

Pham 286999



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 286999 Report

This analysis was run 03/28/26 on database version 641.

Pham number 286999 has 55 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Belfort\_265, Karp\_265, Comrade\_260, SparkleGoddess\_264
- Track 2 : Stigma\_262
- Track 3 : Moab\_264, Patelgo\_267
- Track 4 : DeluluLabubu\_266, Gilson\_264, Maupel\_270, Francob\_267
- Track 5 : Westy\_266
- Track 6 : Kenrey\_270
- Track 7 : MeganTheeKilla\_266
- Track 8 : BillNye\_249, BillNye\_3
- Track 9 : Muntaha\_265, Muntaha\_2
- Track 10 : Wakanda\_2, Wakanda\_261
- Track 11 : Circinus\_3, Circinus\_248
- Track 12 : Chaewon\_5, Chaewon\_254
- Track 13 : Frankenweenie\_359
- Track 14 : Kela\_329
- Track 15 : EhyElimayoE\_332, Kradal\_329, Quantum\_327, Satis\_329, Sarkar\_343
- Track 16 : Nirvana\_362
- Track 17 : JustBecause\_331
- Track 18 : Artu\_24, Artu\_311
- Track 19 : FloraSnap32\_312, Patbob\_29, Patbob\_315, FloraSnap32\_27
- Track 20 : Racecar\_31, Racecar\_320, Bloom\_319, Talia1610\_30, Talia1610\_316, FrostedClock\_32, Bloom\_32, FrostedClock\_317
- Track 21 : GoldenEssence\_16, GoldenEssence\_297
- Track 22 : Mimi\_315, Mimi\_30
- Track 23 : Panchaali\_23, Panchaali\_310
- Track 24 : Phrampa\_309, Phrampa\_25

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

The start number called the most often in the published annotations is 18, it was called in 14 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artu\_24, Artu\_311, Bloom\_319, Bloom\_32, FloraSnap32\_27, FloraSnap32\_312, FrostedClock\_317, FrostedClock\_32, GoldenEssence\_16, GoldenEssence\_297,

Mimi\_30, Mimi\_315, Panchaali\_23, Panchaali\_310, Patbob\_29, Patbob\_315, Phrampa\_25, Phrampa\_309, Racecar\_31, Racecar\_320, Talia1610\_30, Talia1610\_316,

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:

- Belfort\_265, BillNye\_249, BillNye\_3, Chaewon\_254, Chaewon\_5, Circinus\_248, Circinus\_3, Comrade\_260, DeluluLabubu\_266, EhyElimayoE\_332, Francob\_267, Frankenweenie\_359, Gilson\_264, JustBecause\_331, Karp\_265, Kela\_329, Kenrey\_270, Kradal\_329, Maupel\_270, MeganTheeKilla\_266, Moab\_264, Muntaha\_2, Muntaha\_265, Nirvana\_362, Patelgo\_267, Quantum\_327, Sarkar\_343, Satis\_329, SparkleGoddess\_264, Stigma\_262, Wakanda\_2, Wakanda\_261, Westy\_266,

### Summary by start number:

Start 8:

- Found in 6 of 55 ( 10.9% ) of genes in pham
- Manual Annotations of this start: 4 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BillNye\_249 (BK2), BillNye\_3 (BK2), Chaewon\_254 (BK2), Chaewon\_5 (BK2), Circinus\_248 (BK2), Circinus\_3 (BK2),

Start 10:

- Found in 11 of 55 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 10 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EhyElimayoE\_332 (BM), Frankenweenie\_359 (BM), JustBecause\_331 (BM), Kela\_329 (BM), Kradal\_329 (BM), Nirvana\_362 (BM), Quantum\_327 (BM), Sarkar\_343 (BM), Satis\_329 (BM), Wakanda\_2 (BK2), Wakanda\_261 (BK2),

Start 11:

- Found in 14 of 55 ( 25.5% ) of genes in pham
- Manual Annotations of this start: 13 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belfort\_265 (BK1), Comrade\_260 (BK1), DeluluLabubu\_266 (BK1), Francob\_267 (BK1), Gilson\_264 (BK1), Karp\_265 (BK1), Kenrey\_270 (BK1), Maupel\_270 (BK1), MeganTheeKilla\_266 (BK1), Moab\_264 (BK1), Patelgo\_267 (BK1), SparkleGoddess\_264 (BK1), Stigma\_262 (BK1), Westy\_266 (BK1),

