Bakery\_11 Start: 4737, Stop: 4877, Start Num: 35

Candidate Starts for Bakery\_11:

(30, 4671), (34, 4731), (Start: 35 @4737 has 1 MA's), (36, 4851), (37, 4857),

Gene: BatStarr\_68 Start: 47043, Stop: 47291, Start Num: 26

Candidate Starts for BatStarr\_68:

(Start: 26 @47043 has 45 MA's), (Start: 33 @47124 has 10 MA's), (38, 47283),

Gene: BaxterFox\_68 Start: 46523, Stop: 46771, Start Num: 26

Candidate Starts for BaxterFox\_68:

(15, 46439), (Start: 26 @46523 has 45 MA's), (Start: 33 @46604 has 10 MA's), (38, 46763),

Gene: BeeGee\_71 Start: 45992, Stop: 46243, Start Num: 26

Candidate Starts for BeeGee\_71:

(Start: 26 @45992 has 45 MA's), (Start: 33 @46076 has 10 MA's), (38, 46235),

Gene: Bialota\_63 Start: 45097, Stop: 45264, Start Num: 33

Candidate Starts for Bialota\_63:

(Start: 26 @45019 has 45 MA's), (Start: 33 @45097 has 10 MA's), (38, 45256),

Gene: Bjaner7\_60 Start: 40715, Stop: 40960, Start Num: 26

Candidate Starts for Bjaner7\_60:

(Start: 26 @40715 has 45 MA's), (Start: 33 @40793 has 10 MA's), (38, 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 45 MA's), (Start: 33 @47389 has 10 MA's), (38, 47548),

Gene: BoyNamedSue\_67 Start: 46862, Stop: 47032, Start Num: 32

Candidate Starts for BoyNamedSue\_67:

(21, 46751), (Start: 26 @46787 has 45 MA's), (Start: 32 @46862 has 2 MA's), (Start: 33 @46865 has 10 MA's), (38, 47024),

Gene: Bradissa\_63 Start: 45371, Stop: 45616, Start Num: 27

Candidate Starts for Bradissa\_63:

(16, 45284), (17, 45293), (Start: 27 @45371 has 5 MA's), (Start: 32 @45446 has 2 MA's), (Start: 33 @45449 has 10 MA's), (38, 45608),

Gene: Bunnybear\_59 Start: 43728, Stop: 43979, Start Num: 26

Candidate Starts for Bunnybear\_59:

(Start: 26 @43728 has 45 MA's), (Start: 33 @43812 has 10 MA's), (38, 43971),

Gene: Cashline\_65 Start: 46170, Stop: 46415, Start Num: 27

Candidate Starts for Cashline\_65:

(17, 46092), (Start: 27 @46170 has 5 MA's), (28, 46179), (Start: 33 @46248 has 10 MA's), (38, 46407),

Gene: Clap\_63 Start: 40894, Stop: 41139, Start Num: 26

Candidate Starts for Clap\_63:

(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: Cynthia\_63 Start: 40892, Stop: 41137, Start Num: 26

Candidate Starts for Cynthia\_63:

(Start: 26 @40892 has 45 MA's), (Start: 33 @40970 has 10 MA's), (38, 41129),

Gene: EMSquaredA\_66 Start: 45093, Stop: 45344, Start Num: 26  
Candidate Starts for EMSquaredA\_66:  
(19, 45030), (24, 45069), (Start: 26 @45093 has 45 MA's), (Start: 33 @45177 has 10 MA's), (38, 45336),

Gene: Ebert\_67 Start: 41404, Stop: 41571, Start Num: 33  
Candidate Starts for Ebert\_67:  
(Start: 26 @41326 has 45 MA's), (Start: 33 @41404 has 10 MA's), (38, 41563),

Gene: EdnaMode\_60 Start: 40237, Stop: 40404, Start Num: 33  
Candidate Starts for EdnaMode\_60:  
(17, 40081), (Start: 27 @40159 has 5 MA's), (Start: 33 @40237 has 10 MA's), (38, 40396),

