Pham 291321

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 291321 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291321 has 40 members, 14 are drafts.

Phages represented in each track:
• Track 1 : GumGum_50, Zucker_42, CosmicBrownie_47, Nyilah_50
• Track 2 : Hestia_44
• Track 3 : Shukran_46
• Track 4 : Ding_47
• Track 5 : B3_30
• Track 6 : E1_30, E6_30, Anatole_30
• Track 7 : Doucette_33, B22_31
• Track 8 : Judy_41, FosterFrank_42, Bridgette_40, NidoQ_35, Peas_37, Eileen_36, LittleRon_38, LilyBell_40
• Track 9 : ChuckDuck_41, Constance_40, RootBeer_31, KayMoney_40, GlobiWarming_40
• Track 10 : BrayBeast_35
• Track 11 : Kumotta_32
• Track 12 : Shoya_39, Gibbzilla_41
• Track 13 : Sarge_32
• Track 14 : JeanClaude_37
• Track 15 : MargaretKali_32
• Track 16 : Alatato_33
• Track 17 : Pigu_35
• Track 18 : Rooter_36
• Track 19 : BellaJr_41
• Track 20 : Bauer_43
• Track 21 : BlackSpider_38
• Track 22 : Maja_32

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

The start number called the most often in the published annotations is 28, it was called in 14 of the 26 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alatato_33, Bauer_43, BellaJr_41, BlackSpider_38, BrayBeast_35, ChuckDuck_41, Constance_40, CosmicBrownie_47, Gibbzilla_41, GlobiWarming_40, GumGum_50, Hestia_44, JeanClaude_37, KayMoney_40, MargaretKali_32, Nyilah_50, Pigu_35,

RootBeer_31, Sarge_32, Shoya_39, Zucker_42,

Genes that have the "Most Annotated" start but do not call it:
• Bridgette_40, Ding_47, Eileen_36, FosterFrank_42, Judy_41, Kumotta_32,
LilyBell_40, LittleRon_38, Maja_32, NidoQ_35, Peas_37, Rooter_36, Shukran_46,

Genes that do not have the "Most Annotated" start:
• Anatole_30, B22_31, B3_30, Doucette_33, E1_30, E6_30,

Summary by start number:

Start 19:
• Found in 6 of 40 (15.0%) of genes in pham
• Manual Annotations of this start: 1 of 26
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Maja_32 (FO),

Start 20:
• Found in 3 of 40 (7.5%) of genes in pham
• Manual Annotations of this start: 1 of 26
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Kumotta_32 (FB),

Start 23:
• Found in 3 of 40 (7.5%) of genes in pham
• Manual Annotations of this start: 3 of 26
• Called 100.0% of time when present
• Phage (with cluster) where this start called: B22_31 (BW), B3_30 (BV), Doucette_33
(BW),

Start 24:
• Found in 13 of 40 (32.5%) of genes in pham
• Manual Annotations of this start: 4 of 26
• Called 61.5% of time when present
• Phage (with cluster) where this start called: Bridgette_40 (FA), Eileen_36 (FA),
FosterFrank_42 (FA), Judy_41 (FA), LilyBell_40 (FA), LittleRon_38 (FA), NidoQ_35
(FA), Peas_37 (FA),

Start 27:
• Found in 3 of 40 (7.5%) of genes in pham
• Manual Annotations of this start: 3 of 26
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anatole_30 (BV), E1_30 (BV), E6_30
(BW),

Start 28:
• Found in 34 of 40 (85.0%) of genes in pham
• Manual Annotations of this start: 14 of 26
• Called 61.8% of time when present
• Phage (with cluster) where this start called: Alatato_33 (FB), Bauer_43 (FN),
BellaJr_41 (FN), BlackSpider_38 (FN), BrayBeast_35 (FB), ChuckDuck_41 (FA),
Constance_40 (FA), CosmicBrownie_47 (AY), Gibbzilla_41 (FB), GlobiWarming_40
(FA), GumGum_50 (AY), Hestia_44 (AY), JeanClaude_37 (FB), KayMoney_40 (FA),

MargaretKali_32 (FB), Nyilah_50 (AY), Pigu_35 (FB), RootBeer_31 (FA), Sarge_32 (FB), Shoya_39 (FB), Zucker_42 (FN),

Start 29:
• Found in 14 of 40 (35.0%) of genes in pham
• No Manual Annotations of this start.
• Called 7.1% of time when present
• Phage (with cluster) where this start called: Shukran_46 (AY),

Start 30:
• Found in 7 of 40 (17.5%) of genes in pham
• No Manual Annotations of this start.
• Called 28.6% of time when present
• Phage (with cluster) where this start called: Ding_47 (AY), Rooter_36 (FB),

Summary by clusters:

There are 7 clusters represented in this pham: BV, FA, FB, BW, AY, FN, FO,

Info for manual annotations of cluster AY:
•Start number 28 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BV:
•Start number 23 was manually annotated 1 time for cluster BV.
•Start number 27 was manually annotated 2 times for cluster BV.