Start 13:

- Found in 2 of 55 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Muntaha\_2 (BK2), Muntaha\_265 (BK2),

Start 18:

- Found in 22 of 55 ( 40.0% ) of genes in pham
- Manual Annotations of this start: 14 of 43

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artu\_24 (FC), Artu\_311 (FC), Bloom\_319 (FC), Bloom\_32 (FC), FloraSnap32\_27 (FC), FloraSnap32\_312 (FC), FrostedClock\_317 (FC), FrostedClock\_32 (FC), GoldenEssence\_16 (FC), GoldenEssence\_297 (FC), Mimi\_30 (FC), Mimi\_315 (FC), Panchaali\_23 (FC), Panchaali\_310 (FC), Patbob\_29 (FC), Patbob\_315 (FC), Phrampa\_25 (FC), Phrampa\_309 (FC), Racecar\_31 (FC), Racecar\_320 (FC), Talia1610\_30 (FC), Talia1610\_316 (FC),

### **Summary by clusters:**

There are 4 clusters represented in this pham: BM, FC, BK1, BK2,

Info for manual annotations of cluster BK1:

- Start number 11 was manually annotated 13 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 8 was manually annotated 4 times for cluster BK2.
- Start number 10 was manually annotated 2 times for cluster BK2.
- Start number 13 was manually annotated 2 times for cluster BK2.

Info for manual annotations of cluster BM:

- Start number 10 was manually annotated 8 times for cluster BM.

Info for manual annotations of cluster FC:

- Start number 18 was manually annotated 14 times for cluster FC.

### **Gene Information:**

Gene: Artu\_24 Start: 9828, Stop: 10130, Start Num: 18

Candidate Starts for Artu\_24:

(Start: 18 @9828 has 14 MA's), (41, 10068),

Gene: Artu\_311 Start: 188982, Stop: 189284, Start Num: 18

Candidate Starts for Artu\_311:

(Start: 18 @188982 has 14 MA's), (41, 189222),

Gene: Belfort\_265 Start: 126637, Stop: 126978, Start Num: 11

Candidate Starts for Belfort\_265:

(Start: 11 @126637 has 13 MA's), (15, 126658), (26, 126784), (27, 126793), (32, 126862), (34, 126883), (43, 126943),

Gene: BillNye\_249 Start: 125861, Stop: 126271, Start Num: 8

Candidate Starts for BillNye\_249:

(7, 125852), (Start: 8 @125861 has 4 MA's), (14, 125954), (17, 125984), (26, 126071), (29, 126110), (40, 126200),

Gene: BillNye\_3 Start: 1039, Stop: 1449, Start Num: 8

Candidate Starts for BillNye\_3:

(7, 1030), (Start: 8 @1039 has 4 MA's), (14, 1132), (17, 1162), (26, 1249), (29, 1288), (40, 1378),

Gene: Bloom\_319 Start: 187552, Stop: 187866, Start Num: 18  
Candidate Starts for Bloom\_319:  
(Start: 18 @187552 has 14 MA's), (24, 187633),

Gene: Bloom\_32 Start: 14077, Stop: 14391, Start Num: 18  
Candidate Starts for Bloom\_32:  
(Start: 18 @14077 has 14 MA's), (24, 14158),

Gene: Chaewon\_5 Start: 1041, Stop: 1436, Start Num: 8  
Candidate Starts for Chaewon\_5:  
(Start: 8 @1041 has 4 MA's), (14, 1134), (17, 1164), (20, 1179), (27, 1260), (30, 1302), (35, 1347), (38, 1359), (40, 1380),

Gene: Chaewon\_254 Start: 126768, Stop: 127163, Start Num: 8  
Candidate Starts for Chaewon\_254:  
(Start: 8 @126768 has 4 MA's), (14, 126861), (17, 126891), (20, 126906), (27, 126987), (30, 127029), (35, 127074), (38, 127086), (40, 127107),

Gene: Circinus\_3 Start: 1078, Stop: 1488, Start Num: 8  
Candidate Starts for Circinus\_3:  
(7, 1069), (Start: 8 @1078 has 4 MA's), (14, 1171), (17, 1201), (26, 1288), (29, 1327), (30, 1339), (40, 1417),

