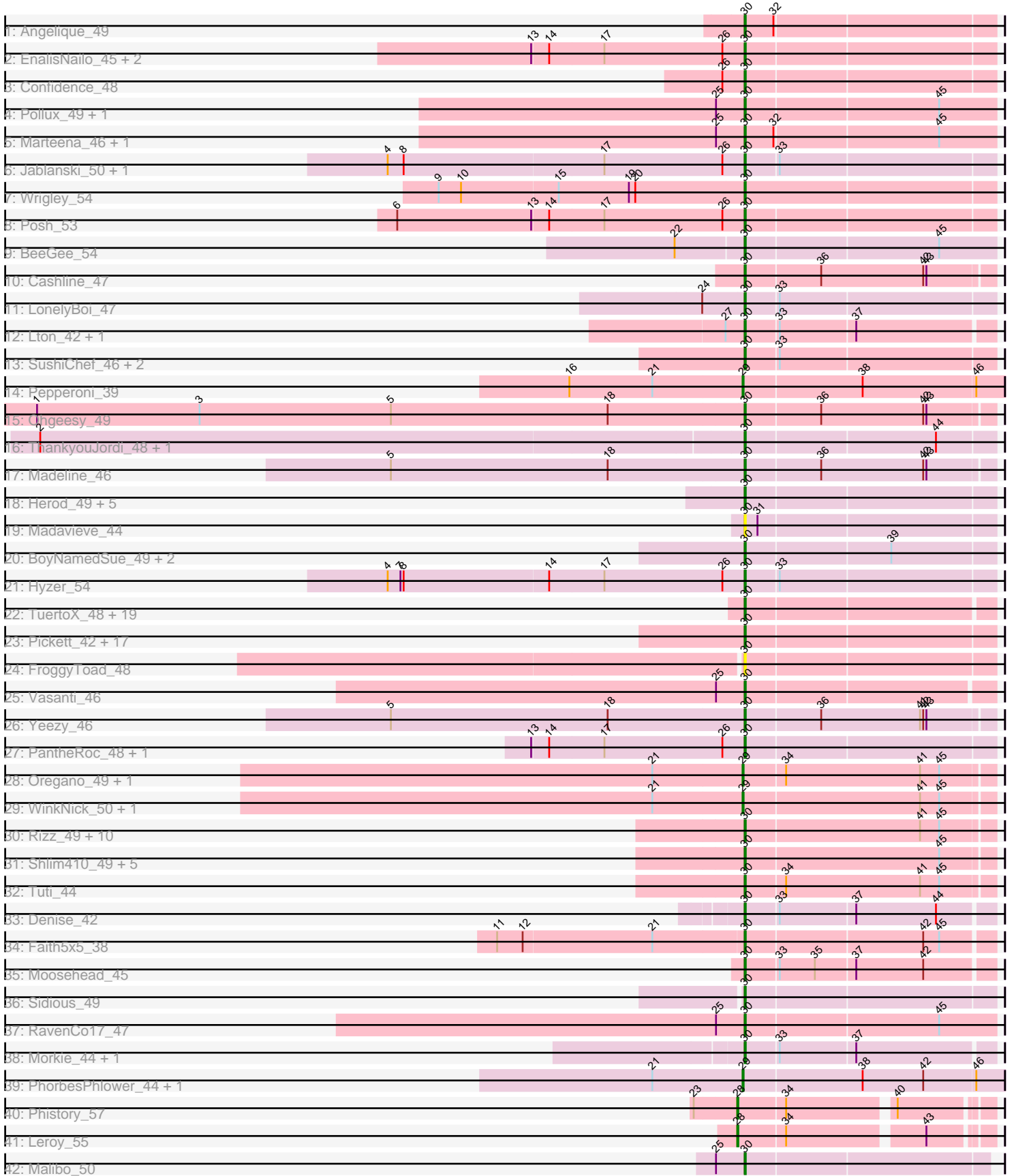


Pham 311393



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 311393 Report

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

Pham number 311393 has 114 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Angelique\_49
- Track 2 : EnalisNailo\_45, Bradissa\_46, Lilas\_48
- Track 3 : Confidence\_48
- Track 4 : Pollux\_49, Floral\_47
- Track 5 : Marteena\_46, EMsquaredA\_47
- Track 6 : Jablanski\_50, Pytheas\_50
- Track 7 : Wrigley\_54
- Track 8 : Posh\_53
- Track 9 : BeeGee\_54
- Track 10 : Cashline\_47
- Track 11 : LonelyBoi\_47
- Track 12 : Lton\_42, Lucky10\_43
- Track 13 : SushiChef\_46, Maridalia\_50, Bunnybear\_42
- Track 14 : Pepperoni\_39
- Track 15 : Ohgeesy\_49
- Track 16 : ThankyouJordi\_48, WelcomeAyanna\_48
- Track 17 : Madeline\_46
- Track 18 : Herod\_49, Eviarto\_50, Nymphadora\_50, BatStarr\_49, TimTam\_50, Hugley\_46
- Track 19 : Madavieve\_44
- Track 20 : BoyNamedSue\_49, AlumE\_49, Agueybana\_51
- Track 21 : Hyzer\_54
- Track 22 : TuertoX\_48, Bosnia\_50, Lamberg\_44, Sproutie\_48, Bjanes7\_45, GemG\_48, Ebert\_50, JCole\_46, Savage\_48, Clap\_48, Matteo\_41, Jalleen\_48, Nettuno\_44, Yinzer\_48, Sahara\_47, Whiteclaw\_48, Haley23\_48, Gizermo\_48, Mocha12\_48, Cynthia\_48
- Track 23 : Pickett\_42, Manasvini\_50, Polly\_46, Yeet412\_44, LordFarquaad\_46, Eudoria\_49, Trumpet\_49, Zirinka\_46, EdnaMode\_43, Zameen\_49, SoilAssassin\_44, Kita\_50, Suscepit\_49, Attis\_44, Tayonia\_49, Antonio\_49, Neobush\_49, Bialota\_47
- Track 24 : FroggyToad\_48
- Track 25 : Vasanti\_46
- Track 26 : Yeezy\_46
- Track 27 : PantheRoc\_48, BaxterFox\_49
- Track 28 : Oregano\_49, Annalisa\_46
- Track 29 : WinkNick\_50, Dolores\_49
- Track 30 : Rizz\_49, Invectra\_50, Beenie\_42, Samman98\_49, Powerball\_46, Dorito\_44, Thimann\_46, Sekhmet\_49, DobbysSock\_41, MichaelScott\_49, Clark\_48

- Track 31 : Shlim410\_49, Adora\_48, Mcklovin\_47, Hortense\_51, Twinkle\_50, Howe\_51
- Track 32 : Tuti\_44
- Track 33 : Denise\_42
- Track 34 : Faith5x5\_38
- Track 35 : Moosehead\_45
