



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 311723 Report

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

Pham number 311723 has 48 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Zhuangyuan\_26
- Track 2 : Zeina\_56, Argan\_53, Altjira\_57, PoeMe\_55, KevinMinion\_54, BlackHoleSun\_57, Tenney120\_56, Mardi\_55, Phaila\_56, TrixiePhattel\_56, Stardrop\_55, Uzumaki\_52, GantcherGoblin\_53
- Track 3 : Lewando\_58, Renaldo\_61, BarbieDoll\_59, Kinny\_58, Barbonzobean\_61
- Track 4 : Leathea\_55
- Track 5 : Navi1117\_56
- Track 6 : Muglass\_57, Biscute\_55
- Track 7 : Onestar\_50
- Track 8 : KeAlii\_56
- Track 9 : Sue2\_55
- Track 10 : Reedo\_56
- Track 11 : VResidence\_56
- Track 12 : Applejacks\_56
- Track 13 : Grumio\_91, Purplicious\_90
- Track 14 : Makar\_93
- Track 15 : Pleakley\_80, Fury\_80
- Track 16 : Scuba\_81
- Track 17 : Mutzi\_44
- Track 18 : PorkBelly\_38
- Track 19 : Kureo\_101, Gandionco\_100, Marianna39\_101, JeNeSaisPas\_98
- Track 20 : Qui\_103, Elver\_103, Paella\_103
- Track 21 : Elfy\_61
- Track 22 : GrimEater\_49, Jankie\_50
- Track 23 : Gallia\_2

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

The start number called the most often in the published annotations is 13, it was called in 14 of the 28 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altjira\_57, Argan\_53, BlackHoleSun\_57, Elver\_103, Gandionco\_100, GantcherGoblin\_53, JeNeSaisPas\_98, KevinMinion\_54, Kureo\_101, Leathea\_55,

Mardi\_55, Marianna39\_101, Navi1117\_56, Paella\_103, Phaila\_56, PoeMe\_55, Qui\_103, Stardrop\_55, Tenney120\_56, TrixiePhattel\_56, Uzumaki\_52, Zeina\_56,

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:

- Applejacks\_56, BarbieDoll\_59, Barbonzobean\_61, Biscute\_55, Elfy\_61, Fury\_80, Gallia\_2, GrimEater\_49, Grumio\_91, Jankie\_50, KeAlii\_56, Kinny\_58, Lewando\_58, Makar\_93, Muglass\_57, Mutzi\_44, Onestar\_50, Pleakley\_80, PorkBelly\_38, Purplicious\_90, Reedo\_56, Renaldo\_61, Scuba\_81, Sue2\_55, VResidence\_56, Zhuangyuan\_26,

### Summary by start number:

Start 10:

- Found in 2 of 48 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KeAlii\_56 (AZ1), Mutzi\_44 (DC1),

Start 11:

- Found in 1 of 48 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elfy\_61 (FP),

Start 12:

- Found in 7 of 48 ( 14.6% ) of genes in pham
- Manual Annotations of this start: 3 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BarbieDoll\_59 (AU6), Barbonzobean\_61 (AU6), Biscute\_55 (AU6), Kinny\_58 (AU6), Lewando\_58 (AU6), Muglass\_57 (AU6), Renaldo\_61 (AU6),

Start 13:

- Found in 22 of 48 ( 45.8% ) of genes in pham
- Manual Annotations of this start: 14 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altjira\_57 (AU6), Argan\_53 (AU6), BlackHoleSun\_57 (AU6), Elver\_103 (FK), Gandionco\_100 (FK), GantcherGoblin\_53 (AU6), JeNeSaisPas\_98 (FK), KevinMinion\_54 (AU6), Kureo\_101 (FK), Leathea\_55 (AU6), Mardi\_55 (AU6), Marianna39\_101 (FK), Navi1117\_56 (AU6), Paella\_103 (FK), Phaila\_56 (AU6), PoeMe\_55 (AU6), Qui\_103 (FK), Stardrop\_55 (AU6), Tenney120\_56 (AU6), TrixiePhattel\_56 (AU6), Uzumaki\_52 (AU6), Zeina\_56 (AU6),

Start 14:

- Found in 1 of 48 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sue2\_55 (AZ1),

Start 15:

- Found in 2 of 48 ( 4.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Onestar\_50 (AW), PorkBelly\_38 (FJ),

Start 16:

