Pham 291267

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 291267 Report

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

Pham number 291267 has 48 members, 14 are drafts.

Phages represented in each track:
• Track 1 : RainyPolka_20
• Track 2 : BabyGotBac_19, Maih_19, BayC_19, Asis_19, Salete_19, TP1604_19
• Track 3 : YDN12_20
• Track 4 : Abt2graduatex2_20
• Track 5 : Mischief19_27
• Track 6 : Xkcd426_25
• Track 7 : Boopy_96, Mareelih_94, BlueNGold_95, Forza_96
• Track 8 : GMA2_25
• Track 9 : Sixama_94
• Track 10 : LeoJr_87, Atuin_82, ReginaGlobina_87
• Track 11 : GoldenEssence_73
• Track 12 : Chilliams_84
• Track 13 : Artu_80, KSunshine22_82, BooTeria_84, WaddleDee_75
• Track 14 : DunneganBoMo_77, Ellewin_79
• Track 15 : Patbob_86, Talia1610_87
• Track 16 : Bloom_91, Racecar_88, Mimi_87
• Track 17 : Phrampa_79
• Track 18 : FloraSnap32_87
• Track 19 : Rockabye_89
• Track 20 : SJReid_90
• Track 21 : Panchaali_80
• Track 22 : Stewart25555_78
• Track 23 : PauloDiaboli_94, A3Wally_94, Dodo_94
• Track 24 : Erasmago_85
• Track 25 : Big4_83
• Track 26 : Zooman_79
• Track 27 : Cece_77
• Track 28 : Pumpernickel_91
• Track 29 : TurkishDelight_25

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

The start number called the most often in the published annotations is 14, it was called in 9 of the 34 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Atuin_82, BlueNGold_95, Boopy_96, Chilliams_84, DunneganBoMo_77, Ellewin_79, Forza_96, LeoJr_87, Mareelih_94, Panchaali_80, ReginaGlobina_87, Rockabye_89, SJReid_90, Sixama_94,

Genes that have the "Most Annotated" start but do not call it:
• Artu_80, BooTeria_84, GMA2_25, KSunshine22_82, Stewart25555_78, WaddleDee_75,

Genes that do not have the "Most Annotated" start:
• A3Wally_94, Abt2graduatex2_20, Asis_19, BabyGotBac_19, BayC_19, Big4_83, Bloom_91, Cece_77, Dodo_94, Erasmago_85, FloraSnap32_87, GoldenEssence_73, Maih_19, Mimi_87, Mischief19_27, Patbob_86, PauloDiaboli_94, Phrampa_79, Pumpernickel_91, Racecar_88, RainyPolka_20, Salete_19, TP1604_19, Talia1610_87, TurkishDelight_25, Xkcd426_25, YDN12_20, Zooman_79,

Summary by start number:

Start 6:
• Found in 1 of 48 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 34
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pumpernickel_91 (GD4),

Start 7:
• Found in 3 of 48 (6.2%) of genes in pham
• Manual Annotations of this start: 2 of 34
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A3Wally_94 (GD1), Dodo_94 (GD1), PauloDiaboli_94 (GD1),

Start 8:
• Found in 4 of 48 (8.3%) of genes in pham
• Manual Annotations of this start: 2 of 34
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Big4_83 (GD2), Zooman_79 (GD2),

Start 9:
• Found in 1 of 48 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 34
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cece_77 (GD3),

Start 10:
• Found in 1 of 48 (2.1%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GMA2_25 (DS),

Start 13:
• Found in 13 of 48 (27.1%) of genes in pham
• Manual Annotations of this start: 6 of 34

• Called 61.5% of time when present
• Phage (with cluster) where this start called: Bloom_91 (FC), FloraSnap32_87 (FC), GoldenEssence_73 (FC), Mimi_87 (FC), Patbob_86 (FC), Phrampa_79 (FC), Racecar_88 (FC), Talia1610_87 (FC),

