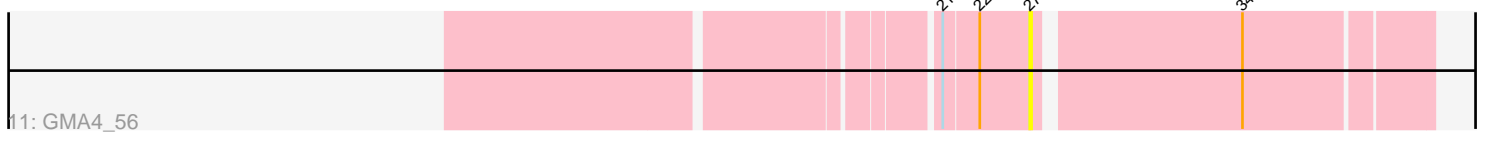
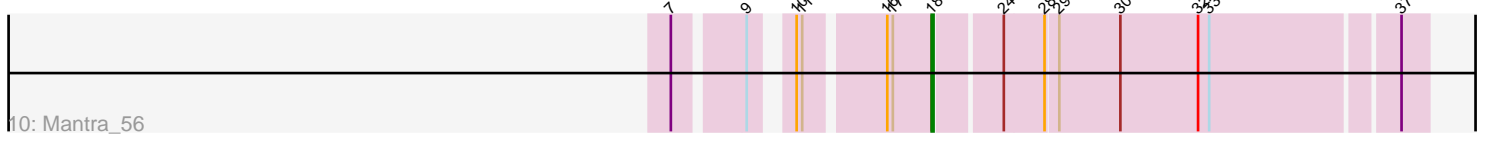
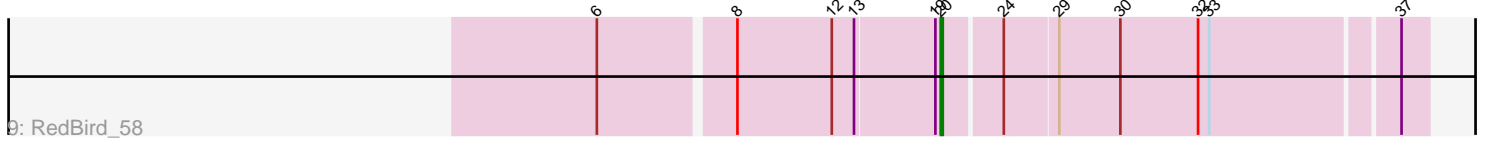
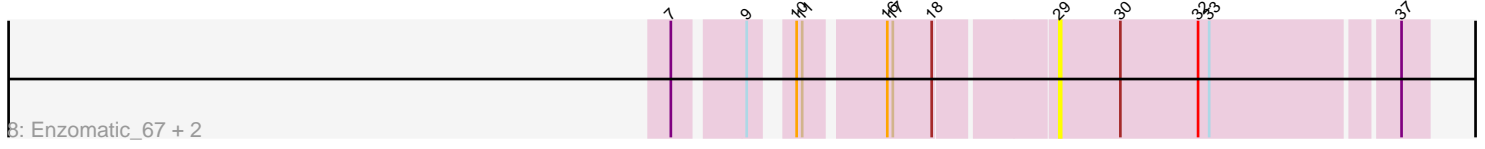
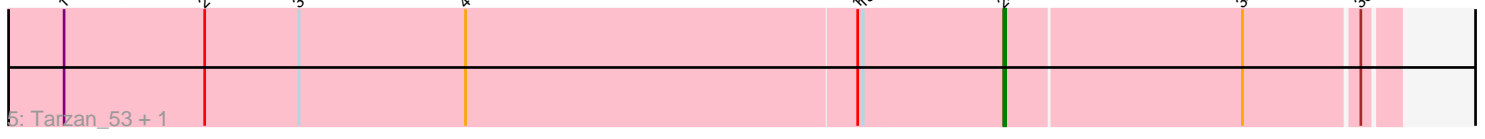
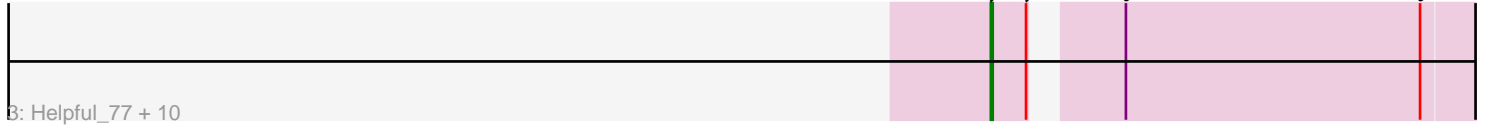
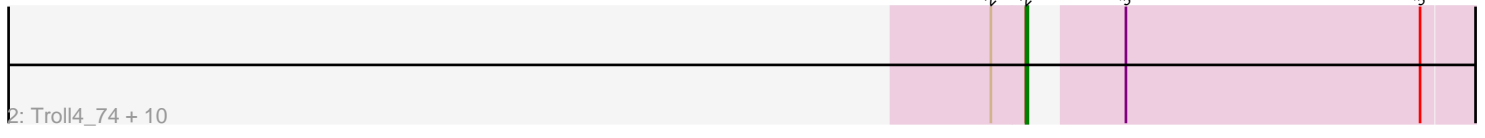
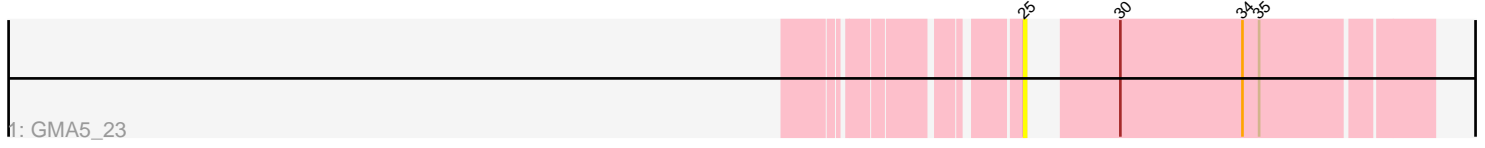


