



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 283758 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283758 has 73 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Flutur\_38, Lego\_39, Joemato\_39, Warda\_39, AGrandiflora\_39, Ascela\_40, JohnDoe\_39, Powerpuff\_41, Cyan\_39, Simpson\_41, Tbone\_38, Lizalica\_37, Kaylissa\_39, Iter\_40, Tutumahutu\_39, YesChef\_39
- Track 2 : ThursdayNight\_42
- Track 3 : Sue2\_40
- Track 4 : Adolin\_38, Reedo\_38, DrManhattan\_38
- Track 5 : Cassia\_38
- Track 6 : Yang\_39, Schaffner\_39
- Track 7 : Tallboi\_39
- Track 8 : DrSierra\_37
- Track 9 : Nitro\_39
- Track 10 : Adumb2043\_37, Turab\_37, Amploria\_38, AEgle\_36
- Track 11 : Community\_42, Phives\_42
- Track 12 : Tian\_38, Pixelle\_39, Amyev\_38
- Track 13 : Pumpkins\_38
- Track 14 : Elezi\_38, Niobe\_38, Subaru\_39, Skelbel\_39, Asa16\_38, London\_38, Eraser\_38, Jstan\_40
- Track 15 : JuneStar\_40
- Track 16 : KeAlii\_38
- Track 17 : MissSwiss\_39
- Track 18 : TforTroy\_40
- Track 19 : Tuck\_43
- Track 20 : IttyBittyPiggy\_39
- Track 21 : Crewmate\_44, ObiToo\_44
- Track 22 : Berrie\_41
- Track 23 : VResidence\_39
- Track 24 : Wildwest\_38
- Track 25 : Janeemi\_42
- Track 26 : IUFootball\_41, Liebe\_41, MaGuCo\_39, Maureen\_41
- Track 27 : Snek\_38, Tweety19\_38
- Track 28 : JohnThicc\_46, FiveHead\_47, LadyAstra\_46, Origami\_45
- Track 29 : JasmineDragon\_43, VroomVroom\_43, ShakeltOph\_43, MiniMommy\_42
- Track 30 : Emotion\_44
- Track 31 : Soondubu\_36

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

The start number called the most often in the published annotations is 11, it was called in 21 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle\_36, Adolin\_38, Adumb2043\_37, Amploria\_38, Cassia\_38, Crewmate\_44, DrManhattan\_38, IUFootball\_41, IttyBittyPiggy\_39, JuneStar\_40, KeAlii\_38, Liebe\_41, MaGuCo\_39, Maureen\_41, MissSwiss\_39, Nitro\_39, ObiToo\_44, Pumpkins\_38, Reedo\_38, Schaffner\_39, Sue2\_40, TforTroy\_40, ThursdayNight\_42, Turab\_37, VResidence\_39, Yang\_39,

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

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

- AGrandiflora\_39, Amyev\_38, Asa16\_38, Ascela\_40, Berrie\_41, Community\_42, Cyan\_39, DrSierra\_37, Elezi\_38, Emotion\_44, Eraser\_38, FiveHead\_47, Flutur\_38, Iter\_40, Janeemi\_42, JasmineDragon\_43, Joemato\_39, JohnDoe\_39, JohnThicc\_46, Jstan\_40, Kaylissa\_39, LadyAstra\_46, Lego\_39, Lizalica\_37, London\_38, MiniMommy\_42, Niobe\_38, Origami\_45, Phives\_42, Pixelle\_39, Powerpuff\_41, ShakeltOph\_43, Simpson\_41, Skelbel\_39, Snek\_38, Soondubu\_36, Subaru\_39, Tallboi\_39, Tbone\_38, Tian\_38, Tuck\_43, Tutumahutu\_39, Tweety19\_38, VroomVroom\_43, Warda\_39, Wildwest\_38, YesChef\_39,

### **Summary by start number:**

Start 8:

- Found in 21 of 73 ( 28.8% ) of genes in pham
- Manual Annotations of this start: 17 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AGrandiflora\_39 (AZ1), Ascela\_40 (AZ1), Berrie\_41 (AZ1), Community\_42 (AZ1), Cyan\_39 (AZ1), Flutur\_38 (AZ), Iter\_40 (AZ1), Janeemi\_42 (AZ1), Joemato\_39 (AZ1), JohnDoe\_39 (AZ1), Kaylissa\_39 (AZ1), Lego\_39 (AZ1), Lizalica\_37 (AZ1), Phives\_42 (AZ1), Powerpuff\_41 (AZ1), Simpson\_41 (AZ1), Tbone\_38 (AZ1), Tuck\_43 (AZ1), Tutumahutu\_39 (AZ1), Warda\_39 (AZ1), YesChef\_39 (AZ1),

