# Pham 291409


1: ModicumRichard_91 + 3
2: Morgana_98
3: Stewart25555_97
4: Bloom_110 + 1
5: Chilliams_105
6: WaddleDee_93 + 2
7: Racecar_107
8: GoldenEssence_92
9: Mimi_106
10: LeoJr_105 + 2
11: SJReid_110
12: Rockabye_111
13: BooTeria_102
14: FloraSnap32_106
15: KSunshine22_100
16: Talia1610_106
17: Phrampa_99
18: Panchaali_97
19: Artu_98
20: Ellewin_97
21: Patbob_105
22: Laure_110

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 291409 Report

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

Pham number 291409 has 30 members, 14 are drafts.

Phages represented in each track:
- Track 1 : ModicumRichard_91, Aleemily_90, Cafasso_91, ObLaDi_91
- Track 2 : Morgana_98
- Track 3 : Stewart25555_97
- Track 4 : Bloom_110, FrostedClock_109
- Track 5 : Chilliams_105
- Track 6 : WaddleDee_93, Emmetator_98, DunneganBoMo_95
- Track 7 : Racecar_107
- Track 8 : GoldenEssence_92
- Track 9 : Mimi_106
- Track 10 : LeoJr_105, ReginaGlobina_105, Atuin_100
- Track 11 : SJReid_110
- Track 12 : Rockabye_111
- Track 13 : BooTeria_102
- Track 14 : FloraSnap32_106
- Track 15 : KSunshine22_100
- Track 16 : Talia1610_106
- Track 17 : Phrampa_99
- Track 18 : Panchaali_97
- Track 19 : Artu_98
- Track 20 : Ellewin_97
- Track 21 : Patbob_105
- Track 22 : Laure_110

***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 8 of the 16 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Artu_98, Atuin_100, Bloom_110, BooTeria_102, Chilliams_105, DunneganBoMo_95, Ellewin_97, Emmetator_98, FloraSnap32_106, FrostedClock_109, GoldenEssence_92, KSunshine22_100, Laure_110, LeoJr_105, Panchaali_97, Phrampa_99, ReginaGlobina_105, Rockabye_111, SJReid_110, Stewart25555_97, Talia1610_106, WaddleDee_93,

Genes that have the "Most Annotated" start but do not call it:
• Mimi_106, Patbob_105, Racecar_107,

Genes that do not have the "Most Annotated" start:
• Aleemily_90, Cafasso_91, ModicumRichard_91, Morgana_98, ObLaDi_91,

**Summary by start number:**

Start 3:
• Found in 7 of 30 ( 23.3% ) of genes in pham
• Manual Annotations of this start: 3 of 16
• Called 42.9% of time when present
• Phage (with cluster) where this start called: Mimi_106 (FC), Patbob_105 (FC), Racecar_107 (FC),

Start 6:
• Found in 25 of 30 ( 83.3% ) of genes in pham
• Manual Annotations of this start: 8 of 16
• Called 88.0% of time when present
• Phage (with cluster) where this start called: Artu_98 (FC), Atuin_100 (FC), Bloom_110 (FC), BooTeria_102 (FC), Chilliams_105 (FC), DunneganBoMo_95 (FC), Ellewin_97 (FC), Emmetator_98 (FC), FloraSnap32_106 (FC), FrostedClock_109 (FC), GoldenEssence_92 (FC), KSunshine22_100 (FC), Laure_110 (UNK), LeoJr_105 (FC), Panchaali_97 (FC), Phrampa_99 (FC), ReginaGlobina_105 (FC), Rockabye_111 (FC), SJReid_110 (FC), Stewart25555_97 (FC), Talia1610_106 (FC), WaddleDee_93 (FC),

Start 7:
• Found in 5 of 30 ( 16.7% ) of genes in pham
• Manual Annotations of this start: 5 of 16
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aleemily_90 (DZ), Cafasso_91 (DZ), ModicumRichard_91 (DZ), Morgana_98 (DZ), ObLaDi_91 (DZ),

**Summary by clusters:**

There are 3 clusters represented in this pham: UNK, FC, DZ,

Info for manual annotations of cluster DZ:
•Start number 7 was manually annotated 5 times for cluster DZ.

