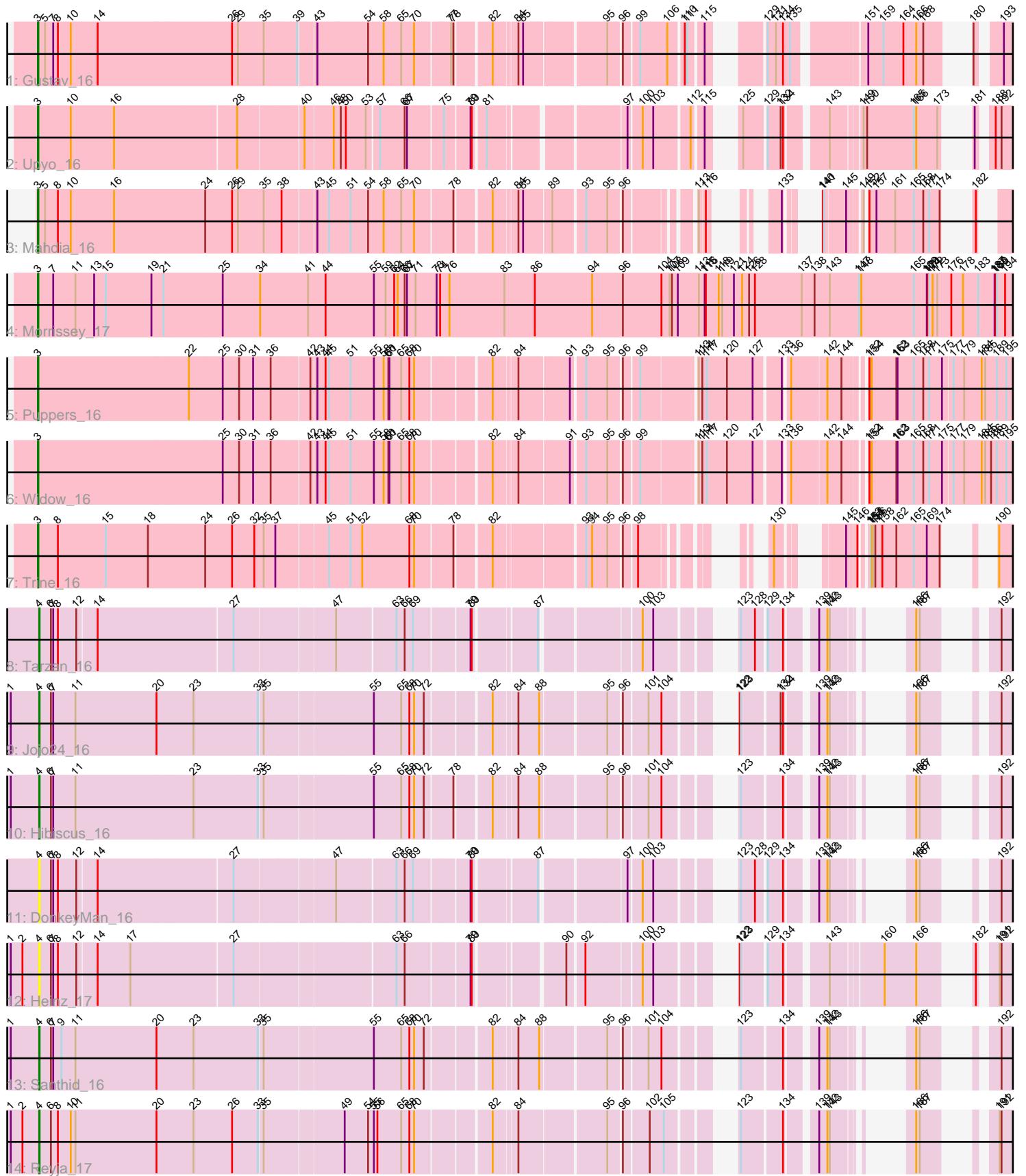


## Zoomed Pham 132518



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 132518 Report

This analysis was run 04/05/24 on database version 557.