Start 9:

- Found in 4 of 73 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 4 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrSierra\_37 (AZ1), Snek\_38 (AZ3), Tweety19\_38 (AZ3), Wildwest\_38 (AZ1),

Start 10:

- Found in 21 of 73 ( 28.8% ) of genes in pham
- Manual Annotations of this start: 13 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amyev\_38 (AZ1), Asa16\_38 (AZ1), Elezi\_38 (AZ1), Emotion\_44 (AZ4), Eraser\_38 (AZ1), FiveHead\_47 (AZ4), JasmineDragon\_43 (AZ4), JohnThicc\_46 (AZ4), Jstan\_40 (AZ1), LadyAstra\_46

(AZ4), London\_38 (AZ1), MiniMommy\_42 (AZ4), Niobe\_38 (AZ1), Origami\_45 (AZ4), Pixelle\_39 (AZ1), ShakeItOph\_43 (AZ4), Skelbel\_39 (AZ1), Subaru\_39 (AZ1), Tallboi\_39 (AZ1), Tian\_38 (AZ1), VroomVroom\_43 (AZ4),

Start 11:

- Found in 26 of 73 ( 35.6% ) of genes in pham
- Manual Annotations of this start: 21 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle\_36 (AZ1), Adolin\_38 (AZ1), Adumb2043\_37 (AZ1), Amploria\_38 (AZ1), Cassia\_38 (AZ1), Crewmate\_44 (AZ1), DrManhattan\_38 (AZ1), IUFootball\_41 (AZ2), IttyBittyPiggy\_39 (AZ1), JuneStar\_40 (AZ1), KeAlii\_38 (AZ1), Liebe\_41 (AZ2), MaGuCo\_39 (AZ2), Maureen\_41 (AZ2), MissSwiss\_39 (AZ1), Nitro\_39 (AZ1), ObiToo\_44 (AZ1), Pumpkins\_38 (AZ1), Reedo\_38 (AZ1), Schaffner\_39 (AZ1), Sue2\_40 (AZ1), TforTroy\_40 (AZ1), ThursdayNight\_42 (AZ), Turab\_37 (AZ1), VResidence\_39 (AZ1), Yang\_39 (AZ1),

Start 12:

- Found in 2 of 73 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 56
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Soondubu\_36 (AZ6),

### **Summary by clusters:**

There are 6 clusters represented in this pham: AZ3, AZ1, AZ2, AZ, AZ4, AZ6,

Info for manual annotations of cluster AZ1:

- Start number 8 was manually annotated 17 times for cluster AZ1.
- Start number 9 was manually annotated 2 times for cluster AZ1.
- Start number 10 was manually annotated 8 times for cluster AZ1.
- Start number 11 was manually annotated 18 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 11 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 9 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 10 was manually annotated 5 times for cluster AZ4.

Info for manual annotations of cluster AZ6:

- Start number 12 was manually annotated 1 time for cluster AZ6.

### **Gene Information:**

Gene: AEgle\_36 Start: 28511, Stop: 28621, Start Num: 11

Candidate Starts for AEgle\_36:

(Start: 11 @28511 has 21 MA's),

Gene: AGrandiflora\_39 Start: 29152, Stop: 29268, Start Num: 8  
Candidate Starts for AGrandiflora\_39:  
(Start: 8 @29152 has 17 MA's),

Gene: Adolin\_38 Start: 27364, Stop: 27474, Start Num: 11  
Candidate Starts for Adolin\_38:  
(Start: 11 @27364 has 21 MA's),

Gene: Adumb2043\_37 Start: 28530, Stop: 28640, Start Num: 11  
Candidate Starts for Adumb2043\_37:  
(Start: 11 @28530 has 21 MA's),

Gene: Amploria\_38 Start: 28713, Stop: 28823, Start Num: 11  
Candidate Starts for Amploria\_38:  
(Start: 11 @28713 has 21 MA's),

Gene: Amyev\_38 Start: 30032, Stop: 30145, Start Num: 10  
Candidate Starts for Amyev\_38:  
(Start: 10 @30032 has 13 MA's),

