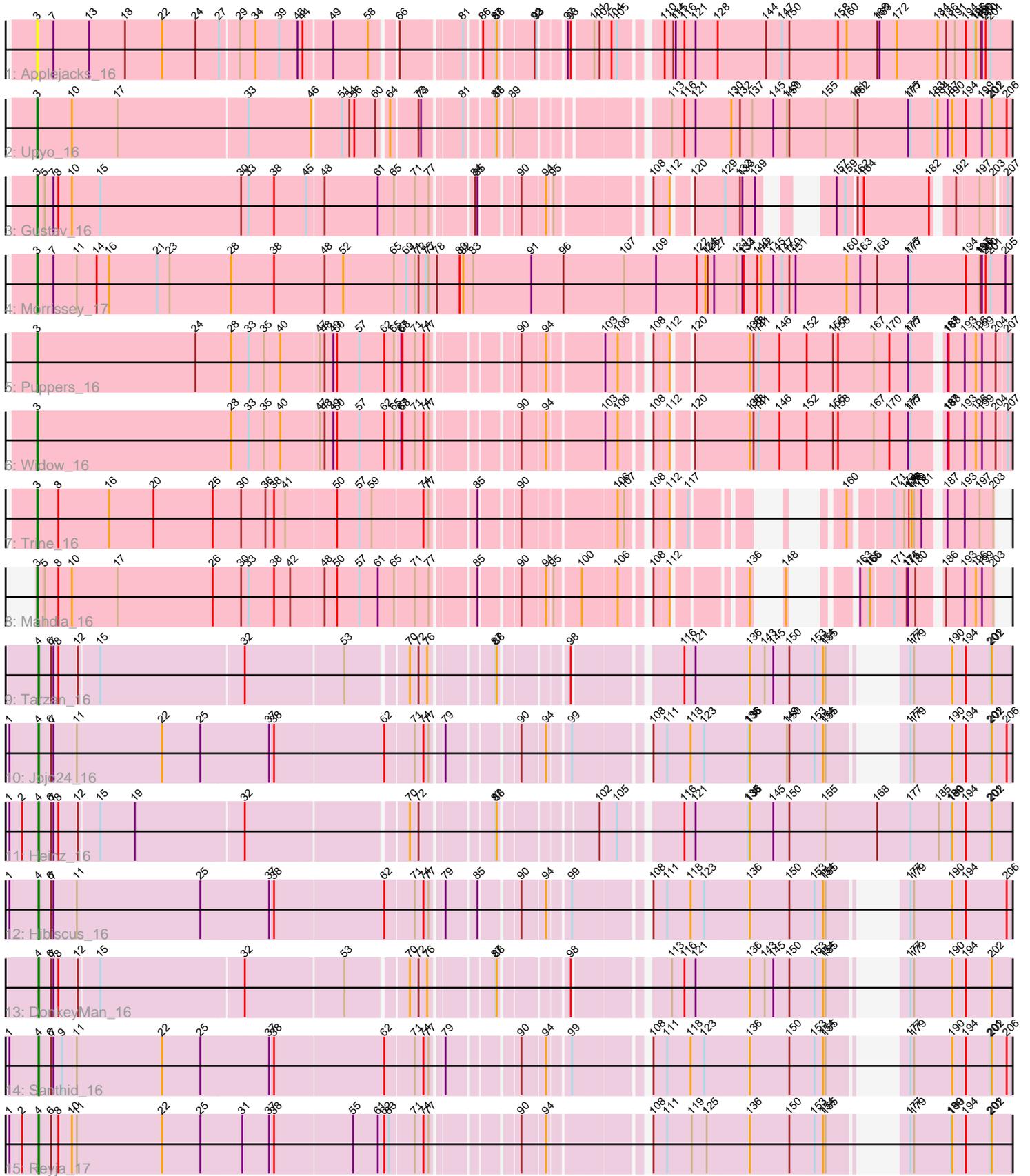


Zoomed Pham 286010



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 286010 Report

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

Pham number 286010 has 15 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Applejacks_16
- Track 2 : Upyo_16
- Track 3 : Gustav_16
- Track 4 : Morrissey_17
- Track 5 : Puppies_16
- Track 6 : Widow_16
- Track 7 : Trine_16
- Track 8 : Mahdia_16
- Track 9 : Tarzan_16
- Track 10 : Jojo24_16
- Track 11 : Heinz_16
- Track 12 : Hibiscus_16
- Track 13 : DonkeyMan_16
- Track 14 : Santhid_16
- Track 15 : Reyja_17

