



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 282244 Report

This analysis was run 02/23/26 on database version 636.

Pham number 282244 has 56 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Anekin\_70, BlueShadow\_66, CosmicBrownie\_63, Nyilah\_69
- Track 2 : Faja\_68, Phrank15\_69, JellyBread\_64, MurphyJoseph\_64, Lawnathon\_69, Raphaella\_67, BenchScraper\_67, Windest\_70
- Track 3 : Tiff81\_63, Gibbzilla\_58
- Track 4 : ThayneTheZag\_71
- Track 5 : CookieBear\_67, Vopal\_69
- Track 6 : Auxilium\_63
- Track 7 : Raqqa\_62
- Track 8 : Bhageatrice\_72
- Track 9 : Sashimi\_65
- Track 10 : Gorpy\_66, YoungHarleezy\_66, BasketStar\_68, Isolde\_65, Sakai\_65
- Track 11 : Crescenzo\_71, DarwinJr\_72, BlackSpider\_55
- Track 12 : Globfish\_68
- Track 13 : SpicyFrank\_70
- Track 14 : MaterMagnus\_67, AdaS\_63, Aikyam\_66
- Track 15 : Sporco\_70
- Track 16 : MUWow\_67
- Track 17 : EvePickles\_64
- Track 18 : Lasker\_67
- Track 19 : Shukran\_65
- Track 20 : GumGum\_70
- Track 21 : Hestia\_59
- Track 22 : Pigu\_51
- Track 23 : Rooter\_53
- Track 24 : Shoya\_51
- Track 25 : Kumotta\_50
- Track 26 : MargaretKali\_46
- Track 27 : JeanClaude\_49
- Track 28 : Alatato\_49, LeBruni\_68
- Track 29 : BrayBeast\_51
- Track 30 : Sarge\_45
- Track 31 : BellaJr\_59
- Track 32 : Zucker\_63, NewKitty\_70
- Track 33 : Cassini\_62
- Track 34 : Bauer\_61

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

The start number called the most often in the published annotations is 35, it was called in 30 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AdaS\_63, Aikyam\_66, Alatato\_49, Anekin\_70, Auxilium\_63, Bauer\_61, BellaJr\_59, BenchScraper\_67, Bhageatrice\_72, BlackSpider\_55, BlueShadow\_66, BrayBeast\_51, Cassini\_62, CookieBear\_67, CosmicBrownie\_63, Crescenzo\_71, DarwinJr\_72, EvePickles\_64, Faja\_68, Gibbzilla\_58, Globfish\_68, GumGum\_70, Hestia\_59, JeanClaude\_49, JellyBread\_64, Kumotta\_50, Lasker\_67, Lawnathon\_69, LeBruni\_68, MargaretKali\_46, MaterMagnus\_67, MurphyJoseph\_64, NewKitty\_70, Nyilah\_69, Phrank15\_69, Raphaella\_67, Raqqa\_62, Sarge\_45, Sashimi\_65, Shoya\_51, SpicyFrank\_70, ThayneTheZag\_71, Tiff81\_63, Vopal\_69, Windest\_70, Zucker\_63,

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

- BasketStar\_68, Gorpy\_66, Isolde\_65, MUWow\_67, Sakai\_65, Shukran\_65, Sporco\_70, YoungHarleezy\_66,

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

- Pigu\_51, Rooter\_53,

### **Summary by start number:**

Start 31:

- Found in 13 of 56 ( 23.2% ) of genes in pham
- Manual Annotations of this start: 4 of 35
- Called 46.2% of time when present
- Phage (with cluster) where this start called: BasketStar\_68 (AY), Gorpy\_66 (AY), Isolde\_65 (AY), Sakai\_65 (AY), Sporco\_70 (AY), YoungHarleezy\_66 (AY),

Start 32:

- Found in 2 of 56 ( 3.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pigu\_51 (FB), Rooter\_53 (FB),

Start 33:

- Found in 4 of 56 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 25.0% of time when present
- Phage (with cluster) where this start called: MUWow\_67 (AY),

Start 34:

- Found in 5 of 56 ( 8.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Shukran\_65 (AY),

Start 35:

- Found in 54 of 56 ( 96.4% ) of genes in pham

- Manual Annotations of this start: 30 of 35
- Called 85.2% of time when present
- Phage (with cluster) where this start called: AdaS\_63 (AY), Aikyam\_66 (AY), Alatato\_49 (FB), Anekin\_70 (AY), Auxilium\_63 (AY), Bauer\_61 (FN), BellaJr\_59 (FN), BenchScraper\_67 (AY), Bhageatrice\_72 (AY), BlackSpider\_55 (FN), BlueShadow\_66 (AY), BrayBeast\_51 (FB), Cassini\_62 (FN), CookieBear\_67 (AY), CosmicBrownie\_63 (AY), Crescenzo\_71 (AY), DarwinJr\_72 (AY), EvePickles\_64 (AY), Faja\_68 (AY), Gibbzilla\_58 (FB), Globfish\_68 (AY), GumGum\_70 (AY), Hestia\_59 (AY), JeanClaude\_49 (FB), JellyBread\_64 (AY), Kumotta\_50 (FB), Lasker\_67 (AY), Lawnathon\_69 (AY), LeBruni\_68 (AY), MargaretKali\_46 (FB), MaterMagnus\_67 (AY), MurphyJoseph\_64 (AY), NewKitty\_70 (AY), Nyilah\_69 (AY), Phrank15\_69 (AY), Raphaella\_67 (AY), Raqqa\_62 (AY), Sarge\_45 (FB), Sashimi\_65 (AY), Shoya\_51 (FB), SpicyFrank\_70 (AY), ThayneTheZag\_71 (AY), Tiff81\_63 (AY), Vopal\_69 (AY), Windest\_70 (AY), Zucker\_63 (FN),

### Summary by clusters:

There are 3 clusters represented in this pham: AY, FB, FN,

Info for manual annotations of cluster AY:

- Start number 31 was manually annotated 4 times for cluster AY.
- Start number 33 was manually annotated 1 time for cluster AY.
- Start number 35 was manually annotated 21 times for cluster AY.

Info for manual annotations of cluster FB:

- Start number 35 was manually annotated 6 times for cluster FB.

Info for manual annotations of cluster FN:

- Start number 35 was manually annotated 3 times for cluster FN.

### Gene Information:

Gene: AdaS\_63 Start: 33664, Stop: 33819, Start Num: 35

Candidate Starts for AdaS\_63:

(6, 33385), (13, 33454), (Start: 31 @33643 has 4 MA's), (Start: 35 @33664 has 30 MA's),

Gene: Aikyam\_66 Start: 33983, Stop: 34138, Start Num: 35

Candidate Starts for Aikyam\_66:

(6, 33704), (13, 33773), (Start: 31 @33962 has 4 MA's), (Start: 35 @33983 has 30 MA's),

Gene: Alatato\_49 Start: 29606, Stop: 29755, Start Num: 35

Candidate Starts for Alatato\_49:

(Start: 35 @29606 has 30 MA's),

Gene: Anekin\_70 Start: 36609, Stop: 36758, Start Num: 35

Candidate Starts for Anekin\_70:

(27, 36525), (28, 36531), (34, 36606), (Start: 35 @36609 has 30 MA's), (36, 36621),

Gene: Auxilium\_63 Start: 33144, Stop: 33299, Start Num: 35

Candidate Starts for Auxilium\_63:

(2, 32751), (3, 32760), (5, 32832), (8, 32892), (Start: 35 @33144 has 30 MA's),

Gene: BasketStar\_68 Start: 36313, Stop: 36489, Start Num: 31  
Candidate Starts for BasketStar\_68:  
(6, 36055), (13, 36124), (Start: 31 @36313 has 4 MA's), (Start: 35 @36334 has 30 MA's),