Pham 301574



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 301574 Report

This analysis was run 06/08/26 on database version 649.

Pham number 301574 has 36 members, 8 are drafts.

Phages represented in each track:

- Track 1 : GMA5\_23
- Track 2 : Troll4\_74, Giuseppe\_76, BigMama\_72, SirHarley\_76, PBI1\_70, Delton\_74, Visconti\_75, Penelope2018\_74, Gumball\_74, KandZ\_72, SuperheroCarly\_74
- Track 3 : Helpful\_77, Erk16\_74, Adjutor\_72, Mopey\_76, Thoth\_74, Butterscotch\_72, WaldoWhy\_76, Prager\_75, Chill\_76, Nova\_74, PLOT\_74
- Track 4 : Phalaborwa\_77
- Track 5 : Tarzan\_53, DonkeyMan\_53
- Track 6 : DinoNuggs\_55, Reyja\_55, DearBasketball\_57
- Track 7 : Jojo24\_52
- Track 8 : Enzomatic\_67, SeaLumen\_65, Polo2Bam\_66
- Track 9 : RedBird\_58
- Track 10 : Mantra\_56
- Track 11 : GMA4\_56

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

The start number called the most often in the published annotations is 26, it was called in 11 of the 28 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BigMama\_72, Delton\_74, Giuseppe\_76, Gumball\_74, KandZ\_72, PBI1\_70, Penelope2018\_74, SirHarley\_76, SuperheroCarly\_74, Troll4\_74, Visconti\_75,

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

- Adjutor\_72, Butterscotch\_72, Chill\_76, Erk16\_74, Helpful\_77, Mopey\_76, Nova\_74, PLOT\_74, Phalaborwa\_77, Prager\_75, Thoth\_74, WaldoWhy\_76,

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

- DearBasketball\_57, DinoNuggs\_55, DonkeyMan\_53, Enzomatic\_67, GMA4\_56, GMA5\_23, Jojo24\_52, Mantra\_56, Polo2Bam\_66, RedBird\_58, Reyja\_55, SeaLumen\_65, Tarzan\_53,

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

Start 18:

- Found in 4 of 36 ( 11.1% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Mantra\_56 (F1),

Start 20:

- Found in 1 of 36 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RedBird\_58 (F1),

Start 23:

