



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 283854 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283854 has 56 members, 15 are drafts.

Phages represented in each track:

- Track 1 : AlanGrant\_76, Vincenzo\_75
- Track 2 : Funsized\_23
- Track 3 : Knocker\_97
- Track 4 : Rinkes\_23
- Track 5 : GodonK\_14, GodonK\_240
- Track 6 : Phendrix\_230, Phendrix\_14
- Track 7 : McGalleon\_55
- Track 8 : FarmerDoug\_55
- Track 9 : Nagem\_55, Alyxandracam\_55, SJay\_55, MaeLinda\_55, Baines\_54, Bandik\_55
- Track 10 : Endor\_57, GardenB\_56, GoneGirl\_57
- Track 11 : SoilGremlin\_56, Phriends\_55, OldNelly\_56, Merida02\_57, Delphidian\_55, SolidSnake\_57
- Track 12 : Acosta\_56
- Track 13 : Jenos\_56
- Track 14 : Carostasia\_54, Mandalorian\_54
- Track 15 : HairyMan\_53
- Track 16 : MiniVolent\_55
- Track 17 : Juanyo\_56
- Track 18 : Nucci\_54
- Track 19 : YuuY\_55
- Track 20 : Quartz\_55
- Track 21 : Pikmin\_54, Casey\_54, Pajaza\_54
- Track 22 : Koji\_48, Kauala\_48
- Track 23 : RenegadeRaider\_51
- Track 24 : Schubert\_53
- Track 25 : CardboardBox\_48, Roberts\_47, ChipsNGuac\_48, Neuville\_47, Gerri43\_48, ChamoyPickle\_49, AnnabelLee\_48
- Track 26 : Mireles\_28
- Track 27 : TMaxx\_30
- Track 28 : Studio\_51
- Track 29 : Makima\_28
- Track 30 : Daegal\_3
- Track 31 : Gravaillia\_2

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

The start number called the most often in the published annotations is 10, it was called in 32 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acosta\_56, AlanGrant\_76, Alyxandracam\_55, Baines\_54, Bandik\_55, Carostasia\_54, Casey\_54, Delphidian\_55, Endor\_57, FarmerDoug\_55, Funsized\_23, GardenB\_56, GoneGirl\_57, HairyMan\_53, Jenos\_56, Kauala\_48, Knocker\_97, Koji\_48, MaeLinda\_55, Mandalorian\_54, McGalleon\_55, Merida02\_57, MiniVolent\_55, Nagem\_55, Nucci\_54, OldNelly\_56, Pajaza\_54, Phriends\_55, Pikmin\_54, RenegadeRaider\_51, Rinkes\_23, SJay\_55, Schubert\_53, SoilGremlin\_56, SolidSnake\_57, Vincenzo\_75, YuuY\_55,

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

- Juanyo\_56, Quartz\_55,

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

- AnnabelLee\_48, CardboardBox\_48, ChamoyPickle\_49, ChipsNGuac\_48, Daegal\_3, Gerri43\_48, GodonK\_14, GodonK\_240, Gravaillia\_2, Makima\_28, Mireles\_28, Neuville\_47, Phendrix\_14, Phendrix\_230, Roberts\_47, Studio\_51, TMaxx\_30,

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

Start 3:

- Found in 3 of 56 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Quartz\_55 (EA10),

Start 4:

- Found in 2 of 56 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Juanyo\_56 (EA10),

Start 9:

- Found in 4 of 56 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 4 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GodonK\_14 (DK), GodonK\_240 (DK), Phendrix\_14 (DK), Phendrix\_230 (DK),

Start 10:

- Found in 39 of 56 ( 69.6% ) of genes in pham
- Manual Annotations of this start: 32 of 41
- Called 94.9% of time when present
- Phage (with cluster) where this start called: Acosta\_56 (EA1), AlanGrant\_76 (B4), Alyxandracam\_55 (EA1), Baines\_54 (EA1), Bandik\_55 (EA1), Carostasia\_54 (EA10), Casey\_54 (EA3), Delphidian\_55 (EA1), Endor\_57 (EA1), FarmerDoug\_55 (EA1), Funsized\_23 (B9), GardenB\_56 (EA1), GoneGirl\_57 (EA1), HairyMan\_53 (EA10), Jenos\_56 (EA1), Kauala\_48 (EA4), Knocker\_97 (B9), Koji\_48 (EA4), MaeLinda\_55