- Found in 2 of 48 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reedo\_56 (AZ1), VResidence\_56 (AZ1),

Start 21:

- Found in 2 of 48 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GrimEater\_49 (FP), Jankie\_50 (FP),

Start 23:

- Found in 4 of 48 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Gallia\_2 (singleton), Zhuangyuan\_26 (AS2),

Start 24:

- Found in 7 of 48 ( 14.6% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applejacks\_56 (CD), Fury\_80 (CR5), Grumio\_91 (CP), Makar\_93 (CP), Pleakley\_80 (CR5), Purpicious\_90 (CP), Scuba\_81 (CR5),

### **Summary by clusters:**

There are 12 clusters represented in this pham: FP, AS2, singleton, CP, CR5, CD, AW, AU6, AZ1, FJ, FK, DC1,

Info for manual annotations of cluster AS2:

- Start number 23 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AU6:

- Start number 12 was manually annotated 3 times for cluster AU6.
- Start number 13 was manually annotated 11 times for cluster AU6.

Info for manual annotations of cluster AZ1:

- Start number 10 was manually annotated 1 time for cluster AZ1.
- Start number 14 was manually annotated 1 time for cluster AZ1.
- Start number 16 was manually annotated 2 times for cluster AZ1.

Info for manual annotations of cluster CR5:

- Start number 24 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster DC1:

- Start number 10 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster FK:

- Start number 13 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster FP:

- Start number 11 was manually annotated 1 time for cluster FP.
- Start number 21 was manually annotated 2 times for cluster FP.

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

Gene: Altjira\_57 Start: 35913, Stop: 36110, Start Num: 13

Candidate Starts for Altjira\_57:

(Start: 13 @35913 has 14 MA's), (39, 36030), (42, 36054),

Gene: Applejacks\_56 Start: 39175, Stop: 38951, Start Num: 24

Candidate Starts for Applejacks\_56:

(Start: 24 @39175 has 2 MA's), (33, 39130), (35, 39124), (50, 39016),

Gene: Argan\_53 Start: 34620, Stop: 34817, Start Num: 13

Candidate Starts for Argan\_53:

(Start: 13 @34620 has 14 MA's), (39, 34737), (42, 34761),

Gene: BarbieDoll\_59 Start: 36340, Stop: 36540, Start Num: 12

Candidate Starts for BarbieDoll\_59:

(Start: 12 @36340 has 3 MA's), (34, 36424), (39, 36460), (42, 36484),

Gene: Barbonzobean\_61 Start: 36603, Stop: 36803, Start Num: 12

Candidate Starts for Barbonzobean\_61:

(Start: 12 @36603 has 3 MA's), (34, 36687), (39, 36723), (42, 36747),

Gene: Biscute\_55 Start: 35992, Stop: 36192, Start Num: 12

Candidate Starts for Biscute\_55:

(Start: 12 @35992 has 3 MA's), (22, 36025), (34, 36076), (39, 36112), (42, 36136),

Gene: BlackHoleSun\_57 Start: 34745, Stop: 34942, Start Num: 13

Candidate Starts for BlackHoleSun\_57:

(Start: 13 @34745 has 14 MA's), (39, 34862), (42, 34886),

Gene: Elfy\_61 Start: 37931, Stop: 38137, Start Num: 11

Candidate Starts for Elfy\_61:

(Start: 11 @37931 has 1 MA's), (19, 37955), (27, 37976), (30, 37988), (37, 38036), (48, 38108), (49, 38111),

Gene: Elver\_103 Start: 55844, Stop: 56035, Start Num: 13

Candidate Starts for Elver\_103:

(Start: 13 @55844 has 14 MA's), (22, 55874), (27, 55892), (31, 55910), (39, 55961), (42, 55985), (43, 55991),

Gene: Fury\_80 Start: 53905, Stop: 53741, Start Num: 24

Candidate Starts for Fury\_80:

(6, 54010), (Start: 24 @53905 has 2 MA's), (45, 53773), (49, 53755),

Gene: Gallia\_2 Start: 751, Stop: 924, Start Num: 23

Candidate Starts for Gallia\_2:

(Start: 23 @751 has 1 MA's), (26, 760), (41, 844), (46, 886),

Gene: Gandionco\_100 Start: 54700, Stop: 54891, Start Num: 13

Candidate Starts for Gandionco\_100:

(Start: 13 @54700 has 14 MA's), (22, 54730), (27, 54748), (31, 54766), (39, 54817), (42, 54841), (43, 54847),

