



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 289621 Report

This analysis was run 03/28/26 on database version 641.

Pham number 289621 has 31 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Minerva\_5, Bombitas\_4, Phoebus\_5, Kalah2\_6, Yeet\_4, Hidrated\_5, Odette\_4, Pound\_5, ThreeRngTarjay\_5, Schatzie\_4, NihilNomen\_5, Dallas\_4, EricMillard\_5
- Track 2 : Beem\_5, Redno2\_5, Halley\_5, Bobby\_6, Marleymoo\_6, Ejimix\_6
- Track 3 : Hannaconda\_3
- Track 4 : Courthouse\_6, Zelink\_5, Ariel\_5, JuicyJay\_6, Superphikiman\_6
- Track 5 : Dove\_4
- Track 6 : Rearden\_4, LittleE\_6, Klein\_6, Wanda\_6, Omega\_8

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

The start number called the most often in the published annotations is 4, it was called in 25 of the 27 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel\_5, Beem\_5, Bobby\_6, Bombitas\_4, Courthouse\_6, Dallas\_4, Ejimix\_6, EricMillard\_5, Halley\_5, Hidrated\_5, JuicyJay\_6, Kalah2\_6, Klein\_6, LittleE\_6, Marleymoo\_6, Minerva\_5, NihilNomen\_5, Odette\_4, Omega\_8, Phoebus\_5, Pound\_5, Rearden\_4, Redno2\_5, Schatzie\_4, Superphikiman\_6, ThreeRngTarjay\_5, Wanda\_6, Yeet\_4, Zelink\_5,

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

- Dove\_4, Hannaconda\_3,

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

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

Start 3:

- Found in 26 of 31 ( 83.9% ) of genes in pham
- Manual Annotations of this start: 2 of 27
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Dove\_4 (J), Hannaconda\_3 (J),

#### Start 4:

- Found in 31 of 31 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 25 of 27
- Called 93.5% of time when present
- Phage (with cluster) where this start called: Ariel\_5 (J), Beem\_5 (J), Bobby\_6 (J), Bombitas\_4 (J), Courthouse\_6 (J), Dallas\_4 (J), Ejimix\_6 (J), EricMillard\_5 (J), Halley\_5 (J), Hidrated\_5 (J), JuicyJay\_6 (J), Kalah2\_6 (J), Klein\_6 (J), LittleE\_6 (J), Marleymoo\_6 (J), Minerva\_5 (J), NihilNomen\_5 (J), Odette\_4 (J), Omega\_8 (J), Phoebus\_5 (J), Pound\_5 (J), Rearden\_4 (J), Redno2\_5 (J), Schatzie\_4 (J), Superphikiman\_6 (J), ThreeRngTarjay\_5 (J), Wanda\_6 (J), Yeet\_4 (J), Zelink\_5 (J),

#### Summary by clusters:

There is one cluster represented in this pham: J

Info for manual annotations of cluster J:

- Start number 3 was manually annotated 2 times for cluster J.
- Start number 4 was manually annotated 25 times for cluster J.

#### **Gene Information:**

Gene: Ariel\_5 Start: 2046, Stop: 2219, Start Num: 4

Candidate Starts for Ariel\_5:

(1, 1968), (2, 1974), (Start: 3 @2016 has 2 MA's), (Start: 4 @2046 has 25 MA's), (5, 2112), (9, 2169),

Gene: Beem\_5 Start: 2011, Stop: 2184, Start Num: 4

Candidate Starts for Beem\_5:

(1, 1933), (2, 1939), (Start: 3 @1981 has 2 MA's), (Start: 4 @2011 has 25 MA's), (5, 2077), (9, 2134), (10, 2158),

Gene: Bobby\_6 Start: 2746, Stop: 2919, Start Num: 4

Candidate Starts for Bobby\_6:

(1, 2668), (2, 2674), (Start: 3 @2716 has 2 MA's), (Start: 4 @2746 has 25 MA's), (5, 2812), (9, 2869), (10, 2893),