- Found in 23 of 36 ( 63.9% ) of genes in pham
- Manual Annotations of this start: 11 of 28
- Called 52.2% of time when present
- Phage (with cluster) where this start called: Adjutor\_72 (D1), Butterscotch\_72 (D1), Chill\_76 (D1), Erk16\_74 (D1), Helpful\_77 (D1), Mopey\_76 (D1), Nova\_74 (D1), PLOT\_74 (D1), Phalaborwa\_77 (D1), Prager\_75 (D1), Thoth\_74 (D1), WaldoWhy\_76 (D1),

Start 24:

- Found in 8 of 36 ( 22.2% ) of genes in pham
- Manual Annotations of this start: 4 of 28
- Called 75.0% of time when present
- Phage (with cluster) where this start called: DearBasketball\_57 (DY), DinoNuggs\_55 (DY), DonkeyMan\_53 (DY), Jojo24\_52 (DY), Reyja\_55 (DY), Tarzan\_53 (DY),

Start 25:

- Found in 1 of 36 ( 2.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA5\_23 (CW2),

Start 26:

- Found in 23 of 36 ( 63.9% ) of genes in pham
- Manual Annotations of this start: 11 of 28
- Called 47.8% of time when present
- Phage (with cluster) where this start called: BigMama\_72 (D1), Delton\_74 (D1), Giuseppe\_76 (D1), Gumball\_74 (D1), KandZ\_72 (D1), PBI1\_70 (D1), Penelope2018\_74 (D1), SirHarley\_76 (D1), SuperheroCarly\_74 (D1), Troll4\_74 (D1), Visconti\_75 (D1),

Start 27:

- Found in 1 of 36 ( 2.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA4\_56 (singleton),

Start 29:

- Found in 5 of 36 ( 13.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 60.0% of time when present

- Phage (with cluster) where this start called: Enzomatic\_67 (F1), Polo2Bam\_66 (F1), SeaLumen\_65 (F1),

### **Summary by clusters:**

There are 5 clusters represented in this pham: F1, singleton, CW2, DY, D1,

Info for manual annotations of cluster D1:

- Start number 23 was manually annotated 11 times for cluster D1.
- Start number 26 was manually annotated 11 times for cluster D1.

Info for manual annotations of cluster DY:

- Start number 24 was manually annotated 4 times for cluster DY.

Info for manual annotations of cluster F1:

- Start number 18 was manually annotated 1 time for cluster F1.
- Start number 20 was manually annotated 1 time for cluster F1.

### **Gene Information:**

Gene: Adjutor\_72 Start: 56286, Stop: 56537, Start Num: 23

Candidate Starts for Adjutor\_72:

(Start: 23 @56286 has 11 MA's), (Start: 26 @56304 has 11 MA's), (31, 56340), (38, 56499),

Gene: BigMama\_72 Start: 56377, Stop: 56610, Start Num: 26

Candidate Starts for BigMama\_72:

(Start: 23 @56359 has 11 MA's), (Start: 26 @56377 has 11 MA's), (31, 56413), (38, 56572),

Gene: Butterscotch\_72 Start: 56337, Stop: 56588, Start Num: 23

Candidate Starts for Butterscotch\_72:

(Start: 23 @56337 has 11 MA's), (Start: 26 @56355 has 11 MA's), (31, 56391), (38, 56550),

Gene: Chill\_76 Start: 56314, Stop: 56565, Start Num: 23

Candidate Starts for Chill\_76:

(Start: 23 @56314 has 11 MA's), (Start: 26 @56332 has 11 MA's), (31, 56368), (38, 56527),

Gene: DearBasketball\_57 Start: 35676, Stop: 35882, Start Num: 24

Candidate Starts for DearBasketball\_57:

(5, 35469), (14, 35598), (15, 35601), (Start: 24 @35676 has 4 MA's), (34, 35805), (35, 35814), (36, 35865),

Gene: Delton\_74 Start: 56753, Stop: 56986, Start Num: 26

Candidate Starts for Delton\_74:

(Start: 23 @56735 has 11 MA's), (Start: 26 @56753 has 11 MA's), (31, 56789), (38, 56948),

Gene: DinoNuggs\_55 Start: 35345, Stop: 35551, Start Num: 24

Candidate Starts for DinoNuggs\_55:

(5, 35138), (14, 35267), (15, 35270), (Start: 24 @35345 has 4 MA's), (34, 35474), (35, 35483), (36, 35534),

