



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 163749 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163749 has 39 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Hestia\_67, Faja\_76
- Track 2 : RadFad\_77, Hillester\_77
- Track 3 : Seahorse\_78, Richie\_76
- Track 4 : Raqqa\_69
- Track 5 : Raphaella\_73
- Track 6 : Globfish\_72
- Track 7 : EvePickles\_72
- Track 8 : Anekin\_76
- Track 9 : Aikyam\_72, Sakai\_71, Gorpy\_72
- Track 10 : BenchScraper\_71, Isolde\_71, CookieBear\_71
- Track 11 : BillyTP\_73
- Track 12 : Phrank15\_76
- Track 13 : Persistence\_66
- Track 14 : Tiff81\_73
- Track 15 : Auxilium\_71
- Track 16 : YoungHarleezy\_71
- Track 17 : AbbyDaisy\_76
- Track 18 : MidnightRain\_78
- Track 19 : Sashimi\_72
- Track 20 : Shoya\_56
- Track 21 : Sarge\_51
- Track 22 : BrayBeast\_56
- Track 23 : TripleJ\_57
- Track 24 : Kukla\_57
- Track 25 : Jinkies\_45
- Track 26 : Zucker\_69
- Track 27 : BlackSpider\_62
- Track 28 : Bauer\_68
- Track 29 : A3Wally\_218
- Track 30 : PauloDiaboli\_218
- Track 31 : Big4\_204, Zooman\_185

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

The start number called the most often in the published annotations is 12, it was called in 14 of the 24 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbyDaisy\_76, Aikyam\_72, Anekin\_76, Auxilium\_71, BenchScraper\_71, BillyTP\_73, BlackSpider\_62, BrayBeast\_56, CookieBear\_71, EvePickles\_72, Faja\_76, Globfish\_72, Gorpy\_72, Hestia\_67, Hillester\_77, Isolde\_71, Persistence\_66, Phrank15\_76, RadFad\_77, Raphaella\_73, Raqqa\_69, Sakai\_71, Sarge\_51, Sashimi\_72, Shoya\_56, Tiff81\_73, YoungHarleezy\_71, Zucker\_69,

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

- Bauer\_68, MidnightRain\_78, Richie\_76, Seahorse\_78,

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

- A3Wally\_218, Big4\_204, Jinkies\_45, Kukla\_57, PauloDiaboli\_218, TripleJ\_57, Zooman\_185,

### Summary by start number:

Start 7:

- Found in 14 of 39 ( 35.9% ) of genes in pham
- Manual Annotations of this start: 3 of 24
- Called 21.4% of time when present
- Phage (with cluster) where this start called: MidnightRain\_78 (AY), Richie\_76 (AY), Seahorse\_78 (AY),

Start 9:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bauer\_68 (FN),

Start 12:

- Found in 32 of 39 ( 82.1% ) of genes in pham
- Manual Annotations of this start: 14 of 24
- Called 87.5% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_76 (AY), Aikyam\_72 (AY), Anekin\_76 (AY), Auxilium\_71 (AY), BenchScraper\_71 (AY), BillyTP\_73 (AY), BlackSpider\_62 (FN), BrayBeast\_56 (FB), CookieBear\_71 (AY), EvePickles\_72 (AY), Faja\_76 (AY), Globfish\_72 (AY), Gorpy\_72 (AY), Hestia\_67 (AY), Hillester\_77 (AY), Isolde\_71 (AY), Persistence\_66 (AY), Phrank15\_76 (AY), RadFad\_77 (AY), Raphaella\_73 (AY), Raqqa\_69 (AY), Sakai\_71 (AY), Sarge\_51 (FB), Sashimi\_72 (AY), Shoya\_56 (FB), Tiff81\_73 (AY), YoungHarleezy\_71 (AY), Zucker\_69 (FN),

Start 13:

- Found in 2 of 39 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kukla\_57 (FJ), TripleJ\_57 (FJ),

Start 15:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 24

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jinkies\_45 (FL),

Start 16:

- Found in 5 of 39 ( 12.8% ) of genes in pham
- Manual Annotations of this start: 4 of 24
- Called 80.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_218 (GD1), Big4\_204 (GD2), PauloDiaboli\_218 (GD1), Zooman\_185 (GD2),

### **Summary by clusters:**

There are 7 clusters represented in this pham: GD1, GD2, FB, AY, FJ, FL, FN,

Info for manual annotations of cluster AY:

- Start number 7 was manually annotated 3 times for cluster AY.
- Start number 12 was manually annotated 10 times for cluster AY.

Info for manual annotations of cluster FB:

- Start number 12 was manually annotated 3 times for cluster FB.

Info for manual annotations of cluster FJ:

- Start number 13 was manually annotated 1 time for cluster FJ.

Info for manual annotations of cluster FL:

- Start number 15 was manually annotated 1 time for cluster FL.

