

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 224824 Report

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

Pham number 224824 has 27 members, 0 are drafts.

Phages represented in each track:

- Track 1: Corvo\_25, Target\_27, Snazzy\_23, Hermia\_27, Pinto\_27, Zeeculate\_24, Atkinbua\_26
- Track 2 : Seabiscuit 76
- Track 3: Wheeler 80
- Track 4 : Ashballer\_24, Trouble\_25, GrecoEtereo\_26, Petruchio\_25, SwissCheese 25, ConceptII\_26, Beatrix\_24, Ajay\_25
- Track 5: Wheeler 74
- Track 6 : Samisti12\_29, EGole\_30
- Track 7 : SpeedDemon 970
- Track 8: Duke13\_49, Optimus\_51, Wanda\_52, DmpstrDiver\_47, Minerva\_52, BAKA 50

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

The start number called the most often in the published annotations is 15, it was called in 8 of the 27 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

 Ajay\_25, Ashballer\_24, Beatrix\_24, ConceptII\_26, GrecoEtereo\_26, Petruchio\_25, SwissCheese\_25, Trouble\_25,

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

Atkinbua\_26, Corvo\_25, Hermia\_27, Pinto\_27, Snazzy\_23, Target\_27, Zeeculate\_24,

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

• BAKA\_50, DmpstrDiver\_47, Duke13\_49, EGole\_30, Minerva\_52, Optimus\_51, Samisti12\_29, Seabiscuit\_76, SpeedDemon\_970, Wanda\_52, Wheeler\_74, Wheeler\_80,

# Summary by start number:

#### Start 5:

• Found in 2 of 27 (7.4%) of genes in pham

- Manual Annotations of this start: 2 of 27
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EGole\_30 (BE1), Samisti12\_29 (BE1),

### Start 8:

- Found in 1 of 27 (3.7%) of genes in pham
- Manual Annotations of this start: 1 of 27
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wheeler\_74 (A1),

### Start 10:

- Found in 8 of 27 (29.6%) of genes in pham
- Manual Annotations of this start: 6 of 27
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BAKA\_50 (J), DmpstrDiver\_47 (J), Duke13\_49 (J), Minerva\_52 (J), Optimus\_51 (J), Wanda\_52 (J),

## Start 11:

- Found in 2 of 27 (7.4%) of genes in pham
- Manual Annotations of this start: 1 of 27
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Wheeler\_80 (A1),

#### Start 12:

- Found in 3 of 27 (11.1%) of genes in pham
- Manual Annotations of this start: 2 of 27
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Seabiscuit\_76 (A1), SpeedDemon\_970 (DL),

#### Start 14:

- Found in 15 of 27 (55.6%) of genes in pham
- Manual Annotations of this start: 7 of 27
- Called 46.7% of time when present
- Phage (with cluster) where this start called: Atkinbua\_26 (A1), Corvo\_25 (A1), Hermia\_27 (A1), Pinto\_27 (A1), Snazzy\_23 (A1), Target\_27 (A1), Zeeculate\_24 (A1),

#### Start 15:

- Found in 15 of 27 (55.6%) of genes in pham
- Manual Annotations of this start: 8 of 27
- Called 53.3% of time when present
- Phage (with cluster) where this start called: Ajay\_25 (A1), Ashballer\_24 (A1), Beatrix\_24 (A1), ConceptII\_26 (A1), GrecoEtereo\_26 (A1), Petruchio\_25 (A1), SwissCheese\_25 (A1), Trouble\_25 (A1),

## Summary by clusters:

There are 4 clusters represented in this pham: A1, DL, J, BE1,

### Info for manual annotations of cluster A1:

- •Start number 8 was manually annotated 1 time for cluster A1.
- •Start number 11 was manually annotated 1 time for cluster A1.
- •Start number 12 was manually annotated 1 time for cluster A1.

- •Start number 14 was manually annotated 7 times for cluster A1.
- •Start number 15 was manually annotated 8 times for cluster A1.

Info for manual annotations of cluster BE1:

•Start number 5 was manually annotated 2 times for cluster BE1.