Gene: EnalisNailo\_62 Start: 44902, Stop: 45150, Start Num: 26  
Candidate Starts for EnalisNailo\_62:  
(15, 44818), (Start: 26 @44902 has 45 MA's), (Start: 32 @44980 has 2 MA's), (Start: 33 @44983 has 10 MA's), (38, 45142),

Gene: Eudoria\_65 Start: 44093, Stop: 44260, Start Num: 33  
Candidate Starts for Eudoria\_65:  
(Start: 26 @44009 has 45 MA's), (Start: 33 @44093 has 10 MA's), (38, 44252),

Gene: Eviarto\_69 Start: 47018, Stop: 47266, Start Num: 26  
Candidate Starts for Eviarto\_69:  
(Start: 26 @47018 has 45 MA's), (Start: 33 @47099 has 10 MA's), (38, 47258),

Gene: Floral\_68 Start: 47328, Stop: 47573, Start Num: 27  
Candidate Starts for Floral\_68:  
(17, 47250), (Start: 27 @47328 has 5 MA's), (Start: 33 @47406 has 10 MA's), (38, 47565),

Gene: GemG\_63 Start: 40976, Stop: 41143, Start Num: 33  
Candidate Starts for GemG\_63:  
(Start: 26 @40898 has 45 MA's), (Start: 33 @40976 has 10 MA's), (38, 41135),

Gene: Gizermo\_63 Start: 40894, Stop: 41139, Start Num: 26  
Candidate Starts for Gizermo\_63:  
(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: Haley23\_63 Start: 40894, Stop: 41139, Start Num: 26  
Candidate Starts for Haley23\_63:  
(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: Herod\_69 Start: 47729, Stop: 47974, Start Num: 26  
Candidate Starts for Herod\_69:  
(Start: 26 @47729 has 45 MA's), (Start: 33 @47807 has 10 MA's), (38, 47966),

Gene: Hugley\_67 Start: 47787, Stop: 47954, Start Num: 33  
Candidate Starts for Hugley\_67:  
(Start: 26 @47709 has 45 MA's), (Start: 33 @47787 has 10 MA's), (38, 47946),

Gene: JCole\_59 Start: 38911, Stop: 39078, Start Num: 33  
Candidate Starts for JCole\_59:

(19, 38764), (24, 38803), (Start: 26 @38827 has 45 MA's), (Start: 33 @38911 has 10 MA's), (38, 39070),

Gene: Jablanski\_70 Start: 47824, Stop: 48075, Start Num: 26  
Candidate Starts for Jablanski\_70:  
(Start: 26 @47824 has 45 MA's), (Start: 33 @47908 has 10 MA's),

Gene: Kita\_66 Start: 44018, Stop: 44269, Start Num: 26  
Candidate Starts for Kita\_66:  
(Start: 26 @44018 has 45 MA's), (Start: 33 @44102 has 10 MA's), (38, 44261),

Gene: Lamberg\_59 Start: 39403, Stop: 39648, Start Num: 26  
Candidate Starts for Lamberg\_59:  
(Start: 26 @39403 has 45 MA's), (Start: 33 @39481 has 10 MA's), (38, 39640),

Gene: Lilas\_63 Start: 46440, Stop: 46688, Start Num: 26  
Candidate Starts for Lilas\_63:  
(15, 46356), (Start: 26 @46440 has 45 MA's), (Start: 32 @46518 has 2 MA's), (Start: 33 @46521 has 10 MA's), (38, 46680),

Gene: LonelyBoi\_64 Start: 46993, Stop: 47250, Start Num: 25  
Candidate Starts for LonelyBoi\_64:  
(13, 46897), (14, 46912), (23, 46960), (Start: 25 @46993 has 2 MA's), (Start: 27 @47002 has 5 MA's), (Start: 33 @47083 has 10 MA's), (38, 47242),

Gene: Madeline\_63 Start: 46342, Stop: 46590, Start Num: 27  
Candidate Starts for Madeline\_63:  
(Start: 27 @46342 has 5 MA's), (29, 46357), (Start: 33 @46423 has 10 MA's), (38, 46582),

Gene: Manasvini\_66 Start: 44033, Stop: 44284, Start Num: 26  
Candidate Starts for Manasvini\_66:  
(Start: 26 @44033 has 45 MA's), (Start: 33 @44117 has 10 MA's), (38, 44276),