Pham number 132518 has 14 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Gustav\_16
- Track 2 : Upyo\_16
- Track 3 : Mahdia\_16
- Track 4 : Morrissey\_17
- Track 5 : Poppers\_16
- Track 6 : Widow\_16
- Track 7 : Trine\_16
- Track 8 : Tarzan\_16
- Track 9 : Jojo24\_16
- Track 10 : Hibiscus\_16
- Track 11 : DonkeyMan\_16
- Track 12 : Heinz\_17
- Track 13 : Santhid\_16
- Track 14 : 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 3, it was called in 7 of the 12 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Gustav\_16, Mahdia\_16, Morrissey\_17, Poppers\_16, Trine\_16, Upyo\_16, Widow\_16,

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

- 

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

- DonkeyMan\_16, Heinz\_17, Hibiscus\_16, Jojo24\_16, Reyja\_17, Santhid\_16, Tarzan\_16,

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

Start 3:

- Found in 7 of 14 ( 50.0% ) of genes in pham
- Manual Annotations of this start: 7 of 12
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gustav\_16 (CD), Mahdia\_16 (CD), Morrissey\_17 (CD), Puppers\_16 (CD), Trine\_16 (CD), Upyo\_16 (CD), Widow\_16 (CD),

#### Start 4:

- Found in 7 of 14 ( 50.0% ) of genes in pham
- Manual Annotations of this start: 5 of 12
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan\_16 (DY), Heinz\_17 (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 5 times for cluster DY.

#### **Gene Information:**

Gene: DonkeyMan\_16 Start: 9948, Stop: 14102, Start Num: 4

Candidate Starts for DonkeyMan\_16:

(Start: 4 @9948 has 5 MA's), (6, 9975), (7, 9981), (8, 9993), (12, 10035), (14, 10083), (27, 10419), (47, 10641), (63, 10773), (66, 10794), (69, 10812), (79, 10941), (80, 10944), (87, 11073), (97, 11253), (100, 11283), (103, 11307), (123, 11436), (128, 11472), (129, 11493), (134, 11532), (139, 11592), (142, 11613), (143, 11619), (166, 11700), (167, 11709), (192, 11802), (196, 11835), (205, 11898), (215, 11988), (217, 12012), (220, 12048), (221, 12054), (223, 12069), (226, 12111), (227, 12162), (230, 12198), (235, 12249), (242, 12348), (249, 12450), (250, 12459), (254, 12510), (256, 12534), (259, 12561), (262, 12579), (263, 12588), (266, 12627), (267, 12696), (269, 12837), (272, 13005), (274, 13029), (276, 13053), (277, 13071), (286, 13254), (287, 13257), (288, 13275), (302, 13548), (310, 13668), (315, 13734), (317, 13761), (318, 13800), (327, 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), (14, 9967), (26, 10306), (29, 10321), (35, 10381), (39, 10459), (43, 10498), (54, 10627), (58, 10660), (65, 10705), (70, 10738), (77, 10822), (78, 10828), (82, 10909), (84, 10963), (85, 10975), (95, 11158), (96, 11188), (99, 11224), (106, 11293), (110, 11326), (111, 11332), (115, 11362), (129, 11443), (131, 11464), (134, 11482), (135, 11497), (151, 11650), (159, 11689), (164, 11737), (166, 11770), (168, 11788), (180, 11836), (193, 11878), (196, 11905), (199, 11929), (200, 11941), (201, 11944), (202, 11953), (204, 11965), (211, 12004), (213, 12031), (220, 12118), (223, 12139), (226, 12181), (228, 12235), (230, 12268), (231, 12289), (232, 12292), (233, 12298), (236, 12322), (246, 12448), (247, 12472), (248, 12517), (250, 12532), (251, 12547), (253, 12565), (254, 12583), (265, 12688), (268, 12892), (269, 12901), (292, 13576), (296, 13642), (299, 13705), (301, 13750), (304, 13798), (305, 13807), (309, 13846),

(310, 13882), (311, 13891), (313, 13903), (320, 14029), (325, 14107), (326, 14119), (327, 14122),  
(329, 14143), (330, 14146), (333, 14200),

Gene: Heinz\_17 Start: 9889, Stop: 14187, Start Num: 4

Candidate Starts for Heinz\_17:

(1, 9820), (2, 9850), (Start: 4 @9889 has 5 MA's), (6, 9916), (7, 9922), (8, 9934), (12, 9976), (14, 10024), (17, 10108), (27, 10360), (63, 10714), (66, 10735), (79, 10882), (80, 10885), (90, 11065), (92, 11098), (100, 11224), (103, 11248), (122, 11374), (123, 11377), (129, 11434), (134, 11473), (143, 11560), (160, 11680), (166, 11761), (182, 11830), (191, 11860), (192, 11863), (196, 11896), (204, 11956), (205, 11959), (215, 12049), (220, 12109), (221, 12115), (223, 12130), (224, 12133), (226, 12172), (227, 12223), (230, 12259), (235, 12310), (242, 12409), (250, 12520), (254, 12571), (256, 12595), (259, 12622), (262, 12640), (263, 12649), (266, 12688), (267, 12757), (269, 12898), (271, 12928), (276, 13114), (286, 13324), (287, 13327), (302, 13627), (308, 13705), (310, 13753), (315, 13819), (317, 13846), (318, 13885), (323, 13990), (324, 13993), (327, 14014), (331, 14047), (332, 14050),

Gene: Hibiscus\_16 Start: 9906, Stop: 14141, Start Num: 4

Candidate Starts for Hibiscus\_16:

(1, 9837), (Start: 4 @9906 has 5 MA's), (6, 9933), (7, 9939), (11, 9996), (23, 10296), (33, 10458), (35, 10467), (55, 10725), (65, 10791), (68, 10812), (70, 10824), (72, 10848), (78, 10914), (82, 10995), (84, 11049), (88, 11094), (95, 11244), (96, 11274), (101, 11331), (104, 11364), (123, 11472), (134, 11568), (139, 11628), (142, 11649), (143, 11655), (166, 11736), (167, 11745), (192, 11838), (196, 11871), (211, 11970), (217, 12048), (220, 12084), (221, 12090), (222, 12102), (223, 12105), (226, 12147), (227, 12198), (230, 12234), (235, 12285), (242, 12384), (245, 12399), (250, 12495), (253, 12528), (254, 12546), (256, 12570), (259, 12597), (262, 12615), (263, 12624), (266, 12663), (267, 12732), (269, 12873), (271, 12903), (272, 13038), (278, 13146), (286, 13290), (287, 13293), (302, 13581), (310, 13707), (315, 13773), (317, 13800), (318, 13839), (321, 13926), (327, 13968),

Gene: Jojo24\_16 Start: 9900, Stop: 14138, Start Num: 4

Candidate Starts for Jojo24\_16:

(1, 9831), (Start: 4 @9900 has 5 MA's), (6, 9927), (7, 9933), (11, 9990), (20, 10197), (23, 10290), (33, 10452), (35, 10461), (55, 10719), (65, 10785), (68, 10806), (70, 10818), (72, 10842), (82, 10989), (84, 11043), (88, 11088), (95, 11238), (96, 11268), (101, 11325), (104, 11358), (122, 11463), (123, 11466), (132, 11556), (134, 11562), (139, 11622), (142, 11643), (143, 11649), (166, 11730), (167, 11739), (192, 11832), (196, 11865), (204, 11925), (205, 11928), (211, 11964), (220, 12078), (221, 12084), (222, 12096), (223, 12099), (226, 12141), (227, 12192), (230, 12228), (235, 12279), (236, 12282), (242, 12378), (245, 12393), (250, 12489), (254, 12540), (256, 12564), (259, 12591), (262, 12609), (263, 12618), (266, 12657), (267, 12726), (269, 12867), (271, 12897), (272, 13032), (277, 13098), (278, 13140), (286, 13281), (287, 13284), (302, 13578), (310, 13704), (315, 13770), (318, 13836), (321, 13923), (327, 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), (16, 9928), (24, 10159), (26, 10225), (29, 10240), (35, 10300), (38, 10339), (43, 10417), (45, 10447), (51, 10501), (54, 10546), (58, 10579), (65, 10624), (70, 10657), (78, 10747), (82, 10828), (84, 10882), (85, 10894), (89, 10951), (93, 11026), (95, 11077), (96, 11107), (113, 11245), (116, 11257), (133, 11317), (140, 11338), (141, 11341), (145, 11392), (149, 11419), (152, 11422), (157, 11440), (161, 11488), (165, 11533), (168, 11557), (171, 11572), (174, 11599), (182, 11605), (203, 11704), (207, 11731), (209, 11737), (211, 11758), (218, 11866), (220, 11872), (223, 11893), (230, 12022), (231, 12043), (232, 12046), (233, 12052), (236, 12076), (239, 12112), (240, 12118), (248, 12259), (254, 12325), (257, 12349), (260, 12376), (264, 12412), (265, 12427), (269, 12649), (285, 13030), (300, 13396), (302, 13420), (306, 13471), (307, 13492), (310, 13546), (312, 13570), (315, 13612), (318, 13678), (319, 13696), (323, 13783), (328,

