

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 194414 Report

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

Pham number 194414 has 16 members, 1 are drafts.

Phages represented in each track:

- Track 1: Schnapsidee 62, Peppino 62, BeeBee8 64, Leafus 62
- Track 2 : GardenB 63
- Track 3 : FarmerDoug\_62
- Track 4: Redfield 62
- Track 5 : Balsa 61, Hamlet 62
- Track 6 : KingJulien\_62
- Track 7 : Agente005 63
- Track 8 : Raccoon 62
- Track 9 : MonChoix 62
- Track 10: Endor 64
- Track 11 : Stormbreaker8\_61
- Track 12 : Etna\_63

## 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 9 of the 15 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• BeeBee8\_64, Endor\_64, Etna\_63, FarmerDoug\_62, Leafus\_62, MonChoix\_62, Peppino\_62, Redfield\_62, Schnapsidee\_62,

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

• Agente005\_63, Balsa\_61, GardenB\_63, Hamlet\_62, KingJulien\_62, Raccoon\_62, Stormbreaker8\_61,

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

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## Summary by start number:

### Start 1:

- Found in 14 of 16 (87.5%) of genes in pham
- Manual Annotations of this start: 4 of 15

- Called 28.6% of time when present
- Phage (with cluster) where this start called: Balsa\_61 (EA1), Hamlet\_62 (EA1), Raccoon\_62 (EA1), Stormbreaker8\_61 (EA1),

#### Start 4:

- Found in 3 of 16 (18.8%) of genes in pham
- Manual Annotations of this start: 1 of 15
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GardenB\_63 (EA1),

### Start 8:

- Found in 16 of 16 (100.0%) of genes in pham
- Manual Annotations of this start: 9 of 15
- Called 56.2% of time when present
- Phage (with cluster) where this start called: BeeBee8\_64 (EA1), Endor\_64 (EA1), Etna\_63 (EA1), FarmerDoug\_62 (EA1), Leafus\_62 (EA1), MonChoix\_62 (EA1), Peppino\_62 (EA1), Redfield\_62 (EA1), Schnapsidee\_62 (EA1),

## Start 9:

- Found in 12 of 16 (75.0%) of genes in pham
- No Manual Annotations of this start.
- Called 8.3% of time when present
- Phage (with cluster) where this start called: KingJulien\_62 (EA1),

### Start 12:

- Found in 15 of 16 (93.8%) of genes in pham
- Manual Annotation's of this start: 1 of 15
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Agente005 63 (EA1),

### Summary by clusters:

There is one cluster represented in this pham: EA1

Info for manual annotations of cluster EA1:

- •Start number 1 was manually annotated 4 times for cluster EA1.
- •Start number 4 was manually annotated 1 time for cluster EA1.
- •Start number 8 was manually annotated 9 times for cluster EA1.
- •Start number 12 was manually annotated 1 time for cluster EA1.

## Gene Information:

Gene: Agente005\_63 Start: 40921, Stop: 41103, Start Num: 12

Candidate Starts for Agente005\_63:

 $\begin{array}{l} (Start:\ 1\ @40783\ has\ 4\ MA's),\ (3,\ 40816),\ (Start:\ 4\ @40822\ has\ 1\ MA's),\ (Start:\ 8\ @40852\ has\ 9\ MA's),\ (Start:\ 12\ @40921\ has\ 1\ MA's),\ (13,\ 40945),\ (14,\ 40951),\ (16,\ 40996),\ (17,\ 41023),\ (18,\ 41029),\ (19,\ 41053), \end{array}$ 

Gene: Balsa\_61 Start: 40812, Stop: 41132, Start Num: 1

Candidate Starts for Balsa 61:

(Start: 1 @40812 has 4 MA's), (5, 40854), (6, 40863), (Start: 8 @40881 has 9 MA's), (9, 40908), (Start: 12 @40950 has 1 MA's), (13, 40974), (16, 41025), (17, 41052), (19, 41082),

Gene: BeeBee8\_64 Start: 41046, Stop: 41297, Start Num: 8

Candidate Starts for BeeBee8 64:

(Start: 1 @ 40977 has 4 MA's), (5, 41019), (6, 41028), (Start: 8 @ 41046 has 9 MA's), (9, 41073), (Start: 12 @ 41115 has 1 MA's), (13, 41139), (16, 41190), (17, 41217), (19, 41247),

Gene: Endor\_64 Start: 41279, Stop: 41530, Start Num: 8

Candidate Starts for Endor 64:

(3, 41243), (Start: 4 @ 41249 has 1 MA's), (Start: 8 @ 41279 has 9 MA's), (11, 41333), (Start: 12 @ 41348 has 1 MA's), (13, 41372), (16, 41423), (18, 41456), (19, 41480),

Gene: Etna 63 Start: 40927, Stop: 41178, Start Num: 8

Candidate Starts for Etna\_63:

(Start: 1 @40858 has 4 MA's), (5, 40900), (6, 40909), (Start: 8 @40927 has 9 MA's), (9, 40954), (Start: 12 @40996 has 1 MA's), (13, 41020), (16, 41071), (17, 41098), (18, 41104), (19, 41128),

Gene: FarmerDoug 62 Start: 40723, Stop: 40974, Start Num: 8

Candidate Starts for FarmerDoug\_62:

(Start: 1 @ 40654 has 4 MA's), (5, 40696), (6, 40705), (Start: 8 @ 40723 has 9 MA's), (11, 40777), (Start: 12 @ 40792 has 1 MA's), (13, 40816), (15, 40849), (16, 40867), (18, 40900), (19, 40924),

Gene: GardenB\_63 Start: 41083, Stop: 41364, Start Num: 4

Candidate Starts for GardenB 63:

(Start: 1 @41044 has 4 MA's), (2, 41056), (3, 41077), (Start: 4 @41083 has 1 MA's), (7, 41101), (Start: 8 @41113 has 9 MA's), (Start: 12 @41182 has 1 MA's), (13, 41206), (16, 41257), (18, 41290), (19, 41314).

Gene: Hamlet\_62 Start: 40884, Stop: 41204, Start Num: 1

Candidate Starts for Hamlet\_62:

(Start: 1 @40884 has 4 MA's), (5, 40926), (6, 40935), (Start: 8 @40953 has 9 MA's), (9, 40980), (Start: 12 @41022 has 1 MA's), (13, 41046), (16, 41097), (17, 41124), (19, 41154),

Gene: KingJulien\_62 Start: 40796, Stop: 41020, Start Num: 9

Candidate Starts for KingJulien\_62:

(Start: 1 @ 40700 has 4 MA's), (5, 40742), (6, 40751), (Start: 8 @ 40769 has 9 MA's), (9, 40796), (Start: 12 @ 40838 has 1 MA's), (13, 40862), (16, 40913), (17, 40940), (19, 40970),

Gene: Leafus\_62 Start: 41019, Stop: 41270, Start Num: 8

Candidate Starts for Leafus 62:

(Start: 1 @40950 has 4 MA's), (5, 40992), (6, 41001), (Start: 8 @41019 has 9 MA's), (9, 41046), (Start: 12 @41088 has 1 MA's), (13, 41112), (16, 41163), (17, 41190), (19, 41220),

Gene: MonChoix 62 Start: 40645, Stop: 40896, Start Num: 8

Candidate Starts for MonChoix 62:

(5, 40618), (6, 40627), (Start: 8 @40645 has 9 MA's), (9, 40672), (10, 40675), (16, 40789), (19, 40846),

Gene: Peppino\_62 Start: 40951, Stop: 41202, Start Num: 8

Candidate Starts for Peppino 62:

(Start: 1 @40882 has 4 MA's), (5, 40924), (6, 40933), (Start: 8 @40951 has 9 MA's), (9, 40978), (Start: 12 @41020 has 1 MA's), (13, 41044), (16, 41095), (17, 41122), (19, 41152),

Gene: Raccoon\_62 Start: 40844, Stop: 41164, Start Num: 1

Candidate Starts for Raccoon\_62:

(Start: 1 @40844 has 4 MA's), (5, 40886), (6, 40895), (Start: 8 @40913 has 9 MA's), (9, 40940), (Start: 12 @40982 has 1 MA's), (13, 41006), (16, 41057), (17, 41084), (18, 41090), (19, 41114),

Gene: Redfield\_62 Start: 40949, Stop: 41200, Start Num: 8

Candidate Starts for Redfield 62:

(Start: 1 @40880 has 4 MA's), (5, 40922), (6, 40931), (Start: 8 @40949 has 9 MA's), (9, 40976), (Start: 12 @41018 has 1 MA's), (13, 41042), (16, 41093), (17, 41120), (18, 41126), (19, 41150),

Gene: Schnapsidee 62 Start: 40891, Stop: 41142, Start Num: 8

Candidate Starts for Schnapsidee\_62:

(Start: 1 @40822 has 4 MA's), (5, 40864), (6, 40873), (Start: 8 @40891 has 9 MA's), (9, 40918), (Start: 12 @40960 has 1 MA's), (13, 40984), (16, 41035), (17, 41062), (19, 41092),

Gene: Stormbreaker8\_61 Start: 40701, Stop: 41021, Start Num: 1

Candidate Starts for Stormbreaker8\_61:

(Start: 1 @ 40701 has 4 MA's), (5, 40743), (6, 40752), (Start: 8 @ 40770 has 9 MA's), (9, 40797), (Start: 12 @ 40839 has 1 MA's), (13, 40863), (16, 40914), (17, 40941), (19, 40971),