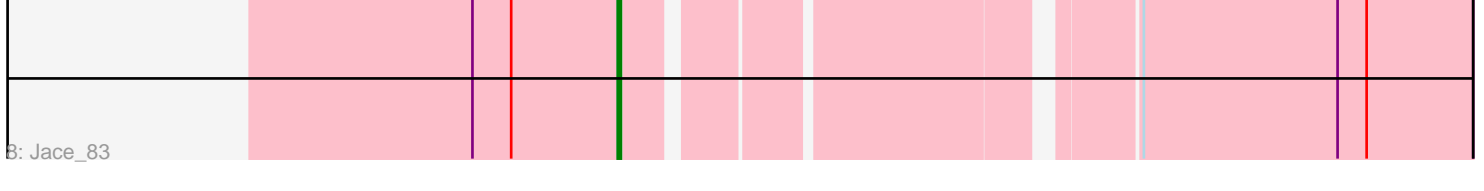
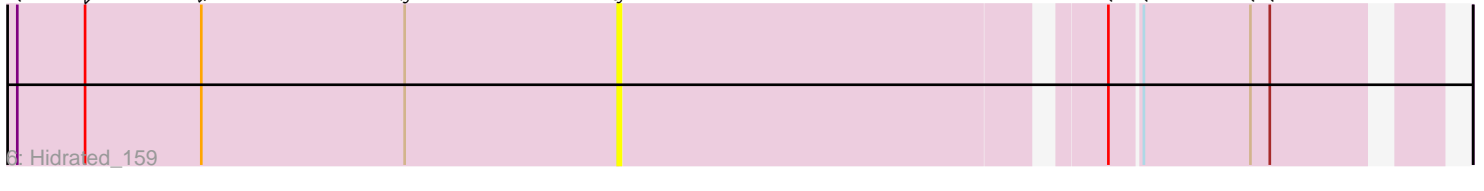
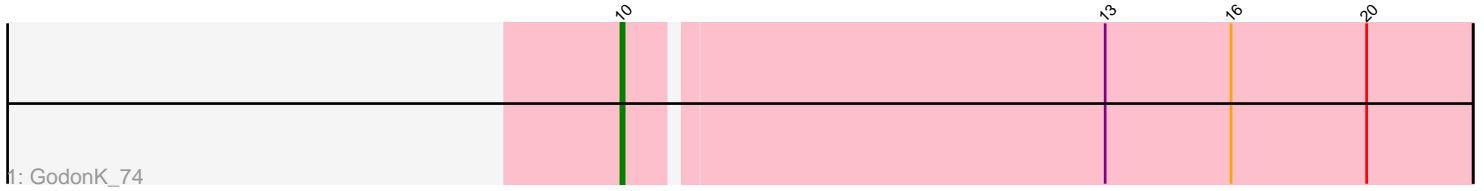


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 308726 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308726 has 53 members, 11 are drafts.

Phages represented in each track:

- Track 1 : GodonK\_74
- Track 2 : Klein\_170, Redno2\_160, Yeet\_158, Beem\_167, Halley\_167, Bobby\_159, Hughesyang\_165, Constella\_162, Xiaokay\_162, Odette\_170, ThreeRngTarjay\_163, Dove\_153, Duke13\_169, HokkenD\_161, Optimus\_165, Schatzie\_161, JuicyJay\_161, EricMillard\_164, Bagrid\_175, Kalah2\_163, Ejimix\_157, NihilNomen\_168, Thibault\_150, BAKA\_172, Phoebus\_167, Zelink\_159, Wanda\_164, Bombitas\_153, Minerva\_166, Dallas\_166, Pound\_160
- Track 3 : Squint\_162, LittleE\_174, BronnyJames\_162, Ariel\_167, Superphikiman\_165, MiaZeal\_170, Courthouse\_164, Shaboozey\_165, Porcelain\_167, Nekros\_165, Nibley\_160, Lucky2013\_163
- Track 4 : Marleymoo\_153, DmpstrDiver\_167
- Track 5 : Hannaconda\_159, Gonephishing\_160, Rearden\_166
- Track 6 : Hidrated\_159
- Track 7 : Omega\_175, KashFlow\_164
- Track 8 : Jace\_83

