



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 162331 Report

This analysis was run 04/28/24 on database version 559.

Pham number 162331 has 12 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Heathen\_34, SaturnRing\_34, Giroux\_34, Bugatti\_34
- Track 2 : Taurus\_37, Lilith\_37, JenCasNa\_37, Microwolf\_37
- Track 3 : Midas2\_31, Coog\_31, Micasa\_30
- Track 4 : AppleCloud\_28

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

The start number called the most often in the published annotations is 6, it was called in 6 of the 8 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Coog\_31, JenCasNa\_37, Lilith\_37, Micasa\_30, Microwolf\_37, Midas2\_31, Taurus\_37,

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:

- AppleCloud\_28, Bugatti\_34, Giroux\_34, Heathen\_34, SaturnRing\_34,

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

Start 5:

- Found in 5 of 12 ( 41.7% ) of genes in pham
- Manual Annotations of this start: 1 of 8
- Called 20.0% of time when present
- Phage (with cluster) where this start called: AppleCloud\_28 (CA),

Start 6:

- Found in 7 of 12 ( 58.3% ) of genes in pham
- Manual Annotations of this start: 6 of 8
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Coog\_31 (A5), JenCasNa\_37 (A3), Lilith\_37 (A3), Micasa\_30 (A5), Microwolf\_37 (A3), Midas2\_31 (A5), Taurus\_37 (A3),

Start 7:

- Found in 12 of 12 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 8
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Bugatti\_34 (A3), Giroux\_34 (A3), Heathen\_34 (A3), SaturnRing\_34 (A3),

### **Summary by clusters:**

There are 3 clusters represented in this pham: CA, A5, A3,

Info for manual annotations of cluster A3:

- Start number 6 was manually annotated 4 times for cluster A3.
- Start number 7 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A5:

- Start number 6 was manually annotated 2 times for cluster A5.

Info for manual annotations of cluster CA:

- Start number 5 was manually annotated 1 time for cluster CA.

### **Gene Information:**

Gene: AppleCloud\_28 Start: 24128, Stop: 24520, Start Num: 5

Candidate Starts for AppleCloud\_28:

(Start: 5 @24128 has 1 MA's), (Start: 7 @24281 has 1 MA's), (8, 24284), (9, 24296), (10, 24308), (12, 24377), (16, 24413), (20, 24488), (21, 24503), (22, 24509), (23, 24512),

Gene: Bugatti\_34 Start: 26846, Stop: 27133, Start Num: 7

Candidate Starts for Bugatti\_34:

(1, 26594), (2, 26600), (3, 26693), (Start: 5 @26708 has 1 MA's), (Start: 7 @26846 has 1 MA's), (13, 26951), (14, 26954), (15, 26960), (16, 26972), (18, 27005), (19, 27008), (23, 27062), (24, 27095),

Gene: Coog\_31 Start: 26050, Stop: 26412, Start Num: 6

Candidate Starts for Coog\_31:

(4, 25993), (Start: 6 @26050 has 6 MA's), (Start: 7 @26125 has 1 MA's), (14, 26233), (16, 26251), (17, 26278), (18, 26284), (19, 26287), (21, 26332), (23, 26341),

Gene: Giroux\_34 Start: 26845, Stop: 27132, Start Num: 7

Candidate Starts for Giroux\_34:

(1, 26593), (2, 26599), (3, 26692), (Start: 5 @26707 has 1 MA's), (Start: 7 @26845 has 1 MA's), (13, 26950), (14, 26953), (15, 26959), (16, 26971), (18, 27004), (19, 27007), (23, 27061), (24, 27094),

Gene: Heathen\_34 Start: 26654, Stop: 26941, Start Num: 7

Candidate Starts for Heathen\_34:

(1, 26402), (2, 26408), (3, 26501), (Start: 5 @26516 has 1 MA's), (Start: 7 @26654 has 1 MA's), (13, 26759), (14, 26762), (15, 26768), (16, 26780), (18, 26813), (19, 26816), (23, 26870), (24, 26903),

Gene: JenCasNa\_37 Start: 27268, Stop: 27630, Start Num: 6

Candidate Starts for JenCasNa\_37:

(1, 27085), (2, 27091), (4, 27199), (Start: 6 @27268 has 6 MA's), (Start: 7 @27337 has 1 MA's), (8, 27340), (11, 27388), (15, 27451), (16, 27463), (18, 27496), (19, 27499), (22, 27550), (23, 27553), (24, 27592),

Gene: Lilith\_37 Start: 27262, Stop: 27624, Start Num: 6

Candidate Starts for Lilith\_37:

(1, 27079), (2, 27085), (4, 27193), (Start: 6 @27262 has 6 MA's), (Start: 7 @27331 has 1 MA's), (8, 27334), (11, 27382), (15, 27445), (16, 27457), (18, 27490), (19, 27493), (22, 27544), (23, 27547), (24, 27586),

Gene: Micasa\_30 Start: 25976, Stop: 26338, Start Num: 6

Candidate Starts for Micasa\_30:

(4, 25919), (Start: 6 @25976 has 6 MA's), (Start: 7 @26051 has 1 MA's), (14, 26159), (16, 26177), (17, 26204), (18, 26210), (19, 26213), (21, 26258), (23, 26267),

Gene: Microwolf\_37 Start: 27270, Stop: 27632, Start Num: 6

Candidate Starts for Microwolf\_37:

(1, 27087), (2, 27093), (4, 27201), (Start: 6 @27270 has 6 MA's), (Start: 7 @27339 has 1 MA's), (8, 27342), (11, 27390), (15, 27453), (16, 27465), (18, 27498), (19, 27501), (22, 27552), (23, 27555), (24, 27594),

Gene: Midas2\_31 Start: 26050, Stop: 26412, Start Num: 6

Candidate Starts for Midas2\_31:

(4, 25993), (Start: 6 @26050 has 6 MA's), (Start: 7 @26125 has 1 MA's), (14, 26233), (16, 26251), (17, 26278), (18, 26284), (19, 26287), (21, 26332), (23, 26341),

Gene: SaturnRing\_34 Start: 26846, Stop: 27133, Start Num: 7

Candidate Starts for SaturnRing\_34:

(1, 26594), (2, 26600), (3, 26693), (Start: 5 @26708 has 1 MA's), (Start: 7 @26846 has 1 MA's), (13, 26951), (14, 26954), (15, 26960), (16, 26972), (18, 27005), (19, 27008), (23, 27062), (24, 27095),

Gene: Taurus\_37 Start: 27268, Stop: 27630, Start Num: 6

Candidate Starts for Taurus\_37:

(1, 27085), (2, 27091), (4, 27199), (Start: 6 @27268 has 6 MA's), (Start: 7 @27337 has 1 MA's), (8, 27340), (11, 27388), (15, 27451), (16, 27463), (18, 27496), (19, 27499), (22, 27550), (23, 27553), (24, 27592),