Gene: Bombitas\_4 Start: 1550, Stop: 1723, Start Num: 4

Candidate Starts for Bombitas\_4:

(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 4 @1550 has 25 MA's), (5, 1616), (9, 1673), (10, 1697),

Gene: Courthouse\_6 Start: 2845, Stop: 3018, Start Num: 4

Candidate Starts for Courthouse\_6:

(1, 2767), (2, 2773), (Start: 3 @2815 has 2 MA's), (Start: 4 @2845 has 25 MA's), (5, 2911), (9, 2968),

Gene: Dallas\_4 Start: 1550, Stop: 1723, Start Num: 4

Candidate Starts for Dallas\_4:

(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 4 @1550 has 25 MA's), (5, 1616), (9, 1673), (10, 1697),

Gene: Dove\_4 Start: 1519, Stop: 1722, Start Num: 3

Candidate Starts for Dove\_4:

(1, 1471), (2, 1477), (Start: 3 @1519 has 2 MA's), (Start: 4 @1549 has 25 MA's), (5, 1615), (9, 1672), (10, 1696),

Gene: Ejimix\_6 Start: 2761, Stop: 2934, Start Num: 4

Candidate Starts for Ejimix\_6:

(1, 2683), (2, 2689), (Start: 3 @2731 has 2 MA's), (Start: 4 @2761 has 25 MA's), (5, 2827), (9, 2884), (10, 2908),

Gene: EricMillard\_5 Start: 2296, Stop: 2469, Start Num: 4

Candidate Starts for EricMillard\_5:

(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 4 @2296 has 25 MA's), (5, 2362), (9, 2419), (10, 2443),

Gene: Halley\_5 Start: 2011, Stop: 2184, Start Num: 4

Candidate Starts for Halley\_5:

(1, 1933), (2, 1939), (Start: 3 @1981 has 2 MA's), (Start: 4 @2011 has 25 MA's), (5, 2077), (9, 2134), (10, 2158),

Gene: Hannaconda\_3 Start: 1495, Stop: 1698, Start Num: 3

Candidate Starts for Hannaconda\_3:

(1, 1447), (2, 1453), (Start: 3 @1495 has 2 MA's), (Start: 4 @1525 has 25 MA's), (5, 1591), (9, 1648), (10, 1672),

Gene: Hidrated\_5 Start: 2296, Stop: 2469, Start Num: 4

Candidate Starts for Hidrated\_5:

(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 4 @2296 has 25 MA's), (5, 2362), (9, 2419), (10, 2443),

Gene: JuicyJay\_6 Start: 2844, Stop: 3017, Start Num: 4

Candidate Starts for JuicyJay\_6:

(1, 2766), (2, 2772), (Start: 3 @2814 has 2 MA's), (Start: 4 @2844 has 25 MA's), (5, 2910), (9, 2967),

Gene: Kalah2\_6 Start: 2840, Stop: 3013, Start Num: 4

Candidate Starts for Kalah2\_6:

(1, 2762), (2, 2768), (Start: 3 @2810 has 2 MA's), (Start: 4 @2840 has 25 MA's), (5, 2906), (9, 2963), (10, 2987),

Gene: Klein\_6 Start: 2837, Stop: 2998, Start Num: 4

Candidate Starts for Klein\_6:

(Start: 4 @2837 has 25 MA's), (6, 2927), (7, 2948), (8, 2951), (9, 2960),

Gene: LittleE\_6 Start: 2404, Stop: 2565, Start Num: 4

Candidate Starts for LittleE\_6:

(Start: 4 @2404 has 25 MA's), (6, 2494), (7, 2515), (8, 2518), (9, 2527),

Gene: Marleymoo\_6 Start: 2841, Stop: 3014, Start Num: 4

Candidate Starts for Marleymoo\_6:

(1, 2763), (2, 2769), (Start: 3 @2811 has 2 MA's), (Start: 4 @2841 has 25 MA's), (5, 2907), (9, 2964), (10, 2988),

Gene: Minerva\_5 Start: 2300, Stop: 2473, Start Num: 4

Candidate Starts for Minerva\_5:

(1, 2222), (2, 2228), (Start: 3 @2270 has 2 MA's), (Start: 4 @2300 has 25 MA's), (5, 2366), (9, 2423), (10, 2447),

Gene: NihilNomen\_5 Start: 2300, Stop: 2473, Start Num: 4

Candidate Starts for NihilNomen\_5:

(1, 2222), (2, 2228), (Start: 3 @2270 has 2 MA's), (Start: 4 @2300 has 25 MA's), (5, 2366), (9, 2423), (10, 2447),

Gene: Odette\_4 Start: 1549, Stop: 1722, Start Num: 4

Candidate Starts for Odette\_4:

(1, 1471), (2, 1477), (Start: 3 @1519 has 2 MA's), (Start: 4 @1549 has 25 MA's), (5, 1615), (9, 1672), (10, 1696),

Gene: Omega\_8 Start: 3749, Stop: 3910, Start Num: 4

Candidate Starts for Omega\_8:

(Start: 4 @3749 has 25 MA's), (6, 3839), (7, 3860), (8, 3863), (9, 3872),

Gene: Phoebus\_5 Start: 2296, Stop: 2469, Start Num: 4

Candidate Starts for Phoebus\_5:

(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 4 @2296 has 25 MA's), (5, 2362), (9, 2419), (10, 2443),

Gene: Pound\_5 Start: 2296, Stop: 2469, Start Num: 4

Candidate Starts for Pound\_5:

(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 4 @2296 has 25 MA's), (5, 2362), (9, 2419), (10, 2443),

Gene: Rearden\_4 Start: 1674, Stop: 1835, Start Num: 4

Candidate Starts for Rearden\_4:

(Start: 4 @1674 has 25 MA's), (6, 1764), (7, 1785), (8, 1788), (9, 1797),

Gene: Redno2\_5 Start: 2011, Stop: 2184, Start Num: 4

Candidate Starts for Redno2\_5:

(1, 1933), (2, 1939), (Start: 3 @1981 has 2 MA's), (Start: 4 @2011 has 25 MA's), (5, 2077), (9, 2134), (10, 2158),

Gene: Schatzie\_4 Start: 1550, Stop: 1723, Start Num: 4

Candidate Starts for Schatzie\_4:

(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 4 @1550 has 25 MA's), (5, 1616), (9, 1673), (10, 1697),

Gene: Superphikiman\_6 Start: 2845, Stop: 3018, Start Num: 4

Candidate Starts for Superphikiman\_6:

(1, 2767), (2, 2773), (Start: 3 @2815 has 2 MA's), (Start: 4 @2845 has 25 MA's), (5, 2911), (9, 2968),

Gene: ThreeRngTarjay\_5 Start: 2296, Stop: 2469, Start Num: 4

Candidate Starts for ThreeRngTarjay\_5:

(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 4 @2296 has 25 MA's), (5, 2362), (9, 2419), (10, 2443),

Gene: Wanda\_6 Start: 2837, Stop: 2998, Start Num: 4

Candidate Starts for Wanda\_6:

(Start: 4 @2837 has 25 MA's), (6, 2927), (7, 2948), (8, 2951), (9, 2960),

Gene: Yeet\_4 Start: 1550, Stop: 1723, Start Num: 4

Candidate Starts for Yeet\_4:

(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 4 @1550 has 25 MA's), (5, 1616), (9, 1673), (10, 1697),

Gene: Zelink\_5 Start: 2094, Stop: 2267, Start Num: 4

Candidate Starts for Zelink\_5:

(1, 2016), (2, 2022), (Start: 3 @2064 has 2 MA's), (Start: 4 @2094 has 25 MA's), (5, 2160), (9, 2217),