

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 225073 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 225073 has 10 members, 1 are drafts.

Phages represented in each track:

• Track 1 : SPB78 26

• Track 2 : Eklok_25, AxeJC_24, Eastland_24, Piccadilly_24

• Track 3: Ignacio 25, HFrancette 25

Track 4 : Cumberbatch_25
Track 5 : Chymera_24
Track 6 : Orion Knight, 26

Track 6 : OnionKnight_26

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

The start number called the most often in the published annotations is 9, it was called in 8 of the 9 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AxeJC_24, Cumberbatch_25, Eastland_24, Eklok_25, HFrancette_25, Ignacio_25, OnionKnight_26, Piccadilly_24,

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

• SPB78_26,

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

Chymera_24,

Summary by start number:

Start 9:

- Found in 9 of 10 (90.0%) of genes in pham
- Manual Annotations of this start: 8 of 9
- Called 88.9% of time when present
- Phage (with cluster) where this start called: AxeJC_24 (BP), Cumberbatch_25 (BP), Eastland_24 (BP), Eklok_25 (BP), HFrancette_25 (BP), Ignacio_25 (BP),

OnionKnight_26 (singleton), Piccadilly_24 (BP),

Start 10:

- Found in 1 of 10 (10.0%) of genes in pham
- Manual Annotations of this start: 1 of 9
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chymera_24 (singleton),

Start 11:

- Found in 1 of 10 (10.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SPB78_26 (BA),

Summary by clusters:

There are 3 clusters represented in this pham: singleton, BP, BA,

Info for manual annotations of cluster BP:

Start number 9 was manually annotated 7 times for cluster BP.

Gene Information:

Gene: AxeJC_24 Start: 18954, Stop: 20204, Start Num: 9

Candidate Starts for AxeJC_24:

(7, 18924), (Start: 9 @18954 has 8 MA's), (14, 19011), (17, 19050), (18, 19071), (19, 19086), (20, 19095), (22, 19116), (24, 19134), (28, 19203), (29, 19215), (37, 19416), (38, 19461), (44, 19548), (46, 19590), (48, 19659), (49, 19683), (50, 19716), (55, 19854), (56, 19878), (59, 19899), (60, 19905), (64, 19944), (75, 20118),

Gene: Chymera 24 Start: 18154, Stop: 19377, Start Num: 10

Candidate Starts for Chymera 24:

(8, 18124), (Start: 10 @18154 has 1 MA's), (15, 18211), (22, 18310), (23, 18325), (25, 18331), (32, 18448), (34, 18565), (42, 18718), (44, 18739), (45, 18775), (47, 18796), (52, 18925), (59, 19075), (62, 19090), (70, 19198), (73, 19276), (74, 19288), (77, 19324), (78, 19327), (83, 19372),

Gene: Cumberbatch_25 Start: 18973, Stop: 20223, Start Num: 9

Candidate Starts for Cumberbatch 25:

(7, 18943), (Start: 9 @18973 has 8 MA's), (14, 19030), (17, 19069), (18, 19090), (19, 19105), (20, 19114), (22, 19135), (24, 19153), (26, 19180), (28, 19222), (29, 19234), (37, 19435), (38, 19480), (44, 19567), (46, 19609), (48, 19678), (49, 19702), (50, 19735), (55, 19873), (56, 19897), (59, 19918), (60, 19924), (64, 19963), (75, 20137),

Gene: Eastland_24 Start: 18939, Stop: 20189, Start Num: 9

Candidate Starts for Eastland_24:

(7, 18909), (Start: 9 @18939 has 8 MA's), (14, 18996), (17, 19035), (18, 19056), (19, 19071), (20, 19080), (22, 19101), (24, 19119), (28, 19188), (29, 19200), (37, 19401), (38, 19446), (44, 19533), (46, 19575), (48, 19644), (49, 19668), (50, 19701), (55, 19839), (56, 19863), (59, 19884), (60, 19890), (64, 19929), (75, 20103),

