



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 162098 Report

This analysis was run 05/04/24 on database version 560.

Pham number 162098 has 27 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Totinger\_49, Karhdo\_45, DeadP\_50, Alexphander\_51, Spikelee\_52, Bipolar\_42, Harley\_49, OwlsT2W\_44, SiSi\_46, BuzzLyseyear\_51, Gandolph\_46, Sandalphon\_48, Starcevich\_46, Phanphagia\_40, GigiOuiOui\_43, Hamulus\_47
- Track 2 : Oksu\_49, Royals2015\_47, Wee\_49, GUmbie\_44
- Track 3 : DotProduct\_43, Veteran\_44, Hades\_46
- Track 4 : Firehouse51\_46
- Track 5 : Girafales\_55
- Track 6 : Quico\_54
- Track 7 : Florinda\_56

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

The start number called the most often in the published annotations is 7, it was called in 15 of the 25 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alexphander\_51, Bipolar\_42, BuzzLyseyear\_51, DeadP\_50, Gandolph\_46, GigiOuiOui\_43, Hamulus\_47, Harley\_49, Karhdo\_45, OwlsT2W\_44, Phanphagia\_40, Sandalphon\_48, SiSi\_46, Spikelee\_52, Starcevich\_46, Totinger\_49,

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

- DotProduct\_43, GUmbie\_44, Hades\_46, Oksu\_49, Royals2015\_47, Veteran\_44, Wee\_49,

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

- Firehouse51\_46, Florinda\_56, Girafales\_55, Quico\_54,

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

Start 3:

- Found in 23 of 27 ( 85.2% ) of genes in pham
- Manual Annotations of this start: 3 of 25
- Called 17.4% of time when present

- Phage (with cluster) where this start called: GUmbe\_44 (F1), Oksu\_49 (F1), Royals2015\_47 (F1), Wee\_49 (F1),

Start 4:

- Found in 2 of 27 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 25
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Florinda\_56 (F1),

Start 5:

- Found in 23 of 27 ( 85.2% ) of genes in pham
- Manual Annotations of this start: 3 of 25
- Called 13.0% of time when present
- Phage (with cluster) where this start called: DotProduct\_43 (F1), Hades\_46 (F1), Veteran\_44 (F1),

Start 6:

- Found in 3 of 27 ( 11.1% ) of genes in pham
- Manual Annotations of this start: 1 of 25
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Firehouse51\_46 (F1),

Start 7:

- Found in 23 of 27 ( 85.2% ) of genes in pham
- Manual Annotations of this start: 15 of 25
- Called 69.6% of time when present
- Phage (with cluster) where this start called: Alexphander\_51 (F1), Bipolar\_42 (F1), BuzzLyseyear\_51 (F1), DeadP\_50 (F1), Gandolph\_46 (F1), GigiOuiOui\_43 (F1), Hamulus\_47 (F1), Harley\_49 (F1), Karhdo\_45 (F1), OwlsT2W\_44 (F1), Phanphagia\_40 (F1), Sandalphon\_48 (F1), SiSi\_46 (F1), Spikelee\_52 (F1), Starcevich\_46 (F1), Totinger\_49 (F1),

Start 8:

- Found in 4 of 27 ( 14.8% ) of genes in pham
- Manual Annotations of this start: 2 of 25
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Girafales\_55 (F1), Quico\_54 (F1),

### **Summary by clusters:**

There is one cluster represented in this pham: F1

Info for manual annotations of cluster F1:

- Start number 3 was manually annotated 3 times for cluster F1.
- Start number 4 was manually annotated 1 time for cluster F1.
- Start number 5 was manually annotated 3 times for cluster F1.
- Start number 6 was manually annotated 1 time for cluster F1.
- Start number 7 was manually annotated 15 times for cluster F1.
- Start number 8 was manually annotated 2 times for cluster F1.

### **Gene Information:**

Gene: Alexphander\_51 Start: 35631, Stop: 35936, Start Num: 7

Candidate Starts for Alexphander\_51:

(Start: 3 @35589 has 3 MA's), (Start: 5 @35607 has 3 MA's), (Start: 7 @35631 has 15 MA's), (9, 35682), (10, 35694), (11, 35718), (12, 35739), (13, 35784), (14, 35805), (15, 35817),

Gene: Bipolar\_42 Start: 33964, Stop: 34269, Start Num: 7

Candidate Starts for Bipolar\_42:

(Start: 3 @33922 has 3 MA's), (Start: 5 @33940 has 3 MA's), (Start: 7 @33964 has 15 MA's), (9, 34015), (10, 34027), (11, 34051), (12, 34072), (13, 34117), (14, 34138), (15, 34150),

Gene: BuzzLyseyear\_51 Start: 36319, Stop: 36624, Start Num: 7

Candidate Starts for BuzzLyseyear\_51:

(Start: 3 @36277 has 3 MA's), (Start: 5 @36295 has 3 MA's), (Start: 7 @36319 has 15 MA's), (9, 36370), (10, 36382), (11, 36406), (12, 36427), (13, 36472), (14, 36493), (15, 36505),

Gene: DeadP\_50 Start: 35168, Stop: 35473, Start Num: 7

Candidate Starts for DeadP\_50:

(Start: 3 @35126 has 3 MA's), (Start: 5 @35144 has 3 MA's), (Start: 7 @35168 has 15 MA's), (9, 35219), (10, 35231), (11, 35255), (12, 35276), (13, 35321), (14, 35342), (15, 35354),

Gene: DotProduct\_43 Start: 34143, Stop: 34472, Start Num: 5

Candidate Starts for DotProduct\_43:

(Start: 3 @34125 has 3 MA's), (Start: 5 @34143 has 3 MA's), (Start: 7 @34167 has 15 MA's), (9, 34218), (10, 34230), (11, 34254), (12, 34275), (13, 34320), (14, 34341), (15, 34353),

Gene: Firehouse51\_46 Start: 36101, Stop: 36424, Start Num: 6

Candidate Starts for Firehouse51\_46:

(Start: 6 @36101 has 1 MA's), (Start: 8 @36131 has 2 MA's), (10, 36182), (12, 36227), (13, 36272), (15, 36305),

Gene: Florinda\_56 Start: 35758, Stop: 36090, Start Num: 4

Candidate Starts for Florinda\_56:

(Start: 4 @35758 has 1 MA's), (Start: 6 @35767 has 1 MA's), (Start: 8 @35797 has 2 MA's), (10, 35848), (12, 35893), (13, 35938), (14, 35959), (15, 35971),

Gene: GUmbie\_44 Start: 34354, Stop: 34701, Start Num: 3

Candidate Starts for GUmbie\_44:

(Start: 3 @34354 has 3 MA's), (Start: 5 @34372 has 3 MA's), (Start: 7 @34396 has 15 MA's), (9, 34447), (10, 34459), (11, 34483), (12, 34504), (13, 34549), (14, 34570), (15, 34582),

Gene: Gandalph\_46 Start: 34476, Stop: 34781, Start Num: 7

Candidate Starts for Gandalph\_46:

(Start: 3 @34434 has 3 MA's), (Start: 5 @34452 has 3 MA's), (Start: 7 @34476 has 15 MA's), (9, 34527), (10, 34539), (11, 34563), (12, 34584), (13, 34629), (14, 34650), (15, 34662),

Gene: GigiOuiOui\_43 Start: 34309, Stop: 34614, Start Num: 7

Candidate Starts for GigiOuiOui\_43:

(Start: 3 @34267 has 3 MA's), (Start: 5 @34285 has 3 MA's), (Start: 7 @34309 has 15 MA's), (9, 34360), (10, 34372), (11, 34396), (12, 34417), (13, 34462), (14, 34483), (15, 34495),

Gene: Girafales\_55 Start: 35606, Stop: 35899, Start Num: 8

Candidate Starts for Girafales\_55:

(1, 35354), (2, 35471), (Start: 8 @35606 has 2 MA's), (10, 35657), (12, 35702), (13, 35747), (15, 35780),

Gene: Hades\_46 Start: 34544, Stop: 34873, Start Num: 5

Candidate Starts for Hades\_46:

(Start: 3 @34526 has 3 MA's), (Start: 5 @34544 has 3 MA's), (Start: 7 @34568 has 15 MA's), (9, 34619), (10, 34631), (11, 34655), (12, 34676), (13, 34721), (14, 34742), (15, 34754),

Gene: Hamulus\_47 Start: 35751, Stop: 36056, Start Num: 7

Candidate Starts for Hamulus\_47:

(Start: 3 @35709 has 3 MA's), (Start: 5 @35727 has 3 MA's), (Start: 7 @35751 has 15 MA's), (9, 35802), (10, 35814), (11, 35838), (12, 35859), (13, 35904), (14, 35925), (15, 35937),

Gene: Harley\_49 Start: 35104, Stop: 35409, Start Num: 7

Candidate Starts for Harley\_49:

(Start: 3 @35062 has 3 MA's), (Start: 5 @35080 has 3 MA's), (Start: 7 @35104 has 15 MA's), (9, 35155), (10, 35167), (11, 35191), (12, 35212), (13, 35257), (14, 35278), (15, 35290),

Gene: Karhdo\_45 Start: 35191, Stop: 35496, Start Num: 7

Candidate Starts for Karhdo\_45:

(Start: 3 @35149 has 3 MA's), (Start: 5 @35167 has 3 MA's), (Start: 7 @35191 has 15 MA's), (9, 35242), (10, 35254), (11, 35278), (12, 35299), (13, 35344), (14, 35365), (15, 35377),