Start 14:
• Found in 20 of 48 (41.7%) of genes in pham
• Manual Annotations of this start: 9 of 34
• Called 70.0% of time when present
• Phage (with cluster) where this start called: Atuin_82 (FC), BlueNGold_95 (DS), Boopy_96 (DS), Chilliams_84 (FC), DunneganBoMo_77 (FC), Ellewin_79 (FC), Forza_96 (DS), LeoJr_87 (FC), Mareelih_94 (DS), Panchaali_80 (FC), ReginaGlobina_87 (FC), Rockabye_89 (FC), SJReid_90 (FC), Sixama_94 (DS),

Start 15:
• Found in 1 of 48 (2.1%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Erasmago_85 (GD2),

Start 17:
• Found in 8 of 48 (16.7%) of genes in pham
• Manual Annotations of this start: 8 of 34
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abt2graduatex2_20 (BG), Asis_19 (BG), BabyGotBac_19 (BG), BayC_19 (BG), Maih_19 (BG), RainyPolka_20 (BG), Salete_19 (BG), TP1604_19 (BG),

Start 18:
• Found in 4 of 48 (8.3%) of genes in pham
• Manual Annotations of this start: 4 of 34
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mischief19_27 (BG), TurkishDelight_25 (singleton), Xkcd426_25 (BG), YDN12_20 (BG),

Start 21:
• Found in 37 of 48 (77.1%) of genes in pham
• Manual Annotations of this start: 1 of 34
• Called 13.5% of time when present
• Phage (with cluster) where this start called: Artu_80 (FC), BooTeria_84 (FC), KSunshine22_82 (FC), Stewart25555_78 (FC), WaddleDee_75 (FC),

Summary by clusters:

There are 8 clusters represented in this pham: GD1, GD2, BG, GD4, singleton, FC, GD3, DS,

Info for manual annotations of cluster BG:
•Start number 17 was manually annotated 8 times for cluster BG.
•Start number 18 was manually annotated 3 times for cluster BG.

Info for manual annotations of cluster DS:
•Start number 14 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster FC:
•Start number 13 was manually annotated 6 times for cluster FC.
•Start number 14 was manually annotated 4 times for cluster FC.
•Start number 21 was manually annotated 1 time for cluster FC.

Info for manual annotations of cluster GD1:
•Start number 7 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 8 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:
•Start number 9 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:
•Start number 6 was manually annotated 1 time for cluster GD4.

Gene Information:

Gene: A3Wally_94 Start: 50689, Stop: 51099, Start Num: 7
Candidate Starts for A3Wally_94:
(Start: 7 @50689 has 2 MA's), (26, 50776), (27, 50779), (32, 50809), (69, 51019), (72, 51037),

Gene: Abt2graduatex2_20 Start: 19744, Stop: 20124, Start Num: 17
Candidate Starts for Abt2graduatex2_20:
(Start: 17 @19744 has 8 MA's), (Start: 21 @19759 has 1 MA's), (29, 19801), (35, 19846), (52, 19936), (59, 19966), (63, 20017), (66, 20032), (70, 20059), (71, 20062),

Gene: Artu_80 Start: 49418, Stop: 49762, Start Num: 21
Candidate Starts for Artu_80:
(Start: 14 @49382 has 9 MA's), (Start: 21 @49418 has 1 MA's), (36, 49505), (50, 49568), (53, 49595), (55, 49604), (71, 49700),

Gene: Asis_19 Start: 19235, Stop: 19615, Start Num: 17
Candidate Starts for Asis_19:
(1, 18785), (4, 19067), (Start: 17 @19235 has 8 MA's), (Start: 21 @19250 has 1 MA's), (29, 19292), (35, 19337), (52, 19427), (59, 19457), (63, 19508), (66, 19523), (70, 19550), (71, 19553),

