Pham 330950


1: LunarLander_77 + 6
2: PattyP_88
3: IHOP_147 + 7
4: Mosby_139 + 8
5: Murphy_143 + 7
6: Nala_144 + 5
7: Bruin_139
8: Dumbo_145 + 2
9: Inca_142
10: Rakim_144
11: Kenuha5_36 + 2
12: Flathead_39
13: Aminay_86

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 330950 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330950 has 50 members, 3 are drafts.

Phages represented in each track:
• Track 1 : LunarLander_77, BillKnuckles_82, Inyanga_80, Iqorha_80, Graduation_91, Bobi_43, Cueylyss_73
• Track 2 : PattyP_88
• Track 3 : IHOP_147, Ukulele_139, BigBubba_145, Marshmallow_145, Phaja_147, Simpliphy_143, Dove_227, OrionPax_140
• Track 4 : Mosby_139, FireRed_146, Filch_146, Tomaszewski_136, Brewer_138, xkcd_147, Youngblood_146, PhatBacter_146, MollyToe_136
• Track 5 : Murphy_143, Halley_245, MPhalcon_143, Dallas_241, MadamMonkfish_144, Odette_242, Zelink_236, Ejimix_234
• Track 6 : Nala_144, Misfit_142, Terminus_145, Sassay_137, Willez_140, Contagion_138
• Track 7 : Bruin_139
• Track 8 : Dumbo_145, Cookies_144, Bask21_146
• Track 9 : Inca_142
• Track 10 : Rakim_144
• Track 11 : Kenuha5_36, Emma_42, Rialto_44
• Track 12 : Flathead_39
• Track 13 : Aminay_86

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

The start number called the most often in the published annotations is 2, it was called in 19 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Bask21_146, Brewer_138, Cookies_144, Dallas_241, Dumbo_145, Ejimix_234, Filch_146, FireRed_146, Halley_245, MPhalcon_143, MadamMonkfish_144, MollyToe_136, Mosby_139, Murphy_143, Odette_242, PhatBacter_146, Tomaszewski_136, Youngblood_146, Zelink_236, xkcd_147,

Genes that have the "Most Annotated" start but do not call it:
• Bruin_139, Contagion_138, Misfit_142, Nala_144, Rakim_144, Sassay_137, Terminus_145, Willez_140,

Genes that do not have the "Most Annotated" start:
• Aminay_86, BigBubba_145, BillKnuckles_82, Bobi_43, Cueylyss_73, Dove_227, Emma_42, Flathead_39, Graduation_91, IHOP_147, Inca_142, Inyanga_80, Iqorha_80, Kenuha5_36, LunarLander_77, Marshmallow_145, OrionPax_140, PattyP_88, Phaja_147, Rialto_44, Simpliphy_143, Ukulele_139,

Summary by start number:

Start 2:
• Found in 28 of 50 (56.0%) of genes in pham
• Manual Annotations of this start: 19 of 47
• Called 71.4% of time when present
• Phage (with cluster) where this start called: Bask21_146 (E), Brewer_138 (E), Cookies_144 (E), Dallas_241 (J), Dumbo_145 (E), Ejimix_234 (J), Filch_146 (E), FireRed_146 (E), Halley_245 (J), MPhalcon_143 (E), MadamMonkfish_144 (E), MollyToe_136 (E), Mosby_139 (E), Murphy_143 (E), Odette_242 (J), PhatBacter_146 (E), Tomaszewski_136 (E), Youngblood_146 (E), Zelink_236 (J), xkcd_147 (E),

Start 3:
• Found in 11 of 50 (22.0%) of genes in pham
• Manual Annotations of this start: 9 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BillKnuckles_82 (A1), Bobi_43 (F1), Cueylyss_73 (A1), Emma_42 (F1), Graduation_91 (A1), Inyanga_80 (A1), Iqorha_80 (A1), Kenuha5_36 (F1), LunarLander_77 (A1), PattyP_88 (A1), Rialto_44 (F1),