Gene: GantcherGoblin\_53 Start: 34694, Stop: 34891, Start Num: 13

Candidate Starts for GantcherGoblin\_53:

(Start: 13 @34694 has 14 MA's), (39, 34811), (42, 34835),

Gene: GrimEater\_49 Start: 35180, Stop: 35371, Start Num: 21

Candidate Starts for GrimEater\_49:

(Start: 21 @35180 has 2 MA's), (36, 35255),

Gene: Grumio\_91 Start: 56786, Stop: 56953, Start Num: 24

Candidate Starts for Grumio\_91:

(Start: 24 @56786 has 2 MA's), (44, 56900),

Gene: Jankie\_50 Start: 35359, Stop: 35550, Start Num: 21

Candidate Starts for Jankie\_50:

(Start: 21 @35359 has 2 MA's), (36, 35434),

Gene: JeNeSaisPas\_98 Start: 55274, Stop: 55465, Start Num: 13

Candidate Starts for JeNeSaisPas\_98:

(Start: 13 @55274 has 14 MA's), (22, 55304), (27, 55322), (31, 55340), (39, 55391), (42, 55415), (43, 55421),

Gene: KeAlii\_56 Start: 38432, Stop: 38650, Start Num: 10

Candidate Starts for KeAlii\_56:

(Start: 10 @38432 has 2 MA's), (Start: 23 @38468 has 1 MA's), (29, 38495), (46, 38609), (49, 38621),

Gene: KevinMinion\_54 Start: 35571, Stop: 35768, Start Num: 13

Candidate Starts for KevinMinion\_54:

(Start: 13 @35571 has 14 MA's), (39, 35688), (42, 35712),

Gene: Kinny\_58 Start: 36835, Stop: 37035, Start Num: 12

Candidate Starts for Kinny\_58:

(Start: 12 @36835 has 3 MA's), (34, 36919), (39, 36955), (42, 36979),

Gene: Kureo\_101 Start: 54854, Stop: 55045, Start Num: 13

Candidate Starts for Kureo\_101:

(Start: 13 @54854 has 14 MA's), (22, 54884), (27, 54902), (31, 54920), (39, 54971), (42, 54995), (43, 55001),

Gene: Leathea\_55 Start: 34458, Stop: 34655, Start Num: 13  
Candidate Starts for Leathea\_55:  
(Start: 13 @34458 has 14 MA's), (34, 34539), (39, 34575), (42, 34599),

Gene: Lewando\_58 Start: 36342, Stop: 36542, Start Num: 12  
Candidate Starts for Lewando\_58:  
(Start: 12 @36342 has 3 MA's), (34, 36426), (39, 36462), (42, 36486),

Gene: Makar\_93 Start: 56890, Stop: 57057, Start Num: 24  
Candidate Starts for Makar\_93:  
(Start: 24 @56890 has 2 MA's), (36, 56950),

Gene: Mardi\_55 Start: 35122, Stop: 35319, Start Num: 13  
Candidate Starts for Mardi\_55:  
(Start: 13 @35122 has 14 MA's), (39, 35239), (42, 35263),

Gene: Marianna39\_101 Start: 55269, Stop: 55460, Start Num: 13  
Candidate Starts for Marianna39\_101:  
(Start: 13 @55269 has 14 MA's), (22, 55299), (27, 55317), (31, 55335), (39, 55386), (42, 55410), (43, 55416),

Gene: Muglass\_57 Start: 35896, Stop: 36096, Start Num: 12  
Candidate Starts for Muglass\_57:  
(Start: 12 @35896 has 3 MA's), (22, 35929), (34, 35980), (39, 36016), (42, 36040),

Gene: Mutzi\_44 Start: 37917, Stop: 38132, Start Num: 10  
Candidate Starts for Mutzi\_44:  
(1, 37686), (2, 37707), (3, 37767), (Start: 10 @37917 has 2 MA's), (Start: 23 @37962 has 1 MA's), (33, 38010), (36, 38028), (39, 38049), (40, 38052), (45, 38097),

Gene: Navi1117\_56 Start: 35388, Stop: 35585, Start Num: 13  
Candidate Starts for Navi1117\_56:  
(Start: 13 @35388 has 14 MA's), (39, 35505), (42, 35529),

Gene: Onestar\_50 Start: 33377, Stop: 33592, Start Num: 15  
Candidate Starts for Onestar\_50:  
(5, 33296), (15, 33377), (30, 33434), (39, 33491), (42, 33515),

