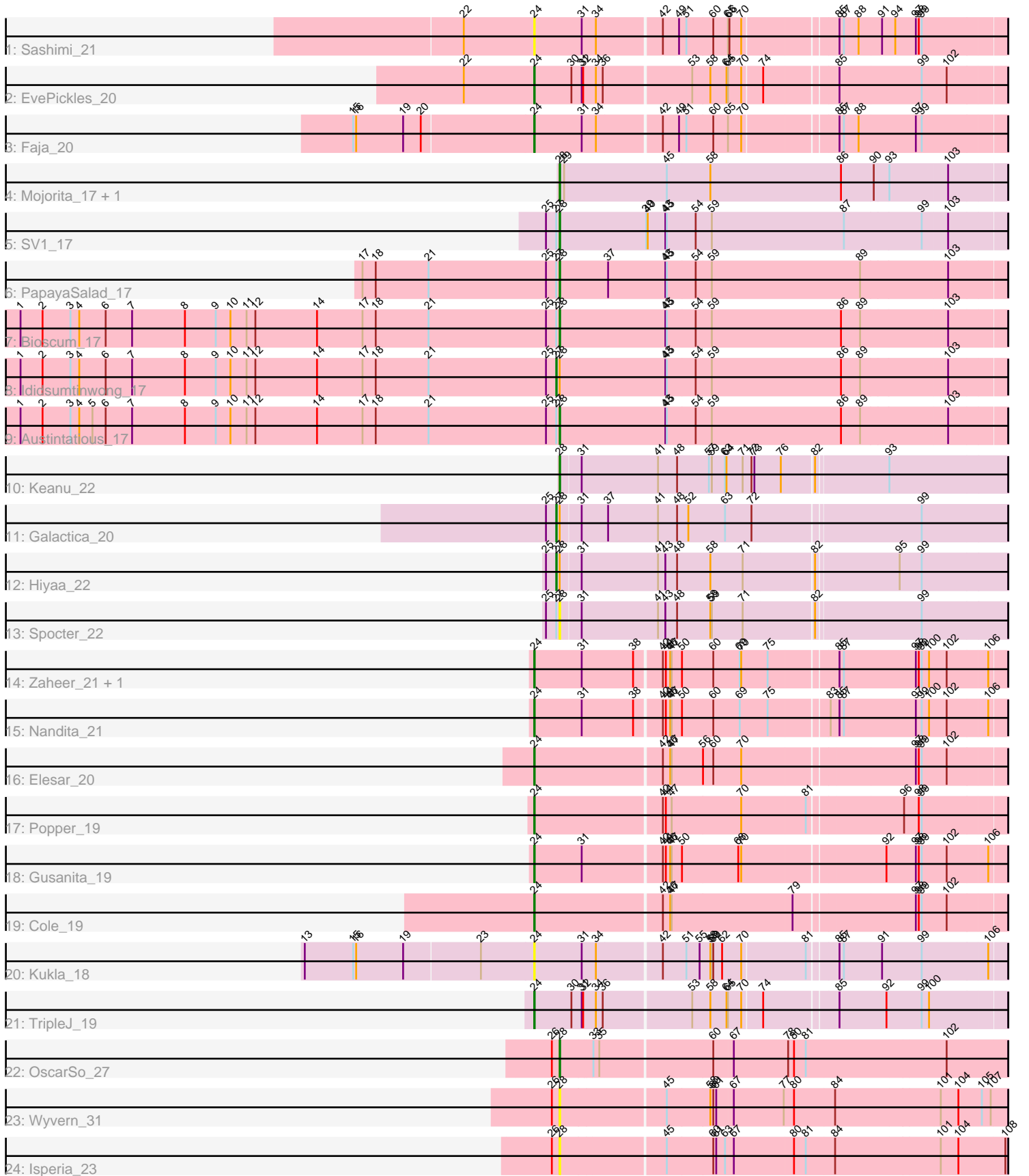


Pham 170228



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 170228 Report

This analysis was run 07/09/24 on database version 566.