Start 4:
• Found in 38 of 50 (76.0%) of genes in pham
• Manual Annotations of this start: 18 of 47
• Called 47.4% of time when present
• Phage (with cluster) where this start called: Aminay_86 (K7), BigBubba_145 (E), Bruin_139 (E), Contagion_138 (E), Dove_227 (J), IHOP_147 (E), Inca_142 (E), Marshmallow_145 (E), Misfit_142 (E), Nala_144 (E), OrionPax_140 (E), Phaja_147 (E), Rakim_144 (E), Sassay_137 (E), Simpliphy_143 (E), Terminus_145 (E), Ukulele_139 (E), Willez_140 (E),

Start 5:
• Found in 1 of 50 (2.0%) of genes in pham
• Manual Annotations of this start: 1 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Flathead_39 (F1),

Summary by clusters:

There are 5 clusters represented in this pham: A1, F1, J, E, K7,

Info for manual annotations of cluster A1:
•Start number 3 was manually annotated 5 times for cluster A1.

Info for manual annotations of cluster E:
•Start number 2 was manually annotated 15 times for cluster E.
•Start number 4 was manually annotated 16 times for cluster E.

Info for manual annotations of cluster F1:
•Start number 3 was manually annotated 4 times for cluster F1.
•Start number 5 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster J:
•Start number 2 was manually annotated 4 times for cluster J.
•Start number 4 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K7:
•Start number 4 was manually annotated 1 time for cluster K7.

Gene Information:

Gene: Aminay_86 Start: 53718, Stop: 53972, Start Num: 4
Candidate Starts for Aminay_86:
(Start: 4 @53718 has 18 MA's), (7, 53763), (8, 53808), (9, 53814), (10, 53841), (13, 53898), (16, 53949), (18, 53961),

Gene: Bask21_146 Start: 73530, Stop: 73267, Start Num: 2
Candidate Starts for Bask21_146:
(Start: 2 @73530 has 19 MA's), (Start: 4 @73524 has 18 MA's), (8, 73443), (9, 73437), (12, 73371), (14, 73347), (17, 73296),

Gene: BigBubba_145 Start: 73532, Stop: 73290, Start Num: 4
Candidate Starts for BigBubba_145:
(Start: 4 @73532 has 18 MA's), (8, 73451), (9, 73445), (12, 73379), (14, 73355), (17, 73304),

Gene: BillKnuckles_82 Start: 50387, Stop: 50142, Start Num: 3
Candidate Starts for BillKnuckles_82:
(1, 50417), (Start: 3 @50387 has 9 MA's), (6, 50354), (8, 50303), (13, 50219), (14, 50207),

Gene: Bobi_43 Start: 32563, Stop: 32318, Start Num: 3
Candidate Starts for Bobi_43:
(1, 32593), (Start: 3 @32563 has 9 MA's), (6, 32530), (8, 32479), (13, 32395), (14, 32383),

Gene: Brewer_138 Start: 72478, Stop: 72215, Start Num: 2
Candidate Starts for Brewer_138:
(Start: 2 @72478 has 19 MA's), (Start: 4 @72472 has 18 MA's), (8, 72391), (9, 72385), (11, 72328), (12, 72319), (14, 72295), (17, 72244),

Gene: Bruin_139 Start: 72737, Stop: 72480, Start Num: 4
Candidate Starts for Bruin_139:
(Start: 2 @72743 has 19 MA's), (Start: 4 @72737 has 18 MA's), (8, 72656), (9, 72650), (11, 72593), (12, 72584), (14, 72560), (17, 72509),

Gene: Contagion_138 Start: 73060, Stop: 72803, Start Num: 4
Candidate Starts for Contagion_138:
(Start: 2 @73066 has 19 MA's), (Start: 4 @73060 has 18 MA's), (8, 72979), (9, 72973), (11, 72916), (12, 72907), (14, 72883), (17, 72832),

Gene: Cookies_144 Start: 74873, Stop: 74610, Start Num: 2

Candidate Starts for Cookies_144:
(Start: 2 @74873 has 19 MA's), (Start: 4 @74867 has 18 MA's), (8, 74786), (9, 74780), (12, 74714), (14, 74690), (17, 74639),

