

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 188379 Report

This analysis was run 11/02/24 on database version 579.

Pham number 188379 has 26 members, 6 are drafts.

Phages represented in each track:

- Track 1: Talia1610\_72, Mimi\_79, Bloom\_76, Racecar\_73
- Track 2: Atuin 69
- Track 3: SJReid 78
- Track 4 : Phrampa\_66
- Track 5 : Patbob\_72
- Track 6: PauloDiaboli\_41, PauloDiaboli\_396, A3Wally\_41, A3Wally\_394
- Track 7: PauloDiaboli 73, A3Wally 74
- Track 8 : Zooman\_61
- Track 9: Big4 65
- Track 10 : Big4\_369, Big4\_43
- Track 11 : Zooman 353, Zooman 40
- Track 12 : Cece\_347, Cece\_45
- Track 13 : Cece 60
- Track 14: Pumpernickel\_350, Pumpernickel\_49
- Track 15: Pumpernickel 76

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

The start number called the most often in the published annotations is 8, it was called in 10 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• A3Wally\_74, Big4\_65, Cece\_347, Cece\_45, Cece\_60, PauloDiaboli\_73, Pumpernickel\_350, Pumpernickel\_49, Pumpernickel\_76, Zooman\_61,

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

A3Wally\_394, A3Wally\_41, PauloDiaboli\_396, PauloDiaboli\_41,

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

• Atuin\_69, Big4\_369, Big4\_43, Bloom\_76, Mimi\_79, Patbob\_72, Phrampa\_66, Racecar\_73, SJReid\_78, Talia1610\_72, Zooman\_353, Zooman\_40,

## **Summary by start number:**

#### Start 4:

- Found in 4 of 26 (15.4%) of genes in pham
- Manual Annotations of this start: 4 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_394 (GD1), A3Wally\_41 (GD1), PauloDiaboli\_396 (GD1), PauloDiaboli\_41 (GD1),

#### Start 6:

- Found in 4 of 26 (15.4%) of genes in pham
- Manual Annotations of this start: 4 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Big4\_369 (GD2), Big4\_43 (GD2), Zooman\_353 (GD2), Zooman\_40 (GD2),

#### Start 8:

- Found in 14 of 26 (53.8%) of genes in pham
- Manual Annotations of this start: 10 of 20
- Called 71.4% of time when present
- Phage (with cluster) where this start called: A3Wally\_74 (GD1), Big4\_65 (GD2), Cece\_347 (GD3), Cece\_45 (GD3), Cece\_60 (GD3), PauloDiaboli\_73 (GD1), Pumpernickel\_350 (GD4), Pumpernickel\_49 (GD4), Pumpernickel\_76 (GD4), Zooman 61 (GD2),

### Start 9:

- Found in 8 of 26 ( 30.8% ) of genes in pham
- Manual Annotations of this start: 2 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_69 (FC), Bloom\_76 (FC), Mimi\_79 (FC), Patbob\_72 (FC), Phrampa\_66 (FC), Racecar\_73 (FC), SJReid\_78 (FC), Talia1610\_72 (FC),

# Summary by clusters:

There are 5 clusters represented in this pham: GD3, GD1, GD2, FC, GD4,

Info for manual annotations of cluster FC:

•Start number 9 was manually annotated 2 times for cluster FC.

Info for manual annotations of cluster GD1:

- •Start number 4 was manually annotated 4 times for cluster GD1.
- •Start number 8 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- •Start number 6 was manually annotated 4 times for cluster GD2.
- •Start number 8 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

•Start number 8 was manually annotated 3 times for cluster GD3.

Info for manual annotations of cluster GD4:

•Start number 8 was manually annotated 3 times for cluster GD4.

