



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 309309 Report

This analysis was run 06/27/26 on database version 652.

Pham number 309309 has 20 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Ibhubes\_i\_88, Che9d\_100, DoRead\_92
- Track 2 : Galactic\_90, Renaud18\_98
- Track 3 : Phasih\_86
- Track 4 : DosHalletts\_86
- Track 5 : Avani\_95
- Track 6 : LunaStella\_85, ByChance\_78, TChen\_87, ShowerHandel\_87, STLscum\_65, Martik\_86
- Track 7 : Pumpernickel\_268
- Track 8 : Azrael100\_66, MaryV\_66, Cosmo\_67, EniyanLRS\_62, Wildcat\_66

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

The start number called the most often in the published annotations is 4, it was called in 15 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Avani\_95, ByChance\_78, Che9d\_100, DoRead\_92, DosHalletts\_86, Galactic\_90, Ibhubes\_i\_88, LunaStella\_85, Martik\_86, Phasih\_86, Pumpernickel\_268, Renaud18\_98, STLscum\_65, ShowerHandel\_87, TChen\_87,

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

- Azrael100\_66, Cosmo\_67, EniyanLRS\_62, MaryV\_66, Wildcat\_66,

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

- 

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

Start 3:

- Found in 5 of 20 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 5 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_66 (V), Cosmo\_67 (V), EniyanLRS\_62 (V), MaryV\_66 (V), Wildcat\_66 (V),

Start 4:

- Found in 20 of 20 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 15 of 20
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Avani\_95 (F2), ByChance\_78 (F1), Che9d\_100 (F2), DoRead\_92 (F1), DosHalletts\_86 (F1), Galactic\_90 (F1), Ibhubesi\_88 (F1), LunaStella\_85 (F4), Martik\_86 (F1), Phasih\_86 (F1), Pumpernickel\_268 (GD4), Renaud18\_98 (F4), STLscum\_65 (A1), ShowerHandel\_87 (F1), TChen\_87 (F4),

**Summary by clusters:**

There are 6 clusters represented in this pham: F1, F2, F4, A1, V, GD4,

Info for manual annotations of cluster A1:

- Start number 4 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster F1:

- Start number 4 was manually annotated 8 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 4 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 4 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster GD4:

- Start number 4 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster V:

- Start number 3 was manually annotated 5 times for cluster V.

**Gene Information:**

Gene: Avani\_95 Start: 48539, Stop: 48709, Start Num: 4

Candidate Starts for Avani\_95:

(Start: 4 @48539 has 15 MA's), (6, 48605), (7, 48650), (10, 48695),

Gene: Azrael100\_66 Start: 44461, Stop: 44664, Start Num: 3

Candidate Starts for Azrael100\_66:

(Start: 3 @44461 has 5 MA's), (Start: 4 @44488 has 15 MA's), (5, 44497), (8, 44602), (9, 44617),

Gene: ByChance\_78 Start: 45994, Stop: 46167, Start Num: 4

Candidate Starts for ByChance\_78:

(Start: 4 @45994 has 15 MA's), (7, 46105), (8, 46108), (10, 46150), (11, 46156), (12, 46159),

Gene: Che9d\_100 Start: 50753, Stop: 50926, Start Num: 4

Candidate Starts for Che9d\_100:

(Start: 4 @50753 has 15 MA's), (6, 50819), (7, 50864), (8, 50867), (10, 50909), (11, 50915), (12, 50918),

Gene: Cosmo\_67 Start: 44462, Stop: 44665, Start Num: 3  
Candidate Starts for Cosmo\_67:  
(Start: 3 @44462 has 5 MA's), (Start: 4 @44489 has 15 MA's), (5, 44498), (8, 44603), (9, 44618),

Gene: DoRead\_92 Start: 49711, Stop: 49884, Start Num: 4  
Candidate Starts for DoRead\_92:  
(Start: 4 @49711 has 15 MA's), (6, 49777), (7, 49822), (8, 49825), (10, 49867), (11, 49873), (12, 49876),

