



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 291539 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291539 has 21 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Chanagan\_83
- Track 2 : Papez\_46, Magnar\_43, Graduation\_47
- Track 3 : Fushigi\_80
- Track 4 : KyMonks1A\_92
- Track 5 : Blackflame\_81
- Track 6 : PFR2\_47, PFR1\_45
- Track 7 : JKSyngboy\_4
- Track 8 : Baddon\_4
- Track 9 : Keitabear\_5
- Track 10 : SchottB\_4
- Track 11 : Lennon\_5
- Track 12 : Trax\_78, LilJank\_78
- Track 13 : Neville\_75
- Track 14 : Rabbitrun\_78
- Track 15 : Leperchaun\_69, Polka14\_75
- Track 16 : Spartoi\_40

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

The start number called the most often in the published annotations is 33, it was called in 6 of the 17 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Baddon\_4, JKSyngboy\_4, LilJank\_78, Neville\_75, Rabbitrun\_78, SchottB\_4, Trax\_78,

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:

- Blackflame\_81, Chanagan\_83, Fushigi\_80, Graduation\_47, Keitabear\_5, KyMonks1A\_92, Lennon\_5, Leperchaun\_69, Magnar\_43, PFR1\_45, PFR2\_47, Papez\_46, Polka14\_75, Spartoi\_40,

## Summary by start number:

### Start 17:

- Found in 2 of 21 ( 9.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PFR1\_45 (BX), PFR2\_47 (BX),

### Start 23:

- Found in 2 of 21 ( 9.5% ) of genes in pham
- Manual Annotations of this start: 1 of 17
- Called 50.0% of time when present
- Phage (with cluster) where this start called: KyMonks1A\_92 (A1),

### Start 24:

- Found in 2 of 21 ( 9.5% ) of genes in pham
- Manual Annotations of this start: 2 of 17
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Leperchaun\_69 (F1), Polka14\_75 (F1),

### Start 29:

- Found in 5 of 21 ( 23.8% ) of genes in pham
- Manual Annotations of this start: 3 of 17
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Blackflame\_81 (A1), Chanagan\_83 (A1), Fushigi\_80 (A1), Spartoi\_40 (singleton),

### Start 32:

- Found in 3 of 21 ( 14.3% ) of genes in pham
- Manual Annotations of this start: 3 of 17
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Graduation\_47 (A1), Magnar\_43 (A1), Papez\_46 (A1),

### Start 33:

- Found in 7 of 21 ( 33.3% ) of genes in pham
- Manual Annotations of this start: 6 of 17
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Baddon\_4 (DE1), JKSyngboy\_4 (DE1), LilJank\_78 (DU2), Neville\_75 (DU2), Rabbitrun\_78 (DU2), SchottB\_4 (DE1), Trax\_78 (DU2),

### Start 44:

- Found in 5 of 21 ( 23.8% ) of genes in pham
- Manual Annotations of this start: 2 of 17
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Keitabear\_5 (DE1), Lennon\_5 (DE1),

## Summary by clusters:

There are 6 clusters represented in this pham: F1, singleton, DE1, A1, DU2, BX,

Info for manual annotations of cluster A1:

- Start number 23 was manually annotated 1 time for cluster A1.
- Start number 29 was manually annotated 2 times for cluster A1.
- Start number 32 was manually annotated 3 times for cluster A1.

Info for manual annotations of cluster DE1:

- Start number 33 was manually annotated 3 times for cluster DE1.
- Start number 44 was manually annotated 2 times for cluster DE1.

Info for manual annotations of cluster DU2:

- Start number 33 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster F1:

- Start number 24 was manually annotated 2 times for cluster F1.

