



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 308952 Report

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

Pham number 308952 has 36 members, 5 are drafts.

Phages represented in each track:

- Track 1 : GTE5\_74
- Track 2 : Flapper\_89
- Track 3 : GRU1\_75
- Track 4 : Turuncu\_89
- Track 5 : Dalilpop\_89
- Track 6 : Buggaboo\_86
- Track 7 : Outis\_84, StarStruck\_84
- Track 8 : NosilaM\_84
- Track 9 : MerCougar\_86
- Track 10 : Ennea\_92
- Track 11 : Float294\_86
- Track 12 : Lollipop1437\_87
- Track 13 : Skysand\_89
- Track 14 : RedRaider\_90
- Track 15 : Patio\_85
- Track 16 : Marietta\_83, WhoseManz\_83
- Track 17 : BiPauneto\_86
- Track 18 : HubbaBubba\_77
- Track 19 : Yndexa\_83, Sukkupi\_83
- Track 20 : Pemberton\_85
- Track 21 : NadineRae\_83
- Track 22 : IDyn\_79
- Track 23 : Scuba\_96
- Track 24 : Fury\_93, Pleakley\_93
- Track 25 : HomeFry\_90
- Track 26 : Maselop\_89, Polyuyuki\_88
- Track 27 : Gagieri\_87
- Track 28 : Braxoaddie\_89
- Track 29 : Apiary\_89
- Track 30 : CoffeeBean\_89
- Track 31 : E3\_gp133

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

The start number called the most often in the published annotations is 21, it was called in 25 of the 31 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BiPauneto\_86, Buggaboo\_86, Dalilpop\_89, Ennea\_92, Flapper\_89, Float294\_86, Fury\_93, GRU1\_75, GTE5\_74, HomeFry\_90, HubbaBubba\_77, IDyn\_79, Lollipop1437\_87, Marietta\_83, MerCougar\_86, NadineRae\_83, NosilaM\_84, Outis\_84, Patio\_85, Pemberton\_85, Pleakley\_93, RedRaider\_90, Scuba\_96, Skysand\_89, StarStruck\_84, Sukkupi\_83, Turuncu\_89, WhoseManz\_83, Yndexa\_83,

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:

- Apiary\_89, Braxoaddie\_89, CoffeeBean\_89, E3\_gp133, Gagieri\_87, Maselop\_89, Polyyuki\_88,

### Summary by start number:

Start 21:

- Found in 29 of 36 ( 80.6% ) of genes in pham
- Manual Annotations of this start: 25 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiPauneto\_86 (CR4), Buggaboo\_86 (CR2), Dalilpop\_89 (CR1), Ennea\_92 (CR3), Flapper\_89 (CR1), Float294\_86 (CR3), Fury\_93 (CR5), GRU1\_75 (CR1), GTE5\_74 (CR1), HomeFry\_90 (CR5), HubbaBubba\_77 (CR4), IDyn\_79 (CR4), Lollipop1437\_87 (CR3), Marietta\_83 (CR4), MerCougar\_86 (CR2), NadineRae\_83 (CR4), NosilaM\_84 (CR2), Outis\_84 (CR2), Patio\_85 (CR3), Pemberton\_85 (CR4), Pleakley\_93 (CR5), RedRaider\_90 (CR3), Scuba\_96 (CR5), Skysand\_89 (CR3), StarStruck\_84 (CR2), Sukkupi\_83 (CR4), Turuncu\_89 (CR1), WhoseManz\_83 (CR4), Yndexa\_83 (CR4),

Start 26:

- Found in 7 of 36 ( 19.4% ) of genes in pham
- Manual Annotations of this start: 6 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary\_89 (CR6), Braxoaddie\_89 (CR6), CoffeeBean\_89 (CR6), E3\_gp133 (singleton), Gagieri\_87 (CR6), Maselop\_89 (CR6), Polyyuki\_88 (CR6),

### Summary by clusters:

There are 7 clusters represented in this pham: CR2, CR3, singleton, CR1, CR6, CR4, CR5,

Info for manual annotations of cluster CR1:

- Start number 21 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 21 was manually annotated 5 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 21 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 21 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 21 was manually annotated 3 times for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 26 was manually annotated 6 times for cluster CR6.