(13810), (329, 13828), (330, 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), (13, 10305), (15, 10335), (19, 10452), (21, 10482), (25, 10629), (34, 10725), (41, 10848), (44, 10893), (55, 11016), (59, 11046), (62, 11067), (64, 11076), (66, 11094), (67, 11100), (71, 11121), (73, 11175), (74, 11184), (76, 11208), (83, 11349), (86, 11427), (94, 11574), (96, 11652), (104, 11751), (107, 11772), (108, 11778), (109, 11793), (113, 11847), (115, 11862), (116, 11865), (118, 11898), (119, 11907), (121, 11937), (124, 11958), (126, 11976), (128, 11991), (137, 12111), (138, 12144), (143, 12183), (147, 12258), (148, 12264), (165, 12399), (169, 12432), (170, 12435), (171, 12438), (172, 12447), (173, 12459), (176, 12495), (178, 12525), (183, 12564), (187, 12606), (188, 12609), (189, 12612), (194, 12633), (197, 12663), (207, 12738), (209, 12744), (214, 12795), (215, 12819), (223, 12900), (228, 12996), (229, 13017), (230, 13029), (231, 13050), (232, 13053), (236, 13083), (239, 13119), (246, 13209), (247, 13233), (248, 13278), (251, 13308), (253, 13326), (254, 13344), (256, 13365), (257, 13368), (268, 13623), (269, 13632), (277, 13866), (282, 13998), (283, 14004), (285, 14022), (286, 14064), (291, 14181), (293, 14433), (294, 14460), (298, 14565), (300, 14607), (301, 14625), (302, 14631), (310, 14757), (312, 14781), (314, 14805), (315, 14823), (316, 14829), (318, 14889), (327, 15018), (328, 15021), (329, 15039), (330, 15042), (334, 15099),

Gene: Puppers\_16 Start: 9686, Stop: 14305, Start Num: 3

Candidate Starts for Puppers\_16:

(Start: 3 @9686 has 7 MA's), (22, 10070), (25, 10154), (30, 10196), (31, 10232), (36, 10271), (42, 10361), (43, 10373), (44, 10394), (45, 10403), (51, 10457), (55, 10514), (58, 10535), (60, 10547), (61, 10550), (65, 10580), (68, 10601), (70, 10613), (82, 10784), (84, 10838), (91, 10952), (93, 10982), (95, 11033), (96, 11063), (99, 11099), (113, 11231), (114, 11240), (117, 11252), (120, 11303), (127, 11369), (133, 11429), (136, 11441), (142, 11528), (144, 11564), (152, 11606), (154, 11612), (162, 11675), (163, 11678), (165, 11717), (168, 11741), (171, 11756), (175, 11789), (177, 11813), (179, 11840), (184, 11882), (185, 11891), (189, 11921), (195, 11945), (201, 12005), (206, 12038), (208, 12050), (211, 12074), (212, 12077), (216, 12137), (219, 12182), (223, 12206), (226, 12248), (229, 12323), (230, 12335), (231, 12356), (232, 12359), (234, 12374), (243, 12500), (244, 12503), (252, 12632), (254, 12653), (255, 12662), (260, 12716), (261, 12722), (269, 12980), (273, 13151), (274, 13169), (280, 13316), (282, 13358), (302, 13739), (306, 13790), (308, 13817), (310, 13865), (312, 13889), (314, 13913), (315, 13931), (318, 13997), (323, 14102), (327, 14126), (328, 14129), (329, 14147), (330, 14150), (335, 14237),

