



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 311781 Report

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

Pham number 311781 has 41 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Akino08\_57, Stromboli\_56, BabyYoda\_56, WalkingDead\_58, Icarian\_59, DirtyBubble\_55, Loviatar\_57
- Track 2 : Gack\_55
- Track 3 : Franklin22\_58
- Track 4 : Celaena\_54, Kieran\_53, Bachaco\_54, FlameThrower\_53, Kamdara\_53, Sharkboy\_54, Katzastrophic\_55, Dismas\_54, ChiliPepper\_53, Rona\_53
- Track 5 : Elva\_58
- Track 6 : Coltrane\_55, Brahms\_55, Armstrong\_55, Clayda5\_57, Bernstein\_55, Vitas\_55, Rollins\_55, Skylord\_55
- Track 7 : SunnyD\_62, Shayna\_62
- Track 8 : CliffHanger\_62
- Track 9 : Quenya\_57
- Track 10 : Cashington\_55, Milomuff\_57, Solea\_58
- Track 11 : Teagster\_61
- Track 12 : Bengal\_58
- Track 13 : PhigPhack\_58
- Track 14 : BAjuniper\_55
- Track 15 : PondAmelia\_69
- Track 16 : Eden\_56

### ***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 13 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BAjuniper\_55, Bachaco\_54, Celaena\_54, ChiliPepper\_53, Dismas\_54, Eden\_56, FlameThrower\_53, Gack\_55, Kamdara\_53, Katzastrophic\_55, Kieran\_53, Quenya\_57, Rona\_53, Sharkboy\_54,

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:

- Akino08\_57, Armstrong\_55, BabyYoda\_56, Bengal\_58, Bernstein\_55, Brahms\_55, Cashington\_55, Clayda5\_57, CliffHanger\_62, Coltrane\_55, DirtyBubble\_55, Elva\_58, Franklin22\_58, Icarian\_59, Loviatar\_57, Milomuff\_57, PhigPhack\_58, PondAmelia\_69, Rollins\_55, Shayna\_62, Skylord\_55, Solea\_58, Stromboli\_56, SunnyD\_62, Teagster\_61, Vitas\_55, WalkingDead\_58,

### Summary by start number:

#### Start 9:

- Found in 3 of 41 ( 7.3% ) of genes in pham
- Manual Annotations of this start: 3 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shayna\_62 (EB), SunnyD\_62 (EB), Teagster\_61 (EB),

#### Start 10:

- Found in 15 of 41 ( 36.6% ) of genes in pham
- Manual Annotations of this start: 10 of 36
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Akino08\_57 (EB), BabyYoda\_56 (EB), Bengal\_58 (EB), CliffHanger\_62 (EB), DirtyBubble\_55 (EB), Elva\_58 (EB), Icarian\_59 (EB), Loviatar\_57 (EB), PhigPhack\_58 (EB), PondAmelia\_69 (EB), Stromboli\_56 (EB), WalkingDead\_58 (EB),

#### Start 13:

- Found in 6 of 41 ( 14.6% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cashington\_55 (EB), Milomuff\_57 (EB), Solea\_58 (EB),

#### Start 15:

- Found in 8 of 41 ( 19.5% ) of genes in pham
- Manual Annotations of this start: 8 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Armstrong\_55 (EB), Bernstein\_55 (EB), Brahms\_55 (EB), Clayda5\_57 (EB), Coltrane\_55 (EB), Rollins\_55 (EB), Skylord\_55 (EB), Vitas\_55 (EB),

#### Start 16:

- Found in 14 of 41 ( 34.1% ) of genes in pham
- Manual Annotations of this start: 13 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BAjuniper\_55 (EB), Bachaco\_54 (EB), Celaena\_54 (EB), ChiliPepper\_53 (EB), Dismas\_54 (EB), Eden\_56 (EB), FlameThrower\_53 (EB), Gack\_55 (EB), Kamdara\_53 (EB), Katzastrophic\_55 (EB), Kieran\_53 (EB), Quenya\_57 (EB), Rona\_53 (EB), Sharkboy\_54 (EB),

#### Start 17:

- Found in 1 of 41 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Franklin22\_58 (EB),

## Summary by clusters:

There is one cluster represented in this pham: EB

Info for manual annotations of cluster EB:

- Start number 9 was manually annotated 3 times for cluster EB.
- Start number 10 was manually annotated 10 times for cluster EB.
- Start number 13 was manually annotated 1 time for cluster EB.
- Start number 15 was manually annotated 8 times for cluster EB.
- Start number 16 was manually annotated 13 times for cluster EB.
- Start number 17 was manually annotated 1 time for cluster EB.