Gene: Paella\_103 Start: 56434, Stop: 56625, Start Num: 13  
Candidate Starts for Paella\_103:  
(Start: 13 @56434 has 14 MA's), (22, 56464), (27, 56482), (31, 56500), (39, 56551), (42, 56575), (43, 56581),

Gene: Phaila\_56 Start: 34769, Stop: 34966, Start Num: 13  
Candidate Starts for Phaila\_56:  
(Start: 13 @34769 has 14 MA's), (39, 34886), (42, 34910),

Gene: Pleakley\_80 Start: 53906, Stop: 53742, Start Num: 24  
Candidate Starts for Pleakley\_80:  
(6, 54011), (Start: 24 @53906 has 2 MA's), (45, 53774), (49, 53756),

Gene: PoeMe\_55 Start: 35313, Stop: 35510, Start Num: 13

Candidate Starts for PoeMe\_55:  
(Start: 13 @35313 has 14 MA's), (39, 35430), (42, 35454),

Gene: PorkBelly\_38 Start: 29387, Stop: 29193, Start Num: 15  
Candidate Starts for PorkBelly\_38:  
(15, 29387), (17, 29381), (31, 29324), (32, 29321), (38, 29279), (42, 29249), (43, 29243), (47, 29216),

Gene: Purpicious\_90 Start: 56551, Stop: 56718, Start Num: 24  
Candidate Starts for Purpicious\_90:  
(Start: 24 @56551 has 2 MA's), (44, 56665),

Gene: Qui\_103 Start: 56434, Stop: 56625, Start Num: 13  
Candidate Starts for Qui\_103:  
(Start: 13 @56434 has 14 MA's), (22, 56464), (27, 56482), (31, 56500), (39, 56551), (42, 56575), (43, 56581),

Gene: Reedo\_56 Start: 36712, Stop: 36921, Start Num: 16  
Candidate Starts for Reedo\_56:  
(4, 36628), (7, 36667), (8, 36676), (Start: 16 @36712 has 2 MA's),

Gene: Renaldo\_61 Start: 36651, Stop: 36851, Start Num: 12  
Candidate Starts for Renaldo\_61:  
(Start: 12 @36651 has 3 MA's), (34, 36735), (39, 36771), (42, 36795),

Gene: Scuba\_81 Start: 53961, Stop: 53797, Start Num: 24  
Candidate Starts for Scuba\_81:  
(6, 54066), (Start: 24 @53961 has 2 MA's), (45, 53829), (49, 53811),

Gene: Stardrop\_55 Start: 35415, Stop: 35612, Start Num: 13  
Candidate Starts for Stardrop\_55:  
(Start: 13 @35415 has 14 MA's), (39, 35532), (42, 35556),

Gene: Sue2\_55 Start: 38279, Stop: 38485, Start Num: 14  
Candidate Starts for Sue2\_55:  
(9, 38258), (Start: 14 @38279 has 1 MA's), (25, 38309),

Gene: Tenney120\_56 Start: 35355, Stop: 35552, Start Num: 13  
Candidate Starts for Tenney120\_56:  
(Start: 13 @35355 has 14 MA's), (39, 35472), (42, 35496),

Gene: TrixiePhattel\_56 Start: 34783, Stop: 34980, Start Num: 13  
Candidate Starts for TrixiePhattel\_56:  
(Start: 13 @34783 has 14 MA's), (39, 34900), (42, 34924),

Gene: Uzumaki\_52 Start: 34796, Stop: 34993, Start Num: 13  
Candidate Starts for Uzumaki\_52:  
(Start: 13 @34796 has 14 MA's), (39, 34913), (42, 34937),

Gene: VResidence\_56 Start: 37677, Stop: 37886, Start Num: 16  
Candidate Starts for VResidence\_56:  
(Start: 16 @37677 has 2 MA's), (20, 37695), (28, 37725), (49, 37857),

Gene: Zeina\_56 Start: 35363, Stop: 35560, Start Num: 13

Candidate Starts for Zeina\_56:

(Start: 13 @35363 has 14 MA's), (39, 35480), (42, 35504),

Gene: Zhuangyuan\_26 Start: 19118, Stop: 18951, Start Num: 23

Candidate Starts for Zhuangyuan\_26:

(18, 19139), (Start: 23 @19118 has 1 MA's),