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

The start number called the most often in the published annotations is 4, it was called in 7 of the 14 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- DonkeyMan_16, Heinz_16, Hibiscus_16, Jojo24_16, Reyja_17, Santhid_16, Tarzan_16,

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

-

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

- Applejacks_16, Gustav_16, Mahdia_16, Morrissey_17, Puppies_16, Trine_16, Upyo_16, Widow_16,

Summary by start number:

Start 3:

- Found in 8 of 15 (53.3%) of genes in pham
- Manual Annotations of this start: 7 of 14
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applejacks_16 (CD), Gustav_16 (CD), Mahdia_16 (CD), Morrissey_17 (CD), Poppers_16 (CD), Trine_16 (CD), Upyo_16 (CD), Widow_16 (CD),

Start 4:

- Found in 7 of 15 (46.7%) of genes in pham
- Manual Annotations of this start: 7 of 14
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan_16 (DY), Heinz_16 (DY), Hibiscus_16 (DY), Jojo24_16 (DY), Reyja_17 (DY), Santhid_16 (DY), Tarzan_16 (DY),

Summary by clusters:

There are 2 clusters represented in this pham: CD, DY,

Info for manual annotations of cluster CD:

- Start number 3 was manually annotated 7 times for cluster CD.

Info for manual annotations of cluster DY:

- Start number 4 was manually annotated 7 times for cluster DY.

Gene Information:

Gene: Applejacks_16 Start: 9709, Stop: 14226, Start Num: 3

Candidate Starts for Applejacks_16:

(Start: 3 @9709 has 7 MA's), (7, 9748), (13, 9835), (18, 9922), (22, 10012), (24, 10093), (27, 10147), (29, 10189), (34, 10222), (39, 10273), (43, 10318), (44, 10327), (49, 10393), (58, 10474), (66, 10528), (81, 10660), (86, 10690), (87, 10720), (88, 10723), (92, 10798), (93, 10801), (97, 10846), (98, 10852), (101, 10894), (102, 10903), (104, 10924), (105, 10936), (110, 11014), (114, 11035), (115, 11041), (116, 11062), (121, 11086), (128, 11140), (144, 11254), (147, 11293), (150, 11311), (158, 11425), (160, 11446), (168, 11518), (169, 11524), (172, 11566), (184, 11665), (186, 11686), (191, 11707), (194, 11734), (195, 11755), (196, 11758), (198, 11770), (199, 11773), (200, 11782), (201, 11794), (212, 11899), (213, 11908), (215, 11929), (217, 11941), (219, 11947), (221, 11965), (222, 11968), (232, 12052), (235, 12073), (237, 12079), (239, 12097), (240, 12100), (243, 12130), (245, 12166), (247, 12181), (250, 12214), (257, 12298), (258, 12322), (264, 12388), (265, 12394), (267, 12415), (269, 12439), (272, 12460), (279, 12598), (282, 12628), (285, 12649), (300, 12832), (302, 12973), (311, 13207), (315, 13297), (319, 13339), (321, 13384), (323, 13432), (329, 13552), (333, 13618), (334, 13639), (336, 13660), (337, 13666), (345, 13792), (347, 13813), (348, 13816), (351, 13858), (355, 13924), (356, 13942), (357, 13945), (358, 13978), (366, 14056), (369, 14077), (373, 14128),

Gene: DonkeyMan_16 Start: 9948, Stop: 14102, Start Num: 4

Candidate Starts for DonkeyMan_16:

(Start: 4 @9948 has 7 MA's), (6, 9975), (7, 9981), (8, 9993), (12, 10035), (15, 10083), (32, 10419), (53, 10641), (70, 10773), (72, 10794), (76, 10812), (87, 10941), (88, 10944), (98, 11073), (113, 11253), (116, 11283), (121, 11307), (136, 11436), (143, 11472), (145, 11493), (150, 11532), (153, 11592), (154, 11613), (155, 11619), (177, 11700), (179, 11709), (190, 11802), (194, 11835), (202, 11898),

(221, 11988), (246, 12012), (250, 12048), (251, 12054), (253, 12069), (256, 12111), (259, 12162), (262, 12198), (267, 12249), (274, 12348), (280, 12450), (281, 12459), (286, 12510), (288, 12534), (291, 12561), (295, 12579), (296, 12588), (299, 12627), (300, 12696), (302, 12837), (305, 13005), (307, 13029), (309, 13053), (310, 13071), (320, 13254), (321, 13257), (322, 13275), (337, 13548), (345, 13668), (351, 13734), (354, 13761), (355, 13800), (365, 13929),

Gene: Gustav_16 Start: 9814, Stop: 14301, Start Num: 3

Candidate Starts for Gustav_16:

(Start: 3 @9814 has 7 MA's), (5, 9832), (7, 9853), (8, 9865), (10, 9898), (15, 9967), (30, 10306), (33, 10321), (38, 10381), (45, 10459), (48, 10498), (61, 10627), (65, 10660), (71, 10705), (77, 10738), (84, 10822), (85, 10828), (90, 10909), (94, 10963), (95, 10975), (108, 11158), (112, 11188), (120, 11224), (129, 11293), (132, 11326), (133, 11332), (139, 11362), (157, 11443), (159, 11464), (162, 11482), (164, 11497), (182, 11650), (192, 11689), (197, 11737), (203, 11770), (207, 11788), (210, 11836), (221, 11878), (224, 11905), (227, 11929), (228, 11941), (229, 11944), (230, 11953), (233, 11965), (240, 12004), (242, 12031), (250, 12118), (253, 12139), (256, 12181), (260, 12235), (262, 12268), (263, 12289), (264, 12292), (265, 12298), (268, 12322), (277, 12448), (278, 12472), (279, 12517), (281, 12532), (282, 12547), (284, 12565), (286, 12583), (298, 12688), (301, 12892), (302, 12901), (328, 13576), (332, 13642), (337, 13705), (339, 13750), (343, 13798), (344, 13807), (346, 13846), (349, 13882), (350, 13891), (352, 13903), (359, 14029), (364, 14107), (365, 14119), (366, 14122), (368, 14143), (369, 14146), (372, 14200),

Gene: Heinz_16 Start: 9889, Stop: 14187, Start Num: 4

Candidate Starts for Heinz_16:

(1, 9820), (2, 9850), (Start: 4 @9889 has 7 MA's), (6, 9916), (7, 9922), (8, 9934), (12, 9976), (15, 10024), (19, 10108), (32, 10360), (70, 10714), (72, 10735), (87, 10882), (88, 10885), (102, 11065), (105, 11098), (116, 11224), (121, 11248), (135, 11374), (136, 11377), (145, 11434), (150, 11473), (155, 11560), (168, 11680), (177, 11761), (185, 11830), (189, 11860), (190, 11863), (194, 11896), (201, 11956), (202, 11959), (221, 12049), (250, 12109), (251, 12115), (253, 12130), (254, 12133), (256, 12172), (259, 12223), (262, 12259), (267, 12310), (274, 12409), (281, 12520), (286, 12571), (288, 12595), (291, 12622), (295, 12640), (296, 12649), (299, 12688), (300, 12757), (302, 12898), (304, 12928), (309, 13114), (320, 13324), (321, 13327), (337, 13627), (342, 13705), (345, 13753), (351, 13819), (354, 13846), (355, 13885), (362, 13990), (363, 13993), (365, 14014), (370, 14047), (371, 14050),

Gene: Hibiscus_16 Start: 9906, Stop: 14141, Start Num: 4

Candidate Starts for Hibiscus_16:

(1, 9837), (Start: 4 @9906 has 7 MA's), (6, 9933), (7, 9939), (11, 9996), (25, 10296), (37, 10458), (38, 10467), (62, 10725), (71, 10791), (74, 10812), (77, 10824), (79, 10848), (85, 10914), (90, 10995), (94, 11049), (99, 11094), (108, 11244), (111, 11274), (118, 11331), (123, 11364), (136, 11472), (150, 11568), (153, 11628), (154, 11649), (155, 11655), (177, 11736), (179, 11745), (190, 11838), (194, 11871), (206, 11970), (246, 12048), (250, 12084), (251, 12090), (252, 12102), (253, 12105), (256, 12147), (259, 12198), (262, 12234), (267, 12285), (274, 12384), (275, 12399), (281, 12495), (284, 12528), (286, 12546), (288, 12570), (291, 12597), (295, 12615), (296, 12624), (299, 12663), (300, 12732), (302, 12873), (304, 12903), (305, 13038), (312, 13146), (320, 13290), (321, 13293), (337, 13581), (345, 13707), (351, 13773), (354, 13800), (355, 13839), (360, 13926), (365, 13968),

Gene: Jojo24_16 Start: 9900, Stop: 14138, Start Num: 4

Candidate Starts for Jojo24_16:

(1, 9831), (Start: 4 @9900 has 7 MA's), (6, 9927), (7, 9933), (11, 9990), (22, 10197), (25, 10290), (37, 10452), (38, 10461), (62, 10719), (71, 10785), (74, 10806), (77, 10818), (79, 10842), (90, 10989), (94, 11043), (99, 11088), (108, 11238), (111, 11268), (118, 11325), (123, 11358), (135, 11463), (136, 11466), (149, 11556), (150, 11562), (153, 11622), (154, 11643), (155, 11649), (177, 11730), (179, 11739), (190, 11832), (194, 11865), (201, 11925), (202, 11928), (206, 11964), (250, 12078), (251,

12084), (252, 12096), (253, 12099), (256, 12141), (259, 12192), (262, 12228), (267, 12279), (268, 12282), (274, 12378), (275, 12393), (281, 12489), (286, 12540), (288, 12564), (291, 12591), (295, 12609), (296, 12618), (299, 12657), (300, 12726), (302, 12867), (304, 12897), (305, 13032), (310, 13098), (312, 13140), (320, 13281), (321, 13284), (337, 13578), (345, 13704), (351, 13770), (355, 13836), (360, 13923), (365, 13965),

Gene: Mahdia_16 Start: 9733, Stop: 13983, Start Num: 3

Candidate Starts for Mahdia_16:

(Start: 3 @9733 has 7 MA's), (5, 9751), (8, 9784), (10, 9817), (17, 9928), (26, 10159), (30, 10225), (33, 10240), (38, 10300), (42, 10339), (48, 10417), (50, 10447), (57, 10501), (61, 10546), (65, 10579), (71, 10624), (77, 10657), (85, 10747), (90, 10828), (94, 10882), (95, 10894), (100, 10951), (106, 11026), (108, 11077), (112, 11107), (136, 11245), (148, 11257), (163, 11317), (165, 11338), (166, 11341), (171, 11392), (174, 11419), (175, 11422), (180, 11440), (186, 11488), (193, 11533), (196, 11557), (199, 11572), (203, 11599), (211, 11605), (231, 11704), (235, 11731), (237, 11737), (240, 11758), (248, 11866), (250, 11872), (253, 11893), (262, 12022), (263, 12043), (264, 12046), (265, 12052), (268, 12076), (271, 12112), (272, 12118), (279, 12259), (286, 12325), (290, 12349), (292, 12376), (297, 12412), (298, 12427), (302, 12649), (319, 13030), (335, 13396), (337, 13420), (340, 13471), (341, 13492), (345, 13546), (348, 13570), (351, 13612), (355, 13678), (356, 13696), (362, 13783), (366, 13810), (367, 13828), (369, 13831),