Gene: Atuin_82 Start: 52030, Stop: 52410, Start Num: 14
Candidate Starts for Atuin_82:
(Start: 14 @52030 has 9 MA's), (16, 52039), (Start: 21 @52066 has 1 MA's), (46, 52207), (55, 52252), (62, 52285), (71, 52348),

Gene: BabyGotBac_19 Start: 19235, Stop: 19615, Start Num: 17
Candidate Starts for BabyGotBac_19:
(1, 18785), (4, 19067), (Start: 17 @19235 has 8 MA's), (Start: 21 @19250 has 1 MA's), (29, 19292), (35, 19337), (52, 19427), (59, 19457), (63, 19508), (66, 19523), (70, 19550), (71, 19553),

Gene: BayC_19 Start: 19235, Stop: 19615, Start Num: 17
Candidate Starts for BayC_19:

(1, 18785), (4, 19067), (Start: 17 @19235 has 8 MA's), (Start: 21 @19250 has 1 MA's), (29, 19292), (35, 19337), (52, 19427), (59, 19457), (63, 19508), (66, 19523), (70, 19550), (71, 19553),

Gene: Big4_83 Start: 49711, Stop: 50121, Start Num: 8
Candidate Starts for Big4_83:
(3, 49555), (4, 49585), (Start: 8 @49711 has 2 MA's), (Start: 21 @49771 has 1 MA's), (27, 49798), (28, 49807), (41, 49897), (72, 50059),

Gene: Bloom_91 Start: 53421, Stop: 53804, Start Num: 13
Candidate Starts for Bloom_91:
(Start: 13 @53421 has 6 MA's), (Start: 21 @53460 has 1 MA's), (22, 53463), (37, 53562), (41, 53586), (53, 53637), (55, 53646), (64, 53700), (69, 53727), (70, 53739),

Gene: BlueNGold_95 Start: 51971, Stop: 52378, Start Num: 14
Candidate Starts for BlueNGold_95:
(Start: 13 @51968 has 6 MA's), (Start: 14 @51971 has 9 MA's), (Start: 21 @52007 has 1 MA's), (31, 52061), (33, 52082), (53, 52184), (56, 52196), (60, 52238), (61, 52247), (64, 52274), (71, 52316), (73, 52349), (74, 52361), (75, 52370),

Gene: BooTeria_84 Start: 49486, Stop: 49830, Start Num: 21
Candidate Starts for BooTeria_84:
(Start: 14 @49450 has 9 MA's), (Start: 21 @49486 has 1 MA's), (36, 49573), (50, 49636), (53, 49663), (55, 49672), (71, 49768),

Gene: Boopy_96 Start: 51983, Stop: 52390, Start Num: 14
Candidate Starts for Boopy_96:
(Start: 13 @51980 has 6 MA's), (Start: 14 @51983 has 9 MA's), (Start: 21 @52019 has 1 MA's), (31, 52073), (33, 52094), (53, 52196), (56, 52208), (60, 52250), (61, 52259), (64, 52286), (71, 52328), (73, 52361), (74, 52373), (75, 52382),

Gene: Cece_77 Start: 45674, Stop: 46081, Start Num: 9
Candidate Starts for Cece_77:
(Start: 9 @45674 has 1 MA's), (19, 45725), (30, 45779), (34, 45815), (38, 45839), (41, 45860), (44, 45866), (64, 45974), (69, 46001), (72, 46019),

Gene: Chilliams_84 Start: 55298, Stop: 55687, Start Num: 14
Candidate Starts for Chilliams_84:
(Start: 14 @55298 has 9 MA's), (31, 55388), (37, 55436), (55, 55520), (64, 55574), (69, 55601), (70, 55613), (74, 55661),

Gene: Dodo_94 Start: 51011, Stop: 51421, Start Num: 7
Candidate Starts for Dodo_94:
(Start: 7 @51011 has 2 MA's), (26, 51098), (27, 51101), (32, 51131), (69, 51341), (72, 51359),