- Track 36 : Sidious\_49
- Track 37 : RavenCo17\_47
- Track 38 : Morkie\_44, OneDirection\_39
- Track 39 : PhorbesPhlower\_44, InLimbo\_44
- Track 40 : Phistory\_57
- Track 41 : Leroy\_55
- Track 42 : Malibo\_50

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

The start number called the most often in the published annotations is 30, it was called in 98 of the 106 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adora\_48, Agueybana\_51, AlumE\_49, Angelique\_49, Antonio\_49, Attis\_44, BatStarr\_49, BaxterFox\_49, BeeGee\_54, Beenie\_42, Bialota\_47, Bjanes7\_45, Bosnia\_50, BoyNamedSue\_49, Bradissa\_46, Bunnybear\_42, Cashline\_47, Clap\_48, Clark\_48, Confidence\_48, Cynthia\_48, Denise\_42, DobbysSock\_41, Dorito\_44, EMSquaredA\_47, Ebert\_50, EdnaMode\_43, EnalisNailo\_45, Eudoria\_49, Eviarto\_50, Faith5x5\_38, Floral\_47, FroggyToad\_48, GemG\_48, Gizermo\_48, Haley23\_48, Herod\_49, Hortense\_51, Howe\_51, Hugley\_46, Hyzer\_54, Invecetra\_50, JCole\_46, Jablanski\_50, Jalleen\_48, Kita\_50, Lamberg\_44, Lilas\_48, LonelyBoi\_47, LordFarquaad\_46, Lton\_42, Lucky10\_43, Madavieve\_44, Madeline\_46, Malibo\_50, Manasvini\_50, Maridalia\_50, Marteena\_46, Matteo\_41, Mcklovin\_47, MichaelScott\_49, Mocha12\_48, Moosehead\_45, Morkie\_44, Neobush\_49, Nettuno\_44, Nymphadora\_50, Ohgeesy\_49, OneDirection\_39, PantheRoc\_48, Pickett\_42, Pollux\_49, Polly\_46, Posh\_53, Powerball\_46, Pytheas\_50, RavenCo17\_47, Rizz\_49, Sahara\_47, Samman98\_49, Savage\_48, Sekhmet\_49, Shlim410\_49, Sidious\_49, SoilAssassin\_44, Sproutie\_48, Suscepit\_49, SushiChef\_46, Tayonia\_49, ThankyouJordi\_48, Thimann\_46, TimTam\_50, Trumpet\_49, TuertoX\_48, Tuti\_44, Twinkle\_50, Vasanti\_46, WelcomeAyanna\_48, Whiteclaw\_48, Wrigley\_54, Yeet412\_44, Yeezy\_46, Yinzer\_48, Zameen\_49, Zirinka\_46,

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

- 

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

- Annalisa\_46, Dolores\_49, InLimbo\_44, Leroy\_55, Oregano\_49, Pepperoni\_39, Phistory\_57, PhorbesPhlower\_44, WinkNick\_50,

