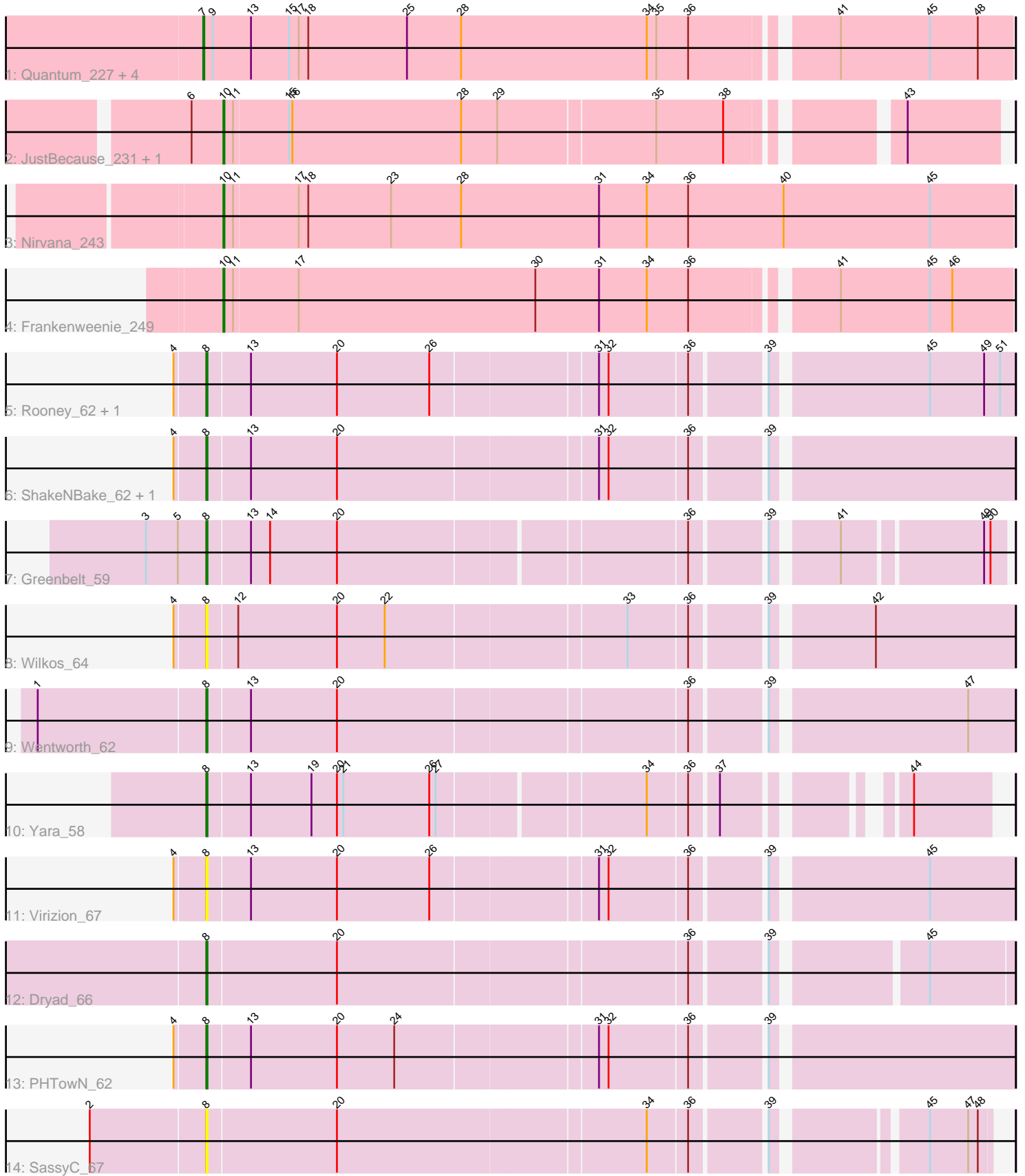


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 296946 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296946 has 21 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Quantum\_227, Satis\_228, Sarkar\_239, EhyElimayoE\_231, Kradal\_229
- Track 2 : JustBecause\_231, Kela\_230
- Track 3 : Nirvana\_243
- Track 4 : Frankenweenie\_249
- Track 5 : Rooney\_62, Gibson\_62
- Track 6 : ShakeNBake\_62, Lizz\_62
- Track 7 : Greenbelt\_59
- Track 8 : Wilkos\_64
- Track 9 : Wentworth\_62
- Track 10 : Yara\_58
- Track 11 : Virizion\_67
- Track 12 : Dryad\_66
- Track 13 : PHTowN\_62
- Track 14 : SassyC\_67

