

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 223351 Report

This analysis was run 03/28/25 on database version 593.

Pham number 223351 has 28 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Abidatro 63
- Track 2 : Galaxy\_62
- Track 3 : Cygnet\_73
- Track 4 : Lunar 69
- Track 5 : Kuleana\_70
- Track 6 : Antrice\_76
- Track 7: Bedetta 71, HannahPhantana 68, Amelia 66
- Track 8 : LittleTokyo\_67
- Track 9 : Coral 67
- Track 10 : StuartMinion 60
- Track 11 : Leona 65
- Track 12: Renna12 69
- Track 13: Renna12 67
- Track 14: Babushka 69
- Track 15: Juno112 66, Atlantica 68
- Track 16: RedFox 67
- Track 17: Hillester\_68, RadFad\_68
- Track 18 : Auxilium 60
- Track 19 : AbbyDaisy\_64
- Track 20 : ThayneTheZag\_66
- Track 21 : Bhageatrice 68, Seahorse 66
- Track 22 : Tiff81 59
- Track 23: Gusanita 67

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

The start number called the most often in the published annotations is 16, it was called in 7 of the 19 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AbbyDaisy\_64, Auxilium\_60, Babushka\_69, Bhageatrice\_68, Gusanita\_67, Hillester\_68, RadFad\_68, Renna12\_69, Seahorse\_66, ThayneTheZag\_66, Tiff81\_59,

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

Abidatro 63,

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

• Amelia\_66, Antrice\_76, Atlantica\_68, Bedetta\_71, Coral\_67, Cygnet\_73, Galaxy\_62, HannahPhantana\_68, Juno112\_66, Kuleana\_70, Leona\_65, LittleTokyo\_67, Lunar\_69, RedFox\_67, Renna12\_67, StuartMinion\_60,

# **Summary by start number:**

### Start 15:

- Found in 1 of 28 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 1 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro\_63 (AS1),

#### Start 16:

- Found in 12 of 28 (42.9%) of genes in pham
- Manual Annotations of this start: 7 of 19
- Called 91.7% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_64 (AY), Auxilium\_60 (AY), Babushka\_69 (AS3), Bhageatrice\_68 (AY), Gusanita\_67 (FF), Hillester\_68 (AY), RadFad\_68 (AY), Renna12\_69 (AS3), Seahorse\_66 (AY), ThayneTheZag\_66 (AY), Tiff81\_59 (AY),

### Start 17:

- Found in 1 of 28 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 1 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Renna12 67 (AS3),

#### Start 18:

- Found in 8 of 28 (28.6%) of genes in pham
- Manual Annotations of this start: 4 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antrice\_76 (AS2), Atlantica\_68 (AS3), Cygnet\_73 (AS2), Juno112\_66 (AS3), Kuleana\_70 (AS2), Leona\_65 (AS3), RedFox\_67 (AS3), StuartMinion\_60 (AS3),

#### Start 19:

- Found in 8 of 28 (28.6%) of genes in pham
- Manual Annotations of this start: 6 of 19
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Amelia\_66 (AS2), Bedetta\_71 (AS2), Coral\_67 (AS2), Galaxy\_62 (AS1), HannahPhantana\_68 (AS2), LittleTokyo\_67 (AS2), Lunar\_69 (AS2),

# Summary by clusters:

There are 5 clusters represented in this pham: AY, AS2, AS1, FF, AS3,

Info for manual annotations of cluster AS1:

- •Start number 15 was manually annotated 1 time for cluster AS1.
- •Start number 19 was manually annotated 1 time for cluster AS1.

Info for manual annotations of cluster AS2:

- •Start number 18 was manually annotated 1 time for cluster AS2.
- •Start number 19 was manually annotated 5 times for cluster AS2.

Info for manual annotations of cluster AS3:

- •Start number 16 was manually annotated 1 time for cluster AS3.
- •Start number 17 was manually annotated 1 time for cluster AS3.
- •Start number 18 was manually annotated 3 times for cluster AS3.

Info for manual annotations of cluster AY:

•Start number 16 was manually annotated 5 times for cluster AY.

Info for manual annotations of cluster FF:

•Start number 16 was manually annotated 1 time for cluster FF.

### Gene Information:

Gene: AbbyDaisy\_64 Start: 35318, Stop: 35455, Start Num: 16

Candidate Starts for AbbyDaisy\_64:

(Start: 16 @35318 has 7 MA's), (21, 35339), (23, 35375),

Gene: Abidatro\_63 Start: 37722, Stop: 37874, Start Num: 15

Candidate Starts for Abidatro\_63:

(Start: 15 @37722 has 1 MA's), (Start: 16 @37725 has 7 MA's), (Start: 19 @37734 has 6 MA's), (23,

37782),

Gene: Amelia\_66 Start: 36727, Stop: 36852, Start Num: 19

Candidate Starts for Amelia 66:

(Start: 19 @36727 has 6 MA's), (23, 36775), (26, 36796), (29, 36802), (35, 36841),

Gene: Antrice 76 Start: 37839, Stop: 37967, Start Num: 18

Candidate Starts for Antrice 76:

(Start: 18 @37839 has 4 MA's), (24, 37893),

Gene: Atlantica\_68 Start: 37422, Stop: 37550, Start Num: 18

Candidate Starts for Atlantica 68:

(Start: 18 @37422 has 4 MA's), (31, 37506),

Gene: Auxilium\_60 Start: 32290, Stop: 32427, Start Num: 16

Candidate Starts for Auxilium\_60: (Start: 16 @32290 has 7 MA's),

Gene: Babushka\_69 Start: 37394, Stop: 37513, Start Num: 16

Candidate Starts for Babushka 69:

(3, 37286), (6, 37307), (8, 37316), (9, 37322), (Start: 16 @37394 has 7 MA's), (20, 37409),

Gene: Bedetta 71 Start: 36890, Stop: 37015, Start Num: 19

Candidate Starts for Bedetta 71:

(Start: 19 @ 36890 has 6 MA's), (23, 36938), (26, 36959), (29, 36965), (35, 37004),

Gene: Bhageatrice\_68 Start: 37131, Stop: 37268, Start Num: 16

Candidate Starts for Bhageatrice\_68:

(12, 37104), (Start: 16 @37131 has 7 MA's), (21, 37152), (32, 37224),

Gene: Coral\_67 Start: 36913, Stop: 37038, Start Num: 19

Candidate Starts for Coral\_67:

(Start: 19 @36913 has 6 MA's), (23, 36961), (26, 36982), (29, 36988), (35, 37027),

Gene: Cygnet\_73 Start: 38186, Stop: 38317, Start Num: 18

Candidate Starts for Cygnet\_73:

(Start: 18 @38186 has 4 MA's), (27, 38258),

Gene: Galaxy\_62 Start: 36560, Stop: 36700, Start Num: 19

Candidate Starts for Galaxy\_62:

(Start: 19 @36560 has 6 MA's), (23, 36608),

Gene: Gusanita\_67 Start: 41673, Stop: 41810, Start Num: 16

Candidate Starts for Gusanita\_67:

(14, 41661), (Start: 16 @41673 has 7 MA's), (23, 41730), (30, 41763),

Gene: HannahPhantana\_68 Start: 36722, Stop: 36847, Start Num: 19

Candidate Starts for HannahPhantana 68:

(Start: 19 @36722 has 6 MA's), (23, 36770), (26, 36791), (29, 36797), (35, 36836),

Gene: Hillester\_68 Start: 35895, Stop: 36032, Start Num: 16

Candidate Starts for Hillester\_68:

(12, 35868), (Start: 16 @35895 has 7 MA's), (21, 35916), (23, 35952),

Gene: Juno112\_66 Start: 37424, Stop: 37552, Start Num: 18

Candidate Starts for Juno112\_66:

(Start: 18 @37424 has 4 MA's), (31, 37508),

Gene: Kuleana\_70 Start: 37424, Stop: 37552, Start Num: 18

Candidate Starts for Kuleana 70:

(1, 37223), (2, 37271), (7, 37334), (Start: 18 @37424 has 4 MA's), (23, 37472), (33, 37532), (35, 37541),

Gene: Leona\_65 Start: 37507, Stop: 37635, Start Num: 18

Candidate Starts for Leona\_65:

(Start: 18 @37507 has 4 MA's), (24, 37561), (31, 37591),

Gene: LittleTokyo\_67 Start: 36418, Stop: 36546, Start Num: 19

Candidate Starts for LittleTokyo 67:

(4, 36304), (5, 36313), (13, 36388), (Start: 19 @36418 has 6 MA's), (23, 36466), (28, 36496),

Gene: Lunar\_69 Start: 37045, Stop: 37170, Start Num: 19

Candidate Starts for Lunar\_69:

(Start: 19 @37045 has 6 MA's), (26, 37114), (29, 37120), (35, 37159),

Gene: RadFad 68 Start: 35895, Stop: 36032, Start Num: 16

Candidate Starts for RadFad\_68:

(12, 35868), (Start: 16 @35895 has 7 MA's), (21, 35916), (23, 35952),

Gene: RedFox\_67 Start: 37521, Stop: 37649, Start Num: 18

Candidate Starts for RedFox\_67:

(Start: 18 @37521 has 4 MA's), (25, 37590), (27, 37593), (28, 37596), (31, 37605),

Gene: Renna12\_69 Start: 38028, Stop: 38147, Start Num: 16

Candidate Starts for Renna12 69:

(6, 37944), (10, 37968), (11, 37977), (Start: 16 @38028 has 7 MA's), (20, 38043),

Gene: Renna12\_67 Start: 37634, Stop: 37759, Start Num: 17

Candidate Starts for Renna12\_67:

(Start: 17 @37634 has 1 MA's), (23, 37682), (33, 37742), (34, 37745),

Gene: Seahorse\_66 Start: 36402, Stop: 36539, Start Num: 16

Candidate Starts for Seahorse\_66:

(12, 36375), (Start: 16 @ 36402 has 7 MA's), (21, 36423), (32, 36495),

Gene: StuartMinion\_60 Start: 33885, Stop: 34013, Start Num: 18

Candidate Starts for StuartMinion\_60:

(Start: 18 @33885 has 4 MA's), (22, 33906), (27, 33957), (31, 33969),

Gene: ThayneTheZag\_66 Start: 34569, Stop: 34706, Start Num: 16

Candidate Starts for ThayneTheZag\_66:

(Start: 16 @34569 has 7 MA's), (21, 34590), (23, 34626),

Gene: Tiff81\_59 Start: 32815, Stop: 32952, Start Num: 16

Candidate Starts for Tiff81\_59:

(12, 32788), (Start: 16 @32815 has 7 MA's), (21, 32836),