

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 163883 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163883 has 25 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Phabba 145
- Track 2 : ScoobyDoobyDoo\_136
- Track 3 : Mahdia\_38
- Track 4 : Gustav 40
- Track 5 : Widow 38
- Track 6 : Upyo\_40
- Track 7: Trine 38
- Track 8 : Morrissey\_39
- Track 9 : CoffeeBean\_63, Braxoaddie\_62, Polyyuki\_62, Maselop\_62, Apiary\_62
- Track 10 : GuyFagieri\_61
- Track 11 : MacGully\_71
- Track 12 : Orchid\_78, Kampe\_79, PatrickStar\_79
- Track 13 : Daredevil\_48
- Track 14: EniyanLRS\_175, MaryV\_129, Wildcat\_143, Azrael100\_136, Cosmo\_143
- Track 15 : Kumao 98

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

The start number called the most often in the published annotations is 21, it was called in 10 of the 24 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

 Apiary\_62, Braxoaddie\_62, CoffeeBean\_63, Gustav\_40, GuyFagieri\_61, Mahdia\_38, Maselop\_62, Morrissey\_39, Polyyuki\_62, Trine\_38, Widow\_38,

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

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

• Azrael100\_136, Cosmo\_143, Daredevil\_48, EniyanLRS\_175, Kampe\_79, Kumao\_98, MacGully\_71, MaryV\_129, Orchid\_78, PatrickStar\_79, Phabba\_145, ScoobyDoobyDoo\_136, Upyo\_40, Wildcat\_143,

# Summary by start number:

#### Start 18:

- Found in 1 of 25 (4.0%) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MacGully\_71 (CR),

## Start 21:

- Found in 11 of 25 (44.0%) of genes in pham
- Manual Annotations of this start: 10 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary\_62 (CR), Braxoaddie\_62 (CR), CoffeeBean\_63 (CR), Gustav\_40 (CD), GuyFagieri\_61 (CR), Mahdia\_38 (CD), Maselop\_62 (CR), Morrissey\_39 (CD), Polyyuki\_62 (CR), Trine\_38 (CD), Widow\_38 (CD),

### Start 22:

- Found in 1 of 25 (4.0%) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Daredevil\_48 (DL),

#### Start 23:

- Found in 2 of 25 (8.0%) of genes in pham
- Manual Annotations of this start: 2 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phabba\_145 (C2), ScoobyDoobyDoo\_136 (C2),

### Start 24:

- Found in 4 of 25 (16.0%) of genes in pham
- Manual Annotations of this start: 4 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kampe\_79 (CX), Kumao\_98 (singleton), Orchid\_78 (CX), PatrickStar\_79 (CX),

# Start 25:

- Found in 5 of 25 (20.0%) of genes in pham
- Manual Annotations of this start: 5 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_136 (V), Cosmo\_143 (V), EniyanLRS\_175 (V), MaryV\_129 (V), Wildcat\_143 (V),

## Start 26:

- Found in 7 of 25 (28.0%) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Upyo 40 (CD),

# **Summary by clusters:**

There are 7 clusters represented in this pham: singleton, DL, CD, CX, V, CR, C2,

Info for manual annotations of cluster C2:

•Start number 23 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster CD:

- •Start number 21 was manually annotated 5 times for cluster CD.
- •Start number 26 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CR:

- •Start number 18 was manually annotated 1 time for cluster CR.
- •Start number 21 was manually annotated 5 times for cluster CR.

Info for manual annotations of cluster CX:

•Start number 24 was manually annotated 3 times for cluster CX.

Info for manual annotations of cluster DL:

•Start number 22 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster V:

•Start number 25 was manually annotated 5 times for cluster V.

### Gene Information:

Gene: Apiary\_62 Start: 46584, Stop: 46390, Start Num: 21

Candidate Starts for Apiary\_62:

(15, 46605), (16, 46602), (Start: 21 @46584 has 10 MA's), (Start: 26 @46569 has 1 MA's), (29, 46512), (30, 46503), (35, 46464), (37, 46434),

Gene: Azrael100 136 Start: 67289, Stop: 67110, Start Num: 25

Candidate Starts for Azrael100\_136:

(Start: 25 @67289 has 5 MA's), (30, 67220), (34, 67178),

Gene: Braxoaddie 62 Start: 46573, Stop: 46379, Start Num: 21

Candidate Starts for Braxoaddie 62:

(15, 46594), (16, 46591), (Start: 21 @46573 has 10 MA's), (Start: 26 @46558 has 1 MA's), (29, 46501), (30, 46492), (35, 46453), (37, 46423),

Gene: CoffeeBean 63 Start: 46531, Stop: 46337, Start Num: 21

Candidate Starts for CoffeeBean 63:

(15, 46552), (16, 46549), (Start: 21 @46531 has 10 MA's), (Start: 26 @46516 has 1 MA's), (29, 46459), (30, 46450), (35, 46411), (37, 46381),

Gene: Cosmo\_143 Start: 67452, Stop: 67273, Start Num: 25

Candidate Starts for Cosmo\_143:

(Start: 25 @67452 has 5 MA's), (30, 67383), (34, 67341),

Gene: Daredevil\_48 Start: 40251, Stop: 40478, Start Num: 22

Candidate Starts for Daredevil 48:

(20, 40239), (Start: 22 @ 40251 has 1 MA's), (29, 40329), (30, 40338),

Gene: EniyanLRS\_175 Start: 67797, Stop: 67618, Start Num: 25

Candidate Starts for EniyanLRS\_175:

(Start: 25 @67797 has 5 MA's), (30, 67728), (34, 67686),

Gene: Gustav\_40 Start: 31883, Stop: 31605, Start Num: 21

Candidate Starts for Gustav\_40:

(9, 32087), (10, 32084), (Start: 21 @31883 has 10 MA's), (39, 31640),

Gene: GuyFagieri\_61 Start: 46767, Stop: 46573, Start Num: 21

Candidate Starts for GuyFagieri 61:

(13, 46800), (Start: 21 @46767 has 10 MA's), (Start: 26 @46752 has 1 MA's), (29, 46695), (30,

46686), (35, 46647), (36, 46626), (37, 46617),

Gene: Kampe 79 Start: 59645, Stop: 59466, Start Num: 24

Candidate Starts for Kampe\_79:

(19, 59675), (Start: 24 @59645 has 4 MA's),

Gene: Kumao\_98 Start: 61160, Stop: 60951, Start Num: 24

Candidate Starts for Kumao\_98:

(Start: 24 @61160 has 4 MA's), (27, 61115), (28, 61097), (30, 61085), (31, 61082),

Gene: MacGully\_71 Start: 49770, Stop: 49540, Start Num: 18

Candidate Starts for MacGully\_71:

(Start: 18 @49770 has 1 MA's), (29, 49668), (30, 49659), (36, 49596), (37, 49587),

Gene: Mahdia\_38 Start: 31109, Stop: 30855, Start Num: 21

Candidate Starts for Mahdia 38:

(1, 31604), (2, 31586), (3, 31484), (6, 31367), (8, 31355), (9, 31325), (10, 31322), (11, 31289), (12, 31250), (Start: 21 @31109 has 10 MA's), (37, 30938), (38, 30866),

Gene: MaryV\_129 Start: 65640, Stop: 65461, Start Num: 25

Candidate Starts for MaryV\_129:

(Start: 25 @65640 has 5 MA's), (30, 65571), (34, 65529),

Gene: Maselop\_62 Start: 46607, Stop: 46413, Start Num: 21

Candidate Starts for Maselop 62:

(15, 46628), (16, 46625), (Start: 21 @46607 has 10 MA's), (Start: 26 @46592 has 1 MA's), (29, 46535), (30, 46526), (35, 46487), (37, 46457),

Gene: Morrissey\_39 Start: 31553, Stop: 31275, Start Num: 21

Candidate Starts for Morrissey\_39:

(9, 31757), (10, 31754), (Start: 21 @31553 has 10 MA's), (33, 31430), (38, 31313),

Gene: Orchid\_78 Start: 59646, Stop: 59467, Start Num: 24

Candidate Starts for Orchid 78:

(19, 59676), (Start: 24 @59646 has 4 MA's),

Gene: PatrickStar\_79 Start: 59645, Stop: 59466, Start Num: 24

Candidate Starts for PatrickStar\_79:

(19, 59675), (Start: 24 @59645 has 4 MA's),

Gene: Phabba\_145 Start: 88454, Stop: 88248, Start Num: 23

Candidate Starts for Phabba\_145:

(Start: 23 @88454 has 2 MA's), (29, 88382), (35, 88337),

Gene: Polyyuki\_62 Start: 46596, Stop: 46402, Start Num: 21

Candidate Starts for Polyyuki\_62:

(15, 46617), (16, 46614), (Start: 21 @46596 has 10 MA's), (Start: 26 @46581 has 1 MA's), (29,

46524), (30, 46515), (35, 46476), (37, 46446),

Gene: ScoobyDoobyDoo\_136 Start: 88103, Stop: 87900, Start Num: 23

Candidate Starts for ScoobyDoobyDoo\_136: (Start: 23 @88103 has 2 MA's), (32, 88010),

Gene: Trine\_38 Start: 31043, Stop: 30771, Start Num: 21

Candidate Starts for Trine\_38:

(Start: 21 @31043 has 10 MA's), (33, 30914),

Gene: Upyo\_40 Start: 32017, Stop: 31766, Start Num: 26

Candidate Starts for Upyo\_40:

(4, 32392), (5, 32371), (14, 32068), (17, 32056), (Start: 26 @32017 has 1 MA's), (29, 31960), (38,

31804),

Gene: Widow\_38 Start: 31430, Stop: 31161, Start Num: 21

Candidate Starts for Widow\_38:

(6, 31676), (7, 31667), (9, 31634), (Start: 21 @31430 has 10 MA's),

Gene: Wildcat\_143 Start: 67533, Stop: 67354, Start Num: 25

Candidate Starts for Wildcat\_143:

(Start: 25 @67533 has 5 MA's), (30, 67464), (34, 67422),