Gene: Asa16\_38 Start: 30077, Stop: 30190, Start Num: 10  
Candidate Starts for Asa16\_38:  
(Start: 10 @30077 has 13 MA's),

Gene: Ascela\_40 Start: 29276, Stop: 29392, Start Num: 8  
Candidate Starts for Ascela\_40:  
(Start: 8 @29276 has 17 MA's),

Gene: Berrie\_41 Start: 30225, Stop: 30341, Start Num: 8  
Candidate Starts for Berrie\_41:  
(6, 30072), (Start: 8 @30225 has 17 MA's),

Gene: Cassia\_38 Start: 28918, Stop: 29028, Start Num: 11  
Candidate Starts for Cassia\_38:  
(Start: 11 @28918 has 21 MA's),

Gene: Community\_42 Start: 31006, Stop: 31122, Start Num: 8  
Candidate Starts for Community\_42:  
(1, 30322), (2, 30346), (3, 30505), (4, 30775), (6, 30856), (Start: 8 @31006 has 17 MA's),

Gene: Crewmate\_44 Start: 29588, Stop: 29698, Start Num: 11  
Candidate Starts for Crewmate\_44:  
(Start: 11 @29588 has 21 MA's), (16, 29654),

Gene: Cyan\_39 Start: 29207, Stop: 29323, Start Num: 8  
Candidate Starts for Cyan\_39:  
(Start: 8 @29207 has 17 MA's),

Gene: DrManhattan\_38 Start: 27354, Stop: 27464, Start Num: 11  
Candidate Starts for DrManhattan\_38:  
(Start: 11 @27354 has 21 MA's),

Gene: DrSierra\_37 Start: 27313, Stop: 27426, Start Num: 9

Candidate Starts for DrSierra\_37:  
(Start: 9 @27313 has 4 MA's), (14, 27364),

Gene: Elezi\_38 Start: 30093, Stop: 30206, Start Num: 10  
Candidate Starts for Elezi\_38:  
(Start: 10 @30093 has 13 MA's),

Gene: Emotion\_44 Start: 30851, Stop: 30973, Start Num: 10  
Candidate Starts for Emotion\_44:  
(7, 30776), (Start: 10 @30851 has 13 MA's),

Gene: Eraser\_38 Start: 30084, Stop: 30197, Start Num: 10  
Candidate Starts for Eraser\_38:  
(Start: 10 @30084 has 13 MA's),

Gene: FiveHead\_47 Start: 30129, Stop: 30248, Start Num: 10  
Candidate Starts for FiveHead\_47:  
(Start: 10 @30129 has 13 MA's), (14, 30180), (17, 30237),

Gene: Flutur\_38 Start: 29465, Stop: 29581, Start Num: 8  
Candidate Starts for Flutur\_38:  
(Start: 8 @29465 has 17 MA's),

Gene: IUFootball\_41 Start: 31035, Stop: 31145, Start Num: 11  
Candidate Starts for IUFootball\_41:  
(Start: 11 @31035 has 21 MA's), (15, 31092),

Gene: Iter\_40 Start: 29273, Stop: 29389, Start Num: 8  
Candidate Starts for Iter\_40:  
(Start: 8 @29273 has 17 MA's),

Gene: IttyBittyPiggy\_39 Start: 28689, Stop: 28799, Start Num: 11  
Candidate Starts for IttyBittyPiggy\_39:  
(Start: 11 @28689 has 21 MA's),

Gene: Janeemi\_42 Start: 30994, Stop: 31110, Start Num: 8  
Candidate Starts for Janeemi\_42:  
(Start: 8 @30994 has 17 MA's),

Gene: JasmineDragon\_43 Start: 30010, Stop: 30129, Start Num: 10  
Candidate Starts for JasmineDragon\_43:  
(Start: 10 @30010 has 13 MA's), (17, 30118),

Gene: Joemato\_39 Start: 29238, Stop: 29354, Start Num: 8  
Candidate Starts for Joemato\_39:  
(Start: 8 @29238 has 17 MA's),

Gene: JohnDoe\_39 Start: 29230, Stop: 29346, Start Num: 8  
Candidate Starts for JohnDoe\_39:  
(Start: 8 @29230 has 17 MA's),

Gene: JohnThicc\_46 Start: 30129, Stop: 30248, Start Num: 10  
Candidate Starts for JohnThicc\_46:

(Start: 10 @30129 has 13 MA's), (14, 30180), (17, 30237),

Gene: Jstan\_40 Start: 30078, Stop: 30191, Start Num: 10

Candidate Starts for Jstan\_40:

(Start: 10 @30078 has 13 MA's),

Gene: JuneStar\_40 Start: 30816, Stop: 30926, Start Num: 11

Candidate Starts for JuneStar\_40:

(Start: 11 @30816 has 21 MA's), (15, 30873),

Gene: Kaylissa\_39 Start: 29173, Stop: 29289, Start Num: 8

Candidate Starts for Kaylissa\_39:

(Start: 8 @29173 has 17 MA's),

Gene: KeAlii\_38 Start: 29207, Stop: 29317, Start Num: 11

Candidate Starts for KeAlii\_38:

(Start: 11 @29207 has 21 MA's), (Start: 12 @29213 has 1 MA's),

Gene: LadyAstra\_46 Start: 30229, Stop: 30348, Start Num: 10

Candidate Starts for LadyAstra\_46:

(Start: 10 @30229 has 13 MA's), (14, 30280), (17, 30337),

Gene: Lego\_39 Start: 29119, Stop: 29235, Start Num: 8

Candidate Starts for Lego\_39:

(Start: 8 @29119 has 17 MA's),

Gene: Liebe\_41 Start: 31035, Stop: 31145, Start Num: 11

Candidate Starts for Liebe\_41:

(Start: 11 @31035 has 21 MA's), (15, 31092),

Gene: Lizalica\_37 Start: 28316, Stop: 28432, Start Num: 8

Candidate Starts for Lizalica\_37:

(Start: 8 @28316 has 17 MA's),

Gene: London\_38 Start: 30093, Stop: 30206, Start Num: 10

Candidate Starts for London\_38:

(Start: 10 @30093 has 13 MA's),

Gene: MaGuCo\_39 Start: 29663, Stop: 29773, Start Num: 11

Candidate Starts for MaGuCo\_39:

(Start: 11 @29663 has 21 MA's), (15, 29720),

Gene: Maureen\_41 Start: 31035, Stop: 31145, Start Num: 11

Candidate Starts for Maureen\_41:

(Start: 11 @31035 has 21 MA's), (15, 31092),

Gene: MiniMommy\_42 Start: 30011, Stop: 30130, Start Num: 10

Candidate Starts for MiniMommy\_42:

(Start: 10 @30011 has 13 MA's), (17, 30119),

Gene: MissSwiss\_39 Start: 27861, Stop: 27974, Start Num: 11

Candidate Starts for MissSwiss\_39:

(Start: 11 @27861 has 21 MA's),

Gene: Niobe\_38 Start: 30078, Stop: 30191, Start Num: 10  
Candidate Starts for Niobe\_38:  
(Start: 10 @30078 has 13 MA's),

Gene: Nitro\_39 Start: 29899, Stop: 30009, Start Num: 11  
Candidate Starts for Nitro\_39:  
(Start: 11 @29899 has 21 MA's),

Gene: ObiToo\_44 Start: 30029, Stop: 30139, Start Num: 11  
Candidate Starts for ObiToo\_44:  
(Start: 11 @30029 has 21 MA's), (16, 30095),

Gene: Origami\_45 Start: 30021, Stop: 30140, Start Num: 10  
Candidate Starts for Origami\_45:  
(Start: 10 @30021 has 13 MA's), (14, 30072), (17, 30129),

Gene: Phives\_42 Start: 30834, Stop: 30950, Start Num: 8  
Candidate Starts for Phives\_42:  
(1, 30150), (2, 30174), (3, 30333), (4, 30603), (6, 30684), (Start: 8 @30834 has 17 MA's),

Gene: Pixelle\_39 Start: 30054, Stop: 30167, Start Num: 10  
Candidate Starts for Pixelle\_39:  
(Start: 10 @30054 has 13 MA's),

Gene: Powerpuff\_41 Start: 30322, Stop: 30438, Start Num: 8  
Candidate Starts for Powerpuff\_41:  
(Start: 8 @30322 has 17 MA's),

Gene: Pumpkins\_38 Start: 29378, Stop: 29488, Start Num: 11  
Candidate Starts for Pumpkins\_38:  
(5, 29201), (Start: 11 @29378 has 21 MA's),

Gene: Reedo\_38 Start: 27445, Stop: 27555, Start Num: 11  
Candidate Starts for Reedo\_38:  
(Start: 11 @27445 has 21 MA's),