Info for manual annotations of cluster BW:
•Start number 23 was manually annotated 2 times for cluster BW.
•Start number 27 was manually annotated 1 time for cluster BW.

Info for manual annotations of cluster FA:
•Start number 24 was manually annotated 4 times for cluster FA.
•Start number 28 was manually annotated 5 times for cluster FA.

Info for manual annotations of cluster FB:
•Start number 20 was manually annotated 1 time for cluster FB.
•Start number 28 was manually annotated 5 times for cluster FB.

Info for manual annotations of cluster FN:
•Start number 28 was manually annotated 3 times for cluster FN.

Info for manual annotations of cluster FO:
•Start number 19 was manually annotated 1 time for cluster FO.

Gene Information:
Gene: Alatato_33 Start: 25274, Stop: 25020, Start Num: 28
Candidate Starts for Alatato_33:
(Start: 28 @25274 has 14 MA's), (30, 25241), (33, 25217), (51, 25073),

Gene: Anatole_30 Start: 23336, Stop: 23091, Start Num: 27

Candidate Starts for Anatole_30:
(21, 23354), (Start: 27 @23336 has 3 MA's), (44, 23180),

Gene: B22_31 Start: 23303, Stop: 23049, Start Num: 23
Candidate Starts for B22_31:
(16, 23396), (17, 23387), (18, 23375), (Start: 23 @23303 has 3 MA's), (47, 23108), (53, 23081),

Gene: B3_30 Start: 23432, Stop: 23178, Start Num: 23
Candidate Starts for B3_30:
(1, 23747), (2, 23732), (3, 23687), (4, 23678), (5, 23675), (6, 23657), (7, 23639), (9, 23615), (10, 23594), (11, 23579), (12, 23564), (14, 23546), (15, 23543), (Start: 23 @23432 has 3 MA's), (47, 23237), (53, 23210),

Gene: Bauer_43 Start: 29569, Stop: 29315, Start Num: 28
Candidate Starts for Bauer_43:
(12, 29710), (13, 29701), (Start: 19 @29605 has 1 MA's), (25, 29575), (Start: 28 @29569 has 14 MA's), (31, 29533), (33, 29512), (35, 29497), (36, 29482), (39, 29464), (43, 29419), (44, 29413), (50, 29371),

Gene: BellaJr_41 Start: 30090, Stop: 29830, Start Num: 28
Candidate Starts for BellaJr_41:
(Start: 28 @30090 has 14 MA's), (35, 30018), (42, 29958), (44, 29934), (53, 29880),

Gene: BlackSpider_38 Start: 28682, Stop: 28422, Start Num: 28
Candidate Starts for BlackSpider_38:
(Start: 28 @28682 has 14 MA's), (35, 28610), (42, 28550), (44, 28526), (53, 28472),

Gene: BrayBeast_35 Start: 26036, Stop: 25785, Start Num: 28
Candidate Starts for BrayBeast_35:
(Start: 20 @26069 has 1 MA's), (Start: 28 @26036 has 14 MA's), (35, 25961), (42, 25901), (43, 25883), (44, 25877), (46, 25859),

Gene: Bridgette_40 Start: 28778, Stop: 28521, Start Num: 24
Candidate Starts for Bridgette_40:
(Start: 24 @28778 has 4 MA's), (Start: 28 @28769 has 14 MA's), (29, 28748), (34, 28709), (37, 28673), (38, 28670), (40, 28655), (41, 28649), (42, 28637), (44, 28613), (53, 28559),

Gene: ChuckDuck_41 Start: 28592, Stop: 28344, Start Num: 28
Candidate Starts for ChuckDuck_41:
(Start: 24 @28601 has 4 MA's), (Start: 28 @28592 has 14 MA's), (29, 28571), (34, 28532), (37, 28496), (38, 28493), (40, 28478), (41, 28472), (42, 28460), (44, 28436), (53, 28382),

Gene: Constance_40 Start: 28921, Stop: 28673, Start Num: 28
Candidate Starts for Constance_40:
(Start: 24 @28930 has 4 MA's), (Start: 28 @28921 has 14 MA's), (29, 28900), (34, 28861), (37, 28825), (38, 28822), (40, 28807), (41, 28801), (42, 28789), (44, 28765), (53, 28711),

