



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 301465 Report

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

Pham number 301465 has 50 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Minerva\_124, Optimus\_117, Hughesyang\_126, BAKA\_126, Zelink\_121, Duke13\_121, Wanda\_125, Constella\_116
- Track 2 : Schatzie\_122, Pound\_115, Kalah2\_117, DmpstrDiver\_126, Klein\_122, Bagrid\_126
- Track 3 : Bombitas\_114, Yeet\_118
- Track 4 : Beem\_128, Thibault\_108, Xiaokay\_120, JuicyJay\_123, Redno2\_118, Phoebus\_127, HokkenD\_116
- Track 5 : Marleymoo\_111, Bobby\_118
- Track 6 : MiaZeal\_122, Shaboozey\_123, Courthouse\_117, Nibley\_119, Superphikiman\_119, BronnyJames\_119, Ariel\_122, LittleE\_126, Rearden\_120, Squint\_120
- Track 7 : Lucky2013\_119, Hannaconda\_113, Nekros\_125, Porcelain\_122, KashFlow\_119
- Track 8 : EricMillard\_118
- Track 9 : Gonephishing\_116
- Track 10 : Omega\_133
- Track 11 : Ejimix\_120, Dove\_112, Hidrated\_111, Dallas\_127, Halley\_128
- Track 12 : ThreeRngTarjay\_122
- Track 13 : NihilNomen\_128

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

The start number called the most often in the published annotations is 9, it was called in 28 of the 40 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BAKA\_126, Bagrid\_126, Beem\_128, Bobby\_118, Bombitas\_114, Constella\_116, Dallas\_127, DmpstrDiver\_126, Dove\_112, Duke13\_121, Ejimix\_120, Halley\_128, Hidrated\_111, HokkenD\_116, Hughesyang\_126, JuicyJay\_123, Kalah2\_117, Klein\_122, Marleymoo\_111, Minerva\_124, NihilNomen\_128, Optimus\_117, Phoebus\_127, Pound\_115, Redno2\_118, Schatzie\_122, Thibault\_108, ThreeRngTarjay\_122, Wanda\_125, Xiaokay\_120, Yeet\_118, Zelink\_121,

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

- EricMillard\_118,

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

- Ariel\_122, BronnyJames\_119, Courthouse\_117, Gonephishing\_116, Hannaconda\_113, KashFlow\_119, LittleE\_126, Lucky2013\_119, MiaZeal\_122, Nekros\_125, Nibley\_119, Omega\_133, Porcelain\_122, Rearden\_120, Shaboozey\_123, Squint\_120, Superphikiman\_119,

### Summary by start number:

Start 1:

- Found in 11 of 50 ( 22.0% ) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 9.1% of time when present
- Phage (with cluster) where this start called: EricMillard\_118 (J),

Start 8:

- Found in 6 of 50 ( 12.0% ) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Omega\_133 (J),

Start 9:

- Found in 33 of 50 ( 66.0% ) of genes in pham
- Manual Annotations of this start: 28 of 40
- Called 97.0% of time when present
- Phage (with cluster) where this start called: BAKA\_126 (J), Bagrid\_126 (J), Beem\_128 (J), Bobby\_118 (J), Bombitas\_114 (J), Constella\_116 (J), Dallas\_127 (J), DmpstrDiver\_126 (J), Dove\_112 (J), Duke13\_121 (J), Ejimix\_120 (J), Halley\_128 (J), Hidrated\_111 (J), HokkenD\_116 (J), Hughesyang\_126 (J), JuicyJay\_123 (J), Kalah2\_117 (J), Klein\_122 (J), Marleymoo\_111 (J), Minerva\_124 (J), NihilNomen\_128 (J), Optimus\_117 (J), Phoebus\_127 (J), Pound\_115 (J), Redno2\_118 (J), Schatzie\_122 (J), Thibault\_108 (J), ThreeRngTarjay\_122 (J), Wanda\_125 (J), Xiaokay\_120 (J), Yeet\_118 (J), Zelink\_121 (J),

Start 10:

- Found in 17 of 50 ( 34.0% ) of genes in pham
- Manual Annotations of this start: 10 of 40
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Ariel\_122 (J), BronnyJames\_119 (J), Courthouse\_117 (J), Gonephishing\_116 (J), Hannaconda\_113 (J), KashFlow\_119 (J), LittleE\_126 (J), Lucky2013\_119 (J), MiaZeal\_122 (J), Nekros\_125 (J), Nibley\_119 (J), Porcelain\_122 (J), Rearden\_120 (J), Shaboozey\_123 (J), Squint\_120 (J), Superphikiman\_119 (J),

### Summary by clusters:

There is one cluster represented in this pham: J

Info for manual annotations of cluster J:

- Start number 1 was manually annotated 1 time for cluster J.
- Start number 8 was manually annotated 1 time for cluster J.
- Start number 9 was manually annotated 28 times for cluster J.

