



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 188411 Report

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

Pham number 188411 has 23 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Phendrix\_166, GodonK\_177
- Track 2 : Forza\_166, Boopy\_165, BlueNGGold\_162, Mareelih\_163
- Track 3 : GMA2\_60
- Track 4 : Sixama\_164
- Track 5 : SJReid\_112
- Track 6 : Phrampa\_100
- Track 7 : Racecar\_106, Talia1610\_105, Bloom\_109, Patbob\_106, Mimi\_111
- Track 8 : DunneganBoMo\_98
- Track 9 : Atuin\_102
- Track 10 : PauloDiaboli\_111, A3Wally\_111
- Track 11 : Big4\_100, Zooman\_95
- Track 12 : Cece\_94
- Track 13 : Pumpernickel\_108

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

The start number called the most often in the published annotations is 2, it was called in 14 of the 15 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A3Wally\_111, Atuin\_102, Big4\_100, Bloom\_109, BlueNGGold\_162, Boopy\_165, Cece\_94, DunneganBoMo\_98, Forza\_166, GodonK\_177, Mareelih\_163, Mimi\_111, Patbob\_106, PauloDiaboli\_111, Phendrix\_166, Phrampa\_100, Pumpernickel\_108, Racecar\_106, Talia1610\_105, Zooman\_95,

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

- SJReid\_112,

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

- GMA2\_60, Sixama\_164,

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

Start 1:

- Found in 2 of 23 ( 8.7% ) of genes in pham
- Manual Annotations of this start: 1 of 15
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA2\_60 (DS), Sixama\_164 (DS),

#### Start 2:

- Found in 21 of 23 ( 91.3% ) of genes in pham
- Manual Annotations of this start: 14 of 15
- Called 95.2% of time when present
- Phage (with cluster) where this start called: A3Wally\_111 (GD1), Atuin\_102 (FC), Big4\_100 (GD2), Bloom\_109 (FC), BlueNGold\_162 (DS), Boopy\_165 (DS), Cece\_94 (GD3), DunneganBoMo\_98 (FC), Forza\_166 (DS), GodonK\_177 (DK), Mareelih\_163 (DS), Mimi\_111 (FC), Patbob\_106 (FC), PauloDiaboli\_111 (GD1), Phendrix\_166 (DK), Phrampa\_100 (FC), Pumpernickel\_108 (GD4), Racecar\_106 (FC), Talia1610\_105 (FC), Zooman\_95 (GD2),

#### Start 4:

- Found in 9 of 23 ( 39.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: SJReid\_112 (FC),

### **Summary by clusters:**

There are 7 clusters represented in this pham: GD1, GD2, GD3, GD4, DK, FC, DS,

Info for manual annotations of cluster DK:

- Start number 2 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DS:

- Start number 1 was manually annotated 1 time for cluster DS.
- Start number 2 was manually annotated 4 times for cluster DS.

Info for manual annotations of cluster FC:

- Start number 2 was manually annotated 2 times for cluster FC.

Info for manual annotations of cluster GD1:

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

Info for manual annotations of cluster GD2:

- Start number 2 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 2 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 2 was manually annotated 1 time for cluster GD4.

### **Gene Information:**

Gene: A3Wally\_111 Start: 75589, Stop: 74876, Start Num: 2

Candidate Starts for A3Wally\_111:

(Start: 2 @75589 has 14 MA's), (16, 75355), (18, 75334), (25, 75127),

Gene: Atuin\_102 Start: 85221, Stop: 85898, Start Num: 2

Candidate Starts for Atuin\_102:

(Start: 2 @85221 has 14 MA's), (4, 85248), (5, 85299), (23, 85596), (29, 85725), (35, 85872),

Gene: Big4\_100 Start: 74707, Stop: 74009, Start Num: 2

Candidate Starts for Big4\_100:

(Start: 2 @74707 has 14 MA's), (16, 74473), (18, 74452),

Gene: Bloom\_109 Start: 85355, Stop: 86011, Start Num: 2

Candidate Starts for Bloom\_109:

(Start: 2 @85355 has 14 MA's), (4, 85382), (7, 85448), (11, 85544), (15, 85583), (28, 85844), (33, 85904), (36, 85988),

Gene: BlueNGold\_162 Start: 92754, Stop: 92056, Start Num: 2

Candidate Starts for BlueNGold\_162:

(Start: 2 @92754 has 14 MA's), (8, 92625), (9, 92607), (18, 92511), (21, 92442), (27, 92271), (34, 92187), (37, 92076),

Gene: Boopy\_165 Start: 92765, Stop: 92067, Start Num: 2

Candidate Starts for Boopy\_165:

(Start: 2 @92765 has 14 MA's), (8, 92636), (9, 92618), (18, 92522), (21, 92453), (27, 92282), (34, 92198), (37, 92087),