### ***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 41 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel\_167, BAKA\_172, Bagrid\_175, Beem\_167, Bobby\_159, Bombitas\_153, BronnyJames\_162, Constella\_162, Courthouse\_164, Dallas\_166, DmpstrDiver\_167, Dove\_153, Duke13\_169, Ejimix\_157, EricMillard\_164, Gonephishing\_160, Halley\_167, Hannaconda\_159, Hidrated\_159, HokkenD\_161, Hughesyang\_165, Jace\_83, JuicyJay\_161, Kalah2\_163, KashFlow\_164, Klein\_170, LittleE\_174, Lucky2013\_163, Marleymoo\_153, MiaZeal\_170, Minerva\_166, Nekros\_165, Nibley\_160, NihilNomen\_168, Odette\_170, Omega\_175, Optimus\_165, Phoebus\_167, Porcelain\_167, Pound\_160, Rearden\_166, Redno2\_160, Schatzie\_161, Shaboozey\_165, Squint\_162, Superphikiman\_165, Thibault\_150, ThreeRngTarjay\_163, Wanda\_164, Xiaokay\_162, Yeet\_158, Zelink\_159,

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

- 

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

- GodonK\_74,

### Summary by start number:

Start 9:

- Found in 52 of 53 ( 98.1% ) of genes in pham
- Manual Annotations of this start: 41 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel\_167 (J), BAKA\_172 (J), Bagrid\_175 (J), Beem\_167 (J), Bobby\_159 (J), Bombitas\_153 (J), BronnyJames\_162 (J), Constella\_162 (J), Courthouse\_164 (J), Dallas\_166 (J), DmpstrDiver\_167 (J), Dove\_153 (J), Duke13\_169 (J), Ejimix\_157 (J), EricMillard\_164 (J), Gonephishing\_160 (J), Halley\_167 (J), Hannaconda\_159 (J), Hidrated\_159 (J), HokkenD\_161 (J), Hughesyang\_165 (J), Jace\_83 (singleton), JuicyJay\_161 (J), Kalah2\_163 (J), KashFlow\_164 (J), Klein\_170 (J), LittleE\_174 (J), Lucky2013\_163 (J), Marleymoo\_153 (J), MiaZeal\_170 (J), Minerva\_166 (J), Nekros\_165 (J), Nibley\_160 (J), NihilNomen\_168 (J), Odette\_170 (J), Omega\_175 (J), Optimus\_165 (J), Phoebus\_167 (J), Porcelain\_167 (J), Pound\_160 (J), Rearden\_166 (J), Redno2\_160 (J), Schatzie\_161 (J), Shaboozey\_165 (J), Squint\_162 (J), Superphikiman\_165 (J), Thibault\_150 (J), ThreeRngTarjay\_163 (J), Wanda\_164 (J), Xiaokay\_162 (J), Yeet\_158 (J), Zelink\_159 (J),

Start 10:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GodonK\_74 (DK),

### Summary by clusters:

There are 3 clusters represented in this pham: singleton, J, DK,

Info for manual annotations of cluster DK:

- Start number 10 was manually annotated 1 time for cluster DK.

Info for manual annotations of cluster J:

- Start number 9 was manually annotated 40 times for cluster J.

### Gene Information:

Gene: Ariel\_167 Start: 85326, Stop: 85568, Start Num: 9

Candidate Starts for Ariel\_167:

(Start: 9 @85326 has 41 MA's), (11, 85431), (12, 85461), (14, 85467), (17, 85509), (21, 85554),

Gene: BAKA\_172 Start: 90313, Stop: 90546, Start Num: 9

Candidate Starts for BAKA\_172:

(Start: 9 @90313 has 41 MA's), (14, 90454), (15, 90463), (17, 90496), (18, 90502),

Gene: Bagrid\_175 Start: 90675, Stop: 90908, Start Num: 9

Candidate Starts for Bagrid\_175:

(Start: 9 @90675 has 41 MA's), (14, 90816), (15, 90825), (17, 90858), (18, 90864),

Gene: Beem\_167 Start: 89468, Stop: 89701, Start Num: 9

Candidate Starts for Beem\_167:

(Start: 9 @89468 has 41 MA's), (14, 89609), (15, 89618), (17, 89651), (18, 89657),

Gene: Bobby\_159 Start: 90463, Stop: 90696, Start Num: 9

Candidate Starts for Bobby\_159:

(Start: 9 @90463 has 41 MA's), (14, 90604), (15, 90613), (17, 90646), (18, 90652),

Gene: Bombitas\_153 Start: 85698, Stop: 85931, Start Num: 9

Candidate Starts for Bombitas\_153:

(Start: 9 @85698 has 41 MA's), (14, 85839), (15, 85848), (17, 85881), (18, 85887),

Gene: BronnyJames\_162 Start: 85372, Stop: 85614, Start Num: 9

Candidate Starts for BronnyJames\_162:

(Start: 9 @85372 has 41 MA's), (11, 85477), (12, 85507), (14, 85513), (17, 85555), (21, 85600),

Gene: Constella\_162 Start: 88202, Stop: 88435, Start Num: 9

Candidate Starts for Constella\_162:

(Start: 9 @88202 has 41 MA's), (14, 88343), (15, 88352), (17, 88385), (18, 88391),

Gene: Courthouse\_164 Start: 85770, Stop: 86012, Start Num: 9

Candidate Starts for Courthouse\_164:

(Start: 9 @85770 has 41 MA's), (11, 85875), (12, 85905), (14, 85911), (17, 85953), (21, 85998),

Gene: Dallas\_166 Start: 88691, Stop: 88924, Start Num: 9

Candidate Starts for Dallas\_166:

(Start: 9 @88691 has 41 MA's), (14, 88832), (15, 88841), (17, 88874), (18, 88880),

Gene: DmpstrDiver\_167 Start: 88386, Stop: 88619, Start Num: 9

Candidate Starts for DmpstrDiver\_167:

(5, 88320), (6, 88338), (Start: 9 @88386 has 41 MA's), (14, 88527), (15, 88536), (17, 88569), (18, 88575),

Gene: Dove\_153 Start: 84054, Stop: 84287, Start Num: 9

Candidate Starts for Dove\_153:

(Start: 9 @84054 has 41 MA's), (14, 84195), (15, 84204), (17, 84237), (18, 84243),

Gene: Duke13\_169 Start: 88809, Stop: 89042, Start Num: 9

Candidate Starts for Duke13\_169:

(Start: 9 @88809 has 41 MA's), (14, 88950), (15, 88959), (17, 88992), (18, 88998),

Gene: Ejimix\_157 Start: 87679, Stop: 87912, Start Num: 9

Candidate Starts for Ejimix\_157:

(Start: 9 @87679 has 41 MA's), (14, 87820), (15, 87829), (17, 87862), (18, 87868),

Gene: EricMillard\_164 Start: 89285, Stop: 89518, Start Num: 9

Candidate Starts for EricMillard\_164:

(Start: 9 @89285 has 41 MA's), (14, 89426), (15, 89435), (17, 89468), (18, 89474),

Gene: GodonK\_74 Start: 35167, Stop: 35424, Start Num: 10  
Candidate Starts for GodonK\_74:  
(Start: 10 @35167 has 1 MA's), (13, 35311), (16, 35350), (20, 35392),

Gene: Gonephishing\_160 Start: 86587, Stop: 86829, Start Num: 9  
Candidate Starts for Gonephishing\_160:  
(3, 86434), (5, 86521), (Start: 9 @86587 has 41 MA's), (11, 86692), (12, 86722), (14, 86728), (17, 86770), (21, 86815),

Gene: Halley\_167 Start: 87995, Stop: 88228, Start Num: 9  
Candidate Starts for Halley\_167:  
(Start: 9 @87995 has 41 MA's), (14, 88136), (15, 88145), (17, 88178), (18, 88184),

Gene: Hannaconda\_159 Start: 88508, Stop: 88750, Start Num: 9  
Candidate Starts for Hannaconda\_159:  
(3, 88355), (5, 88442), (Start: 9 @88508 has 41 MA's), (11, 88613), (12, 88643), (14, 88649), (17, 88691), (21, 88736),

Gene: Hidrated\_159 Start: 89709, Stop: 89942, Start Num: 9  
Candidate Starts for Hidrated\_159:  
(1, 89523), (2, 89544), (4, 89580), (5, 89643), (Start: 9 @89709 has 41 MA's), (14, 89850), (15, 89859), (17, 89892), (18, 89898),

Gene: HokkenD\_161 Start: 89776, Stop: 90009, Start Num: 9  
Candidate Starts for HokkenD\_161:  
(Start: 9 @89776 has 41 MA's), (14, 89917), (15, 89926), (17, 89959), (18, 89965),