Gene: CosmicBrownie_47 Start: 30617, Stop: 30363, Start Num: 28
Candidate Starts for CosmicBrownie_47:
(Start: 19 @30653 has 1 MA's), (Start: 28 @30617 has 14 MA's), (33, 30560), (44, 30461), (45, 30455), (50, 30419), (51, 30416), (52, 30410),

Gene: Ding_47 Start: 30530, Stop: 30309, Start Num: 30
Candidate Starts for Ding_47:

(Start: 28 @30563 has 14 MA's), (30, 30530), (33, 30506), (50, 30365), (51, 30362),

Gene: Doucette_33 Start: 24717, Stop: 24463, Start Num: 23
Candidate Starts for Doucette_33:
(16, 24810), (17, 24801), (18, 24789), (Start: 23 @24717 has 3 MA's), (47, 24522), (53, 24495),

Gene: E1_30 Start: 23336, Stop: 23091, Start Num: 27
Candidate Starts for E1_30:
(21, 23354), (Start: 27 @23336 has 3 MA's), (44, 23180),

Gene: E6_30 Start: 23058, Stop: 22813, Start Num: 27
Candidate Starts for E6_30:
(21, 23076), (Start: 27 @23058 has 3 MA's), (44, 22902),

Gene: Eileen_36 Start: 27008, Stop: 26751, Start Num: 24
Candidate Starts for Eileen_36:
(Start: 24 @27008 has 4 MA's), (Start: 28 @26999 has 14 MA's), (29, 26978), (34, 26939), (37, 26903), (38, 26900), (40, 26885), (41, 26879), (42, 26867), (44, 26843), (53, 26789),

Gene: FosterFrank_42 Start: 28660, Stop: 28403, Start Num: 24
Candidate Starts for FosterFrank_42:
(Start: 24 @28660 has 4 MA's), (Start: 28 @28651 has 14 MA's), (29, 28630), (34, 28591), (37, 28555), (38, 28552), (40, 28537), (41, 28531), (42, 28519), (44, 28495), (53, 28441),

Gene: Gibbzilla_41 Start: 26546, Stop: 26292, Start Num: 28
Candidate Starts for Gibbzilla_41:
(Start: 28 @26546 has 14 MA's), (30, 26513), (33, 26489), (44, 26390), (51, 26345),

Gene: GlobiWarming_40 Start: 28175, Stop: 27927, Start Num: 28
Candidate Starts for GlobiWarming_40:
(Start: 24 @28184 has 4 MA's), (Start: 28 @28175 has 14 MA's), (29, 28154), (34, 28115), (37, 28079), (38, 28076), (40, 28061), (41, 28055), (42, 28043), (44, 28019), (53, 27965),

Gene: GumGum_50 Start: 31036, Stop: 30782, Start Num: 28
Candidate Starts for GumGum_50:
(Start: 19 @31072 has 1 MA's), (Start: 28 @31036 has 14 MA's), (33, 30979), (44, 30880), (45, 30874), (50, 30838), (51, 30835), (52, 30829),

Gene: Hestia_44 Start: 29360, Stop: 29106, Start Num: 28
Candidate Starts for Hestia_44:
(25, 29366), (Start: 28 @29360 has 14 MA's), (32, 29315), (33, 29303), (35, 29288), (36, 29273), (39, 29255), (44, 29204), (46, 29186),

Gene: JeanClaude_37 Start: 25039, Stop: 24785, Start Num: 28
Candidate Starts for JeanClaude_37:
(Start: 28 @25039 has 14 MA's), (30, 25006), (33, 24982), (36, 24952), (51, 24838),

Gene: Judy_41 Start: 29096, Stop: 28839, Start Num: 24
Candidate Starts for Judy_41:
(Start: 24 @29096 has 4 MA's), (Start: 28 @29087 has 14 MA's), (29, 29066), (34, 29027), (37, 28991), (38, 28988), (40, 28973), (41, 28967), (42, 28955), (44, 28931), (53, 28877),

Gene: KayMoney_40 Start: 28264, Stop: 28016, Start Num: 28

Candidate Starts for KayMoney_40:
(Start: 24 @28273 has 4 MA's), (Start: 28 @28264 has 14 MA's), (29, 28243), (34, 28204), (37, 28168), (38, 28165), (40, 28150), (41, 28144), (42, 28132), (44, 28108), (53, 28054),

Gene: Kumotta_32 Start: 26058, Stop: 25768, Start Num: 20
Candidate Starts for Kumotta_32:
(8, 26229), (Start: 20 @26058 has 1 MA's), (Start: 28 @26025 has 14 MA's), (41, 25905), (43, 25875), (44, 25869), (48, 25839),