Gene: Morrissey_17 Start: 10161, Stop: 15197, Start Num: 3

Candidate Starts for Morrissey_17:

(Start: 3 @10161 has 7 MA's), (7, 10200), (11, 10257), (14, 10305), (16, 10335), (21, 10452), (23, 10482), (28, 10629), (38, 10725), (48, 10848), (52, 10893), (65, 11016), (69, 11046), (71, 11067), (72, 11076), (75, 11094), (77, 11100), (78, 11121), (80, 11175), (82, 11184), (83, 11208), (91, 11349), (96, 11427), (107, 11574), (109, 11652), (122, 11751), (124, 11772), (126, 11778), (127, 11793), (131, 11847), (133, 11862), (134, 11865), (140, 11898), (142, 11907), (145, 11937), (147, 11958), (150, 11976), (151, 11991), (160, 12111), (163, 12144), (168, 12183), (175, 12258), (177, 12264), (194, 12399), (197, 12432), (198, 12435), (199, 12438), (200, 12447), (201, 12459), (205, 12495), (208, 12525), (212, 12564), (217, 12606), (218, 12609), (219, 12612), (222, 12633), (225, 12663), (235, 12738), (237, 12744), (243, 12795), (244, 12819), (253, 12900), (260, 12996), (261, 13017), (262, 13029), (263, 13050), (264, 13053), (268, 13083), (271, 13119), (277, 13209), (278, 13233), (279, 13278), (282, 13308), (284, 13326), (286, 13344), (289, 13365), (290, 13368), (301, 13623), (302, 13632), (310, 13866), (316, 13998), (317, 14004), (319, 14022), (320, 14064), (325, 14181), (326, 14433), (327, 14460), (331, 14565), (335, 14607), (336, 14625), (337, 14631), (345, 14757), (348, 14781), (349, 14805), (351, 14823), (353, 14829), (355, 14889), (365, 15018), (366, 15021), (367, 15039), (369, 15042), (373, 15099),

Gene: Puppies_16 Start: 9686, Stop: 14305, Start Num: 3

Candidate Starts for Puppies_16:

(Start: 3 @9686 has 7 MA's), (24, 10070), (28, 10154), (33, 10196), (35, 10232), (40, 10271), (47, 10361), (48, 10373), (49, 10394), (50, 10403), (57, 10457), (62, 10514), (65, 10535), (67, 10547), (68, 10550), (71, 10580), (74, 10601), (77, 10613), (90, 10784), (94, 10838), (103, 10952), (106, 10982), (108, 11033), (112, 11063), (120, 11099), (136, 11231), (138, 11240), (141, 11252), (146, 11303), (152, 11369), (156, 11429), (158, 11441), (167, 11528), (170, 11564), (175, 11606), (177, 11612), (187, 11675), (188, 11678), (193, 11717), (196, 11741), (199, 11756), (204, 11789), (207, 11813), (209, 11840), (213, 11882), (214, 11891), (219, 11921), (223, 11945), (229, 12005), (234, 12038), (236, 12050), (240, 12074), (241, 12077), (245, 12137), (249, 12182), (253, 12206), (256, 12248), (261, 12323), (262, 12335), (263, 12356), (264, 12359), (266, 12374), (275, 12500), (276, 12503), (283, 12632), (286, 12653), (287, 12662), (293, 12716), (294, 12722), (302, 12980), (306, 13151), (307, 13169), (314, 13316), (316, 13358), (337, 13739), (340, 13790), (342, 13817), (345, 13865), (348, 13889), (349, 13913), (351, 13931), (355, 13997), (362, 14102), (365, 14126), (366, 14129), (367, 14147), (369, 14150), (374, 14237),

Gene: Reyja_17 Start: 10078, Stop: 14313, Start Num: 4

Candidate Starts for Reyja_17:

(1, 10009), (2, 10039), (Start: 4 @10078 has 7 MA's), (6, 10105), (8, 10123), (10, 10156), (11, 10168), (22, 10375), (25, 10468), (31, 10567), (37, 10630), (38, 10639), (55, 10825), (61, 10885), (62, 10897), (63, 10906), (71, 10963), (74, 10984), (77, 10996), (90, 11167), (94, 11221), (108, 11416), (111, 11446), (119, 11506), (125, 11542), (136, 11644), (150, 11740), (153, 11800), (154, 11821), (155, 11827), (177, 11908), (179, 11917), (189, 12007), (190, 12010), (194, 12043), (201, 12103), (202, 12106), (221, 12196), (246, 12220), (250, 12256), (251, 12262), (253, 12277), (256, 12319), (259, 12370), (262, 12406), (267, 12457), (274, 12556), (280, 12658), (281, 12667), (286, 12718), (288, 12742), (291, 12769), (295, 12787), (296, 12796), (299, 12835), (300, 12904), (302, 13045), (305, 13213), (307, 13237), (309, 13261), (310, 13279), (320, 13468), (321, 13471), (322, 13489), (337, 13759), (345, 13879), (351, 13945), (355, 14011), (365, 14140),

Gene: Santhid_16 Start: 9908, Stop: 14146, Start Num: 4

Candidate Starts for Santhid_16:

(1, 9839), (Start: 4 @9908 has 7 MA's), (6, 9935), (7, 9941), (9, 9962), (11, 9998), (22, 10205), (25, 10298), (37, 10460), (38, 10469), (62, 10727), (71, 10793), (74, 10814), (77, 10826), (79, 10850), (90, 10997), (94, 11051), (99, 11096), (108, 11246), (111, 11276), (118, 11333), (123, 11366), (136, 11474), (150, 11570), (153, 11630), (154, 11651), (155, 11657), (177, 11738), (179, 11747), (190, 11840), (194, 11873), (201, 11933), (202, 11936), (206, 11972), (250, 12086), (251, 12092), (253, 12107), (256, 12149), (259, 12200), (262, 12236), (267, 12287), (274, 12386), (275, 12401), (281, 12497), (286, 12548), (288, 12572), (291, 12599), (295, 12617), (296, 12626), (299, 12665), (300, 12734), (302, 12875), (303, 12899), (304, 12905), (305, 13040), (312, 13148), (320, 13292), (321, 13295), (337, 13586), (338, 13616), (345, 13712), (348, 13736), (351, 13778), (354, 13805), (355, 13844), (360, 13931), (365, 13973), (366, 13976),

Gene: Tarzan_16 Start: 9953, Stop: 14116, Start Num: 4

Candidate Starts for Tarzan_16:

(Start: 4 @9953 has 7 MA's), (6, 9980), (7, 9986), (8, 9998), (12, 10040), (15, 10088), (32, 10424), (53, 10646), (70, 10778), (72, 10799), (76, 10817), (87, 10946), (88, 10949), (98, 11078), (116, 11288), (121, 11312), (136, 11441), (143, 11477), (145, 11498), (150, 11537), (153, 11597), (154, 11618), (155, 11624), (177, 11705), (179, 11714), (190, 11807), (194, 11840), (201, 11900), (202, 11903), (221, 11993), (246, 12017), (250, 12053), (251, 12059), (253, 12074), (256, 12116), (259, 12167), (262, 12203), (267, 12254), (280, 12455), (281, 12464), (286, 12515), (288, 12539), (291, 12566), (295, 12584), (296, 12593), (299, 12632), (300, 12701), (302, 12842), (305, 13010), (307, 13034), (309, 13058), (313, 13151), (320, 13265), (321, 13268), (322, 13286), (337, 13562), (345, 13682), (351, 13748), (355, 13814), (365, 13943),

Gene: Trine_16 Start: 9668, Stop: 13906, Start Num: 3

Candidate Starts for Trine_16:

(Start: 3 @9668 has 7 MA's), (8, 9719), (16, 9842), (20, 9950), (26, 10094), (30, 10160), (36, 10214), (38, 10235), (41, 10262), (50, 10382), (57, 10436), (59, 10466), (74, 10580), (77, 10592), (85, 10682), (90, 10763), (106, 10961), (107, 10976), (108, 11012), (112, 11042), (117, 11072), (160, 11237), (171, 11327), (173, 11348), (176, 11360), (177, 11363), (178, 11366), (179, 11372), (181, 11390), (187, 11426), (193, 11468), (197, 11501), (203, 11534), (220, 11546), (226, 11600), (228, 11621), (229, 11624), (235, 11666), (238, 11678), (248, 11801), (249, 11804), (253, 11828), (256, 11870), (261, 11945), (262, 11957), (263, 11978), (269, 12032), (271, 12047), (273, 12068), (275, 12122), (281, 12209), (282, 12224), (286, 12260), (289, 12281), (302, 12527), (308, 12740), (315, 12884), (321, 12971), (322, 12989), (323, 13019), (329, 13223), (333, 13289), (336, 13331), (337, 13337), (340, 13388), (342, 13415), (345, 13463), (351, 13529), (355, 13595), (357, 13616), (362, 13700), (365, 13724), (366, 13727), (367, 13745), (372, 13805),

Gene: Upyo_16 Start: 9799, Stop: 14112, Start Num: 3

Candidate Starts for Upyo_16:

(Start: 3 @9799 has 7 MA's), (10, 9883), (17, 9994), (33, 10297), (46, 10438), (51, 10504), (54, 10522), (56, 10534), (60, 10582), (64, 10603), (72, 10663), (73, 10669), (81, 10750), (87, 10810), (88, 10813), (89, 10840), (113, 11122), (116, 11152), (121, 11176), (130, 11260), (132, 11281), (137, 11311), (145, 11362), (149, 11395), (150, 11401), (155, 11488), (161, 11554), (162, 11563), (175, 11683), (177, 11689), (183, 11743), (184, 11755), (187, 11779), (190, 11791), (194, 11824), (199, 11863), (201, 11884), (202, 11887), (206, 11923), (250, 12037), (251, 12043), (253, 12058), (255, 12097), (256, 12100), (261, 12175), (262, 12187), (264, 12211), (270, 12274), (277, 12373), (279, 12442), (284, 12490), (286, 12508), (290, 12532), (302, 12796), (318, 13165), (319, 13177), (321, 13222), (324, 13321), (330, 13486), (331, 13492), (335, 13534), (337, 13558), (345, 13678), (349, 13726), (351, 13744), (353, 13750), (355, 13810), (361, 13912), (365, 13939), (366, 13942), (369, 13963), (373, 14014),

Gene: Widow_16 Start: 9677, Stop: 14296, Start Num: 3

Candidate Starts for Widow_16:

(Start: 3 @9677 has 7 MA's), (28, 10145), (33, 10187), (35, 10223), (40, 10262), (47, 10352), (48, 10364), (49, 10385), (50, 10394), (57, 10448), (62, 10505), (65, 10526), (67, 10538), (68, 10541), (71, 10571), (74, 10592), (77, 10604), (90, 10775), (94, 10829), (103, 10943), (106, 10973), (108, 11024), (112, 11054), (120, 11090), (136, 11222), (138, 11231), (141, 11243), (146, 11294), (152, 11360), (156, 11420), (158, 11432), (167, 11519), (170, 11555), (175, 11597), (177, 11603), (187, 11666), (188, 11669), (193, 11708), (196, 11732), (199, 11747), (204, 11780), (207, 11804), (209, 11831), (213, 11873), (214, 11882), (216, 11897), (219, 11912), (223, 11936), (229, 11996), (234, 12029), (236, 12041), (240, 12065), (241, 12068), (245, 12128), (249, 12173), (253, 12197), (256, 12239), (261, 12314), (262, 12326), (263, 12347), (264, 12350), (275, 12491), (276, 12494), (283, 12623), (286, 12644), (287, 12653), (293, 12707), (294, 12713), (302, 12971), (306, 13142), (307, 13160), (314, 13307), (316, 13349), (331, 13664), (337, 13730), (340, 13781), (342, 13808), (345, 13856), (348, 13880), (349, 13904), (351, 13922), (355, 13988), (362, 14093), (365, 14117), (366, 14120), (367, 14138), (369, 14141), (374, 14228),