

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 87062 Report

This analysis was run 04/05/24 on database version 557.

Pham number 87062 has 15 members, 1 are drafts.

Phages represented in each track:

Track 1 : Culver\_87, WilliamBoone\_85

Track 2 : Bachita\_87, Smoothie\_87, ClubL\_85

• Track 3: Cucurbita\_87, PhinkBoden\_85, Aphelion\_85, Miskis\_82, Norvs\_86,

Engineer\_87, Lozinak\_86, Toniann\_86

• Track 4 : BrutonGaster 69

Track 5 : OneUp\_76

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

The start number called the most often in the published annotations is 3, it was called in 10 of the 14 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

 Aphelion\_85, BrutonGaster\_69, Cucurbita\_87, Culver\_87, Engineer\_87, Lozinak\_86, Miskis\_82, Norvs\_86, PhinkBoden\_85, Toniann\_86, WilliamBoone\_85,

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

Bachita\_87, ClubL\_85, Smoothie\_87,

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

OneUp\_76,

### Summary by start number:

#### Start 3:

- Found in 14 of 15 (93.3%) of genes in pham
- Manual Annotations of this start: 10 of 14
- Called 78.6% of time when present
- Phage (with cluster) where this start called: Aphelion\_85 (CQ1), BrutonGaster\_69 (CQ2), Cucurbita\_87 (CQ1), Culver\_87 (CQ1), Engineer\_87 (CQ1), Lozinak\_86 (CQ1), Miskis\_82 (CQ), Norvs\_86 (CQ), PhinkBoden\_85 (CQ1), Toniann\_86 (CQ1), WilliamBoone\_85 (CQ1),

#### Start 4:

- Found in 14 of 15 (93.3%) of genes in pham
- Manual Annotations of this start: 3 of 14
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Bachita\_87 (CQ1), ClubL\_85 (CQ1), Smoothie\_87 (CQ1),

#### Start 7:

- 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: OneUp\_76 (CQ2),

### **Summary by clusters:**

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

Info for manual annotations of cluster CQ:

•Start number 3 was manually annotated 1 time for cluster CQ.

Info for manual annotations of cluster CQ1:

- •Start number 3 was manually annotated 8 times for cluster CQ1.
- •Start number 4 was manually annotated 3 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- •Start number 3 was manually annotated 1 time for cluster CQ2.
- •Start number 7 was manually annotated 1 time for cluster CQ2.

### Gene Information:

Gene: Aphelion 85 Start: 53899, Stop: 53474, Start Num: 3

Candidate Starts for Aphelion 85:

(Start: 3 @53899 has 10 MA's), (Start: 4 @53875 has 3 MA's), (5, 53833), (6, 53830), (8, 53779), (9, 53671), (11, 53650), (16, 53545),

Gene: Bachita\_87 Start: 54300, Stop: 53899, Start Num: 4

Candidate Starts for Bachita\_87:

(Start: 3 @54324 has 10 MA's), (Start: 4 @54300 has 3 MA's), (5, 54258), (6, 54255), (8, 54204), (9, 54096), (11, 54075), (16, 53970),

Gene: BrutonGaster 69 Start: 49606, Stop: 49178, Start Num: 3

Candidate Starts for BrutonGaster 69:

(1, 49624), (2, 49621), (Start: 3 @49606 has 10 MA's), (Start: 4 @49582 has 3 MA's), (5, 49540), (9, 49378), (10, 49372), (12, 49354),

Gene: ClubL\_85 Start: 52988, Stop: 52587, Start Num: 4

Candidate Starts for ClubL 85:

(Start: 3 @53012 has 10 MA's), (Start: 4 @52988 has 3 MA's), (5, 52946), (6, 52943), (8, 52892), (9, 52784), (11, 52763), (16, 52658),

Gene: Cucurbita\_87 Start: 54831, Stop: 54406, Start Num: 3

Candidate Starts for Cucurbita\_87:

(Start: 3 @54831 has 10 MA's), (Start: 4 @54807 has 3 MA's), (5, 54765), (6, 54762), (8, 54711), (9, 54603), (11, 54582), (16, 54477),

Gene: Culver\_87 Start: 52935, Stop: 52510, Start Num: 3

Candidate Starts for Culver\_87:

(Start: 3 @52935 has 10 MA's), (Start: 4 @52911 has 3 MA's), (5, 52869), (6, 52866), (8, 52815), (9, 52707), (11, 52686), (15, 52593),

Gene: Engineer\_87 Start: 54297, Stop: 53872, Start Num: 3

Candidate Starts for Engineer\_87:

(Start: 3 @54297 has 10 MA's), (Start: 4 @54273 has 3 MA's), (5, 54231), (6, 54228), (8, 54177), (9, 54069), (11, 54048), (16, 53943),

Gene: Lozinak\_86 Start: 54135, Stop: 53710, Start Num: 3

Candidate Starts for Lozinak\_86:

(Start: 3 @54135 has 10 MA's), (Start: 4 @54111 has 3 MA's), (5, 54069), (6, 54066), (8, 54015), (9, 53907), (11, 53886), (16, 53781),

Gene: Miskis 82 Start: 52040, Stop: 51615, Start Num: 3

Candidate Starts for Miskis\_82:

(Start: 3 @52040 has 10 MA's), (Start: 4 @52016 has 3 MA's), (5, 51974), (6, 51971), (8, 51920), (9, 51812), (11, 51791), (16, 51686),

Gene: Norvs\_86 Start: 53544, Stop: 53119, Start Num: 3

Candidate Starts for Norvs 86:

(Start: 3 @53544 has 10 MA's), (Start: 4 @53520 has 3 MA's), (5, 53478), (6, 53475), (8, 53424), (9, 53316), (11, 53295), (16, 53190),

Gene: OneUp\_76 Start: 51335, Stop: 51006, Start Num: 7

Candidate Starts for OneUp\_76:

(Start: 7 @51335 has 1 MA's), (13, 51128), (14, 51113),

Gene: PhinkBoden 85 Start: 53925, Stop: 53500, Start Num: 3

Candidate Starts for PhinkBoden 85:

(Start: 3 @53925 has 10 MA's), (Start: 4 @53901 has 3 MA's), (5, 53859), (6, 53856), (8, 53805), (9, 53697), (11, 53676), (16, 53571),

Gene: Smoothie\_87 Start: 54111, Stop: 53710, Start Num: 4

Candidate Starts for Smoothie\_87:

(Start: 3 @54135 has 10 MA's), (Start: 4 @54111 has 3 MA's), (5, 54069), (6, 54066), (8, 54015), (9, 53907), (11, 53886), (16, 53781),

Gene: Toniann\_86 Start: 53487, Stop: 53062, Start Num: 3

Candidate Starts for Toniann 86:

(Start: 3 @53487 has 10 MA's), (Start: 4 @53463 has 3 MA's), (5, 53421), (6, 53418), (8, 53367), (9, 53259), (11, 53238), (16, 53133),

Gene: WilliamBoone\_85 Start: 52238, Stop: 51813, Start Num: 3

Candidate Starts for WilliamBoone\_85:

(Start: 3 @52238 has 10 MA's), (Start: 4 @52214 has 3 MA's), (5, 52172), (6, 52169), (8, 52118), (9, 52010), (11, 51989), (15, 51896),