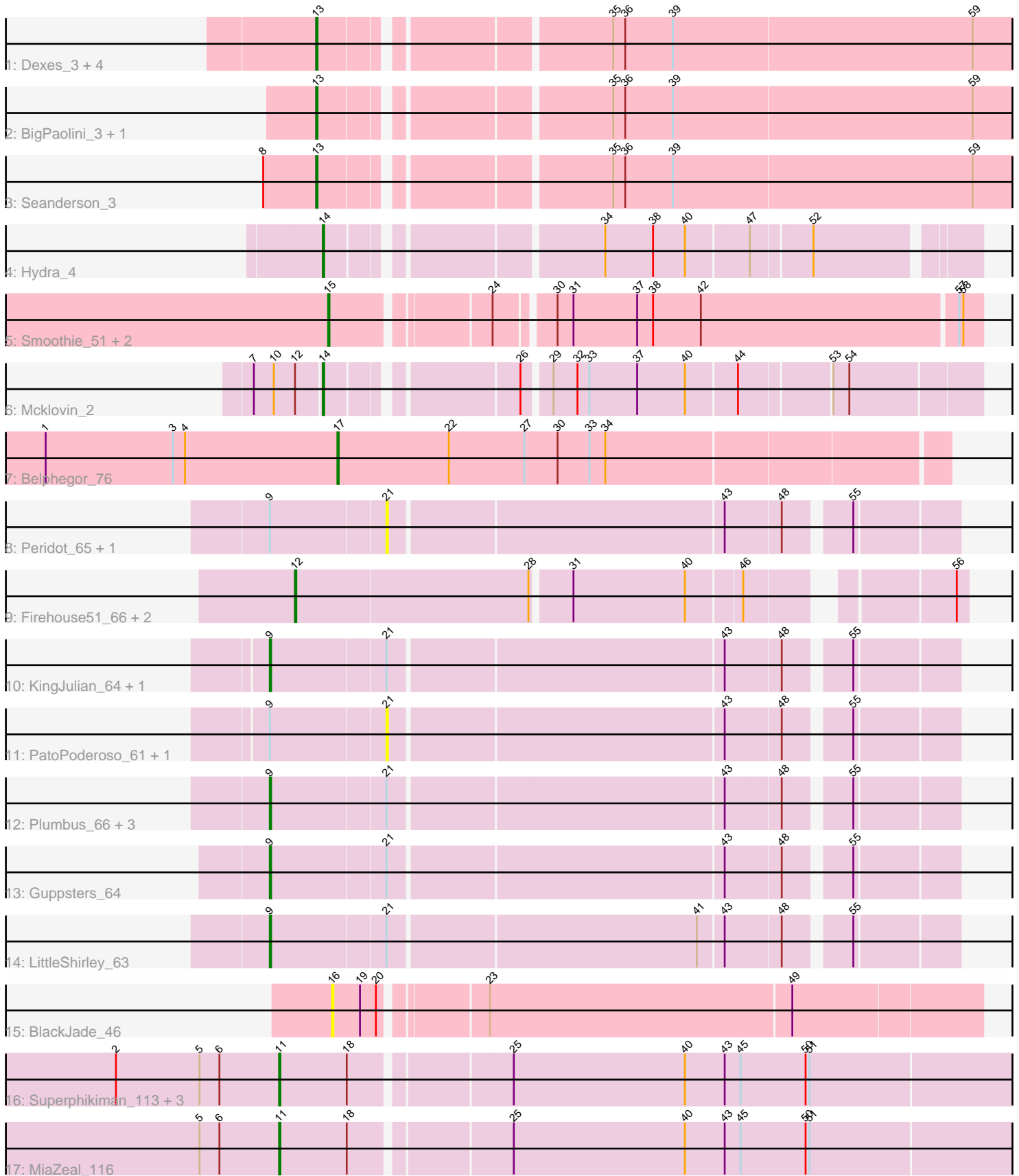


Pham 296767



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 296767 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296767 has 35 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Dexes\_3, Whitspit\_3, Gyzzar\_3, Smairt\_2, Smeagol\_2
- Track 2 : BigPaolini\_3, Licorice\_4
- Track 3 : Seanderson\_3
- Track 4 : Hydra\_4
- Track 5 : Smoothie\_51, Engineer\_51, Lozinak\_50
- Track 6 : Mcklovin\_2
- Track 7 : Belphegor\_76
- Track 8 : Peridot\_65, Ms6\_60
- Track 9 : Firehouse51\_66, EleanorGeorge\_65, Mutaforma13\_69
- Track 10 : KingJulian\_64, Byougenkin\_63
- Track 11 : PatoPoderoso\_61, Corium\_61
- Track 12 : Plumbus\_66, Slim\_65, Emmaloid\_65, Totinger\_63
- Track 13 : Guppsters\_64
- Track 14 : LittleShirley\_63
- Track 15 : BlackJade\_46
- Track 16 : Superphikiman\_113, Courthouse\_111, Squint\_114, Ariel\_116
- Track 17 : MiaZeal\_116