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 170228 has 26 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Sashimi\_21
- Track 2 : EvePickles\_20
- Track 3 : Faja\_20
- Track 4 : Mojorita\_17, Picard\_17
- Track 5 : SV1\_17
- Track 6 : PapayaSalad\_17
- Track 7 : Bioscum\_17
- Track 8 : Ididsumtinwong\_17
- Track 9 : Austintatious\_17
- Track 10 : Keanu\_22
- Track 11 : Galactica\_20
- Track 12 : Hiyaa\_22
- Track 13 : Spocter\_22
- Track 14 : Zaheer\_21, Ryan\_21
- Track 15 : Nandita\_21
- Track 16 : Elesar\_20
- Track 17 : Popper\_19
- Track 18 : Gusanita\_19
- Track 19 : Cole\_19
- Track 20 : Kukla\_18
- Track 21 : TripleJ\_19
- Track 22 : OscarSo\_27
- Track 23 : Wyvern\_31
- Track 24 : Isperia\_23

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

The start number called the most often in the published annotations is 24, it was called in 10 of the 21 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Cole\_19, Elesar\_20, EvePickles\_20, Faja\_20, Gusanita\_19, Kukla\_18, Nandita\_21, Popper\_19, Ryan\_21, Sashimi\_21, TripleJ\_19, Zaheer\_21,

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

- 

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

- Austintatious\_17, Bioscum\_17, Galactica\_20, Hiyaa\_22, Ididsumtinwong\_17, Isperia\_23, Keanu\_22, Mojorita\_17, OscarSo\_27, PapayaSalad\_17, Picard\_17, SV1\_17, Spocter\_22, Wyvern\_31,

### Summary by start number:

Start 24:

- Found in 12 of 26 ( 46.2% ) of genes in pham
- Manual Annotations of this start: 10 of 21
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cole\_19 (FF), Elesar\_20 (FF), EvePickles\_20 (AY), Faja\_20 (AY), Gusanita\_19 (FF), Kukla\_18 (FJ), Nandita\_21 (FF), Popper\_19 (FF), Ryan\_21 (FF), Sashimi\_21 (AY), TripleJ\_19 (FJ), Zaheer\_21 (FF),

Start 27:

- Found in 8 of 26 ( 30.8% ) of genes in pham
- Manual Annotations of this start: 3 of 21
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Galactica\_20 (BQ), Hiyaa\_22 (BQ), Ididsumtinwong\_17 (BC3),

Start 28:

- Found in 14 of 26 ( 53.8% ) of genes in pham
- Manual Annotations of this start: 8 of 21
- Called 78.6% of time when present
- Phage (with cluster) where this start called: Austintatious\_17 (BC3), Bioscum\_17 (BC3), Isperia\_23 (GJ), Keanu\_22 (BQ), Mojorita\_17 (BC1), OscarSo\_27 (GJ), PapayaSalad\_17 (BC3), Picard\_17 (BC1), SV1\_17 (BC1), Spocter\_22 (BQ), Wyvern\_31 (GJ),

### Summary by clusters:

There are 7 clusters represented in this pham: GJ, BQ, FF, AY, FJ, BC1, BC3,

Info for manual annotations of cluster AY:

- Start number 24 was manually annotated 2 times for cluster AY.

Info for manual annotations of cluster BC1:

- Start number 28 was manually annotated 3 times for cluster BC1.

Info for manual annotations of cluster BC3:

- Start number 27 was manually annotated 1 time for cluster BC3.
- Start number 28 was manually annotated 3 times for cluster BC3.

Info for manual annotations of cluster BQ:

- Start number 27 was manually annotated 2 times for cluster BQ.
- Start number 28 was manually annotated 1 time for cluster BQ.

Info for manual annotations of cluster FF:

- Start number 24 was manually annotated 7 times for cluster FF.

