Pham 158028


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 158028 Report

This analysis was run 04/13/24 on database version 558.
Pham number 158028 has 37 members, 6 are drafts.
Phages represented in each track:

- Track 1 : Cheesy_51, Xenomorph_48, Elsa_51, Correa_49, Arcadia_51, Tribby_52, Nason_51
- Track 2 : Benllo_52, JEGGS_50, BenitoAntonio_51, Heisenberger_50,

KeaneyLin_50, Kārdesai_52, Mooshroom_52, GōCrazy_50

- Track 3 : Dynamite_51, NapoleonB_51
- Track 4 : Hankly 50 $\mathbf{0}$, Circum_53, Múdcat_48
- Track 5 : Inked_50
- Track 6 : Tokki_51
- Track 7 : LilHuddy_48, Phaby_48
- Track 8 : Giantsbane_48
- Track 9 : Shepard_50
- Track 10 : Ingrid_48, Loretta_48
- Track 11 : Caterpillar_43, MēdiumFry_44
- Track 12 : Makai 46
- Track 13 : Truckēe_44
- Track 14 : Renaldo_56, Lewando_53
- Track 15 : Leathea_51
- Track 16 : GantcherGoblin_48
- Track 17 : BarbieDoll_54


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

The start number called the most often in the published annotations is 6 , it was called in 15 of the 31 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arcadia_51, BenitoAntonio_51, Benllo_52, Cheesy_51, Correa_49, Dynamite_51, Elsa_51, GoCrazy_50, Heisenberger_50, JEGGS_50, Kardesai_52, KeaneyLin_50, Mooshroom_52, NapoleonB_51, Nasōn_51, Tribbȳ_52, Xenomōrph_48,

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

- Circum_53, Hankly_50, Mudcat_48,

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

- BarbieDoll_54, Caterpillar_43, GantcherGoblin_48, Giantsbane_48, Ingrid_48, Inked_50, Leathea_51, Lewando_53, LilHuddy_48, Loretta_48, Makai_46, MediumFry_44, Phaby_48, Renaldo_56, Shepard_50, Tokki_51, Truckee_44,


## Summary by start number:

Start 3:

- Found in 11 of 37 ( $29.7 \%$ ) of genes in pham
- Manual Annotations of this start: 3 of 31
- Called $27.3 \%$ of time when present
- Phage (with cluster) where this start called: Circum_53 (AM), Hankly_50 (AM), Mudcat_48 (AM),

Start 4:

- Found in 1 of 37 ( $2.7 \%$ ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0\% of time when present
- Phage (with cluster) where this start called: BarbieDoll_54 (AU6),

Start 5:

- Found in 12 of 37 ( $32.4 \%$ ) of genes in pham
- Manual Annotations of this start: 11 of 31
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Caterpillar_43 (AU4), Giantsbane_48
(AU2), Ingrid_48 (AU3), Inked_50 (AU), LilHuddy_48 (AU2), Loretta_48 (AU3),
Makai_46 (AŪ5), MediumFry_44 (AU4), Phaby_48 (AU2), Shepard_50 (AU2),
Tokki_51 (AU2), Truckee_44 (AU5),
Start 6:
- Found in 20 of 37 ( $54.1 \%$ ) of genes in pham
- Manual Annotations of this start: 15 of 31
- Called $85.0 \%$ of time when present
- Phage (with cluster) where this start called: Arcadia_51 (AM), BenitoAntonio_51 (AM), Benllo_52 (AM), Cheesy_51 (AM), Correa_49 (AM), Dynamite_51 (AM), Elsa_51 (AM), GoCrazy_50 (AM), Heisenberger_50 (AM), JEGGS_50 (AM),
Kardesai_52 (AM), KeaneyLin_50 (AM), Mooshroom_52 (AM), Nap̄oleonB_51 (AM), Nason_51 (AM), Tribby_52 (AM $)$, Xenomorph_48 (AM $)$,

Start 7:

- Found in 7 of 37 (18.9\%) of genes in pham
- Manual Annotations of this start: 2 of 31
- Called $57.1 \%$ of time when present
- Phage (with cluster) where this start called: GantcherGoblin_48 (AU6), Leathea_51 (AU6), Lewando_53 (AU6), Renaldo_56 (AU6),


## Summary by clusters:

There are 7 clusters represented in this pham: $A M, A \cup 3, A U 2, A \cup 5, A \cup 4, A U 6, A U$,
Info for manual annotations of cluster AM:

- Start number 3 was manually annotated 3 times for cluster AM.
- Start number 6 was manually annotated 15 times for cluster AM.

