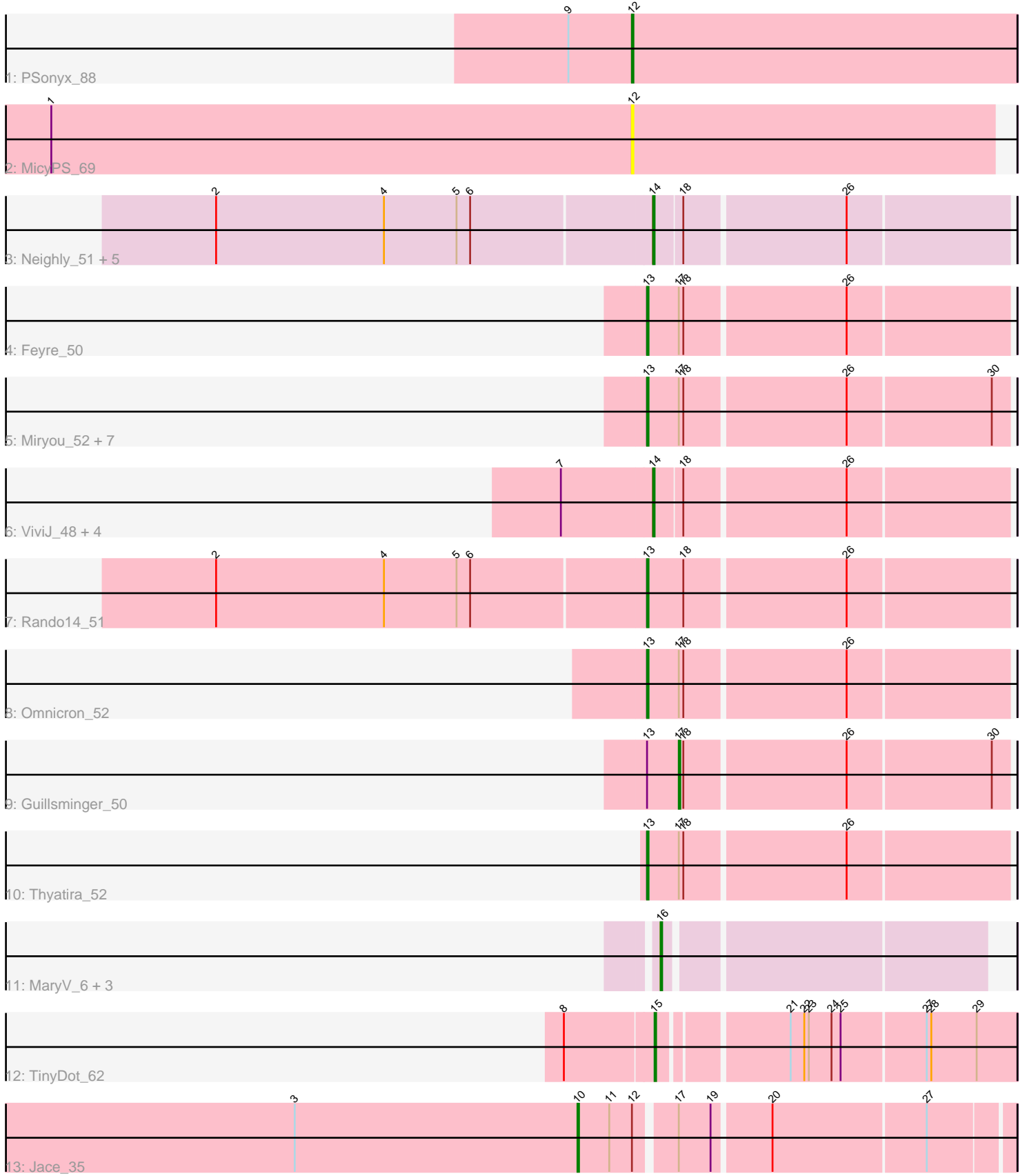


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 224781 Report

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

Pham number 224781 has 32 members, 3 are drafts.

