

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 158154 Report

This analysis was run 04/13/24 on database version 558.

Pham number 158154 has 23 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Gustav 61
- Track 2 : Turuncu_10
- Track 3 : Dalilpop_12
- Track 4 : Flapper_10
- Track 5 : GRU1 94
- Track 6 : Outis_9, StarStruck_9
- Track 7 : MerCougar 9
- Track 8: Kabluna 10, Bonum 10
- Track 9 : Commandaria 10
- Track 10 : SuperSulley_9, Buggaboo_9
- Track 11 : NosilaM 10
- Track 12 : Sukkupi_9, BiPauneto_9, Yndexa_9
- Track 13 : NadineRae_8
- Track 14 : Marietta_8, WhoseManz_8
- Track 15 : IDyn 9
- Track 16: Pleakley 13, Fury 13

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

The start number called the most often in the published annotations is 10, it was called in 11 of the 22 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Bonum_10, Buggaboo_9, Dalilpop_12, Flapper_10, GRU1_94, Kabluna_10, MerCougar_9, NosilaM_10, Outis_9, StarStruck_9, SuperSulley_9, Turuncu_10,

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

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

• BiPauneto_9, Commandaria_10, Fury_13, Gustav_61, IDyn_9, Marietta_8, NadineRae_8, Pleakley_13, Sukkupi_9, WhoseManz_8, Yndexa_9,

Summary by start number:

Start 7:

- Found in 3 of 23 (13.0%) of genes in pham
- Manual Annotations of this start: 3 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiPauneto_9 (CR4), Sukkupi_9 (CR4), Yndexa 9 (CR4),

Start 8:

- Found in 1 of 23 (4.3%) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NadineRae_8 (CR4),

Start 9:

- Found in 2 of 23 (8.7%) of genes in pham
- Manual Annotations of this start: 2 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury_13 (CR5), Pleakley_13 (CR5),

Start 10:

- Found in 12 of 23 (52.2%) of genes in pham
- Manual Annotations of this start: 11 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bonum_10 (CR2), Buggaboo_9 (CR2), Dalilpop_12 (CR1), Flapper_10 (CR1), GRU1_94 (CR1), Kabluna_10 (CR2), MerCougar_9 (CR2), NosilaM_10 (CR2), Outis_9 (CR2), StarStruck_9 (CR2), SuperSulley_9 (CR2), Turuncu_10 (CR1),

Start 11:

- Found in 4 of 23 (17.4%) of genes in pham
- Manual Annotations of this start: 4 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gustav_61 (CD), IDyn_9 (CR4), Marietta_8 (CR4), WhoseManz_8 (CR4),

Start 12:

- Found in 1 of 23 (4.3%) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Commandaria_10 (CR2),

Summary by clusters:

There are 5 clusters represented in this pham: CR2, CR1, CR5, CR4, CD,

Info for manual annotations of cluster CD:

•Start number 11 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CR1:

•Start number 10 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- •Start number 10 was manually annotated 8 times for cluster CR2.
- •Start number 12 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR4:

- •Start number 7 was manually annotated 3 times for cluster CR4.
- •Start number 8 was manually annotated 1 time for cluster CR4.
- •Start number 11 was manually annotated 3 times for cluster CR4.

Info for manual annotations of cluster CR5:

•Start number 9 was manually annotated 2 times for cluster CR5.

Gene Information:

Gene: BiPauneto 9 Start: 4386, Stop: 4853, Start Num: 7

Candidate Starts for BiPauneto 9:

(Start: 7 @4386 has 3 MA's), (20, 4542), (24, 4557), (25, 4560), (35, 4743), (36, 4755),

Gene: Bonum_10 Start: 5796, Stop: 6227, Start Num: 10

Candidate Starts for Bonum 10:

 $(1,\,5427),\,(Start:\,10\,\,@\,5796\,\,has\,\,11\,\,MA's),\,(14,\,5817),\,(15,\,5832),\,(17,\,5853),\,(19,\,5898),\,(25,\,5946),\,(26,\,$

(26, 5964), (27, 6000), (38, 6177),

Gene: Buggaboo_9 Start: 5315, Stop: 5746, Start Num: 10

Candidate Starts for Buggaboo 9:

(Start: 10 @5315 has 11 MA's), (14, 5336), (19, 5417), (25, 5465), (26, 5483), (27, 5519), (38, 5696),

Gene: Commandaria_10 Start: 5673, Stop: 6080, Start Num: 12

Candidate Starts for Commandaria 10:

(4, 5541), (5, 5610), (6, 5613), (Start: 12 @5673 has 1 MA's), (14, 5688), (23, 5793), (29, 5886), (30,

5910), (31, 5916), (34, 5964), (39, 6054),

Gene: Dalilpop 12 Start: 6793, Stop: 7221, Start Num: 10

Candidate Starts for Dalilpop 12:

(2, 6643), (Start: 10 @6793 has 11 MA's), (14, 6814), (23, 6937), (25, 6943), (26, 6961), (28, 7000),