### **Gene Information:**

Gene: Akino08\_57 Start: 38324, Stop: 38584, Start Num: 10

Candidate Starts for Akino08\_57:

(Start: 10 @38324 has 10 MA's),

Gene: Armstrong\_55 Start: 34759, Stop: 34983, Start Num: 15

Candidate Starts for Armstrong\_55:

(Start: 15 @34759 has 8 MA's),

Gene: BAjuniper\_55 Start: 37299, Stop: 37520, Start Num: 16

Candidate Starts for BAjuniper\_55:

(5, 37236), (Start: 16 @37299 has 13 MA's), (20, 37356),

Gene: BabyYoda\_56 Start: 37257, Stop: 37517, Start Num: 10

Candidate Starts for BabyYoda\_56:

(Start: 10 @37257 has 10 MA's),

Gene: Bachaco\_54 Start: 37983, Stop: 38204, Start Num: 16

Candidate Starts for Bachaco\_54:

(Start: 16 @37983 has 13 MA's),

Gene: Bengal\_58 Start: 36486, Stop: 36746, Start Num: 10

Candidate Starts for Bengal\_58:

(3, 36417), (8, 36480), (Start: 10 @36486 has 10 MA's), (Start: 13 @36501 has 1 MA's),

Gene: Bernstein\_55 Start: 34757, Stop: 34981, Start Num: 15

Candidate Starts for Bernstein\_55:

(Start: 15 @34757 has 8 MA's),

Gene: Brahms\_55 Start: 34659, Stop: 34883, Start Num: 15

Candidate Starts for Brahms\_55:

(Start: 15 @34659 has 8 MA's),

Gene: Cashington\_55 Start: 35827, Stop: 36072, Start Num: 13

Candidate Starts for Cashington\_55:

(2, 35695), (3, 35743), (8, 35806), (Start: 10 @35812 has 10 MA's), (Start: 13 @35827 has 1 MA's),

Gene: Celaena\_54 Start: 37745, Stop: 37966, Start Num: 16  
Candidate Starts for Celaena\_54:  
(Start: 16 @37745 has 13 MA's),

Gene: ChiliPepper\_53 Start: 37055, Stop: 37276, Start Num: 16  
Candidate Starts for ChiliPepper\_53:  
(Start: 16 @37055 has 13 MA's),

Gene: Clayda5\_57 Start: 34724, Stop: 34948, Start Num: 15  
Candidate Starts for Clayda5\_57:  
(Start: 15 @34724 has 8 MA's),

Gene: CliffHanger\_62 Start: 35855, Stop: 36130, Start Num: 10  
Candidate Starts for CliffHanger\_62:  
(1, 35687), (4, 35801), (Start: 10 @35855 has 10 MA's), (18, 35903), (22, 35969),

Gene: Coltrane\_55 Start: 34659, Stop: 34883, Start Num: 15  
Candidate Starts for Coltrane\_55:  
(Start: 15 @34659 has 8 MA's),

Gene: DirtyBubble\_55 Start: 36927, Stop: 37187, Start Num: 10  
Candidate Starts for DirtyBubble\_55:  
(Start: 10 @36927 has 10 MA's),

Gene: Dismas\_54 Start: 36976, Stop: 37197, Start Num: 16  
Candidate Starts for Dismas\_54:  
(Start: 16 @36976 has 13 MA's),

Gene: Eden\_56 Start: 35874, Stop: 36098, Start Num: 16  
Candidate Starts for Eden\_56:  
(5, 35811), (Start: 16 @35874 has 13 MA's), (22, 35949),

Gene: Elva\_58 Start: 37321, Stop: 37581, Start Num: 10  
Candidate Starts for Elva\_58:  
(Start: 10 @37321 has 10 MA's), (Start: 13 @37336 has 1 MA's),

Gene: FlameThrower\_53 Start: 36782, Stop: 37003, Start Num: 16  
Candidate Starts for FlameThrower\_53:  
(Start: 16 @36782 has 13 MA's),

Gene: Franklin22\_58 Start: 35518, Stop: 35742, Start Num: 17  
Candidate Starts for Franklin22\_58:  
(6, 35458), (Start: 17 @35518 has 1 MA's), (20, 35575),