Info for manual annotations of cluster FJ:

- Start number 24 was manually annotated 1 time for cluster FJ.

Info for manual annotations of cluster GJ:

- Start number 28 was manually annotated 1 time for cluster GJ.

### **Gene Information:**

Gene: Austintatious\_17 Start: 12200, Stop: 13096, Start Num: 28

Candidate Starts for Austintatious\_17:

(1, 11099), (2, 11144), (3, 11201), (4, 11219), (5, 11246), (6, 11273), (7, 11327), (8, 11435), (9, 11498), (10, 11528), (11, 11561), (12, 11579), (14, 11705), (17, 11798), (18, 11825), (21, 11933), (25, 12173), (Start: 27 @12194 has 3 MA's), (Start: 28 @12200 has 8 MA's), (43, 12416), (45, 12419), (54, 12476), (59, 12506), (86, 12770), (89, 12809), (103, 12983),

Gene: Bioscum\_17 Start: 12236, Stop: 13132, Start Num: 28

Candidate Starts for Bioscum\_17:

(1, 11135), (2, 11180), (3, 11237), (4, 11255), (6, 11309), (7, 11363), (8, 11471), (9, 11534), (10, 11564), (11, 11597), (12, 11615), (14, 11741), (17, 11834), (18, 11861), (21, 11969), (25, 12209), (Start: 27 @12230 has 3 MA's), (Start: 28 @12236 has 8 MA's), (43, 12452), (45, 12455), (54, 12512), (59, 12542), (86, 12806), (89, 12845), (103, 13019),

Gene: Cole\_19 Start: 15483, Stop: 16403, Start Num: 24

Candidate Starts for Cole\_19:

(Start: 24 @15483 has 10 MA's), (42, 15735), (46, 15750), (47, 15753), (79, 15993), (97, 16224), (98, 16230), (99, 16236), (102, 16287),

Gene: Elesar\_20 Start: 15874, Stop: 16794, Start Num: 24

Candidate Starts for Elesar\_20:

(Start: 24 @15874 has 10 MA's), (42, 16126), (46, 16141), (47, 16144), (56, 16207), (60, 16228), (70, 16282), (97, 16615), (98, 16621), (99, 16627), (102, 16678),

Gene: EvePickles\_20 Start: 15163, Stop: 16071, Start Num: 24

Candidate Starts for EvePickles\_20:

(22, 15019), (Start: 24 @15163 has 10 MA's), (30, 15238), (31, 15259), (32, 15262), (34, 15286), (36, 15298), (53, 15469), (58, 15505), (64, 15538), (65, 15541), (70, 15565), (74, 15604), (85, 15739), (99, 15904), (102, 15955),

Gene: Faja\_20 Start: 15058, Stop: 15966, Start Num: 24

Candidate Starts for Faja\_20:

(15, 14695), (16, 14701), (19, 14797), (20, 14833), (Start: 24 @15058 has 10 MA's), (31, 15154), (34, 15181), (42, 15304), (49, 15337), (51, 15352), (60, 15406), (65, 15436), (70, 15460), (85, 15634), (87, 15643), (88, 15673), (97, 15787), (99, 15799),

Gene: Galactica\_20 Start: 17668, Stop: 18558, Start Num: 27

Candidate Starts for Galactica\_20:

(25, 17647), (Start: 27 @17668 has 3 MA's), (Start: 28 @17674 has 8 MA's), (31, 17713), (37, 17767), (41, 17869), (48, 17908), (52, 17929), (63, 18004), (72, 18058), (99, 18385),

Gene: Gusanita\_19 Start: 15698, Stop: 16618, Start Num: 24

Candidate Starts for Gusanita\_19:

(Start: 24 @15698 has 10 MA's), (31, 15794), (42, 15950), (44, 15956), (46, 15965), (47, 15968), (50, 15989), (68, 16100), (70, 16106), (92, 16379), (97, 16439), (98, 16445), (99, 16451), (102, 16502), (106, 16583),

