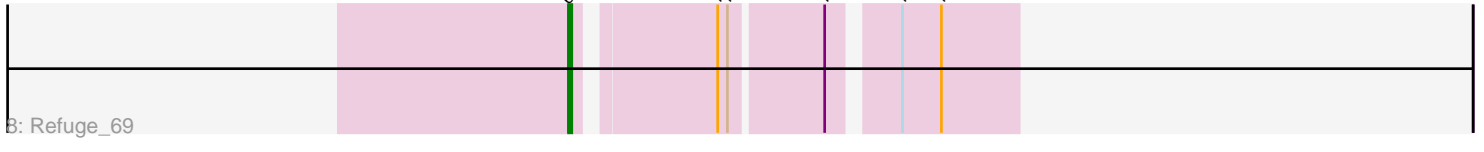
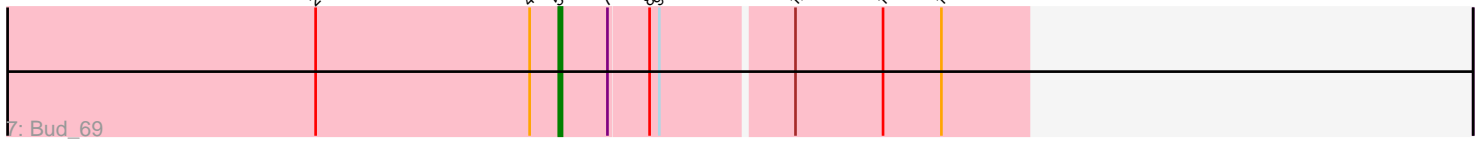
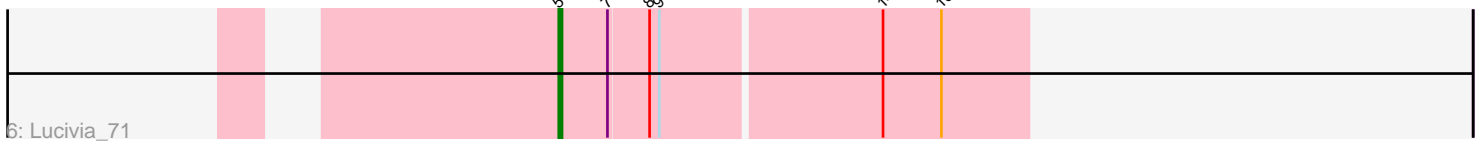
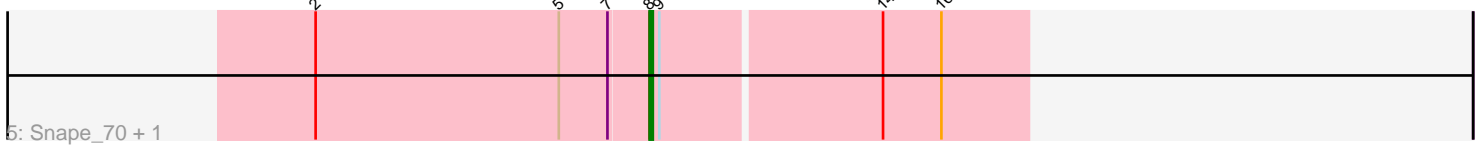
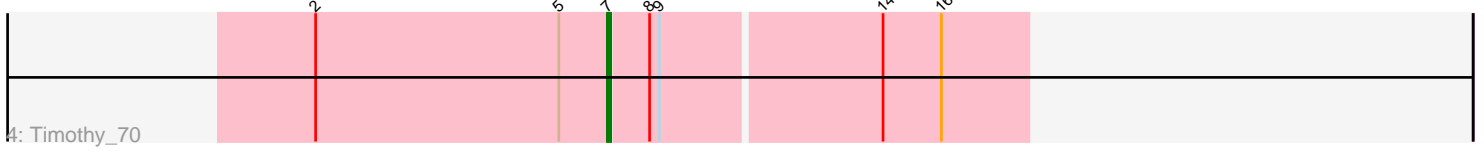
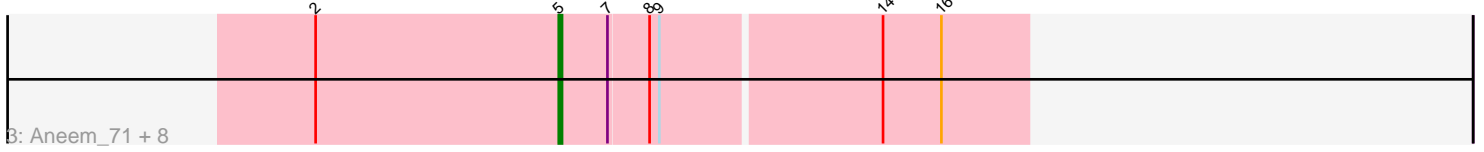
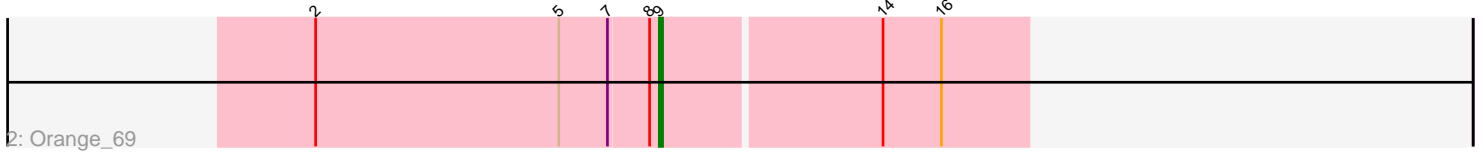
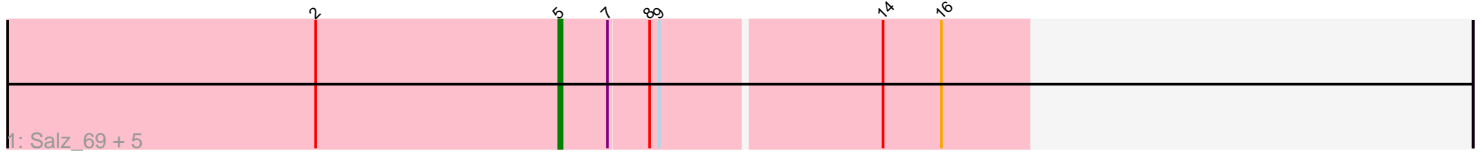


