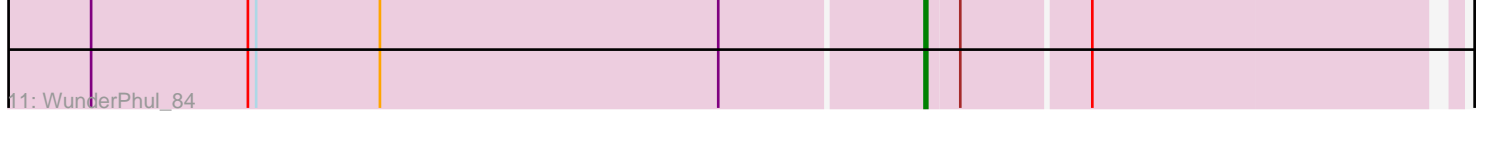
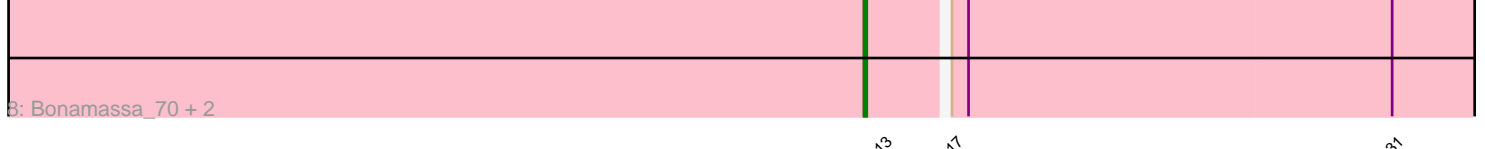
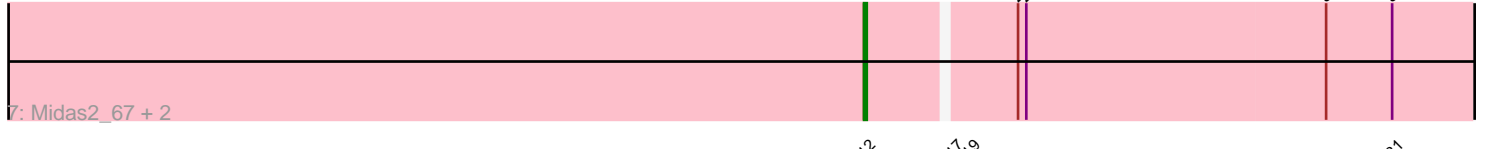
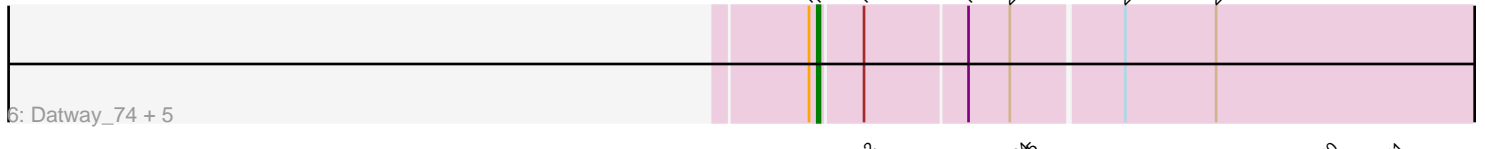
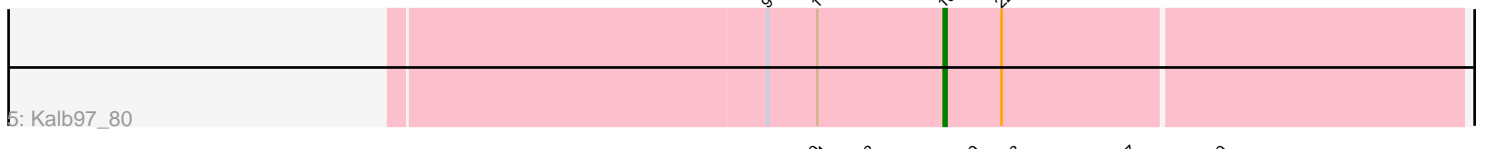
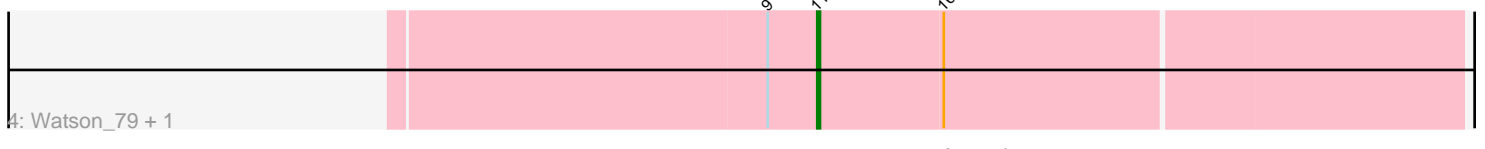
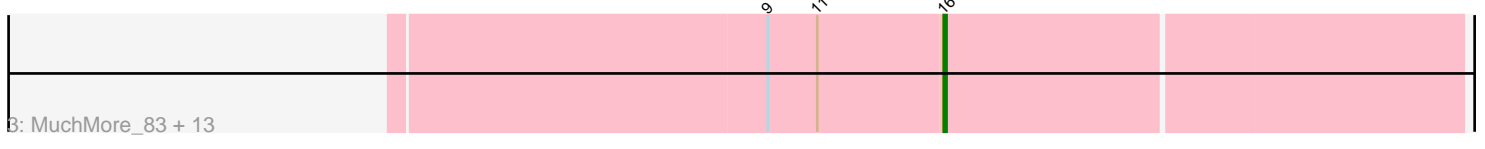
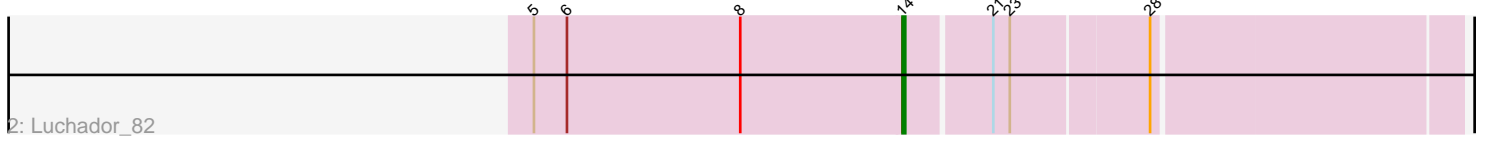
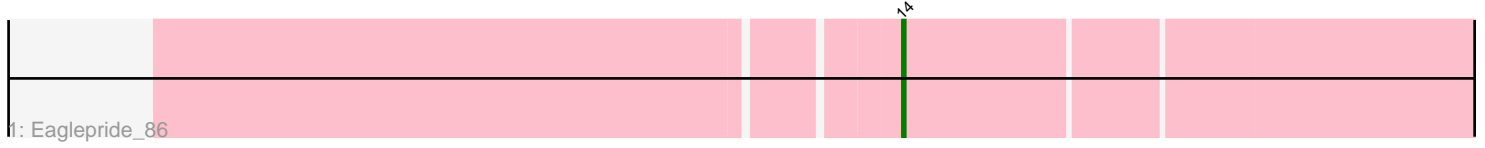


