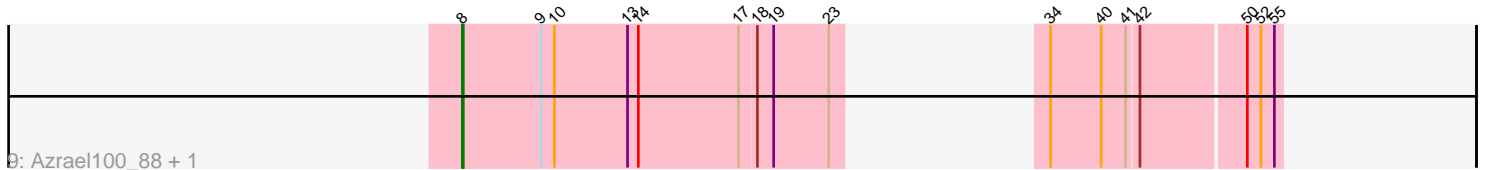
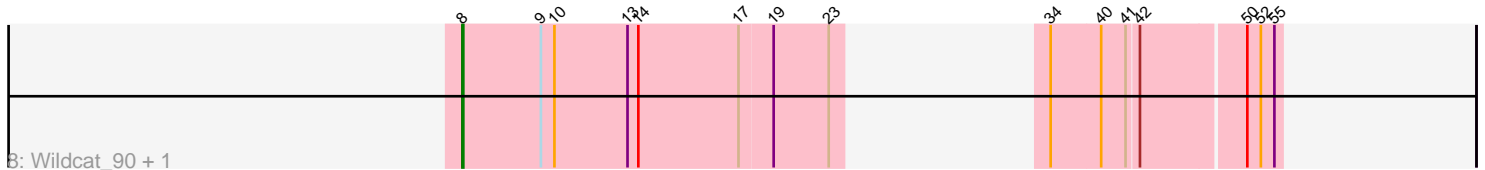
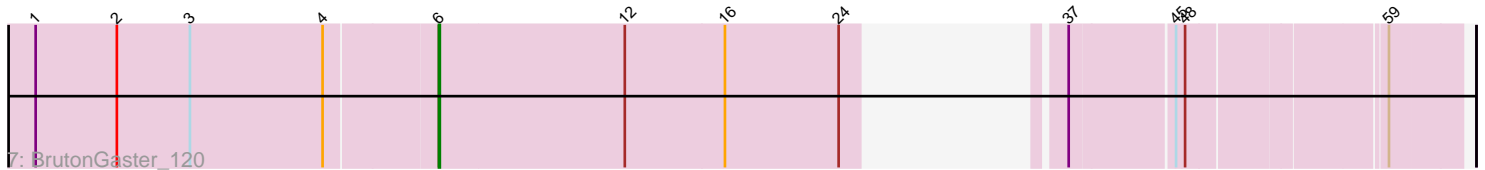
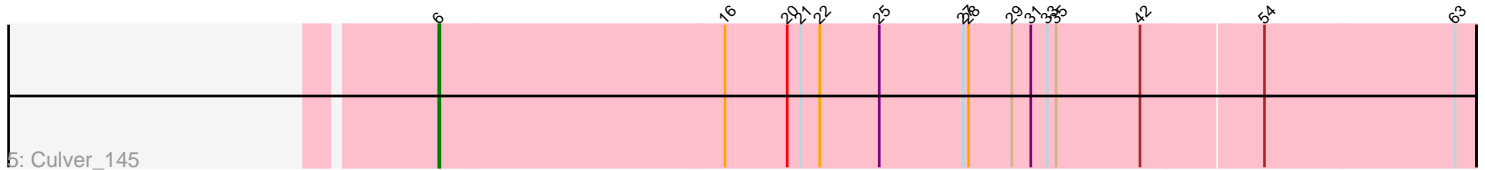
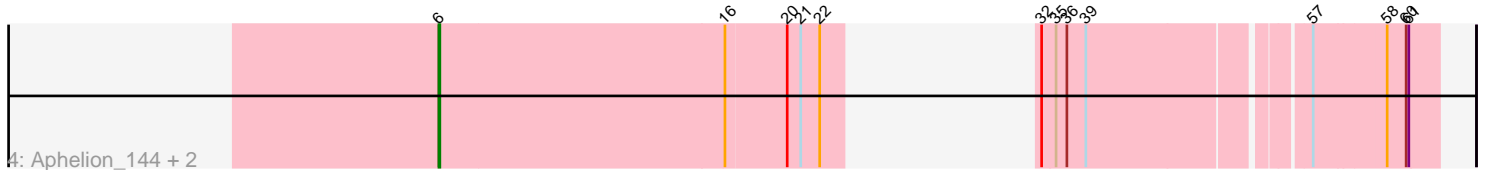
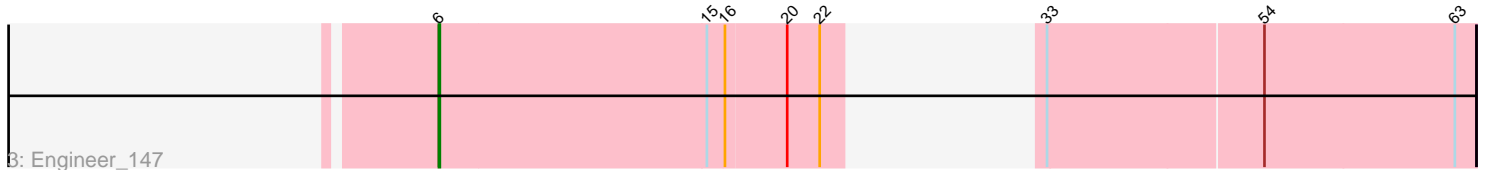
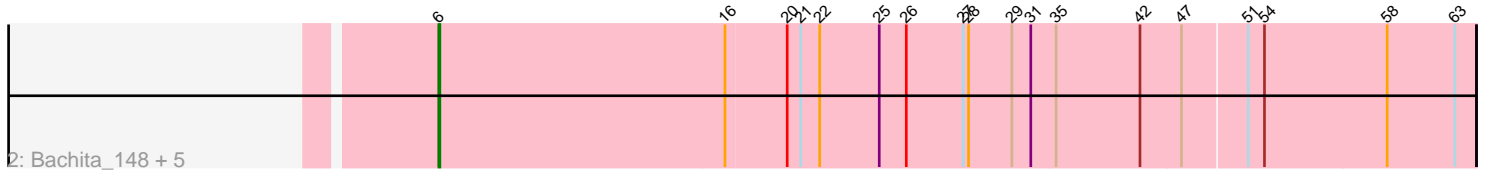
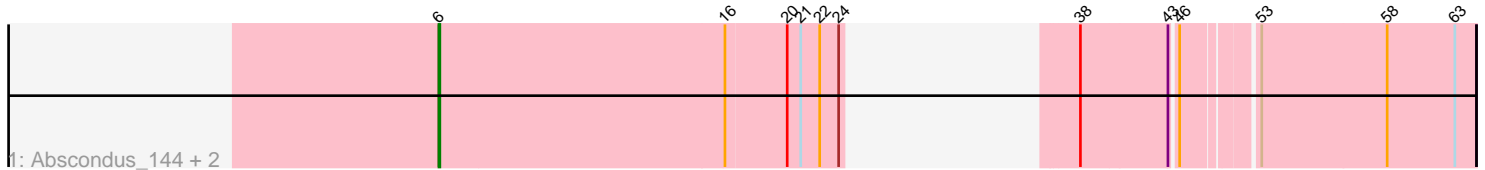