Gene: Eklok_25 Start: 18954, Stop: 20204, Start Num: 9

Candidate Starts for Eklok 25:

(7, 18924), (Start: 9 @18954 has 8 MA's), (14, 19011), (17, 19050), (18, 19071), (19, 19086), (20, 19095), (22, 19116), (24, 19134), (28, 19203), (29, 19215), (37, 19416), (38, 19461), (44, 19548), (46, 19590), (48, 19659), (49, 19683), (50, 19716), (55, 19854), (56, 19878), (59, 19899), (60, 19905), (64, 19944), (75, 20118),

Gene: HFrancette_25 Start: 19616, Stop: 20866, Start Num: 9 Candidate Starts for HFrancette_25:

 $\begin{array}{l} (1,\,19409),\,(2,\,19427),\,(5,\,19499),\,(7,\,19586),\,(Start:\,9\,\,@\,19616\,\,has\,\,8\,\,MA's),\,(14,\,19673),\,(17,\,19712),\\ (18,\,19733),\,(19,\,19748),\,(20,\,19757),\,(22,\,19778),\,(24,\,19796),\,(26,\,19823),\,(28,\,19865),\,(29,\,19877),\\ (33,\,19928),\,(37,\,20078),\,(38,\,20123),\,(44,\,20210),\,(46,\,20252),\,(48,\,20321),\,(49,\,20345),\,(50,\,20378),\\ (55,\,20516),\,(56,\,20540),\,(59,\,20561),\,(60,\,20567),\,(64,\,20606),\,(75,\,20780),\\ \end{array}$

Gene: Ignacio_25 Start: 19616, Stop: 20866, Start Num: 9 Candidate Starts for Ignacio_25:

(1, 19409), (2, 19427), (5, 19499), (7, 19586), (Start: 9 @19616 has 8 MA's), (14, 19673), (17, 19712), (18, 19733), (19, 19748), (20, 19757), (22, 19778), (24, 19796), (26, 19823), (28, 19865), (29, 19877), (33, 19928), (37, 20078), (38, 20123), (44, 20210), (46, 20252), (48, 20321), (49, 20345), (50, 20378), (55, 20516), (56, 20540), (59, 20561), (60, 20567), (64, 20606), (75, 20780),

Gene: OnionKnight_26 Start: 19960, Stop: 21210, Start Num: 9 Candidate Starts for OnionKnight 26:

(Start: 9 @ 19960 has 8 MA's), (12, 19999), (16, 20044), (23, 20137), (24, 20140), (25, 20143), (26, 20167), (27, 20203), (31, 20251), (37, 20422), (41, 20503), (43, 20539), (44, 20554), (51, 20743), (54, 20824), (55, 20860), (56, 20884), (58, 20899), (61, 20917), (63, 20938), (66, 20965), (80, 21184),

Gene: Piccadilly_24 Start: 18938, Stop: 20188, Start Num: 9 Candidate Starts for Piccadilly 24:

(7, 18908), (Start: 9 @18938 has 8 MA's), (14, 18995), (17, 19034), (18, 19055), (19, 19070), (20, 19079), (22, 19100), (24, 19118), (28, 19187), (29, 19199), (37, 19400), (38, 19445), (44, 19532), (46, 19574), (48, 19643), (49, 19667), (50, 19700), (55, 19838), (56, 19862), (59, 19883), (60, 19889), (64, 19928), (75, 20102),

Gene: SPB78_26 Start: 21757, Stop: 22989, Start Num: 11 Candidate Starts for SPB78 26:

(3, 21550), (4, 21595), (6, 21673), (Start: 9 @21727 has 8 MA's), (11, 21757), (13, 21775), (21, 21889), (23, 21913), (30, 22015), (35, 22171), (36, 22174), (39, 22255), (40, 22279), (44, 22336), (53, 22543), (56, 22657), (57, 22663), (58, 22672), (63, 22711), (65, 22735), (67, 22753), (68, 22792), (69, 22795), (71, 22840), (72, 22855), (75, 22906), (76, 22918), (79, 22939), (81, 22972), (82, 22978),