Pham 224731



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 224731 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224731 has 38 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Eaglepride\_86
- Track 2 : Luchador\_82
- Track 3 : MuchMore\_83, Stagni\_77, AugsMagnumOpus\_83, DaHudson\_79, Malinsilva\_83, StepMih\_80, Mainiac\_79, PGHhamlin\_82, Sabia\_78, Grub\_78, Lilith\_78, Lova\_77, Microwolf\_76, Pembroke\_80
- Track 4 : Watson\_79, BreSam8\_80
- Track 5 : Kalb97\_80
- Track 6 : Datway\_74, AbbysRanger\_74, PetiteSangsue\_74, Backyardigan\_72, Perplexer\_74, Xena\_73
- Track 7 : Midas2\_67, Coog\_67, Cuco\_69
- Track 8 : Bonamassa\_70, LittleCherry\_69, HuhtaEnerson15\_68
- Track 9 : ForGetIt\_71, Conspiracy\_71, Discoknowium\_68
- Track 10 : Garak\_85, Temprado\_85, Helmet\_85
- Track 11 : WunderPhul\_84

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

The start number called the most often in the published annotations is 16, it was called in 14 of the 34 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AugsMagnumOpus\_83, DaHudson\_79, Grub\_78, Kalb97\_80, Lilith\_78, Lova\_77, Mainiac\_79, Malinsilva\_83, Microwolf\_76, MuchMore\_83, PGHhamlin\_82, Pembroke\_80, Sabia\_78, Stagni\_77, StepMih\_80,