Info for manual annotations of cluster DL:

•Start number 12 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster J:

•Start number 10 was manually annotated 6 times for cluster J.

### Gene Information:

Gene: Ajay\_25 Start: 18878, Stop: 19372, Start Num: 15

Candidate Starts for Ajay\_25:

(Start: 14 @18872 has 7 MA's), (Start: 15 @18878 has 8 MA's), (20, 19034), (23, 19094), (32, 19274), (37, 19325),

Gene: Ashballer\_24 Start: 18821, Stop: 19315, Start Num: 15

Candidate Starts for Ashballer\_24:

(Start: 14 @18815 has 7 MA's), (Start: 15 @18821 has 8 MA's), (20, 18977), (23, 19037), (32, 19217), (37, 19268),

Gene: Atkinbua\_26 Start: 18768, Stop: 19268, Start Num: 14

Candidate Starts for Atkinbua\_26:

(Start: 14 @18768 has 7 MA's), (Start: 15 @18774 has 8 MA's), (20, 18930), (23, 18990), (32, 19170), (37, 19221),

Gene: BAKA 50 Start: 40286, Stop: 40870, Start Num: 10

Candidate Starts for BAKA 50:

(Start: 10 @40286 has 6 MA's), (13, 40328), (17, 40499), (19, 40514), (27, 40739), (31, 40802),

Gene: Beatrix\_24 Start: 19780, Stop: 20274, Start Num: 15

Candidate Starts for Beatrix\_24:

(Start: 14 @19774 has 7 MA's), (Start: 15 @19780 has 8 MA's), (20, 19936), (23, 19996), (32, 20176), (37, 20227),

Gene: ConceptII 26 Start: 19302, Stop: 19796, Start Num: 15

Candidate Starts for ConceptII 26:

(Start: 14 @19296 has 7 MA's), (Start: 15 @19302 has 8 MA's), (20, 19458), (23, 19518), (32, 19698), (37, 19749),

Gene: Corvo\_25 Start: 19271, Stop: 19771, Start Num: 14

Candidate Starts for Corvo 25:

(Start: 14 @19271 has 7 MA's), (Start: 15 @19277 has 8 MA's), (20, 19433), (23, 19493), (32, 19673), (37, 19724),

Gene: DmpstrDiver\_47 Start: 39715, Stop: 40299, Start Num: 10

Candidate Starts for DmpstrDiver 47:

(Start: 10 @39715 has 6 MA's), (13, 39757), (17, 39928), (19, 39943), (27, 40168), (31, 40231),

Gene: Duke13\_49 Start: 40033, Stop: 40617, Start Num: 10

Candidate Starts for Duke13\_49:

(Start: 10 @40033 has 6 MA's), (13, 40075), (17, 40246), (19, 40261), (27, 40486), (31, 40549),

Gene: EGole\_30 Start: 14796, Stop: 14044, Start Num: 5

Candidate Starts for EGole 30:

(Start: 5 @14796 has 2 MA's), (Start: 10 @14712 has 6 MA's), (26, 14301), (30, 14205),

Gene: GrecoEtereo\_26 Start: 19123, Stop: 19617, Start Num: 15

Candidate Starts for GrecoEtereo 26:

(Start: 14 @19117 has 7 MA's), (Start: 15 @19123 has 8 MA's), (20, 19279), (23, 19339), (32, 19519), (37, 19570),

Gene: Hermia\_27 Start: 19855, Stop: 20355, Start Num: 14

Candidate Starts for Hermia\_27:

(Start: 14 @19855 has 7 MA's), (Start: 15 @19861 has 8 MA's), (20, 20017), (23, 20077), (32, 20257), (37, 20308),

Gene: Minerva\_52 Start: 41582, Stop: 42166, Start Num: 10

Candidate Starts for Minerva 52:

(Start: 10 @41582 has 6 MA's), (13, 41624), (17, 41795), (19, 41810), (27, 42035), (31, 42098),

Gene: Optimus\_51 Start: 41167, Stop: 41751, Start Num: 10

Candidate Starts for Optimus\_51:

(Start: 10 @41167 has 6 MA's), (13, 41209), (17, 41380), (19, 41395), (27, 41620), (31, 41683),

Gene: Petruchio 25 Start: 18798, Stop: 19292, Start Num: 15

Candidate Starts for Petruchio 25:

(Start: 14 @18792 has 7 MA's), (Start: 15 @18798 has 8 MA's), (20, 18954), (23, 19014), (32, 19194), (37, 19245),

Gene: Pinto 27 Start: 18931, Stop: 19431, Start Num: 14

Candidate Starts for Pinto 27:

(Start: 14 @18931 has 7 MA's), (Start: 15 @18937 has 8 MA's), (20, 19093), (23, 19153), (32, 19333), (37, 19384),

Gene: Samisti12\_29 Start: 14403, Stop: 13651, Start Num: 5

Candidate Starts for Samisti12\_29:

(Start: 5 @14403 has 2 MA's), (Start: 10 @14319 has 6 MA's), (26, 13908), (30, 13812),

Gene: Seabiscuit\_76 Start: 46023, Stop: 45430, Start Num: 12

Candidate Starts for Seabiscuit 76:

(4, 46128), (Start: 11 @46026 has 1 MA's), (Start: 12 @46023 has 2 MA's), (16, 45912), (18, 45831), (34, 45501), (38, 45459),

Gene: Snazzy\_23 Start: 18265, Stop: 18765, Start Num: 14

Candidate Starts for Snazzy\_23:

(Start: 14 @18265 has 7 MA's), (Start: 15 @18271 has 8 MA's), (20, 18427), (23, 18487), (32, 18667), (37, 18718),

Gene: SpeedDemon 970 Start: 66680, Stop: 66057, Start Num: 12

Candidate Starts for SpeedDemon\_970:

(1, 66839), (6, 66737), (Start: 12 @66680 has 2 MA's), (21, 66401), (24, 66314), (25, 66299), (35, 66143), (36, 66131), (39, 66092),

Gene: SwissCheese\_25 Start: 18840, Stop: 19334, Start Num: 15

Candidate Starts for SwissCheese\_25:

(Start: 14 @18834 has 7 MA's), (Start: 15 @18840 has 8 MA's), (20, 18996), (23, 19056), (32, 19236), (37, 19287),

Gene: Target\_27 Start: 19834, Stop: 20334, Start Num: 14

Candidate Starts for Target\_27:

(Start: 14 @19834 has 7 MA's), (Start: 15 @19840 has 8 MA's), (20, 19996), (23, 20056), (32, 20236), (37, 20287),

Gene: Trouble\_25 Start: 19144, Stop: 19638, Start Num: 15

Candidate Starts for Trouble\_25:

(Start: 14 @19138 has 7 MA's), (Start: 15 @19144 has 8 MA's), (20, 19300), (23, 19360), (32, 19540), (37, 19591),

Gene: Wanda 52 Start: 40059, Stop: 40643, Start Num: 10

Candidate Starts for Wanda\_52:

(Start: 10 @40059 has 6 MA's), (13, 40101), (17, 40272), (19, 40287), (27, 40512), (31, 40575),

Gene: Wheeler\_80 Start: 48775, Stop: 48179, Start Num: 11

Candidate Starts for Wheeler\_80:

(4, 48877), (Start: 11 @48775 has 1 MA's), (Start: 12 @48772 has 2 MA's), (16, 48661), (18, 48580), (34, 48250), (38, 48208),

Gene: Wheeler 74 Start: 46185, Stop: 45562, Start Num: 8

Candidate Starts for Wheeler\_74:

(2, 46296), (3, 46287), (7, 46194), (Start: 8 @46185 has 1 MA's), (9, 46173), (22, 45846), (28, 45687), (29, 45681), (33, 45627),

Gene: Zeeculate 24 Start: 19013, Stop: 19513, Start Num: 14

Candidate Starts for Zeeculate 24:

(Start: 14 @19013 has 7 MA's), (Start: 15 @19019 has 8 MA's), (20, 19175), (23, 19235), (32, 19415), (37, 19466),