Info for manual annotations of cluster FN:

- Start number 9 was manually annotated 1 time for cluster FN.
- Start number 12 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster GD1:

- Start number 16 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 16 was manually annotated 2 times for cluster GD2.

### **Gene Information:**

Gene: A3Wally\_218 Start: 118317, Stop: 118063, Start Num: 16

Candidate Starts for A3Wally\_218:

(Start: 16 @118317 has 4 MA's), (27, 118203), (32, 118176), (38, 118131),

Gene: AbbyDaisy\_76 Start: 41022, Stop: 41339, Start Num: 12

Candidate Starts for AbbyDaisy\_76:

(6, 40953), (Start: 12 @41022 has 14 MA's), (23, 41172),

Gene: Aikyam\_72 Start: 37441, Stop: 37758, Start Num: 12

Candidate Starts for Aikyam\_72:

(Start: 12 @37441 has 14 MA's), (24, 37597), (29, 37627), (31, 37636), (33, 37654),

Gene: Anekin\_76 Start: 40019, Stop: 40330, Start Num: 12  
Candidate Starts for Anekin\_76:  
(Start: 12 @40019 has 14 MA's), (20, 40112), (21, 40115), (30, 40196), (35, 40235), (42, 40316),

Gene: Auxilium\_71 Start: 37005, Stop: 37301, Start Num: 12  
Candidate Starts for Auxilium\_71:  
(Start: 12 @37005 has 14 MA's), (37, 37221), (39, 37254),

Gene: Bauer\_68 Start: 38091, Stop: 38444, Start Num: 9  
Candidate Starts for Bauer\_68:  
(5, 38049), (Start: 9 @38091 has 1 MA's), (Start: 12 @38127 has 14 MA's), (19, 38232), (23, 38277),  
(33, 38340),

Gene: BenchScraper\_71 Start: 38140, Stop: 38463, Start Num: 12  
Candidate Starts for BenchScraper\_71:  
(Start: 7 @38080 has 3 MA's), (Start: 12 @38140 has 14 MA's), (33, 38359),

Gene: Big4\_204 Start: 114726, Stop: 114472, Start Num: 16  
Candidate Starts for Big4\_204:  
(14, 114774), (Start: 16 @114726 has 4 MA's),

Gene: BillyTP\_73 Start: 39995, Stop: 40291, Start Num: 12  
Candidate Starts for BillyTP\_73:  
(Start: 7 @39935 has 3 MA's), (Start: 12 @39995 has 14 MA's), (37, 40211), (39, 40244),

Gene: BlackSpider\_62 Start: 36140, Stop: 36442, Start Num: 12  
Candidate Starts for BlackSpider\_62:  
(1, 35759), (Start: 12 @36140 has 14 MA's), (19, 36230),

Gene: BrayBeast\_56 Start: 31864, Stop: 32181, Start Num: 12  
Candidate Starts for BrayBeast\_56:  
(Start: 12 @31864 has 14 MA's), (33, 32077), (40, 32140),

Gene: CookieBear\_71 Start: 38614, Stop: 38937, Start Num: 12  
Candidate Starts for CookieBear\_71:  
(Start: 7 @38554 has 3 MA's), (Start: 12 @38614 has 14 MA's), (33, 38833),

Gene: EvePickles\_72 Start: 39884, Stop: 40201, Start Num: 12  
Candidate Starts for EvePickles\_72:  
(Start: 12 @39884 has 14 MA's), (23, 40034),

Gene: Faja\_76 Start: 40656, Stop: 40979, Start Num: 12  
Candidate Starts for Faja\_76:  
(Start: 7 @40596 has 3 MA's), (Start: 12 @40656 has 14 MA's), (33, 40875),

Gene: Globfish\_72 Start: 38348, Stop: 38665, Start Num: 12  
Candidate Starts for Globfish\_72:  
(Start: 12 @38348 has 14 MA's), (23, 38498),

Gene: Gorpy\_72 Start: 39861, Stop: 40178, Start Num: 12  
Candidate Starts for Gorpy\_72:  
(Start: 12 @39861 has 14 MA's), (24, 40017), (29, 40047), (31, 40056), (33, 40074),

Gene: Hestia\_67 Start: 36879, Stop: 37202, Start Num: 12  
Candidate Starts for Hestia\_67:  
(Start: 7 @36819 has 3 MA's), (Start: 12 @36879 has 14 MA's), (33, 37098),

Gene: Hillester\_77 Start: 39406, Stop: 39702, Start Num: 12  
Candidate Starts for Hillester\_77:  
(Start: 7 @39346 has 3 MA's), (Start: 12 @39406 has 14 MA's),

Gene: Isolde\_71 Start: 38725, Stop: 39048, Start Num: 12  
Candidate Starts for Isolde\_71:  
(Start: 7 @38665 has 3 MA's), (Start: 12 @38725 has 14 MA's), (33, 38944),