### ***Gene Information:***

Gene: Baddon\_4 Start: 2579, Stop: 3649, Start Num: 33

Candidate Starts for Baddon\_4:

(8, 2123), (Start: 33 @2579 has 6 MA's), (40, 2636), (46, 2690), (62, 2984), (86, 3377), (92, 3437), (95, 3452), (96, 3455), (100, 3476), (111, 3581), (114, 3599), (115, 3635),

Gene: Blackflame\_81 Start: 49915, Stop: 48884, Start Num: 29

Candidate Starts for Blackflame\_81:

(27, 49936), (Start: 29 @49915 has 3 MA's), (39, 49849), (41, 49825), (56, 49579), (78, 49195), (87, 49120), (91, 49075), (103, 49006), (104, 48994), (106, 48976), (110, 48928),

Gene: Chanagan\_83 Start: 48048, Stop: 47131, Start Num: 29

Candidate Starts for Chanagan\_83:

(27, 48069), (Start: 29 @48048 has 3 MA's), (39, 47982), (41, 47958), (56, 47712), (78, 47328), (87, 47253), (91, 47208), (98, 47169), (101, 47157),

Gene: Fushigi\_80 Start: 47333, Stop: 46284, Start Num: 29

Candidate Starts for Fushigi\_80:

(27, 47354), (Start: 29 @47333 has 3 MA's), (39, 47267), (41, 47243), (56, 46997), (78, 46613), (87, 46538), (91, 46493), (103, 46424), (104, 46412), (106, 46394),

Gene: Graduation\_47 Start: 34493, Stop: 33666, Start Num: 32

Candidate Starts for Graduation\_47:

(Start: 32 @34493 has 3 MA's), (41, 34421), (56, 34175), (78, 33791), (87, 33716),

Gene: JKSyngboy\_4 Start: 2579, Stop: 3643, Start Num: 33

Candidate Starts for JKSyngboy\_4:

(Start: 33 @2579 has 6 MA's), (40, 2636), (42, 2654), (Start: 44 @2663 has 2 MA's), (46, 2690), (62, 2984), (86, 3371), (92, 3431), (95, 3446), (96, 3449), (100, 3470), (111, 3575), (114, 3593), (115, 3629),

Gene: Keitabear\_5 Start: 4089, Stop: 5051, Start Num: 44

Candidate Starts for Keitabear\_5:

(1, 3228), (2, 3420), (3, 3450), (5, 3477), (7, 3513), (9, 3549), (10, 3666), (11, 3678), (16, 3765), (19, 3807), (20, 3819), (21, 3825), (28, 3969), (31, 3993), (Start: 44 @4089 has 2 MA's), (45, 4110), (51,

4245), (58, 4350), (64, 4446), (71, 4614), (72, 4635), (74, 4656), (95, 4905), (96, 4908), (97, 4911), (107, 4989),

Gene: KyMonks1A\_92 Start: 50898, Stop: 49912, Start Num: 23

Candidate Starts for KyMonks1A\_92:

(12, 51117), (14, 51069), (Start: 23 @50898 has 1 MA's), (Start: 29 @50829 has 3 MA's), (39, 50763), (41, 50739), (53, 50544), (56, 50493), (78, 50109), (87, 50034), (91, 49989), (98, 49950), (101, 49938),

Gene: Lennon\_5 Start: 3295, Stop: 4143, Start Num: 44

Candidate Starts for Lennon\_5:

(1, 2434), (2, 2626), (3, 2656), (5, 2683), (7, 2719), (9, 2755), (10, 2872), (11, 2884), (16, 2971), (19, 3013), (20, 3025), (21, 3031), (28, 3175), (31, 3199), (Start: 44 @3295 has 2 MA's), (45, 3316), (51, 3451), (58, 3556), (64, 3652), (71, 3820), (74, 3862), (95, 3997), (96, 4000), (97, 4003), (107, 4081),

Gene: Leperchaun\_69 Start: 44915, Stop: 45781, Start Num: 24

Candidate Starts for Leperchaun\_69:

(Start: 24 @44915 has 2 MA's), (36, 45014), (37, 45017), (40, 45038), (Start: 44 @45065 has 2 MA's), (45, 45086), (65, 45389), (85, 45551), (95, 45629), (96, 45632), (100, 45653), (102, 45662), (105, 45689), (114, 45770),

Gene: LilJank\_78 Start: 48712, Stop: 49575, Start Num: 33

Candidate Starts for LilJank\_78:

(Start: 33 @48712 has 6 MA's), (47, 48826), (49, 48898), (60, 49087), (61, 49102), (76, 49342), (77, 49378), (79, 49417), (81, 49438), (82, 49441), (83, 49462), (86, 49471), (89, 49495), (90, 49516), (94, 49534),