Gene: Hiyaa\_22 Start: 18704, Stop: 19594, Start Num: 27

Candidate Starts for Hiyaa\_22:

(25, 18683), (Start: 27 @18704 has 3 MA's), (Start: 28 @18710 has 8 MA's), (31, 18749), (41, 18905), (43, 18920), (48, 18944), (58, 19010), (71, 19076), (82, 19214), (95, 19376), (99, 19421),

Gene: Ididsumtinwong\_17 Start: 12230, Stop: 13132, Start Num: 27

Candidate Starts for Ididsumtinwong\_17:

(1, 11135), (2, 11180), (3, 11237), (4, 11255), (6, 11309), (7, 11363), (8, 11471), (9, 11534), (10, 11564), (11, 11597), (12, 11615), (14, 11741), (17, 11834), (18, 11861), (21, 11969), (25, 12209), (Start: 27 @12230 has 3 MA's), (Start: 28 @12236 has 8 MA's), (43, 12452), (45, 12455), (54, 12512), (59, 12542), (86, 12806), (89, 12845), (103, 13019),

Gene: Isperia\_23 Start: 15256, Stop: 16134, Start Num: 28

Candidate Starts for Isperia\_23:

(26, 15241), (Start: 28 @15256 has 8 MA's), (45, 15460), (60, 15553), (61, 15559), (63, 15577), (67, 15592), (80, 15712), (81, 15736), (84, 15793), (101, 16000), (104, 16036), (108, 16129),

Gene: Keanu\_22 Start: 18751, Stop: 19635, Start Num: 28

Candidate Starts for Keanu\_22:

(Start: 28 @18751 has 8 MA's), (31, 18790), (41, 18946), (48, 18985), (57, 19048), (59, 19054), (63, 19081), (64, 19084), (71, 19117), (72, 19135), (73, 19141), (76, 19192), (82, 19255), (93, 19396),

Gene: Kukla\_18 Start: 14545, Stop: 15453, Start Num: 24

Candidate Starts for Kukla\_18:

(13, 14086), (15, 14185), (16, 14191), (19, 14287), (23, 14437), (Start: 24 @14545 has 10 MA's), (31, 14641), (34, 14668), (42, 14791), (51, 14839), (55, 14866), (58, 14887), (59, 14890), (60, 14893), (62, 14911), (70, 14947), (81, 15070), (85, 15121), (87, 15130), (91, 15205), (99, 15286), (106, 15418),

Gene: Mojerita\_17 Start: 12339, Stop: 13232, Start Num: 28

Candidate Starts for Mojerita\_17:

(Start: 28 @12339 has 8 MA's), (29, 12348), (45, 12555), (58, 12639), (86, 12906), (90, 12972), (93, 13002), (103, 13119),

Gene: Nandita\_21 Start: 15809, Stop: 16729, Start Num: 24

Candidate Starts for Nandita\_21:

(Start: 24 @15809 has 10 MA's), (31, 15905), (38, 16010), (42, 16061), (44, 16067), (46, 16076), (47, 16079), (50, 16100), (60, 16163), (69, 16214), (75, 16271), (83, 16382), (85, 16397), (87, 16406), (97, 16550), (99, 16562), (100, 16577), (102, 16613), (106, 16694),

Gene: OscarSo\_27 Start: 17801, Stop: 18682, Start Num: 28

Candidate Starts for OscarSo\_27:

(26, 17786), (Start: 28 @17801 has 8 MA's), (33, 17864), (35, 17876), (60, 18098), (67, 18137), (78, 18245), (80, 18257), (81, 18281), (102, 18560),

Gene: PapayaSalad\_17 Start: 12206, Stop: 13102, Start Num: 28

Candidate Starts for PapayaSalad\_17:

(17, 11804), (18, 11831), (21, 11939), (25, 12179), (Start: 27 @12200 has 3 MA's), (Start: 28 @12206 has 8 MA's), (37, 12305), (43, 12422), (45, 12425), (54, 12482), (59, 12512), (89, 12815), (103, 12989),