Gene: Cueylyss_73 Start: 47182, Stop: 46937, Start Num: 3
Candidate Starts for Cueylyss_73:
(1, 47212), (Start: 3 @47182 has 9 MA's), (6, 47149), (8, 47098), (13, 47014), (14, 47002),

Gene: Dallas_241 Start: 111238, Stop: 110990, Start Num: 2
Candidate Starts for Dallas_241:
(Start: 2 @111238 has 19 MA's), (Start: 4 @111232 has 18 MA's), (8, 111151), (9, 111145), (12, 111079), (14, 111055), (17, 111004),

Gene: Dove_227 Start: 108364, Stop: 108122, Start Num: 4
Candidate Starts for Dove_227:
(Start: 4 @108364 has 18 MA's), (8, 108283), (9, 108277), (12, 108211), (14, 108187), (17, 108136),

Gene: Dumbo_145 Start: 74269, Stop: 74021, Start Num: 2
Candidate Starts for Dumbo_145:
(Start: 2 @74269 has 19 MA's), (Start: 4 @74263 has 18 MA's), (8, 74182), (9, 74176), (12, 74110), (14, 74086), (17, 74035),

Gene: Ejimix_234 Start: 111316, Stop: 111068, Start Num: 2
Candidate Starts for Ejimix_234:
(Start: 2 @111316 has 19 MA's), (Start: 4 @111310 has 18 MA's), (8, 111229), (9, 111223), (12, 111157), (14, 111133), (17, 111082),

Gene: Emma_42 Start: 32052, Stop: 31807, Start Num: 3
Candidate Starts for Emma_42:
(1, 32082), (Start: 3 @32052 has 9 MA's), (8, 31968), (13, 31884), (14, 31872),

Gene: Filch_146 Start: 74224, Stop: 73961, Start Num: 2
Candidate Starts for Filch_146:
(Start: 2 @74224 has 19 MA's), (Start: 4 @74218 has 18 MA's), (8, 74137), (9, 74131), (11, 74074), (12, 74065), (14, 74041), (17, 73990),

Gene: FireRed_146 Start: 74750, Stop: 74487, Start Num: 2
Candidate Starts for FireRed_146:
(Start: 2 @74750 has 19 MA's), (Start: 4 @74744 has 18 MA's), (8, 74663), (9, 74657), (11, 74600), (12, 74591), (14, 74567), (17, 74516),

Gene: Flathead_39 Start: 32134, Stop: 31913, Start Num: 5
Candidate Starts for Flathead_39:
(Start: 5 @32134 has 1 MA's), (13, 31990), (14, 31978),

Gene: Graduation_91 Start: 50590, Stop: 50345, Start Num: 3
Candidate Starts for Graduation_91:
(1, 50620), (Start: 3 @50590 has 9 MA's), (6, 50557), (8, 50506), (13, 50422), (14, 50410),

Gene: Halley_245 Start: 111724, Stop: 111476, Start Num: 2
Candidate Starts for Halley_245:
(Start: 2 @111724 has 19 MA's), (Start: 4 @111718 has 18 MA's), (8, 111637), (9, 111631), (12, 111565), (14, 111541), (17, 111490),

Gene: IHOP_147 Start: 74194, Stop: 73952, Start Num: 4
Candidate Starts for IHOP_147:
(Start: 4 @74194 has 18 MA's), (8, 74113), (9, 74107), (12, 74041), (14, 74017), (17, 73966),

Gene: Inca_142 Start: 72391, Stop: 72149, Start Num: 4
Candidate Starts for Inca_142:
(Start: 4 @72391 has 18 MA's), (9, 72304), (12, 72238), (14, 72214), (17, 72163),

Gene: Inyanga_80 Start: 48877, Stop: 48632, Start Num: 3
Candidate Starts for Inyanga_80:
(1, 48907), (Start: 3 @48877 has 9 MA's), (6, 48844), (8, 48793), (13, 48709), (14, 48697),