### ***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 17 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Dryad\_66, Gibson\_62, Greenbelt\_59, Lizz\_62, PHTowN\_62, Rooney\_62, SassyC\_67, ShakeNBake\_62, Virizion\_67, Wentworth\_62, Wilkos\_64, Yara\_58,

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

- 

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

- EhyElimayoE\_231, Frankenweenie\_249, JustBecause\_231, Kela\_230, Kradal\_229, Nirvana\_243, Quantum\_227, Sarkar\_239, Satis\_228,

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

Start 7:

- Found in 5 of 21 ( 23.8% ) of genes in pham
- Manual Annotations of this start: 4 of 17
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EhyElimayoE\_231 (BM), Kradal\_229 (BM), Quantum\_227 (BM), Sarkar\_239 (BM), Satis\_228 (BM),

Start 8:

- Found in 12 of 21 ( 57.1% ) of genes in pham
- Manual Annotations of this start: 9 of 17
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dryad\_66 (BN), Gibson\_62 (BN), Greenbelt\_59 (BN), Lizz\_62 (BN), PHTowN\_62 (BN), Rooney\_62 (BN), SassyC\_67 (BN), ShakeNBake\_62 (BN), Virizion\_67 (BN), Wentworth\_62 (BN), Wilkos\_64 (BN), Yara\_58 (BN),

Start 10:

- Found in 4 of 21 ( 19.0% ) of genes in pham
- Manual Annotations of this start: 4 of 17
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Frankenweenie\_249 (BM), JustBecause\_231 (BM), Kela\_230 (BM), Nirvana\_243 (BM),

### **Summary by clusters:**

There are 2 clusters represented in this pham: BM, BN,

Info for manual annotations of cluster BM:

- Start number 7 was manually annotated 4 times for cluster BM.
- Start number 10 was manually annotated 4 times for cluster BM.

Info for manual annotations of cluster BN:

- Start number 8 was manually annotated 9 times for cluster BN.

### **Gene Information:**

Gene: Dryad\_66 Start: 45069, Stop: 44365, Start Num: 8

Candidate Starts for Dryad\_66:

(Start: 8 @45069 has 9 MA's), (20, 44949), (36, 44634), (39, 44571), (45, 44442),

Gene: EhyElimayoE\_231 Start: 136388, Stop: 137125, Start Num: 7

Candidate Starts for EhyElimayoE\_231:

(Start: 7 @136388 has 4 MA's), (9, 136397), (13, 136433), (15, 136469), (17, 136478), (18, 136487), (25, 136580), (28, 136631), (34, 136805), (35, 136814), (36, 136844), (41, 136964), (45, 137048), (48, 137093),

Gene: Frankenweenie\_249 Start: 147539, Stop: 148255, Start Num: 10

Candidate Starts for Frankenweenie\_249:

(Start: 10 @147539 has 4 MA's), (11, 147548), (17, 147608), (30, 147830), (31, 147890), (34, 147935), (36, 147974), (41, 148094), (45, 148178), (46, 148199),

Gene: Gibson\_62 Start: 44320, Stop: 43604, Start Num: 8

Candidate Starts for Gibson\_62:

(4, 44347), (Start: 8 @44320 has 9 MA's), (13, 44281), (20, 44200), (26, 44113), (31, 43966), (32, 43957), (36, 43885), (39, 43822), (45, 43684), (49, 43633), (51, 43618),

Gene: Greenbelt\_59 Start: 40352, Stop: 39663, Start Num: 8

Candidate Starts for Greenbelt\_59:

(3, 40409), (5, 40379), (Start: 8 @40352 has 9 MA's), (13, 40313), (14, 40295), (20, 40232), (36, 39923), (39, 39860), (41, 39806), (49, 39683), (50, 39677),

Gene: JustBecause\_231 Start: 134496, Stop: 135179, Start Num: 10

Candidate Starts for JustBecause\_231:

(6, 134466), (Start: 10 @134496 has 4 MA's), (11, 134505), (15, 134556), (16, 134559), (28, 134718), (29, 134751), (35, 134895), (38, 134958), (43, 135093),

Gene: Kela\_230 Start: 135079, Stop: 135762, Start Num: 10

Candidate Starts for Kela\_230:

(6, 135049), (Start: 10 @135079 has 4 MA's), (11, 135088), (15, 135139), (16, 135142), (28, 135301), (29, 135334), (35, 135478), (38, 135541), (43, 135676),

Gene: Kradal\_229 Start: 136385, Stop: 137122, Start Num: 7

Candidate Starts for Kradal\_229:

(Start: 7 @136385 has 4 MA's), (9, 136394), (13, 136430), (15, 136466), (17, 136475), (18, 136484), (25, 136577), (28, 136628), (34, 136802), (35, 136811), (36, 136841), (41, 136961), (45, 137045), (48, 137090),