**Summary by start number:**

Start 28:

- Found in 2 of 114 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 2 of 106
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Leroy\_55 (DN1), Phistory\_57 (DN1),

#### Start 29:

- Found in 7 of 114 ( 6.1% ) of genes in pham
- Manual Annotations of this start: 6 of 106
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annalisa\_46 (CZ4), Dolores\_49 (CZ4), InLimbo\_44 (DH), Oregano\_49 (CZ4), Pepperoni\_39 (CZ), PhorbesPhlower\_44 (DH), WinkNick\_50 (CZ4),

#### Start 30:

- Found in 105 of 114 ( 92.1% ) of genes in pham
- Manual Annotations of this start: 98 of 106
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adora\_48 (CZ4), Agueybana\_51 (CZ1), AlumE\_49 (CZ1), Angelique\_49 (CY1), Antonio\_49 (CZ1), Attis\_44 (CZ2), BatStarr\_49 (CZ1), BaxterFox\_49 (CZ3), BeeGee\_54 (CY5), Beenie\_42 (CZ4), Bialota\_47 (CZ1), Bjanes7\_45 (CZ2), Bosnia\_50 (CZ1), BoyNamedSue\_49 (CZ1), Bradissa\_46 (CY1), Bunnybear\_42 (CZ), Cashline\_47 (CY6), Clap\_48 (CZ2), Clark\_48 (CZ4), Confidence\_48 (CY1), Cynthia\_48 (CZ2), Denise\_42 (CZ5), DobbysSock\_41 (CZ4), Dorito\_44 (CZ4), EMSquaredA\_47 (CY1), Ebert\_50 (CZ2), EdnaMode\_43 (CZ2), EnalisNailo\_45 (CY1), Eudoria\_49 (CZ1), Eviarto\_50 (CZ1), Faith5x5\_38 (CZ6), Floral\_47 (CY1), FroggyToad\_48 (CZ2), GemG\_48 (CZ2), Gizermo\_48 (CZ2), Haley23\_48 (CZ2), Herod\_49 (CZ1), Hortense\_51 (CZ4), Howe\_51 (CZ4), Hugley\_46 (CZ1), Hyzer\_54 (CZ1), Invecetra\_50 (CZ4), JCole\_46 (CZ2), Jablanski\_50 (CY3), Jalleen\_48 (CZ2), Kita\_50 (CZ1), Lamberg\_44 (CZ2), Lilas\_48 (CY1), LonelyBoi\_47 (CY7), LordFarquaad\_46 (CZ2), Lton\_42 (CZ), Lucky10\_43 (DH), Madavieve\_44 (CZ1), Madeline\_46 (CZ1), Malibo\_50 (DW), Manasvini\_50 (CZ1), Maridalia\_50 (CZ1), Marteena\_46 (CY1), Matteo\_41 (CZ2), Mcklovin\_47 (CZ4), MichaelScott\_49 (CZ4), Mocha12\_48 (CZ2), Moosehead\_45 (CZ6), Morkie\_44 (DH), Neobush\_49 (CZ1), Nettuno\_44 (CZ2), Nymphadora\_50 (CZ1), Ohgeesy\_49 (CZ), OneDirection\_39 (CZ6), PantheRoc\_48 (CZ3), Pickett\_42 (CZ2), Pollux\_49 (CY1), Polly\_46 (CZ1), Posh\_53 (CY4), Powerball\_46 (CZ4), Pytheas\_50 (CY3), RavenCo17\_47 (CZ8), Rizz\_49 (CZ4), Sahara\_47 (CZ2), Samman98\_49 (CZ4), Savage\_48 (CZ2), Sekhmet\_49 (CZ4), Shlim410\_49 (CZ4), Sidious\_49 (CZ7), SoilAssassin\_44 (CZ2), Sproutie\_48 (CZ2), Suscepit\_49 (CZ1), SushiChef\_46 (CZ), Tayonia\_49 (CZ1), ThankyouJordi\_48 (CZ1), Thimann\_46 (CZ4), TimTam\_50 (CZ1), Trumpet\_49 (CZ1), TuertoX\_48 (CZ2), Tuti\_44 (CZ4), Twinkle\_50 (CZ4), Vasanti\_46 (CZ2), WelcomeAyanna\_48 (CZ1), Whiteclaw\_48 (CZ2), Wrigley\_54 (CY4), Yeet412\_44 (CZ2), Yeezy\_46 (CZ3), Yinzer\_48 (CZ2), Zameen\_49 (CZ1), Zirinka\_46 (CZ1),

#### Summary by clusters:

There are 18 clusters represented in this pham: CY3, CY1, CY7, CY5, DH, CY4, CZ2, CZ3, CZ1, CZ6, CZ7, CZ4, CZ5, CZ, DN1, CZ8, DW, CY6,

Info for manual annotations of cluster CY1:

- Start number 30 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY3:

- Start number 30 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 30 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:

- Start number 30 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:

- Start number 30 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:

- Start number 30 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ:

- Start number 29 was manually annotated 1 time for cluster CZ.
- Start number 30 was manually annotated 3 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 30 was manually annotated 26 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 30 was manually annotated 24 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 30 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 29 was manually annotated 4 times for cluster CZ4.
- Start number 30 was manually annotated 17 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 30 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 30 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 30 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 30 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DH:

- Start number 29 was manually annotated 1 time for cluster DH.
- Start number 30 was manually annotated 2 times for cluster DH.