Gene: Maridalia\_67 Start: 45387, Stop: 45638, Start Num: 26  
Candidate Starts for Maridalia\_67:  
(Start: 26 @45387 has 45 MA's), (Start: 33 @45471 has 10 MA's), (38, 45630),

Gene: Marteena\_65 Start: 45093, Stop: 45344, Start Num: 26  
Candidate Starts for Marteena\_65:  
(19, 45030), (24, 45069), (Start: 26 @45093 has 45 MA's), (Start: 33 @45177 has 10 MA's), (38, 45336),

Gene: Matteo\_56 Start: 38069, Stop: 38326, Start Num: 25  
Candidate Starts for Matteo\_56:  
(13, 37973), (14, 37988), (23, 38036), (Start: 25 @38069 has 2 MA's), (Start: 27 @38078 has 5 MA's), (Start: 32 @38156 has 2 MA's), (Start: 33 @38159 has 10 MA's), (38, 38318),

Gene: Mocha12\_63 Start: 40894, Stop: 41139, Start Num: 26  
Candidate Starts for Mocha12\_63:  
(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: Neobush\_67 Start: 44577, Stop: 44828, Start Num: 26  
Candidate Starts for Neobush\_67:



(Start: 26 @44577 has 45 MA's), (Start: 33 @44661 has 10 MA's), (38, 44820),

Gene: Nettuno\_59 Start: 39403, Stop: 39651, Start Num: 26

Candidate Starts for Nettuno\_59:

(Start: 26 @39403 has 45 MA's), (Start: 33 @39481 has 10 MA's), (38, 39640),

Gene: Nymphadora\_69 Start: 47042, Stop: 47290, Start Num: 26

Candidate Starts for Nymphadora\_69:

(Start: 26 @47042 has 45 MA's), (Start: 33 @47123 has 10 MA's), (38, 47282),

Gene: PantheRoc\_72 Start: 47106, Stop: 47273, Start Num: 33

Candidate Starts for PantheRoc\_72:

(Start: 26 @47028 has 45 MA's), (Start: 33 @47106 has 10 MA's), (38, 47265),

Gene: Pickett\_59 Start: 38758, Stop: 39009, Start Num: 26

Candidate Starts for Pickett\_59:

(19, 38695), (24, 38734), (Start: 26 @38758 has 45 MA's), (Start: 33 @38842 has 10 MA's), (38, 39001),

Gene: Pollux\_70 Start: 47328, Stop: 47573, Start Num: 27

Candidate Starts for Pollux\_70:

(17, 47250), (Start: 27 @47328 has 5 MA's), (Start: 33 @47406 has 10 MA's), (38, 47565),

Gene: Polly\_62 Start: 43452, Stop: 43703, Start Num: 26

Candidate Starts for Polly\_62:

(Start: 26 @43452 has 45 MA's), (Start: 33 @43536 has 10 MA's), (38, 43695),

Gene: Posh\_69 Start: 47283, Stop: 47450, Start Num: 33

Candidate Starts for Posh\_69:

(22, 47169), (Start: 26 @47205 has 45 MA's), (Start: 33 @47283 has 10 MA's), (38, 47442),

Gene: Pytheas\_70 Start: 47823, Stop: 48074, Start Num: 26

Candidate Starts for Pytheas\_70:

(Start: 26 @47823 has 45 MA's), (Start: 33 @47907 has 10 MA's),

Gene: RavenCo17\_64 Start: 45276, Stop: 45527, Start Num: 26

Candidate Starts for RavenCo17\_64:

(19, 45213), (24, 45252), (Start: 26 @45276 has 45 MA's), (Start: 33 @45360 has 10 MA's), (38, 45519),

Gene: Sahara\_62 Start: 40374, Stop: 40544, Start Num: 32

Candidate Starts for Sahara\_62:

(19, 40230), (24, 40269), (Start: 26 @40293 has 45 MA's), (Start: 32 @40374 has 2 MA's), (Start: 33 @40377 has 10 MA's), (38, 40536),

