



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 291534 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291534 has 22 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Thoth\_87, Helpful\_90, Prager\_87, WaldoWhy\_88, SuperheroCarly\_88, Adjutor\_85, Butterscotch\_85, Troll4\_87, Delton\_86, BigMama\_86, Visconti\_88, Penelope2018\_87, Chill\_88
- Track 2 : Nova\_87, Giuseppe\_89
- Track 3 : Gumball\_87, Erk16\_88, KandZ\_85
- Track 4 : Phalaborwa\_89
- Track 5 : SirHarley\_89, PLOT\_88
- Track 6 : Mopey\_89

### ***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 17 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adjutor\_85, BigMama\_86, Butterscotch\_85, Chill\_88, Delton\_86, Erk16\_88, Giuseppe\_89, Gumball\_87, Helpful\_90, KandZ\_85, Nova\_87, Penelope2018\_87, Phalaborwa\_89, Prager\_87, SuperheroCarly\_88, Thoth\_87, Troll4\_87, Visconti\_88, WaldoWhy\_88,

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

- Mopey\_89, PLOT\_88, SirHarley\_89,

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

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

Start 3:

- Found in 7 of 22 ( 31.8% ) of genes in pham
- Manual Annotations of this start: 3 of 20
- Called 42.9% of time when present
- Phage (with cluster) where this start called: Mopey\_89 (D1), PLOT\_88 (D1), SirHarley\_89 (D1),

Start 4:

- Found in 22 of 22 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 17 of 20
- Called 86.4% of time when present
- Phage (with cluster) where this start called: Adjutor\_85 (D1), BigMama\_86 (D1), Butterscotch\_85 (D1), Chill\_88 (D1), Delton\_86 (D1), Erk16\_88 (D1), Giuseppe\_89 (D1), Gumball\_87 (D1), Helpful\_90 (D1), KandZ\_85 (D1), Nova\_87 (D1), Penelope2018\_87 (D1), Phalaborwa\_89 (D1), Prager\_87 (D1), SuperheroCarly\_88 (D1), Thoth\_87 (D1), Troll4\_87 (D1), Visconti\_88 (D1), WaldoWhy\_88 (D1),

**Summary by clusters:**

There is one cluster represented in this pham: D1

Info for manual annotations of cluster D1:

- Start number 3 was manually annotated 3 times for cluster D1.
- Start number 4 was manually annotated 17 times for cluster D1.

**Gene Information:**

Gene: Adjutor\_85 Start: 60952, Stop: 61065, Start Num: 4

Candidate Starts for Adjutor\_85:

(Start: 4 @60952 has 17 MA's), (5, 60967), (6, 60970), (7, 60976),

Gene: BigMama\_86 Start: 61043, Stop: 61156, Start Num: 4

Candidate Starts for BigMama\_86:

(Start: 4 @61043 has 17 MA's), (5, 61058), (6, 61061), (7, 61067),

Gene: Butterscotch\_85 Start: 61003, Stop: 61116, Start Num: 4

Candidate Starts for Butterscotch\_85:

(Start: 4 @61003 has 17 MA's), (5, 61018), (6, 61021), (7, 61027),

Gene: Chill\_88 Start: 60980, Stop: 61093, Start Num: 4

Candidate Starts for Chill\_88:

(Start: 4 @60980 has 17 MA's), (5, 60995), (6, 60998), (7, 61004),

Gene: Delton\_86 Start: 61413, Stop: 61526, Start Num: 4

Candidate Starts for Delton\_86:

(Start: 4 @61413 has 17 MA's), (5, 61428), (6, 61431), (7, 61437),

Gene: Erk16\_88 Start: 61335, Stop: 61448, Start Num: 4

Candidate Starts for Erk16\_88:

(1, 61185), (2, 61266), (Start: 3 @61326 has 3 MA's), (Start: 4 @61335 has 17 MA's), (5, 61350), (6, 61353),

Gene: Giuseppe\_89 Start: 61055, Stop: 61168, Start Num: 4

Candidate Starts for Giuseppe\_89:

(Start: 4 @61055 has 17 MA's), (5, 61070), (6, 61073),

Gene: Gumball\_87 Start: 61267, Stop: 61380, Start Num: 4

Candidate Starts for Gumball\_87:

(1, 61117), (2, 61198), (Start: 3 @61258 has 3 MA's), (Start: 4 @61267 has 17 MA's), (5, 61282), (6, 61285),

Gene: Helpful\_90 Start: 61254, Stop: 61367, Start Num: 4

Candidate Starts for Helpful\_90:

(Start: 4 @61254 has 17 MA's), (5, 61269), (6, 61272), (7, 61278),

Gene: KandZ\_85 Start: 61077, Stop: 61190, Start Num: 4

Candidate Starts for KandZ\_85:

(1, 60927), (2, 61008), (Start: 3 @61068 has 3 MA's), (Start: 4 @61077 has 17 MA's), (5, 61092), (6, 61095),

Gene: Mopey\_89 Start: 61066, Stop: 61188, Start Num: 3

Candidate Starts for Mopey\_89:

(2, 61006), (Start: 3 @61066 has 3 MA's), (Start: 4 @61075 has 17 MA's), (5, 61090), (6, 61093),

Gene: Nova\_87 Start: 61568, Stop: 61681, Start Num: 4

Candidate Starts for Nova\_87:

(Start: 4 @61568 has 17 MA's), (5, 61583), (6, 61586),

Gene: PLOT\_88 Start: 61220, Stop: 61342, Start Num: 3

Candidate Starts for PLOT\_88:

(1, 61079), (2, 61160), (Start: 3 @61220 has 3 MA's), (Start: 4 @61229 has 17 MA's), (5, 61244), (6, 61247),

Gene: Penelope2018\_87 Start: 61005, Stop: 61118, Start Num: 4

Candidate Starts for Penelope2018\_87:

(Start: 4 @61005 has 17 MA's), (5, 61020), (6, 61023), (7, 61029),

Gene: Phalaborwa\_89 Start: 61576, Stop: 61689, Start Num: 4

Candidate Starts for Phalaborwa\_89:

(1, 61426), (2, 61507), (Start: 3 @61567 has 3 MA's), (Start: 4 @61576 has 17 MA's), (5, 61591), (6, 61594), (7, 61600),

Gene: Prager\_87 Start: 60913, Stop: 61026, Start Num: 4

Candidate Starts for Prager\_87:

(Start: 4 @60913 has 17 MA's), (5, 60928), (6, 60931), (7, 60937),

Gene: SirHarley\_89 Start: 61242, Stop: 61364, Start Num: 3

Candidate Starts for SirHarley\_89:

(1, 61101), (2, 61182), (Start: 3 @61242 has 3 MA's), (Start: 4 @61251 has 17 MA's), (5, 61266), (6, 61269),

Gene: SuperheroCarly\_88 Start: 60982, Stop: 61095, Start Num: 4

Candidate Starts for SuperheroCarly\_88:

(Start: 4 @60982 has 17 MA's), (5, 60997), (6, 61000), (7, 61006),

Gene: Thoth\_87 Start: 61056, Stop: 61169, Start Num: 4

Candidate Starts for Thoth\_87:

(Start: 4 @61056 has 17 MA's), (5, 61071), (6, 61074), (7, 61080),

Gene: Troll4\_87 Start: 61063, Stop: 61176, Start Num: 4

Candidate Starts for Troll4\_87:

(Start: 4 @61063 has 17 MA's), (5, 61078), (6, 61081), (7, 61087),

Gene: Visconti\_88 Start: 61020, Stop: 61133, Start Num: 4

Candidate Starts for Visconti\_88:

(Start: 4 @61020 has 17 MA's), (5, 61035), (6, 61038), (7, 61044),

Gene: WaldoWhy\_88 Start: 60980, Stop: 61093, Start Num: 4

Candidate Starts for WaldoWhy\_88:

(Start: 4 @60980 has 17 MA's), (5, 60995), (6, 60998), (7, 61004),