Info for manual annotations of cluster DN1:

- Start number 28 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DW:

- Start number 30 was manually annotated 1 time for cluster DW.

**Gene Information:**

Gene: Adora\_48 Start: 37387, Stop: 37614, Start Num: 30

Candidate Starts for Adora\_48:

(Start: 30 @37387 has 98 MA's), (45, 37567),

Gene: Agueybana\_51 Start: 38410, Stop: 38637, Start Num: 30

Candidate Starts for Agueybana\_51:

(Start: 30 @38410 has 98 MA's), (39, 38542),

Gene: AlumE\_49 Start: 36910, Stop: 37137, Start Num: 30

Candidate Starts for AlumE\_49:

(Start: 30 @36910 has 98 MA's), (39, 37042),

Gene: Angelique\_49 Start: 38125, Stop: 38352, Start Num: 30

Candidate Starts for Angelique\_49:

(Start: 30 @38125 has 98 MA's), (32, 38152),

Gene: Annalisa\_46 Start: 34052, Stop: 34279, Start Num: 29

Candidate Starts for Annalisa\_46:

(21, 33968), (Start: 29 @34052 has 6 MA's), (34, 34088), (41, 34214), (45, 34232),

Gene: Antonio\_49 Start: 36183, Stop: 36410, Start Num: 30

Candidate Starts for Antonio\_49:

(Start: 30 @36183 has 98 MA's),

Gene: Attis\_44 Start: 33316, Stop: 33543, Start Num: 30

Candidate Starts for Attis\_44:

(Start: 30 @33316 has 98 MA's),

Gene: BatStarr\_49 Start: 38153, Stop: 38380, Start Num: 30

Candidate Starts for BatStarr\_49:

(Start: 30 @38153 has 98 MA's),

Gene: BaxterFox\_49 Start: 37705, Stop: 37932, Start Num: 30

Candidate Starts for BaxterFox\_49:

(13, 37507), (14, 37522), (17, 37573), (26, 37684), (Start: 30 @37705 has 98 MA's),

Gene: BeeGee\_54 Start: 37637, Stop: 37867, Start Num: 30

Candidate Starts for BeeGee\_54:

(22, 37574), (Start: 30 @37637 has 98 MA's), (45, 37814),

Gene: Beenie\_42 Start: 34798, Stop: 35025, Start Num: 30

Candidate Starts for Beenie\_42:

(Start: 30 @34798 has 98 MA's), (41, 34960), (45, 34978),

Gene: Bialota\_47 Start: 36815, Stop: 37042, Start Num: 30

Candidate Starts for Bialota\_47:

(Start: 30 @36815 has 98 MA's),

Gene: Bjanest7\_45 Start: 33494, Stop: 33718, Start Num: 30  
Candidate Starts for Bjanest7\_45:  
(Start: 30 @33494 has 98 MA's),

Gene: Bosnia\_50 Start: 39858, Stop: 40082, Start Num: 30  
Candidate Starts for Bosnia\_50:  
(Start: 30 @39858 has 98 MA's),

Gene: BoyNamedSue\_49 Start: 36910, Stop: 37137, Start Num: 30  
Candidate Starts for BoyNamedSue\_49:  
(Start: 30 @36910 has 98 MA's), (39, 37042),

Gene: Bradissa\_46 Start: 37251, Stop: 37478, Start Num: 30  
Candidate Starts for Bradissa\_46:  
(13, 37053), (14, 37068), (17, 37119), (26, 37230), (Start: 30 @37251 has 98 MA's),

Gene: Bunnybear\_42 Start: 34583, Stop: 34810, Start Num: 30  
Candidate Starts for Bunnybear\_42:  
(Start: 30 @34583 has 98 MA's), (33, 34613),

Gene: Cashline\_47 Start: 37401, Stop: 37628, Start Num: 30  
Candidate Starts for Cashline\_47:  
(Start: 30 @37401 has 98 MA's), (36, 37470), (42, 37566), (43, 37569),

Gene: Clap\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for Clap\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: Clark\_48 Start: 34615, Stop: 34842, Start Num: 30  
Candidate Starts for Clark\_48:  
(Start: 30 @34615 has 98 MA's), (41, 34777), (45, 34795),