Gene: DonkeyMan\_53 Start: 34757, Stop: 34960, Start Num: 24

Candidate Starts for DonkeyMan\_53:

(1, 34253), (2, 34328), (3, 34379), (4, 34469), (14, 34679), (15, 34682), (Start: 24 @34757 has 4 MA's), (34, 34883), (36, 34943),

Gene: Enzomatic\_67 Start: 40234, Stop: 40425, Start Num: 29

Candidate Starts for Enzomatic\_67:

(7, 40060), (9, 40093), (10, 40108), (11, 40111), (16, 40150), (17, 40153), (Start: 18 @40174 has 1 MA's), (29, 40234), (30, 40267), (32, 40309), (33, 40315), (37, 40411),

Gene: Erk16\_74 Start: 56392, Stop: 56643, Start Num: 23

Candidate Starts for Erk16\_74:

(Start: 23 @56392 has 11 MA's), (Start: 26 @56410 has 11 MA's), (31, 56446), (38, 56605),

Gene: GMA4\_56 Start: 35967, Stop: 36167, Start Num: 27

Candidate Starts for GMA4\_56:

(21, 35922), (22, 35940), (27, 35967), (34, 36072),

Gene: GMA5\_23 Start: 15324, Stop: 15518, Start Num: 25

Candidate Starts for GMA5\_23:

(25, 15324), (30, 15357), (34, 15423), (35, 15432),

Gene: Giuseppe\_76 Start: 56282, Stop: 56515, Start Num: 26

Candidate Starts for Giuseppe\_76:

(Start: 23 @56264 has 11 MA's), (Start: 26 @56282 has 11 MA's), (31, 56318), (38, 56477),

Gene: Gumball\_74 Start: 56755, Stop: 56988, Start Num: 26

Candidate Starts for Gumball\_74:

(Start: 23 @56737 has 11 MA's), (Start: 26 @56755 has 11 MA's), (31, 56791), (38, 56950),

Gene: Helpful\_77 Start: 56652, Stop: 56903, Start Num: 23

Candidate Starts for Helpful\_77:

(Start: 23 @56652 has 11 MA's), (Start: 26 @56670 has 11 MA's), (31, 56706), (38, 56865),

Gene: Jojo24\_52 Start: 34059, Stop: 34259, Start Num: 24

Candidate Starts for Jojo24\_52:

(5, 33852), (14, 33981), (15, 33984), (Start: 24 @34059 has 4 MA's), (33, 34164), (34, 34182), (36, 34242),

Gene: KandZ\_72 Start: 56499, Stop: 56780, Start Num: 26

Candidate Starts for KandZ\_72:

(Start: 23 @56481 has 11 MA's), (Start: 26 @56499 has 11 MA's), (31, 56535), (38, 56694),

Gene: Mantra\_56 Start: 39272, Stop: 39523, Start Num: 18

Candidate Starts for Mantra\_56:

(7, 39158), (9, 39191), (10, 39206), (11, 39209), (16, 39248), (17, 39251), (Start: 18 @39272 has 1 MA's), (Start: 24 @39305 has 4 MA's), (28, 39326), (29, 39332), (30, 39365), (32, 39407), (33, 39413), (37, 39509),

Gene: Mopey\_76 Start: 56290, Stop: 56541, Start Num: 23

Candidate Starts for Mopey\_76:

(Start: 23 @56290 has 11 MA's), (Start: 26 @56308 has 11 MA's), (31, 56344), (38, 56503),

Gene: Nova\_74 Start: 56760, Stop: 57011, Start Num: 23

Candidate Starts for Nova\_74:

(Start: 23 @56760 has 11 MA's), (Start: 26 @56778 has 11 MA's), (31, 56814), (38, 56973),

Gene: PBI1\_70 Start: 56286, Stop: 56519, Start Num: 26

Candidate Starts for PBI1\_70:

(Start: 23 @56268 has 11 MA's), (Start: 26 @56286 has 11 MA's), (31, 56322), (38, 56481),

Gene: PLOT\_74 Start: 56290, Stop: 56541, Start Num: 23

Candidate Starts for PLOT\_74:

(Start: 23 @56290 has 11 MA's), (Start: 26 @56308 has 11 MA's), (31, 56344), (38, 56503),