Info for manual annotations of cluster AU:

- Start number 5 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU2:

- Start number 5 was manually annotated 4 times for cluster AU2.

Info for manual annotations of cluster AU3:

- Start number 5 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:

- Start number 5 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 5 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:

- Start number 7 was manually annotated 2 times for cluster AU6.


## Gene Information:

Gene: Arcadia_51 Start: 33107, Stop: 33238, Start Num: 6
Candidate Starts for Arcadia_51:
(Start: 6 @33107 has 15 MA's),
Gene: BarbieDoll_54 Start: 34859, Stop: 34999, Start Num: 4 Candidate Starts for BarbieDoll_54: (1, 34706), (2, 34772), (4, 34859), (Start: 7 @34886 has 2 MA's),

Gene: BenitoAntonio_51 Start: 32641, Stop: 32775, Start Num: 6
Candidate Starts for BenitoAntonio_51:
(Start: 3 @32626 has 3 MA's), (Start: 6 @32641 has 15 MA's),
Gene: Benllo_52 Start: 33319, Stop: 33453, Start Num: 6
Candidate Starts for Benllo_52:
(Start: 3 @33304 has 3 MA's), (Start: 6 @33319 has 15 MA's),
Gene: Caterpillar_43 Start: 33489, Stop: 33626, Start Num: 5
Candidate Starts for Caterpillar_43:
(Start: 5 @33489 has 11 MA's), (10, 33558),
Gene: Cheesy_51 Start: 32828, Stop: 32959, Start Num: 6 Candidate Starts for Cheesy_51:
(Start: 6 @32828 has 15 MA's),
Gene: Circum_53 Start: 33495, Stop: 33644, Start Num: 3 Candidate Starts for Circum_53:
(Start: 3 @33495 has 3 MA's), (Start: 6 @33510 has 15 MA's),
Gene: Correa_49 Start: 31974, Stop: 32105, Start Num: 6
Candidate Starts for Correa_49:
(Start: 6 @31974 has 15 MA's),

Gene: Dynamite_51 Start: 33040, Stop: 33168, Start Num: 6
Candidate Starts for Dynamite_51:
(Start: 6 @ 33040 has 15 MA's),
Gene: Elsa_51 Start: 33107, Stop: 33238, Start Num: 6
Candidate Starts for Elsa_51:
(Start: 6 @33107 has 15 MA's),
Gene: GantcherGoblin_48 Start: 33220, Stop: 33339, Start Num: 7
Candidate Starts for GantcherGoblin_48:
(Start: 7 @33220 has 2 MA's), (9, 33256),
Gene: Giantsbane_48 Start: 33565, Stop: 33705, Start Num: 5
Candidate Starts for Giantsbane_48:
(Start: 5 @ 33565 has 11 MA's),
Gene: GoCrazy_50 Start: 32975, Stop: 33109, Start Num: 6
Candidate Starts for GoCrazy_50:
(Start: 3 @32960 has 3 MA's), (Start: 6 @32975 has 15 MA's),
Gene: Hankly_50 Start: 32234, Stop: 32383, Start Num: 3
Candidate Starts for Hankly_50:
(Start: 3 @32234 has 3 MA's), (Start: 6 @32249 has 15 MA's),
Gene: Heisenberger_50 Start: 32530, Stop: 32664, Start Num: 6
Candidate Starts for Heisenberger_50:
(Start: 3 @ 32515 has 3 MA's), (Start: 6 @32530 has 15 MA's),
Gene: Ingrid_48 Start: 34313, Stop: 34441, Start Num: 5
Candidate Starts for Ingrid_48:
(Start: 5 @34313 has 11 MA's), (Start: 7 @34334 has 2 MA's), (11, 34400), (12, 34415), (13, 34421),
Gene: Inked_50 Start: 35444, Stop: 35572, Start Num: 5
Candidate Starts for Inked_50:
(Start: 5 @35444 has 11 MA's), (12, 35546),
Gene: JEGGS_50 Start: 32585, Stop: 32719, Start Num: 6 Candidate Starts for JEGGS_50:
(Start: 3 @32570 has 3 MA's), (Start: 6 @32585 has 15 MA's),
Gene: Kardesai_52 Start: 33219, Stop: 33353, Start Num: 6 Candidate Starts for Kardesai_52:
(Start: 3 @33204 has 3 MA's), (Start: 6 @33219 has 15 MA's),
Gene: KeaneyLin_50 Start: 32975, Stop: 33109, Start Num: 6
Candidate Starts for KeaneyLin_50:
(Start: 3 @32960 has 3 MA's), (Start: 6 @32975 has 15 MA's),
Gene: Leathea_51 Start: 33316, Stop: 33435, Start Num: 7
Candidate Starts for Leathea_51:
(Start: 7 @33316 has 2 MA's),

