Pham 156833


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 156833 Report

This analysis was run 04/12/24 on database version 558.
Pham number 156833 has 11 members, 2 are drafts.
Phages represented in each track:

- Track 1 : E1_32, Anatole_32
- Track 2 : Herod_48, BatStarr_48
- Track 3 : Nymph̄adora_49
- Track 4 : Hugley_45
- Track 5 : Denise-41
- Track 6 : Horus_58
- Track 7 : Stiles_32
- Track 8 : StAB_31
- Track 9 : Mbo4_35


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

The start number called the most often in the published annotations is 13 , it was called in 4 of the 9 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anatole_32, E1_32, StAB_31, Stiles_32,

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

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

- BatStarr_48, Denise_41, Herod_48, Horus_58, Hugley_45, Mbo4_35,

Nymphadora_49,

## Summary by start number:

Start 6:

- Found in 3 of 11 ( $27.3 \%$ ) of genes in pham
- Manual Annotations of this start: 2 of 9
- Called $66.7 \%$ of time when present
- Phage (with cluster) where this start called: BatStarr_48 (CZ1), Herod_48 (CZ1),

Start 8:

- Found in 3 of 11 ( $27.3 \%$ ) of genes in pham
- No Manual Annotations of this start.
- Called $33.3 \%$ of time when present
- Phage (with cluster) where this start called: Hugley_45 (CZ1),

Start 9:

- Found in 1 of 11 ( $9.1 \%$ ) of genes in pham
- No Manual Annotations of this start.
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Mbo4_35 (singleton),


## Start 11:

- Found in 1 of 11 ( $9.1 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 9
- Called 100.0\% of time when present
- Phage (with cluster) where this start called: Denise_41 (CZ5),

Start 12:

- Found in 1 of 11 ( $9.1 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 9
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Horus_58 (DN1),

Start 13:

- Found in 4 of 11 ( $36.4 \%$ ) of genes in pham
- Manual Annotations of this start: 4 of 9
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Anatole_32 (BV), E1_32 (BV), StAB_31 (EP), Stiles_32 (EP),

Start 28:

- Found in 8 of 11 ( $72.7 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 9
- Called $12.5 \%$ of time when present
- Phage (with cluster) where this start called: Nymphadora_49 (CZ1),


## Summary by clusters:

There are 6 clusters represented in this pham: singleton, $\mathrm{CZ} 1, \mathrm{CZ5}, \mathrm{BV}, \mathrm{DN1}, \mathrm{EP}$,
Info for manual annotations of cluster BV:

- Start number 13 was manually annotated 2 times for cluster BV.

Info for manual annotations of cluster CZ1:

- Start number 6 was manually annotated 2 times for cluster CZ1.
- Start number 28 was manually annotated 1 time for cluster CZ1.

Info for manual annotations of cluster CZ5:

- Start number 11 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster DN1:
-Start number 12 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster EP:
-Start number 13 was manually annotated 2 times for cluster EP.

## Gene Information:

Gene: Anatole_32 Start: 23723, Stop: 24496, Start Num: 13
Candidate Starts for Anatole_32:
(Start: 13 @23723 has 4 MA's), (20, 23798), (21, 23807), (25, 23876), (31, 23927), (32, 23948), (34, 24035), (35, 24095), (36, 24122), (37, 24128), (39, 24194), (49, 24401), (51, 24443),

Gene: BatStarr_48 Start: 37326, Stop: 38156, Start Num: 6
Candidate Starts for BatStarr_48:
(1, 37221), (Start: 6 @37326 has 2 MA's), (7, 37356), (8, 37368), (15, 37404), (16, 37428), (18, 37455), (22, 37491), (25, 37542), (Start: 28 @37587 has 1 MA's), (29, 37590), (30, 37593), (32, $37617),(33,37647),(41,37908),(42,37920),(43,37935),(45,37962),(47,38010),(50,38076)$,

