



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 196713 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196713 has 32 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Quasar\_71
- Track 2 : Amok\_68, Emalyn\_67
- Track 3 : Pons\_74, MAnor\_73
- Track 4 : Axym\_69, Agatha\_71, Burnsey\_70
- Track 5 : Lauer\_66
- Track 6 : Yakult\_74
- Track 7 : Mayweather\_74, Elinal\_76, Vine\_74, KayGee\_74
- Track 8 : Orla\_75
- Track 9 : SummitAcademy\_71, PotPie\_71
- Track 10 : SweatNTears\_71
- Track 11 : Button\_71
- Track 12 : MunkgeeRoachy\_69
- Track 13 : Yummy\_71
- Track 14 : Buttrmilkdreams\_71, Horseradish\_71
- Track 15 : RanchParmCat\_72
- Track 16 : Jamzy\_76
- Track 17 : GiKK\_75
- Track 18 : Margaret\_75
- Track 19 : Troje\_71
- Track 20 : Nodigi\_74
- Track 21 : Gaia\_169, Nebkiss\_165
- Track 22 : Juicebox\_59

### ***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 14 of the 31 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha\_71, Amok\_68, Axym\_69, Burnsey\_70, Button\_71, Emalyn\_67, Jamzy\_76, Margaret\_75, MunkgeeRoachy\_69, Nodigi\_74, Orla\_75, RanchParmCat\_72, SweatNTears\_71, Troje\_71, Yakult\_74,

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

- Buttrmlkdreams\_71, GiKK\_75, Horseradish\_71, Quasar\_71, Yummy\_71,

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

- Elinal\_76, Gaia\_169, Juicebox\_59, KayGee\_74, Lauer\_66, MAnor\_73, Mayweather\_74, Nebkiss\_165, Pons\_74, PotPie\_71, SummitAcademy\_71, Vine\_74,

### Summary by start number:

Start 5:

- Found in 5 of 32 ( 15.6% ) of genes in pham
- Manual Annotations of this start: 1 of 31
- Called 20.0% of time when present
- Phage (with cluster) where this start called: GiKK\_75 (CT),

Start 6:

- Found in 6 of 32 ( 18.8% ) of genes in pham
- Manual Annotations of this start: 3 of 31
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Gaia\_169 (X), Nebkiss\_165 (X), Quasar\_71 (CT),

Start 8:

- Found in 8 of 32 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 3 of 31
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Buttrmlkdreams\_71 (CT), Horseradish\_71 (CT), Juicebox\_59 (singleton),

Start 9:

- Found in 20 of 32 ( 62.5% ) of genes in pham
- Manual Annotations of this start: 14 of 31
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Agatha\_71 (CT), Amok\_68 (CT), Axym\_69 (CT), Burnsey\_70 (CT), Button\_71 (CT), Emalyn\_67 (CT), Jamzy\_76 (CT), Margaret\_75 (CT), MunkgeeRoachy\_69 (CT), Nodigi\_74 (CT), Orla\_75 (CT), RanchParmCat\_72 (CT), SweatNTears\_71 (CT), Troje\_71 (CT), Yakult\_74 (CT),

Start 10:

- Found in 9 of 32 ( 28.1% ) of genes in pham
- Manual Annotations of this start: 8 of 31
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Elinal\_76 (CT), KayGee\_74 (CT), MAnor\_73 (CT), Mayweather\_74 (CT), Pons\_74 (CT), PotPie\_71 (CT), SummitAcademy\_71 (CT), Vine\_74 (CT),

Start 16:

- Found in 5 of 32 ( 15.6% ) of genes in pham
- Manual Annotations of this start: 1 of 31
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Yummy\_71 (CT),

Start 18:

- Found in 5 of 32 ( 15.6% ) of genes in pham

- Manual Annotations of this start: 1 of 31
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Lauer\_66 (CT),

### **Summary by clusters:**

There are 3 clusters represented in this pham: X, singleton, CT,

Info for manual annotations of cluster CT:

- Start number 5 was manually annotated 1 time for cluster CT.
- Start number 6 was manually annotated 1 time for cluster CT.
- Start number 8 was manually annotated 2 times for cluster CT.
- Start number 9 was manually annotated 14 times for cluster CT.
- Start number 10 was manually annotated 8 times for cluster CT.
- Start number 16 was manually annotated 1 time for cluster CT.
- Start number 18 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster X:

- Start number 6 was manually annotated 2 times for cluster X.

