



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 87059 Report

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

Pham number 87059 has 17 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Norvs\_65, PhinkBoden\_64, Aphelion\_64, Toniann\_65, Culver\_66, Cucurbita\_66, Miskis\_66
- Track 2 : Abscondus\_64, Dusty\_63
- Track 3 : WilliamBoone\_64
- Track 4 : Engineer\_66, Bachita\_66
- Track 5 : ClubL\_65, Smoothie\_66
- Track 6 : Lozinak\_65
- Track 7 : BrutonGaster\_53
- Track 8 : OneUp\_57

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

The start number called the most often in the published annotations is 2, it was called in 11 of the 14 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aphelion\_64, Bachita\_66, ClubL\_65, Cucurbita\_66, Culver\_66, Engineer\_66, Miskis\_66, Norvs\_65, PhinkBoden\_64, Smoothie\_66, Toniann\_65, WilliamBoone\_64,

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

- Abscondus\_64, Dusty\_63, Lozinak\_65,

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

- BrutonGaster\_53, OneUp\_57,

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

Start 1:

- Found in 15 of 17 ( 88.2% ) of genes in pham
- Manual Annotations of this start: 1 of 14
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Abscondus\_64 (CQ), Dusty\_63 (CQ), Lozinak\_65 (CQ1),

#### Start 2:

- Found in 15 of 17 ( 88.2% ) of genes in pham
- Manual Annotations of this start: 11 of 14
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Aphelion\_64 (CQ1), Bachita\_66 (CQ1), ClubL\_65 (CQ1), Cucurbita\_66 (CQ1), Culver\_66 (CQ1), Engineer\_66 (CQ1), Miskis\_66 (CQ), Norvs\_65 (CQ), PhinkBoden\_64 (CQ1), Smoothie\_66 (CQ1), Toniann\_65 (CQ1), WilliamBoone\_64 (CQ1),

#### Start 3:

- Found in 2 of 17 ( 11.8% ) of genes in pham
- Manual Annotations of this start: 2 of 14
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BrutonGaster\_53 (CQ2), OneUp\_57 (CQ2),

### Summary by clusters:

There are 3 clusters represented in this pham: CQ2, CQ, CQ1,

Info for manual annotations of cluster CQ:

- Start number 2 was manually annotated 1 time for cluster CQ.

Info for manual annotations of cluster CQ1:

- Start number 1 was manually annotated 1 time for cluster CQ1.
- Start number 2 was manually annotated 10 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 3 was manually annotated 2 times for cluster CQ2.

### Gene Information:

Gene: Abscondus\_64 Start: 43163, Stop: 43372, Start Num: 1

Candidate Starts for Abscondus\_64:

(Start: 1 @43163 has 1 MA's), (Start: 2 @43178 has 11 MA's), (4, 43205), (5, 43226), (7, 43256), (9, 43349),

Gene: Aphelion\_64 Start: 43446, Stop: 43640, Start Num: 2

Candidate Starts for Aphelion\_64:

(Start: 1 @43431 has 1 MA's), (Start: 2 @43446 has 11 MA's), (4, 43473), (5, 43494), (7, 43524), (9, 43617),

Gene: Bachita\_66 Start: 43880, Stop: 44074, Start Num: 2

Candidate Starts for Bachita\_66:

(Start: 1 @43865 has 1 MA's), (Start: 2 @43880 has 11 MA's), (4, 43907), (5, 43928), (7, 43958), (9, 44051),

Gene: BrutonGaster\_53 Start: 41166, Stop: 41351, Start Num: 3

Candidate Starts for BrutonGaster\_53:

(Start: 3 @41166 has 2 MA's), (6, 41229),

Gene: ClubL\_65 Start: 43370, Stop: 43564, Start Num: 2

Candidate Starts for ClubL\_65:

(Start: 1 @43355 has 1 MA's), (Start: 2 @43370 has 11 MA's), (4, 43397), (5, 43418), (7, 43448), (9, 43541), (10, 43553),

Gene: Cucurbita\_66 Start: 44738, Stop: 44932, Start Num: 2

Candidate Starts for Cucurbita\_66:

(Start: 1 @44723 has 1 MA's), (Start: 2 @44738 has 11 MA's), (4, 44765), (5, 44786), (7, 44816), (9, 44909),

Gene: Culver\_66 Start: 43049, Stop: 43243, Start Num: 2

Candidate Starts for Culver\_66:

(Start: 1 @43034 has 1 MA's), (Start: 2 @43049 has 11 MA's), (4, 43076), (5, 43097), (7, 43127), (9, 43220),

Gene: Dusty\_63 Start: 43170, Stop: 43379, Start Num: 1

Candidate Starts for Dusty\_63:

(Start: 1 @43170 has 1 MA's), (Start: 2 @43185 has 11 MA's), (4, 43212), (5, 43233), (7, 43263), (9, 43356),

Gene: Engineer\_66 Start: 43853, Stop: 44047, Start Num: 2

Candidate Starts for Engineer\_66:

(Start: 1 @43838 has 1 MA's), (Start: 2 @43853 has 11 MA's), (4, 43880), (5, 43901), (7, 43931), (9, 44024),

Gene: Lozinak\_65 Start: 43664, Stop: 43873, Start Num: 1

Candidate Starts for Lozinak\_65:

(Start: 1 @43664 has 1 MA's), (Start: 2 @43679 has 11 MA's), (4, 43706), (5, 43727), (7, 43757), (9, 43850), (10, 43862),

Gene: Miskis\_66 Start: 43212, Stop: 43406, Start Num: 2

Candidate Starts for Miskis\_66:

(Start: 1 @43197 has 1 MA's), (Start: 2 @43212 has 11 MA's), (4, 43239), (5, 43260), (7, 43290), (9, 43383),

Gene: Norvs\_65 Start: 43451, Stop: 43645, Start Num: 2

Candidate Starts for Norvs\_65:

(Start: 1 @43436 has 1 MA's), (Start: 2 @43451 has 11 MA's), (4, 43478), (5, 43499), (7, 43529), (9, 43622),

Gene: OneUp\_57 Start: 42866, Stop: 43051, Start Num: 3

Candidate Starts for OneUp\_57:

(Start: 3 @42866 has 2 MA's), (6, 42929), (8, 43004),

Gene: PhinkBoden\_64 Start: 43832, Stop: 44026, Start Num: 2

Candidate Starts for PhinkBoden\_64:

(Start: 1 @43817 has 1 MA's), (Start: 2 @43832 has 11 MA's), (4, 43859), (5, 43880), (7, 43910), (9, 44003),

Gene: Smoothie\_66 Start: 43679, Stop: 43873, Start Num: 2

Candidate Starts for Smoothie\_66:

(Start: 1 @43664 has 1 MA's), (Start: 2 @43679 has 11 MA's), (4, 43706), (5, 43727), (7, 43757), (9, 43850), (10, 43862),

Gene: Toniann\_65 Start: 43394, Stop: 43588, Start Num: 2

Candidate Starts for Toniann\_65:

(Start: 1 @43379 has 1 MA's), (Start: 2 @43394 has 11 MA's), (4, 43421), (5, 43442), (7, 43472), (9, 43565),

Gene: WilliamBoone\_64 Start: 42346, Stop: 42540, Start Num: 2

Candidate Starts for WilliamBoone\_64:

(Start: 1 @42331 has 1 MA's), (Start: 2 @42346 has 11 MA's), (5, 42394), (9, 42517),