



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 296850 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296850 has 27 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Sporco\_59
- Track 2 : Nigel\_46
- Track 3 : PFR2\_33, PFR1\_31
- Track 4 : Polyuyuki\_78, Apiary\_78
- Track 5 : Maselop\_78, CoffeeBean\_78, Braxoaddie\_78
- Track 6 : Gagieri\_76
- Track 7 : MacGully\_87
- Track 8 : Ecliptus\_59
- Track 9 : Frickyeah\_62
- Track 10 : CaiB\_48
- Track 11 : Mariokart\_45
- Track 12 : DeadP\_52, Oksu\_51
- Track 13 : Stewart25555\_249
- Track 14 : Cambiare\_43
- Track 15 : Avocado\_42
- Track 16 : Cloudyecho\_42
- Track 17 : Lemuria\_43
- Track 18 : Mercurio\_44
- Track 19 : Jolie2\_41
- Track 20 : Bipper\_63
- Track 21 : BigAnti\_59
- Track 22 : ChewyVIII\_15

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

The start number called the most often in the published annotations is 17, it was called in 7 of the 18 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apiary\_78, Braxoaddie\_78, CoffeeBean\_78, Gagieri\_76, MacGully\_87, Maselop\_78, Polyuyuki\_78,

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

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

- Avocado\_42, BigAnti\_59, Bipper\_63, CaiB\_48, Cambiare\_43, ChewyVIII\_15, Cloudyecho\_42, DeadP\_52, Ecliptus\_59, Frickyeah\_62, Jolie2\_41, Lemuria\_43, Mariokart\_45, Mercurio\_44, Nigel\_46, Oksu\_51, PFR1\_31, PFR2\_33, Sporco\_59, Stewart25555\_249,

**Summary by start number:**

Start 11:

- Found in 1 of 27 ( 3.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Frickyeah\_62 (DN1),

Start 12:

- Found in 1 of 27 ( 3.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jolie2\_41 (G4),

Start 13:

- Found in 2 of 27 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 2 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipper\_63 (Y), ChewyVIII\_15 (singleton),

Start 14:

- Found in 3 of 27 ( 11.1% ) of genes in pham
- Manual Annotations of this start: 2 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DeadP\_52 (F1), Ecliptus\_59 (DN), Oksu\_51 (F1),

Start 15:

- Found in 1 of 27 ( 3.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigAnti\_59 (singleton),

Start 16:

- Found in 1 of 27 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nigel\_46 (B4),

Start 17:

- Found in 7 of 27 ( 25.9% ) of genes in pham
- Manual Annotations of this start: 7 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary\_78 (CR6), Braxoaddie\_78 (CR6), CoffeeBean\_78 (CR6), Gagieri\_76 (CR6), MacGully\_87 (CR7), Maselop\_78 (CR6), Polyuyki\_78 (CR6),

Start 18:

- Found in 4 of 27 ( 14.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 75.0% of time when present
- Phage (with cluster) where this start called: PFR1\_31 (BX), PFR2\_33 (BX), Sporco\_59 (AY),

Start 19:

- Found in 2 of 27 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Lemuria\_43 (G4),

Start 22:

- Found in 2 of 27 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Mercurio\_44 (G4),

Start 25:

- Found in 4 of 27 ( 14.8% ) of genes in pham
- Manual Annotations of this start: 3 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avocado\_42 (G2), CaiB\_48 (DR), Cambiare\_43 (G2), Cloudyecho\_42 (G3),

Start 26:

- Found in 1 of 27 ( 3.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stewart25555\_249 (FC),

Start 27:

- Found in 1 of 27 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mariokart\_45 (DR),

**Summary by clusters:**

There are 15 clusters represented in this pham: DN, F1, singleton, G4, CR6, G2, BX, B4, AY, FC, DN1, Y, G3, DR, CR7,

Info for manual annotations of cluster B4:

- Start number 16 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster CR6:

- Start number 17 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 17 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster DN:

- Start number 14 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DR:

- Start number 25 was manually annotated 1 time for cluster DR.
- Start number 27 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster F1:

- Start number 14 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster G2:

- Start number 25 was manually annotated 2 times for cluster G2.

