Pham 158061









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 158061 Report

This analysis was run 04/13/24 on database version 558.
Pham number 158061 has 33 members, 5 are drafts.
Phages represented in each track:

- Track 1 : Papez_9, Kenmech_10, TheloniousMonk_9, LilBib_8
- Track 2 : Norz_9, Monet_9
- Track 3 : Squee_8, Gwendoluna_9, KBG_9, Graduation_10, Solon_8, Nerujay_9
- Track 4 : Hermia_9, Buttons_9, SpikeBT_9, Edtherson_9, Treddle_9
- Track 5 : BillKnuckles_9, DD5_9
- Track 6 : Zeuska_8, QTRlifeCrisis 11
- Track 7 : StAnnes_29, Hamulus_31, Soul22_35, Kingsley_29
- Track 8 : Ovechkin_31
- Track 9 : Ruby_32, MisterCuddles_32, Girr_32
- Track 10 : Mozy_32
- Track 11 : Mozy_92
- Track 12 : GMA4_67
- Track 13 : LilSpotty_83


## 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 17 of the 28 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BillKnuckles_9, Buttons_9, DD5_9, Edtherson_9, Graduation_10, Gwendoluna_9, Hermia_9, KBG_9, Kenmech_10, LilBib_8, Monet_9, Nerujay_9, Norz_9, Papez_9, QTRlifeCrisis_11, Solon_8, SpikeBT_9, Squee_8, TheloniousMonk_9, Treddle_9, Zeuska_8,

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

- GMA4_67, Girr_32, Hamulus_31, Kingsley_29, LilSpotty 83, MisterCuddles_32, Mozy_32, Mozy_92, Ovechkin_31, Ruby_32, Soul22_35, StAnnes_29,


## Summary by start number:

Start 1:

- Found in 5 of 33 ( $15.2 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called $20.0 \%$ of time when present
- Phage (with cluster) where this start called: Ovechkin_31 (F1),

Start 2:

- Found in 5 of 33 ( $15.2 \%$ ) of genes in pham
- Manual Annotations of this start: 4 of 28
- Called $80.0 \%$ of time when present
- Phage (with cluster) where this start called: Hamulus_31 (F1), Kingsley_29 (F1), Soul22_35 (F2), StAnnes_29 (F1),

Start 3:

- Found in 3 of 33 ( $9.1 \%$ ) of genes in pham
- Manual Annotations of this start: 3 of 28
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Girr_32 (F1), MisterCuddles_32 (F1),

Ruby_32 (F1),
Start 5:

- Found in 1 of 33 ( $3.0 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Mozy_92 (F1),

Start 6:

- Found in 1 of 33 (3.0\%) of genes in pham
- No Manual Annotations of this start.
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: GMA4_67 (singleton),


## Start 10:

- Found in 21 of 33 ( $63.6 \%$ ) of genes in pham
- Manual Annotations of this start: 17 of 28
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: BillKnuckles_9 (A1), Buttons_9 (A1), DD5_9 (A1), Edtherson_9 (A1), Graduation_10 (A1), Gwendoluna_9 (A1), Hermia_9 (A1), KBG_9 (A1), Kenmech_10 (A1), LilBib_8 (A1), Monet 9 (A1), Nerujay_9 (A1) , Norz_9 (A1), Papez_9 (A1), $\overline{\text { QTRlifeCrisis_11 (A1), Solon_} 8 \text { (A1), SpikeBT_9 (A1), }}$ Squee_8 (A1), TheloniousMonk_9 (A1), Treddle_9 (A1), Zeuska_8 (A1),

Start 11:

- Found in 1 of 33 ( $3.0 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Mozy_32 (F1),

Start 16:

- Found in 1 of 33 ( $3.0 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: LilSpotty_83 (singleton),


## Summary by clusters:

There are 4 clusters represented in this pham: A1, F1, singleton, F2,
Info for manual annotations of cluster A1:
-Start number 10 was manually annotated 17 times for cluster A1.
Info for manual annotations of cluster F1:
-Start number 1 was manually annotated 1 time for cluster F1.
-Start number 2 was manually annotated 3 times for cluster F1.
-Start number 3 was manually annotated 3 times for cluster F1.
-Start number 5 was manually annotated 1 time for cluster F1.
-Start number 11 was manually annotated 1 time for cluster F1.
Info for manual annotations of cluster F2:
-Start number 2 was manually annotated 1 time for cluster F2.

