



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 293410 Report

This analysis was run 04/18/26 on database version 643.

Pham number 293410 has 9 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Bloom\_98, Talia1610\_94, Mimi\_94, Racecar\_95
- Track 2 : FloraSnap32\_94
- Track 3 : Patbob\_93
- Track 4 : Phrampa\_86
- Track 5 : GoldenEssence\_80
- Track 6 : FrostedClock\_96

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

The start number called the most often in the published annotations is 1, it was called in 5 of the 6 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bloom\_98, FloraSnap32\_94, FrostedClock\_96, GoldenEssence\_80, Mimi\_94, Patbob\_93, Racecar\_95, Talia1610\_94,

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

- Phrampa\_86,

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

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### **Summary by start number:**

Start 1:

- Found in 9 of 9 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 5 of 6
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Bloom\_98 (FC), FloraSnap32\_94 (FC), FrostedClock\_96 (FC), GoldenEssence\_80 (FC), Mimi\_94 (FC), Patbob\_93 (FC), Racecar\_95 (FC), Talia1610\_94 (FC),

Start 2:

- Found in 1 of 9 ( 11.1% ) of genes in pham

- Manual Annotations of this start: 1 of 6
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrampa\_86 (FC),

### Summary by clusters:

There is one cluster represented in this pham: FC

Info for manual annotations of cluster FC:

- Start number 1 was manually annotated 5 times for cluster FC.
- Start number 2 was manually annotated 1 time for cluster FC.

### Gene Information:

Gene: Bloom\_98 Start: 63725, Stop: 76525, Start Num: 1

Candidate Starts for Bloom\_98:

(Start: 1 @63725 has 5 MA's), (4, 63803), (7, 64088), (8, 64154), (10, 64256), (13, 64835), (18, 65864), (19, 65924), (20, 66173), (22, 66449), (31, 67709), (34, 67916), (35, 67919), (36, 67940), (39, 68291), (41, 68408), (45, 68483), (52, 68855), (53, 68978), (55, 69338), (57, 69461), (58, 69524), (59, 69533), (60, 69551), (61, 69584), (64, 69977), (65, 70148), (67, 70199), (68, 70220), (69, 70241), (71, 70328), (85, 70634), (88, 71054), (89, 71159), (94, 71639), (95, 71669), (96, 71954), (97, 72044), (98, 72101), (100, 72308), (109, 72512), (114, 72650), (115, 72773), (117, 73058), (121, 73433), (122, 73439), (123, 73448), (125, 73514), (127, 73535), (130, 73817), (134, 74042), (136, 74342), (141, 75182), (142, 75236), (143, 75239), (147, 75413), (150, 75518), (151, 75533), (152, 75536), (153, 75551), (154, 75569), (155, 75575), (156, 75623), (158, 75641), (162, 75932), (165, 76064), (167, 76202), (174, 76337), (175, 76352),

Gene: FloraSnap32\_94 Start: 62765, Stop: 75421, Start Num: 1

Candidate Starts for FloraSnap32\_94:

(Start: 1 @62765 has 5 MA's), (4, 62843), (7, 63128), (8, 63194), (9, 63224), (13, 63875), (18, 64904), (19, 64964), (22, 65489), (31, 66749), (32, 66836), (34, 66956), (35, 66959), (36, 66980), (37, 67034), (40, 67382), (41, 67448), (45, 67523), (52, 67895), (53, 68018), (55, 68378), (57, 68501), (59, 68573), (60, 68591), (61, 68624), (64, 69017), (66, 69200), (68, 69260), (69, 69281), (71, 69368), (84, 69599), (85, 69674), (86, 69734), (87, 69839), (89, 70199), (93, 70439), (95, 70709), (101, 71336), (102, 71342), (104, 71384), (105, 71408), (111, 71516), (113, 71576), (115, 71714), (116, 71969), (124, 72401), (132, 72839), (134, 72974), (136, 73274), (138, 73529), (139, 73739), (141, 74114), (145, 74195), (147, 74333), (149, 74402), (151, 74453), (154, 74489), (158, 74558), (160, 74774), (163, 74855), (171, 75140), (177, 75287), (178, 75293),

Gene: FrostedClock\_96 Start: 63213, Stop: 76004, Start Num: 1

Candidate Starts for FrostedClock\_96:

(Start: 1 @63213 has 5 MA's), (4, 63291), (7, 63576), (8, 63642), (10, 63744), (13, 64323), (18, 65352), (19, 65412), (20, 65661), (22, 65937), (31, 67197), (34, 67404), (35, 67407), (36, 67428), (39, 67779), (41, 67896), (45, 67971), (52, 68343), (53, 68466), (55, 68826), (57, 68949), (58, 69012), (59, 69021), (60, 69039), (61, 69072), (64, 69465), (65, 69636), (67, 69687), (68, 69708), (69, 69729), (71, 69816), (85, 70122), (88, 70542), (89, 70647), (94, 71127), (95, 71157), (96, 71442), (97, 71532), (98, 71589), (100, 71796), (109, 72000), (114, 72138), (115, 72261), (117, 72546), (118, 72561), (119, 72576), (124, 72948), (132, 73386), (133, 73398), (134, 73521), (136, 73821), (138, 74076), (141, 74661), (142, 74715), (143, 74718), (147, 74892), (150, 74997), (151, 75012), (152, 75015), (153, 75030), (154, 75048), (155, 75054), (156, 75102), (158, 75120), (162, 75411), (165, 75543), (167, 75681), (174, 75816), (175, 75831),

Gene: GoldenEssence\_80 Start: 57521, Stop: 70312, Start Num: 1

Candidate Starts for GoldenEssence\_80:

(Start: 1 @57521 has 5 MA's), (4, 57599), (6, 57788), (9, 57980), (13, 58631), (18, 59660), (19, 59720), (20, 59969), (22, 60245), (24, 60854), (31, 61505), (34, 61712), (35, 61715), (37, 61790), (41, 62204), (45, 62279), (47, 62516), (48, 62564), (52, 62648), (53, 62771), (55, 63131), (57, 63254), (59, 63326), (60, 63344), (61, 63377), (64, 63770), (66, 63953), (68, 64013), (69, 64034), (71, 64121), (87, 64592), (89, 64952), (90, 64967), (93, 65222), (95, 65492), (96, 65777), (97, 65867), (99, 65927), (100, 66131), (114, 66473), (115, 66596), (116, 66851), (117, 66881), (120, 67106), (121, 67256), (122, 67262), (123, 67271), (125, 67337), (127, 67358), (130, 67640), (134, 67865), (136, 68165), (138, 68420), (139, 68630), (141, 69005), (145, 69086), (147, 69224), (151, 69344), (154, 69380), (155, 69386), (157, 69437), (158, 69449), (159, 69659), (163, 69746), (164, 69839), (171, 70031),

Gene: Mimi\_94 Start: 63072, Stop: 75872, Start Num: 1

Candidate Starts for Mimi\_94:

(Start: 1 @63072 has 5 MA's), (4, 63150), (7, 63435), (8, 63501), (10, 63603), (13, 64182), (18, 65211), (19, 65271), (20, 65520), (22, 65796), (31, 67056), (34, 67263), (35, 67266), (36, 67287), (39, 67638), (41, 67755), (45, 67830), (52, 68202), (53, 68325), (55, 68685), (57, 68808), (58, 68871), (59, 68880), (60, 68898), (61, 68931), (64, 69324), (65, 69495), (67, 69546), (68, 69567), (69, 69588), (71, 69675), (85, 69981), (88, 70401), (89, 70506), (94, 70986), (95, 71016), (96, 71301), (97, 71391), (98, 71448), (100, 71655), (109, 71859), (114, 71997), (115, 72120), (117, 72405), (121, 72780), (122, 72786), (123, 72795), (125, 72861), (127, 72882), (130, 73164), (134, 73389), (136, 73689), (141, 74529), (142, 74583), (143, 74586), (147, 74760), (150, 74865), (151, 74880), (152, 74883), (153, 74898), (154, 74916), (155, 74922), (156, 74970), (158, 74988), (162, 75279), (165, 75411), (167, 75549), (174, 75684), (175, 75699),

Gene: Patbob\_93 Start: 63944, Stop: 76600, Start Num: 1

Candidate Starts for Patbob\_93:

(Start: 1 @63944 has 5 MA's), (4, 64022), (7, 64307), (8, 64373), (9, 64403), (13, 65054), (16, 65807), (18, 66083), (19, 66143), (20, 66392), (21, 66479), (24, 67277), (31, 67928), (34, 68135), (35, 68138), (36, 68159), (39, 68510), (41, 68627), (45, 68702), (52, 69074), (53, 69197), (55, 69557), (57, 69680), (59, 69752), (60, 69770), (61, 69803), (64, 70196), (66, 70379), (68, 70439), (69, 70460), (71, 70547), (84, 70778), (85, 70853), (87, 71018), (89, 71378), (95, 71888), (101, 72515), (102, 72521), (104, 72563), (105, 72587), (106, 72590), (110, 72683), (111, 72695), (112, 72731), (113, 72755), (115, 72893), (117, 73178), (124, 73580), (132, 74018), (133, 74030), (134, 74153), (136, 74453), (137, 74498), (139, 74918), (141, 75293), (147, 75512), (149, 75581), (151, 75632), (154, 75668), (158, 75737), (160, 75953), (163, 76034), (171, 76319),