Info for manual annotations of cluster G4:

- Start number 19 was manually annotated 1 time for cluster G4.
- Start number 22 was manually annotated 1 time for cluster G4.

Info for manual annotations of cluster Y:

- Start number 13 was manually annotated 1 time for cluster Y.

### ***Gene Information:***

Gene: Apiary\_78 Start: 56582, Stop: 55644, Start Num: 17

Candidate Starts for Apiary\_78:

(Start: 17 @56582 has 7 MA's), (36, 56492), (47, 56408), (52, 56366), (62, 56312), (72, 56261), (80, 56207), (96, 56144), (102, 56114), (159, 55790),

Gene: Avocado\_42 Start: 33150, Stop: 33995, Start Num: 25

Candidate Starts for Avocado\_42:

(4, 32958), (Start: 25 @33150 has 3 MA's), (31, 33165), (36, 33198), (44, 33264), (48, 33285), (53, 33327), (55, 33348), (58, 33360), (61, 33381), (71, 33429), (74, 33462), (79, 33486), (94, 33543), (110, 33645), (116, 33681), (125, 33726), (131, 33750), (139, 33789), (146, 33840), (151, 33867), (154, 33876),

Gene: BigAnti\_59 Start: 47461, Stop: 48333, Start Num: 15

Candidate Starts for BigAnti\_59:

(15, 47461), (23, 47503), (44, 47629), (54, 47710), (55, 47713), (63, 47752), (65, 47758), (66, 47761), (71, 47794), (76, 47836), (77, 47839), (94, 47908), (103, 47968), (121, 48064), (139, 48154), (144, 48187), (152, 48220), (161, 48277), (164, 48307),

Gene: Bipper\_63 Start: 44027, Stop: 44980, Start Num: 13

Candidate Starts for Bipper\_63:

(Start: 13 @44027 has 2 MA's), (18, 44045), (20, 44063), (21, 44069), (30, 44099), (32, 44105), (40, 44177), (41, 44180), (44, 44198), (51, 44255), (60, 44309), (65, 44327), (66, 44330), (71, 44363), (89, 44459), (93, 44474), (95, 44495), (98, 44510), (100, 44522), (101, 44525), (106, 44558), (109, 44576), (114, 44585), (116, 44615), (117, 44618), (120, 44633), (124, 44651), (141, 44747), (154, 44798),

(156, 44804), (158, 44825), (171, 44948),

Gene: Braxoaddie\_78 Start: 56567, Stop: 55629, Start Num: 17

Candidate Starts for Braxoaddie\_78:

(Start: 17 @56567 has 7 MA's), (36, 56477), (47, 56393), (52, 56351), (62, 56297), (72, 56246), (80, 56192), (96, 56129), (98, 56117), (102, 56099), (159, 55775),

Gene: CaiB\_48 Start: 41138, Stop: 40308, Start Num: 25

Candidate Starts for CaiB\_48:

(1, 41507), (2, 41483), (3, 41372), (5, 41327), (Start: 25 @41138 has 3 MA's), (40, 41045), (42, 41036), (44, 41024), (45, 41021), (51, 40967), (67, 40874), (69, 40862), (71, 40856), (81, 40784), (82, 40781), (101, 40688), (107, 40646), (118, 40595), (119, 40592), (137, 40508), (159, 40373), (163, 40358),

Gene: Cambiare\_43 Start: 33393, Stop: 34238, Start Num: 25

Candidate Starts for Cambiare\_43:

(Start: 25 @33393 has 3 MA's), (36, 33441), (40, 33486), (44, 33507), (48, 33528), (53, 33570), (55, 33591), (58, 33603), (61, 33624), (65, 33636), (71, 33672), (74, 33705), (79, 33729), (94, 33786), (110, 33888), (116, 33924), (125, 33969), (131, 33993), (139, 34032), (146, 34083), (151, 34110), (154, 34119),

Gene: ChewyVIII\_15 Start: 6891, Stop: 7907, Start Num: 13

Candidate Starts for ChewyVIII\_15:

(6, 6765), (9, 6825), (Start: 13 @6891 has 2 MA's), (37, 7011), (44, 7068), (63, 7236), (68, 7263), (90, 7377), (96, 7404), (99, 7425), (112, 7488), (123, 7548), (127, 7572), (138, 7632), (159, 7758), (169, 7833), (172, 7869),