Gene: Bauer\_61 Start: 34076, Stop: 34231, Start Num: 35  
Candidate Starts for Bauer\_61:  
(Start: 31 @34055 has 4 MA's), (Start: 35 @34076 has 30 MA's),

Gene: BellaJr\_59 Start: 34771, Stop: 34926, Start Num: 35  
Candidate Starts for BellaJr\_59:  
(19, 34612), (Start: 35 @34771 has 30 MA's),

Gene: BenchScraper\_67 Start: 35352, Stop: 35516, Start Num: 35  
Candidate Starts for BenchScraper\_67:  
(27, 35268), (28, 35274), (Start: 35 @35352 has 30 MA's), (36, 35364),

Gene: Bhageatrice\_72 Start: 38560, Stop: 38709, Start Num: 35  
Candidate Starts for Bhageatrice\_72:  
(Start: 35 @38560 has 30 MA's), (38, 38656),

Gene: BlackSpider\_55 Start: 32936, Stop: 33091, Start Num: 35  
Candidate Starts for BlackSpider\_55:  
(Start: 33 @32927 has 1 MA's), (Start: 35 @32936 has 30 MA's),

Gene: BlueShadow\_66 Start: 35620, Stop: 35769, Start Num: 35  
Candidate Starts for BlueShadow\_66:  
(27, 35536), (28, 35542), (34, 35617), (Start: 35 @35620 has 30 MA's), (36, 35632),

Gene: BrayBeast\_51 Start: 29661, Stop: 29810, Start Num: 35  
Candidate Starts for BrayBeast\_51:  
(21, 29538), (Start: 35 @29661 has 30 MA's),

Gene: Cassini\_62 Start: 34777, Stop: 34932, Start Num: 35  
Candidate Starts for Cassini\_62:  
(Start: 35 @34777 has 30 MA's),

Gene: CookieBear\_67 Start: 35414, Stop: 35569, Start Num: 35  
Candidate Starts for CookieBear\_67:  
(6, 35135), (13, 35204), (23, 35294), (Start: 31 @35393 has 4 MA's), (Start: 35 @35414 has 30 MA's),

Gene: CosmicBrownie\_63 Start: 34343, Stop: 34492, Start Num: 35  
Candidate Starts for CosmicBrownie\_63:  
(27, 34259), (28, 34265), (34, 34340), (Start: 35 @34343 has 30 MA's), (36, 34355),

Gene: Crescenzo\_71 Start: 37555, Stop: 37710, Start Num: 35  
Candidate Starts for Crescenzo\_71:  
(Start: 33 @37546 has 1 MA's), (Start: 35 @37555 has 30 MA's),

Gene: DarwinJr\_72 Start: 37510, Stop: 37665, Start Num: 35  
Candidate Starts for DarwinJr\_72:  
(Start: 33 @37501 has 1 MA's), (Start: 35 @37510 has 30 MA's),

Gene: EvePickles\_64 Start: 36114, Stop: 36269, Start Num: 35  
Candidate Starts for EvePickles\_64:  
(Start: 35 @36114 has 30 MA's),

Gene: Faja\_68 Start: 36966, Stop: 37121, Start Num: 35  
Candidate Starts for Faja\_68:  
(27, 36882), (28, 36888), (Start: 35 @36966 has 30 MA's), (36, 36978),

Gene: Gibbzilla\_58 Start: 30990, Stop: 31109, Start Num: 35  
Candidate Starts for Gibbzilla\_58:  
(Start: 35 @30990 has 30 MA's),

Gene: Globfish\_68 Start: 36057, Stop: 36212, Start Num: 35  
Candidate Starts for Globfish\_68:  
(Start: 35 @36057 has 30 MA's),

Gene: Gorpy\_66 Start: 36385, Stop: 36561, Start Num: 31  
Candidate Starts for Gorpy\_66:  
(6, 36127), (13, 36196), (Start: 31 @36385 has 4 MA's), (Start: 35 @36406 has 30 MA's),