## Gene Information:

Gene: A3Wally 41 Start: 14268, Stop: 14873, Start Num: 4

Candidate Starts for A3Wally\_41:

(1, 14244), (Start: 4 @14268 has 4 MA's), (Start: 8 @14316 has 10 MA's), (12, 14361), (22, 14469), (35, 14562), (49, 14733), (51, 14766), (56, 14829), (57, 14838), (58, 14853),

Gene: A3Wally\_394 Start: 193489, Stop: 194094, Start Num: 4

Candidate Starts for A3Wally 394:

(1, 193465), (Start: 4 @193489 has 4 MA's), (Start: 8 @193537 has 10 MA's), (12, 193582), (22, 193690), (35, 193783), (49, 193954), (51, 193987), (56, 194050), (57, 194059), (58, 194074),

Gene: A3Wally\_74 Start: 26233, Stop: 26730, Start Num: 8

Candidate Starts for A3Wally 74:

(Start: 8 @ 26233 has 10 MA's), (33, 26467), (44, 26584), (45, 26623), (52, 26710), (53, 26722),

Gene: Atuin\_69 Start: 29715, Stop: 30212, Start Num: 9

Candidate Starts for Atuin 69:

(Start: 9 @ 29715 has 2 MA's), (46, 30093), (47, 30102),

Gene: Big4 65 Start: 26317, Stop: 26814, Start Num: 8

Candidate Starts for Big4\_65:

(Start: 8 @26317 has 10 MA's), (19, 26413), (28, 26524), (44, 26668), (45, 26707), (51, 26779), (52, 26794),

Gene: Big4\_369 Start: 191141, Stop: 191719, Start Num: 6

Candidate Starts for Big4\_369:

(Start: 6 @191141 has 4 MA's), (11, 191192), (20, 191255), (23, 191318), (33, 191387), (40, 191429), (47, 191540), (49, 191567), (51, 191600),

Gene: Big4\_43 Start: 16447, Stop: 17025, Start Num: 6

Candidate Starts for Big4 43:

(Start: 6 @16447 has 4 MA's), (11, 16498), (20, 16561), (23, 16624), (33, 16693), (40, 16735), (47, 16846), (49, 16873), (51, 16906),

Gene: Bloom\_76 Start: 32332, Stop: 32826, Start Num: 9

Candidate Starts for Bloom 76:

(Start: 9 @ 32332 has 2 MA's), (18, 32428), (20, 32437), (29, 32539), (38, 32599), (47, 32722),

Gene: Cece\_347 Start: 185392, Stop: 185943, Start Num: 8

Candidate Starts for Cece\_347:

(Start: 8 @185392 has 10 MA's), (22, 185545), (23, 185560), (30, 185599), (31, 185605), (39, 185650), (48, 185776), (51, 185827), (55, 185875), (59, 185932),

Gene: Cece 60 Start: 24833, Stop: 25330, Start Num: 8

Candidate Starts for Cece\_60:

(Start: 8 @ 24833 has 10 MA's), (17, 24911), (19, 24929), (37, 25100), (44, 25184), (52, 25310),

Gene: Cece\_45 Start: 16958, Stop: 17509, Start Num: 8

Candidate Starts for Cece\_45:

(Start: 8 @16958 has 10 MA's), (22, 17111), (23, 17126), (30, 17165), (31, 17171), (39, 17216), (48, 17342), (51, 17393), (55, 17441), (59, 17498),

Gene: Mimi\_79 Start: 31679, Stop: 32173, Start Num: 9

Candidate Starts for Mimi\_79:

(Start: 9 @ 31679 has 2 MA's), (18, 31775), (20, 31784), (29, 31886), (38, 31946), (47, 32069),

Gene: Patbob\_72 Start: 31972, Stop: 32466, Start Num: 9

Candidate Starts for Patbob 72:

(5, 31933), (Start: 9 @31972 has 2 MA's), (18, 32068), (20, 32077), (22, 32125), (29, 32179), (33, 32203), (40, 32248), (47, 32362),

Gene: PauloDiaboli\_41 Start: 14108, Stop: 14713, Start Num: 4

Candidate Starts for PauloDiaboli 41:

(1, 14084), (Start: 4 @14108 has 4 MA's), (Start: 8 @14156 has 10 MA's), (12, 14201), (22, 14309), (35, 14402), (49, 14573), (51, 14606), (56, 14669), (57, 14678), (58, 14693),