Gene: Confidence\_48 Start: 35142, Stop: 35369, Start Num: 30  
Candidate Starts for Confidence\_48:  
(26, 35121), (Start: 30 @35142 has 98 MA's),

Gene: Cynthia\_48 Start: 33671, Stop: 33895, Start Num: 30  
Candidate Starts for Cynthia\_48:  
(Start: 30 @33671 has 98 MA's),

Gene: Denise\_42 Start: 31822, Stop: 32046, Start Num: 30  
Candidate Starts for Denise\_42:  
(Start: 30 @31822 has 98 MA's), (33, 31852), (37, 31921), (44, 31996),

Gene: DobbysSock\_41 Start: 33457, Stop: 33684, Start Num: 30  
Candidate Starts for DobbysSock\_41:  
(Start: 30 @33457 has 98 MA's), (41, 33619), (45, 33637),

Gene: Dolores\_49 Start: 35132, Stop: 35359, Start Num: 29  
Candidate Starts for Dolores\_49:  
(21, 35048), (Start: 29 @35132 has 6 MA's), (41, 35294), (45, 35312),

Gene: Dorito\_44 Start: 33102, Stop: 33329, Start Num: 30

Candidate Starts for Dorito\_44:  
(Start: 30 @33102 has 98 MA's), (41, 33264), (45, 33282),

Gene: EMSquaredA\_47 Start: 36058, Stop: 36288, Start Num: 30  
Candidate Starts for EMSquaredA\_47:  
(25, 36031), (Start: 30 @36058 has 98 MA's), (32, 36085), (45, 36235),

Gene: Ebert\_50 Start: 33597, Stop: 33821, Start Num: 30  
Candidate Starts for Ebert\_50:  
(Start: 30 @33597 has 98 MA's),

Gene: EdnaMode\_43 Start: 32004, Stop: 32231, Start Num: 30  
Candidate Starts for EdnaMode\_43:  
(Start: 30 @32004 has 98 MA's),

Gene: EnalisNailo\_45 Start: 36785, Stop: 37012, Start Num: 30  
Candidate Starts for EnalisNailo\_45:  
(13, 36587), (14, 36602), (17, 36653), (26, 36764), (Start: 30 @36785 has 98 MA's),

Gene: Eudoria\_49 Start: 36183, Stop: 36410, Start Num: 30  
Candidate Starts for Eudoria\_49:  
(Start: 30 @36183 has 98 MA's),

Gene: Eviarto\_50 Start: 38128, Stop: 38355, Start Num: 30  
Candidate Starts for Eviarto\_50:  
(Start: 30 @38128 has 98 MA's),

Gene: Faith5x5\_38 Start: 29451, Stop: 29675, Start Num: 30  
Candidate Starts for Faith5x5\_38:  
(11, 29223), (12, 29247), (21, 29367), (Start: 30 @29451 has 98 MA's), (42, 29613), (45, 29628),

Gene: Floral\_47 Start: 37542, Stop: 37772, Start Num: 30  
Candidate Starts for Floral\_47:  
(25, 37515), (Start: 30 @37542 has 98 MA's), (45, 37719),

Gene: FroggyToad\_48 Start: 34354, Stop: 34581, Start Num: 30  
Candidate Starts for FroggyToad\_48:  
(Start: 30 @34354 has 98 MA's),

Gene: GemG\_48 Start: 33677, Stop: 33901, Start Num: 30  
Candidate Starts for GemG\_48:  
(Start: 30 @33677 has 98 MA's),

Gene: Gizermo\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for Gizermo\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: Haley23\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for Haley23\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: Herod\_49 Start: 38153, Stop: 38380, Start Num: 30  
Candidate Starts for Herod\_49:

(Start: 30 @38153 has 98 MA's),

Gene: Hortense\_51 Start: 38742, Stop: 38969, Start Num: 30

Candidate Starts for Hortense\_51:

(Start: 30 @38742 has 98 MA's), (45, 38922),

Gene: Howe\_51 Start: 38742, Stop: 38969, Start Num: 30

Candidate Starts for Howe\_51:

(Start: 30 @38742 has 98 MA's), (45, 38922),

Gene: Hugley\_46 Start: 38152, Stop: 38379, Start Num: 30

Candidate Starts for Hugley\_46:

(Start: 30 @38152 has 98 MA's),

Gene: Hyzer\_54 Start: 39099, Stop: 39326, Start Num: 30

Candidate Starts for Hyzer\_54:

(4, 38766), (7, 38778), (8, 38781), (14, 38916), (17, 38967), (26, 39078), (Start: 30 @39099 has 98 MA's), (33, 39129),

Gene: InLimbo\_44 Start: 31243, Stop: 31482, Start Num: 29

Candidate Starts for InLimbo\_44:

(21, 31159), (Start: 29 @31243 has 6 MA's), (38, 31351), (42, 31408), (46, 31456),