(EA1), Mandalorian\_54 (EA10), McGalleon\_55 (EA1), Merida02\_57 (EA1), MiniVolent\_55 (EA10), Nagem\_55 (EA1), Nucci\_54 (EA10), OldNelly\_56 (EA1), Pajaza\_54 (EA3), Phriends\_55 (EA1), Pikmin\_54 (EA3), RenegadeRaider\_51 (EA4), Rinkes\_23 (B9), SJay\_55 (EA1), Schubert\_53 (EA8), SoilGremlin\_56 (EA1), SolidSnake\_57 (EA1), Vincenzo\_75 (B4), Yuyu\_55 (EA10),

Start 11:

- Found in 1 of 56 ( 1.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Studio\_51 (FR),

Start 12:

- Found in 2 of 56 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 2 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Daegal\_3 (Q), Gravallia\_2 (Q),

Start 13:

- Found in 10 of 56 ( 17.9% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnnabelleLee\_48 (FR), CardboardBox\_48 (FR), ChamoyPickle\_49 (FR), ChipsNGuac\_48 (FR), Gerri43\_48 (FR), Makima\_28 (FR), Mireles\_28 (FR), Neuville\_47 (FR), Roberts\_47 (FR), TMaxx\_30 (FR),

### **Summary by clusters:**

There are 10 clusters represented in this pham: Q, FR, EA10, B9, B4, EA8, EA1, EA3, EA4, DK,

Info for manual annotations of cluster B4:

- Start number 10 was manually annotated 2 times for cluster B4.

Info for manual annotations of cluster B9:

- Start number 10 was manually annotated 3 times for cluster B9.

Info for manual annotations of cluster DK:

- Start number 9 was manually annotated 4 times for cluster DK.

Info for manual annotations of cluster EA1:

- Start number 10 was manually annotated 16 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 3 was manually annotated 1 time for cluster EA10.
- Start number 4 was manually annotated 1 time for cluster EA10.
- Start number 10 was manually annotated 5 times for cluster EA10.

Info for manual annotations of cluster EA3:

- Start number 10 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 10 was manually annotated 2 times for cluster EA4.

Info for manual annotations of cluster EA8:

- Start number 10 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster FR:

- Start number 13 was manually annotated 1 time for cluster FR.

Info for manual annotations of cluster Q:

- Start number 12 was manually annotated 2 times for cluster Q.

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

Gene: Acosta\_56 Start: 37827, Stop: 37555, Start Num: 10

Candidate Starts for Acosta\_56:

(Start: 10 @37827 has 32 MA's), (20, 37731), (26, 37686),

Gene: AlanGrant\_76 Start: 63236, Stop: 62979, Start Num: 10

Candidate Starts for AlanGrant\_76:

(Start: 10 @63236 has 32 MA's), (14, 63212), (17, 63161), (20, 63134), (24, 63095),

Gene: Alyxandracam\_55 Start: 38007, Stop: 37705, Start Num: 10

Candidate Starts for Alyxandracam\_55:

(Start: 10 @38007 has 32 MA's), (24, 37872), (30, 37818),

Gene: AnnabelLee\_48 Start: 31169, Stop: 30939, Start Num: 13

Candidate Starts for AnnabelLee\_48:

(Start: 13 @31169 has 1 MA's), (21, 31070), (27, 31028),

Gene: Baines\_54 Start: 37755, Stop: 37453, Start Num: 10

Candidate Starts for Baines\_54:

(Start: 10 @37755 has 32 MA's), (24, 37620), (30, 37566),

Gene: Bandik\_55 Start: 38002, Stop: 37700, Start Num: 10

Candidate Starts for Bandik\_55:

(Start: 10 @38002 has 32 MA's), (24, 37867), (30, 37813),

Gene: CardboardBox\_48 Start: 31172, Stop: 30942, Start Num: 13

Candidate Starts for CardboardBox\_48:

(Start: 13 @31172 has 1 MA's), (21, 31073), (27, 31031),

Gene: Carostasia\_54 Start: 36652, Stop: 36395, Start Num: 10

Candidate Starts for Carostasia\_54:

(Start: 3 @36745 has 1 MA's), (Start: 10 @36652 has 32 MA's), (20, 36556), (24, 36517), (29, 36472), (34, 36445),

Gene: Casey\_54 Start: 36538, Stop: 36284, Start Num: 10

Candidate Starts for Casey\_54:

(Start: 10 @36538 has 32 MA's), (32, 36331), (36, 36319),

Gene: ChamoyPickle\_49 Start: 31712, Stop: 31482, Start Num: 13

Candidate Starts for ChamoyPickle\_49:

(Start: 13 @31712 has 1 MA's), (21, 31613), (27, 31571),

Gene: ChipsNGuac\_48 Start: 31172, Stop: 30942, Start Num: 13

Candidate Starts for ChipsNGuac\_48:

(Start: 13 @31172 has 1 MA's), (21, 31073), (27, 31031),

Gene: Daegal\_3 Start: 1154, Stop: 930, Start Num: 12

Candidate Starts for Daegal\_3:

(Start: 12 @1154 has 2 MA's), (16, 1094), (25, 1025), (28, 983),

Gene: Delphidian\_55 Start: 37991, Stop: 37731, Start Num: 10

Candidate Starts for Delphidian\_55:

(Start: 10 @37991 has 32 MA's), (24, 37853), (25, 37850),

Gene: Endor\_57 Start: 38543, Stop: 38283, Start Num: 10

Candidate Starts for Endor\_57:

(Start: 10 @38543 has 32 MA's), (24, 38405), (25, 38402), (33, 38327), (34, 38324),

Gene: FarmerDoug\_55 Start: 38067, Stop: 37807, Start Num: 10

Candidate Starts for FarmerDoug\_55:

(Start: 10 @38067 has 32 MA's), (24, 37929), (25, 37926), (33, 37851),

Gene: Funsized\_23 Start: 19544, Stop: 19296, Start Num: 10

Candidate Starts for Funsized\_23:

(1, 19742), (2, 19694), (Start: 10 @19544 has 32 MA's), (14, 19517), (17, 19466), (20, 19439),

Gene: GardenB\_56 Start: 38320, Stop: 38060, Start Num: 10

Candidate Starts for GardenB\_56:

(Start: 10 @38320 has 32 MA's), (24, 38182), (25, 38179), (33, 38104), (34, 38101),

Gene: Gerri43\_48 Start: 31172, Stop: 30942, Start Num: 13

Candidate Starts for Gerri43\_48:

(Start: 13 @31172 has 1 MA's), (21, 31073), (27, 31031),

Gene: GodonK\_14 Start: 5550, Stop: 5308, Start Num: 9

Candidate Starts for GodonK\_14:

(Start: 9 @5550 has 4 MA's), (14, 5526), (17, 5475),

Gene: GodonK\_240 Start: 120532, Stop: 120290, Start Num: 9

Candidate Starts for GodonK\_240:

(Start: 9 @120532 has 4 MA's), (14, 120508), (17, 120457),

Gene: GoneGirl\_57 Start: 38307, Stop: 38047, Start Num: 10

Candidate Starts for GoneGirl\_57:

(Start: 10 @38307 has 32 MA's), (24, 38169), (25, 38166), (33, 38091), (34, 38088),

Gene: Gravaillia\_2 Start: 866, Stop: 639, Start Num: 12

Candidate Starts for Gravaillia\_2:

(Start: 12 @866 has 2 MA's), (25, 734),

Gene: HairyMan\_53 Start: 37770, Stop: 37519, Start Num: 10

Candidate Starts for HairyMan\_53:

(Start: 10 @37770 has 32 MA's), (19, 37686), (23, 37638), (24, 37635),

Gene: Jenos\_56 Start: 38342, Stop: 38070, Start Num: 10  
Candidate Starts for Jenos\_56:  
(Start: 10 @38342 has 32 MA's), (20, 38246), (26, 38201), (30, 38153),

Gene: Juanyo\_56 Start: 37419, Stop: 37084, Start Num: 4  
Candidate Starts for Juanyo\_56:  
(Start: 4 @37419 has 1 MA's), (Start: 10 @37326 has 32 MA's), (20, 37230), (24, 37206), (34, 37134),

Gene: Kauala\_48 Start: 35372, Stop: 35127, Start Num: 10  
Candidate Starts for Kauala\_48:  
(Start: 10 @35372 has 32 MA's), (20, 35276), (24, 35237),

Gene: Knocker\_97 Start: 70879, Stop: 70643, Start Num: 10  
Candidate Starts for Knocker\_97:  
(Start: 10 @70879 has 32 MA's), (14, 70861), (15, 70855), (18, 70804), (32, 70678),

Gene: Koji\_48 Start: 35362, Stop: 35105, Start Num: 10  
Candidate Starts for Koji\_48:  
(Start: 10 @35362 has 32 MA's), (20, 35266), (24, 35227),

Gene: MaeLinda\_55 Start: 38006, Stop: 37704, Start Num: 10  
Candidate Starts for MaeLinda\_55:  
(Start: 10 @38006 has 32 MA's), (24, 37871), (30, 37817),

Gene: Makima\_28 Start: 19515, Stop: 19291, Start Num: 13  
Candidate Starts for Makima\_28:  
(Start: 13 @19515 has 1 MA's), (27, 19377), (29, 19341),

Gene: Mandalorian\_54 Start: 36663, Stop: 36406, Start Num: 10  
Candidate Starts for Mandalorian\_54:  
(Start: 3 @36756 has 1 MA's), (Start: 10 @36663 has 32 MA's), (20, 36567), (24, 36528), (29, 36483),  
(34, 36456),

Gene: McGalleon\_55 Start: 38480, Stop: 38208, Start Num: 10  
Candidate Starts for McGalleon\_55:  
(Start: 10 @38480 has 32 MA's), (20, 38384), (26, 38339), (30, 38291),

Gene: Merida02\_57 Start: 37998, Stop: 37738, Start Num: 10  
Candidate Starts for Merida02\_57:  
(Start: 10 @37998 has 32 MA's), (24, 37860), (25, 37857),

Gene: MiniVolent\_55 Start: 37294, Stop: 37037, Start Num: 10  
Candidate Starts for MiniVolent\_55:  
(Start: 4 @37387 has 1 MA's), (Start: 10 @37294 has 32 MA's), (24, 37159), (34, 37087),

Gene: Mireles\_28 Start: 18449, Stop: 18216, Start Num: 13  
Candidate Starts for Mireles\_28:  
(8, 18485), (Start: 13 @18449 has 1 MA's), (27, 18311), (35, 18254),

Gene: Nagem\_55 Start: 38045, Stop: 37743, Start Num: 10  
Candidate Starts for Nagem\_55:  
(Start: 10 @38045 has 32 MA's), (24, 37910), (30, 37856),

Gene: Neuville\_47 Start: 31172, Stop: 30942, Start Num: 13

Candidate Starts for Neuville\_47:

(Start: 13 @31172 has 1 MA's), (21, 31073), (27, 31031),

Gene: Nucci\_54 Start: 36629, Stop: 36366, Start Num: 10

Candidate Starts for Nucci\_54:

(Start: 10 @36629 has 32 MA's), (20, 36533), (24, 36494),

Gene: OldNelly\_56 Start: 37995, Stop: 37735, Start Num: 10

Candidate Starts for OldNelly\_56:

(Start: 10 @37995 has 32 MA's), (24, 37857), (25, 37854),

Gene: Pajaza\_54 Start: 36538, Stop: 36284, Start Num: 10

Candidate Starts for Pajaza\_54:

(Start: 10 @36538 has 32 MA's), (32, 36331), (36, 36319),

Gene: Phendrix\_230 Start: 119315, Stop: 119073, Start Num: 9

Candidate Starts for Phendrix\_230:

(5, 119390), (6, 119384), (7, 119366), (Start: 9 @119315 has 4 MA's), (17, 119240),

Gene: Phendrix\_14 Start: 5717, Stop: 5475, Start Num: 9

Candidate Starts for Phendrix\_14:

(5, 5792), (6, 5786), (7, 5768), (Start: 9 @5717 has 4 MA's), (17, 5642),

Gene: Phriends\_55 Start: 37999, Stop: 37739, Start Num: 10

Candidate Starts for Phriends\_55:

(Start: 10 @37999 has 32 MA's), (24, 37861), (25, 37858),

Gene: Pikmin\_54 Start: 36538, Stop: 36284, Start Num: 10

Candidate Starts for Pikmin\_54:

(Start: 10 @36538 has 32 MA's), (32, 36331), (36, 36319),

Gene: Quartz\_55 Start: 36869, Stop: 36519, Start Num: 3

Candidate Starts for Quartz\_55:

(Start: 3 @36869 has 1 MA's), (Start: 10 @36776 has 32 MA's), (20, 36680), (24, 36641), (29, 36596), (34, 36569),

Gene: RenegadeRaider\_51 Start: 35067, Stop: 34810, Start Num: 10

Candidate Starts for RenegadeRaider\_51:

(Start: 10 @35067 has 32 MA's), (20, 34971), (24, 34932),

Gene: Rinke\_23 Start: 19467, Stop: 19222, Start Num: 10

Candidate Starts for Rinke\_23:

(Start: 10 @19467 has 32 MA's), (14, 19443), (17, 19392), (18, 19386), (22, 19347), (24, 19326),

Gene: Roberts\_47 Start: 31172, Stop: 30942, Start Num: 13

Candidate Starts for Roberts\_47:

(Start: 13 @31172 has 1 MA's), (21, 31073), (27, 31031),

Gene: SJay\_55 Start: 38046, Stop: 37744, Start Num: 10

Candidate Starts for SJay\_55:

(Start: 10 @38046 has 32 MA's), (24, 37911), (30, 37857),

Gene: Schubert\_53 Start: 37310, Stop: 37065, Start Num: 10  
Candidate Starts for Schubert\_53:  
(Start: 10 @37310 has 32 MA's), (24, 37175),

Gene: SoilGremlin\_56 Start: 37992, Stop: 37732, Start Num: 10  
Candidate Starts for SoilGremlin\_56:  
(Start: 10 @37992 has 32 MA's), (24, 37854), (25, 37851),

Gene: SolidSnake\_57 Start: 37991, Stop: 37731, Start Num: 10  
Candidate Starts for SolidSnake\_57:  
(Start: 10 @37991 has 32 MA's), (24, 37853), (25, 37850),

Gene: Studio\_51 Start: 32697, Stop: 32470, Start Num: 11  
Candidate Starts for Studio\_51:  
(11, 32697), (21, 32592), (27, 32553),

Gene: TMaxx\_30 Start: 18671, Stop: 18444, Start Num: 13  
Candidate Starts for TMaxx\_30:  
(Start: 13 @18671 has 1 MA's), (27, 18533), (35, 18476),

Gene: Vincenzo\_75 Start: 63266, Stop: 63009, Start Num: 10  
Candidate Starts for Vincenzo\_75:  
(Start: 10 @63266 has 32 MA's), (14, 63242), (17, 63191), (20, 63164), (24, 63125),

Gene: YuuY\_55 Start: 37195, Stop: 36938, Start Num: 10  
Candidate Starts for YuuY\_55:  
(Start: 10 @37195 has 32 MA's), (20, 37099), (24, 37060), (31, 37003), (34, 36988),