



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 308736 Report

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

Pham number 308736 has 51 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Shrubaron\_63
- Track 2 : KaiHaiDragon\_60, EarickHC\_60, Paschalis\_59, Onika\_58, Antares\_59, Ganandorf\_58, Scumberland\_61, Quhwah\_63, CrazyRich\_58, Jefe\_59, PhedwardCullen\_58, LittleFortune\_61, Busephilis\_58, Cranjis\_60, Savannah\_58
- Track 3 : Tyumbra\_59, RobsFeet\_63, Fireman\_62
- Track 4 : Gina\_63, Teamocil\_63
- Track 5 : Germa\_61
- Track 6 : Ariadne\_69, Smarties\_69
- Track 7 : Skugga\_59
- Track 8 : NoodlelyBoi\_60, SirFrank\_59
- Track 9 : BeagleBug\_58, Phrancesco\_59, Shotgun\_59, Hermeonysus\_59, Rockwell\_58, PiperSansNom\_60
- Track 10 : Metamorphoo\_62
- Track 11 : Jayden\_61
- Track 12 : Lucretia\_59, Piperis\_60, Selwyn23\_60, Yeti\_61, Pulchra\_61, Phorgeous\_59
- Track 13 : Ramiel05\_58, Kowalski\_58, BrazzalePHS\_58, Jollipop\_60
- Track 14 : Zapato\_59
- Track 15 : Crisis\_60
- Track 16 : ClearAsMud\_63
- Track 17 : Glorp\_60, PierreOrion\_59, Honeyfin\_60

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

The start number called the most often in the published annotations is 5, it was called in 24 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariadne\_69, BrazzalePHS\_58, ClearAsMud\_63, Fireman\_62, Gina\_63, Glorp\_60, Honeyfin\_60, Jayden\_61, Jollipop\_60, Kowalski\_58, Lucretia\_59, Metamorphoo\_62, NoodlelyBoi\_60, Phorgeous\_59, PierreOrion\_59, Piperis\_60, Pulchra\_61, Ramiel05\_58, RobsFeet\_63, Selwyn23\_60, Shrubaron\_63, SirFrank\_59, Skugga\_59, Smarties\_69, Teamocil\_63, Tyumbra\_59, Yeti\_61, Zapato\_59,

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:

- Antares\_59, BeagleBug\_58, Busephilis\_58, Cranjjs\_60, CrazyRich\_58, Crisis\_60, EarickHC\_60, Ganandorf\_58, Germa\_61, Hermeonysus\_59, Jefe\_59, KaiHaiDragon\_60, LittleFortune\_61, Onika\_58, Paschalis\_59, PhedwardCullen\_58, Phrancesco\_59, PiperSansNom\_60, Quhwah\_63, Rockwell\_58, Savannah\_58, Scumberland\_61, Shotgun\_59,

### Summary by start number:

Start 3:

- Found in 23 of 51 ( 45.1% ) of genes in pham
- Manual Annotations of this start: 21 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antares\_59 (EC), BeagleBug\_58 (EC), Busephilis\_58 (EC), Cranjjs\_60 (EC), CrazyRich\_58 (EC), Crisis\_60 (EC), EarickHC\_60 (EC), Ganandorf\_58 (EC), Germa\_61 (EC), Hermeonysus\_59 (EC), Jefe\_59 (EC), KaiHaiDragon\_60 (EC), LittleFortune\_61 (EC), Onika\_58 (EC), Paschalis\_59 (EC), PhedwardCullen\_58 (EC), Phrancesco\_59 (EC), PiperSansNom\_60 (EC), Quhwah\_63 (EC), Rockwell\_58 (EC), Savannah\_58 (EC), Scumberland\_61 (EC), Shotgun\_59 (EC),

Start 5:

- Found in 28 of 51 ( 54.9% ) of genes in pham
- Manual Annotations of this start: 24 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariadne\_69 (EC), BrazzalePHS\_58 (EC), ClearAsMud\_63 (EC), Fireman\_62 (EC), Gina\_63 (EC), Glorp\_60 (EC), Honeyfin\_60 (EC), Jayden\_61 (EC), Jollipop\_60 (EC), Kowalski\_58 (EC), Lucretia\_59 (EC), Metamorphoo\_62 (EC), NoodlelyBoi\_60 (EC), Phorgeous\_59 (EC), PierreOrion\_59 (EC), Piperis\_60 (EC), Pulchra\_61 (EC), Ramiel05\_58 (EC), RobsFeet\_63 (EC), Selwyn23\_60 (EC), Shrubaron\_63 (EC), SirFrank\_59 (EC), Skugga\_59 (EC), Smarties\_69 (EC), Teamocil\_63 (EC), Tyrumbra\_59 (EC), Yeti\_61 (EC), Zapato\_59 (EC),

### Summary by clusters:

There is one cluster represented in this pham: EC

Info for manual annotations of cluster EC:

- Start number 3 was manually annotated 21 times for cluster EC.
- Start number 5 was manually annotated 24 times for cluster EC.