- Start number 10 was manually annotated 10 times for cluster J.

**Gene Information:**

Gene: Ariel\_122 Start: 65393, Stop: 65701, Start Num: 10

Candidate Starts for Ariel\_122:

(4, 65330), (6, 65342), (Start: 10 @65393 has 10 MA's),

Gene: BAKA\_126 Start: 68936, Stop: 69253, Start Num: 9

Candidate Starts for BAKA\_126:

(Start: 1 @68855 has 1 MA's), (Start: 9 @68936 has 28 MA's), (11, 68978), (12, 69026), (14, 69224),

Gene: Bagrid\_126 Start: 69047, Stop: 69364, Start Num: 9

Candidate Starts for Bagrid\_126:

(7, 69035), (Start: 9 @69047 has 28 MA's), (11, 69089), (12, 69137), (14, 69335),

Gene: Beem\_128 Start: 70519, Stop: 70836, Start Num: 9

Candidate Starts for Beem\_128:

(3, 70453), (6, 70474), (Start: 9 @70519 has 28 MA's), (11, 70561), (12, 70609), (13, 70786), (14, 70807),

Gene: Bobby\_118 Start: 70119, Stop: 70436, Start Num: 9

Candidate Starts for Bobby\_118:

(2, 70050), (3, 70053), (6, 70074), (Start: 9 @70119 has 28 MA's), (11, 70161), (12, 70209), (14, 70407),

Gene: Bombitas\_114 Start: 67933, Stop: 68247, Start Num: 9

Candidate Starts for Bombitas\_114:

(7, 67921), (Start: 9 @67933 has 28 MA's), (13, 68197), (14, 68218),

Gene: BronnyJames\_119 Start: 66373, Stop: 66681, Start Num: 10

Candidate Starts for BronnyJames\_119:

(4, 66310), (6, 66322), (Start: 10 @66373 has 10 MA's),

Gene: Constella\_116 Start: 66023, Stop: 66340, Start Num: 9

Candidate Starts for Constella\_116:

(Start: 1 @65942 has 1 MA's), (Start: 9 @66023 has 28 MA's), (11, 66065), (12, 66113), (14, 66311),

Gene: Courthouse\_117 Start: 64993, Stop: 65301, Start Num: 10

Candidate Starts for Courthouse\_117:

(4, 64930), (6, 64942), (Start: 10 @64993 has 10 MA's),

Gene: Dallas\_127 Start: 70034, Stop: 70351, Start Num: 9

Candidate Starts for Dallas\_127:

(3, 69968), (6, 69989), (Start: 9 @70034 has 28 MA's), (11, 70076), (12, 70124), (14, 70322),

Gene: DmpstrDiver\_126 Start: 69336, Stop: 69653, Start Num: 9

Candidate Starts for DmpstrDiver\_126:

(7, 69324), (Start: 9 @69336 has 28 MA's), (11, 69378), (12, 69426), (14, 69624),

Gene: Dove\_112 Start: 64947, Stop: 65264, Start Num: 9

Candidate Starts for Dove\_112:

(3, 64881), (6, 64902), (Start: 9 @64947 has 28 MA's), (11, 64989), (12, 65037), (14, 65235),

Gene: Duke13\_121 Start: 66604, Stop: 66921, Start Num: 9

Candidate Starts for Duke13\_121:

(Start: 1 @66523 has 1 MA's), (Start: 9 @66604 has 28 MA's), (11, 66646), (12, 66694), (14, 66892),

Gene: Ejimix\_120 Start: 70102, Stop: 70419, Start Num: 9

Candidate Starts for Ejimix\_120:

(3, 70036), (6, 70057), (Start: 9 @70102 has 28 MA's), (11, 70144), (12, 70192), (14, 70390),

Gene: EricMillard\_118 Start: 68492, Stop: 68890, Start Num: 1

Candidate Starts for EricMillard\_118:

(Start: 1 @68492 has 1 MA's), (Start: 9 @68573 has 28 MA's), (11, 68615), (12, 68663), (14, 68861),

Gene: Gonephishing\_116 Start: 64412, Stop: 64720, Start Num: 10

Candidate Starts for Gonephishing\_116:

(Start: 10 @64412 has 10 MA's),

Gene: Halley\_128 Start: 70418, Stop: 70735, Start Num: 9

Candidate Starts for Halley\_128:

(3, 70352), (6, 70373), (Start: 9 @70418 has 28 MA's), (11, 70460), (12, 70508), (14, 70706),

Gene: Hannaconda\_113 Start: 64342, Stop: 64650, Start Num: 10

Candidate Starts for Hannaconda\_113:

(Start: 8 @64330 has 1 MA's), (Start: 10 @64342 has 10 MA's),

Gene: Hidrated\_111 Start: 66687, Stop: 67004, Start Num: 9

Candidate Starts for Hidrated\_111:

(3, 66621), (6, 66642), (Start: 9 @66687 has 28 MA's), (11, 66729), (12, 66777), (14, 66975),

Gene: HokkenD\_116 Start: 68748, Stop: 69065, Start Num: 9

Candidate Starts for HokkenD\_116:

(3, 68682), (6, 68703), (Start: 9 @68748 has 28 MA's), (11, 68790), (12, 68838), (13, 69015), (14, 69036),

Gene: Hughesyang\_126 Start: 70110, Stop: 70427, Start Num: 9

Candidate Starts for Hughesyang\_126:

(Start: 1 @70029 has 1 MA's), (Start: 9 @70110 has 28 MA's), (11, 70152), (12, 70200), (14, 70398),

Gene: JuicyJay\_123 Start: 71655, Stop: 71972, Start Num: 9

Candidate Starts for JuicyJay\_123:

(3, 71589), (6, 71610), (Start: 9 @71655 has 28 MA's), (11, 71697), (12, 71745), (13, 71922), (14, 71943),

Gene: Kalah2\_117 Start: 68949, Stop: 69266, Start Num: 9

Candidate Starts for Kalah2\_117:

(7, 68937), (Start: 9 @68949 has 28 MA's), (11, 68991), (12, 69039), (14, 69237),

Gene: KashFlow\_119 Start: 66847, Stop: 67155, Start Num: 10

Candidate Starts for KashFlow\_119:

(Start: 8 @66835 has 1 MA's), (Start: 10 @66847 has 10 MA's),

Gene: Klein\_122 Start: 67306, Stop: 67623, Start Num: 9  
Candidate Starts for Klein\_122:  
(7, 67294), (Start: 9 @67306 has 28 MA's), (11, 67348), (12, 67396), (14, 67594),

Gene: LittleE\_126 Start: 68598, Stop: 68906, Start Num: 10  
Candidate Starts for LittleE\_126:  
(4, 68535), (6, 68547), (Start: 10 @68598 has 10 MA's),

Gene: Lucky2013\_119 Start: 65726, Stop: 66034, Start Num: 10  
Candidate Starts for Lucky2013\_119:  
(Start: 8 @65714 has 1 MA's), (Start: 10 @65726 has 10 MA's),

Gene: Marleymoo\_111 Start: 65865, Stop: 66182, Start Num: 9  
Candidate Starts for Marleymoo\_111:  
(2, 65796), (3, 65799), (6, 65820), (Start: 9 @65865 has 28 MA's), (11, 65907), (12, 65955), (14, 66153),

Gene: MiaZeal\_122 Start: 66071, Stop: 66379, Start Num: 10  
Candidate Starts for MiaZeal\_122:  
(4, 66008), (6, 66020), (Start: 10 @66071 has 10 MA's),

Gene: Minerva\_124 Start: 68711, Stop: 69028, Start Num: 9  
Candidate Starts for Minerva\_124:  
(Start: 1 @68630 has 1 MA's), (Start: 9 @68711 has 28 MA's), (11, 68753), (12, 68801), (14, 68999),

Gene: Nekros\_125 Start: 69567, Stop: 69875, Start Num: 10  
Candidate Starts for Nekros\_125:  
(Start: 8 @69555 has 1 MA's), (Start: 10 @69567 has 10 MA's),

Gene: Nibley\_119 Start: 65950, Stop: 66258, Start Num: 10  
Candidate Starts for Nibley\_119:  
(4, 65887), (6, 65899), (Start: 10 @65950 has 10 MA's),

Gene: NihilNomen\_128 Start: 69600, Stop: 69917, Start Num: 9  
Candidate Starts for NihilNomen\_128:  
(Start: 1 @69519 has 1 MA's), (Start: 9 @69600 has 28 MA's), (11, 69642), (12, 69690), (13, 69867), (14, 69888),