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 305331 Report

This analysis was run 06/08/26 on database version 649.

Pham number 305331 has 20 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Abscondus\_144, Dusty\_143, Geeche\_146
- Track 2 : Bachita\_148, ClubL\_145, Norvs\_143, Cucurbita\_144, Lozinak\_145, Toniann\_145
- Track 3 : Engineer\_147
- Track 4 : Aphelion\_144, Miskis\_139, PhinkBoden\_143
- Track 5 : Culver\_145
- Track 6 : OneUp\_129
- Track 7 : BrutonGaster\_120
- Track 8 : Wildcat\_90, MaryV\_90
- Track 9 : Azrael100\_88, Cosmo\_89

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

The start number called the most often in the published annotations is 6, it was called in 14 of the 19 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abscondus\_144, Aphelion\_144, Bachita\_148, BrutonGaster\_120, ClubL\_145, Cucurbita\_144, Culver\_145, Dusty\_143, Engineer\_147, Geeche\_146, Lozinak\_145, Miskis\_139, Norvs\_143, PhinkBoden\_143, Toniann\_145,

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

- 

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

- Azrael100\_88, Cosmo\_89, MaryV\_90, OneUp\_129, Wildcat\_90,

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

Start 5:

- Found in 1 of 20 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OneUp\_129 (CQ2),

Start 6:

- Found in 15 of 20 ( 75.0% ) of genes in pham
- Manual Annotations of this start: 14 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus\_144 (CQ1), Aphelion\_144 (CQ1), Bachita\_148 (CQ1), BrutonGaster\_120 (CQ2), ClubL\_145 (CQ1), Cucurbita\_144 (CQ1), Culver\_145 (CQ1), Dusty\_143 (CQ1), Engineer\_147 (CQ1), Geeche\_146 (CQ1), Lozinak\_145 (CQ1), Miskis\_139 (CQ1), Norvs\_143 (CQ1), PhinkBoden\_143 (CQ1), Toniann\_145 (CQ1),

Start 8:

- Found in 4 of 20 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 4 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_88 (V), Cosmo\_89 (V), MaryV\_90 (V), Wildcat\_90 (V),

**Summary by clusters:**

There are 3 clusters represented in this pham: CQ2, CQ1, V,

Info for manual annotations of cluster CQ1:

- Start number 6 was manually annotated 13 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 5 was manually annotated 1 time for cluster CQ2.
- Start number 6 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster V:

- Start number 8 was manually annotated 4 times for cluster V.

**Gene Information:**

Gene: Abscondus\_144 Start: 78207, Stop: 79091, Start Num: 6

Candidate Starts for Abscondus\_144:

(Start: 6 @78207 has 14 MA's), (16, 78519), (20, 78585), (21, 78600), (22, 78621), (24, 78642), (38, 78687), (43, 78780), (46, 78786), (53, 78855), (58, 78993), (63, 79068),

Gene: Aphelion\_144 Start: 79132, Stop: 79980, Start Num: 6

Candidate Starts for Aphelion\_144:

(Start: 6 @79132 has 14 MA's), (16, 79444), (20, 79510), (21, 79525), (22, 79546), (32, 79579), (35, 79594), (36, 79606), (39, 79627), (57, 79849), (58, 79924), (60, 79945), (61, 79948),

Gene: Azrael100\_88 Start: 54300, Stop: 54977, Start Num: 8

Candidate Starts for Azrael100\_88:

(Start: 8 @54300 has 4 MA's), (9, 54387), (10, 54402), (13, 54483), (14, 54495), (17, 54606), (18, 54624), (19, 54642), (23, 54702), (34, 54735), (40, 54789), (41, 54816), (42, 54828), (50, 54939), (52, 54954), (55, 54969),

Gene: Bachita\_148 Start: 78997, Stop: 80130, Start Num: 6

Candidate Starts for Bachita\_148:

(Start: 6 @78997 has 14 MA's), (16, 79309), (20, 79375), (21, 79390), (22, 79411), (25, 79477), (26, 79507), (27, 79570), (28, 79576), (29, 79624), (31, 79645), (35, 79672), (42, 79765), (47, 79810), (51, 79879), (54, 79897), (58, 80032), (63, 80107),

Gene: BrutonGaster\_120 Start: 72413, Stop: 73297, Start Num: 6

Candidate Starts for BrutonGaster\_120:

(1, 71975), (2, 72065), (3, 72146), (4, 72293), (Start: 6 @72413 has 14 MA's), (12, 72617), (16, 72725), (24, 72851), (37, 72905), (45, 73013), (48, 73022), (59, 73220),

Gene: ClubL\_145 Start: 77571, Stop: 78704, Start Num: 6

Candidate Starts for ClubL\_145:

(Start: 6 @77571 has 14 MA's), (16, 77883), (20, 77949), (21, 77964), (22, 77985), (25, 78051), (26, 78081), (27, 78144), (28, 78150), (29, 78198), (31, 78219), (35, 78246), (42, 78339), (47, 78384), (51, 78453), (54, 78471), (58, 78606), (63, 78681),

Gene: Cosmo\_89 Start: 54301, Stop: 54978, Start Num: 8

Candidate Starts for Cosmo\_89:

(Start: 8 @54301 has 4 MA's), (9, 54388), (10, 54403), (13, 54484), (14, 54496), (17, 54607), (18, 54625), (19, 54643), (23, 54703), (34, 54736), (40, 54790), (41, 54817), (42, 54829), (50, 54940), (52, 54955), (55, 54970),

Gene: Cucurbita\_144 Start: 79310, Stop: 80443, Start Num: 6

Candidate Starts for Cucurbita\_144:

(Start: 6 @79310 has 14 MA's), (16, 79622), (20, 79688), (21, 79703), (22, 79724), (25, 79790), (26, 79820), (27, 79883), (28, 79889), (29, 79937), (31, 79958), (35, 79985), (42, 80078), (47, 80123), (51, 80192), (54, 80210), (58, 80345), (63, 80420),

Gene: Culver\_145 Start: 77574, Stop: 78707, Start Num: 6

Candidate Starts for Culver\_145:

(Start: 6 @77574 has 14 MA's), (16, 77886), (20, 77952), (21, 77967), (22, 77988), (25, 78054), (27, 78147), (28, 78153), (29, 78201), (31, 78222), (33, 78240), (35, 78249), (42, 78342), (54, 78474), (63, 78684),

Gene: Dusty\_143 Start: 78034, Stop: 78918, Start Num: 6

Candidate Starts for Dusty\_143:

(Start: 6 @78034 has 14 MA's), (16, 78346), (20, 78412), (21, 78427), (22, 78448), (24, 78469), (38, 78514), (43, 78607), (46, 78613), (53, 78682), (58, 78820), (63, 78895),

Gene: Engineer\_147 Start: 79046, Stop: 79966, Start Num: 6

Candidate Starts for Engineer\_147:

(Start: 6 @79046 has 14 MA's), (15, 79340), (16, 79358), (20, 79424), (22, 79460), (33, 79499), (54, 79733), (63, 79943),

Gene: Geeche\_146 Start: 78460, Stop: 79344, Start Num: 6

Candidate Starts for Geeche\_146:

(Start: 6 @78460 has 14 MA's), (16, 78772), (20, 78838), (21, 78853), (22, 78874), (24, 78895), (38, 78940), (43, 79033), (46, 79039), (53, 79108), (58, 79246), (63, 79321),

Gene: Lozinak\_145 Start: 78838, Stop: 79971, Start Num: 6

Candidate Starts for Lozinak\_145:

(Start: 6 @78838 has 14 MA's), (16, 79150), (20, 79216), (21, 79231), (22, 79252), (25, 79318), (26, 79348), (27, 79411), (28, 79417), (29, 79465), (31, 79486), (35, 79513), (42, 79606), (47, 79651), (51,

79720), (54, 79738), (58, 79873), (63, 79948),

Gene: MaryV\_90 Start: 54365, Stop: 55042, Start Num: 8

Candidate Starts for MaryV\_90:

(Start: 8 @54365 has 4 MA's), (9, 54452), (10, 54467), (13, 54548), (14, 54560), (17, 54671), (19, 54707), (23, 54767), (34, 54800), (40, 54854), (41, 54881), (42, 54893), (50, 55004), (52, 55019), (55, 55034),

Gene: Miskis\_139 Start: 77881, Stop: 78729, Start Num: 6

Candidate Starts for Miskis\_139:

(Start: 6 @77881 has 14 MA's), (16, 78193), (20, 78259), (21, 78274), (22, 78295), (32, 78328), (35, 78343), (36, 78355), (39, 78376), (57, 78598), (58, 78673), (60, 78694), (61, 78697),

Gene: Norvs\_143 Start: 78029, Stop: 79162, Start Num: 6

Candidate Starts for Norvs\_143:

(Start: 6 @78029 has 14 MA's), (16, 78341), (20, 78407), (21, 78422), (22, 78443), (25, 78509), (26, 78539), (27, 78602), (28, 78608), (29, 78656), (31, 78677), (35, 78704), (42, 78797), (47, 78842), (51, 78911), (54, 78929), (58, 79064), (63, 79139),

Gene: OneUp\_129 Start: 76870, Stop: 77817, Start Num: 5

Candidate Starts for OneUp\_129:

(Start: 5 @76870 has 1 MA's), (7, 76921), (11, 77029), (14, 77107), (24, 77326), (30, 77356), (44, 77515), (49, 77566), (56, 77635), (62, 77767),

Gene: PhinkBoden\_143 Start: 78709, Stop: 79557, Start Num: 6

Candidate Starts for PhinkBoden\_143:

(Start: 6 @78709 has 14 MA's), (16, 79021), (20, 79087), (21, 79102), (22, 79123), (32, 79156), (35, 79171), (36, 79183), (39, 79204), (57, 79426), (58, 79501), (60, 79522), (61, 79525),

Gene: Toniann\_145 Start: 78170, Stop: 79303, Start Num: 6

Candidate Starts for Toniann\_145:

(Start: 6 @78170 has 14 MA's), (16, 78482), (20, 78548), (21, 78563), (22, 78584), (25, 78650), (26, 78680), (27, 78743), (28, 78749), (29, 78797), (31, 78818), (35, 78845), (42, 78938), (47, 78983), (51, 79052), (54, 79070), (58, 79205), (63, 79280),

Gene: Wildcat\_90 Start: 54375, Stop: 55052, Start Num: 8

Candidate Starts for Wildcat\_90:

(Start: 8 @54375 has 4 MA's), (9, 54462), (10, 54477), (13, 54558), (14, 54570), (17, 54681), (19, 54717), (23, 54777), (34, 54810), (40, 54864), (41, 54891), (42, 54903), (50, 55014), (52, 55029), (55, 55044),