Info for manual annotations of cluster FC:
•Start number 3 was manually annotated 3 times for cluster FC.
•Start number 6 was manually annotated 8 times for cluster FC.

***Gene Information:***

Gene: Aleemily_90 Start: 53699, Stop: 54325, Start Num: 7
Candidate Starts for Aleemily_90:

(Start: 7 @53699 has 5 MA's), (9, 53726), (14, 53900), (19, 53984), (29, 54104), (33, 54149), (36, 54185), (40, 54257),

Gene: Artu_98 Start: 82489, Stop: 83100, Start Num: 6
Candidate Starts for Artu_98:
(5, 82441), (Start: 6 @82489 has 8 MA's), (25, 82864),

Gene: Atuin_100 Start: 85986, Stop: 86594, Start Num: 6
Candidate Starts for Atuin_100:
(5, 85941), (Start: 6 @85986 has 8 MA's), (29, 86382), (36, 86463),

Gene: Bloom_110 Start: 86089, Stop: 86679, Start Num: 6
Candidate Starts for Bloom_110:
(Start: 3 @86026 has 3 MA's), (Start: 6 @86089 has 8 MA's), (25, 86443), (27, 86452), (28, 86461), (33, 86509), (36, 86545),

Gene: BooTeria_102 Start: 82602, Stop: 83213, Start Num: 6
Candidate Starts for BooTeria_102:
(5, 82554), (Start: 6 @82602 has 8 MA's), (24, 82971),

Gene: Cafasso_91 Start: 53851, Stop: 54477, Start Num: 7
Candidate Starts for Cafasso_91:
(Start: 7 @53851 has 5 MA's), (9, 53878), (14, 54052), (19, 54136), (29, 54256), (33, 54301), (36, 54337), (40, 54409),

Gene: Chilliams_105 Start: 78852, Stop: 79442, Start Num: 6
Candidate Starts for Chilliams_105:
(5, 78807), (Start: 6 @78852 has 8 MA's), (21, 79158), (25, 79203), (26, 79206), (30, 79227), (35, 79281), (36, 79305), (37, 79332), (41, 79380),

Gene: DunneganBoMo_95 Start: 81871, Stop: 82482, Start Num: 6
Candidate Starts for DunneganBoMo_95:
(5, 81823), (Start: 6 @81871 has 8 MA's), (25, 82246),

Gene: Ellewin_97 Start: 81282, Stop: 81893, Start Num: 6
Candidate Starts for Ellewin_97:
(5, 81234), (Start: 6 @81282 has 8 MA's), (24, 81651), (25, 81657), (34, 81729), (36, 81759),

Gene: Emmetator_98 Start: 81826, Stop: 82437, Start Num: 6
Candidate Starts for Emmetator_98:
(5, 81778), (Start: 6 @81826 has 8 MA's), (25, 82201),

Gene: FloraSnap32_106 Start: 84986, Stop: 85579, Start Num: 6
Candidate Starts for FloraSnap32_106:
(Start: 3 @84923 has 3 MA's), (Start: 6 @84986 has 8 MA's), (25, 85340), (31, 85373), (32, 85391), (36, 85442),

Gene: FrostedClock_109 Start: 86286, Stop: 86876, Start Num: 6
Candidate Starts for FrostedClock_109:
(Start: 3 @86223 has 3 MA's), (Start: 6 @86286 has 8 MA's), (25, 86640), (27, 86649), (28, 86658), (33, 86706), (36, 86742),

Gene: GoldenEssence_92 Start: 79881, Stop: 80471, Start Num: 6

Candidate Starts for GoldenEssence_92:
(Start: 3 @79818 has 3 MA's), (Start: 6 @79881 has 8 MA's), (27, 80244), (28, 80253), (33, 80301), (36, 80337),

Gene: KSunshine22_100 Start: 82883, Stop: 83494, Start Num: 6
Candidate Starts for KSunshine22_100:
(5, 82835), (Start: 6 @82883 has 8 MA's), (24, 83252), (25, 83258), (36, 83360),

Gene: Laure_110 Start: 78788, Stop: 79390, Start Num: 6
Candidate Starts for Laure_110:
(4, 78734), (Start: 6 @78788 has 8 MA's), (16, 78977), (18, 79046), (31, 79181), (38, 79307), (43, 79367),