## Gene Information:

Gene: BillKnuckles_9 Start: 4709, Stop: 5290, Start Num: 10
Candidate Starts for BillKnuckles_9:
(Start: 10 @4709 has 17 MA's), (15, 4811), (17, 4832), (26, 4880), (41, 5159),
Gene: Buttons_9 Start: 4220, Stop: 4798, Start Num: 10
Candidate Starts for Buttons_9:
(Start: 10 @4220 has 17 MA's), (18, 4346), (41, 4679),
Gene: DD5_9 Start: 4751, Stop: 5332, Start Num: 10
Candidate Starts for DD5_9:
(Start: 10 @ 4751 has 17 MA's), ( 15,4853 ), (17, 4874), ( 26,4922 ), ( 41,5201 ),
Gene: Edtherson_9 Start: 4530, Stop: 5108, Start Num: 10
Candidate Starts for Edtherson_9:
(Start: 10 @4530 has 17 MA's), (18, 4656), (41, 4989),
Gene: GMA4_67 Start: 43840, Stop: 44490, Start Num: 6
Candidate Starts for GMA4_67:
$(6,43840),(8,43870),(20,44059),(21,44065),(28,44122),(37,44284)$,
Gene: Girr_32 Start: 27712, Stop: 28464, Start Num: 3
Candidate Starts for Girr_32:
(Start: 3 @27712 has 3 MA's), (7, 27775), (9, 27823), (13, 27871), (21, 27982), (23, 27991), (31, 28117), (43, 28384),

Gene: Graduation_10 Start: 4816, Stop: 5397, Start Num: 10 Candidate Starts for Graduation_10:
(Start: 10 @4816 has 17 MA's), (15, 4918), (17, 4939), (26, 4987), (41, 5266),
Gene: Gwendoluna_9 Start: 4700, Stop: 5281, Start Num: 10
Candidate Starts for Gwendoluna_9:
(Start: 10 @4700 has 17 MA's), (15, 4802), (17, 4823), (26, 4871), (41, 5150),
Gene: Hamulus_31 Start: 27654, Stop: 28418, Start Num: 2
Candidate Starts for Hamulus_31:
(Start: 1 @27627 has 1 MA's), (Start: 2 @27654 has 4 MA's), (7, 27729), (9, 27777), (13, 27825), (21, 27936), (23, 27945), (31, 28071), (43, 28338),

Gene: Hermia_9 Start: 4783, Stop: 5361, Start Num: 10
Candidate Starts for Hermia_9:
(Start: 10 @4783 has 17 MA's), ( 18,4909 ), ( 41,5242 ),
Gene: KBG_9 Start: 4959, Stop: 5540, Start Num: 10
Candidate Starts for KBG_9:
(Start: 10 @4959 has 17 MA's), $(15,5061),(17,5082),(26,5130),(41,5409)$,
Gene: Kenmech_10 Start: 4617, Stop: 5195, Start Num: 10
Candidate Starts for Kenmech_10:
(Start: 10 @4617 has 17 MA's), ( 18,4743 ), $(41,5076)$,
Gene: Kingsley_29 Start: 26483, Stop: 27247, Start Num: 2
Candidate Starts for Kingsley_29:
(Start: 1 @26456 has 1 MA's), (Start: 2 @26483 has 4 MA's), (7, 26558), (9, 26606), (13, 26654), (21, 26765), (23, 26774), (31, 26900), (43, 27167),

Gene: LilBib_8 Start: 4381, Stop: 4959, Start Num: 10
Candidate Starts for LilBib_8:
(Start: 10 @4381 has 17 MA's), $(18,4507),(41,4840)$,
Gene: LilSpotty_83 Start: 48505, Stop: 49212, Start Num: 16
Candidate Starts for LilSpotty_83:
(Start: 16 @48505 has 1 MA's), (30, 48661), (33, 48739), (34, 48757), (35, 48781), (38, 48865), (39, $48877),(40,48886),(42,48922),(44,49051),(45,49180)$,

Gene: MisterCuddles_32 Start: 27712, Stop: 28464, Start Num: 3
Candidate Starts for MisterCuddles_32:
(Start: 3 @27712 has 3 MA's), (7, 27775), (9, 27823), (13, 27871), (21, 27982), (23, 27991), (31, 28117), (43, 28384),