Gene: Invectra\_50 Start: 36189, Stop: 36416, Start Num: 30

Candidate Starts for Invectra\_50:

(Start: 30 @36189 has 98 MA's), (41, 36351), (45, 36369),

Gene: JCole\_46 Start: 32691, Stop: 32915, Start Num: 30

Candidate Starts for JCole\_46:

(Start: 30 @32691 has 98 MA's),

Gene: Jablanski\_50 Start: 39144, Stop: 39371, Start Num: 30

Candidate Starts for Jablanski\_50:

(4, 38811), (8, 38826), (17, 39012), (26, 39123), (Start: 30 @39144 has 98 MA's), (33, 39174),

Gene: Jalleen\_48 Start: 33312, Stop: 33536, Start Num: 30

Candidate Starts for Jalleen\_48:

(Start: 30 @33312 has 98 MA's),

Gene: Kita\_50 Start: 36192, Stop: 36419, Start Num: 30

Candidate Starts for Kita\_50:

(Start: 30 @36192 has 98 MA's),

Gene: Lamberg\_44 Start: 32182, Stop: 32406, Start Num: 30

Candidate Starts for Lamberg\_44:

(Start: 30 @32182 has 98 MA's),

Gene: Leroy\_55 Start: 36252, Stop: 36467, Start Num: 28

Candidate Starts for Leroy\_55:

(Start: 28 @36252 has 2 MA's), (34, 36294), (43, 36414),

Gene: Lilas\_48 Start: 38496, Stop: 38723, Start Num: 30

Candidate Starts for Lilas\_48:

(13, 38298), (14, 38313), (17, 38364), (26, 38475), (Start: 30 @38496 has 98 MA's),

Gene: LonelyBoi\_47 Start: 38656, Stop: 38883, Start Num: 30

Candidate Starts for LonelyBoi\_47:

(24, 38617), (Start: 30 @38656 has 98 MA's), (33, 38686),

Gene: LordFarquaad\_46 Start: 33297, Stop: 33524, Start Num: 30

Candidate Starts for LordFarquaad\_46:

(Start: 30 @33297 has 98 MA's),

Gene: Lton\_42 Start: 29506, Stop: 29730, Start Num: 30

Candidate Starts for Lton\_42:

(27, 29488), (Start: 30 @29506 has 98 MA's), (33, 29536), (37, 29605),

Gene: Lucky10\_43 Start: 32224, Stop: 32448, Start Num: 30

Candidate Starts for Lucky10\_43:

(27, 32206), (Start: 30 @32224 has 98 MA's), (33, 32254), (37, 32323),

Gene: Madavieve\_44 Start: 35500, Stop: 35727, Start Num: 30

Candidate Starts for Madavieve\_44:

(Start: 30 @35500 has 98 MA's), (31, 35512),

Gene: Madeline\_46 Start: 36834, Stop: 37061, Start Num: 30

Candidate Starts for Madeline\_46:

(5, 36504), (18, 36708), (Start: 30 @36834 has 98 MA's), (36, 36903), (42, 36999), (43, 37002),

Gene: Malibo\_50 Start: 36835, Stop: 37056, Start Num: 30

Candidate Starts for Malibo\_50:

(25, 36808), (Start: 30 @36835 has 98 MA's),

Gene: Manasvini\_50 Start: 36207, Stop: 36434, Start Num: 30

Candidate Starts for Manasvini\_50:

(Start: 30 @36207 has 98 MA's),

Gene: Maridalia\_50 Start: 36329, Stop: 36556, Start Num: 30

Candidate Starts for Maridalia\_50:

(Start: 30 @36329 has 98 MA's), (33, 36359),

Gene: Marteena\_46 Start: 36058, Stop: 36288, Start Num: 30

Candidate Starts for Marteena\_46:

(25, 36031), (Start: 30 @36058 has 98 MA's), (32, 36085), (45, 36235),

Gene: Matteo\_41 Start: 31224, Stop: 31448, Start Num: 30

Candidate Starts for Matteo\_41:

(Start: 30 @31224 has 98 MA's),

Gene: Mcklovin\_47 Start: 40209, Stop: 40436, Start Num: 30

Candidate Starts for Mcklovin\_47:

(Start: 30 @40209 has 98 MA's), (45, 40389),

Gene: MichaelScott\_49 Start: 36092, Stop: 36319, Start Num: 30

Candidate Starts for MichaelScott\_49:

(Start: 30 @36092 has 98 MA's), (41, 36254), (45, 36272),

Gene: Mocha12\_48 Start: 33673, Stop: 33897, Start Num: 30

Candidate Starts for Mocha12\_48:

(Start: 30 @33673 has 98 MA's),

Gene: Moosehead\_45 Start: 30439, Stop: 30663, Start Num: 30

Candidate Starts for Moosehead\_45:

(Start: 30 @30439 has 98 MA's), (33, 30469), (35, 30502), (37, 30538), (42, 30601),