Gene: Jinkies\_45 Start: 34146, Stop: 34457, Start Num: 15  
Candidate Starts for Jinkies\_45:  
(Start: 15 @34146 has 1 MA's), (Start: 16 @34164 has 4 MA's), (25, 34263), (26, 34272), (41, 34398),  
(43, 34434),

Gene: Kukla\_57 Start: 35378, Stop: 35701, Start Num: 13  
Candidate Starts for Kukla\_57:  
(11, 35345), (Start: 13 @35378 has 1 MA's), (18, 35459), (20, 35480), (28, 35555), (34, 35594), (39,  
35648),

Gene: MidnightRain\_78 Start: 40135, Stop: 40518, Start Num: 7  
Candidate Starts for MidnightRain\_78:  
(Start: 7 @40135 has 3 MA's), (Start: 12 @40195 has 14 MA's), (22, 40321), (33, 40414),

Gene: PauloDiaboli\_218 Start: 116530, Stop: 116276, Start Num: 16  
Candidate Starts for PauloDiaboli\_218:  
(Start: 16 @116530 has 4 MA's), (27, 116416), (32, 116389),

Gene: Persistence\_66 Start: 36801, Stop: 37118, Start Num: 12  
Candidate Starts for Persistence\_66:  
(3, 36561), (Start: 12 @36801 has 14 MA's), (29, 36987), (33, 37014),

Gene: Phrank15\_76 Start: 38696, Stop: 39013, Start Num: 12  
Candidate Starts for Phrank15\_76:  
(Start: 12 @38696 has 14 MA's), (17, 38765), (23, 38846), (36, 38924),

Gene: RadFad\_77 Start: 39406, Stop: 39702, Start Num: 12  
Candidate Starts for RadFad\_77:  
(Start: 7 @39346 has 3 MA's), (Start: 12 @39406 has 14 MA's),

Gene: Raphaella\_73 Start: 38671, Stop: 38994, Start Num: 12  
Candidate Starts for Raphaella\_73:  
(5, 38596), (Start: 12 @38671 has 14 MA's), (33, 38890),

Gene: Raqqa\_69 Start: 36817, Stop: 37113, Start Num: 12  
Candidate Starts for Raqqa\_69:  
(Start: 7 @36757 has 3 MA's), (Start: 12 @36817 has 14 MA's),

Gene: Richie\_76 Start: 40479, Stop: 40859, Start Num: 7  
Candidate Starts for Richie\_76:  
(Start: 7 @40479 has 3 MA's), (Start: 12 @40542 has 14 MA's), (19, 40647), (23, 40692), (33, 40755),

Gene: Sakai\_71 Start: 38572, Stop: 38889, Start Num: 12  
Candidate Starts for Sakai\_71:  
(Start: 12 @38572 has 14 MA's), (24, 38728), (29, 38758), (31, 38767), (33, 38785),

Gene: Sarge\_51 Start: 30199, Stop: 30498, Start Num: 12  
Candidate Starts for Sarge\_51:  
(Start: 12 @30199 has 14 MA's), (19, 30289),

Gene: Sashimi\_72 Start: 38667, Stop: 38984, Start Num: 12  
Candidate Starts for Sashimi\_72:  
(2, 38412), (4, 38442), (Start: 7 @38604 has 3 MA's), (Start: 12 @38667 has 14 MA's), (33, 38880),  
(36, 38895),

Gene: Seahorse\_78 Start: 41611, Stop: 41991, Start Num: 7  
Candidate Starts for Seahorse\_78:  
(Start: 7 @41611 has 3 MA's), (Start: 12 @41674 has 14 MA's), (19, 41779), (23, 41824), (33, 41887),

Gene: Shoya\_56 Start: 31813, Stop: 32112, Start Num: 12  
Candidate Starts for Shoya\_56:  
(Start: 12 @31813 has 14 MA's), (19, 31903),

Gene: Tiff81\_73 Start: 37265, Stop: 37582, Start Num: 12  
Candidate Starts for Tiff81\_73:  
(10, 37229), (Start: 12 @37265 has 14 MA's), (23, 37415), (40, 37541),

Gene: TripleJ\_57 Start: 35331, Stop: 35654, Start Num: 13  
Candidate Starts for TripleJ\_57:  
(8, 35280), (Start: 13 @35331 has 1 MA's), (18, 35412), (20, 35433), (39, 35601),

Gene: YoungHarleezy\_71 Start: 38447, Stop: 38743, Start Num: 12  
Candidate Starts for YoungHarleezy\_71:  
(Start: 7 @38387 has 3 MA's), (Start: 12 @38447 has 14 MA's), (36, 38654),

Gene: Zooman\_185 Start: 110949, Stop: 110695, Start Num: 16  
Candidate Starts for Zooman\_185:  
(14, 110997), (Start: 16 @110949 has 4 MA's),

Gene: Zucker\_69 Start: 40359, Stop: 40676, Start Num: 12  
Candidate Starts for Zucker\_69:  
(Start: 12 @40359 has 14 MA's), (19, 40464), (33, 40572),