



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 87086 Report

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

Pham number 87086 has 15 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Gumball\_48, Nova\_48, Thoth\_49, Visconti\_50, KandZ\_48, SirHarley\_50, Giuseppe\_49, Penelope2018\_49
- Track 2 : PBI1\_46, Butterscotch\_48, PLOT\_49, Prager\_49
- Track 3 : Mopey\_50, BigMama\_47
- Track 4 : Hawkeye\_53

### ***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 8 of the 14 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Giuseppe\_49, Gumball\_48, KandZ\_48, Nova\_48, Penelope2018\_49, SirHarley\_50, Thoth\_49, Visconti\_50,

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

- BigMama\_47, Butterscotch\_48, Mopey\_50, PBI1\_46, PLOT\_49, Prager\_49,

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

- Hawkeye\_53,

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

Start 3:

- Found in 1 of 15 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 1 of 14
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hawkeye\_53 (D2),

Start 4:

- Found in 14 of 15 ( 93.3% ) of genes in pham
- Manual Annotations of this start: 3 of 14
- Called 28.6% of time when present

- Phage (with cluster) where this start called: Butterscotch\_48 (D1), PBI1\_46 (D1), PLOT\_49 (D1), Prager\_49 (D1),

Start 5:

- Found in 14 of 15 ( 93.3% ) of genes in pham
- Manual Annotations of this start: 2 of 14
- Called 14.3% of time when present
- Phage (with cluster) where this start called: BigMama\_47 (D1), Mopey\_50 (D1),

Start 6:

- Found in 14 of 15 ( 93.3% ) of genes in pham
- Manual Annotations of this start: 8 of 14
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Giuseppe\_49 (D1), Gumball\_48 (D1), KandZ\_48 (D1), Nova\_48 (D1), Penelope2018\_49 (D1), SirHarley\_50 (D1), Thoth\_49 (D1), Visconti\_50 (D1),

### **Summary by clusters:**

There are 2 clusters represented in this pham: D2, D1,

Info for manual annotations of cluster D1:

- Start number 4 was manually annotated 3 times for cluster D1.
- Start number 5 was manually annotated 2 times for cluster D1.
- Start number 6 was manually annotated 8 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 3 was manually annotated 1 time for cluster D2.

### **Gene Information:**

Gene: BigMama\_47 Start: 38319, Stop: 38498, Start Num: 5

Candidate Starts for BigMama\_47:

(1, 38232), (Start: 4 @38316 has 3 MA's), (Start: 5 @38319 has 2 MA's), (Start: 6 @38322 has 8 MA's), (7, 38367), (8, 38436),

Gene: Butterscotch\_48 Start: 38300, Stop: 38482, Start Num: 4

Candidate Starts for Butterscotch\_48:

(1, 38216), (Start: 4 @38300 has 3 MA's), (Start: 5 @38303 has 2 MA's), (Start: 6 @38306 has 8 MA's), (7, 38351), (8, 38420),

Gene: Giuseppe\_49 Start: 38295, Stop: 38471, Start Num: 6

Candidate Starts for Giuseppe\_49:

(1, 38205), (Start: 4 @38289 has 3 MA's), (Start: 5 @38292 has 2 MA's), (Start: 6 @38295 has 8 MA's), (7, 38340), (8, 38409),

Gene: Gumball\_48 Start: 38470, Stop: 38646, Start Num: 6

Candidate Starts for Gumball\_48:

(1, 38380), (Start: 4 @38464 has 3 MA's), (Start: 5 @38467 has 2 MA's), (Start: 6 @38470 has 8 MA's), (7, 38515), (8, 38584),

Gene: Hawkeye\_53 Start: 38381, Stop: 38572, Start Num: 3

Candidate Starts for Hawkeye\_53:

(2, 38357), (Start: 3 @38381 has 1 MA's), (8, 38513),

Gene: KandZ\_48 Start: 38404, Stop: 38580, Start Num: 6

Candidate Starts for KandZ\_48:

(1, 38314), (Start: 4 @38398 has 3 MA's), (Start: 5 @38401 has 2 MA's), (Start: 6 @38404 has 8 MA's), (7, 38449), (8, 38518),

Gene: Mopey\_50 Start: 38303, Stop: 38482, Start Num: 5

Candidate Starts for Mopey\_50:

(1, 38216), (Start: 4 @38300 has 3 MA's), (Start: 5 @38303 has 2 MA's), (Start: 6 @38306 has 8 MA's), (7, 38351), (8, 38420),

Gene: Nova\_48 Start: 38730, Stop: 38906, Start Num: 6

Candidate Starts for Nova\_48:

(1, 38640), (Start: 4 @38724 has 3 MA's), (Start: 5 @38727 has 2 MA's), (Start: 6 @38730 has 8 MA's), (7, 38775), (8, 38844),

Gene: PBI1\_46 Start: 38231, Stop: 38413, Start Num: 4

Candidate Starts for PBI1\_46:

(1, 38147), (Start: 4 @38231 has 3 MA's), (Start: 5 @38234 has 2 MA's), (Start: 6 @38237 has 8 MA's), (7, 38282), (8, 38351),

Gene: PLOT\_49 Start: 38297, Stop: 38479, Start Num: 4

Candidate Starts for PLOT\_49:

(1, 38213), (Start: 4 @38297 has 3 MA's), (Start: 5 @38300 has 2 MA's), (Start: 6 @38303 has 8 MA's), (7, 38348), (8, 38417),

Gene: Penelope2018\_49 Start: 38306, Stop: 38482, Start Num: 6

Candidate Starts for Penelope2018\_49:

(1, 38216), (Start: 4 @38300 has 3 MA's), (Start: 5 @38303 has 2 MA's), (Start: 6 @38306 has 8 MA's), (7, 38351), (8, 38420),

Gene: Prager\_49 Start: 38320, Stop: 38502, Start Num: 4

Candidate Starts for Prager\_49:

(1, 38236), (Start: 4 @38320 has 3 MA's), (Start: 5 @38323 has 2 MA's), (Start: 6 @38326 has 8 MA's), (7, 38371), (8, 38440),

Gene: SirHarley\_50 Start: 38452, Stop: 38628, Start Num: 6

Candidate Starts for SirHarley\_50:

(1, 38362), (Start: 4 @38446 has 3 MA's), (Start: 5 @38449 has 2 MA's), (Start: 6 @38452 has 8 MA's), (7, 38497), (8, 38566),

Gene: Thoth\_49 Start: 38304, Stop: 38480, Start Num: 6

Candidate Starts for Thoth\_49:

(1, 38214), (Start: 4 @38298 has 3 MA's), (Start: 5 @38301 has 2 MA's), (Start: 6 @38304 has 8 MA's), (7, 38349), (8, 38418),

Gene: Visconti\_50 Start: 38316, Stop: 38492, Start Num: 6

Candidate Starts for Visconti\_50:

(1, 38226), (Start: 4 @38310 has 3 MA's), (Start: 5 @38313 has 2 MA's), (Start: 6 @38316 has 8 MA's), (7, 38361), (8, 38430),

