

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 224693 Report

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

Pham number 224693 has 44 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi 3
- Track 2: SteamedHams 4, Tolls 4
- Track 3: AikoCarson\_2, Amok\_2, Emalyn\_2
- Track 4 : Zareef 5
- Track 5 : RedBaron 4, MunkgeeRoachy 3
- Track 6: SweatNTears\_4, Horseradish\_3, MScarn\_4, Yummy\_3
- Track 7 : Button 3
- Track 8 : Fribs8 3
- Track 9: MaVan\_4, ChickenTender\_4, Typhonomachy\_3, Sopespian\_3, GoldHunter\_3, Starburst\_3, PsychoKiller\_3, Azira\_4, Burnsey\_3, Nibbles\_4, Eliott\_3, Socotra 3
- Track 10 : BillDoor 4
- Track 11: RanchParmCat 4
- Track 12 : GiKK 4
- Track 13 : Carsonalex 3
- Track 14: Jamzv 4
- Track 15 : Margaret 4
- Track 16 : Barnyard 9
- Track 17 : Zenon\_8, MontyDev\_8, Send513\_7, Candle\_7, Riparian\_7, Weiss13\_7,
- Yelo\_7, Papyrus\_8, Nilo\_8
  Track 18 : OnionKnight\_7

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

The start number called the most often in the published annotations is 21, it was called in 10 of the 32 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

AikoCarson\_2, Amok\_2, BillDoor\_4, Emalyn\_2, Horseradish\_3, MScarn\_4, SteamedHams\_4, SweatNTears\_4, Tolls\_4, Yummy\_3,

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

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

Azira\_4, Barnyard\_9, Burnsey\_3, Button\_3, Candle\_7, Carsonalex\_3, ChickenTender\_4, Eliott\_3, Fribs8\_3, GiKK\_4, GoldHunter\_3, Indlulamithi\_3, Jamzy\_4, MaVan\_4, Margaret\_4, MontyDev\_8, MunkgeeRoachy\_3, Nibbles\_4, Nilo\_8, OnionKnight\_7, Papyrus\_8, PsychoKiller\_3, RanchParmCat\_4, RedBaron\_4, Riparian\_7, Send513\_7, Socotra\_3, Sopespian\_3, Starburst\_3, Typhonomachy\_3, Weiss13\_7, Yelo\_7, Zareef\_5, Zenon\_8,

# Summary by start number:

### Start 13:

- Found in 2 of 44 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 50.0% of time when present
- Phage (with cluster) where this start called: RanchParmCat\_4 (CT),

#### Start 15:

- Found in 4 of 44 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 3 of 32
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Button\_3 (CT), Jamzy\_4 (CT), Margaret\_4 (CT),

### Start 16:

- Found in 1 of 44 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GiKK\_4 (CT),

#### Start 18:

- Found in 18 of 44 (40.9%) of genes in pham
- Manual Annotations of this start: 7 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azira\_4 (CT), Barnyard\_9 (H2), Burnsey\_3 (CT), Carsonalex\_3 (CT), ChickenTender\_4 (CT), Eliott\_3 (CT), Fribs8\_3 (CT), GoldHunter\_3 (CT), MaVan\_4 (CT), MunkgeeRoachy\_3 (CT), Nibbles\_4 (CT), PsychoKiller\_3 (CT), RedBaron\_4 (CT), Socotra\_3 (CT), Sopespian\_3 (CT), Starburst\_3 (CT), Typhonomachy\_3 (CT), Zareef\_5 (CT),

#### Start 20:

- Found in 9 of 44 ( 20.5% ) of genes in pham
- Manual Annotations of this start: 8 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle\_7 (R), MontyDev\_8 (R), Nilo\_8 (R), Papyrus\_8 (R), Riparian\_7 (R), Send513\_7 (R), Weiss13\_7 (R), Yelo\_7 (R), Zenon\_8 (R),

### Start 21:

- Found in 10 of 44 (22.7%) of genes in pham
- Manual Annotations of this start: 10 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AikoCarson\_2 (CT), Amok\_2 (CT), BillDoor\_4 (CT), Emalyn\_2 (CT), Horseradish\_3 (CT), MScarn\_4 (CT),

SteamedHams\_4 (CT), SweatNTears\_4 (CT), Tolls\_4 (CT), Yummy\_3 (CT),

#### Start 22:

- Found in 2 of 44 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi\_3 (AC), OnionKnight\_7 (singleton),

# **Summary by clusters:**

There are 5 clusters represented in this pham: H2, AC, R, singleton, CT,

Info for manual annotations of cluster AC:

•Start number 22 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster CT:

- •Start number 13 was manually annotated 1 time for cluster CT.
- •Start number 15 was manually annotated 3 times for cluster CT.
- •Start number 16 was manually annotated 1 time for cluster CT.
- •Start number 18 was manually annotated 6 times for cluster CT.
- •Start number 21 was manually annotated 10 times for cluster CT.