Gene: Cloudyecho\_42 Start: 32850, Stop: 33695, Start Num: 25

Candidate Starts for Cloudyecho\_42:

(Start: 25 @32850 has 3 MA's), (36, 32898), (40, 32943), (44, 32964), (48, 32985), (53, 33027), (55, 33048), (61, 33081), (65, 33093), (71, 33129), (74, 33162), (79, 33186), (94, 33243), (139, 33489), (146, 33540), (151, 33567), (154, 33576), (156, 33582),

Gene: CoffeeBean\_78 Start: 56525, Stop: 55587, Start Num: 17

Candidate Starts for CoffeeBean\_78:

(Start: 17 @56525 has 7 MA's), (36, 56435), (47, 56351), (52, 56309), (62, 56255), (72, 56204), (80, 56150), (96, 56087), (98, 56075), (102, 56057), (159, 55733),

Gene: DeadP\_52 Start: 36351, Stop: 37211, Start Num: 14

Candidate Starts for DeadP\_52:

(10, 36294), (Start: 14 @36351 has 2 MA's), (31, 36420), (40, 36492), (44, 36513), (46, 36525), (50, 36561), (63, 36633), (70, 36672), (71, 36675), (82, 36744), (94, 36789), (114, 36894), (124, 36957), (134, 37002), (137, 37011),

Gene: Ecliptus\_59 Start: 39066, Stop: 39929, Start Num: 14

Candidate Starts for Ecliptus\_59:

(Start: 14 @39066 has 2 MA's), (29, 39129), (30, 39132), (31, 39135), (34, 39165), (40, 39207), (44, 39228), (49, 39264), (59, 39327), (63, 39348), (71, 39390), (82, 39459), (84, 39468), (86, 39477), (93, 39501), (94, 39504), (129, 39699), (130, 39702), (134, 39717), (135, 39720), (137, 39726), (167, 39918), (168, 39921),

Gene: Frickyeah\_62 Start: 37087, Stop: 37995, Start Num: 11

Candidate Starts for Frickyeah\_62:

(11, 37087), (33, 37201), (43, 37270), (44, 37279), (58, 37378), (66, 37414), (71, 37447), (92, 37564), (105, 37648), (120, 37720), (122, 37726), (156, 37894), (157, 37897), (163, 37945),

Gene: Gagieri\_76 Start: 56376, Stop: 55438, Start Num: 17

Candidate Starts for Gagieri\_76:

(7, 56499), (8, 56487), (Start: 17 @56376 has 7 MA's), (36, 56286), (47, 56202), (52, 56160), (62, 56106), (72, 56055), (80, 56001), (83, 55983), (96, 55938), (102, 55908), (159, 55584), (170, 55506),

Gene: Jolie2\_41 Start: 31510, Stop: 32421, Start Num: 12

Candidate Starts for Jolie2\_41:

(12, 31510), (Start: 19 @31555 has 1 MA's), (39, 31657), (44, 31693), (55, 31777), (65, 31822), (71, 31858), (79, 31915), (94, 31972), (107, 32062), (110, 32074), (138, 32215), (139, 32218), (146, 32269), (154, 32305), (156, 32311), (159, 32347),

Gene: Lemuria\_43 Start: 32899, Stop: 33759, Start Num: 19

Candidate Starts for Lemuria\_43:

(Start: 19 @32899 has 1 MA's), (36, 32965), (39, 32995), (40, 33010), (44, 33031), (58, 33127), (65, 33160), (71, 33196), (79, 33253), (94, 33310), (107, 33400), (110, 33412), (131, 33517), (138, 33553), (139, 33556), (146, 33607), (154, 33643), (156, 33649), (159, 33685),

Gene: MacGully\_87 Start: 59557, Stop: 58619, Start Num: 17

Candidate Starts for MacGully\_87:

(Start: 17 @59557 has 7 MA's), (36, 59464), (40, 59419), (51, 59341), (52, 59338), (63, 59281), (72, 59233), (82, 59170), (91, 59134), (96, 59119), (102, 59089), (111, 59038), (149, 58822), (169, 58687),

Gene: Mariokart\_45 Start: 38547, Stop: 37738, Start Num: 27

Candidate Starts for Mariokart\_45:

(Start: 27 @38547 has 1 MA's), (28, 38544), (33, 38514), (36, 38502), (42, 38448), (44, 38436), (47, 38418), (52, 38376), (63, 38310), (71, 38268), (73, 38244), (78, 38214), (82, 38193), (105, 38082), (120, 38010), (124, 37989), (128, 37968), (133, 37950), (139, 37914), (155, 37839), (166, 37749),

Gene: Maselop\_78 Start: 56601, Stop: 55663, Start Num: 17

Candidate Starts for Maselop\_78:

(Start: 17 @56601 has 7 MA's), (36, 56511), (47, 56427), (52, 56385), (62, 56331), (72, 56280), (80, 56226), (96, 56163), (98, 56151), (102, 56133), (159, 55809),

Gene: Mercurio\_44 Start: 33423, Stop: 34298, Start Num: 22

Candidate Starts for Mercurio\_44:

(Start: 22 @33423 has 1 MA's), (40, 33528), (44, 33549), (57, 33642), (64, 33669), (68, 33693), (70, 33705), (87, 33804), (101, 33876), (104, 33906), (132, 34047), (142, 34116), (143, 34122), (156, 34185), (160, 34227), (166, 34275), (168, 34281),

Gene: Nigel\_46 Start: 45469, Stop: 44555, Start Num: 16

Candidate Starts for Nigel\_46:

(Start: 16 @45469 has 1 MA's), (35, 45367), (40, 45319), (44, 45298), (52, 45238), (63, 45181), (69, 45145), (70, 45142), (84, 45052), (86, 45043), (87, 45037), (88, 45031), (95, 44992), (97, 44986), (101, 44953), (103, 44938), (105, 44917), (123, 44824), (126, 44800), (145, 44695), (150, 44668), (153, 44659), (156, 44650), (165, 44563),

Gene: Oksu\_51 Start: 36971, Stop: 37831, Start Num: 14

Candidate Starts for Oksu\_51:

(10, 36914), (Start: 14 @36971 has 2 MA's), (31, 37040), (40, 37112), (44, 37133), (46, 37145), (50, 37181), (63, 37253), (70, 37292), (71, 37295), (82, 37364), (94, 37409), (114, 37514), (124, 37577),

(134, 37622), (137, 37631),

Gene: PFR1\_31 Start: 24480, Stop: 25334, Start Num: 18

Candidate Starts for PFR1\_31:

(18, 24480), (24, 24513), (40, 24609), (44, 24630), (45, 24633), (52, 24690), (56, 24720), (69, 24789), (71, 24795), (76, 24837), (85, 24876), (96, 24930), (116, 25047), (121, 25065), (140, 25158), (147, 25197), (168, 25323),

Gene: PFR2\_33 Start: 26049, Stop: 26903, Start Num: 18

Candidate Starts for PFR2\_33:

(18, 26049), (24, 26082), (40, 26178), (44, 26199), (45, 26202), (52, 26259), (56, 26289), (69, 26358), (71, 26364), (76, 26406), (85, 26445), (96, 26499), (116, 26616), (121, 26634), (140, 26727), (147, 26766), (168, 26892),

Gene: Polyzuki\_78 Start: 56593, Stop: 55655, Start Num: 17

Candidate Starts for Polyzuki\_78:

(Start: 17 @56593 has 7 MA's), (36, 56503), (47, 56419), (52, 56377), (62, 56323), (72, 56272), (80, 56218), (96, 56155), (102, 56125), (159, 55801),

Gene: Sporco\_59 Start: 33488, Stop: 34336, Start Num: 18

Candidate Starts for Sporco\_59:

(18, 33488), (55, 33728), (61, 33755), (71, 33803), (75, 33839), (81, 33872), (110, 34016), (113, 34022), (115, 34040), (136, 34136), (140, 34163), (148, 34214),

Gene: Stewart25555\_249 Start: 161740, Stop: 162612, Start Num: 26

Candidate Starts for Stewart25555\_249:

(Start: 22 @161728 has 1 MA's), (26, 161740), (38, 161806), (44, 161860), (52, 161920), (63, 161977), (65, 161983), (76, 162061), (84, 162100), (102, 162190), (108, 162241), (162, 162541),