### **Gene Information:**

Gene: Apiary\_89 Start: 62187, Stop: 62666, Start Num: 26

Candidate Starts for Apiary\_89:

(5, 61830), (10, 61974), (22, 62118), (Start: 26 @62187 has 6 MA's), (32, 62250), (34, 62307), (40, 62397), (56, 62556), (57, 62580), (64, 62625),

Gene: BiPauneto\_86 Start: 61366, Stop: 61935, Start Num: 21

Candidate Starts for BiPauneto\_86:

(Start: 21 @61366 has 25 MA's), (23, 61399), (34, 61561), (37, 61660), (44, 61702), (56, 61843),

Gene: Braxoaddie\_89 Start: 62185, Stop: 62655, Start Num: 26

Candidate Starts for Braxoaddie\_89:

(3, 61774), (4, 61777), (5, 61828), (10, 61972), (Start: 26 @62185 has 6 MA's), (34, 62305), (40, 62395), (46, 62431), (56, 62554), (57, 62578),

Gene: Buggaboo\_86 Start: 63771, Stop: 64322, Start Num: 21

Candidate Starts for Buggaboo\_86:

(Start: 21 @63771 has 25 MA's), (31, 63909), (34, 63966), (35, 63969), (36, 63972), (56, 64239), (61, 64284), (62, 64287),

Gene: CoffeeBean\_89 Start: 62131, Stop: 62601, Start Num: 26

Candidate Starts for CoffeeBean\_89:

(12, 61930), (22, 62062), (Start: 26 @62131 has 6 MA's), (29, 62167), (33, 62239), (34, 62251), (37, 62326), (40, 62341), (56, 62500), (57, 62524),

Gene: Dalilpop\_89 Start: 63669, Stop: 64238, Start Num: 21

Candidate Starts for Dalilpop\_89:

(11, 63531), (16, 63573), (18, 63612), (19, 63621), (Start: 21 @63669 has 25 MA's), (23, 63705), (24, 63726), (28, 63750), (31, 63774), (34, 63831), (47, 64032), (50, 64041), (59, 64170),

Gene: E3\_gp133 Start: 88048, Stop: 88518, Start Num: 26

Candidate Starts for E3\_gp133:

(Start: 26 @88048 has 6 MA's), (32, 88108), (49, 88366), (58, 88465),

Gene: Ennea\_92 Start: 63889, Stop: 64464, Start Num: 21

Candidate Starts for Ennea\_92:

(Start: 21 @63889 has 25 MA's), (23, 63925), (25, 63958), (31, 64030), (36, 64090), (37, 64174), (41, 64210), (42, 64213), (46, 64237), (52, 64369), (56, 64393),

Gene: Flapper\_89 Start: 63538, Stop: 64107, Start Num: 21

Candidate Starts for Flapper\_89:

(18, 63490), (19, 63499), (Start: 21 @63538 has 25 MA's), (24, 63595), (28, 63619), (34, 63700), (43, 63832), (47, 63901), (59, 64039),

Gene: Float294\_86 Start: 63789, Stop: 64358, Start Num: 21

Candidate Starts for Float294\_86:

(Start: 21 @63789 has 25 MA's), (25, 63858), (30, 63918), (31, 63927), (34, 63981), (36, 63987), (37, 64071), (41, 64107), (42, 64110), (46, 64134), (52, 64263), (56, 64287),

Gene: Fury\_93 Start: 61531, Stop: 62052, Start Num: 21

Candidate Starts for Fury\_93:

(7, 61261), (9, 61375), (14, 61408), (Start: 21 @61531 has 25 MA's), (38, 61783), (44, 61819), (56, 61975),