Gene: Lizz\_62 Start: 44158, Stop: 43442, Start Num: 8

Candidate Starts for Lizz\_62:

(4, 44185), (Start: 8 @44158 has 9 MA's), (13, 44119), (20, 44038), (31, 43804), (32, 43795), (36, 43723), (39, 43660),

Gene: Nirvana\_243 Start: 146399, Stop: 147139, Start Num: 10

Candidate Starts for Nirvana\_243:

(Start: 10 @146399 has 4 MA's), (11, 146408), (17, 146468), (18, 146477), (23, 146555), (28, 146621), (31, 146750), (34, 146795), (36, 146834), (40, 146924), (45, 147062),

Gene: PHTowN\_62 Start: 44156, Stop: 43440, Start Num: 8

Candidate Starts for PHTowN\_62:

(4, 44183), (Start: 8 @44156 has 9 MA's), (13, 44117), (20, 44036), (24, 43982), (31, 43802), (32, 43793), (36, 43721), (39, 43658),

Gene: Quantum\_227 Start: 136379, Stop: 137116, Start Num: 7

Candidate Starts for Quantum\_227:

(Start: 7 @136379 has 4 MA's), (9, 136388), (13, 136424), (15, 136460), (17, 136469), (18, 136478), (25, 136571), (28, 136622), (34, 136796), (35, 136805), (36, 136835), (41, 136955), (45, 137039), (48, 137084),

Gene: Rooney\_62 Start: 44317, Stop: 43601, Start Num: 8

Candidate Starts for Rooney\_62:

(4, 44344), (Start: 8 @44317 has 9 MA's), (13, 44278), (20, 44197), (26, 44110), (31, 43963), (32, 43954), (36, 43882), (39, 43819), (45, 43681), (49, 43630), (51, 43615),

Gene: Sarkar\_239 Start: 136409, Stop: 137146, Start Num: 7

Candidate Starts for Sarkar\_239:

(Start: 7 @136409 has 4 MA's), (9, 136418), (13, 136454), (15, 136490), (17, 136499), (18, 136508), (25, 136601), (28, 136652), (34, 136826), (35, 136835), (36, 136865), (41, 136985), (45, 137069), (48, 137114),

Gene: SassyC\_67 Start: 45244, Stop: 44564, Start Num: 8

Candidate Starts for SassyC\_67:

(2, 45349), (Start: 8 @45244 has 9 MA's), (20, 45124), (34, 44842), (36, 44806), (39, 44743), (45, 44620), (47, 44584), (48, 44575),

Gene: Satis\_228 Start: 136722, Stop: 137459, Start Num: 7

Candidate Starts for Satis\_228:

(Start: 7 @136722 has 4 MA's), (9, 136731), (13, 136767), (15, 136803), (17, 136812), (18, 136821), (25, 136914), (28, 136965), (34, 137139), (35, 137148), (36, 137178), (41, 137298), (45, 137382), (48, 137427),

Gene: ShakeNBake\_62 Start: 44174, Stop: 43458, Start Num: 8

Candidate Starts for ShakeNBake\_62:

(4, 44201), (Start: 8 @44174 has 9 MA's), (13, 44135), (20, 44054), (31, 43820), (32, 43811), (36, 43739), (39, 43676),

Gene: Virizion\_67 Start: 44516, Stop: 43800, Start Num: 8

Candidate Starts for Virizion\_67:

(4, 44543), (Start: 8 @44516 has 9 MA's), (13, 44477), (20, 44396), (26, 44309), (31, 44162), (32, 44153), (36, 44081), (39, 44018), (45, 43880),

Gene: Wentworth\_62 Start: 44313, Stop: 43597, Start Num: 8

Candidate Starts for Wentworth\_62:

(1, 44469), (Start: 8 @44313 has 9 MA's), (13, 44274), (20, 44193), (36, 43878), (39, 43815), (47, 43641),

Gene: Wilkos\_64 Start: 44465, Stop: 43749, Start Num: 8

Candidate Starts for Wilkos\_64:

(4, 44492), (Start: 8 @44465 has 9 MA's), (12, 44438), (20, 44345), (22, 44300), (33, 44084), (36, 44030), (39, 43967), (42, 43880),

Gene: Yara\_58 Start: 43009, Stop: 42356, Start Num: 8

Candidate Starts for Yara\_58:

(Start: 8 @43009 has 9 MA's), (13, 42970), (19, 42913), (20, 42889), (21, 42883), (26, 42802), (27, 42796), (34, 42616), (36, 42580), (37, 42556), (44, 42427),