Gene: Magnar\_43 Start: 33305, Stop: 32478, Start Num: 32

Candidate Starts for Magnar\_43:

(Start: 32 @33305 has 3 MA's), (41, 33233), (56, 32987), (78, 32603), (87, 32528),

Gene: Neville\_75 Start: 47371, Stop: 48234, Start Num: 33

Candidate Starts for Neville\_75:

(Start: 33 @47371 has 6 MA's), (47, 47485), (49, 47557), (60, 47746), (61, 47761), (76, 48001), (77, 48037), (79, 48076), (81, 48097), (82, 48100), (83, 48121), (86, 48130), (89, 48154), (90, 48175), (94, 48193),

Gene: PFR1\_45 Start: 31715, Stop: 32761, Start Num: 17

Candidate Starts for PFR1\_45:

(13, 31649), (15, 31700), (16, 31706), (17, 31715), (18, 31739), (22, 31850), (25, 31886), (26, 31907), (30, 31943), (34, 31979), (35, 31982), (66, 32363), (67, 32372), (70, 32453), (84, 32531), (85, 32534), (93, 32600), (95, 32609), (96, 32612), (99, 32630), (105, 32666), (109, 32723), (113, 32744),

Gene: PFR2\_47 Start: 33284, Stop: 34330, Start Num: 17

Candidate Starts for PFR2\_47:

(13, 33218), (15, 33269), (16, 33275), (17, 33284), (18, 33308), (22, 33419), (25, 33455), (26, 33476), (30, 33512), (34, 33548), (35, 33551), (66, 33932), (67, 33941), (70, 34022), (84, 34100), (85, 34103), (93, 34169), (95, 34178), (96, 34181), (99, 34199), (105, 34235), (109, 34292), (113, 34313),

Gene: Papez\_46 Start: 35129, Stop: 34302, Start Num: 32

Candidate Starts for Papez\_46:

(Start: 32 @35129 has 3 MA's), (41, 35057), (56, 34811), (78, 34427), (87, 34352),

Gene: Polka14\_75 Start: 46662, Stop: 47525, Start Num: 24

Candidate Starts for Polka14\_75:

(Start: 24 @46662 has 2 MA's), (36, 46758), (37, 46761), (40, 46782), (Start: 44 @46809 has 2 MA's), (45, 46830), (65, 47133), (85, 47295), (95, 47373), (96, 47376), (100, 47397), (102, 47406), (105, 47433), (114, 47514),

Gene: Rabbitrun\_78 Start: 47636, Stop: 48499, Start Num: 33

Candidate Starts for Rabbitrun\_78:

(Start: 33 @47636 has 6 MA's), (47, 47750), (48, 47813), (61, 48026), (77, 48302), (81, 48362), (82, 48365), (83, 48386), (86, 48395), (89, 48419), (90, 48440), (94, 48458), (96, 48467),

Gene: SchottB\_4 Start: 2583, Stop: 3653, Start Num: 33

Candidate Starts for SchottB\_4:

(4, 2040), (6, 2061), (Start: 33 @2583 has 6 MA's), (40, 2640), (46, 2694), (62, 2988), (86, 3381), (92, 3441), (95, 3456), (96, 3459), (100, 3480), (111, 3585), (114, 3603), (115, 3639),

Gene: Spartoi\_40 Start: 27031, Stop: 28128, Start Num: 29

Candidate Starts for Spartoi\_40:

(Start: 23 @26962 has 1 MA's), (Start: 29 @27031 has 3 MA's), (38, 27088), (43, 27133), (50, 27274), (52, 27301), (54, 27337), (55, 27373), (56, 27376), (57, 27388), (59, 27424), (60, 27445), (63, 27484), (68, 27592), (69, 27619), (73, 27700), (75, 27718), (80, 27823), (88, 27895), (95, 27955), (96, 27958), (108, 28042), (109, 28075), (112, 28087),

Gene: Trax\_78 Start: 48336, Stop: 49199, Start Num: 33

Candidate Starts for Trax\_78:

(Start: 33 @48336 has 6 MA's), (47, 48450), (49, 48522), (60, 48711), (61, 48726), (76, 48966), (77, 49002), (79, 49041), (81, 49062), (82, 49065), (83, 49086), (86, 49095), (89, 49119), (90, 49140), (94, 49158),