Pham 166062



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 166062 Report

This analysis was run 07/09/24 on database version 566.

Pham number 166062 has 24 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Salz\_69, Hutc2\_69, Petersenfast\_68, Gilberta\_71, Sham4\_70, Bachome\_72
- Track 2 : Orange\_69
- Track 3 : Aneem\_71, MaCh\_70, Fibonacci\_70, Ebony\_70, Flaverint\_71, Munch\_70, Bowtie\_71, Et2Brutus\_69, Mabel\_70
- Track 4 : Timothy\_70
- Track 5 : Snape\_70, Mulciber\_69
- Track 6 : Lucivia\_71
- Track 7 : Bud\_69
- Track 8 : Refuge\_69
- Track 9 : Zimmer\_69
- Track 10 : DarthPhader\_69

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

The start number called the most often in the published annotations is 5, it was called in 16 of the 23 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aneem\_71, Bachome\_72, Bowtie\_71, Bud\_69, Ebony\_70, Et2Brutus\_69, Fibonacci\_70, Flaverint\_71, Gilberta\_71, Hutc2\_69, Lucivia\_71, MaCh\_70, Mabel\_70, Munch\_70, Petersenfast\_68, Salz\_69, Sham4\_70,

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

- Mulciber\_69, Orange\_69, Snape\_70, Timothy\_70,

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

- DarthPhader\_69, Refuge\_69, Zimmer\_69,

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

Start 5:

- Found in 21 of 24 ( 87.5% ) of genes in pham
- Manual Annotations of this start: 16 of 23

- Called 81.0% of time when present
- Phage (with cluster) where this start called: Aneem\_71 (A11), Bachome\_72 (A11), Bowtie\_71 (A11), Bud\_69 (A11), Ebony\_70 (A11), Et2Brutus\_69 (A11), Fibonacci\_70 (A11), Flaverint\_71 (A11), Gilberta\_71 (A11), Hutc2\_69 (A11), Lucivia\_71 (A11), MaCh\_70 (A11), Mabel\_70 (A11), Munch\_70 (A11), Petersenfast\_68 (A11), Salz\_69 (A11), Sham4\_70 (A11),

Start 6:

- Found in 2 of 24 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 2 of 23
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DARTHPhader\_69 (A12), Refuge\_69 (A12),

Start 7:

- Found in 21 of 24 ( 87.5% ) of genes in pham
- Manual Annotations of this start: 1 of 23
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Timothy\_70 (A11),

Start 8:

- Found in 22 of 24 ( 91.7% ) of genes in pham
- Manual Annotations of this start: 2 of 23
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Mulciber\_69 (A11), Snape\_70 (A11),

Start 9:

- Found in 21 of 24 ( 87.5% ) of genes in pham
- Manual Annotations of this start: 1 of 23
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Orange\_69 (A11),

Start 18:

- Found in 1 of 24 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 23
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zimmer\_69 (A12),

### **Summary by clusters:**

There are 2 clusters represented in this pham: A11, A12,

Info for manual annotations of cluster A11:

- Start number 5 was manually annotated 16 times for cluster A11.
- Start number 7 was manually annotated 1 time for cluster A11.
- Start number 8 was manually annotated 2 times for cluster A11.
- Start number 9 was manually annotated 1 time for cluster A11.