Gene: PauloDiaboli\_396 Start: 190737, Stop: 191342, Start Num: 4

Candidate Starts for PauloDiaboli\_396:

(1, 190713), (Start: 4 @190737 has 4 MA's), (Start: 8 @190785 has 10 MA's), (12, 190830), (22, 190938), (35, 191031), (49, 191202), (51, 191235), (56, 191298), (57, 191307), (58, 191322),

Gene: PauloDiaboli\_73 Start: 25590, Stop: 26087, Start Num: 8

Candidate Starts for PauloDiaboli 73:

(Start: 8 @ 25590 has 10 MA's), (33, 25824), (44, 25941), (45, 25980), (52, 26067), (53, 26079),

Gene: Phrampa\_66 Start: 28999, Stop: 29493, Start Num: 9

Candidate Starts for Phrampa 66:

(Start: 9 @28999 has 2 MA's), (18, 29095), (20, 29104), (22, 29152), (29, 29206), (43, 29305), (47, 29389),

Gene: Pumpernickel\_350 Start: 183775, Stop: 184356, Start Num: 8

Candidate Starts for Pumpernickel\_350:

(5, 183742), (Start: 8 @183775 has 10 MA's), (25, 183967), (35, 184030), (36, 184039), (41, 184081), (42, 184090), (49, 184201), (50, 184207),

Gene: Pumpernickel 76 Start: 29614, Stop: 30117, Start Num: 8

Candidate Starts for Pumpernickel 76:

(7, 29611), (Start: 8 @29614 has 10 MA's), (10, 29644), (14, 29677), (15, 29686), (16, 29689), (20, 29713), (24, 29782), (26, 29806), (27, 29812), (44, 29965), (52, 30091),

Gene: Pumpernickel\_49 Start: 17643, Stop: 18224, Start Num: 8

Candidate Starts for Pumpernickel 49:

(5, 17610), (Start: 8 @17643 has 10 MA's), (25, 17835), (35, 17898), (36, 17907), (41, 17949), (42, 17958), (49, 18069), (50, 18075),

Gene: Racecar 73 Start: 32332, Stop: 32826, Start Num: 9

Candidate Starts for Racecar 73:

(Start: 9 @ 32332 has 2 MA's), (18, 32428), (20, 32437), (29, 32539), (38, 32599), (47, 32722),

Gene: SJReid\_78 Start: 33536, Stop: 34036, Start Num: 9

Candidate Starts for SJReid\_78:

(Start: 9 @ 33536 has 2 MA's), (13, 33590), (20, 33641), (22, 33689), (34, 33770), (54, 34016),

Gene: Talia1610 72 Start: 31697, Stop: 32191, Start Num: 9

Candidate Starts for Talia1610\_72:

(Start: 9 @ 31697 has 2 MA's), (18, 31793), (20, 31802), (29, 31904), (38, 31964), (47, 32087),

Gene: Zooman\_61 Start: 24985, Stop: 25482, Start Num: 8

Candidate Starts for Zooman\_61:

(Start: 8 @24985 has 10 MA's), (19, 25081), (28, 25192), (44, 25336), (45, 25375), (51, 25447), (52, 25462),

Gene: Zooman\_353 Start: 191506, Stop: 192084, Start Num: 6 Candidate Starts for Zooman\_353:

(2, 191449), (3, 191458), (Start: 6 @191506 has 4 MA's), (11, 191557), (21, 191641), (23, 191683), (27, 191716), (32, 191746), (33, 191752), (40, 191794), (47, 191905), (49, 191932), (51, 191965), (56, 192028), (59, 192067),

Gene: Zooman\_40 Start: 15855, Stop: 16433, Start Num: 6 Candidate Starts for Zooman\_40:

(2, 15798), (3, 15807), (Start: 6 @15855 has 4 MA's), (11, 15906), (21, 15990), (23, 16032), (27, 16065), (32, 16095), (33, 16101), (40, 16143), (47, 16254), (49, 16281), (51, 16314), (56, 16377), (59, 16416),