Gene: Iqorha_80 Start: 48876, Stop: 48631, Start Num: 3
Candidate Starts for Iqorha_80:
(1, 48906), (Start: 3 @48876 has 9 MA's), (6, 48843), (8, 48792), (13, 48708), (14, 48696),

Gene: Kenuha5_36 Start: 30563, Stop: 30318, Start Num: 3
Candidate Starts for Kenuha5_36:
(1, 30593), (Start: 3 @30563 has 9 MA's), (8, 30479), (13, 30395), (14, 30383),

Gene: LunarLander_77 Start: 47883, Stop: 47638, Start Num: 3
Candidate Starts for LunarLander_77:
(1, 47913), (Start: 3 @47883 has 9 MA's), (6, 47850), (8, 47799), (13, 47715), (14, 47703),

Gene: MPhalcon_143 Start: 73828, Stop: 73565, Start Num: 2
Candidate Starts for MPhalcon_143:
(Start: 2 @73828 has 19 MA's), (Start: 4 @73822 has 18 MA's), (8, 73741), (9, 73735), (12, 73669), (14, 73645), (17, 73594),

Gene: MadamMonkfish_144 Start: 74087, Stop: 73839, Start Num: 2
Candidate Starts for MadamMonkfish_144:
(Start: 2 @74087 has 19 MA's), (Start: 4 @74081 has 18 MA's), (8, 74000), (9, 73994), (12, 73928), (14, 73904), (17, 73853),

Gene: Marshmallow_145 Start: 75266, Stop: 75024, Start Num: 4
Candidate Starts for Marshmallow_145:
(Start: 4 @75266 has 18 MA's), (8, 75185), (9, 75179), (12, 75113), (14, 75089), (17, 75038),

Gene: Misfit_142 Start: 74696, Stop: 74439, Start Num: 4
Candidate Starts for Misfit_142:
(Start: 2 @74702 has 19 MA's), (Start: 4 @74696 has 18 MA's), (8, 74615), (9, 74609), (11, 74552), (12, 74543), (14, 74519), (17, 74468),

Gene: MollyToe_136 Start: 71711, Stop: 71448, Start Num: 2
Candidate Starts for MollyToe_136:
(Start: 2 @71711 has 19 MA's), (Start: 4 @71705 has 18 MA's), (8, 71624), (9, 71618), (11, 71561), (12, 71552), (14, 71528), (17, 71477),

Gene: Mosby_139 Start: 73066, Stop: 72803, Start Num: 2
Candidate Starts for Mosby_139:
(Start: 2 @73066 has 19 MA's), (Start: 4 @73060 has 18 MA's), (8, 72979), (9, 72973), (11, 72916), (12, 72907), (14, 72883), (17, 72832),

Gene: Murphy_143 Start: 74414, Stop: 74166, Start Num: 2
Candidate Starts for Murphy_143:
(Start: 2 @74414 has 19 MA's), (Start: 4 @74408 has 18 MA's), (8, 74327), (9, 74321), (12, 74255), (14, 74231), (17, 74180),

Gene: Nala_144 Start: 74111, Stop: 73854, Start Num: 4
Candidate Starts for Nala_144:
(Start: 2 @74117 has 19 MA's), (Start: 4 @74111 has 18 MA's), (8, 74030), (9, 74024), (11, 73967), (12, 73958), (14, 73934), (17, 73883),

Gene: Odette_242 Start: 112166, Stop: 111918, Start Num: 2
Candidate Starts for Odette_242:
(Start: 2 @112166 has 19 MA's), (Start: 4 @112160 has 18 MA's), (8, 112079), (9, 112073), (12, 112007), (14, 111983), (17, 111932),

Gene: OrionPax_140 Start: 73639, Stop: 73397, Start Num: 4
Candidate Starts for OrionPax_140:
(Start: 4 @73639 has 18 MA's), (8, 73558), (9, 73552), (12, 73486), (14, 73462), (17, 73411),

Gene: PattyP_88 Start: 50536, Stop: 50300, Start Num: 3
Candidate Starts for PattyP_88:
(1, 50566), (Start: 3 @50536 has 9 MA's), (6, 50503), (8, 50452), (15, 50326),