### ***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 8 of the 29 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Byougenkin\_63, Emmaloid\_65, Guppsters\_64, KingJulian\_64, LittleShirley\_63, Plumbus\_66, Slim\_65, Totinger\_63,

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

- Corium\_61, Ms6\_60, PatoPoderoso\_61, Peridot\_65,

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

- Ariel\_116, Belphegor\_76, BigPaolini\_3, BlackJade\_46, Courthouse\_111, Dexes\_3, EleanorGeorge\_65, Engineer\_51, Firehouse51\_66, Gyzzar\_3, Hydra\_4, Licorice\_4, Lozinak\_50, Mcklovin\_2, MiaZeal\_116, Mutaforma13\_69, Seanderson\_3, Smairt\_2,

Smeagol\_2, Smoothie\_51, Squint\_114, Superphikiman\_113, Whitspit\_3,

### Summary by start number:

#### Start 9:

- Found in 12 of 35 ( 34.3% ) of genes in pham
- Manual Annotations of this start: 8 of 29
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Byougenkin\_63 (F1), Emmaloid\_65 (F1), Guppsters\_64 (F1), KingJulian\_64 (F1), LittleShirley\_63 (F1), Plumbus\_66 (F1), Slim\_65 (F1), Totinger\_63 (F1),

#### Start 11:

- Found in 5 of 35 ( 14.3% ) of genes in pham
- Manual Annotations of this start: 5 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel\_116 (J), Courthouse\_111 (J), MiaZeal\_116 (J), Squint\_114 (J), Superphikiman\_113 (J),

#### Start 12:

- Found in 4 of 35 ( 11.4% ) of genes in pham
- Manual Annotations of this start: 3 of 29
- Called 75.0% of time when present
- Phage (with cluster) where this start called: EleanorGeorge\_65 (F1), Firehouse51\_66 (F1), Mutaforma13\_69 (F1),

#### Start 13:

- Found in 8 of 35 ( 22.9% ) of genes in pham
- Manual Annotations of this start: 7 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigPaolini\_3 (A1), Dexes\_3 (A1), Gyzlar\_3 (A1), Licorice\_4 (A1), Seanderson\_3 (A1), Smairt\_2 (A1), Smeagol\_2 (A1), Whitspit\_3 (A1),

#### Start 14:

- Found in 2 of 35 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 2 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hydra\_4 (BD1), Mcklovin\_2 (CZ4),

#### Start 15:

- Found in 3 of 35 ( 8.6% ) of genes in pham
- Manual Annotations of this start: 3 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Engineer\_51 (CQ1), Lozinak\_50 (CQ1), Smoothie\_51 (CQ1),

#### Start 16:

- Found in 1 of 35 ( 2.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlackJade\_46 (FL),

Start 17:

- Found in 1 of 35 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belphegor\_76 (DE2),

Start 21:

- Found in 12 of 35 ( 34.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Corium\_61 (F1), Ms6\_60 (F1), PatoPoderoso\_61 (F1), Peridot\_65 (F1),

**Summary by clusters:**

There are 8 clusters represented in this pham: F1, DE2, J, CZ4, A1, BD1, CQ1, FL,

Info for manual annotations of cluster A1:

- Start number 13 was manually annotated 7 times for cluster A1.

Info for manual annotations of cluster BD1:

- Start number 14 was manually annotated 1 time for cluster BD1.

Info for manual annotations of cluster CQ1:

- Start number 15 was manually annotated 3 times for cluster CQ1.

Info for manual annotations of cluster CZ4:

- Start number 14 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster DE2:

- Start number 17 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster F1:

- Start number 9 was manually annotated 8 times for cluster F1.
- Start number 12 was manually annotated 3 times for cluster F1.

Info for manual annotations of cluster J:

- Start number 11 was manually annotated 5 times for cluster J.