Gene: LeoJr_105 Start: 86221, Stop: 86829, Start Num: 6
Candidate Starts for LeoJr_105:
(5, 86176), (Start: 6 @86221 has 8 MA's), (29, 86617), (36, 86698),

Gene: Mimi_106 Start: 85373, Stop: 86026, Start Num: 3
Candidate Starts for Mimi_106:
(Start: 3 @85373 has 3 MA's), (Start: 6 @85436 has 8 MA's), (25, 85790), (27, 85799), (28, 85808), (36, 85892),

Gene: ModicumRichard_91 Start: 53919, Stop: 54545, Start Num: 7
Candidate Starts for ModicumRichard_91:
(Start: 7 @53919 has 5 MA's), (9, 53946), (14, 54120), (19, 54204), (29, 54324), (33, 54369), (36, 54405), (40, 54477),

Gene: Morgana_98 Start: 56101, Stop: 56727, Start Num: 7
Candidate Starts for Morgana_98:
(1, 55819), (2, 55831), (Start: 7 @56101 has 5 MA's), (8, 56113), (9, 56128), (14, 56302), (19, 56386), (29, 56506), (31, 56518), (33, 56551), (36, 56587), (39, 56656),

Gene: ObLaDi_91 Start: 53945, Stop: 54571, Start Num: 7
Candidate Starts for ObLaDi_91:
(Start: 7 @53945 has 5 MA's), (9, 53972), (14, 54146), (19, 54230), (29, 54350), (33, 54395), (36, 54431), (40, 54503),

Gene: Panchaali_97 Start: 82860, Stop: 83471, Start Num: 6
Candidate Starts for Panchaali_97:
(Start: 6 @82860 has 8 MA's), (31, 83268), (36, 83337),

Gene: Patbob_105 Start: 86108, Stop: 86761, Start Num: 3
Candidate Starts for Patbob_105:
(Start: 3 @86108 has 3 MA's), (Start: 6 @86171 has 8 MA's), (27, 86534), (28, 86543), (33, 86591), (36, 86627),

Gene: Phrampa_99 Start: 87574, Stop: 88167, Start Num: 6
Candidate Starts for Phrampa_99:
(Start: 6 @87574 has 8 MA's), (10, 87619), (13, 87703), (20, 87865), (21, 87883), (22, 87898), (36, 88030), (42, 88126),

Gene: Racecar_107 Start: 86026, Stop: 86679, Start Num: 3
Candidate Starts for Racecar_107:

(Start: 3 @86026 has 3 MA's), (Start: 6 @86089 has 8 MA's), (25, 86443), (27, 86452), (28, 86461), (33, 86509), (36, 86545),

Gene: ReginaGlobina_105 Start: 85786, Stop: 86394, Start Num: 6
Candidate Starts for ReginaGlobina_105:
(5, 85741), (Start: 6 @85786 has 8 MA's), (29, 86182), (36, 86263),

Gene: Rockabye_111 Start: 79290, Stop: 79880, Start Num: 6
Candidate Starts for Rockabye_111:
(5, 79245), (Start: 6 @79290 has 8 MA's), (35, 79719), (36, 79743), (37, 79770),

Gene: SJReid_110 Start: 78336, Stop: 78929, Start Num: 6
Candidate Starts for SJReid_110:
(Start: 6 @78336 has 8 MA's), (10, 78381), (13, 78465), (15, 78522), (17, 78549), (23, 78681), (35, 78768), (36, 78792), (41, 78867),

Gene: Stewart25555_97 Start: 82605, Stop: 83216, Start Num: 6
Candidate Starts for Stewart25555_97:
(5, 82557), (Start: 6 @82605 has 8 MA's), (11, 82659), (12, 82728), (29, 83001), (36, 83082),

Gene: Talia1610_106 Start: 85455, Stop: 86045, Start Num: 6
Candidate Starts for Talia1610_106:
(Start: 6 @85455 has 8 MA's), (25, 85809), (27, 85818), (28, 85827), (33, 85875), (36, 85911),

Gene: WaddleDee_93 Start: 81057, Stop: 81668, Start Num: 6
Candidate Starts for WaddleDee_93:
(5, 81009), (Start: 6 @81057 has 8 MA's), (25, 81432),