Gene: DunneganBoMo_77 Start: 48875, Stop: 49255, Start Num: 14
Candidate Starts for DunneganBoMo_77:
(Start: 14 @48875 has 9 MA's), (Start: 21 @48911 has 1 MA's), (36, 48998), (50, 49061), (53, 49088), (55, 49097), (71, 49193),

Gene: Ellewin_79 Start: 48470, Stop: 48850, Start Num: 14
Candidate Starts for Ellewin_79:
(Start: 14 @48470 has 9 MA's), (Start: 21 @48506 has 1 MA's), (36, 48593), (50, 48656), (53, 48683), (55, 48692), (71, 48788),

Gene: Erasmago_85 Start: 47346, Stop: 47723, Start Num: 15
Candidate Starts for Erasmago_85:
(Start: 8 @47316 has 2 MA's), (15, 47346), (28, 47412), (31, 47430), (69, 47643), (72, 47661),

Gene: FloraSnap32_87 Start: 52458, Stop: 52841, Start Num: 13
Candidate Starts for FloraSnap32_87:
(Start: 13 @52458 has 6 MA's), (Start: 21 @52497 has 1 MA's), (22, 52500), (37, 52599), (41, 52623), (49, 52644), (53, 52674), (55, 52683), (64, 52737), (69, 52764), (70, 52776),

Gene: Forza_96 Start: 51899, Stop: 52306, Start Num: 14
Candidate Starts for Forza_96:
(Start: 13 @51896 has 6 MA's), (Start: 14 @51899 has 9 MA's), (Start: 21 @51935 has 1 MA's), (31, 51989), (33, 52010), (53, 52112), (56, 52124), (60, 52166), (61, 52175), (64, 52202), (71, 52244), (73, 52277), (74, 52289), (75, 52298),

Gene: GMA2_25 Start: 22256, Stop: 22675, Start Num: 10
Candidate Starts for GMA2_25:
(10, 22256), (Start: 14 @22268 has 9 MA's), (25, 22325), (39, 22424), (53, 22481), (60, 22535), (61, 22544), (69, 22595), (74, 22655),

Gene: GoldenEssence_73 Start: 47214, Stop: 47597, Start Num: 13
Candidate Starts for GoldenEssence_73:
(Start: 13 @47214 has 6 MA's), (Start: 21 @47253 has 1 MA's), (37, 47355), (41, 47379), (49, 47400), (55, 47439), (64, 47493), (69, 47520), (70, 47532),

Gene: KSunshine22_82 Start: 50145, Stop: 50489, Start Num: 21
Candidate Starts for KSunshine22_82:
(Start: 14 @50109 has 9 MA's), (Start: 21 @50145 has 1 MA's), (36, 50232), (50, 50295), (53, 50322), (55, 50331), (71, 50427),

Gene: LeoJr_87 Start: 52158, Stop: 52538, Start Num: 14
Candidate Starts for LeoJr_87:
(Start: 14 @52158 has 9 MA's), (16, 52167), (Start: 21 @52194 has 1 MA's), (46, 52335), (55, 52380), (62, 52413), (71, 52476),

Gene: Maih_19 Start: 19234, Stop: 19614, Start Num: 17
Candidate Starts for Maih_19:
(1, 18784), (4, 19066), (Start: 17 @19234 has 8 MA's), (Start: 21 @19249 has 1 MA's), (29, 19291), (35, 19336), (52, 19426), (59, 19456), (63, 19507), (66, 19522), (70, 19549), (71, 19552),

Gene: Mareelih_94 Start: 51401, Stop: 51808, Start Num: 14
Candidate Starts for Mareelih_94:
(Start: 13 @51398 has 6 MA's), (Start: 14 @51401 has 9 MA's), (Start: 21 @51437 has 1 MA's), (31, 51491), (33, 51512), (53, 51614), (56, 51626), (60, 51668), (61, 51677), (64, 51704), (71, 51746), (73, 51779), (74, 51791), (75, 51800),