Gene: Lewando_53 Start: 34888, Stop: 35001, Start Num: 7
Candidate Starts for Lewando_53:
(Start: 7 @34888 has 2 MA's),
Gene: LilHuddy_48 Start: 34521, Stop: 34658, Start Num: 5
Candidate Starts for LilHuddy_48:
(Start: 5 @34521 has 11 MA's), (11, 34608),
Gene: Loretta_48 Start: 34313, Stop: 34441, Start Num: 5
Candidate Starts for Loretta_48:
(Start: 5 @34313 has 11 MA's), (Start: 7 @34334 has 2 MA's), (11, 34400), (12, 34415), (13, 34421),
Gene: Makai_46 Start: 34498, Stop: 34635, Start Num: 5
Candidate Starts for Makai_46:
(Start: 5 @34498 has 11 MA's), (10, 34567), (11, 34585),
Gene: MediumFry_44 Start: 33794, Stop: 33931, Start Num: 5 Candidate Starts for MediumFry_44:
(Start: 5 @33794 has 11 MA's), (10, 33863),
Gene: Mooshroom_52 Start: 33219, Stop: 33353, Start Num: 6 Candidate Starts for Mooshroom_52:
(Start: 3 @33204 has 3 MA's), (Start: 6 @33219 has 15 MA's),
Gene: Mudcat_48 Start: 33928, Stop: 34077, Start Num: 3 Candidate Starts for Mudcat_48:
(Start: 3 @33928 has 3 MA's), (Start: 6 @33943 has 15 MA's),
Gene: NapoleonB_51 Start: 33040, Stop: 33168, Start Num: 6 Candidate Starts for NapoleonB_51:
(Start: 6 @33040 has 15 MA's),
Gene: Nason_51 Start: 33107, Stop: 33238, Start Num: 6
Candidate Starts for Nason_51:
(Start: 6 @33107 has 15 MA's),
Gene: Phaby_48 Start: 35065, Stop: 35202, Start Num: 5
Candidate Starts for Phaby_48:
(Start: 5 @35065 has 11 MA's), (11, 35152),
Gene: Renaldo_56 Start: 35197, Stop: 35310, Start Num: 7
Candidate Starts for Renaldo_56:
(Start: 7 @35197 has 2 MA's),
Gene: Shepard_50 Start: 34596, Stop: 34736, Start Num: 5
Candidate Starts for Shepard_50:
(Start: 5 @34596 has 11 MA's),
Gene: Tokki_51 Start: 34693, Stop: 34830, Start Num: 5
Candidate Starts for Tokki_51:
(Start: 5 @34693 has 11 MA's), $(8,34717)$, (11, 34780), (12, 34795),
Gene: Tribby_52 Start: 33045, Stop: 33176, Start Num: 6

Candidate Starts for Tribby_52:
(Start: 6 @33045 has 15 MA's),
Gene: Truckee_44 Start: 34288, Stop: 34425, Start Num: 5
Candidate Starts for Truckee_44:
(Start: 5 @34288 has 11 MA's), $(10,34357),(11,34375)$,
Gene: Xenomorph_48 Start: 32778, Stop: 32909, Start Num: 6
Candidate Starts for Xenomorph_48:
(Start: 6 @32778 has 15 MA's),