Phages represented in each track:

- Track 1 : PSonyx\_88
- Track 2 : MicyPS\_69
- Track 3 : Neighly\_51, AlleyCat\_51, Dadosky\_51, Psycho\_49, Edugator\_48, Larva\_50
- Track 4 : Feyre\_50
- Track 5 : Miryou\_52, Heftyboy\_49, Paola\_49, OkiRoe\_49, Leston\_49, SoSeph\_49, Waterfoul\_50, Gengar\_49
- Track 6 : ViviJ\_48, Collard\_48, Agent47\_50, InvictusManeo\_48, Kratio\_47
- Track 7 : Rando14\_51
- Track 8 : Omnicron\_52
- Track 9 : Guillsminger\_50
- Track 10 : Thyatira\_52
- Track 11 : MaryV\_6, Wildcat\_6, Azrael100\_6, Cosmo\_6
- Track 12 : TinyDot\_62
- Track 13 : Jace\_35

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

The start number called the most often in the published annotations is 13, it was called in 12 of the 29 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Feyre\_50, Gengar\_49, Heftyboy\_49, Leston\_49, Miryou\_52, OkiRoe\_49, Omnicron\_52, Paola\_49, Rando14\_51, SoSeph\_49, Thyatira\_52, Waterfoul\_50,

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

- Guillsminger\_50,

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

- Agent47\_50, AlleyCat\_51, Azrael100\_6, Collard\_48, Cosmo\_6, Dadosky\_51, Edugator\_48, InvictusManeo\_48, Jace\_35, Kratio\_47, Larva\_50, MaryV\_6, MicyPS\_69, Neighly\_51, PSonyx\_88, Psycho\_49, TinyDot\_62, ViviJ\_48, Wildcat\_6,

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

Start 10:

- Found in 1 of 32 ( 3.1% ) 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: Jace\_35 (singleton),

Start 12:

- Found in 3 of 32 ( 9.4% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 66.7% of time when present
- Phage (with cluster) where this start called: MicyPS\_69 (EQ), PSonyx\_88 (EQ),

Start 13:

- Found in 13 of 32 ( 40.6% ) of genes in pham
- Manual Annotations of this start: 12 of 29
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Feyre\_50 (K5), Gengar\_49 (K5), Heftyboy\_49 (K5), Leston\_49 (K5), Miryou\_52 (K5), OkiRoe\_49 (K5), Omnicron\_52 (K5), Paola\_49 (K5), Rando14\_51 (K5), SoSeph\_49 (K5), Thyatira\_52 (K5), Waterfoul\_50 (K5),

Start 14:

- Found in 11 of 32 ( 34.4% ) of genes in pham
- Manual Annotations of this start: 9 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agent47\_50 (K5), AlleyCat\_51 (K5), Collard\_48 (K5), Dadosky\_51 (K5), Edugator\_48 (K5), InvictusManeo\_48 (K5), Kratio\_47 (K5), Larva\_50 (K5), Neighly\_51 (K3), Psycho\_49 (K5), ViviJ\_48 (K5),

Start 15:

- Found in 1 of 32 ( 3.1% ) 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: TinyDot\_62 (singleton),

Start 16:

- Found in 4 of 32 ( 12.5% ) of genes in pham
- Manual Annotations of this start: 4 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_6 (V), Cosmo\_6 (V), MaryV\_6 (V), Wildcat\_6 (V),

Start 17:

- Found in 13 of 32 ( 40.6% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Guillsminger\_50 (K5),

**Summary by clusters:**

There are 5 clusters represented in this pham: K3, singleton, EQ, K5, V,

Info for manual annotations of cluster EQ:

- Start number 12 was manually annotated 1 time for cluster EQ.

Info for manual annotations of cluster K5:

- Start number 13 was manually annotated 12 times for cluster K5.
- Start number 14 was manually annotated 9 times for cluster K5.
- Start number 17 was manually annotated 1 time for cluster K5.

Info for manual annotations of cluster V:

- Start number 16 was manually annotated 4 times for cluster V.