Gene: Penelope2018\_74 Start: 56342, Stop: 56575, Start Num: 26

Candidate Starts for Penelope2018\_74:

(Start: 23 @56324 has 11 MA's), (Start: 26 @56342 has 11 MA's), (31, 56378), (38, 56537),

Gene: Phalaborwa\_77 Start: 56917, Stop: 57168, Start Num: 23

Candidate Starts for Phalaborwa\_77:

(Start: 23 @56917 has 11 MA's), (Start: 26 @56935 has 11 MA's), (31, 56971), (38, 57130),

Gene: Polo2Bam\_66 Start: 40234, Stop: 40425, Start Num: 29

Candidate Starts for Polo2Bam\_66:

(7, 40060), (9, 40093), (10, 40108), (11, 40111), (16, 40150), (17, 40153), (Start: 18 @40174 has 1 MA's), (29, 40234), (30, 40267), (32, 40309), (33, 40315), (37, 40411),

Gene: Prager\_75 Start: 56384, Stop: 56635, Start Num: 23

Candidate Starts for Prager\_75:

(Start: 23 @56384 has 11 MA's), (Start: 26 @56402 has 11 MA's), (31, 56438), (38, 56597),

Gene: RedBird\_58 Start: 39602, Stop: 39850, Start Num: 20

Candidate Starts for RedBird\_58:

(6, 39425), (8, 39494), (12, 39545), (13, 39557), (19, 39599), (Start: 20 @39602 has 1 MA's), (Start: 24 @39632 has 4 MA's), (29, 39659), (30, 39692), (32, 39734), (33, 39740), (37, 39836),

Gene: Reyja\_55 Start: 35345, Stop: 35551, Start Num: 24

Candidate Starts for Reyja\_55:

(5, 35138), (14, 35267), (15, 35270), (Start: 24 @35345 has 4 MA's), (34, 35474), (35, 35483), (36, 35534),

Gene: SeaLumen\_65 Start: 40234, Stop: 40425, Start Num: 29

Candidate Starts for SeaLumen\_65:

(7, 40060), (9, 40093), (10, 40108), (11, 40111), (16, 40150), (17, 40153), (Start: 18 @40174 has 1 MA's), (29, 40234), (30, 40267), (32, 40309), (33, 40315), (37, 40411),

Gene: SirHarley\_76 Start: 56738, Stop: 56971, Start Num: 26

Candidate Starts for SirHarley\_76:

(Start: 23 @56720 has 11 MA's), (Start: 26 @56738 has 11 MA's), (31, 56774), (38, 56933),

Gene: SuperheroCarly\_74 Start: 56490, Stop: 56723, Start Num: 26

Candidate Starts for SuperheroCarly\_74:

(Start: 23 @56472 has 11 MA's), (Start: 26 @56490 has 11 MA's), (31, 56526), (38, 56685),

Gene: Tarzan\_53 Start: 34012, Stop: 34215, Start Num: 24

Candidate Starts for Tarzan\_53:

(1, 33508), (2, 33583), (3, 33634), (4, 33724), (14, 33934), (15, 33937), (Start: 24 @34012 has 4 MA's),  
(34, 34138), (36, 34198),

Gene: Thoth\_74 Start: 56378, Stop: 56629, Start Num: 23

Candidate Starts for Thoth\_74:

(Start: 23 @56378 has 11 MA's), (Start: 26 @56396 has 11 MA's), (31, 56432), (38, 56591),

Gene: Troll4\_74 Start: 56464, Stop: 56697, Start Num: 26

Candidate Starts for Troll4\_74:

(Start: 23 @56446 has 11 MA's), (Start: 26 @56464 has 11 MA's), (31, 56500), (38, 56659),

Gene: Visconti\_75 Start: 56372, Stop: 56605, Start Num: 26

Candidate Starts for Visconti\_75:

(Start: 23 @56354 has 11 MA's), (Start: 26 @56372 has 11 MA's), (31, 56408), (38, 56567),

Gene: WaldoWhy\_76 Start: 56314, Stop: 56565, Start Num: 23

Candidate Starts for WaldoWhy\_76:

(Start: 23 @56314 has 11 MA's), (Start: 26 @56332 has 11 MA's), (31, 56368), (38, 56527),