Gene: Cece\_94 Start: 77750, Stop: 77037, Start Num: 2

Candidate Starts for Cece\_94:

(Start: 2 @77750 has 14 MA's), (11, 77558), (16, 77516), (18, 77495),

Gene: DunneganBoMo\_98 Start: 81122, Stop: 81781, Start Num: 2

Candidate Starts for DunneganBoMo\_98:

(Start: 2 @81122 has 14 MA's), (4, 81149), (31, 81659),

Gene: Forza\_166 Start: 92682, Stop: 91984, Start Num: 2

Candidate Starts for Forza\_166:

(Start: 2 @92682 has 14 MA's), (8, 92553), (9, 92535), (18, 92439), (21, 92370), (27, 92199), (34, 92115), (37, 92004),

Gene: GMA2\_60 Start: 63482, Stop: 62877, Start Num: 1

Candidate Starts for GMA2\_60:

(Start: 1 @63482 has 1 MA's), (8, 63353), (10, 63332), (14, 63266), (18, 63239), (20, 63182), (27, 62999),

Gene: GodonK\_177 Start: 88708, Stop: 88028, Start Num: 2

Candidate Starts for GodonK\_177:

(Start: 2 @88708 has 14 MA's), (3, 88702), (6, 88627), (8, 88579), (12, 88516), (18, 88465), (20, 88408), (21, 88396), (24, 88270), (30, 88174), (32, 88159), (34, 88132),

Gene: Mareelih\_163 Start: 92200, Stop: 91502, Start Num: 2

Candidate Starts for Mareelih\_163:

(Start: 2 @92200 has 14 MA's), (8, 92071), (9, 92053), (18, 91957), (21, 91888), (27, 91717), (34, 91633), (37, 91522),

Gene: Mimi\_111 Start: 84702, Stop: 85358, Start Num: 2

Candidate Starts for Mimi\_111:

(Start: 2 @84702 has 14 MA's), (4, 84729), (7, 84795), (11, 84891), (15, 84930), (28, 85191), (33, 85251), (36, 85335),

Gene: Patbob\_106 Start: 85437, Stop: 86093, Start Num: 2

Candidate Starts for Patbob\_106:

(Start: 2 @85437 has 14 MA's), (4, 85464), (7, 85530), (11, 85626), (15, 85665), (28, 85926), (33, 85986), (36, 86070),

Gene: PauloDiaboli\_111 Start: 74946, Stop: 74233, Start Num: 2

Candidate Starts for PauloDiaboli\_111:

(Start: 2 @74946 has 14 MA's), (16, 74712), (18, 74691), (25, 74484),

Gene: Phendrix\_166 Start: 87805, Stop: 87125, Start Num: 2

Candidate Starts for Phendrix\_166:

(Start: 2 @87805 has 14 MA's), (3, 87799), (6, 87724), (8, 87676), (12, 87613), (18, 87562), (20, 87505), (21, 87493), (24, 87367), (30, 87271), (32, 87256), (34, 87229),

Gene: Phrampa\_100 Start: 86836, Stop: 87489, Start Num: 2

Candidate Starts for Phrampa\_100:

(Start: 2 @86836 has 14 MA's), (4, 86863), (11, 87025), (15, 87064), (22, 87187), (33, 87382), (36, 87466),

Gene: Pumpernickel\_108 Start: 76513, Stop: 75818, Start Num: 2

Candidate Starts for Pumpernickel\_108:

(Start: 2 @76513 has 14 MA's), (7, 76414), (16, 76279), (18, 76258), (19, 76249), (26, 76027),

Gene: Racecar\_106 Start: 85355, Stop: 86011, Start Num: 2

Candidate Starts for Racecar\_106:

(Start: 2 @85355 has 14 MA's), (4, 85382), (7, 85448), (11, 85544), (15, 85583), (28, 85844), (33, 85904), (36, 85988),

Gene: SJReid\_112 Start: 77654, Stop: 78247, Start Num: 4

Candidate Starts for SJReid\_112:

(Start: 2 @77627 has 14 MA's), (4, 77654), (5, 77705), (15, 77855), (17, 77861),

Gene: Sixama\_164 Start: 92202, Stop: 91534, Start Num: 1

Candidate Starts for Sixama\_164:

(Start: 1 @92202 has 1 MA's), (3, 92196), (6, 92121), (8, 92073), (12, 92010), (13, 92004), (14, 91986), (18, 91959),

Gene: Talia1610\_105 Start: 84720, Stop: 85376, Start Num: 2

Candidate Starts for Talia1610\_105:

(Start: 2 @84720 has 14 MA's), (4, 84747), (7, 84813), (11, 84909), (15, 84948), (28, 85209), (33, 85269), (36, 85353),

Gene: Zooman\_95 Start: 72552, Stop: 71857, Start Num: 2

Candidate Starts for Zooman\_95:

(Start: 2 @72552 has 14 MA's), (16, 72318), (18, 72297),