Gene: GumGum\_70 Start: 35873, Stop: 36028, Start Num: 35  
Candidate Starts for GumGum\_70:  
(20, 35711), (25, 35780), (27, 35789), (28, 35795), (Start: 35 @35873 has 30 MA's),

Gene: Hestia\_59 Start: 33177, Stop: 33284, Start Num: 35  
Candidate Starts for Hestia\_59:  
(25, 33084), (27, 33093), (28, 33099), (Start: 35 @33177 has 30 MA's), (36, 33189), (37, 33228),

Gene: Isolde\_65 Start: 35062, Stop: 35238, Start Num: 31  
Candidate Starts for Isolde\_65:  
(6, 34804), (13, 34873), (Start: 31 @35062 has 4 MA's), (Start: 35 @35083 has 30 MA's),

Gene: JeanClaude\_49 Start: 27759, Stop: 27908, Start Num: 35  
Candidate Starts for JeanClaude\_49:  
(7, 27489), (10, 27513), (12, 27534), (14, 27555), (Start: 35 @27759 has 30 MA's), (36, 27771),

Gene: JellyBread\_64 Start: 34612, Stop: 34776, Start Num: 35  
Candidate Starts for JellyBread\_64:  
(27, 34528), (28, 34534), (Start: 35 @34612 has 30 MA's), (36, 34624),

Gene: Kumotta\_50 Start: 30103, Stop: 30261, Start Num: 35  
Candidate Starts for Kumotta\_50:  
(29, 30037), (Start: 35 @30103 has 30 MA's),

Gene: Lasker\_67 Start: 35961, Stop: 36116, Start Num: 35  
Candidate Starts for Lasker\_67:  
(Start: 31 @35940 has 4 MA's), (Start: 35 @35961 has 30 MA's),

Gene: Lawnathon\_69 Start: 35752, Stop: 35916, Start Num: 35  
Candidate Starts for Lawnathon\_69:  
(27, 35668), (28, 35674), (Start: 35 @35752 has 30 MA's), (36, 35764),

Gene: LeBruni\_68 Start: 35023, Stop: 35178, Start Num: 35

Candidate Starts for LeBruni\_68:  
(Start: 35 @35023 has 30 MA's),

Gene: MUWow\_67 Start: 35986, Stop: 36150, Start Num: 33  
Candidate Starts for MUWow\_67:  
(Start: 33 @35986 has 1 MA's), (Start: 35 @35995 has 30 MA's),

Gene: MargaretKali\_46 Start: 28714, Stop: 28863, Start Num: 35  
Candidate Starts for MargaretKali\_46:  
(27, 28633), (Start: 35 @28714 has 30 MA's), (40, 28855),

Gene: MaterMagnus\_67 Start: 36155, Stop: 36310, Start Num: 35  
Candidate Starts for MaterMagnus\_67:  
(6, 35876), (13, 35945), (Start: 31 @36134 has 4 MA's), (Start: 35 @36155 has 30 MA's),

Gene: MurphyJoseph\_64 Start: 34830, Stop: 34994, Start Num: 35  
Candidate Starts for MurphyJoseph\_64:  
(27, 34746), (28, 34752), (Start: 35 @34830 has 30 MA's), (36, 34842),

Gene: NewKitty\_70 Start: 36234, Stop: 36389, Start Num: 35  
Candidate Starts for NewKitty\_70:  
(Start: 35 @36234 has 30 MA's),

Gene: Nyilah\_69 Start: 34800, Stop: 34949, Start Num: 35  
Candidate Starts for Nyilah\_69:  
(27, 34716), (28, 34722), (34, 34797), (Start: 35 @34800 has 30 MA's), (36, 34812),

Gene: Phrank15\_69 Start: 35883, Stop: 36047, Start Num: 35  
Candidate Starts for Phrank15\_69:  
(27, 35799), (28, 35805), (Start: 35 @35883 has 30 MA's), (36, 35895),