**Gene Information:**

Gene: Ariel\_116 Start: 62922, Stop: 63554, Start Num: 11

Candidate Starts for Ariel\_116:

(2, 62799), (5, 62862), (6, 62877), (Start: 11 @62922 has 5 MA's), (18, 62973), (25, 63084), (40, 63213), (43, 63243), (45, 63255), (50, 63303), (51, 63306),

Gene: Belphegor\_76 Start: 56290, Stop: 56739, Start Num: 17

Candidate Starts for Belphegor\_76:

(1, 56071), (3, 56167), (4, 56176), (Start: 17 @56290 has 1 MA's), (22, 56374), (27, 56431), (30, 56455), (33, 56479), (34, 56491),

Gene: BigPaolini\_3 Start: 1128, Stop: 1637, Start Num: 13  
Candidate Starts for BigPaolini\_3:  
(Start: 13 @1128 has 7 MA's), (35, 1323), (36, 1332), (39, 1368), (59, 1590),

Gene: BlackJade\_46 Start: 31841, Stop: 32305, Start Num: 16  
Candidate Starts for BlackJade\_46:  
(16, 31841), (19, 31862), (20, 31874), (23, 31943), (49, 32168),

Gene: Byougenkin\_63 Start: 41134, Stop: 41616, Start Num: 9  
Candidate Starts for Byougenkin\_63:  
(Start: 9 @41134 has 8 MA's), (21, 41218), (43, 41461), (48, 41500), (55, 41542),

Gene: Corium\_61 Start: 40510, Stop: 40908, Start Num: 21  
Candidate Starts for Corium\_61:  
(Start: 9 @40426 has 8 MA's), (21, 40510), (43, 40753), (48, 40792), (55, 40834),

Gene: Courthouse\_111 Start: 62522, Stop: 63154, Start Num: 11  
Candidate Starts for Courthouse\_111:  
(2, 62399), (5, 62462), (6, 62477), (Start: 11 @62522 has 5 MA's), (18, 62573), (25, 62684), (40, 62813), (43, 62843), (45, 62855), (50, 62903), (51, 62906),

Gene: Dexes\_3 Start: 1113, Stop: 1622, Start Num: 13  
Candidate Starts for Dexes\_3:  
(Start: 13 @1113 has 7 MA's), (35, 1308), (36, 1317), (39, 1353), (59, 1575),

Gene: EleanorGeorge\_65 Start: 42284, Stop: 42745, Start Num: 12  
Candidate Starts for EleanorGeorge\_65:  
(Start: 12 @42284 has 3 MA's), (28, 42458), (31, 42485), (40, 42569), (46, 42608), (56, 42737),

Gene: Emmaloid\_65 Start: 42008, Stop: 42490, Start Num: 9  
Candidate Starts for Emmaloid\_65:  
(Start: 9 @42008 has 8 MA's), (21, 42092), (43, 42335), (48, 42374), (55, 42416),

Gene: Engineer\_51 Start: 31923, Stop: 32384, Start Num: 15  
Candidate Starts for Engineer\_51:  
(Start: 15 @31923 has 3 MA's), (24, 32031), (30, 32070), (31, 32082), (37, 32130), (38, 32142), (42, 32178), (57, 32367), (58, 32370),

Gene: Firehouse51\_66 Start: 45330, Stop: 45791, Start Num: 12  
Candidate Starts for Firehouse51\_66:  
(Start: 12 @45330 has 3 MA's), (28, 45504), (31, 45531), (40, 45615), (46, 45654), (56, 45783),

Gene: Guppsters\_64 Start: 40923, Stop: 41405, Start Num: 9  
Candidate Starts for Guppsters\_64:  
(Start: 9 @40923 has 8 MA's), (21, 41007), (43, 41250), (48, 41289), (55, 41331),

Gene: Gyzlar\_3 Start: 1073, Stop: 1582, Start Num: 13  
Candidate Starts for Gyzlar\_3:  
(Start: 13 @1073 has 7 MA's), (35, 1268), (36, 1277), (39, 1313), (59, 1535),

Gene: Hydra\_4 Start: 1342, Stop: 1785, Start Num: 14  
Candidate Starts for Hydra\_4:

(Start: 14 @1342 has 2 MA's), (34, 1525), (38, 1561), (40, 1585), (47, 1630), (52, 1672),

Gene: KingJulian\_64 Start: 40426, Stop: 40908, Start Num: 9

Candidate Starts for KingJulian\_64:

(Start: 9 @40426 has 8 MA's), (21, 40510), (43, 40753), (48, 40792), (55, 40834),

Gene: Licorice\_4 Start: 1283, Stop: 1792, Start Num: 13

Candidate Starts for Licorice\_4:

(Start: 13 @1283 has 7 MA's), (35, 1478), (36, 1487), (39, 1523), (59, 1745),

Gene: LittleShirley\_63 Start: 41739, Stop: 42221, Start Num: 9

Candidate Starts for LittleShirley\_63:

(Start: 9 @41739 has 8 MA's), (21, 41823), (41, 42048), (43, 42066), (48, 42105), (55, 42147),

Gene: Lozinak\_50 Start: 31978, Stop: 32439, Start Num: 15

Candidate Starts for Lozinak\_50:

(Start: 15 @31978 has 3 MA's), (24, 32086), (30, 32125), (31, 32137), (37, 32185), (38, 32197), (42, 32233), (57, 32422), (58, 32425),