### Gene Information:

Gene: Antares\_59 Start: 38683, Stop: 39186, Start Num: 3

Candidate Starts for Antares\_59:

(Start: 3 @38683 has 21 MA's), (6, 38818), (7, 38821), (9, 38869), (22, 39163),

Gene: Ariadne\_69 Start: 40305, Stop: 40778, Start Num: 5  
Candidate Starts for Ariadne\_69:  
(Start: 5 @40305 has 24 MA's), (6, 40410), (9, 40461), (11, 40506), (12, 40533), (14, 40569), (15, 40575),

Gene: BeagleBug\_58 Start: 38463, Stop: 38966, Start Num: 3  
Candidate Starts for BeagleBug\_58:  
(Start: 3 @38463 has 21 MA's), (6, 38598), (7, 38601), (9, 38649), (13, 38724), (16, 38766), (22, 38943),

Gene: BrazzalePHS\_58 Start: 38478, Stop: 38948, Start Num: 5  
Candidate Starts for BrazzalePHS\_58:  
(Start: 5 @38478 has 24 MA's), (6, 38583), (9, 38634), (14, 38742), (15, 38748), (21, 38880),

Gene: Busephilis\_58 Start: 38390, Stop: 38893, Start Num: 3  
Candidate Starts for Busephilis\_58:  
(Start: 3 @38390 has 21 MA's), (6, 38525), (7, 38528), (9, 38576), (22, 38870),

Gene: ClearAsMud\_63 Start: 38961, Stop: 39434, Start Num: 5  
Candidate Starts for ClearAsMud\_63:  
(Start: 5 @38961 has 24 MA's), (6, 39066), (9, 39117), (10, 39123), (12, 39189), (14, 39225), (20, 39360),

Gene: Cranjis\_60 Start: 38638, Stop: 39141, Start Num: 3  
Candidate Starts for Cranjis\_60:  
(Start: 3 @38638 has 21 MA's), (6, 38773), (7, 38776), (9, 38824), (22, 39118),

Gene: CrazyRich\_58 Start: 38447, Stop: 38950, Start Num: 3  
Candidate Starts for CrazyRich\_58:  
(Start: 3 @38447 has 21 MA's), (6, 38582), (7, 38585), (9, 38633), (22, 38927),

Gene: Crisis\_60 Start: 38438, Stop: 38941, Start Num: 3  
Candidate Starts for Crisis\_60:  
(Start: 3 @38438 has 21 MA's), (6, 38573), (7, 38576), (9, 38624), (13, 38699), (16, 38741), (19, 38840), (22, 38918),

Gene: EarickHC\_60 Start: 38360, Stop: 38863, Start Num: 3  
Candidate Starts for EarickHC\_60:  
(Start: 3 @38360 has 21 MA's), (6, 38495), (7, 38498), (9, 38546), (22, 38840),

Gene: Fireman\_62 Start: 40381, Stop: 40857, Start Num: 5  
Candidate Starts for Fireman\_62:  
(Start: 5 @40381 has 24 MA's), (8, 40498), (9, 40540), (10, 40546), (12, 40612),

Gene: Ganandorf\_58 Start: 38471, Stop: 38974, Start Num: 3  
Candidate Starts for Ganandorf\_58:  
(Start: 3 @38471 has 21 MA's), (6, 38606), (7, 38609), (9, 38657), (22, 38951),

Gene: Germa\_61 Start: 38301, Stop: 38804, Start Num: 3  
Candidate Starts for Germa\_61:  
(Start: 3 @38301 has 21 MA's), (6, 38436), (7, 38439), (9, 38487), (13, 38562), (22, 38781),

Gene: Gina\_63 Start: 38467, Stop: 38940, Start Num: 5

Candidate Starts for Gina\_63:

(Start: 5 @38467 has 24 MA's), (6, 38572), (9, 38623), (12, 38695), (15, 38737),

Gene: Glorp\_60 Start: 38471, Stop: 38941, Start Num: 5

Candidate Starts for Glorp\_60:

(Start: 5 @38471 has 24 MA's), (6, 38576), (9, 38627), (14, 38735), (18, 38828), (20, 38870),

Gene: Hermeonysus\_59 Start: 38366, Stop: 38869, Start Num: 3

Candidate Starts for Hermeonysus\_59:

(Start: 3 @38366 has 21 MA's), (6, 38501), (7, 38504), (9, 38552), (13, 38627), (16, 38669), (22, 38846),