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

Gene: Agent47\_50 Start: 37416, Stop: 37640, Start Num: 14

Candidate Starts for Agent47\_50:

(7, 37362), (Start: 14 @37416 has 9 MA's), (18, 37434), (26, 37536),

Gene: AlleyCat\_51 Start: 37492, Stop: 37716, Start Num: 14

Candidate Starts for AlleyCat\_51:

(2, 37213), (4, 37324), (5, 37372), (6, 37381), (Start: 14 @37492 has 9 MA's), (18, 37510), (26, 37612),

Gene: Azrael100\_6 Start: 1245, Stop: 1045, Start Num: 16

Candidate Starts for Azrael100\_6:

(Start: 16 @1245 has 4 MA's),

Gene: Collard\_48 Start: 37377, Stop: 37601, Start Num: 14

Candidate Starts for Collard\_48:

(7, 37323), (Start: 14 @37377 has 9 MA's), (18, 37395), (26, 37497),

Gene: Cosmo\_6 Start: 1245, Stop: 1045, Start Num: 16

Candidate Starts for Cosmo\_6:

(Start: 16 @1245 has 4 MA's),

Gene: Dadosky\_51 Start: 37494, Stop: 37718, Start Num: 14

Candidate Starts for Dadosky\_51:

(2, 37215), (4, 37326), (5, 37374), (6, 37383), (Start: 14 @37494 has 9 MA's), (18, 37512), (26, 37614),

Gene: Edugator\_48 Start: 38915, Stop: 39139, Start Num: 14

Candidate Starts for Edugator\_48:

(2, 38636), (4, 38747), (5, 38795), (6, 38804), (Start: 14 @38915 has 9 MA's), (18, 38933), (26, 39035),

Gene: Feyre\_50 Start: 39724, Stop: 39954, Start Num: 13

Candidate Starts for Feyre\_50:

(Start: 13 @39724 has 12 MA's), (Start: 17 @39745 has 1 MA's), (18, 39748), (26, 39850),

Gene: Gengar\_49 Start: 38335, Stop: 38565, Start Num: 13

Candidate Starts for Gengar\_49:

(Start: 13 @38335 has 12 MA's), (Start: 17 @38356 has 1 MA's), (18, 38359), (26, 38461), (30, 38554),

Gene: Guillsminger\_50 Start: 38327, Stop: 38536, Start Num: 17

Candidate Starts for Guillsminger\_50:

(Start: 13 @38306 has 12 MA's), (Start: 17 @38327 has 1 MA's), (18, 38330), (26, 38432), (30, 38525),

Gene: Heftyboy\_49 Start: 38481, Stop: 38711, Start Num: 13

Candidate Starts for Heftyboy\_49:

(Start: 13 @38481 has 12 MA's), (Start: 17 @38502 has 1 MA's), (18, 38505), (26, 38607), (30, 38700),

Gene: InvictusManeo\_48 Start: 37420, Stop: 37644, Start Num: 14

Candidate Starts for InvictusManeo\_48:

(7, 37366), (Start: 14 @37420 has 9 MA's), (18, 37438), (26, 37540),

Gene: Jace\_35 Start: 27669, Stop: 27938, Start Num: 10

Candidate Starts for Jace\_35:

(3, 27483), (Start: 10 @27669 has 1 MA's), (11, 27690), (Start: 12 @27705 has 1 MA's), (Start: 17 @27729 has 1 MA's), (19, 27750), (20, 27786), (27, 27885),

Gene: Kratio\_47 Start: 36969, Stop: 37193, Start Num: 14

Candidate Starts for Kratio\_47:

(7, 36915), (Start: 14 @36969 has 9 MA's), (18, 36987), (26, 37089),

Gene: Larva\_50 Start: 38366, Stop: 38590, Start Num: 14

Candidate Starts for Larva\_50:

(2, 38087), (4, 38198), (5, 38246), (6, 38255), (Start: 14 @38366 has 9 MA's), (18, 38384), (26, 38486),

Gene: Leston\_49 Start: 38435, Stop: 38665, Start Num: 13

Candidate Starts for Leston\_49:

(Start: 13 @38435 has 12 MA's), (Start: 17 @38456 has 1 MA's), (18, 38459), (26, 38561), (30, 38654),

Gene: MaryV\_6 Start: 1245, Stop: 1045, Start Num: 16

Candidate Starts for MaryV\_6:

(Start: 16 @1245 has 4 MA's),

Gene: MicyPS\_69 Start: 44459, Stop: 44220, Start Num: 12

Candidate Starts for MicyPS\_69:

(1, 44843), (Start: 12 @44459 has 1 MA's),

Gene: Miryou\_52 Start: 40637, Stop: 40867, Start Num: 13

Candidate Starts for Miryou\_52:

(Start: 13 @40637 has 12 MA's), (Start: 17 @40658 has 1 MA's), (18, 40661), (26, 40763), (30, 40856),

Gene: Neighly\_51 Start: 38365, Stop: 38589, Start Num: 14

Candidate Starts for Neighly\_51:

(2, 38086), (4, 38197), (5, 38245), (6, 38254), (Start: 14 @38365 has 9 MA's), (18, 38383), (26, 38485),

Gene: OkiRoe\_49 Start: 38308, Stop: 38538, Start Num: 13

Candidate Starts for OkiRoe\_49:

(Start: 13 @38308 has 12 MA's), (Start: 17 @38329 has 1 MA's), (18, 38332), (26, 38434), (30, 38527),

Gene: Omnicron\_52 Start: 37912, Stop: 38142, Start Num: 13

Candidate Starts for Omnicron\_52:

(Start: 13 @37912 has 12 MA's), (Start: 17 @37933 has 1 MA's), (18, 37936), (26, 38038),

Gene: PSonyx\_88 Start: 47998, Stop: 47744, Start Num: 12

Candidate Starts for PSonyx\_88:  
(9, 48037), (Start: 12 @47998 has 1 MA's),

Gene: Paola\_49 Start: 38306, Stop: 38536, Start Num: 13  
Candidate Starts for Paola\_49:  
(Start: 13 @38306 has 12 MA's), (Start: 17 @38327 has 1 MA's), (18, 38330), (26, 38432), (30, 38525),

Gene: Psycho\_49 Start: 37491, Stop: 37715, Start Num: 14  
Candidate Starts for Psycho\_49:  
(2, 37212), (4, 37323), (5, 37371), (6, 37380), (Start: 14 @37491 has 9 MA's), (18, 37509), (26, 37611),

Gene: Rando14\_51 Start: 36490, Stop: 36720, Start Num: 13  
Candidate Starts for Rando14\_51:  
(2, 36211), (4, 36322), (5, 36370), (6, 36379), (Start: 13 @36490 has 12 MA's), (18, 36514), (26, 36616),

Gene: SoSeph\_49 Start: 38481, Stop: 38711, Start Num: 13  
Candidate Starts for SoSeph\_49:  
(Start: 13 @38481 has 12 MA's), (Start: 17 @38502 has 1 MA's), (18, 38505), (26, 38607), (30, 38700),

Gene: Thyatira\_52 Start: 40642, Stop: 40872, Start Num: 13  
Candidate Starts for Thyatira\_52:  
(Start: 13 @40642 has 12 MA's), (Start: 17 @40663 has 1 MA's), (18, 40666), (26, 40768),

Gene: TinyDot\_62 Start: 38552, Stop: 38776, Start Num: 15  
Candidate Starts for TinyDot\_62:  
(8, 38501), (Start: 15 @38552 has 1 MA's), (21, 38630), (22, 38639), (23, 38642), (24, 38657), (25, 38663), (27, 38717), (28, 38720), (29, 38750),

Gene: ViviJ\_48 Start: 37177, Stop: 37401, Start Num: 14  
Candidate Starts for ViviJ\_48:  
(7, 37123), (Start: 14 @37177 has 9 MA's), (18, 37195), (26, 37297),

Gene: Waterfoul\_50 Start: 38543, Stop: 38773, Start Num: 13  
Candidate Starts for Waterfoul\_50:  
(Start: 13 @38543 has 12 MA's), (Start: 17 @38564 has 1 MA's), (18, 38567), (26, 38669), (30, 38762),

Gene: Wildcat\_6 Start: 1255, Stop: 1055, Start Num: 16  
Candidate Starts for Wildcat\_6:  
(Start: 16 @1255 has 4 MA's),