Info for manual annotations of cluster A12:

- Start number 6 was manually annotated 2 times for cluster A12.
- Start number 18 was manually annotated 1 time for cluster A12.

**Gene Information:**

Gene: Aneem\_71 Start: 42172, Stop: 42032, Start Num: 5

Candidate Starts for Aneem\_71:

(2, 42247), (Start: 5 @42172 has 16 MA's), (Start: 7 @42157 has 1 MA's), (Start: 8 @42145 has 2 MA's), (Start: 9 @42142 has 1 MA's), (14, 42076), (16, 42058),

Gene: Bachome\_72 Start: 42168, Stop: 42028, Start Num: 5

Candidate Starts for Bachome\_72:

(2, 42243), (Start: 5 @42168 has 16 MA's), (Start: 7 @42153 has 1 MA's), (Start: 8 @42141 has 2 MA's), (Start: 9 @42138 has 1 MA's), (14, 42072), (16, 42054),

Gene: Bowtie\_71 Start: 42179, Stop: 42039, Start Num: 5

Candidate Starts for Bowtie\_71:

(2, 42254), (Start: 5 @42179 has 16 MA's), (Start: 7 @42164 has 1 MA's), (Start: 8 @42152 has 2 MA's), (Start: 9 @42149 has 1 MA's), (14, 42083), (16, 42065),

Gene: Bud\_69 Start: 41726, Stop: 41586, Start Num: 5

Candidate Starts for Bud\_69:

(2, 41801), (4, 41735), (Start: 5 @41726 has 16 MA's), (Start: 7 @41711 has 1 MA's), (Start: 8 @41699 has 2 MA's), (Start: 9 @41696 has 1 MA's), (12, 41657), (14, 41630), (16, 41612),

Gene: DarthPhader\_69 Start: 43789, Stop: 43667, Start Num: 6

Candidate Starts for DarthPhader\_69:

(1, 43927), (Start: 6 @43789 has 2 MA's), (Start: 8 @43771 has 2 MA's), (10, 43750), (11, 43747), (13, 43720), (15, 43702), (16, 43690),

Gene: Ebony\_70 Start: 41743, Stop: 41603, Start Num: 5

Candidate Starts for Ebony\_70:

(2, 41818), (Start: 5 @41743 has 16 MA's), (Start: 7 @41728 has 1 MA's), (Start: 8 @41716 has 2 MA's), (Start: 9 @41713 has 1 MA's), (14, 41647), (16, 41629),

Gene: Et2Brutus\_69 Start: 41706, Stop: 41566, Start Num: 5

Candidate Starts for Et2Brutus\_69:

(2, 41781), (Start: 5 @41706 has 16 MA's), (Start: 7 @41691 has 1 MA's), (Start: 8 @41679 has 2 MA's), (Start: 9 @41676 has 1 MA's), (14, 41610), (16, 41592),

Gene: Fibonacci\_70 Start: 41712, Stop: 41572, Start Num: 5

Candidate Starts for Fibonacci\_70:

(2, 41787), (Start: 5 @41712 has 16 MA's), (Start: 7 @41697 has 1 MA's), (Start: 8 @41685 has 2 MA's), (Start: 9 @41682 has 1 MA's), (14, 41616), (16, 41598),

Gene: Flaverint\_71 Start: 42170, Stop: 42030, Start Num: 5

Candidate Starts for Flaverint\_71:

(2, 42245), (Start: 5 @42170 has 16 MA's), (Start: 7 @42155 has 1 MA's), (Start: 8 @42143 has 2 MA's), (Start: 9 @42140 has 1 MA's), (14, 42074), (16, 42056),

Gene: Gilberta\_71 Start: 42163, Stop: 42023, Start Num: 5

Candidate Starts for Gilberta\_71:

(2, 42238), (Start: 5 @42163 has 16 MA's), (Start: 7 @42148 has 1 MA's), (Start: 8 @42136 has 2 MA's), (Start: 9 @42133 has 1 MA's), (14, 42067), (16, 42049),

Gene: Hutc2\_69 Start: 41712, Stop: 41572, Start Num: 5

Candidate Starts for Hutc2\_69:

(2, 41787), (Start: 5 @41712 has 16 MA's), (Start: 7 @41697 has 1 MA's), (Start: 8 @41685 has 2 MA's), (Start: 9 @41682 has 1 MA's), (14, 41616), (16, 41598),