Gene: Gack\_55 Start: 35465, Stop: 35689, Start Num: 16  
Candidate Starts for Gack\_55:  
(7, 35414), (11, 35432), (12, 35435), (14, 35462), (Start: 16 @35465 has 13 MA's), (23, 35642), (25, 35675),

Gene: Icarian\_59 Start: 37925, Stop: 38185, Start Num: 10  
Candidate Starts for Icarian\_59:  
(Start: 10 @37925 has 10 MA's),

Gene: Kamdara\_53 Start: 37014, Stop: 37235, Start Num: 16  
Candidate Starts for Kamdara\_53:  
(Start: 16 @37014 has 13 MA's),

Gene: Katzastrophic\_55 Start: 37292, Stop: 37513, Start Num: 16  
Candidate Starts for Katzastrophic\_55:  
(Start: 16 @37292 has 13 MA's),

Gene: Kieran\_53 Start: 37017, Stop: 37238, Start Num: 16  
Candidate Starts for Kieran\_53:  
(Start: 16 @37017 has 13 MA's),

Gene: Loviatar\_57 Start: 38339, Stop: 38599, Start Num: 10  
Candidate Starts for Loviatar\_57:  
(Start: 10 @38339 has 10 MA's),

Gene: Milomuff\_57 Start: 36355, Stop: 36600, Start Num: 13  
Candidate Starts for Milomuff\_57:  
(2, 36223), (3, 36271), (8, 36334), (Start: 10 @36340 has 10 MA's), (Start: 13 @36355 has 1 MA's),

Gene: PhigPhack\_58 Start: 36350, Stop: 36610, Start Num: 10  
Candidate Starts for PhigPhack\_58:  
(2, 36233), (3, 36281), (8, 36344), (Start: 10 @36350 has 10 MA's), (Start: 13 @36365 has 1 MA's),  
(19, 36431),

Gene: PondAmelia\_69 Start: 37304, Stop: 37564, Start Num: 10  
Candidate Starts for PondAmelia\_69:  
(Start: 10 @37304 has 10 MA's),

Gene: Quenya\_57 Start: 37424, Stop: 37645, Start Num: 16  
Candidate Starts for Quenya\_57:  
(Start: 16 @37424 has 13 MA's), (24, 37616),

Gene: Rollins\_55 Start: 34757, Stop: 34981, Start Num: 15  
Candidate Starts for Rollins\_55:  
(Start: 15 @34757 has 8 MA's),

Gene: Rona\_53 Start: 36967, Stop: 37188, Start Num: 16  
Candidate Starts for Rona\_53:  
(Start: 16 @36967 has 13 MA's),

Gene: Sharkboy\_54 Start: 37066, Stop: 37287, Start Num: 16  
Candidate Starts for Sharkboy\_54:  
(Start: 16 @37066 has 13 MA's),

Gene: Shayna\_62 Start: 36677, Stop: 36955, Start Num: 9  
Candidate Starts for Shayna\_62:  
(Start: 9 @36677 has 3 MA's), (21, 36785),

Gene: Skylord\_55 Start: 34698, Stop: 34922, Start Num: 15  
Candidate Starts for Skylord\_55:  
(Start: 15 @34698 has 8 MA's),

Gene: Solea\_58 Start: 36354, Stop: 36599, Start Num: 13  
Candidate Starts for Solea\_58:  
(2, 36222), (3, 36270), (8, 36333), (Start: 10 @36339 has 10 MA's), (Start: 13 @36354 has 1 MA's),

Gene: Stromboli\_56 Start: 37294, Stop: 37554, Start Num: 10  
Candidate Starts for Stromboli\_56:  
(Start: 10 @37294 has 10 MA's),

Gene: SunnyD\_62 Start: 36683, Stop: 36961, Start Num: 9  
Candidate Starts for SunnyD\_62:  
(Start: 9 @36683 has 3 MA's), (21, 36791),

Gene: Teagster\_61 Start: 36981, Stop: 37259, Start Num: 9  
Candidate Starts for Teagster\_61:  
(Start: 9 @36981 has 3 MA's), (21, 37089),

Gene: Vitas\_55 Start: 34730, Stop: 34954, Start Num: 15  
Candidate Starts for Vitas\_55:  
(Start: 15 @34730 has 8 MA's),

Gene: WalkingDead\_58 Start: 38049, Stop: 38309, Start Num: 10  
Candidate Starts for WalkingDead\_58:  
(Start: 10 @38049 has 10 MA's),