



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 192879 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192879 has 22 members, 2 are drafts.

Phages represented in each track:

- Track 1 : QuadZero\_42
- Track 2 : Hasitha\_42, CaptainRex\_42, Librie\_42, Fulton\_42
- Track 3 : Zayuliv\_42
- Track 4 : Greenlvy\_41
- Track 5 : LilTerminator\_42
- Track 6 : Zepp\_42
- Track 7 : Juicer\_43, Jemerald\_43
- Track 8 : WilliamStrong\_42
- Track 9 : FireCastle\_45
- Track 10 : Htur\_46
- Track 11 : Rasovi\_46
- Track 12 : Sucha\_44
- Track 13 : Benry\_46, IndiRoo\_48
- Track 14 : PermaG\_46
- Track 15 : Milani\_44
- Track 16 : Pickles13\_59
- Track 17 : Huwbert\_18

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

The start number called the most often in the published annotations is 7, it was called in 13 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- CaptainRex\_42, FireCastle\_45, Fulton\_42, Greenlvy\_41, Hasitha\_42, Jemerald\_43, Juicer\_43, Librie\_42, LilTerminator\_42, PermaG\_46, QuadZero\_42, WilliamStrong\_42, Zayuliv\_42, Zepp\_42,

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:

- Benry\_46, Htur\_46, Huwbert\_18, IndiRoo\_48, Milani\_44, Pickles13\_59, Rasovi\_46, Sucha\_44,

## Summary by start number:

### Start 5:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pickles13\_59 (GA),

### Start 6:

- Found in 3 of 22 ( 13.6% ) of genes in pham
- Manual Annotations of this start: 3 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Htur\_46 (EJ), Huwbert\_18 (GG), Rasovi\_46 (EJ),

### Start 7:

- Found in 14 of 22 ( 63.6% ) of genes in pham
- Manual Annotations of this start: 13 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CaptainRex\_42 (EA5), FireCastle\_45 (EJ), Fulton\_42 (EA5), Greenlvy\_41 (EA5), Hasitha\_42 (EA5), Jemerald\_43 (EA6), Juicer\_43 (EA6), Librie\_42 (EA5), LilTerminator\_42 (EA5), PermaG\_46 (EJ), QuadZero\_42 (EA5), WilliamStrong\_42 (EA6), Zayuliv\_42 (EA5), Zepp\_42 (EA5),

### Start 8:

- Found in 4 of 22 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 3 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Benry\_46 (EJ), IndiRoo\_48 (EJ), Milani\_44 (EJ), Sucha\_44 (EJ),

## Summary by clusters:

There are 5 clusters represented in this pham: GG, EJ, EA5, GA, EA6,

### Info for manual annotations of cluster EA5:

- Start number 7 was manually annotated 8 times for cluster EA5.

### Info for manual annotations of cluster EA6:

- Start number 7 was manually annotated 3 times for cluster EA6.

### Info for manual annotations of cluster EJ:

- Start number 6 was manually annotated 2 times for cluster EJ.
- Start number 7 was manually annotated 2 times for cluster EJ.
- Start number 8 was manually annotated 3 times for cluster EJ.

### Info for manual annotations of cluster GA:

- Start number 5 was manually annotated 1 time for cluster GA.

### Info for manual annotations of cluster GG:

- Start number 6 was manually annotated 1 time for cluster GG.

**Gene Information:**

Gene: Benry\_46 Start: 28257, Stop: 28490, Start Num: 8

Candidate Starts for Benry\_46:

(Start: 8 @28257 has 3 MA's), (10, 28281), (13, 28308), (19, 28359), (21, 28380), (26, 28419), (28, 28431), (30, 28437), (39, 28470),

Gene: CaptainRex\_42 Start: 29567, Stop: 29343, Start Num: 7

Candidate Starts for CaptainRex\_42:

(Start: 7 @29567 has 13 MA's), (27, 29408), (28, 29402), (30, 29396), (31, 29393),

Gene: FireCastle\_45 Start: 29401, Stop: 29607, Start Num: 7

Candidate Starts for FireCastle\_45:

(4, 29392), (Start: 7 @29401 has 13 MA's), (10, 29425), (11, 29428), (12, 29449), (15, 29467), (16, 29470), (18, 29476), (27, 29563), (31, 29578),

Gene: Fulton\_42 Start: 29568, Stop: 29344, Start Num: 7

Candidate Starts for Fulton\_42:

(Start: 7 @29568 has 13 MA's), (27, 29409), (28, 29403), (30, 29397), (31, 29394),

Gene: Greenlvy\_41 Start: 29908, Stop: 29678, Start Num: 7

Candidate Starts for Greenlvy\_41:

(Start: 7 @29908 has 13 MA's), (27, 29749), (28, 29743), (30, 29737), (31, 29734), (34, 29722), (41, 29695),