Gene: Hughesyang\_165 Start: 88477, Stop: 88710, Start Num: 9  
Candidate Starts for Hughesyang\_165:  
(Start: 9 @88477 has 41 MA's), (14, 88618), (15, 88627), (17, 88660), (18, 88666),

Gene: Jace\_83 Start: 45617, Stop: 45856, Start Num: 9  
Candidate Starts for Jace\_83:  
(7, 45572), (8, 45584), (Start: 9 @45617 has 41 MA's), (15, 45755), (19, 45815), (20, 45824),

Gene: JuicyJay\_161 Start: 89423, Stop: 89656, Start Num: 9  
Candidate Starts for JuicyJay\_161:  
(Start: 9 @89423 has 41 MA's), (14, 89564), (15, 89573), (17, 89606), (18, 89612),

Gene: Kalah2\_163 Start: 89761, Stop: 89994, Start Num: 9  
Candidate Starts for Kalah2\_163:  
(Start: 9 @89761 has 41 MA's), (14, 89902), (15, 89911), (17, 89944), (18, 89950),

Gene: KashFlow\_164 Start: 88321, Stop: 88563, Start Num: 9  
Candidate Starts for KashFlow\_164:  
(5, 88255), (Start: 9 @88321 has 41 MA's), (11, 88426), (12, 88456), (14, 88462), (17, 88504), (21, 88549),

Gene: Klein\_170 Start: 88100, Stop: 88333, Start Num: 9  
Candidate Starts for Klein\_170:  
(Start: 9 @88100 has 41 MA's), (14, 88241), (15, 88250), (17, 88283), (18, 88289),

Gene: LittleE\_174 Start: 89344, Stop: 89586, Start Num: 9

Candidate Starts for LittleE\_174:

(Start: 9 @89344 has 41 MA's), (11, 89449), (12, 89479), (14, 89485), (17, 89527), (21, 89572),

Gene: Lucky2013\_163 Start: 84841, Stop: 85083, Start Num: 9

Candidate Starts for Lucky2013\_163:

(Start: 9 @84841 has 41 MA's), (11, 84946), (12, 84976), (14, 84982), (17, 85024), (21, 85069),

Gene: Marleymoo\_153 Start: 86613, Stop: 86846, Start Num: 9

Candidate Starts for Marleymoo\_153:

(5, 86547), (6, 86565), (Start: 9 @86613 has 41 MA's), (14, 86754), (15, 86763), (17, 86796), (18, 86802),

Gene: MiaZeal\_170 Start: 85988, Stop: 86230, Start Num: 9

Candidate Starts for MiaZeal\_170:

(Start: 9 @85988 has 41 MA's), (11, 86093), (12, 86123), (14, 86129), (17, 86171), (21, 86216),

Gene: Minerva\_166 Start: 87841, Stop: 88074, Start Num: 9

Candidate Starts for Minerva\_166:

(Start: 9 @87841 has 41 MA's), (14, 87982), (15, 87991), (17, 88024), (18, 88030),

Gene: Nekros\_165 Start: 87788, Stop: 88030, Start Num: 9

Candidate Starts for Nekros\_165:

(Start: 9 @87788 has 41 MA's), (11, 87893), (12, 87923), (14, 87929), (17, 87971), (21, 88016),

Gene: Nibley\_160 Start: 84949, Stop: 85191, Start Num: 9

Candidate Starts for Nibley\_160:

(Start: 9 @84949 has 41 MA's), (11, 85054), (12, 85084), (14, 85090), (17, 85132), (21, 85177),

Gene: NihilNomen\_168 Start: 87549, Stop: 87782, Start Num: 9

Candidate Starts for NihilNomen\_168:

(Start: 9 @87549 has 41 MA's), (14, 87690), (15, 87699), (17, 87732), (18, 87738),

Gene: Odette\_170 Start: 90230, Stop: 90463, Start Num: 9

Candidate Starts for Odette\_170:

(Start: 9 @90230 has 41 MA's), (14, 90371), (15, 90380), (17, 90413), (18, 90419),

Gene: Omega\_175 Start: 90315, Stop: 90557, Start Num: 9

Candidate Starts for Omega\_175:

(5, 90249), (Start: 9 @90315 has 41 MA's), (11, 90420), (12, 90450), (14, 90456), (17, 90498), (21, 90543),

Gene: Optimus\_165 Start: 88756, Stop: 88989, Start Num: 9

Candidate Starts for Optimus\_165:

(Start: 9 @88756 has 41 MA's), (14, 88897), (15, 88906), (17, 88939), (18, 88945),

Gene: Phoebus\_167 Start: 91236, Stop: 91469, Start Num: 9

Candidate Starts for Phoebus\_167:

(Start: 9 @91236 has 41 MA's), (14, 91377), (15, 91386), (17, 91419), (18, 91425),

Gene: Porcelain\_167 Start: 85787, Stop: 86029, Start Num: 9

Candidate Starts for Porcelain\_167:

(Start: 9 @85787 has 41 MA's), (11, 85892), (12, 85922), (14, 85928), (17, 85970), (21, 86015),

Gene: Pound\_160 Start: 87285, Stop: 87518, Start Num: 9

Candidate Starts for Pound\_160:

(Start: 9 @87285 has 41 MA's), (14, 87426), (15, 87435), (17, 87468), (18, 87474),

Gene: Rearden\_166 Start: 86290, Stop: 86532, Start Num: 9

Candidate Starts for Rearden\_166:

(3, 86137), (5, 86224), (Start: 9 @86290 has 41 MA's), (11, 86395), (12, 86425), (14, 86431), (17, 86473), (21, 86518),

Gene: Redno2\_160 Start: 85349, Stop: 85582, Start Num: 9

Candidate Starts for Redno2\_160:

(Start: 9 @85349 has 41 MA's), (14, 85490), (15, 85499), (17, 85532), (18, 85538),

Gene: Schatzie\_161 Start: 88284, Stop: 88517, Start Num: 9

Candidate Starts for Schatzie\_161:

(Start: 9 @88284 has 41 MA's), (14, 88425), (15, 88434), (17, 88467), (18, 88473),

Gene: Shaboozey\_165 Start: 85393, Stop: 85635, Start Num: 9

Candidate Starts for Shaboozey\_165:

(Start: 9 @85393 has 41 MA's), (11, 85498), (12, 85528), (14, 85534), (17, 85576), (21, 85621),

Gene: Squint\_162 Start: 86297, Stop: 86539, Start Num: 9

Candidate Starts for Squint\_162:

(Start: 9 @86297 has 41 MA's), (11, 86402), (12, 86432), (14, 86438), (17, 86480), (21, 86525),

Gene: Superphikiman\_165 Start: 85466, Stop: 85708, Start Num: 9

Candidate Starts for Superphikiman\_165:

(Start: 9 @85466 has 41 MA's), (11, 85571), (12, 85601), (14, 85607), (17, 85649), (21, 85694),

Gene: Thibault\_150 Start: 85164, Stop: 85397, Start Num: 9

Candidate Starts for Thibault\_150:

(Start: 9 @85164 has 41 MA's), (14, 85305), (15, 85314), (17, 85347), (18, 85353),

Gene: ThreeRngTarjay\_163 Start: 89158, Stop: 89391, Start Num: 9

Candidate Starts for ThreeRngTarjay\_163:

(Start: 9 @89158 has 41 MA's), (14, 89299), (15, 89308), (17, 89341), (18, 89347),

Gene: Wanda\_164 Start: 85749, Stop: 85982, Start Num: 9

Candidate Starts for Wanda\_164:

(Start: 9 @85749 has 41 MA's), (14, 85890), (15, 85899), (17, 85932), (18, 85938),

Gene: Xiaokay\_162 Start: 89184, Stop: 89417, Start Num: 9

Candidate Starts for Xiaokay\_162:

(Start: 9 @89184 has 41 MA's), (14, 89325), (15, 89334), (17, 89367), (18, 89373),

Gene: Yeet\_158 Start: 87137, Stop: 87370, Start Num: 9

Candidate Starts for Yeet\_158:

(Start: 9 @87137 has 41 MA's), (14, 87278), (15, 87287), (17, 87320), (18, 87326),

Gene: Zelink\_159 Start: 87472, Stop: 87705, Start Num: 9

Candidate Starts for Zelink\_159:

(Start: 9 @87472 has 41 MA's), (14, 87613), (15, 87622), (17, 87655), (18, 87661),