Gene: DosHalletts\_86 Start: 51296, Stop: 51466, Start Num: 4  
Candidate Starts for DosHalletts\_86:  
(2, 51167), (Start: 4 @51296 has 15 MA's), (6, 51362), (7, 51407), (10, 51452),

Gene: EniyanLRS\_62 Start: 43996, Stop: 44199, Start Num: 3  
Candidate Starts for EniyanLRS\_62:  
(Start: 3 @43996 has 5 MA's), (Start: 4 @44023 has 15 MA's), (5, 44032), (8, 44137), (9, 44152),

Gene: Galactic\_90 Start: 50662, Stop: 50832, Start Num: 4  
Candidate Starts for Galactic\_90:  
(Start: 4 @50662 has 15 MA's), (6, 50728), (7, 50773), (10, 50818),

Gene: Ibhubesi\_88 Start: 49134, Stop: 49307, Start Num: 4  
Candidate Starts for Ibhubesi\_88:  
(Start: 4 @49134 has 15 MA's), (6, 49200), (7, 49245), (8, 49248), (10, 49290), (11, 49296), (12, 49299),

Gene: LunaStella\_85 Start: 49535, Stop: 49708, Start Num: 4  
Candidate Starts for LunaStella\_85:  
(Start: 4 @49535 has 15 MA's), (7, 49646), (8, 49649), (10, 49691), (11, 49697), (12, 49700),

Gene: Martik\_86 Start: 52005, Stop: 52178, Start Num: 4  
Candidate Starts for Martik\_86:  
(Start: 4 @52005 has 15 MA's), (7, 52116), (8, 52119), (10, 52161), (11, 52167), (12, 52170),

Gene: MaryV\_66 Start: 44283, Stop: 44486, Start Num: 3  
Candidate Starts for MaryV\_66:  
(Start: 3 @44283 has 5 MA's), (Start: 4 @44310 has 15 MA's), (5, 44319), (8, 44424), (9, 44439),

Gene: Phasih\_86 Start: 49685, Stop: 49855, Start Num: 4  
Candidate Starts for Phasih\_86:  
(1, 49514), (Start: 4 @49685 has 15 MA's), (6, 49751), (7, 49796), (10, 49841),

Gene: Pumpernickel\_268 Start: 152667, Stop: 152858, Start Num: 4  
Candidate Starts for Pumpernickel\_268:  
(Start: 4 @152667 has 15 MA's), (10, 152823),

Gene: Renaud18\_98 Start: 51631, Stop: 51801, Start Num: 4  
Candidate Starts for Renaud18\_98:  
(Start: 4 @51631 has 15 MA's), (6, 51697), (7, 51742), (10, 51787),

Gene: STLscum\_65 Start: 41968, Stop: 41795, Start Num: 4  
Candidate Starts for STLscum\_65:

(Start: 4 @41968 has 15 MA's), (7, 41857), (8, 41854), (10, 41812), (11, 41806), (12, 41803),

Gene: ShowerHandel\_87 Start: 49932, Stop: 50105, Start Num: 4

Candidate Starts for ShowerHandel\_87:

(Start: 4 @49932 has 15 MA's), (7, 50043), (8, 50046), (10, 50088), (11, 50094), (12, 50097),

Gene: TChen\_87 Start: 51486, Stop: 51659, Start Num: 4

Candidate Starts for TChen\_87:

(Start: 4 @51486 has 15 MA's), (7, 51597), (8, 51600), (10, 51642), (11, 51648), (12, 51651),

Gene: Wildcat\_66 Start: 44293, Stop: 44496, Start Num: 3

Candidate Starts for Wildcat\_66:

(Start: 3 @44293 has 5 MA's), (Start: 4 @44320 has 15 MA's), (5, 44329), (8, 44434), (9, 44449),