Info for manual annotations of cluster H2:

•Start number 18 was manually annotated 1 time for cluster H2.

Info for manual annotations of cluster R:

•Start number 20 was manually annotated 8 times for cluster R.

### Gene Information:

Gene: AikoCarson 2 Start: 534, Stop: 692, Start Num: 21

Candidate Starts for AikoCarson\_2: (Start: 21 @534 has 10 MA's), (26, 660),

Gene: Amok\_2 Start: 535, Stop: 693, Start Num: 21

Candidate Starts for Amok 2:

(Start: 21 @535 has 10 MA's), (26, 661),

Gene: Azira\_4 Start: 1179, Stop: 1337, Start Num: 18

Candidate Starts for Azira\_4: (Start: 18 @1179 has 7 MA's),

Gene: Barnyard\_9 Start: 6285, Stop: 6467, Start Num: 18

Candidate Starts for Barnyard\_9:

(Start: 18 @6285 has 7 MA's), (27, 6438),

Gene: BillDoor 4 Start: 852, Stop: 998, Start Num: 21

Candidate Starts for BillDoor 4:

(9, 795), (10, 801), (11, 807), (Start: 21 @852 has 10 MA's), (27, 984),

Gene: Burnsey\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for Burnsey\_3: (Start: 18 @829 has 7 MA's),

Gene: Button\_3 Start: 752, Stop: 910, Start Num: 15

Candidate Starts for Button\_3:

(14, 749), (Start: 15 @752 has 3 MA's),

Gene: Candle\_7 Start: 5193, Stop: 5354, Start Num: 20

Candidate Starts for Candle\_7:

(17, 5181), (Start: 20 @5193 has 8 MA's), (23, 5244), (25, 5277),

Gene: Carsonalex\_3 Start: 894, Stop: 1055, Start Num: 18

Candidate Starts for Carsonalex\_3: (Start: 18 @894 has 7 MA's), (19, 897),

Gene: ChickenTender\_4 Start: 877, Stop: 1047, Start Num: 18

Candidate Starts for ChickenTender\_4:

(Start: 18 @877 has 7 MA's),

Gene: Eliott\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for Eliott\_3: (Start: 18 @829 has 7 MA's),

Gene: Emalyn\_2 Start: 534, Stop: 692, Start Num: 21

Candidate Starts for Emalyn\_2:

(Start: 21 @534 has 10 MA's), (26, 660),

Gene: Fribs8\_3 Start: 954, Stop: 1115, Start Num: 18

Candidate Starts for Fribs8\_3:

(14, 939), (Start: 18 @954 has 7 MA's),

Gene: GiKK\_4 Start: 1010, Stop: 1165, Start Num: 16

Candidate Starts for GiKK 4:

(5, 875), (Start: 16 @ 1010 has 1 MA's),

Gene: GoldHunter\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for GoldHunter\_3:

(Start: 18 @829 has 7 MA's),

Gene: Horseradish\_3 Start: 758, Stop: 898, Start Num: 21

Candidate Starts for Horseradish\_3:

(Start: 21 @758 has 10 MA's),

Gene: Indlulamithi\_3 Start: 3257, Stop: 3418, Start Num: 22

Candidate Starts for Indlulamithi\_3:

(Start: 22 @3257 has 2 MA's), (23, 3293), (28, 3407),

Gene: Jamzy\_4 Start: 1014, Stop: 1175, Start Num: 15

Candidate Starts for Jamzy\_4:

(3, 867), (4, 870), (Start: 15 @1014 has 3 MA's),

Gene: MScarn\_4 Start: 852, Stop: 992, Start Num: 21

Candidate Starts for MScarn\_4: (Start: 21 @852 has 10 MA's),

Gene: MaVan\_4 Start: 1180, Stop: 1338, Start Num: 18

Candidate Starts for MaVan\_4: (Start: 18 @1180 has 7 MA's),

Gene: Margaret\_4 Start: 1387, Stop: 1548, Start Num: 15

Candidate Starts for Margaret\_4:

(6, 1303), (7, 1330), (8, 1336), (12, 1381), (Start: 13 @1384 has 1 MA's), (Start: 15 @1387 has 3 MA's),

Gene: MontyDev\_8 Start: 5192, Stop: 5353, Start Num: 20

Candidate Starts for MontyDev\_8:

(17, 5180), (Start: 20 @5192 has 8 MA's), (23, 5243), (25, 5276),

Gene: MunkgeeRoachy\_3 Start: 877, Stop: 1047, Start Num: 18

Candidate Starts for MunkgeeRoachy\_3: (Start: 18 @877 has 7 MA's), (26, 1015),

Gene: Nibbles\_4 Start: 1180, Stop: 1338, Start Num: 18

Candidate Starts for Nibbles\_4: (Start: 18 @1180 has 7 MA's),

Gene: Nilo\_8 Start: 5193, Stop: 5354, Start Num: 20

Candidate Starts for Nilo\_8:

(17, 5181), (Start: 20 @5193 has 8 MA's), (23, 5244), (25, 5277),

Gene: OnionKnight\_7 Start: 5413, Stop: 5559, Start Num: 22

Candidate Starts for OnionKnight\_7:

(1, 4798), (2, 4996), (Start: 22 @5413 has 2 MA's), (24, 5464),

Gene: Papyrus\_8 Start: 5193, Stop: 5354, Start Num: 20

Candidate Starts for Papyrus 8:

(17, 5181), (Start: 20 @5193 has 8 MA's), (23, 5244), (25, 5277),

Gene: PsychoKiller\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for PsychoKiller\_3:

(Start: 18 @829 has 7 MA's),

Gene: RanchParmCat\_4 Start: 1384, Stop: 1548, Start Num: 13

Candidate Starts for RanchParmCat\_4:

(6, 1303), (8, 1336), (10, 1366), (12, 1381), (Start: 13 @1384 has 1 MA's), (Start: 15 @1387 has 3 MA's),

Gene: RedBaron\_4 Start: 877, Stop: 1044, Start Num: 18

Candidate Starts for RedBaron\_4: (Start: 18 @877 has 7 MA's), (26, 1012),

Gene: Riparian 7 Start: 4890, Stop: 5051, Start Num: 20

Candidate Starts for Riparian\_7:

(17, 4878), (Start: 20 @4890 has 8 MA's), (23, 4941), (25, 4974),

Gene: Send513\_7 Start: 5193, Stop: 5354, Start Num: 20

Candidate Starts for Send513\_7:

(17, 5181), (Start: 20 @5193 has 8 MA's), (23, 5244), (25, 5277),

Gene: Socotra\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for Socotra\_3: (Start: 18 @829 has 7 MA's),

Gene: Sopespian\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for Sopespian\_3:

(Start: 18 @829 has 7 MA's),

Gene: Starburst\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for Starburst\_3: (Start: 18 @829 has 7 MA's),

Gene: SteamedHams\_4 Start: 852, Stop: 1004, Start Num: 21

Candidate Starts for SteamedHams\_4:

(9, 795), (10, 801), (11, 807), (12, 816), (Start: 21 @852 has 10 MA's), (27, 990),

Gene: SweatNTears\_4 Start: 1378, Stop: 1518, Start Num: 21

Candidate Starts for SweatNTears\_4:

(Start: 21 @1378 has 10 MA's),

Gene: Tolls\_4 Start: 852, Stop: 1004, Start Num: 21

Candidate Starts for Tolls\_4:

(9, 795), (10, 801), (11, 807), (12, 816), (Start: 21 @852 has 10 MA's), (27, 990),

Gene: Typhonomachy\_3 Start: 829, Stop: 999, Start Num: 18

Candidate Starts for Typhonomachy\_3:

(Start: 18 @829 has 7 MA's),

Gene: Weiss13\_7 Start: 4881, Stop: 5042, Start Num: 20

Candidate Starts for Weiss13 7:

(17, 4869), (Start: 20 @4881 has 8 MA's), (23, 4932), (25, 4965),

Gene: Yelo\_7 Start: 5193, Stop: 5354, Start Num: 20

Candidate Starts for Yelo\_7:

(17, 5181), (Start: 20 @5193 has 8 MA's), (23, 5244), (25, 5277),

Gene: Yummy\_3 Start: 758, Stop: 898, Start Num: 21

Candidate Starts for Yummy\_3: (Start: 21 @758 has 10 MA's),

Gene: Zareef\_5 Start: 1180, Stop: 1338, Start Num: 18

Candidate Starts for Zareef\_5:

(10, 1141), (Start: 18 @1180 has 7 MA's),

Gene: Zenon\_8 Start: 5193, Stop: 5354, Start Num: 20

Candidate Starts for Zenon\_8:

(17, 5181), (Start: 20 @5193 has 8 MA's), (23, 5244), (25, 5277),