Gene: Honeyfin\_60 Start: 38659, Stop: 39129, Start Num: 5

Candidate Starts for Honeyfin\_60:

(Start: 5 @38659 has 24 MA's), (6, 38764), (9, 38815), (14, 38923), (18, 39016), (20, 39058),

Gene: Jayden\_61 Start: 39140, Stop: 39613, Start Num: 5

Candidate Starts for Jayden\_61:

(Start: 5 @39140 has 24 MA's), (6, 39245), (11, 39341), (12, 39368), (14, 39404),

Gene: Jefe\_59 Start: 38424, Stop: 38927, Start Num: 3

Candidate Starts for Jefe\_59:

(Start: 3 @38424 has 21 MA's), (6, 38559), (7, 38562), (9, 38610), (22, 38904),

Gene: Jollipop\_60 Start: 38839, Stop: 39309, Start Num: 5

Candidate Starts for Jollipop\_60:

(Start: 5 @38839 has 24 MA's), (6, 38944), (9, 38995), (14, 39103), (15, 39109), (21, 39241),

Gene: KaiHaiDragon\_60 Start: 38360, Stop: 38863, Start Num: 3

Candidate Starts for KaiHaiDragon\_60:

(Start: 3 @38360 has 21 MA's), (6, 38495), (7, 38498), (9, 38546), (22, 38840),

Gene: Kowalski\_58 Start: 38473, Stop: 38943, Start Num: 5

Candidate Starts for Kowalski\_58:

(Start: 5 @38473 has 24 MA's), (6, 38578), (9, 38629), (14, 38737), (15, 38743), (21, 38875),

Gene: LittleFortune\_61 Start: 38731, Stop: 39234, Start Num: 3

Candidate Starts for LittleFortune\_61:

(Start: 3 @38731 has 21 MA's), (6, 38866), (7, 38869), (9, 38917), (22, 39211),

Gene: Lucretia\_59 Start: 38389, Stop: 38859, Start Num: 5

Candidate Starts for Lucretia\_59:

(Start: 5 @38389 has 24 MA's), (6, 38494), (9, 38545), (14, 38653), (18, 38746), (21, 38791),

Gene: Metamorphoo\_62 Start: 39675, Stop: 40148, Start Num: 5

Candidate Starts for Metamorphoo\_62:

(Start: 5 @39675 has 24 MA's), (8, 39792), (9, 39834), (12, 39906),

Gene: NoodlelyBoi\_60 Start: 39252, Stop: 39725, Start Num: 5

Candidate Starts for NoodlelyBoi\_60:

(Start: 5 @39252 has 24 MA's), (6, 39357), (9, 39408), (12, 39480), (14, 39516), (20, 39651),

Gene: Onika\_58 Start: 38449, Stop: 38952, Start Num: 3

Candidate Starts for Onika\_58:

(Start: 3 @38449 has 21 MA's), (6, 38584), (7, 38587), (9, 38635), (22, 38929),

Gene: Paschalis\_59 Start: 38456, Stop: 38959, Start Num: 3

Candidate Starts for Paschalis\_59:

(Start: 3 @38456 has 21 MA's), (6, 38591), (7, 38594), (9, 38642), (22, 38936),

Gene: PhedwardCullen\_58 Start: 38206, Stop: 38697, Start Num: 3

Candidate Starts for PhedwardCullen\_58:

(Start: 3 @38206 has 21 MA's), (6, 38341), (7, 38344), (9, 38392), (22, 38674),

Gene: Phorgeous\_59 Start: 38290, Stop: 38760, Start Num: 5

Candidate Starts for Phorgeous\_59:

(Start: 5 @38290 has 24 MA's), (6, 38395), (9, 38446), (14, 38554), (18, 38647), (21, 38692),

Gene: Phrancesco\_59 Start: 38580, Stop: 39083, Start Num: 3

Candidate Starts for Phrancesco\_59:

(Start: 3 @38580 has 21 MA's), (6, 38715), (7, 38718), (9, 38766), (13, 38841), (16, 38883), (22, 39060),

Gene: PierreOrion\_59 Start: 38698, Stop: 39168, Start Num: 5

Candidate Starts for PierreOrion\_59:

(Start: 5 @38698 has 24 MA's), (6, 38803), (9, 38854), (14, 38962), (18, 39055), (20, 39097),

Gene: PiperSansNom\_60 Start: 38762, Stop: 39265, Start Num: 3

Candidate Starts for PiperSansNom\_60:

(Start: 3 @38762 has 21 MA's), (6, 38897), (7, 38900), (9, 38948), (13, 39023), (16, 39065), (22, 39242),

Gene: Piperis\_60 Start: 38415, Stop: 38885, Start Num: 5

Candidate Starts for Piperis\_60:

(Start: 5 @38415 has 24 MA's), (6, 38520), (9, 38571), (14, 38679), (18, 38772), (21, 38817),

Gene: Pulchra\_61 Start: 38811, Stop: 39281, Start Num: 5

Candidate Starts for Pulchra\_61:

(Start: 5 @38811 has 24 MA's), (6, 38916), (9, 38967), (14, 39075), (18, 39168), (21, 39213),

Gene: Quhwah\_63 Start: 39070, Stop: 39573, Start Num: 3

Candidate Starts for Quhwah\_63:

(Start: 3 @39070 has 21 MA's), (6, 39205), (7, 39208), (9, 39256), (22, 39550),

Gene: Ramiel05\_58 Start: 38473, Stop: 38943, Start Num: 5

Candidate Starts for Ramiel05\_58:

(Start: 5 @38473 has 24 MA's), (6, 38578), (9, 38629), (14, 38737), (15, 38743), (21, 38875),

Gene: RobsFeet\_63 Start: 39942, Stop: 40418, Start Num: 5

Candidate Starts for RobsFeet\_63:

(Start: 5 @39942 has 24 MA's), (8, 40059), (9, 40101), (10, 40107), (12, 40173),

Gene: Rockwell\_58 Start: 38473, Stop: 38976, Start Num: 3

Candidate Starts for Rockwell\_58:

(Start: 3 @38473 has 21 MA's), (6, 38608), (7, 38611), (9, 38659), (13, 38734), (16, 38776), (22, 38953),

Gene: Savannah\_58 Start: 38500, Stop: 39003, Start Num: 3

Candidate Starts for Savannah\_58:

(Start: 3 @38500 has 21 MA's), (6, 38635), (7, 38638), (9, 38686), (22, 38980),

Gene: Scumberland\_61 Start: 38695, Stop: 39198, Start Num: 3

Candidate Starts for Scumberland\_61:

(Start: 3 @38695 has 21 MA's), (6, 38830), (7, 38833), (9, 38881), (22, 39175),

Gene: Selwyn23\_60 Start: 38645, Stop: 39115, Start Num: 5

Candidate Starts for Selwyn23\_60:

(Start: 5 @38645 has 24 MA's), (6, 38750), (9, 38801), (14, 38909), (18, 39002), (21, 39047),

Gene: Shotgun\_59 Start: 38376, Stop: 38879, Start Num: 3

Candidate Starts for Shotgun\_59:

(Start: 3 @38376 has 21 MA's), (6, 38511), (7, 38514), (9, 38562), (13, 38637), (16, 38679), (22, 38856),

Gene: Shrubaron\_63 Start: 39555, Stop: 40031, Start Num: 5

Candidate Starts for Shrubaron\_63:

(Start: 5 @39555 has 24 MA's), (8, 39672), (9, 39714), (10, 39720),

Gene: SirFrank\_59 Start: 38656, Stop: 39129, Start Num: 5

Candidate Starts for SirFrank\_59:

(Start: 5 @38656 has 24 MA's), (6, 38761), (9, 38812), (12, 38884), (14, 38920), (20, 39055),

Gene: Skugga\_59 Start: 38845, Stop: 39315, Start Num: 5

Candidate Starts for Skugga\_59:

(Start: 5 @38845 has 24 MA's), (6, 38950), (11, 39046), (12, 39073), (14, 39109), (15, 39115), (22, 39295),

Gene: Smarties\_69 Start: 40305, Stop: 40778, Start Num: 5

Candidate Starts for Smarties\_69:

(Start: 5 @40305 has 24 MA's), (6, 40410), (9, 40461), (11, 40506), (12, 40533), (14, 40569), (15, 40575),

Gene: Teamocil\_63 Start: 38560, Stop: 39033, Start Num: 5

Candidate Starts for Teamocil\_63:

(Start: 5 @38560 has 24 MA's), (6, 38665), (9, 38716), (12, 38788), (15, 38830),

Gene: Tyrumbra\_59 Start: 39801, Stop: 40277, Start Num: 5

Candidate Starts for Tyrumbra\_59:

(Start: 5 @39801 has 24 MA's), (8, 39918), (9, 39960), (10, 39966), (12, 40032),

Gene: Yeti\_61 Start: 38447, Stop: 38917, Start Num: 5

Candidate Starts for Yeti\_61:

(Start: 5 @38447 has 24 MA's), (6, 38552), (9, 38603), (14, 38711), (18, 38804), (21, 38849),

Gene: Zapato\_59 Start: 39133, Stop: 39603, Start Num: 5

Candidate Starts for Zapato\_59:

(1, 39046), (2, 39097), (4, 39130), (Start: 5 @39133 has 24 MA's), (6, 39238), (9, 39289), (11, 39334), (12, 39361), (14, 39397), (17, 39418), (21, 39535),