



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 191565 Report

This analysis was run 11/02/24 on database version 579.

Pham number 191565 has 19 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Saintus\_91, Danforth\_97, Roary\_98, Astro\_95, Groundhog\_93, NearlyHeadless\_97, Smeadley\_96, Dixon\_95, Phillis\_93, Expelliarmus\_93, Stephig9\_97
- Track 2 : Cborch11\_46, Oaker\_44, Thumb\_45, Megatron06\_46
- Track 3 : Konstantine\_48, Phreeze\_43, Beckerton\_44
- Track 4 : Damien\_45

### ***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 19 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Astro\_95, Danforth\_97, Dixon\_95, Expelliarmus\_93, Groundhog\_93, NearlyHeadless\_97, Phillis\_93, Roary\_98, Saintus\_91, Smeadley\_96, Stephig9\_97,

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:

- Beckerton\_44, Cborch11\_46, Damien\_45, Konstantine\_48, Megatron06\_46, Oaker\_44, Phreeze\_43, Thumb\_45,

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

Start 2:

- Found in 11 of 19 ( 57.9% ) of genes in pham
- Manual Annotations of this start: 11 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Astro\_95 (A8), Danforth\_97 (A8), Dixon\_95 (A8), Expelliarmus\_93 (A8), Groundhog\_93 (A8), NearlyHeadless\_97 (A8), Phillis\_93 (A8), Roary\_98 (A8), Saintus\_91 (A8), Smeadley\_96 (A8), Stephig9\_97 (A8),

#### Start 3:

- Found in 8 of 19 ( 42.1% ) of genes in pham
- Manual Annotations of this start: 7 of 19
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Beckerton\_44 (H1), Cborch11\_46 (H1), Konstantine\_48 (H1), Megatron06\_46 (H1), Oaker\_44 (H1), Phreeze\_43 (H1), Thumb\_45 (H1),

#### Start 4:

- Found in 8 of 19 ( 42.1% ) of genes in pham
- Manual Annotations of this start: 1 of 19
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Damien\_45 (H1),

### **Summary by clusters:**

There are 2 clusters represented in this pham: A8, H1,

Info for manual annotations of cluster A8:

- Start number 2 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster H1:

- Start number 3 was manually annotated 7 times for cluster H1.
- Start number 4 was manually annotated 1 time for cluster H1.

### **Gene Information:**

Gene: Astro\_95 Start: 49957, Stop: 49652, Start Num: 2

Candidate Starts for Astro\_95:

(Start: 2 @49957 has 11 MA's), (5, 49897), (6, 49852), (7, 49831), (12, 49708),

Gene: Beckerton\_44 Start: 39490, Stop: 39768, Start Num: 3

Candidate Starts for Beckerton\_44:

(1, 39379), (Start: 3 @39490 has 7 MA's), (Start: 4 @39496 has 1 MA's), (8, 39592), (9, 39607), (10, 39628), (11, 39670), (12, 39718), (14, 39745),

Gene: Cborch11\_46 Start: 39003, Stop: 39281, Start Num: 3

Candidate Starts for Cborch11\_46:

(1, 38892), (Start: 3 @39003 has 7 MA's), (Start: 4 @39009 has 1 MA's), (8, 39105), (9, 39120), (10, 39141), (11, 39183), (12, 39231), (13, 39249), (14, 39258),

Gene: Damien\_45 Start: 38971, Stop: 39243, Start Num: 4

Candidate Starts for Damien\_45:

(1, 38854), (Start: 3 @38965 has 7 MA's), (Start: 4 @38971 has 1 MA's), (8, 39067), (9, 39082), (10, 39103), (11, 39145), (13, 39211), (14, 39220),

Gene: Danforth\_97 Start: 50111, Stop: 49806, Start Num: 2

Candidate Starts for Danforth\_97:

(Start: 2 @50111 has 11 MA's), (5, 50051), (6, 50006), (7, 49985), (12, 49862),

Gene: Dixon\_95 Start: 49516, Stop: 49211, Start Num: 2

Candidate Starts for Dixon\_95:

(Start: 2 @49516 has 11 MA's), (5, 49456), (6, 49411), (7, 49390), (12, 49267),

Gene: Expelliarmus\_93 Start: 49730, Stop: 49425, Start Num: 2

Candidate Starts for Expelliarmus\_93:

(Start: 2 @49730 has 11 MA's), (5, 49670), (6, 49625), (7, 49604), (12, 49481),

Gene: Groundhog\_93 Start: 49786, Stop: 49481, Start Num: 2

Candidate Starts for Groundhog\_93:

(Start: 2 @49786 has 11 MA's), (5, 49726), (6, 49681), (7, 49660), (12, 49537),

Gene: Konstantine\_48 Start: 39800, Stop: 40078, Start Num: 3

Candidate Starts for Konstantine\_48:

(1, 39689), (Start: 3 @39800 has 7 MA's), (Start: 4 @39806 has 1 MA's), (8, 39902), (9, 39917), (10, 39938), (11, 39980), (12, 40028), (14, 40055),

Gene: Megatron06\_46 Start: 39541, Stop: 39819, Start Num: 3

Candidate Starts for Megatron06\_46:

(1, 39430), (Start: 3 @39541 has 7 MA's), (Start: 4 @39547 has 1 MA's), (8, 39643), (9, 39658), (10, 39679), (11, 39721), (12, 39769), (13, 39787), (14, 39796),

Gene: NearlyHeadless\_97 Start: 49848, Stop: 49543, Start Num: 2

Candidate Starts for NearlyHeadless\_97:

(Start: 2 @49848 has 11 MA's), (5, 49788), (6, 49743), (7, 49722), (12, 49599),

Gene: Oaker\_44 Start: 39256, Stop: 39534, Start Num: 3

Candidate Starts for Oaker\_44:

(1, 39145), (Start: 3 @39256 has 7 MA's), (Start: 4 @39262 has 1 MA's), (8, 39358), (9, 39373), (10, 39394), (11, 39436), (12, 39484), (13, 39502), (14, 39511),

Gene: Phillis\_93 Start: 48861, Stop: 48556, Start Num: 2

Candidate Starts for Phillis\_93:

(Start: 2 @48861 has 11 MA's), (5, 48801), (6, 48756), (7, 48735), (12, 48612),

Gene: Phreeze\_43 Start: 38566, Stop: 38844, Start Num: 3

Candidate Starts for Phreeze\_43:

(1, 38455), (Start: 3 @38566 has 7 MA's), (Start: 4 @38572 has 1 MA's), (8, 38668), (9, 38683), (10, 38704), (11, 38746), (12, 38794), (14, 38821),

Gene: Roary\_98 Start: 49985, Stop: 49680, Start Num: 2

Candidate Starts for Roary\_98:

(Start: 2 @49985 has 11 MA's), (5, 49925), (6, 49880), (7, 49859), (12, 49736),

Gene: Saintus\_91 Start: 46713, Stop: 46408, Start Num: 2

Candidate Starts for Saintus\_91:

(Start: 2 @46713 has 11 MA's), (5, 46653), (6, 46608), (7, 46587), (12, 46464),

Gene: Smeadley\_96 Start: 49852, Stop: 49547, Start Num: 2

Candidate Starts for Smeadley\_96:

(Start: 2 @49852 has 11 MA's), (5, 49792), (6, 49747), (7, 49726), (12, 49603),

Gene: Stephig9\_97 Start: 50203, Stop: 49898, Start Num: 2

Candidate Starts for Stephig9\_97:

(Start: 2 @50203 has 11 MA's), (5, 50143), (6, 50098), (7, 50077), (12, 49954),

Gene: Thumb\_45 Start: 38998, Stop: 39276, Start Num: 3

Candidate Starts for Thumb\_45:

(1, 38887), (Start: 3 @38998 has 7 MA's), (Start: 4 @39004 has 1 MA's), (8, 39100), (9, 39115), (10, 39136), (11, 39178), (12, 39226), (13, 39244), (14, 39253),