Gene: Schaffner\_39 Start: 29611, Stop: 29721, Start Num: 11  
Candidate Starts for Schaffner\_39:  
(Start: 11 @29611 has 21 MA's),

Gene: ShakeltOph\_43 Start: 30010, Stop: 30129, Start Num: 10  
Candidate Starts for ShakeltOph\_43:  
(Start: 10 @30010 has 13 MA's), (17, 30118),

Gene: Simpson\_41 Start: 29238, Stop: 29354, Start Num: 8  
Candidate Starts for Simpson\_41:  
(Start: 8 @29238 has 17 MA's),

Gene: Skelbel\_39 Start: 30078, Stop: 30191, Start Num: 10  
Candidate Starts for Skelbel\_39:  
(Start: 10 @30078 has 13 MA's),

Gene: Snek\_38 Start: 27749, Stop: 27862, Start Num: 9  
Candidate Starts for Snek\_38:  
(Start: 9 @27749 has 4 MA's),

Gene: Soondubu\_36 Start: 30664, Stop: 30771, Start Num: 12  
Candidate Starts for Soondubu\_36:  
(Start: 12 @30664 has 1 MA's),

Gene: Subaru\_39 Start: 30093, Stop: 30206, Start Num: 10  
Candidate Starts for Subaru\_39:  
(Start: 10 @30093 has 13 MA's),

Gene: Sue2\_40 Start: 29761, Stop: 29871, Start Num: 11  
Candidate Starts for Sue2\_40:  
(Start: 11 @29761 has 21 MA's),

Gene: Tallboi\_39 Start: 30267, Stop: 30380, Start Num: 10  
Candidate Starts for Tallboi\_39:  
(Start: 10 @30267 has 13 MA's), (13, 30288),

Gene: Tbone\_38 Start: 29033, Stop: 29149, Start Num: 8  
Candidate Starts for Tbone\_38:  
(Start: 8 @29033 has 17 MA's),

Gene: TforTroy\_40 Start: 29241, Stop: 29351, Start Num: 11  
Candidate Starts for TforTroy\_40:  
(Start: 11 @29241 has 21 MA's), (13, 29259),

Gene: ThursdayNight\_42 Start: 30130, Stop: 30243, Start Num: 11  
Candidate Starts for ThursdayNight\_42:  
(Start: 11 @30130 has 21 MA's),

Gene: Tian\_38 Start: 30032, Stop: 30145, Start Num: 10  
Candidate Starts for Tian\_38:  
(Start: 10 @30032 has 13 MA's),

Gene: Tuck\_43 Start: 31386, Stop: 31502, Start Num: 8  
Candidate Starts for Tuck\_43:  
(4, 31155), (6, 31236), (Start: 8 @31386 has 17 MA's),

Gene: Turab\_37 Start: 28530, Stop: 28640, Start Num: 11  
Candidate Starts for Turab\_37:  
(Start: 11 @28530 has 21 MA's),

Gene: Tutumahutu\_39 Start: 29204, Stop: 29320, Start Num: 8  
Candidate Starts for Tutumahutu\_39:  
(Start: 8 @29204 has 17 MA's),

Gene: Tweety19\_38 Start: 27749, Stop: 27862, Start Num: 9  
Candidate Starts for Tweety19\_38:  
(Start: 9 @27749 has 4 MA's),

Gene: VResidence\_39 Start: 28676, Stop: 28786, Start Num: 11

Candidate Starts for VResidence\_39:  
(Start: 11 @28676 has 21 MA's),

Gene: VroomVroom\_43 Start: 30137, Stop: 30256, Start Num: 10  
Candidate Starts for VroomVroom\_43:  
(Start: 10 @30137 has 13 MA's), (17, 30245),

Gene: Warda\_39 Start: 29209, Stop: 29325, Start Num: 8  
Candidate Starts for Warda\_39:  
(Start: 8 @29209 has 17 MA's),

Gene: Wildwest\_38 Start: 28648, Stop: 28761, Start Num: 9  
Candidate Starts for Wildwest\_38:  
(Start: 9 @28648 has 4 MA's),

Gene: Yang\_39 Start: 28730, Stop: 28840, Start Num: 11  
Candidate Starts for Yang\_39:  
(Start: 11 @28730 has 21 MA's),

Gene: YesChef\_39 Start: 29181, Stop: 29297, Start Num: 8  
Candidate Starts for YesChef\_39:  
(Start: 8 @29181 has 17 MA's),