Gene: Mimi_87 Start: 52768, Stop: 53151, Start Num: 13
Candidate Starts for Mimi_87:
(Start: 13 @52768 has 6 MA's), (Start: 21 @52807 has 1 MA's), (22, 52810), (37, 52909), (41, 52933), (53, 52984), (55, 52993), (64, 53047), (69, 53074), (70, 53086),

Gene: Mischief19_27 Start: 29157, Stop: 29531, Start Num: 18

Candidate Starts for Mischief19_27:
(Start: 18 @29157 has 4 MA's), (35, 29256), (47, 29316), (52, 29346), (58, 29370),

Gene: Panchaali_80 Start: 49870, Stop: 50250, Start Num: 14
Candidate Starts for Panchaali_80:
(Start: 14 @49870 has 9 MA's), (16, 49879), (Start: 21 @49906 has 1 MA's), (22, 49909), (51, 50062), (55, 50092), (71, 50188),

Gene: Patbob_86 Start: 53640, Stop: 54023, Start Num: 13
Candidate Starts for Patbob_86:
(Start: 13 @53640 has 6 MA's), (Start: 21 @53679 has 1 MA's), (37, 53781), (41, 53805), (49, 53826), (53, 53856), (55, 53865), (64, 53919), (69, 53946), (70, 53958),

Gene: PauloDiaboli_94 Start: 50046, Stop: 50456, Start Num: 7
Candidate Starts for PauloDiaboli_94:
(Start: 7 @50046 has 2 MA's), (26, 50133), (27, 50136), (32, 50166), (69, 50376), (72, 50394),

Gene: Phrampa_79 Start: 50368, Stop: 50751, Start Num: 13
Candidate Starts for Phrampa_79:
(Start: 13 @50368 has 6 MA's), (Start: 21 @50407 has 1 MA's), (34, 50488), (37, 50509), (41, 50533), (54, 50590), (55, 50593), (64, 50647), (69, 50674),

Gene: Pumpernickel_91 Start: 51418, Stop: 51831, Start Num: 6
Candidate Starts for Pumpernickel_91:
(Start: 6 @51418 has 1 MA's), (26, 51508), (32, 51541), (34, 51565), (37, 51586), (55, 51670), (68, 51748), (71, 51766), (72, 51769),

Gene: Racecar_88 Start: 53421, Stop: 53804, Start Num: 13
Candidate Starts for Racecar_88:
(Start: 13 @53421 has 6 MA's), (Start: 21 @53460 has 1 MA's), (22, 53463), (37, 53562), (41, 53586), (53, 53637), (55, 53646), (64, 53700), (69, 53727), (70, 53739),

Gene: RainyPolka_20 Start: 19600, Stop: 19980, Start Num: 17
Candidate Starts for RainyPolka_20:
(2, 19327), (4, 19408), (Start: 17 @19600 has 8 MA's), (Start: 21 @19615 has 1 MA's), (29, 19657), (35, 19702), (42, 19744), (59, 19822), (63, 19873), (66, 19888), (70, 19915), (71, 19918),

Gene: ReginaGlobina_87 Start: 52911, Stop: 53291, Start Num: 14
Candidate Starts for ReginaGlobina_87:
(Start: 14 @52911 has 9 MA's), (16, 52920), (Start: 21 @52947 has 1 MA's), (46, 53088), (55, 53133), (62, 53166), (71, 53229),

Gene: Rockabye_89 Start: 55651, Stop: 56040, Start Num: 14
Candidate Starts for Rockabye_89:
(Start: 14 @55651 has 9 MA's), (26, 55711), (31, 55741), (36, 55774), (55, 55873), (64, 55927), (69, 55954), (70, 55966), (74, 56014),

Gene: SJReid_90 Start: 54733, Stop: 55122, Start Num: 14
Candidate Starts for SJReid_90:
(Start: 14 @54733 has 9 MA's), (25, 54790), (41, 54895), (43, 54898), (55, 54955), (64, 55009), (69, 55036), (70, 55048), (74, 55096),