Gene: Monet_9 Start: 4498, Stop: 5076, Start Num: 10
Candidate Starts for Monet 9:
(Start: 10 @4498 has 17 MA's), ( 18,4624 ), ( 41,4957 ),
Gene: Mozy_32 Start: 27800, Stop: 28405, Start Num: 11
Candidate Starts for Mozy_32:
(7, 27716), (Start: 11 @27800 has 1 MA's), (14, 27872), (17, 27896), (19, 27902), (24, 27932), (27, 27953), (28, 27974), (32, 28061),

Gene: Mozy_92 Start: 49652, Stop: 50401, Start Num: 5
Candidate Starts for Mozy_92:
(4, 49640), (Start: 5 @49652 has 1 MA's), (12, 49799), (22, 49931), (25, 49946), (29, 49991), (36, 50144),

Gene: Nerujay_9 Start: 4453, Stop: 5034, Start Num: 10

Candidate Starts for Nerujay_9:
(Start: 10 @4453 has 17 MA's), ( 15,4555 ), ( 17,4576 ), ( 26,4624 ), ( 41,4903 ),
Gene: Norz_9 Start: 4534, Stop: 5112, Start Num: 10 Candidate Starts for Norz_9:
(Start: 10 @4534 has 17 MA's), (18, 4660), (41, 4993),
Gene: Ovechkin_31 Start: 27645, Stop: 28436, Start Num: 1
Candidate Starts for Ovechkin_31:
(Start: 1 @27645 has 1 MA's), (Start: 2 @27672 has 4 MA's), (7, 27747), (9, 27795), (13, 27843), (21, 27954), (23, 27963), (31, 28089), (43, 28356),

Gene: Papez_9 Start: 5271, Stop: 5849, Start Num: 10
Candidate Starts for Papez_9:
(Start: 10 @5271 has 17 MA's), ( 18,5397 ), ( 41,5730 ),
Gene: QTRlifeCrisis_11 Start: 4494, Stop: 5075, Start Num: 10 Candidate Starts for QTRlifeCrisis_11:
(Start: 10 @4494 has 17 MA's), (15, 4596), (17, 4617), (26, 4665), (41, 4944),
Gene: Ruby_32 Start: 27712, Stop: 28464, Start Num: 3
Candidate Starts for Ruby_32:
(Start: 3 @27712 has 3 MA's), (7, 27775), (9, 27823), (13, 27871), (21, 27982), (23, 27991), (31, 28117), (43, 28384),

Gene: Solon_8 Start: 4653, Stop: 5234, Start Num: 10
Candidate Starts for Solon_8:
(Start: 10 @4653 has 17 MA's), (15, 4755), (17, 4776), (26, 4824), (41, 5103),
Gene: Soul22_35 Start: 27040, Stop: 27804, Start Num: 2
Candidate Starts for Soul22_35:
(Start: 1 @27013 has 1 MA's), (Start: 2 @27040 has 4 MA's), (7, 27115), (9, 27163), (13, 27211), (21, 27322), (23, 27331), (31, 27457), (43, 27724),

Gene: SpikeBT_9 Start: 4433, Stop: 5011, Start Num: 10
Candidate Starts for SpikeBT_9:
(Start: 10 @4433 has 17 MA's), ( 18,4559 ), ( 41,4892 ),
Gene: Squee_8 Start: 4160, Stop: 4741, Start Num: 10
Candidate Starts for Squee_8:
(Start: 10 @4160 has 17 MA's), (15, 4262), (17, 4283), (26, 4331), (41, 4610),
Gene: StAnnes_29 Start: 27239, Stop: 28003, Start Num: 2
Candidate Starts for StAnnes_29:
(Start: 1 @27212 has 1 MA's), (Start: 2 @27239 has 4 MA's), (7, 27314), (9, 27362), (13, 27410), (21, 27521), (23, 27530), (31, 27656), (43, 27923),

Gene: TheloniousMonk_9 Start: 4484, Stop: 5062, Start Num: 10
Candidate Starts for TheloniousMonk_9:
(Start: 10 @4484 has 17 MA's), ( 18,4610 ), ( 41,4943 ),
Gene: Treddle_9 Start: 4499, Stop: 5077, Start Num: 10
Candidate Starts for Treddle_9:
(Start: 10 @4499 has 17 MA's), (18, 4625), (41, 4958),
Gene: Zeuska_8 Start: 4378, Stop: 4959, Start Num: 10
Candidate Starts for Zeuska_8:
(Start: 10 @4378 has 17 MA's), $(15,4480),(17,4501),(26,4549),(41,4828)$,