Gene: Oksu\_49 Start: 35728, Stop: 36075, Start Num: 3

Candidate Starts for Oksu\_49:

(Start: 3 @35728 has 3 MA's), (Start: 5 @35746 has 3 MA's), (Start: 7 @35770 has 15 MA's), (9, 35821), (10, 35833), (11, 35857), (12, 35878), (13, 35923), (14, 35944), (15, 35956),

Gene: OwlsT2W\_44 Start: 34806, Stop: 35111, Start Num: 7

Candidate Starts for OwlsT2W\_44:

(Start: 3 @34764 has 3 MA's), (Start: 5 @34782 has 3 MA's), (Start: 7 @34806 has 15 MA's), (9, 34857), (10, 34869), (11, 34893), (12, 34914), (13, 34959), (14, 34980), (15, 34992),

Gene: Phanphagia\_40 Start: 33623, Stop: 33928, Start Num: 7

Candidate Starts for Phanphagia\_40:

(Start: 3 @33581 has 3 MA's), (Start: 5 @33599 has 3 MA's), (Start: 7 @33623 has 15 MA's), (9, 33674), (10, 33686), (11, 33710), (12, 33731), (13, 33776), (14, 33797), (15, 33809),

Gene: Quico\_54 Start: 35617, Stop: 35910, Start Num: 8

Candidate Starts for Quico\_54:

(Start: 4 @35578 has 1 MA's), (Start: 6 @35587 has 1 MA's), (Start: 8 @35617 has 2 MA's), (10, 35668), (12, 35713), (13, 35758), (14, 35779), (15, 35791),

Gene: Royals2015\_47 Start: 34784, Stop: 35131, Start Num: 3

Candidate Starts for Royals2015\_47:

(Start: 3 @34784 has 3 MA's), (Start: 5 @34802 has 3 MA's), (Start: 7 @34826 has 15 MA's), (9, 34877), (10, 34889), (11, 34913), (12, 34934), (13, 34979), (14, 35000), (15, 35012),

Gene: Sandalphon\_48 Start: 35740, Stop: 36045, Start Num: 7

Candidate Starts for Sandalphon\_48:

(Start: 3 @35698 has 3 MA's), (Start: 5 @35716 has 3 MA's), (Start: 7 @35740 has 15 MA's), (9, 35791), (10, 35803), (11, 35827), (12, 35848), (13, 35893), (14, 35914), (15, 35926),

Gene: SiSi\_46 Start: 34739, Stop: 35044, Start Num: 7

Candidate Starts for SiSi\_46:

(Start: 3 @34697 has 3 MA's), (Start: 5 @34715 has 3 MA's), (Start: 7 @34739 has 15 MA's), (9, 34790), (10, 34802), (11, 34826), (12, 34847), (13, 34892), (14, 34913), (15, 34925),

Gene: Spikelee\_52 Start: 35736, Stop: 36041, Start Num: 7

Candidate Starts for Spikelee\_52:

(Start: 3 @35694 has 3 MA's), (Start: 5 @35712 has 3 MA's), (Start: 7 @35736 has 15 MA's), (9, 35787), (10, 35799), (11, 35823), (12, 35844), (13, 35889), (14, 35910), (15, 35922),

Gene: Starcevich\_46 Start: 35373, Stop: 35678, Start Num: 7

Candidate Starts for Starcevich\_46:

(Start: 3 @35331 has 3 MA's), (Start: 5 @35349 has 3 MA's), (Start: 7 @35373 has 15 MA's), (9, 35424), (10, 35436), (11, 35460), (12, 35481), (13, 35526), (14, 35547), (15, 35559),

Gene: Totinger\_49 Start: 34515, Stop: 34820, Start Num: 7

Candidate Starts for Totinger\_49:

(Start: 3 @34473 has 3 MA's), (Start: 5 @34491 has 3 MA's), (Start: 7 @34515 has 15 MA's), (9, 34566), (10, 34578), (11, 34602), (12, 34623), (13, 34668), (14, 34689), (15, 34701),

Gene: Veteran\_44 Start: 34359, Stop: 34688, Start Num: 5

Candidate Starts for Veteran\_44:

(Start: 3 @34341 has 3 MA's), (Start: 5 @34359 has 3 MA's), (Start: 7 @34383 has 15 MA's), (9, 34434), (10, 34446), (11, 34470), (12, 34491), (13, 34536), (14, 34557), (15, 34569),

Gene: Wee\_49 Start: 35708, Stop: 36055, Start Num: 3

Candidate Starts for Wee\_49:

(Start: 3 @35708 has 3 MA's), (Start: 5 @35726 has 3 MA's), (Start: 7 @35750 has 15 MA's), (9, 35801), (10, 35813), (11, 35837), (12, 35858), (13, 35903), (14, 35924), (15, 35936),