Gene: Phrampa\_86 Start: 61282, Stop: 78105, Start Num: 2

Candidate Starts for Phrampa\_86:

(Start: 1 @61243 has 5 MA's), (Start: 2 @61282 has 1 MA's), (3, 61318), (5, 61468), (11, 61786), (12, 62413), (14, 63214), (15, 63397), (17, 63799), (23, 64750), (25, 65575), (26, 65722), (27, 65959), (28, 66328), (29, 66373), (30, 66376), (33, 66742), (34, 66787), (38, 67033), (42, 67321), (43, 67342), (44, 67363), (46, 67477), (49, 67720), (50, 67738), (51, 67741), (54, 68113), (56, 68440), (62, 68923), (63, 68992), (68, 69343), (69, 69364), (70, 69376), (72, 69454), (73, 69712), (74, 69970), (75, 70027), (76, 70054), (77, 70057), (78, 70078), (79, 70171), (80, 70237), (81, 70306), (82, 70357), (83, 70555), (91, 71620), (92, 71650), (95, 72415), (101, 73042), (102, 73048), (103, 73081), (104, 73090), (105, 73114), (107, 73132), (108, 73144), (113, 73282), (115, 73420), (121, 74080), (122, 74086), (123, 74095), (125, 74161), (126, 74164), (127, 74182), (128, 74251), (129, 74299), (130, 74464), (131, 74551), (135, 74839), (140, 75526), (144, 75931), (146, 75964), (148, 76099), (161, 76549), (166, 76822), (168, 76933), (169, 76942), (170, 76948), (172, 76996), (173, 77032), (174, 77056), (176, 77080), (179, 77125), (180, 77401), (181, 77458), (182, 77638), (183, 78040), (184, 78076), (185, 78100),

Gene: Racecar\_95 Start: 63725, Stop: 76525, Start Num: 1

Candidate Starts for Racecar\_95:

(Start: 1 @63725 has 5 MA's), (4, 63803), (7, 64088), (8, 64154), (10, 64256), (13, 64835), (18, 65864), (19, 65924), (20, 66173), (22, 66449), (31, 67709), (34, 67916), (35, 67919), (36, 67940), (39, 68291), (41, 68408), (45, 68483), (52, 68855), (53, 68978), (55, 69338), (57, 69461), (58, 69524), (59, 69533), (60, 69551), (61, 69584), (64, 69977), (65, 70148), (67, 70199), (68, 70220), (69, 70241), (71, 70328), (85, 70634), (88, 71054), (89, 71159), (94, 71639), (95, 71669), (96, 71954), (97, 72044), (98, 72101), (100, 72308), (109, 72512), (114, 72650), (115, 72773), (117, 73058), (121, 73433), (122, 73439), (123, 73448), (125, 73514), (127, 73535), (130, 73817), (134, 74042), (136, 74342), (141, 75182), (142, 75236), (143, 75239), (147, 75413), (150, 75518), (151, 75533), (152, 75536), (153, 75551), (154, 75569), (155, 75575), (156, 75623), (158, 75641), (162, 75932), (165, 76064), (167, 76202), (174, 76337), (175, 76352),

Gene: Talia1610\_94 Start: 63090, Stop: 75890, Start Num: 1

Candidate Starts for Talia1610\_94:

(Start: 1 @63090 has 5 MA's), (4, 63168), (7, 63453), (8, 63519), (10, 63621), (13, 64200), (18, 65229), (19, 65289), (20, 65538), (22, 65814), (31, 67074), (34, 67281), (35, 67284), (36, 67305), (39, 67656), (41, 67773), (45, 67848), (52, 68220), (53, 68343), (55, 68703), (57, 68826), (58, 68889), (59, 68898), (60, 68916), (61, 68949), (64, 69342), (65, 69513), (67, 69564), (68, 69585), (69, 69606), (71, 69693), (85, 69999), (88, 70419), (89, 70524), (94, 71004), (95, 71034), (96, 71319), (97, 71409), (98, 71466), (100, 71673), (109, 71877), (114, 72015), (115, 72138), (117, 72423), (121, 72798), (122, 72804), (123, 72813), (125, 72879), (127, 72900), (130, 73182), (134, 73407), (136, 73707), (141, 74547), (142, 74601), (143, 74604), (147, 74778), (150, 74883), (151, 74898), (152, 74901), (153, 74916), (154, 74934), (155, 74940), (156, 74988), (158, 75006), (162, 75297), (165, 75429), (167, 75567), (174, 75702), (175, 75717),