Gene: Circinus\_248 Start: 125405, Stop: 125815, Start Num: 8  
Candidate Starts for Circinus\_248:  
(7, 125396), (Start: 8 @125405 has 4 MA's), (14, 125498), (17, 125528), (26, 125615), (29, 125654), (30, 125666), (40, 125744),

Gene: Comrade\_260 Start: 126776, Stop: 127117, Start Num: 11  
Candidate Starts for Comrade\_260:  
(Start: 11 @126776 has 13 MA's), (15, 126797), (26, 126923), (27, 126932), (32, 127001), (34, 127022), (43, 127082),

Gene: DeluluLabubu\_266 Start: 126437, Stop: 126772, Start Num: 11  
Candidate Starts for DeluluLabubu\_266:  
(Start: 11 @126437 has 13 MA's), (15, 126455), (20, 126497), (25, 126572), (26, 126578), (27, 126587), (30, 126641), (34, 126677), (43, 126737),

Gene: EhyElimayoE\_332 Start: 178762, Stop: 178415, Start Num: 10  
Candidate Starts for EhyElimayoE\_332:  
(Start: 10 @178762 has 10 MA's), (19, 178708), (22, 178666), (28, 178588), (30, 178570), (39, 178501), (42, 178474),

Gene: FloraSnap32\_312 Start: 186646, Stop: 186960, Start Num: 18  
Candidate Starts for FloraSnap32\_312:  
(Start: 18 @186646 has 14 MA's), (24, 186727), (38, 186856), (40, 186877), (50, 186925),

Gene: FloraSnap32\_27 Start: 12508, Stop: 12822, Start Num: 18  
Candidate Starts for FloraSnap32\_27:  
(Start: 18 @12508 has 14 MA's), (24, 12589), (38, 12718), (40, 12739), (50, 12787),

Gene: Francob\_267 Start: 126631, Stop: 126966, Start Num: 11  
Candidate Starts for Francob\_267:

(Start: 11 @126631 has 13 MA's), (15, 126649), (20, 126691), (25, 126766), (26, 126772), (27, 126781), (30, 126835), (34, 126871), (43, 126931),

Gene: Frankenweenie\_359 Start: 192379, Stop: 192002, Start Num: 10

Candidate Starts for Frankenweenie\_359:

(1, 192910), (2, 192757), (3, 192715), (4, 192712), (5, 192607), (9, 192430), (Start: 10 @192379 has 10 MA's), (28, 192181), (36, 192121), (37, 192109), (38, 192106), (39, 192097), (49, 192040),

Gene: FrostedClock\_32 Start: 13635, Stop: 13949, Start Num: 18

Candidate Starts for FrostedClock\_32:

(Start: 18 @13635 has 14 MA's), (24, 13716),

Gene: FrostedClock\_317 Start: 187435, Stop: 187749, Start Num: 18

Candidate Starts for FrostedClock\_317:

(Start: 18 @187435 has 14 MA's), (24, 187516),

Gene: Gilson\_264 Start: 126168, Stop: 126503, Start Num: 11

Candidate Starts for Gilson\_264:

(Start: 11 @126168 has 13 MA's), (15, 126186), (20, 126228), (25, 126303), (26, 126309), (27, 126318), (30, 126372), (34, 126408), (43, 126468),

Gene: GoldenEssence\_16 Start: 7886, Stop: 8194, Start Num: 18

Candidate Starts for GoldenEssence\_16:

(Start: 18 @7886 has 14 MA's), (24, 7967), (28, 8024), (33, 8069), (46, 8150),

Gene: GoldenEssence\_297 Start: 178439, Stop: 178747, Start Num: 18

Candidate Starts for GoldenEssence\_297:

(Start: 18 @178439 has 14 MA's), (24, 178520), (28, 178577), (33, 178622), (46, 178703),

Gene: JustBecause\_331 Start: 175882, Stop: 175484, Start Num: 10

Candidate Starts for JustBecause\_331:

(6, 176047), (9, 175933), (Start: 10 @175882 has 10 MA's), (16, 175828), (30, 175660), (31, 175657), (44, 175555), (47, 175546),

Gene: Karp\_265 Start: 128234, Stop: 128575, Start Num: 11

Candidate Starts for Karp\_265:

(Start: 11 @128234 has 13 MA's), (15, 128255), (26, 128381), (27, 128390), (32, 128459), (34, 128480), (43, 128540),

Gene: Kela\_329 Start: 176783, Stop: 176385, Start Num: 10

Candidate Starts for Kela\_329:

(6, 176948), (9, 176834), (Start: 10 @176783 has 10 MA's), (16, 176729), (30, 176561), (31, 176558), (44, 176456), (47, 176447),

Gene: Kenrey\_270 Start: 127380, Stop: 127718, Start Num: 11

Candidate Starts for Kenrey\_270:

(Start: 11 @127380 has 13 MA's), (15, 127398), (20, 127440), (23, 127497), (25, 127521), (26, 127527), (27, 127536), (30, 127590),

Gene: Kradal\_329 Start: 178759, Stop: 178412, Start Num: 10

Candidate Starts for Kradal\_329:

(Start: 10 @178759 has 10 MA's), (19, 178705), (22, 178663), (28, 178585), (30, 178567), (39, 178498), (42, 178471),

Gene: Maupel\_270 Start: 125361, Stop: 125696, Start Num: 11

Candidate Starts for Maupel\_270:

(Start: 11 @125361 has 13 MA's), (15, 125379), (20, 125421), (25, 125496), (26, 125502), (27, 125511), (30, 125565), (34, 125601), (43, 125661),

Gene: MeganTheeKilla\_266 Start: 125979, Stop: 126317, Start Num: 11

Candidate Starts for MeganTheeKilla\_266:

(Start: 11 @125979 has 13 MA's), (12, 125982), (15, 125997), (20, 126039), (23, 126096), (25, 126120), (26, 126126), (27, 126135), (30, 126189),

Gene: Mimi\_315 Start: 186189, Stop: 186503, Start Num: 18

Candidate Starts for Mimi\_315:

(Start: 18 @186189 has 14 MA's), (24, 186270), (38, 186399), (40, 186420), (50, 186468),

Gene: Mimi\_30 Start: 13529, Stop: 13843, Start Num: 18

Candidate Starts for Mimi\_30:

(Start: 18 @13529 has 14 MA's), (24, 13610), (38, 13739), (40, 13760), (50, 13808),

Gene: Moab\_264 Start: 127015, Stop: 127356, Start Num: 11

Candidate Starts for Moab\_264:

(Start: 11 @127015 has 13 MA's), (15, 127036), (17, 127063), (21, 127081), (23, 127132), (26, 127162), (27, 127171), (30, 127225), (32, 127240), (34, 127261), (43, 127321), (48, 127339),

Gene: Muntaha\_265 Start: 126426, Stop: 126731, Start Num: 13

Candidate Starts for Muntaha\_265:

(Start: 13 @126426 has 2 MA's), (17, 126456), (25, 126537), (27, 126552), (30, 126594), (38, 126651), (40, 126672), (50, 126720),

Gene: Muntaha\_2 Start: 749, Stop: 1054, Start Num: 13

Candidate Starts for Muntaha\_2:

(Start: 13 @749 has 2 MA's), (17, 779), (25, 860), (27, 875), (30, 917), (38, 974), (40, 995), (50, 1043),

Gene: Nirvana\_362 Start: 195822, Stop: 195472, Start Num: 10

Candidate Starts for Nirvana\_362:

(9, 195873), (Start: 10 @195822 has 10 MA's), (19, 195765), (22, 195723), (28, 195645), (38, 195567), (39, 195558),

Gene: Panchaali\_23 Start: 9758, Stop: 10060, Start Num: 18

Candidate Starts for Panchaali\_23:

(Start: 18 @9758 has 14 MA's), (41, 9998), (45, 10013), (51, 10052),

Gene: Panchaali\_310 Start: 188816, Stop: 189118, Start Num: 18

Candidate Starts for Panchaali\_310:

(Start: 18 @188816 has 14 MA's), (41, 189056), (45, 189071), (51, 189110),

Gene: Patbob\_29 Start: 13693, Stop: 14007, Start Num: 18

Candidate Starts for Patbob\_29:

(Start: 18 @13693 has 14 MA's), (24, 13774), (38, 13903), (40, 13924), (50, 13972),