Gene: Omega\_133 Start: 70267, Stop: 70587, Start Num: 8  
Candidate Starts for Omega\_133:  
(Start: 8 @70267 has 1 MA's), (Start: 10 @70279 has 10 MA's),

Gene: Optimus\_117 Start: 67107, Stop: 67424, Start Num: 9  
Candidate Starts for Optimus\_117:  
(Start: 1 @67026 has 1 MA's), (Start: 9 @67107 has 28 MA's), (11, 67149), (12, 67197), (14, 67395),

Gene: Phoebus\_127 Start: 71464, Stop: 71781, Start Num: 9  
Candidate Starts for Phoebus\_127:  
(3, 71398), (6, 71419), (Start: 9 @71464 has 28 MA's), (11, 71506), (12, 71554), (13, 71731), (14, 71752),

Gene: Porcelain\_122 Start: 66672, Stop: 66980, Start Num: 10  
Candidate Starts for Porcelain\_122:

(Start: 8 @66660 has 1 MA's), (Start: 10 @66672 has 10 MA's),

Gene: Pound\_115 Start: 67880, Stop: 68197, Start Num: 9

Candidate Starts for Pound\_115:

(7, 67868), (Start: 9 @67880 has 28 MA's), (11, 67922), (12, 67970), (14, 68168),

Gene: Rearden\_120 Start: 65970, Stop: 66278, Start Num: 10

Candidate Starts for Rearden\_120:

(4, 65907), (6, 65919), (Start: 10 @65970 has 10 MA's),

Gene: Redno2\_118 Start: 66930, Stop: 67247, Start Num: 9

Candidate Starts for Redno2\_118:

(3, 66864), (6, 66885), (Start: 9 @66930 has 28 MA's), (11, 66972), (12, 67020), (13, 67197), (14, 67218),

Gene: Schatzie\_122 Start: 69560, Stop: 69877, Start Num: 9

Candidate Starts for Schatzie\_122:

(7, 69548), (Start: 9 @69560 has 28 MA's), (11, 69602), (12, 69650), (14, 69848),

Gene: Shaboozey\_123 Start: 66394, Stop: 66702, Start Num: 10

Candidate Starts for Shaboozey\_123:

(4, 66331), (6, 66343), (Start: 10 @66394 has 10 MA's),

Gene: Squint\_120 Start: 66184, Stop: 66492, Start Num: 10

Candidate Starts for Squint\_120:

(4, 66121), (6, 66133), (Start: 10 @66184 has 10 MA's),

Gene: Superphikiman\_119 Start: 65275, Stop: 65583, Start Num: 10

Candidate Starts for Superphikiman\_119:

(4, 65212), (6, 65224), (Start: 10 @65275 has 10 MA's),

Gene: Thibault\_108 Start: 64265, Stop: 64582, Start Num: 9

Candidate Starts for Thibault\_108:

(3, 64199), (6, 64220), (Start: 9 @64265 has 28 MA's), (11, 64307), (12, 64355), (13, 64532), (14, 64553),

Gene: ThreeRngTarjay\_122 Start: 70055, Stop: 70372, Start Num: 9

Candidate Starts for ThreeRngTarjay\_122:

(Start: 1 @69974 has 1 MA's), (5, 70001), (Start: 9 @70055 has 28 MA's), (11, 70097), (12, 70145), (14, 70343),

Gene: Wanda\_125 Start: 67190, Stop: 67507, Start Num: 9

Candidate Starts for Wanda\_125:

(Start: 1 @67109 has 1 MA's), (Start: 9 @67190 has 28 MA's), (11, 67232), (12, 67280), (14, 67478),

Gene: Xiaokay\_120 Start: 67161, Stop: 67478, Start Num: 9

Candidate Starts for Xiaokay\_120:

(3, 67095), (6, 67116), (Start: 9 @67161 has 28 MA's), (11, 67203), (12, 67251), (13, 67428), (14, 67449),

Gene: Yeet\_118 Start: 68813, Stop: 69127, Start Num: 9

Candidate Starts for Yeet\_118:

(7, 68801), (Start: 9 @68813 has 28 MA's), (13, 69077), (14, 69098),

Gene: Zelink\_121 Start: 70002, Stop: 70319, Start Num: 9

Candidate Starts for Zelink\_121:

(Start: 1 @69921 has 1 MA's), (Start: 9 @70002 has 28 MA's), (11, 70044), (12, 70092), (14, 70290),