Gene: Lucivia\_71 Start: 42221, Stop: 42081, Start Num: 5

Candidate Starts for Lucivia\_71:

(Start: 5 @42221 has 16 MA's), (Start: 7 @42206 has 1 MA's), (Start: 8 @42194 has 2 MA's), (Start: 9 @42191 has 1 MA's), (14, 42125), (16, 42107),

Gene: MaCh\_70 Start: 42167, Stop: 42027, Start Num: 5

Candidate Starts for MaCh\_70:

(2, 42242), (Start: 5 @42167 has 16 MA's), (Start: 7 @42152 has 1 MA's), (Start: 8 @42140 has 2 MA's), (Start: 9 @42137 has 1 MA's), (14, 42071), (16, 42053),

Gene: Mabel\_70 Start: 42168, Stop: 42028, Start Num: 5

Candidate Starts for Mabel\_70:

(2, 42243), (Start: 5 @42168 has 16 MA's), (Start: 7 @42153 has 1 MA's), (Start: 8 @42141 has 2 MA's), (Start: 9 @42138 has 1 MA's), (14, 42072), (16, 42054),

Gene: Mulciber\_69 Start: 41682, Stop: 41569, Start Num: 8

Candidate Starts for Mulciber\_69:

(2, 41784), (Start: 5 @41709 has 16 MA's), (Start: 7 @41694 has 1 MA's), (Start: 8 @41682 has 2 MA's), (Start: 9 @41679 has 1 MA's), (14, 41613), (16, 41595),

Gene: Munch\_70 Start: 42172, Stop: 42032, Start Num: 5

Candidate Starts for Munch\_70:

(2, 42247), (Start: 5 @42172 has 16 MA's), (Start: 7 @42157 has 1 MA's), (Start: 8 @42145 has 2 MA's), (Start: 9 @42142 has 1 MA's), (14, 42076), (16, 42058),

Gene: Orange\_69 Start: 41691, Stop: 41581, Start Num: 9

Candidate Starts for Orange\_69:

(2, 41796), (Start: 5 @41721 has 16 MA's), (Start: 7 @41706 has 1 MA's), (Start: 8 @41694 has 2 MA's), (Start: 9 @41691 has 1 MA's), (14, 41625), (16, 41607),

Gene: Petersenfast\_68 Start: 41720, Stop: 41580, Start Num: 5

Candidate Starts for Petersenfast\_68:

(2, 41795), (Start: 5 @41720 has 16 MA's), (Start: 7 @41705 has 1 MA's), (Start: 8 @41693 has 2 MA's), (Start: 9 @41690 has 1 MA's), (14, 41624), (16, 41606),

Gene: Refuge\_69 Start: 43844, Stop: 43722, Start Num: 6

Candidate Starts for Refuge\_69:

(Start: 6 @43844 has 2 MA's), (10, 43805), (11, 43802), (13, 43775), (15, 43757), (16, 43745),

Gene: Salz\_69 Start: 41635, Stop: 41495, Start Num: 5

Candidate Starts for Salz\_69:

(2, 41710), (Start: 5 @41635 has 16 MA's), (Start: 7 @41620 has 1 MA's), (Start: 8 @41608 has 2 MA's), (Start: 9 @41605 has 1 MA's), (14, 41539), (16, 41521),

Gene: Sham4\_70 Start: 41719, Stop: 41579, Start Num: 5

Candidate Starts for Sham4\_70:

(2, 41794), (Start: 5 @41719 has 16 MA's), (Start: 7 @41704 has 1 MA's), (Start: 8 @41692 has 2 MA's), (Start: 9 @41689 has 1 MA's), (14, 41623), (16, 41605),

Gene: Snape\_70 Start: 41684, Stop: 41571, Start Num: 8

Candidate Starts for Snape\_70:

(2, 41786), (Start: 5 @41711 has 16 MA's), (Start: 7 @41696 has 1 MA's), (Start: 8 @41684 has 2 MA's), (Start: 9 @41681 has 1 MA's), (14, 41615), (16, 41597),

Gene: Timothy\_70 Start: 41673, Stop: 41548, Start Num: 7

Candidate Starts for Timothy\_70:

(2, 41763), (Start: 5 @41688 has 16 MA's), (Start: 7 @41673 has 1 MA's), (Start: 8 @41661 has 2 MA's), (Start: 9 @41658 has 1 MA's), (14, 41592), (16, 41574),

Gene: Zimmer\_69 Start: 43555, Stop: 43433, Start Num: 18

Candidate Starts for Zimmer\_69:

(3, 43729), (17, 43576), (Start: 18 @43555 has 1 MA's), (19, 43516), (20, 43513), (21, 43486), (22, 43456),