(38, 7174),

Gene: Flapper 10 Start: 5630, Stop: 6058, Start Num: 10

Candidate Starts for Flapper 10:

(Start: 10 @5630 has 11 MA's), (14, 5651), (25, 5780), (26, 5798), (28, 5837), (38, 6011),

Gene: Fury 13 Start: 5917, Stop: 6342, Start Num: 9

Candidate Starts for Fury_13:

(Start: 9 @ 5917 has 2 MA's), (13, 5944), (16, 5974), (33, 6214), (37, 6256),

Gene: GRU1_94 Start: 64725, Stop: 65153, Start Num: 10

Candidate Starts for GRU1 94:

(Start: 10 @64725 has 11 MA's), (14, 64746), (23, 64869), (25, 64875), (26, 64893), (28, 64932), (38,

65106).

Gene: Gustav_61 Start: 41194, Stop: 40802, Start Num: 11

Candidate Starts for Gustav 61:

(3, 41308), (Start: 11 @41194 has 4 MA's), (20, 41083), (21, 41080), (22, 41077), (25, 41065), (31, 40960), (33, 40915), (35, 40903), (38, 40849),

Gene: IDyn_9 Start: 4709, Stop: 5167, Start Num: 11

Candidate Starts for IDyn_9:

(Start: 11 @4709 has 4 MA's), (14, 4733), (18, 4790), (20, 4856), (24, 4871), (25, 4874), (35, 5057), (36, 5069),

Gene: Kabluna_10 Start: 5187, Stop: 5618, Start Num: 10

Candidate Starts for Kabluna 10:

(1, 4818), (Start: 10 @5187 has 11 MA's), (14, 5208), (15, 5223), (17, 5244), (19, 5289), (25, 5337), (26, 5355), (27, 5391), (38, 5568),

Gene: Marietta_8 Start: 4121, Stop: 4579, Start Num: 11

Candidate Starts for Marietta_8:

(Start: 11 @4121 has 4 MA's), (18, 4202), (20, 4268), (24, 4283), (25, 4286), (35, 4469), (36, 4481),

Gene: MerCougar_9 Start: 5538, Stop: 5972, Start Num: 10

Candidate Starts for MerCougar 9:

(Start: 10 @5538 has 11 MA's), (25, 5691), (38, 5922),

Gene: NadineRae_8 Start: 3822, Stop: 4295, Start Num: 8

Candidate Starts for NadineRae 8:

(Start: 8 @ 3822 has 1 MA's), (14, 3855), (16, 3879), (18, 3912), (25, 3999), (36, 4197),

Gene: NosilaM_10 Start: 6075, Stop: 6506, Start Num: 10

Candidate Starts for NosilaM_10:

(1, 5706), (Start: 10 @6075 has 11 MA's), (13, 6090), (14, 6096), (15, 6111), (17, 6132), (19, 6177), (26, 6243), (27, 6279), (31, 6345), (32, 6363), (38, 6456),

Gene: Outis_9 Start: 5229, Stop: 5666, Start Num: 10

Candidate Starts for Outis 9:

(Start: 10 @5229 has 11 MA's), (15, 5268), (16, 5277), (19, 5334), (25, 5385), (26, 5403), (38, 5616),

Gene: Pleakley_13 Start: 5917, Stop: 6342, Start Num: 9

Candidate Starts for Pleakley_13:

(Start: 9 @5917 has 2 MA's), (13, 5944), (16, 5974), (33, 6214), (37, 6256),

Gene: StarStruck_9 Start: 5229, Stop: 5666, Start Num: 10

Candidate Starts for StarStruck_9:

(Start: 10 @5229 has 11 MA's), (15, 5268), (16, 5277), (19, 5334), (25, 5385), (26, 5403), (38, 5616),

Gene: Sukkupi_9 Start: 4277, Stop: 4744, Start Num: 7

Candidate Starts for Sukkupi 9:

(Start: 7 @ 4277 has 3 MA's), (20, 4433), (24, 4448), (25, 4451), (35, 4634), (36, 4646),

Gene: SuperSulley_9 Start: 5315, Stop: 5746, Start Num: 10

Candidate Starts for SuperSulley_9:

(Start: 10 @5315 has 11 MA's), (14, 5336), (19, 5417), (25, 5465), (26, 5483), (27, 5519), (38, 5696),

Gene: Turuncu_10 Start: 5145, Stop: 5576, Start Num: 10

Candidate Starts for Turuncu 10:

(Start: 10 @5145 has 11 MA's), (25, 5295), (26, 5313), (38, 5529),

Gene: WhoseManz_8 Start: 3732, Stop: 4190, Start Num: 11

Candidate Starts for WhoseManz_8:

(Start: 11 @3732 has 4 MA's), (18, 3813), (20, 3879), (24, 3894), (25, 3897), (35, 4080), (36, 4092),

Gene: Yndexa_9 Start: 4277, Stop: 4744, Start Num: 7

Candidate Starts for Yndexa_9:

(Start: 7 @ 4277 has 3 MA's), (20, 4433), (24, 4448), (25, 4451), (35, 4634), (36, 4646),