Gene: Salete_19 Start: 19235, Stop: 19615, Start Num: 17

Candidate Starts for Salete_19:
(1, 18785), (4, 19067), (Start: 17 @19235 has 8 MA's), (Start: 21 @19250 has 1 MA's), (29, 19292), (35, 19337), (52, 19427), (59, 19457), (63, 19508), (66, 19523), (70, 19550), (71, 19553),

Gene: Sixama_94 Start: 51509, Stop: 51916, Start Num: 14
Candidate Starts for Sixama_94:
(Start: 13 @51506 has 6 MA's), (Start: 14 @51509 has 9 MA's), (Start: 21 @51545 has 1 MA's), (32, 51602), (60, 51776), (61, 51785), (65, 51821), (67, 51833), (71, 51854), (73, 51887), (74, 51899), (75, 51908),

Gene: Stewart25555_78 Start: 49328, Stop: 49672, Start Num: 21
Candidate Starts for Stewart25555_78:
(Start: 14 @49292 has 9 MA's), (16, 49301), (Start: 21 @49328 has 1 MA's), (55, 49514), (71, 49610),

Gene: TP1604_19 Start: 19235, Stop: 19615, Start Num: 17
Candidate Starts for TP1604_19:
(1, 18785), (4, 19067), (Start: 17 @19235 has 8 MA's), (Start: 21 @19250 has 1 MA's), (29, 19292), (35, 19337), (52, 19427), (59, 19457), (63, 19508), (66, 19523), (70, 19550), (71, 19553),

Gene: Talia1610_87 Start: 52786, Stop: 53169, Start Num: 13
Candidate Starts for Talia1610_87:
(Start: 13 @52786 has 6 MA's), (Start: 21 @52825 has 1 MA's), (37, 52927), (41, 52951), (49, 52972), (53, 53002), (55, 53011), (64, 53065), (69, 53092), (70, 53104),

Gene: TurkishDelight_25 Start: 21435, Stop: 21812, Start Num: 18
Candidate Starts for TurkishDelight_25:
(4, 21273), (5, 21360), (11, 21411), (Start: 18 @21435 has 4 MA's), (20, 21441), (Start: 21 @21447 has 1 MA's), (23, 21453), (35, 21534), (40, 21570), (45, 21582), (48, 21594), (57, 21648), (69, 21735), (70, 21747), (73, 21783),

Gene: WaddleDee_75 Start: 48766, Stop: 49110, Start Num: 21
Candidate Starts for WaddleDee_75:
(Start: 14 @48730 has 9 MA's), (Start: 21 @48766 has 1 MA's), (36, 48853), (50, 48916), (53, 48943), (55, 48952), (71, 49048),

Gene: Xkcd426_25 Start: 26648, Stop: 27025, Start Num: 18
Candidate Starts for Xkcd426_25:
(Start: 8 @26606 has 2 MA's), (Start: 18 @26648 has 4 MA's), (Start: 21 @26660 has 1 MA's), (35, 26747), (47, 26807), (59, 26867), (63, 26918), (70, 26960), (73, 26996),

Gene: YDN12_20 Start: 19174, Stop: 19551, Start Num: 18
Candidate Starts for YDN12_20:
(4, 19003), (Start: 18 @19174 has 4 MA's), (Start: 21 @19186 has 1 MA's), (24, 19207), (29, 19228), (35, 19273), (52, 19363), (59, 19393), (63, 19444), (66, 19459), (70, 19486), (71, 19489),

Gene: Zooman_79 Start: 48365, Stop: 48775, Start Num: 8
Candidate Starts for Zooman_79:
(Start: 8 @48365 has 2 MA's), (12, 48386), (Start: 21 @48425 has 1 MA's), (27, 48452), (28, 48461), (31, 48479), (41, 48551), (68, 48692), (72, 48713),