Gene: Hasitha\_42 Start: 29580, Stop: 29356, Start Num: 7

Candidate Starts for Hasitha\_42:

(Start: 7 @29580 has 13 MA's), (27, 29421), (28, 29415), (30, 29409), (31, 29406),

Gene: Htur\_46 Start: 29833, Stop: 30033, Start Num: 6

Candidate Starts for Htur\_46:

(4, 29827), (Start: 6 @29833 has 3 MA's), (11, 29860), (16, 29902), (17, 29905), (18, 29908), (25, 29983),

Gene: Huwbert\_18 Start: 6388, Stop: 6663, Start Num: 6

Candidate Starts for Huwbert\_18:

(Start: 6 @6388 has 3 MA's), (10, 6427), (22, 6556), (26, 6574), (29, 6592), (31, 6598), (37, 6619),

Gene: IndiRoo\_48 Start: 28373, Stop: 28606, Start Num: 8

Candidate Starts for IndiRoo\_48:

(Start: 8 @28373 has 3 MA's), (10, 28397), (13, 28424), (19, 28475), (21, 28496), (26, 28535), (28, 28547), (30, 28553), (39, 28586),

Gene: Jemerald\_43 Start: 31971, Stop: 31714, Start Num: 7

Candidate Starts for Jemerald\_43:

(3, 31986), (Start: 7 @31971 has 13 MA's), (13, 31908), (19, 31857), (24, 31797), (38, 31743),

Gene: Juicer\_43 Start: 31971, Stop: 31714, Start Num: 7

Candidate Starts for Juicer\_43:

(3, 31986), (Start: 7 @31971 has 13 MA's), (13, 31908), (19, 31857), (24, 31797), (38, 31743),

Gene: Librie\_42 Start: 29567, Stop: 29343, Start Num: 7  
Candidate Starts for Librie\_42:  
(Start: 7 @29567 has 13 MA's), (27, 29408), (28, 29402), (30, 29396), (31, 29393),

Gene: LilTerminator\_42 Start: 29589, Stop: 29365, Start Num: 7  
Candidate Starts for LilTerminator\_42:  
(Start: 7 @29589 has 13 MA's), (27, 29430), (31, 29415), (32, 29409),

Gene: Milani\_44 Start: 28679, Stop: 28912, Start Num: 8  
Candidate Starts for Milani\_44:  
(Start: 8 @28679 has 3 MA's), (10, 28703), (11, 28706), (13, 28730), (19, 28781), (21, 28802), (23, 28832), (30, 28859), (39, 28892),

Gene: PermaG\_46 Start: 29499, Stop: 29699, Start Num: 7  
Candidate Starts for PermaG\_46:  
(1, 29385), (2, 29424), (4, 29490), (Start: 7 @29499 has 13 MA's), (10, 29523), (11, 29526), (15, 29565), (17, 29571), (18, 29574), (22, 29643), (36, 29694),

Gene: Pickles13\_59 Start: 35548, Stop: 35790, Start Num: 5  
Candidate Starts for Pickles13\_59:  
(Start: 5 @35548 has 1 MA's), (37, 35755), (38, 35758), (39, 35764),

Gene: QuadZero\_42 Start: 29737, Stop: 29513, Start Num: 7  
Candidate Starts for QuadZero\_42:  
(Start: 7 @29737 has 13 MA's), (14, 29689), (27, 29578), (28, 29572),

Gene: Rasovi\_46 Start: 29833, Stop: 30033, Start Num: 6  
Candidate Starts for Rasovi\_46:  
(4, 29827), (Start: 6 @29833 has 3 MA's), (11, 29860), (16, 29902), (17, 29905), (18, 29908), (25, 29983), (26, 29986),

Gene: Sucha\_44 Start: 27874, Stop: 28107, Start Num: 8  
Candidate Starts for Sucha\_44:  
(Start: 8 @27874 has 3 MA's), (10, 27898), (13, 27925), (19, 27976), (20, 27982), (21, 27997), (26, 28036), (28, 28048), (30, 28054), (39, 28087),

Gene: WilliamStrong\_42 Start: 31432, Stop: 31187, Start Num: 7  
Candidate Starts for WilliamStrong\_42:  
(Start: 7 @31432 has 13 MA's), (9, 31414), (10, 31396), (19, 31318), (28, 31246), (29, 31243), (31, 31237), (33, 31228), (34, 31225), (35, 31219), (40, 31207),

Gene: Zayuliv\_42 Start: 30190, Stop: 29966, Start Num: 7  
Candidate Starts for Zayuliv\_42:  
(Start: 7 @30190 has 13 MA's), (27, 30031), (31, 30016),

Gene: Zepp\_42 Start: 29624, Stop: 29400, Start Num: 7  
Candidate Starts for Zepp\_42:  
(Start: 7 @29624 has 13 MA's), (27, 29465), (28, 29459), (30, 29453), (31, 29450), (37, 29429),