Gene: GRU1\_75 Start: 55116, Stop: 55685, Start Num: 21

Candidate Starts for GRU1\_75:

(Start: 21 @55116 has 25 MA's), (24, 55173), (28, 55197), (31, 55221), (34, 55278), (40, 55389), (47, 55479), (52, 55563), (59, 55617), (61, 55626),

Gene: GTE5\_74 Start: 56009, Stop: 56578, Start Num: 21

Candidate Starts for GTE5\_74:

(11, 55871), (16, 55913), (18, 55952), (19, 55961), (Start: 21 @56009 has 25 MA's), (23, 56045), (24, 56066), (28, 56090), (34, 56171), (47, 56372), (52, 56456), (59, 56510),

Gene: Gagieri\_87 Start: 61764, Stop: 62234, Start Num: 26

Candidate Starts for Gagieri\_87:

(22, 61695), (Start: 26 @61764 has 6 MA's), (34, 61884), (40, 61974), (44, 62001), (57, 62157), (60, 62172), (63, 62181), (64, 62202),

Gene: HomeFry\_90 Start: 60610, Stop: 61113, Start Num: 21

Candidate Starts for HomeFry\_90:

(Start: 21 @60610 has 25 MA's), (27, 60679), (31, 60712), (38, 60850), (39, 60856), (56, 61039),

Gene: HubbaBubba\_77 Start: 57693, Stop: 58262, Start Num: 21

Candidate Starts for HubbaBubba\_77:

(Start: 21 @57693 has 25 MA's), (23, 57726), (34, 57888), (44, 58029), (54, 58152),

Gene: IDyn\_79 Start: 58347, Stop: 58916, Start Num: 21

Candidate Starts for IDyn\_79:

(Start: 21 @58347 has 25 MA's), (23, 58380), (34, 58542), (37, 58641), (44, 58683), (56, 58824), (59, 58860),

Gene: Lollipop1437\_87 Start: 63571, Stop: 64140, Start Num: 21

Candidate Starts for Lollipop1437\_87:

(Start: 21 @63571 has 25 MA's), (23, 63607), (25, 63640), (30, 63703), (31, 63712), (34, 63766), (36, 63772), (37, 63856), (41, 63892), (42, 63895), (52, 64045), (53, 64048), (56, 64069),

Gene: Marietta\_83 Start: 59020, Stop: 59589, Start Num: 21

Candidate Starts for Marietta\_83:

(Start: 21 @59020 has 25 MA's), (23, 59053), (34, 59215), (37, 59314), (44, 59356), (61, 59542),

Gene: Maselop\_89 Start: 62196, Stop: 62666, Start Num: 26

Candidate Starts for Maselop\_89:

(5, 61839), (10, 61983), (Start: 26 @62196 has 6 MA's), (34, 62316), (40, 62406), (46, 62442), (56, 62565), (57, 62589),

Gene: MerCougar\_86 Start: 63955, Stop: 64506, Start Num: 21

Candidate Starts for MerCougar\_86:

(Start: 21 @63955 has 25 MA's), (36, 64156), (37, 64240), (43, 64276), (53, 64402), (56, 64423), (61, 64468),

Gene: NadineRae\_83 Start: 58857, Stop: 59435, Start Num: 21

Candidate Starts for NadineRae\_83:

(13, 58734), (Start: 21 @58857 has 25 MA's), (23, 58890), (34, 59052), (37, 59160), (44, 59202), (45, 59208), (56, 59343), (65, 59427),

Gene: NosilaM\_84 Start: 62812, Stop: 63363, Start Num: 21

Candidate Starts for NosilaM\_84:

(Start: 21 @62812 has 25 MA's), (34, 63007), (35, 63010), (36, 63013), (40, 63112), (56, 63280),

Gene: Outis\_84 Start: 63228, Stop: 63779, Start Num: 21

Candidate Starts for Outis\_84:

(Start: 21 @63228 has 25 MA's), (34, 63423), (36, 63429), (37, 63513), (43, 63549), (56, 63696), (61, 63741),

Gene: Patio\_85 Start: 62788, Stop: 63357, Start Num: 21

Candidate Starts for Patio\_85:

(17, 62725), (Start: 21 @62788 has 25 MA's), (23, 62824), (25, 62857), (30, 62917), (31, 62926), (36, 62986), (37, 63070), (41, 63106), (46, 63133), (52, 63262), (56, 63286),

Gene: Pemberton\_85 Start: 59267, Stop: 59836, Start Num: 21

Candidate Starts for Pemberton\_85:

(8, 59069), (Start: 21 @59267 has 25 MA's), (23, 59300), (34, 59462), (37, 59561), (44, 59603), (56, 59744),

Gene: Pleakley\_93 Start: 61532, Stop: 62053, Start Num: 21

Candidate Starts for Pleakley\_93:

(7, 61262), (9, 61376), (14, 61409), (Start: 21 @61532 has 25 MA's), (38, 61784), (44, 61820), (56, 61976),

Gene: Polyzuki\_88 Start: 62206, Stop: 62676, Start Num: 26

Candidate Starts for Polyzuki\_88:

(5, 61849), (10, 61993), (Start: 26 @62206 has 6 MA's), (34, 62326), (40, 62416), (46, 62452), (56, 62575), (57, 62599),

Gene: RedRaider\_90 Start: 64988, Stop: 65569, Start Num: 21

Candidate Starts for RedRaider\_90:

(Start: 21 @64988 has 25 MA's), (23, 65024), (30, 65120), (31, 65129), (34, 65183), (36, 65189), (37, 65273), (41, 65309), (42, 65312), (53, 65477), (55, 65495),

Gene: Scuba\_96 Start: 61876, Stop: 62385, Start Num: 21

Candidate Starts for Scuba\_96:

(Start: 21 @61876 has 25 MA's), (37, 62110), (44, 62152), (46, 62161), (51, 62239), (56, 62308),

Gene: Skysand\_89 Start: 63735, Stop: 64307, Start Num: 21

Candidate Starts for Skysand\_89:

(Start: 21 @63735 has 25 MA's), (23, 63771), (25, 63804), (31, 63876), (36, 63936), (48, 64137), (52, 64212), (56, 64236),

Gene: StarStruck\_84 Start: 63228, Stop: 63779, Start Num: 21

Candidate Starts for StarStruck\_84:

(Start: 21 @63228 has 25 MA's), (34, 63423), (36, 63429), (37, 63513), (43, 63549), (56, 63696), (61, 63741),

Gene: Sukkupi\_83 Start: 60734, Stop: 61303, Start Num: 21

Candidate Starts for Sukkupi\_83:

(1, 60362), (2, 60377), (6, 60464), (15, 60629), (20, 60698), (Start: 21 @60734 has 25 MA's), (34, 60929), (37, 61028), (44, 61070), (65, 61295),

Gene: Turuncu\_89 Start: 63164, Stop: 63733, Start Num: 21

Candidate Starts for Turuncu\_89:

(18, 63107), (19, 63116), (Start: 21 @63164 has 25 MA's), (28, 63245), (34, 63326), (52, 63611), (59, 63665),

Gene: WhoseManz\_83 Start: 58680, Stop: 59249, Start Num: 21

Candidate Starts for WhoseManz\_83:

(Start: 21 @58680 has 25 MA's), (23, 58713), (34, 58875), (37, 58974), (44, 59016), (61, 59202),

Gene: Yndexa\_83 Start: 60734, Stop: 61303, Start Num: 21

Candidate Starts for Yndexa\_83:

(1, 60362), (2, 60377), (6, 60464), (15, 60629), (20, 60698), (Start: 21 @60734 has 25 MA's), (34, 60929), (37, 61028), (44, 61070), (65, 61295),