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

- BreSam8\_80, Watson\_79,

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

- AbbysRanger\_74, Backyardigan\_72, Bonamassa\_70, Conspiracy\_71, Coog\_67, Cuco\_69, Datway\_74, Discoknowium\_68, Eaglepride\_86, ForGetIt\_71, Garak\_85, Helmet\_85, HuhtaEnerson15\_68, LittleCherry\_69, Luchador\_82, Midas2\_67, Perplexer\_74, PetiteSangsue\_74, Temprado\_85, WunderPhul\_84, Xena\_73,

## Summary by start number:

### Start 11:

- Found in 23 of 38 ( 60.5% ) of genes in pham
- Manual Annotations of this start: 8 of 34
- Called 34.8% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_74 (A4), Backyardigan\_72 (A4), BreSam8\_80 (A3), Datway\_74 (A4), Perplexer\_74 (A4), PetiteSangsue\_74 (A4), Watson\_79 (A3), Xena\_73 (A4),

### Start 12:

- Found in 12 of 38 ( 31.6% ) of genes in pham
- Manual Annotations of this start: 6 of 34
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bonamassa\_70 (A5), Coog\_67 (A5), Cuco\_69 (A5), HuhtaEnerson15\_68 (A5), LittleCherry\_69 (A5), Midas2\_67 (A5),

### Start 13:

- Found in 3 of 38 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 3 of 34
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Conspiracy\_71 (A5), Discoknowium\_68 (A5), ForGetIt\_71 (A5),

### Start 14:

- Found in 2 of 38 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 2 of 34
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Eaglepride\_86 (A10), Luchador\_82 (A14),

### Start 15:

- Found in 4 of 38 ( 10.5% ) of genes in pham
- Manual Annotations of this start: 1 of 34
- Called 25.0% of time when present
- Phage (with cluster) where this start called: WunderPhul\_84 (A6),

### Start 16:

- Found in 17 of 38 ( 44.7% ) of genes in pham
- Manual Annotations of this start: 14 of 34
- Called 88.2% of time when present
- Phage (with cluster) where this start called: AugsMagnumOpus\_83 (A3), DaHudson\_79 (A3), Grub\_78 (A3), Kalb97\_80 (A3), Lilith\_78 (A3), Lowa\_77 (A3), Mainiac\_79 (A3), Malinsilva\_83 (A3), Microwolf\_76 (A3), MuchMore\_83 (A3), PGHhamlin\_82 (A3), Pembroke\_80 (A3), Sabia\_78 (A3), Stagni\_77 (A3), StepMih\_80 (A3),

### Start 18:

- Found in 4 of 38 ( 10.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Garak\_85 (A6), Helmet\_85 (A6), Temprado\_85 (A6),

## **Summary by clusters:**

There are 6 clusters represented in this pham: A14, A10, A3, A5, A4, A6,

Info for manual annotations of cluster A10:

- Start number 14 was manually annotated 1 time for cluster A10.

Info for manual annotations of cluster A14:

- Start number 14 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A3:

- Start number 11 was manually annotated 2 times for cluster A3.
- Start number 16 was manually annotated 14 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 11 was manually annotated 6 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 12 was manually annotated 6 times for cluster A5.
- Start number 13 was manually annotated 3 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 15 was manually annotated 1 time for cluster A6.

## ***Gene Information:***

Gene: AbbysRanger\_74 Start: 45728, Stop: 45411, Start Num: 11

Candidate Starts for AbbysRanger\_74:

(10, 45731), (Start: 11 @45728 has 8 MA's), (Start: 12 @45713 has 6 MA's), (19, 45677), (23, 45662), (27, 45623), (29, 45590),

Gene: AugsMagnumOpus\_83 Start: 45616, Stop: 45353, Start Num: 16

Candidate Starts for AugsMagnumOpus\_83:

(9, 45679), (Start: 11 @45661 has 8 MA's), (Start: 16 @45616 has 14 MA's),

Gene: Backyardigan\_72 Start: 45744, Stop: 45427, Start Num: 11

Candidate Starts for Backyardigan\_72:

(10, 45747), (Start: 11 @45744 has 8 MA's), (Start: 12 @45729 has 6 MA's), (19, 45693), (23, 45678), (27, 45639), (29, 45606),

Gene: Bonamassa\_70 Start: 44301, Stop: 43999, Start Num: 12

Candidate Starts for Bonamassa\_70:

(Start: 12 @44301 has 6 MA's), (17, 44274), (19, 44268), (31, 44115),

Gene: BreSam8\_80 Start: 45666, Stop: 45358, Start Num: 11

Candidate Starts for BreSam8\_80:

(9, 45684), (Start: 11 @45666 has 8 MA's), (Start: 16 @45621 has 14 MA's),

Gene: Conspiracy\_71 Start: 44353, Stop: 44057, Start Num: 13

Candidate Starts for Conspiracy\_71:

(Start: 13 @44353 has 3 MA's), (17, 44332), (31, 44173),

Gene: Coog\_67 Start: 44122, Stop: 43820, Start Num: 12

Candidate Starts for Coog\_67:

(Start: 12 @44122 has 6 MA's), (24, 44071), (25, 44068), (30, 43960), (31, 43936),

Gene: Cuco\_69 Start: 43982, Stop: 43680, Start Num: 12

Candidate Starts for Cuco\_69:

(Start: 12 @43982 has 6 MA's), (24, 43931), (25, 43928), (30, 43820), (31, 43796),

Gene: DaHudson\_79 Start: 45620, Stop: 45357, Start Num: 16

Candidate Starts for DaHudson\_79:

(9, 45683), (Start: 11 @45665 has 8 MA's), (Start: 16 @45620 has 14 MA's),

Gene: Datway\_74 Start: 45727, Stop: 45410, Start Num: 11

Candidate Starts for Datway\_74:

(10, 45730), (Start: 11 @45727 has 8 MA's), (Start: 12 @45712 has 6 MA's), (19, 45676), (23, 45661), (27, 45622), (29, 45589),

Gene: Discoknowium\_68 Start: 43870, Stop: 43574, Start Num: 13

Candidate Starts for Discoknowium\_68:

(Start: 13 @43870 has 3 MA's), (17, 43849), (31, 43690),

Gene: Eaglepride\_86 Start: 48465, Stop: 48175, Start Num: 14

Candidate Starts for Eaglepride\_86:

(Start: 14 @48465 has 2 MA's),

Gene: ForGetIt\_71 Start: 44378, Stop: 44082, Start Num: 13

Candidate Starts for ForGetIt\_71:

(Start: 13 @44378 has 3 MA's), (17, 44357), (31, 44198),

Gene: Garak\_85 Start: 45929, Stop: 45678, Start Num: 18

Candidate Starts for Garak\_85:

(1, 46241), (2, 46184), (3, 46181), (4, 46136), (7, 46013), (Start: 15 @45941 has 1 MA's), (18, 45929), (20, 45923), (26, 45884),

Gene: Grub\_78 Start: 45620, Stop: 45357, Start Num: 16

Candidate Starts for Grub\_78:

(9, 45683), (Start: 11 @45665 has 8 MA's), (Start: 16 @45620 has 14 MA's),

Gene: Helmet\_85 Start: 45929, Stop: 45678, Start Num: 18

Candidate Starts for Helmet\_85:

(1, 46241), (2, 46184), (3, 46181), (4, 46136), (7, 46013), (Start: 15 @45941 has 1 MA's), (18, 45929), (20, 45923), (26, 45884),

Gene: HuhtaEnerson15\_68 Start: 43954, Stop: 43652, Start Num: 12

Candidate Starts for HuhtaEnerson15\_68:

(Start: 12 @43954 has 6 MA's), (17, 43927), (19, 43921), (31, 43768),

Gene: Kalb97\_80 Start: 44807, Stop: 44451, Start Num: 16

Candidate Starts for Kalb97\_80:

(9, 44870), (Start: 11 @44852 has 8 MA's), (Start: 16 @44807 has 14 MA's), (22, 44786),

Gene: Lilith\_78 Start: 45620, Stop: 45357, Start Num: 16  
Candidate Starts for Lilith\_78:  
(9, 45683), (Start: 11 @45665 has 8 MA's), (Start: 16 @45620 has 14 MA's),

Gene: LittleCherry\_69 Start: 43824, Stop: 43522, Start Num: 12  
Candidate Starts for LittleCherry\_69:  
(Start: 12 @43824 has 6 MA's), (17, 43797), (19, 43791), (31, 43638),

Gene: Lowa\_77 Start: 45619, Stop: 45356, Start Num: 16  
Candidate Starts for Lowa\_77:  
(9, 45682), (Start: 11 @45664 has 8 MA's), (Start: 16 @45619 has 14 MA's),

Gene: Luchador\_82 Start: 47356, Stop: 47087, Start Num: 14  
Candidate Starts for Luchador\_82:  
(5, 47488), (6, 47476), (8, 47413), (Start: 14 @47356 has 2 MA's), (21, 47326), (23, 47320), (28, 47272),

