



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 171726 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171726 has 25 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Tinyman4\_22, HerculesXL\_22
- Track 2 : Schimmels22\_22
- Track 3 : WestPM\_21
- Track 4 : QuadZero\_22
- Track 5 : Hasitha\_22
- Track 6 : Zayuliv\_22, Greenlvy\_22
- Track 7 : CaptainRex\_22, LilTerminator\_23, Fulton\_23, Librie\_22
- Track 8 : Zepp\_23
- Track 9 : Jayden\_43
- Track 10 : Megan\_36
- Track 11 : Kozie\_37
- Track 12 : Damascus\_1, DizzyRudy\_1
- Track 13 : Camille\_1
- Track 14 : Count\_2
- Track 15 : Teng\_29
- Track 16 : Gingerbug\_25
- Track 17 : DelaGarza\_27, Lesiram\_28
- Track 18 : FuzzBuster\_48

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

The start number called the most often in the published annotations is 15, it was called in 9 of the 22 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Camille\_1, Count\_2, Damascus\_1, DizzyRudy\_1, FuzzBuster\_48, Gingerbug\_25, Jayden\_43, Kozie\_37, Megan\_36,

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

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

- CaptainRex\_22, DelaGarza\_27, Fulton\_23, Greenlvy\_22, Hasitha\_22, HerculesXL\_22, Lesiram\_28, Librie\_22, LilTerminator\_23, QuadZero\_22,

Schimmels22\_22, Teng\_29, Tinyman4\_22, WestPM\_21, Zayuliv\_22, Zepp\_23,

### Summary by start number:

Start 12:

- Found in 5 of 25 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 3 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CaptainRex\_22 (EA5), Fulton\_23 (EA5), Hasitha\_22 (EA5), Librie\_22 (EA5), LiITerminator\_23 (EA5),

Start 13:

- Found in 7 of 25 ( 28.0% ) of genes in pham
- Manual Annotations of this start: 7 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Greenlvy\_22 (EA5), HerculesXL\_22 (EA11), QuadZero\_22 (EA5), Schimmels22\_22 (EA11), Tinyman4\_22 (EA11), Zayuliv\_22 (EA5), Zepp\_23 (EA5),

Start 14:

- Found in 1 of 25 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WestPM\_21 (EA11),

Start 15:

- Found in 9 of 25 ( 36.0% ) of genes in pham
- Manual Annotations of this start: 9 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camille\_1 (EL), Count\_2 (EL), Damascus\_1 (EL), DizzyRudy\_1 (EL), FuzzBuster\_48 (singleton), Gingerbug\_25 (GF), Jayden\_43 (EC), Kozie\_37 (EI), Megan\_36 (EC),

Start 22:

- Found in 3 of 25 ( 12.0% ) of genes in pham
- Manual Annotations of this start: 2 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DelaGarza\_27 (GF), Lesiram\_28 (GF), Teng\_29 (GF),

### Summary by clusters:

There are 7 clusters represented in this pham: EL, singleton, EA11, EC, GF, EI, EA5,

Info for manual annotations of cluster EA11:

- Start number 13 was manually annotated 3 times for cluster EA11.
- Start number 14 was manually annotated 1 time for cluster EA11.

Info for manual annotations of cluster EA5:

- Start number 12 was manually annotated 3 times for cluster EA5.
- Start number 13 was manually annotated 4 times for cluster EA5.

Info for manual annotations of cluster EC:

- Start number 15 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EI:

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

Info for manual annotations of cluster EL:

- Start number 15 was manually annotated 4 times for cluster EL.

Info for manual annotations of cluster GF:

- Start number 15 was manually annotated 1 time for cluster GF.
- Start number 22 was manually annotated 2 times for cluster GF.

### ***Gene Information:***

Gene: Camille\_1 Start: 116, Stop: 358, Start Num: 15

Candidate Starts for Camille\_1:

(7, 71), (11, 89), (Start: 15 @116 has 9 MA's), (19, 146), (31, 263), (32, 275), (34, 281),

Gene: CaptainRex\_22 Start: 16502, Stop: 16759, Start Num: 12

Candidate Starts for CaptainRex\_22:

(Start: 12 @16502 has 3 MA's), (20, 16553), (26, 16607), (35, 16688), (36, 16697),

Gene: Count\_2 Start: 251, Stop: 496, Start Num: 15

Candidate Starts for Count\_2:

(Start: 15 @251 has 9 MA's), (32, 410), (35, 419),

Gene: Damascus\_1 Start: 74, Stop: 313, Start Num: 15

Candidate Starts for Damascus\_1:

(8, 35), (Start: 15 @74 has 9 MA's), (23, 128), (27, 170), (34, 239),

Gene: DelaGarza\_27 Start: 18870, Stop: 19055, Start Num: 22

Candidate Starts for DelaGarza\_27:

(16, 18822), (17, 18825), (Start: 22 @18870 has 2 MA's), (28, 18921), (30, 18945), (32, 18978), (38, 19020), (39, 19038),

Gene: DizzyRudy\_1 Start: 74, Stop: 313, Start Num: 15

Candidate Starts for DizzyRudy\_1:

(8, 35), (Start: 15 @74 has 9 MA's), (23, 128), (27, 170), (34, 239),

Gene: Fulton\_23 Start: 16484, Stop: 16741, Start Num: 12

Candidate Starts for Fulton\_23:

(Start: 12 @16484 has 3 MA's), (20, 16535), (26, 16589), (35, 16670), (36, 16679),

Gene: FuzzBuster\_48 Start: 30251, Stop: 30502, Start Num: 15

Candidate Starts for FuzzBuster\_48:

(9, 30215), (10, 30221), (Start: 15 @30251 has 9 MA's), (25, 30332), (32, 30410), (36, 30428),

Gene: Gingerbug\_25 Start: 18946, Stop: 19185, Start Num: 15

Candidate Starts for Gingerbug\_25:

(Start: 15 @18946 has 9 MA's), (18, 18958), (21, 18982), (28, 19048), (32, 19105), (35, 19114), (38, 19147), (40, 19177),

Gene: Greenlvy\_22 Start: 17076, Stop: 17333, Start Num: 13

Candidate Starts for Greenlvy\_22:

(6, 17034), (Start: 13 @17076 has 7 MA's), (20, 17127), (26, 17181), (35, 17262), (36, 17271),

Gene: Hasitha\_22 Start: 16502, Stop: 16759, Start Num: 12

Candidate Starts for Hasitha\_22:

(Start: 12 @16502 has 3 MA's), (20, 16553), (26, 16607), (32, 16679), (36, 16697),

Gene: HerculesXL\_22 Start: 16593, Stop: 16850, Start Num: 13

Candidate Starts for HerculesXL\_22:

(2, 16365), (6, 16551), (Start: 13 @16593 has 7 MA's), (20, 16644), (36, 16788), (37, 16806), (40, 16842),

Gene: Jayden\_43 Start: 30188, Stop: 30442, Start Num: 15

Candidate Starts for Jayden\_43:

(Start: 15 @30188 has 9 MA's), (18, 30200), (21, 30224), (24, 30263), (27, 30284), (29, 30296), (30, 30314), (35, 30356), (39, 30407),

Gene: Kozie\_37 Start: 29192, Stop: 29446, Start Num: 15

Candidate Starts for Kozie\_37:

(Start: 15 @29192 has 9 MA's), (24, 29267), (28, 29294), (32, 29351), (33, 29354),

Gene: Lesiram\_28 Start: 18839, Stop: 19024, Start Num: 22

Candidate Starts for Lesiram\_28:

(16, 18791), (17, 18794), (Start: 22 @18839 has 2 MA's), (28, 18890), (30, 18914), (32, 18947), (38, 18989), (39, 19007),

Gene: Librie\_22 Start: 16502, Stop: 16759, Start Num: 12

Candidate Starts for Librie\_22:

(Start: 12 @16502 has 3 MA's), (20, 16553), (26, 16607), (35, 16688), (36, 16697),

Gene: LilTerminator\_23 Start: 16508, Stop: 16765, Start Num: 12

Candidate Starts for LilTerminator\_23:

(Start: 12 @16508 has 3 MA's), (20, 16559), (26, 16613), (35, 16694), (36, 16703),

Gene: Megan\_36 Start: 30627, Stop: 30881, Start Num: 15

Candidate Starts for Megan\_36:

(11, 30600), (Start: 15 @30627 has 9 MA's), (18, 30639), (28, 30729), (32, 30786), (35, 30795), (39, 30846),

Gene: QuadZero\_22 Start: 16512, Stop: 16769, Start Num: 13

Candidate Starts for QuadZero\_22:

(1, 16263), (4, 16404), (5, 16419), (Start: 13 @16512 has 7 MA's), (20, 16563), (26, 16617), (35, 16698), (36, 16707),

Gene: Schimmels22\_22 Start: 16956, Stop: 17213, Start Num: 13

Candidate Starts for Schimmels22\_22:

(6, 16914), (Start: 13 @16956 has 7 MA's), (20, 17007), (36, 17151), (37, 17169), (40, 17205),

Gene: Teng\_29 Start: 18889, Stop: 19074, Start Num: 22

Candidate Starts for Teng\_29:

(16, 18841), (17, 18844), (Start: 22 @18889 has 2 MA's), (28, 18940), (30, 18964), (32, 18997), (33, 19000), (39, 19057),

Gene: Tinyman4\_22 Start: 16593, Stop: 16850, Start Num: 13

Candidate Starts for Tinyman4\_22:

(2, 16365), (6, 16551), (Start: 13 @16593 has 7 MA's), (20, 16644), (36, 16788), (37, 16806), (40, 16842),

Gene: WestPM\_21 Start: 16437, Stop: 16694, Start Num: 14

Candidate Starts for WestPM\_21:

(4, 16326), (5, 16341), (Start: 14 @16437 has 1 MA's), (20, 16488), (33, 16617), (36, 16632), (37, 16650), (40, 16686),

Gene: Zayuliv\_22 Start: 17098, Stop: 17355, Start Num: 13

Candidate Starts for Zayuliv\_22:

(6, 17056), (Start: 13 @17098 has 7 MA's), (20, 17149), (26, 17203), (35, 17284), (36, 17293),

Gene: Zepp\_23 Start: 16496, Stop: 16753, Start Num: 13

Candidate Starts for Zepp\_23:

(1, 16247), (3, 16343), (4, 16388), (5, 16403), (Start: 13 @16496 has 7 MA's), (20, 16547), (26, 16601), (35, 16682), (36, 16691),