Gene: Denise_41 Start: 31037, Stop: 31825, Start Num: 11
Candidate Starts for Denise_41:
(1, 30872), (2, 30881), (Start: 11 @31037 has 1 MA's), (15, 31073), (16, 31097), (18, 31124), (19, 31127), (26, 31214), (Start: 28 @31256 has 1 MA's), (30, 31262), (32, 31286), (42, 31589), (45, $31631)$, $(48,31721)$, $(53,31814)$,

Gene: E1_32 Start: 23723, Stop: 24496, Start Num: 13
Candidate Starts for E1_32:
(Start: 13 @23723 has 4 MA's), (20, 23798), (21, 23807), (25, 23876), (31, 23927), (32, 23948), (34, $24035)$, (35, 24095), (36, 24122), (37, 24128), (39, 24194), (49, 24401), (51, 24443),

Gene: Herod_48 Start: 37326, Stop: 38156, Start Num: 6
Candidate Starts for Herod_48:
(1, 37221), (Start: 6 @37326 has 2 MA's), (7, 37356), (8, 37368), (15, 37404), (16, 37428), (18, 37455), (22, 37491), (25, 37542), (Start: 28 @37587 has 1 MA's), (29, 37590), (30, 37593), (32, $37617),(33,37647),(41,37908),(42,37920),(43,37935),(45,37962),(47,38010),(50,38076)$,

Gene: Horus_58 Start: 38442, Stop: 39221, Start Num: 12
Candidate Starts for Horus_58:
(Start: 12 @38442 has 1 MA's), (14, 38454), (16, 38493), (17, 38496), (18, 38520), (19, 38523), (26, 38610), (Start: 28 @38652 has 1 MA's), (30, 38658), (32, 38682), (33, 38712), (42, 38985), (45, $39027)$, $(48,39117)$, $(53,39210)$,

Gene: Hugley_45 Start: 37367, Stop: 38155, Start Num: 8
Candidate Starts for Hugley_45:
(1, 37220), (Start: 6 @37325 has 2 MA's), (7, 37355), (8, 37367), (15, 37403), (16, 37427), (18, 37454), (22, 37490), (25, 37541), (Start: 28 @37586 has 1 MA's), (29, 37589), (30, 37592), (32, $37616),(33,37646),(41,37907),(42,37919),(43,37934),(45,37961),(47,38009),(50,38075)$,

Gene: Mbo4_35 Start: 31761, Stop: 32552, Start Num: 9 Candidate Starts for Mbo4_35:
$(4,31668),(5,31671),(9,31761),(15,31800),(23,31899),(24,31908),(25,31932),(S t a r t: 28$ @31977 has 1 MA's), (32, 32007), (37, 32184), (38, 32190), (40, 32265), (44, 32349), (52, 32532),

Gene: Nymphadora_49 Start: 37586, Stop: 38155, Start Num: 28

Candidate Starts for Nymphadora_49:
(25, 37541), (Start: 28 @37586 has 1 MA's), (29, 37589), (30, 37592), (32, 37616), (33, 37646), (41, 37907), (42, 37919), (43, 37934), (45, 37961), (47, 38009), (50, 38075),

Gene: StAB_31 Start: 27398, Stop: 28165, Start Num: 13 Candidate Starts for StAB_31:
(10, 27389), (Start: 13 @27398 has 4 MA's), (18, 27470), (19, 27473), (22, 27503), (Start: 28 @27599 has 1 MA's), (32, 27629), (35, 27773), (37, 27806), (45, 27974), (46, 27992), (51, 28121), (53, 28154),

Gene: Stiles_32 Start: 27029, Stop: 27793, Start Num: 13
Candidate Starts for Stiles_32:
(3, 26873), (10, 27020), (Start: 13 @27029 has 4 MA's), (18, 27101), (19, 27104), (25, 27185), (27, 27194), (32, 27257), (35, 27401), (37, 27434), (45, 27602), (46, 27620), (51, 27749), (53, 27782),