Gene: Patbob\_315 Start: 189152, Stop: 189466, Start Num: 18

Candidate Starts for Patbob\_315:

(Start: 18 @189152 has 14 MA's), (24, 189233), (38, 189362), (40, 189383), (50, 189431),

Gene: Patelgo\_267 Start: 127948, Stop: 128289, Start Num: 11

Candidate Starts for Patelgo\_267:

(Start: 11 @127948 has 13 MA's), (15, 127969), (17, 127996), (21, 128014), (23, 128065), (26, 128095), (27, 128104), (30, 128158), (32, 128173), (34, 128194), (43, 128254), (48, 128272),

Gene: Phrampa\_309 Start: 187978, Stop: 188286, Start Num: 18

Candidate Starts for Phrampa\_309:

(Start: 18 @187978 has 14 MA's), (24, 188059), (38, 188188), (40, 188209), (46, 188242),

Gene: Phrampa\_25 Start: 11607, Stop: 11915, Start Num: 18

Candidate Starts for Phrampa\_25:

(Start: 18 @11607 has 14 MA's), (24, 11688), (38, 11817), (40, 11838), (46, 11871),

Gene: Quantum\_327 Start: 178753, Stop: 178406, Start Num: 10

Candidate Starts for Quantum\_327:

(Start: 10 @178753 has 10 MA's), (19, 178699), (22, 178657), (28, 178579), (30, 178561), (39, 178492), (42, 178465),

Gene: Racecar\_31 Start: 14121, Stop: 14435, Start Num: 18

Candidate Starts for Racecar\_31:

(Start: 18 @14121 has 14 MA's), (24, 14202),

Gene: Racecar\_320 Start: 187830, Stop: 188144, Start Num: 18

Candidate Starts for Racecar\_320:

(Start: 18 @187830 has 14 MA's), (24, 187911),

Gene: Sarkar\_343 Start: 178803, Stop: 178456, Start Num: 10

Candidate Starts for Sarkar\_343:

(Start: 10 @178803 has 10 MA's), (19, 178749), (22, 178707), (28, 178629), (30, 178611), (39, 178542), (42, 178515),

Gene: Satis\_329 Start: 179094, Stop: 178747, Start Num: 10

Candidate Starts for Satis\_329:

(Start: 10 @179094 has 10 MA's), (19, 179040), (22, 178998), (28, 178920), (30, 178902), (39, 178833), (42, 178806),

Gene: SparkleGoddess\_264 Start: 127503, Stop: 127844, Start Num: 11

Candidate Starts for SparkleGoddess\_264:

(Start: 11 @127503 has 13 MA's), (15, 127524), (26, 127650), (27, 127659), (32, 127728), (34, 127749), (43, 127809),

Gene: Stigma\_262 Start: 127216, Stop: 127557, Start Num: 11

Candidate Starts for Stigma\_262:

(Start: 11 @127216 has 13 MA's), (15, 127237), (26, 127363), (27, 127372), (34, 127462), (43, 127522),

Gene: Talia1610\_30 Start: 13543, Stop: 13857, Start Num: 18

Candidate Starts for Talia1610\_30:

(Start: 18 @13543 has 14 MA's), (24, 13624),

Gene: Talia1610\_316 Start: 188015, Stop: 188329, Start Num: 18

Candidate Starts for Talia1610\_316:

(Start: 18 @188015 has 14 MA's), (24, 188096),

Gene: Wakanda\_2 Start: 866, Stop: 1201, Start Num: 10

Candidate Starts for Wakanda\_2:

(Start: 10 @866 has 10 MA's), (14, 899), (17, 929), (20, 944), (38, 1121), (40, 1142), (50, 1190),

Gene: Wakanda\_261 Start: 125707, Stop: 126042, Start Num: 10

Candidate Starts for Wakanda\_261:

(Start: 10 @125707 has 10 MA's), (14, 125740), (17, 125770), (20, 125785), (38, 125962), (40, 125983), (50, 126031),

Gene: Westy\_266 Start: 128040, Stop: 128381, Start Num: 11

Candidate Starts for Westy\_266:

(Start: 11 @128040 has 13 MA's), (15, 128061), (26, 128187), (27, 128196), (32, 128265), (34, 128286), (35, 128295), (37, 128304), (43, 128346),