Gene: Morkie\_44 Start: 31328, Stop: 31552, Start Num: 30

Candidate Starts for Morkie\_44:

(Start: 30 @31328 has 98 MA's), (33, 31358), (37, 31427),

Gene: Neobush\_49 Start: 36177, Stop: 36404, Start Num: 30

Candidate Starts for Neobush\_49:

(Start: 30 @36177 has 98 MA's),

Gene: Nettuno\_44 Start: 32182, Stop: 32406, Start Num: 30

Candidate Starts for Nettuno\_44:

(Start: 30 @32182 has 98 MA's),

Gene: Nymphadora\_50 Start: 38152, Stop: 38379, Start Num: 30

Candidate Starts for Nymphadora\_50:

(Start: 30 @38152 has 98 MA's),

Gene: Ohgeesy\_49 Start: 37629, Stop: 37856, Start Num: 30

Candidate Starts for Ohgeesy\_49:

(1, 36966), (3, 37119), (5, 37299), (18, 37503), (Start: 30 @37629 has 98 MA's), (36, 37698), (42, 37794), (43, 37797),

Gene: OneDirection\_39 Start: 28942, Stop: 29166, Start Num: 30

Candidate Starts for OneDirection\_39:

(Start: 30 @28942 has 98 MA's), (33, 28972), (37, 29041),

Gene: Oregano\_49 Start: 34685, Stop: 34912, Start Num: 29

Candidate Starts for Oregano\_49:

(21, 34601), (Start: 29 @34685 has 6 MA's), (34, 34721), (41, 34847), (45, 34865),

Gene: PantheRoc\_48 Start: 36680, Stop: 36907, Start Num: 30

Candidate Starts for PantheRoc\_48:

(13, 36482), (14, 36497), (17, 36548), (26, 36659), (Start: 30 @36680 has 98 MA's),

Gene: Pepperoni\_39 Start: 30505, Stop: 30744, Start Num: 29

Candidate Starts for Pepperoni\_39:

(16, 30343), (21, 30421), (Start: 29 @30505 has 6 MA's), (38, 30613), (46, 30718),

Gene: Phistory\_57 Start: 36512, Stop: 36727, Start Num: 28

Candidate Starts for Phistory\_57:

(23, 36473), (Start: 28 @36512 has 2 MA's), (34, 36554), (40, 36647),

Gene: PhorbesPhlower\_44 Start: 30696, Stop: 30935, Start Num: 29

Candidate Starts for PhorbesPhlower\_44:

(21, 30612), (Start: 29 @30696 has 6 MA's), (38, 30804), (42, 30861), (46, 30909),

Gene: Pickett\_42 Start: 30480, Stop: 30707, Start Num: 30  
Candidate Starts for Pickett\_42:  
(Start: 30 @30480 has 98 MA's),

Gene: Pollux\_49 Start: 37542, Stop: 37772, Start Num: 30  
Candidate Starts for Pollux\_49:  
(25, 37515), (Start: 30 @37542 has 98 MA's), (45, 37719),

Gene: Polly\_46 Start: 35626, Stop: 35853, Start Num: 30  
Candidate Starts for Polly\_46:  
(Start: 30 @35626 has 98 MA's),

Gene: Posh\_53 Start: 38901, Stop: 39128, Start Num: 30  
Candidate Starts for Posh\_53:  
(6, 38577), (13, 38703), (14, 38718), (17, 38769), (26, 38880), (Start: 30 @38901 has 98 MA's),

Gene: Powerball\_46 Start: 34959, Stop: 35186, Start Num: 30  
Candidate Starts for Powerball\_46:  
(Start: 30 @34959 has 98 MA's), (41, 35121), (45, 35139),

Gene: Pytheas\_50 Start: 39143, Stop: 39370, Start Num: 30  
Candidate Starts for Pytheas\_50:  
(4, 38810), (8, 38825), (17, 39011), (26, 39122), (Start: 30 @39143 has 98 MA's), (33, 39173),

Gene: RavenCo17\_47 Start: 36363, Stop: 36593, Start Num: 30  
Candidate Starts for RavenCo17\_47:  
(25, 36336), (Start: 30 @36363 has 98 MA's), (45, 36540),

Gene: Rizz\_49 Start: 35401, Stop: 35628, Start Num: 30  
Candidate Starts for Rizz\_49:  
(Start: 30 @35401 has 98 MA's), (41, 35563), (45, 35581),

Gene: Sahara\_47 Start: 33420, Stop: 33644, Start Num: 30  
Candidate Starts for Sahara\_47:  
(Start: 30 @33420 has 98 MA's),

Gene: Samman98\_49 Start: 34718, Stop: 34945, Start Num: 30  
Candidate Starts for Samman98\_49:  
(Start: 30 @34718 has 98 MA's), (41, 34880), (45, 34898),

