

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 216573 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216573 has 21 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Belphegor 66
- Track 2 : Phinally\_72, Inspectinfecti\_73, Leonard\_72
- Track 3 : EMoore\_70
- Track 4: Hans\_73, Phauci\_64
- Track 5 : MelBins 74
- Track 6 : Ali17 69
- Track 7: Kwekel 71, Chickadee 71
- Track 8: Twonlo\_69, GTE6\_72, RoadKill\_68
- Track 9 : EdmundFerry\_69
- Track 10 : Tardus\_72
- Track 11 : DoctorFroggo\_72, Verity\_72, Delrey21\_72
- Track 12 : Zitch 73
- Track 13: ViaConlectus 71

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

The start number called the most often in the published annotations is 20, it was called in 7 of the 19 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Ali17\_69, Hans\_73, Inspectinfecti\_73, Leonard\_72, MelBins\_74, Phauci\_64, Phinally\_72,

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

Belphegor\_66,

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

• Chickadee\_71, Delrey21\_72, DoctorFroggo\_72, EMoore\_70, EdmundFerry\_69, GTE6\_72, Kwekel\_71, RoadKill\_68, Tardus\_72, Twonlo\_69, Verity\_72, ViaConlectus\_71, Zitch\_73,

## Summary by start number:

Start 18:

- Found in 1 of 21 (4.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belphegor\_66 (DE),

### Start 19:

- Found in 6 of 21 (28.6%) of genes in pham
- Manual Annotations of this start: 6 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Delrey21\_72 (DE4), DoctorFroggo\_72 (DE4), Tardus\_72 (DE4), Verity\_72 (DE4), ViaConlectus\_71 (DE4), Zitch\_73 (DE4),

#### Start 20:

- Found in 8 of 21 (38.1%) of genes in pham
- Manual Annotations of this start: 7 of 19
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Ali17\_69 (DE2), Hans\_73 (DE2), Inspectinfecti\_73 (DE2), Leonard\_72 (DE2), MelBins\_74 (DE2), Phauci\_64 (DE2), Phinally\_72 (DE2),

#### Start 21:

- Found in 4 of 21 (19.0%) of genes in pham
- Manual Annotations of this start: 3 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EMoore\_70 (DE2), GTE6\_72 (DE3), RoadKill\_68 (DE3), Twonlo\_69 (DE3),

### Start 22:

- Found in 14 of 21 (66.7%) of genes in pham
- Manual Annotations of this start: 3 of 19
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Chickadee\_71 (DE3), EdmundFerry\_69 (DE3), Kwekel\_71 (DE3),

## **Summary by clusters:**

There are 4 clusters represented in this pham: DE2, DE3, DE4, DE,

Info for manual annotations of cluster DE2:

- •Start number 20 was manually annotated 7 times for cluster DE2.
- •Start number 21 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster DE3:

- •Start number 21 was manually annotated 2 times for cluster DE3.
- •Start number 22 was manually annotated 3 times for cluster DE3.

Info for manual annotations of cluster DE4:

•Start number 19 was manually annotated 6 times for cluster DE4.

### Gene Information:

Gene: Ali17\_69 Start: 52610, Stop: 52894, Start Num: 20

Candidate Starts for Ali17 69:

(11, 52523), (13, 52565), (Start: 20 @52610 has 7 MA's), (Start: 22 @52634 has 3 MA's), (23, 52655),

(25, 52679), (27, 52697), (28, 52736), (29, 52748),

Gene: Belphegor\_66 Start: 53613, Stop: 53903, Start Num: 18

Candidate Starts for Belphegor\_66:

(9, 53499), (10, 53520), (18, 53613), (Start: 20 @53616 has 7 MA's), (23, 53661), (25, 53685), (27, 53703), (28, 53742), (29, 53754),

Gene: Chickadee 71 Start: 50496, Stop: 50762, Start Num: 22

Candidate Starts for Chickadee 71:

(3, 49947), (5, 50133), (8, 50298), (Start: 22 @50496 has 3 MA's), (26, 50547),

Gene: Delrey21\_72 Start: 54939, Stop: 55223, Start Num: 19

Candidate Starts for Delrey21\_72:

(Start: 19 @54939 has 6 MA's), (32, 55188),

Gene: DoctorFroggo\_72 Start: 54939, Stop: 55223, Start Num: 19

Candidate Starts for DoctorFroggo\_72: (Start: 19 @54939 has 6 MA's), (32, 55188),

Gene: EMoore 70 Start: 54051, Stop: 54338, Start Num: 21

Candidate Starts for EMoore\_70:

(1, 53250), (2, 53484), (4, 53541), (6, 53745), (7, 53847), (13, 53970), (14, 53973), (15, 53982), (16, 54000), (Start: 21 @54051 has 3 MA's), (23, 54096), (27, 54138), (29, 54189), (30, 54264), (31, 54276),

Gene: EdmundFerry\_69 Start: 50048, Stop: 50314, Start Num: 22

Candidate Starts for EdmundFerry\_69:

(8, 49850), (Start: 22 @50048 has 3 MA's), (26, 50099),

Gene: GTE6\_72 Start: 51283, Stop: 51579, Start Num: 21

Candidate Starts for GTE6 72:

(3, 50740), (5, 50926), (8, 51091), (Start: 21 @51283 has 3 MA's), (Start: 22 @51307 has 3 MA's), (24, 51349), (26, 51364),

Gene: Hans\_73 Start: 53483, Stop: 53767, Start Num: 20

Candidate Starts for Hans\_73:

(13, 53438), (Start: 20 @53483 has 7 MA's), (Start: 22 @53507 has 3 MA's), (23, 53528), (25, 53552), (27, 53570), (28, 53609), (29, 53621),

Gene: Inspectinfecti\_73 Start: 53454, Stop: 53741, Start Num: 20

Candidate Starts for Inspectinfecti 73:

(13, 53409), (Start: 20 @53454 has 7 MA's), (Start: 22 @53481 has 3 MA's), (23, 53502), (25, 53526), (28, 53583),

Gene: Kwekel\_71 Start: 50409, Stop: 50675, Start Num: 22

Candidate Starts for Kwekel\_71:

(3, 49860), (5, 50046), (8, 50211), (Start: 22 @50409 has 3 MA's), (26, 50460),

Gene: Leonard 72 Start: 53517, Stop: 53804, Start Num: 20

Candidate Starts for Leonard\_72:

(13, 53472), (Start: 20 @53517 has 7 MA's), (Start: 22 @53544 has 3 MA's), (23, 53565), (25, 53589), (28, 53646),

Gene: MelBins\_74 Start: 53725, Stop: 54009, Start Num: 20

Candidate Starts for MelBins\_74:

(13, 53680), (Start: 20 @53725 has 7 MA's), (Start: 22 @53749 has 3 MA's), (23, 53770), (25, 53794), (27, 53812), (28, 53851), (29, 53863),

Gene: Phauci\_64 Start: 50560, Stop: 50844, Start Num: 20

Candidate Starts for Phauci\_64:

(13, 50515), (Start: 20 @50560 has 7 MA's), (Start: 22 @50584 has 3 MA's), (23, 50605), (25, 50629), (27, 50647), (28, 50686), (29, 50698),

Gene: Phinally\_72 Start: 53514, Stop: 53801, Start Num: 20

Candidate Starts for Phinally\_72:

(13, 53469), (Start: 20 @53514 has 7 MA's), (Start: 22 @53541 has 3 MA's), (23, 53562), (25, 53586), (28, 53643).

Gene: RoadKill 68 Start: 49908, Stop: 50204, Start Num: 21

Candidate Starts for RoadKill\_68:

(3, 49365), (5, 49551), (8, 49716), (Start: 21 @49908 has 3 MA's), (Start: 22 @49932 has 3 MA's), (24, 49974), (26, 49989),

Gene: Tardus\_72 Start: 53609, Stop: 53890, Start Num: 19

Candidate Starts for Tardus\_72: (Start: 19 @53609 has 6 MA's),

Gene: Twonlo 69 Start: 50462, Stop: 50758, Start Num: 21

Candidate Starts for Twonlo\_69:

(3, 49919), (5, 50105), (8, 50270), (Start: 21 @50462 has 3 MA's), (Start: 22 @50486 has 3 MA's), (24, 50528), (26, 50543),

Gene: Verity\_72 Start: 54939, Stop: 55223, Start Num: 19

Candidate Starts for Verity 72:

(Start: 19 @54939 has 6 MA's), (32, 55188),

Gene: ViaConlectus\_71 Start: 52277, Stop: 52561, Start Num: 19

Candidate Starts for ViaConlectus\_71:

(12, 52181), (17, 52256), (Start: 19 @52277 has 6 MA's), (32, 52526),

Gene: Zitch\_73 Start: 52986, Stop: 53270, Start Num: 19

Candidate Starts for Zitch\_73:

(17, 52965), (Start: 19 @52986 has 6 MA's), (Start: 22 @53016 has 3 MA's), (26, 53064),