Gene: LilyBell_40 Start: 28502, Stop: 28245, Start Num: 24
Candidate Starts for LilyBell_40:
(Start: 24 @28502 has 4 MA's), (Start: 28 @28493 has 14 MA's), (29, 28472), (34, 28433), (37, 28397), (38, 28394), (40, 28379), (41, 28373), (42, 28361), (44, 28337), (53, 28283),

Gene: LittleRon_38 Start: 27882, Stop: 27625, Start Num: 24
Candidate Starts for LittleRon_38:
(Start: 24 @27882 has 4 MA's), (Start: 28 @27873 has 14 MA's), (29, 27852), (34, 27813), (37, 27777), (38, 27774), (40, 27759), (41, 27753), (42, 27741), (44, 27717), (53, 27663),

Gene: Maja_32 Start: 26527, Stop: 26237, Start Num: 19
Candidate Starts for Maja_32:
(Start: 19 @26527 has 1 MA's), (Start: 28 @26491 has 14 MA's), (30, 26458), (33, 26434), (50, 26293), (52, 26284),

Gene: MargaretKali_32 Start: 25660, Stop: 25403, Start Num: 28
Candidate Starts for MargaretKali_32:
(8, 25864), (Start: 20 @25693 has 1 MA's), (Start: 28 @25660 has 14 MA's), (41, 25540), (43, 25510), (44, 25504), (48, 25474),

Gene: NidoQ_35 Start: 27607, Stop: 27350, Start Num: 24
Candidate Starts for NidoQ_35:
(Start: 24 @27607 has 4 MA's), (Start: 28 @27598 has 14 MA's), (29, 27577), (34, 27538), (37, 27502), (38, 27499), (40, 27484), (41, 27478), (42, 27466), (44, 27442), (53, 27388),

Gene: Nyilah_50 Start: 30252, Stop: 29998, Start Num: 28
Candidate Starts for Nyilah_50:
(Start: 19 @30288 has 1 MA's), (Start: 28 @30252 has 14 MA's), (33, 30195), (44, 30096), (45, 30090), (50, 30054), (51, 30051), (52, 30045),

Gene: Peas_37 Start: 29155, Stop: 28898, Start Num: 24
Candidate Starts for Peas_37:
(Start: 24 @29155 has 4 MA's), (Start: 28 @29146 has 14 MA's), (29, 29125), (34, 29086), (37, 29050), (38, 29047), (40, 29032), (41, 29026), (42, 29014), (44, 28990), (53, 28936),

Gene: Pigu_35 Start: 25236, Stop: 24982, Start Num: 28
Candidate Starts for Pigu_35:
(25, 25242), (Start: 28 @25236 has 14 MA's), (31, 25200), (32, 25191), (33, 25179), (35, 25164), (36, 25149), (39, 25131), (44, 25080), (49, 25044),

Gene: RootBeer_31 Start: 25049, Stop: 24801, Start Num: 28
Candidate Starts for RootBeer_31:
(Start: 24 @25058 has 4 MA's), (Start: 28 @25049 has 14 MA's), (29, 25028), (34, 24989), (37, 24953), (38, 24950), (40, 24935), (41, 24929), (42, 24917), (44, 24893), (53, 24839),

Gene: Rooter_36 Start: 25498, Stop: 25277, Start Num: 30
Candidate Starts for Rooter_36:
(Start: 28 @25531 has 14 MA's), (30, 25498), (33, 25474), (44, 25375), (51, 25330),

Gene: Sarge_32 Start: 23905, Stop: 23651, Start Num: 28
Candidate Starts for Sarge_32:
(26, 23911), (Start: 28 @23905 has 14 MA's), (31, 23869), (33, 23848), (35, 23833), (36, 23818), (39, 23800), (43, 23755), (44, 23749), (50, 23707),

Gene: Shoya_39 Start: 26307, Stop: 26053, Start Num: 28
Candidate Starts for Shoya_39:
(Start: 28 @26307 has 14 MA's), (30, 26274), (33, 26250), (44, 26151), (51, 26106),

Gene: Shukran_46 Start: 30035, Stop: 29808, Start Num: 29
Candidate Starts for Shukran_46:
(22, 30077), (Start: 28 @30056 has 14 MA's), (29, 30035), (35, 29984), (42, 29924), (44, 29900), (52, 29849), (53, 29846),

Gene: Zucker_42 Start: 30051, Stop: 29797, Start Num: 28
Candidate Starts for Zucker_42:
(Start: 19 @30087 has 1 MA's), (Start: 28 @30051 has 14 MA's), (33, 29994), (44, 29895), (45, 29889), (50, 29853), (51, 29850), (52, 29844),