Gene: Phaja_147 Start: 74199, Stop: 73957, Start Num: 4
Candidate Starts for Phaja_147:
(Start: 4 @74199 has 18 MA's), (8, 74118), (9, 74112), (12, 74046), (14, 74022), (17, 73971),

Gene: PhatBacter_146 Start: 74750, Stop: 74487, Start Num: 2
Candidate Starts for PhatBacter_146:
(Start: 2 @74750 has 19 MA's), (Start: 4 @74744 has 18 MA's), (8, 74663), (9, 74657), (11, 74600), (12, 74591), (14, 74567), (17, 74516),

Gene: Rakim_144 Start: 74233, Stop: 73976, Start Num: 4
Candidate Starts for Rakim_144:
(Start: 2 @74239 has 19 MA's), (Start: 4 @74233 has 18 MA's), (8, 74152), (9, 74146), (12, 74080), (14, 74056), (17, 74005),

Gene: Rialto_44 Start: 33781, Stop: 33536, Start Num: 3
Candidate Starts for Rialto_44:
(1, 33811), (Start: 3 @33781 has 9 MA's), (8, 33697), (13, 33613), (14, 33601),

Gene: Sassay_137 Start: 72022, Stop: 71765, Start Num: 4
Candidate Starts for Sassay_137:
(Start: 2 @72028 has 19 MA's), (Start: 4 @72022 has 18 MA's), (8, 71941), (9, 71935), (11, 71878), (12, 71869), (14, 71845), (17, 71794),

Gene: Simpliphy_143 Start: 73892, Stop: 73650, Start Num: 4
Candidate Starts for Simpliphy_143:
(Start: 4 @73892 has 18 MA's), (8, 73811), (9, 73805), (12, 73739), (14, 73715), (17, 73664),

Gene: Terminus_145 Start: 74696, Stop: 74439, Start Num: 4
Candidate Starts for Terminus_145:

(Start: 2 @74702 has 19 MA's), (Start: 4 @74696 has 18 MA's), (8, 74615), (9, 74609), (11, 74552), (12, 74543), (14, 74519), (17, 74468),

Gene: Tomaszewski_136 Start: 73240, Stop: 72977, Start Num: 2
Candidate Starts for Tomaszewski_136:
(Start: 2 @73240 has 19 MA's), (Start: 4 @73234 has 18 MA's), (8, 73153), (9, 73147), (11, 73090), (12, 73081), (14, 73057), (17, 73006),

Gene: Ukulele_139 Start: 73640, Stop: 73398, Start Num: 4
Candidate Starts for Ukulele_139:
(Start: 4 @73640 has 18 MA's), (8, 73559), (9, 73553), (12, 73487), (14, 73463), (17, 73412),

Gene: Willez_140 Start: 73103, Stop: 72846, Start Num: 4
Candidate Starts for Willez_140:
(Start: 2 @73109 has 19 MA's), (Start: 4 @73103 has 18 MA's), (8, 73022), (9, 73016), (11, 72959), (12, 72950), (14, 72926), (17, 72875),

Gene: Youngblood_146 Start: 74429, Stop: 74166, Start Num: 2
Candidate Starts for Youngblood_146:
(Start: 2 @74429 has 19 MA's), (Start: 4 @74423 has 18 MA's), (8, 74342), (9, 74336), (11, 74279), (12, 74270), (14, 74246), (17, 74195),

Gene: Zelink_236 Start: 111113, Stop: 110865, Start Num: 2
Candidate Starts for Zelink_236:
(Start: 2 @111113 has 19 MA's), (Start: 4 @111107 has 18 MA's), (8, 111026), (9, 111020), (12, 110954), (14, 110930), (17, 110879),

Gene: xkcd_147 Start: 75448, Stop: 75185, Start Num: 2
Candidate Starts for xkcd_147:
(Start: 2 @75448 has 19 MA's), (Start: 4 @75442 has 18 MA's), (8, 75361), (9, 75355), (11, 75298), (12, 75289), (14, 75265), (17, 75214),