Gene: Mainiac\_79 Start: 45620, Stop: 45357, Start Num: 16  
Candidate Starts for Mainiac\_79:  
(9, 45683), (Start: 11 @45665 has 8 MA's), (Start: 16 @45620 has 14 MA's),

Gene: Malinsilva\_83 Start: 45619, Stop: 45356, Start Num: 16  
Candidate Starts for Malinsilva\_83:  
(9, 45682), (Start: 11 @45664 has 8 MA's), (Start: 16 @45619 has 14 MA's),

Gene: Microwolf\_76 Start: 45643, Stop: 45380, Start Num: 16  
Candidate Starts for Microwolf\_76:  
(9, 45706), (Start: 11 @45688 has 8 MA's), (Start: 16 @45643 has 14 MA's),

Gene: Midas2\_67 Start: 44122, Stop: 43820, Start Num: 12  
Candidate Starts for Midas2\_67:  
(Start: 12 @44122 has 6 MA's), (24, 44071), (25, 44068), (30, 43960), (31, 43936),

Gene: MuchMore\_83 Start: 45616, Stop: 45353, Start Num: 16  
Candidate Starts for MuchMore\_83:  
(9, 45679), (Start: 11 @45661 has 8 MA's), (Start: 16 @45616 has 14 MA's),

Gene: PGHhamlin\_82 Start: 45619, Stop: 45356, Start Num: 16  
Candidate Starts for PGHhamlin\_82:  
(9, 45682), (Start: 11 @45664 has 8 MA's), (Start: 16 @45619 has 14 MA's),

Gene: Pembroke\_80 Start: 45628, Stop: 45365, Start Num: 16  
Candidate Starts for Pembroke\_80:  
(9, 45691), (Start: 11 @45673 has 8 MA's), (Start: 16 @45628 has 14 MA's),

Gene: Perplexer\_74 Start: 45711, Stop: 45394, Start Num: 11  
Candidate Starts for Perplexer\_74:  
(10, 45714), (Start: 11 @45711 has 8 MA's), (Start: 12 @45696 has 6 MA's), (19, 45660), (23, 45645), (27, 45606), (29, 45573),

Gene: PetiteSangsue\_74 Start: 45714, Stop: 45397, Start Num: 11  
Candidate Starts for PetiteSangsue\_74:

(10, 45717), (Start: 11 @45714 has 8 MA's), (Start: 12 @45699 has 6 MA's), (19, 45663), (23, 45648), (27, 45609), (29, 45576),

Gene: Sabia\_78 Start: 45635, Stop: 45372, Start Num: 16

Candidate Starts for Sabia\_78:

(9, 45698), (Start: 11 @45680 has 8 MA's), (Start: 16 @45635 has 14 MA's),

Gene: Stagni\_77 Start: 45630, Stop: 45367, Start Num: 16

Candidate Starts for Stagni\_77:

(9, 45693), (Start: 11 @45675 has 8 MA's), (Start: 16 @45630 has 14 MA's),

Gene: StepMih\_80 Start: 45621, Stop: 45358, Start Num: 16

Candidate Starts for StepMih\_80:

(9, 45684), (Start: 11 @45666 has 8 MA's), (Start: 16 @45621 has 14 MA's),

Gene: Temprado\_85 Start: 45929, Stop: 45678, Start Num: 18

Candidate Starts for Temprado\_85:

(1, 46241), (2, 46184), (3, 46181), (4, 46136), (7, 46013), (Start: 15 @45941 has 1 MA's), (18, 45929), (20, 45923), (26, 45884),

Gene: Watson\_79 Start: 45664, Stop: 45356, Start Num: 11

Candidate Starts for Watson\_79:

(9, 45682), (Start: 11 @45664 has 8 MA's), (Start: 16 @45619 has 14 MA's),

Gene: WunderPhul\_84 Start: 45570, Stop: 45307, Start Num: 15

Candidate Starts for WunderPhul\_84:

(1, 45870), (2, 45813), (3, 45810), (4, 45765), (7, 45642), (Start: 15 @45570 has 1 MA's), (18, 45558), (26, 45513),

Gene: Xena\_73 Start: 45735, Stop: 45418, Start Num: 11

Candidate Starts for Xena\_73:

(10, 45738), (Start: 11 @45735 has 8 MA's), (Start: 12 @45720 has 6 MA's), (19, 45684), (23, 45669), (27, 45630), (29, 45597),