Gene: Mcklovin\_2 Start: 532, Stop: 981, Start Num: 14

Candidate Starts for Mcklovin\_2:

(7, 484), (10, 499), (Start: 12 @514 has 3 MA's), (Start: 14 @532 has 2 MA's), (26, 658), (29, 676), (32, 694), (33, 703), (37, 739), (40, 775), (44, 811), (53, 874), (54, 886),

Gene: MiaZeal\_116 Start: 63594, Stop: 64151, Start Num: 11

Candidate Starts for MiaZeal\_116:

(5, 63534), (6, 63549), (Start: 11 @63594 has 5 MA's), (18, 63645), (25, 63756), (40, 63885), (43, 63915), (45, 63927), (50, 63975), (51, 63978),

Gene: Ms6\_60 Start: 36767, Stop: 37165, Start Num: 21

Candidate Starts for Ms6\_60:

(Start: 9 @36683 has 8 MA's), (21, 36767), (43, 37010), (48, 37049), (55, 37091),

Gene: Mutaforma13\_69 Start: 44640, Stop: 45101, Start Num: 12

Candidate Starts for Mutaforma13\_69:

(Start: 12 @44640 has 3 MA's), (28, 44814), (31, 44841), (40, 44925), (46, 44964), (56, 45093),

Gene: PatoPoderoso\_61 Start: 40510, Stop: 40908, Start Num: 21

Candidate Starts for PatoPoderoso\_61:

(Start: 9 @40426 has 8 MA's), (21, 40510), (43, 40753), (48, 40792), (55, 40834),

Gene: Peridot\_65 Start: 40742, Stop: 41140, Start Num: 21

Candidate Starts for Peridot\_65:

(Start: 9 @40658 has 8 MA's), (21, 40742), (43, 40985), (48, 41024), (55, 41066),

Gene: Plumbus\_66 Start: 41519, Stop: 42001, Start Num: 9

Candidate Starts for Plumbus\_66:

(Start: 9 @41519 has 8 MA's), (21, 41603), (43, 41846), (48, 41885), (55, 41927),

Gene: Seanderson\_3 Start: 1096, Stop: 1605, Start Num: 13

Candidate Starts for Seanderson\_3:

(8, 1057), (Start: 13 @1096 has 7 MA's), (35, 1291), (36, 1300), (39, 1336), (59, 1558),

Gene: Slim\_65 Start: 41999, Stop: 42481, Start Num: 9  
Candidate Starts for Slim\_65:  
(Start: 9 @41999 has 8 MA's), (21, 42083), (43, 42326), (48, 42365), (55, 42407),

Gene: Smairt\_2 Start: 926, Stop: 1435, Start Num: 13  
Candidate Starts for Smairt\_2:  
(Start: 13 @926 has 7 MA's), (35, 1121), (36, 1130), (39, 1166), (59, 1388),

Gene: Smeagol\_2 Start: 927, Stop: 1436, Start Num: 13  
Candidate Starts for Smeagol\_2:  
(Start: 13 @927 has 7 MA's), (35, 1122), (36, 1131), (39, 1167), (59, 1389),

Gene: Smoothie\_51 Start: 31978, Stop: 32439, Start Num: 15  
Candidate Starts for Smoothie\_51:  
(Start: 15 @31978 has 3 MA's), (24, 32086), (30, 32125), (31, 32137), (37, 32185), (38, 32197), (42, 32233), (57, 32422), (58, 32425),

Gene: Squint\_114 Start: 63713, Stop: 64345, Start Num: 11  
Candidate Starts for Squint\_114:  
(2, 63590), (5, 63653), (6, 63668), (Start: 11 @63713 has 5 MA's), (18, 63764), (25, 63875), (40, 64004), (43, 64034), (45, 64046), (50, 64094), (51, 64097),

Gene: Superphikiman\_113 Start: 62804, Stop: 63436, Start Num: 11  
Candidate Starts for Superphikiman\_113:  
(2, 62681), (5, 62744), (6, 62759), (Start: 11 @62804 has 5 MA's), (18, 62855), (25, 62966), (40, 63095), (43, 63125), (45, 63137), (50, 63185), (51, 63188),

Gene: Totinger\_63 Start: 40465, Stop: 40947, Start Num: 9  
Candidate Starts for Totinger\_63:  
(Start: 9 @40465 has 8 MA's), (21, 40549), (43, 40792), (48, 40831), (55, 40873),

Gene: Whitspit\_3 Start: 1078, Stop: 1587, Start Num: 13  
Candidate Starts for Whitspit\_3:  
(Start: 13 @1078 has 7 MA's), (35, 1273), (36, 1282), (39, 1318), (59, 1540),