Gene: Savage\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for Savage\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: Sekhmet\_49 Start: 35618, Stop: 35845, Start Num: 30  
Candidate Starts for Sekhmet\_49:  
(Start: 30 @35618 has 98 MA's), (41, 35780), (45, 35798),

Gene: Shlim410\_49 Start: 38742, Stop: 38969, Start Num: 30  
Candidate Starts for Shlim410\_49:  
(Start: 30 @38742 has 98 MA's), (45, 38922),

Gene: Sidious\_49 Start: 37507, Stop: 37734, Start Num: 30  
Candidate Starts for Sidious\_49:  
(Start: 30 @37507 has 98 MA's),

Gene: SoilAssassin\_44 Start: 33315, Stop: 33542, Start Num: 30  
Candidate Starts for SoilAssassin\_44:  
(Start: 30 @33315 has 98 MA's),

Gene: Sproutie\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for Sproutie\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: Suscepit\_49 Start: 36184, Stop: 36411, Start Num: 30  
Candidate Starts for Suscepit\_49:  
(Start: 30 @36184 has 98 MA's),

Gene: SushiChef\_46 Start: 37097, Stop: 37324, Start Num: 30  
Candidate Starts for SushiChef\_46:  
(Start: 30 @37097 has 98 MA's), (33, 37127),

Gene: Tayonia\_49 Start: 36183, Stop: 36410, Start Num: 30  
Candidate Starts for Tayonia\_49:  
(Start: 30 @36183 has 98 MA's),

Gene: ThankyouJordi\_48 Start: 38028, Stop: 38255, Start Num: 30  
Candidate Starts for ThankyouJordi\_48:  
(2, 37374), (Start: 30 @38028 has 98 MA's), (44, 38202),

Gene: Thimann\_46 Start: 33983, Stop: 34210, Start Num: 30  
Candidate Starts for Thimann\_46:  
(Start: 30 @33983 has 98 MA's), (41, 34145), (45, 34163),

Gene: TimTam\_50 Start: 38152, Stop: 38379, Start Num: 30  
Candidate Starts for TimTam\_50:  
(Start: 30 @38152 has 98 MA's),

Gene: Trumpet\_49 Start: 36184, Stop: 36411, Start Num: 30  
Candidate Starts for Trumpet\_49:  
(Start: 30 @36184 has 98 MA's),

Gene: TuertoX\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for TuertoX\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: Tuti\_44 Start: 35433, Stop: 35660, Start Num: 30  
Candidate Starts for Tuti\_44:  
(Start: 30 @35433 has 98 MA's), (34, 35469), (41, 35595), (45, 35613),

Gene: Twinkle\_50 Start: 39801, Stop: 40028, Start Num: 30  
Candidate Starts for Twinkle\_50:  
(Start: 30 @39801 has 98 MA's), (45, 39981),

Gene: Vasanti\_46 Start: 32681, Stop: 32905, Start Num: 30

Candidate Starts for Vasanti\_46:  
(25, 32654), (Start: 30 @32681 has 98 MA's),

Gene: WelcomeAyanna\_48 Start: 38175, Stop: 38402, Start Num: 30  
Candidate Starts for WelcomeAyanna\_48:  
(2, 37521), (Start: 30 @38175 has 98 MA's), (44, 38349),

Gene: Whiteclaw\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for Whiteclaw\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: WinkNick\_50 Start: 35055, Stop: 35282, Start Num: 29  
Candidate Starts for WinkNick\_50:  
(21, 34971), (Start: 29 @35055 has 6 MA's), (41, 35217), (45, 35235),

Gene: Wrigley\_54 Start: 38058, Stop: 38288, Start Num: 30  
Candidate Starts for Wrigley\_54:  
(9, 37773), (10, 37794), (15, 37884), (19, 37950), (20, 37956), (Start: 30 @38058 has 98 MA's),

Gene: Yeet412\_44 Start: 33316, Stop: 33543, Start Num: 30  
Candidate Starts for Yeet412\_44:  
(Start: 30 @33316 has 98 MA's),

Gene: Yeezy\_46 Start: 34678, Stop: 34905, Start Num: 30  
Candidate Starts for Yeezy\_46:  
(5, 34348), (18, 34552), (Start: 30 @34678 has 98 MA's), (36, 34747), (41, 34840), (42, 34843), (43, 34846),

Gene: Yinzer\_48 Start: 33673, Stop: 33897, Start Num: 30  
Candidate Starts for Yinzer\_48:  
(Start: 30 @33673 has 98 MA's),

Gene: Zameen\_49 Start: 36183, Stop: 36410, Start Num: 30  
Candidate Starts for Zameen\_49:  
(Start: 30 @36183 has 98 MA's),

Gene: Zirinka\_46 Start: 36803, Stop: 37030, Start Num: 30  
Candidate Starts for Zirinka\_46:  
(Start: 30 @36803 has 98 MA's),