Gene: Savage\_63 Start: 40972, Stop: 41139, Start Num: 33

Candidate Starts for Savage\_63:

(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: Sidious\_67 Start: 46609, Stop: 46860, Start Num: 26

Candidate Starts for Sidious\_67:

(Start: 26 @46609 has 45 MA's), (Start: 33 @46693 has 10 MA's), (38, 46852),

Gene: Sproutie\_63 Start: 40972, Stop: 41139, Start Num: 33  
Candidate Starts for Sproutie\_63:  
(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: Suerte\_59 Start: 41651, Stop: 41851, Start Num: 26  
Candidate Starts for Suerte\_59:  
(Start: 26 @41651 has 45 MA's), (31, 41705), (38, 41843),

Gene: Suscepit\_65 Start: 44010, Stop: 44261, Start Num: 26  
Candidate Starts for Suscepit\_65:  
(Start: 26 @44010 has 45 MA's), (Start: 33 @44094 has 10 MA's), (38, 44253),

Gene: Tayonia\_65 Start: 44009, Stop: 44260, Start Num: 26  
Candidate Starts for Tayonia\_65:  
(Start: 26 @44009 has 45 MA's), (Start: 33 @44093 has 10 MA's), (38, 44252),

Gene: ThankyouJordi\_67 Start: 47522, Stop: 47767, Start Num: 26  
Candidate Starts for ThankyouJordi\_67:  
(7, 47363), (8, 47393), (12, 47423), (22, 47486), (Start: 26 @47522 has 45 MA's), (Start: 33 @47600 has 10 MA's), (38, 47759),

Gene: TimTam\_69 Start: 47042, Stop: 47290, Start Num: 26  
Candidate Starts for TimTam\_69:  
(Start: 26 @47042 has 45 MA's), (Start: 33 @47123 has 10 MA's), (38, 47282),

Gene: Trumpet\_65 Start: 44010, Stop: 44261, Start Num: 26  
Candidate Starts for Trumpet\_65:  
(Start: 26 @44010 has 45 MA's), (Start: 33 @44094 has 10 MA's), (38, 44253),

Gene: TuertoX\_63 Start: 40894, Stop: 41139, Start Num: 26  
Candidate Starts for TuertoX\_63:  
(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: WelcomeAyanna\_67 Start: 47669, Stop: 47914, Start Num: 26  
Candidate Starts for WelcomeAyanna\_67:  
(7, 47510), (8, 47540), (12, 47570), (22, 47633), (Start: 26 @47669 has 45 MA's), (Start: 33 @47747 has 10 MA's), (38, 47906),

Gene: Whiteclaw\_63 Start: 40972, Stop: 41139, Start Num: 33  
Candidate Starts for Whiteclaw\_63:  
(Start: 26 @40894 has 45 MA's), (Start: 33 @40972 has 10 MA's), (38, 41131),

Gene: Wrigley\_71 Start: 46788, Stop: 47033, Start Num: 26  
Candidate Starts for Wrigley\_71:  
(22, 46752), (Start: 26 @46788 has 45 MA's), (Start: 33 @46866 has 10 MA's), (38, 47025),

Gene: Yeet412\_60 Start: 41044, Stop: 41295, Start Num: 26  
Candidate Starts for Yeet412\_60:  
(19, 40981), (24, 41020), (Start: 26 @41044 has 45 MA's), (Start: 33 @41128 has 10 MA's), (38, 41287),

Gene: Yeezy\_66 Start: 43272, Stop: 43439, Start Num: 33  
Candidate Starts for Yeezy\_66:

(Start: 26 @43188 has 45 MA's), (Start: 33 @43272 has 10 MA's), (38, 43431),

Gene: Zameen\_65 Start: 44009, Stop: 44260, Start Num: 26

Candidate Starts for Zameen\_65:

(Start: 26 @44009 has 45 MA's), (Start: 33 @44093 has 10 MA's), (38, 44252),

Gene: Zirinka\_63 Start: 45085, Stop: 45252, Start Num: 33

Candidate Starts for Zirinka\_63:

(Start: 26 @45007 has 45 MA's), (Start: 33 @45085 has 10 MA's), (38, 45244),