Gene: Picard\_17 Start: 12333, Stop: 13226, Start Num: 28

Candidate Starts for Picard\_17:

(Start: 28 @12333 has 8 MA's), (29, 12342), (45, 12549), (58, 12633), (86, 12900), (90, 12966), (93, 12996), (103, 13113),

Gene: Popper\_19 Start: 15336, Stop: 16256, Start Num: 24

Candidate Starts for Popper\_19:

(Start: 24 @15336 has 10 MA's), (42, 15588), (44, 15594), (47, 15606), (70, 15744), (81, 15873), (96, 16053), (98, 16083), (99, 16089),

Gene: Ryan\_21 Start: 15955, Stop: 16875, Start Num: 24

Candidate Starts for Ryan\_21:

(Start: 24 @15955 has 10 MA's), (31, 16051), (38, 16156), (42, 16207), (44, 16213), (46, 16222), (47, 16225), (50, 16246), (60, 16309), (69, 16360), (70, 16363), (75, 16417), (85, 16543), (87, 16552), (97, 16696), (98, 16702), (99, 16708), (100, 16723), (102, 16759), (106, 16840),

Gene: SV1\_17 Start: 12442, Stop: 13338, Start Num: 28

Candidate Starts for SV1\_17:

(25, 12415), (Start: 27 @12436 has 3 MA's), (Start: 28 @12442 has 8 MA's), (39, 12619), (40, 12622), (43, 12658), (45, 12661), (54, 12718), (59, 12748), (87, 13018), (99, 13174), (103, 13225),

Gene: Sashimi\_21 Start: 15164, Stop: 16072, Start Num: 24

Candidate Starts for Sashimi\_21:

(22, 15020), (Start: 24 @15164 has 10 MA's), (31, 15260), (34, 15287), (42, 15410), (49, 15443), (51, 15458), (60, 15512), (65, 15542), (66, 15545), (70, 15566), (85, 15740), (87, 15749), (88, 15779), (91, 15824), (94, 15851), (97, 15893), (98, 15899), (99, 15905),

Gene: Spocter\_22 Start: 18698, Stop: 19582, Start Num: 28

Candidate Starts for Spocter\_22:

(25, 18671), (Start: 27 @18692 has 3 MA's), (Start: 28 @18698 has 8 MA's), (31, 18737), (41, 18893), (43, 18908), (48, 18932), (58, 18998), (59, 19001), (71, 19064), (82, 19202), (99, 19409),

Gene: TripleJ\_19 Start: 15465, Stop: 16373, Start Num: 24

Candidate Starts for TripleJ\_19:

(Start: 24 @15465 has 10 MA's), (30, 15540), (31, 15561), (32, 15564), (34, 15588), (36, 15600), (53, 15771), (58, 15807), (64, 15840), (65, 15843), (70, 15867), (74, 15906), (85, 16041), (92, 16134), (99, 16206), (100, 16221),

Gene: Wyvern\_31 Start: 16066, Stop: 16947, Start Num: 28

Candidate Starts for Wyvern\_31:

(26, 16051), (Start: 28 @16066 has 8 MA's), (45, 16273), (58, 16360), (60, 16366), (61, 16372), (67, 16405), (77, 16507), (80, 16525), (84, 16606), (101, 16813), (104, 16849), (105, 16897), (107, 16915),

Gene: Zaheer\_21 Start: 16044, Stop: 16964, Start Num: 24

Candidate Starts for Zaheer\_21:

(Start: 24 @16044 has 10 MA's), (31, 16140), (38, 16245), (42, 16296), (44, 16302), (46, 16311), (47, 16314), (50, 16335), (60, 16398), (69, 16449), (70, 16452), (75, 16506), (85, 16632), (87, 16641), (97, 16785), (98, 16791), (99, 16797), (100, 16812), (102, 16848), (106, 16929),