Gene: Reyja\_17 Start: 10078, Stop: 14313, Start Num: 4

Candidate Starts for Reyja\_17:

(1, 10009), (2, 10039), (Start: 4 @10078 has 5 MA's), (6, 10105), (8, 10123), (10, 10156), (11, 10168), (20, 10375), (23, 10468), (26, 10567), (33, 10630), (35, 10639), (49, 10825), (54, 10885), (55, 10897), (56, 10906), (65, 10963), (68, 10984), (70, 10996), (82, 11167), (84, 11221), (95, 11416), (96, 11446), (102, 11506), (105, 11542), (123, 11644), (134, 11740), (139, 11800), (142, 11821), (143, 11827), (166, 11908), (167, 11917), (191, 12007), (192, 12010), (196, 12043), (204, 12103), (205, 12106), (215, 12196), (217, 12220), (220, 12256), (221, 12262), (223, 12277), (226, 12319), (227, 12370), (230, 12406), (235, 12457), (242, 12556), (249, 12658), (250, 12667), (254, 12718), (256, 12742), (259, 12769), (262, 12787), (263, 12796), (266, 12835), (267, 12904), (269, 13045), (272, 13213), (274, 13237), (276, 13261), (277, 13279), (286, 13468), (287, 13471), (288, 13489), (302, 13759), (310, 13879), (315, 13945), (318, 14011), (327, 14140),

Gene: Santhid\_16 Start: 9908, Stop: 14146, Start Num: 4

Candidate Starts for Santhid\_16:

(1, 9839), (Start: 4 @9908 has 5 MA's), (6, 9935), (7, 9941), (9, 9962), (11, 9998), (20, 10205), (23, 10298), (33, 10460), (35, 10469), (55, 10727), (65, 10793), (68, 10814), (70, 10826), (72, 10850), (82,

(10997), (84, 11051), (88, 11096), (95, 11246), (96, 11276), (101, 11333), (104, 11366), (123, 11474), (134, 11570), (139, 11630), (142, 11651), (143, 11657), (166, 11738), (167, 11747), (192, 11840), (196, 11873), (204, 11933), (205, 11936), (211, 11972), (220, 12086), (221, 12092), (223, 12107), (226, 12149), (227, 12200), (230, 12236), (235, 12287), (242, 12386), (245, 12401), (250, 12497), (254, 12548), (256, 12572), (259, 12599), (262, 12617), (263, 12626), (266, 12665), (267, 12734), (269, 12875), (270, 12899), (271, 12905), (272, 13040), (278, 13148), (286, 13292), (287, 13295), (302, 13586), (303, 13616), (310, 13712), (312, 13736), (315, 13778), (317, 13805), (318, 13844), (321, 13931), (327, 13973), (328, 13976),

Gene: Tarzan\_16 Start: 9953, Stop: 14116, Start Num: 4

Candidate Starts for Tarzan\_16:

(Start: 4 @9953 has 5 MA's), (6, 9980), (7, 9986), (8, 9998), (12, 10040), (14, 10088), (27, 10424), (47, 10646), (63, 10778), (66, 10799), (69, 10817), (79, 10946), (80, 10949), (87, 11078), (100, 11288), (103, 11312), (123, 11441), (128, 11477), (129, 11498), (134, 11537), (139, 11597), (142, 11618), (143, 11624), (166, 11705), (167, 11714), (192, 11807), (196, 11840), (204, 11900), (205, 11903), (215, 11993), (217, 12017), (220, 12053), (221, 12059), (223, 12074), (226, 12116), (227, 12167), (230, 12203), (235, 12254), (249, 12455), (250, 12464), (254, 12515), (256, 12539), (259, 12566), (262, 12584), (263, 12593), (266, 12632), (267, 12701), (269, 12842), (272, 13010), (274, 13034), (276, 13058), (279, 13151), (286, 13265), (287, 13268), (288, 13286), (302, 13562), (310, 13682), (315, 13748), (318, 13814), (327, 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), (15, 9842), (18, 9950), (24, 10094), (26, 10160), (32, 10214), (35, 10235), (37, 10262), (45, 10382), (51, 10436), (52, 10466), (68, 10580), (70, 10592), (78, 10682), (82, 10763), (93, 10961), (94, 10976), (95, 11012), (96, 11042), (98, 11072), (130, 11237), (145, 11327), (146, 11348), (153, 11360), (154, 11363), (155, 11366), (156, 11372), (158, 11390), (162, 11426), (165, 11468), (169, 11501), (174, 11534), (190, 11546), (198, 11600), (200, 11621), (201, 11624), (207, 11666), (210, 11678), (218, 11801), (219, 11804), (223, 11828), (226, 11870), (229, 11945), (230, 11957), (231, 11978), (237, 12032), (239, 12047), (241, 12068), (243, 12122), (250, 12209), (251, 12224), (254, 12260), (256, 12281), (269, 12527), (275, 12740), (281, 12884), (287, 12971), (288, 12989), (289, 13019), (295, 13223), (299, 13289), (301, 13331), (302, 13337), (306, 13388), (308, 13415), (310, 13463), (315, 13529), (318, 13595), (320, 13616), (323, 13700), (327, 13724), (328, 13727), (329, 13745), (333, 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), (16, 9994), (28, 10297), (40, 10438), (46, 10504), (48, 10522), (50, 10534), (53, 10582), (57, 10603), (66, 10663), (67, 10669), (75, 10750), (79, 10810), (80, 10813), (81, 10840), (97, 11122), (100, 11152), (103, 11176), (112, 11260), (115, 11281), (125, 11311), (129, 11362), (132, 11395), (134, 11401), (143, 11488), (149, 11554), (150, 11563), (165, 11683), (166, 11689), (173, 11743), (181, 11755), (188, 11779), (192, 11791), (196, 11824), (201, 11863), (204, 11884), (205, 11887), (211, 11923), (220, 12037), (221, 12043), (223, 12058), (225, 12097), (226, 12100), (229, 12175), (230, 12187), (232, 12211), (238, 12274), (246, 12373), (248, 12442), (253, 12490), (254, 12508), (258, 12532), (269, 12796), (284, 13165), (285, 13177), (287, 13222), (290, 13321), (297, 13486), (298, 13492), (300, 13534), (302, 13558), (310, 13678), (314, 13726), (315, 13744), (316, 13750), (318, 13810), (322, 13912), (327, 13939), (328, 13942), (330, 13963), (334, 14014),

Gene: Widow\_16 Start: 9677, Stop: 14296, Start Num: 3

Candidate Starts for Widow\_16:

(Start: 3 @9677 has 7 MA's), (25, 10145), (30, 10187), (31, 10223), (36, 10262), (42, 10352), (43, 10364), (44, 10385), (45, 10394), (51, 10448), (55, 10505), (58, 10526), (60, 10538), (61, 10541), (65,

(10571), (68, 10592), (70, 10604), (82, 10775), (84, 10829), (91, 10943), (93, 10973), (95, 11024), (96, 11054), (99, 11090), (113, 11222), (114, 11231), (117, 11243), (120, 11294), (127, 11360), (133, 11420), (136, 11432), (142, 11519), (144, 11555), (152, 11597), (154, 11603), (162, 11666), (163, 11669), (165, 11708), (168, 11732), (171, 11747), (175, 11780), (177, 11804), (179, 11831), (184, 11873), (185, 11882), (186, 11897), (189, 11912), (195, 11936), (201, 11996), (206, 12029), (208, 12041), (211, 12065), (212, 12068), (216, 12128), (219, 12173), (223, 12197), (226, 12239), (229, 12314), (230, 12326), (231, 12347), (232, 12350), (243, 12491), (244, 12494), (252, 12623), (254, 12644), (255, 12653), (260, 12707), (261, 12713), (269, 12971), (273, 13142), (274, 13160), (280, 13307), (282, 13349), (298, 13664), (302, 13730), (306, 13781), (308, 13808), (310, 13856), (312, 13880), (314, 13904), (315, 13922), (318, 13988), (323, 14093), (327, 14117), (328, 14120), (329, 14138), (330, 14141), (335, 14228),