### **Gene Information:**

Gene: Agatha\_71 Start: 46233, Stop: 46523, Start Num: 9

Candidate Starts for Agatha\_71:

(Start: 6 @46212 has 3 MA's), (Start: 9 @46233 has 14 MA's), (20, 46332),

Gene: Amok\_68 Start: 44983, Stop: 45258, Start Num: 9

Candidate Starts for Amok\_68:

(Start: 8 @44980 has 3 MA's), (Start: 9 @44983 has 14 MA's), (26, 45088),

Gene: Axym\_69 Start: 46163, Stop: 46453, Start Num: 9

Candidate Starts for Axym\_69:

(Start: 6 @46142 has 3 MA's), (Start: 9 @46163 has 14 MA's), (20, 46262),

Gene: Burnsey\_70 Start: 45875, Stop: 46165, Start Num: 9

Candidate Starts for Burnsey\_70:

(Start: 6 @45854 has 3 MA's), (Start: 9 @45875 has 14 MA's), (20, 45974),

Gene: Button\_71 Start: 45762, Stop: 46070, Start Num: 9

Candidate Starts for Button\_71:

(3, 45687), (Start: 5 @45732 has 1 MA's), (7, 45753), (Start: 9 @45762 has 14 MA's), (15, 45807), (19, 45846), (25, 45876), (28, 45909), (35, 45960),

Gene: Buttrmlkdreams\_71 Start: 45701, Stop: 45979, Start Num: 8

Candidate Starts for Buttrmlkdreams\_71:

(Start: 8 @45701 has 3 MA's), (Start: 9 @45704 has 14 MA's), (14, 45746), (Start: 16 @45758 has 1 MA's), (17, 45770), (28, 45821), (31, 45848), (32, 45851),

Gene: Elinal\_76 Start: 48006, Stop: 48332, Start Num: 10

Candidate Starts for Elinal\_76:

(7, 47994), (Start: 10 @48006 has 8 MA's), (12, 48030), (Start: 18 @48084 has 1 MA's), (22, 48111), (37, 48231),

Gene: Emalyn\_67 Start: 43687, Stop: 43962, Start Num: 9

Candidate Starts for Emalyn\_67:

(Start: 8 @43684 has 3 MA's), (Start: 9 @43687 has 14 MA's), (26, 43792),

Gene: Gaia\_169 Start: 83930, Stop: 84226, Start Num: 6

Candidate Starts for Gaia\_169:

(Start: 6 @83930 has 3 MA's), (11, 83975), (13, 83987), (20, 84041), (26, 84062), (29, 84077), (33, 84116), (35, 84125), (36, 84131),

Gene: GiKK\_75 Start: 47115, Stop: 47441, Start Num: 5

Candidate Starts for GiKK\_75:

(3, 47070), (Start: 5 @47115 has 1 MA's), (7, 47136), (Start: 9 @47145 has 14 MA's), (15, 47190), (19, 47229), (20, 47244), (27, 47277), (30, 47304), (34, 47328), (35, 47331),

Gene: Horseradish\_71 Start: 45465, Stop: 45743, Start Num: 8

Candidate Starts for Horseradish\_71:

(Start: 8 @45465 has 3 MA's), (Start: 9 @45468 has 14 MA's), (14, 45510), (Start: 16 @45522 has 1 MA's), (17, 45534), (28, 45585), (31, 45612), (32, 45615),

Gene: Jamzy\_76 Start: 46875, Stop: 47171, Start Num: 9

Candidate Starts for Jamzy\_76:

(3, 46800), (Start: 5 @46845 has 1 MA's), (7, 46866), (Start: 9 @46875 has 14 MA's), (15, 46920), (19, 46959), (20, 46974), (27, 47007), (30, 47034), (34, 47058), (35, 47061),

Gene: Juicebox\_59 Start: 41044, Stop: 41346, Start Num: 8

Candidate Starts for Juicebox\_59:

(7, 41038), (Start: 8 @41044 has 3 MA's), (32, 41221),

Gene: KayGee\_74 Start: 48035, Stop: 48361, Start Num: 10

Candidate Starts for KayGee\_74:

(7, 48023), (Start: 10 @48035 has 8 MA's), (12, 48059), (Start: 18 @48113 has 1 MA's), (22, 48140), (37, 48260),

Gene: Lauer\_66 Start: 47856, Stop: 48119, Start Num: 18

Candidate Starts for Lauer\_66:

(7, 47766), (Start: 10 @47778 has 8 MA's), (12, 47802), (Start: 18 @47856 has 1 MA's), (21, 47889), (37, 48015),

Gene: MAnor\_73 Start: 48015, Stop: 48329, Start Num: 10

Candidate Starts for MAnor\_73:

(7, 48003), (Start: 10 @48015 has 8 MA's), (23, 48114), (34, 48201),

Gene: Margaret\_75 Start: 46622, Stop: 46930, Start Num: 9

Candidate Starts for Margaret\_75:

(1, 46505), (2, 46538), (3, 46547), (Start: 5 @46592 has 1 MA's), (7, 46613), (Start: 9 @46622 has 14 MA's), (15, 46667), (19, 46706), (20, 46721), (24, 46730), (25, 46736), (28, 46769),

Gene: Mayweather\_74 Start: 48037, Stop: 48378, Start Num: 10

Candidate Starts for Mayweather\_74:

(7, 48025), (Start: 10 @48037 has 8 MA's), (12, 48061), (Start: 18 @48115 has 1 MA's), (22, 48154), (37, 48274),

Gene: MunkgeeRoachy\_69 Start: 45602, Stop: 45892, Start Num: 9

Candidate Starts for MunkgeeRoachy\_69:

(7, 45596), (Start: 9 @45602 has 14 MA's), (20, 45701),

Gene: Nebkiss\_165 Start: 79421, Stop: 79717, Start Num: 6

Candidate Starts for Nebkiss\_165:

(Start: 6 @79421 has 3 MA's), (11, 79466), (13, 79478), (20, 79532), (26, 79553), (29, 79568), (33, 79607), (35, 79616), (36, 79622),

Gene: Nodigi\_74 Start: 46877, Stop: 47185, Start Num: 9

Candidate Starts for Nodigi\_74:

(4, 46838), (7, 46868), (Start: 9 @46877 has 14 MA's), (15, 46922), (19, 46961), (20, 46976), (24, 46985), (28, 47024), (30, 47048), (32, 47057),

Gene: Orla\_75 Start: 47026, Stop: 47334, Start Num: 9

Candidate Starts for Orla\_75:

(7, 47017), (Start: 9 @47026 has 14 MA's), (15, 47071), (19, 47110), (20, 47125), (24, 47134), (28, 47173), (30, 47197), (32, 47206),

Gene: Pons\_74 Start: 47664, Stop: 47978, Start Num: 10

Candidate Starts for Pons\_74:

(7, 47652), (Start: 10 @47664 has 8 MA's), (23, 47763), (34, 47850),

Gene: PotPie\_71 Start: 47864, Stop: 48178, Start Num: 10

Candidate Starts for PotPie\_71:

(7, 47852), (Start: 10 @47864 has 8 MA's), (12, 47888), (20, 47957), (37, 48074),

Gene: Quasar\_71 Start: 46628, Stop: 46939, Start Num: 6

Candidate Starts for Quasar\_71:

(Start: 6 @46628 has 3 MA's), (Start: 9 @46649 has 14 MA's), (20, 46748),

Gene: RanchParmCat\_72 Start: 46910, Stop: 47206, Start Num: 9

Candidate Starts for RanchParmCat\_72:

(7, 46901), (Start: 9 @46910 has 14 MA's), (15, 46955), (20, 47009), (28, 47045),

Gene: SummitAcademy\_71 Start: 47007, Stop: 47324, Start Num: 10

Candidate Starts for SummitAcademy\_71:

(7, 46995), (Start: 10 @47007 has 8 MA's), (12, 47031), (20, 47100), (37, 47217),

Gene: SweatNTears\_71 Start: 45622, Stop: 45897, Start Num: 9

Candidate Starts for SweatNTears\_71:

(Start: 8 @45619 has 3 MA's), (Start: 9 @45622 has 14 MA's), (14, 45664), (Start: 16 @45676 has 1 MA's), (17, 45688), (31, 45766), (32, 45769),

Gene: Troje\_71 Start: 45614, Stop: 45889, Start Num: 9

Candidate Starts for Troje\_71:

(Start: 8 @45611 has 3 MA's), (Start: 9 @45614 has 14 MA's), (14, 45656), (Start: 16 @45668 has 1 MA's), (17, 45680), (27, 45728), (28, 45731), (31, 45758), (32, 45761), (35, 45779),

Gene: Vine\_74 Start: 47747, Stop: 48088, Start Num: 10

Candidate Starts for Vine\_74:

(7, 47735), (Start: 10 @47747 has 8 MA's), (12, 47771), (Start: 18 @47825 has 1 MA's), (22, 47864), (37, 47984),

Gene: Yakult\_74 Start: 46869, Stop: 47177, Start Num: 9

Candidate Starts for Yakult\_74:

(3, 46794), (Start: 5 @46839 has 1 MA's), (7, 46860), (Start: 9 @46869 has 14 MA's), (15, 46914), (19, 46953), (24, 46977), (25, 46983), (28, 47016),

Gene: Yummy\_71 Start: 45636, Stop: 45857, Start Num: 16

Candidate Starts for Yummy\_71:

(Start: 8 @45579 has 3 MA's), (Start: 9 @45582 has 14 MA's), (14, 45624), (Start: 16 @45636 has 1 MA's), (17, 45648), (28, 45699), (31, 45726), (32, 45729),