Gene: Pigu\_51 Start: 28594, Stop: 28722, Start Num: 32  
Candidate Starts for Pigu\_51:  
(26, 28534), (32, 28594),

Gene: Raphaella\_67 Start: 35450, Stop: 35614, Start Num: 35  
Candidate Starts for Raphaella\_67:  
(27, 35366), (28, 35372), (Start: 35 @35450 has 30 MA's), (36, 35462),

Gene: Raqqa\_62 Start: 33690, Stop: 33839, Start Num: 35  
Candidate Starts for Raqqa\_62:  
(21, 33567), (Start: 35 @33690 has 30 MA's), (38, 33786), (39, 33804),

Gene: Rooter\_53 Start: 29651, Stop: 29800, Start Num: 32  
Candidate Starts for Rooter\_53:  
(11, 29438), (16, 29489), (17, 29495), (22, 29540), (32, 29651), (36, 29663),

Gene: Sakai\_65 Start: 35096, Stop: 35272, Start Num: 31  
Candidate Starts for Sakai\_65:  
(6, 34838), (13, 34907), (Start: 31 @35096 has 4 MA's), (Start: 35 @35117 has 30 MA's),

Gene: Sarge\_45 Start: 27408, Stop: 27557, Start Num: 35  
Candidate Starts for Sarge\_45:

(Start: 35 @27408 has 30 MA's),

Gene: Sashimi\_65 Start: 36369, Stop: 36536, Start Num: 35

Candidate Starts for Sashimi\_65:

(Start: 35 @36369 has 30 MA's),

Gene: Shoya\_51 Start: 29581, Stop: 29730, Start Num: 35

Candidate Starts for Shoya\_51:

(24, 29470), (27, 29500), (30, 29557), (Start: 35 @29581 has 30 MA's), (36, 29593),

Gene: Shukran\_65 Start: 34398, Stop: 34565, Start Num: 34

Candidate Starts for Shukran\_65:

(9, 34143), (15, 34200), (20, 34239), (27, 34317), (28, 34323), (34, 34398), (Start: 35 @34401 has 30 MA's),

Gene: SpicyFrank\_70 Start: 36679, Stop: 36834, Start Num: 35

Candidate Starts for SpicyFrank\_70:

(1, 36157), (4, 36298), (Start: 35 @36679 has 30 MA's),

Gene: Sporco\_70 Start: 36680, Stop: 36856, Start Num: 31

Candidate Starts for Sporco\_70:

(6, 36422), (13, 36491), (23, 36581), (Start: 31 @36680 has 4 MA's), (Start: 35 @36701 has 30 MA's),

Gene: ThayneTheZag\_71 Start: 35896, Stop: 36051, Start Num: 35

Candidate Starts for ThayneTheZag\_71:

(18, 35722), (Start: 35 @35896 has 30 MA's), (36, 35908),

Gene: Tiff81\_63 Start: 34064, Stop: 34219, Start Num: 35

Candidate Starts for Tiff81\_63:

(Start: 35 @34064 has 30 MA's),

Gene: Vopal\_69 Start: 38606, Stop: 38761, Start Num: 35

Candidate Starts for Vopal\_69:

(6, 38327), (13, 38396), (23, 38486), (Start: 31 @38585 has 4 MA's), (Start: 35 @38606 has 30 MA's),

Gene: Windest\_70 Start: 34810, Stop: 34974, Start Num: 35

Candidate Starts for Windest\_70:

(27, 34726), (28, 34732), (Start: 35 @34810 has 30 MA's), (36, 34822),

Gene: YoungHarleezy\_66 Start: 35791, Stop: 35967, Start Num: 31

Candidate Starts for YoungHarleezy\_66:

(6, 35533), (13, 35602), (Start: 31 @35791 has 4 MA's), (Start: 35 @35812 has 30 MA's),

Gene: Zucker\_63 Start: 36020, Stop: 36172, Start Num: 35

Candidate Starts for Zucker\_63:

(Start: 35 @36020 has 30 MA's),