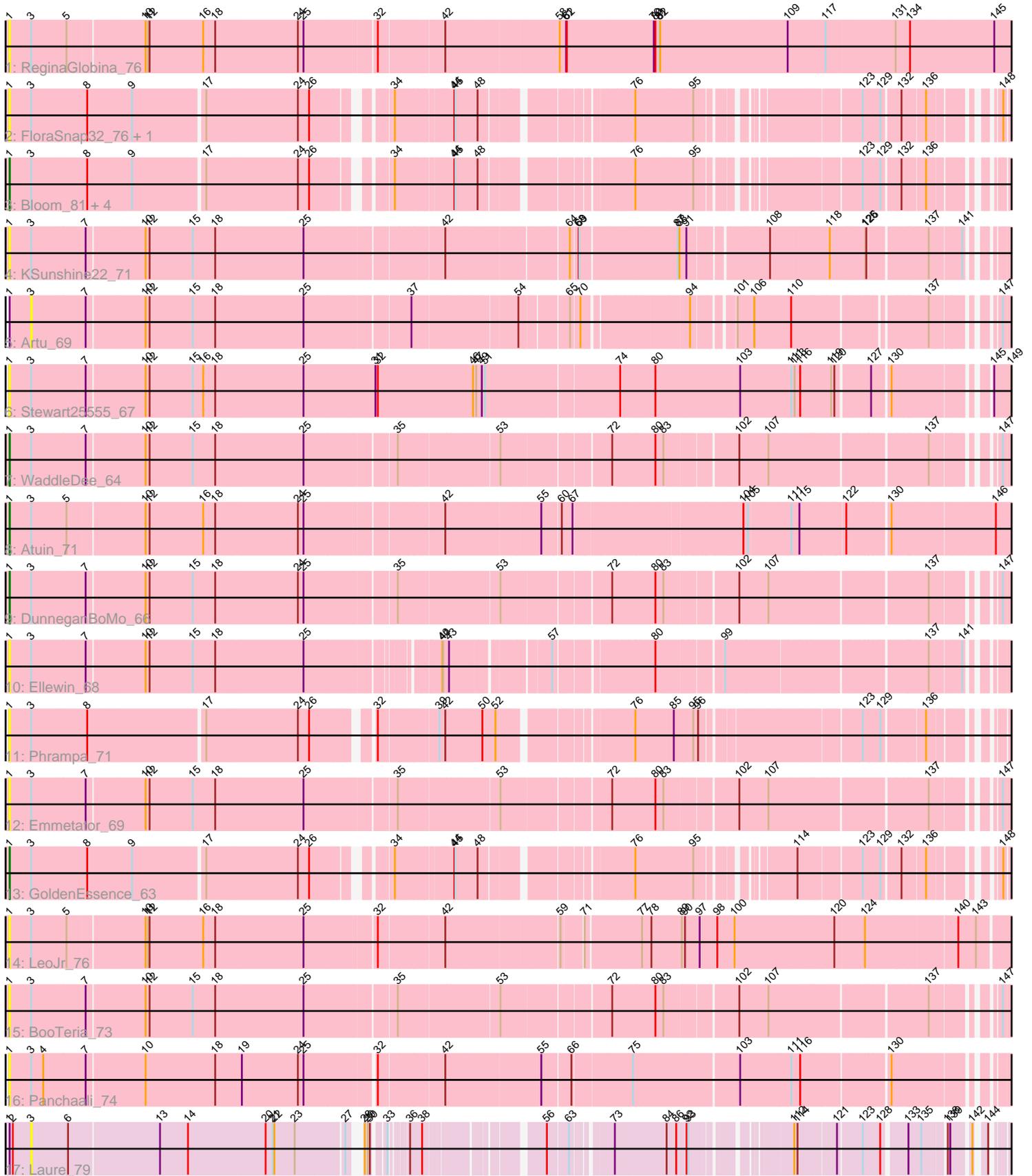# Zoomed Pham 284171

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 284171 Report

This analysis was run 02/23/26 on database version 636.

Pham number 284171 has 22 members, 15 are drafts.

Phages represented in each track:
• Track 1 : ReginaGlobina_76
• Track 2 : FloraSnap32_76, Patbob_77
• Track 3 : Bloom_81, Racecar_78, Talia1610_77, FrostedClock_80, Mimi_77
• Track 4 : KSunshine22_71
• Track 5 : Artu_69
• Track 6 : Stewart25555_67
• Track 7 : WaddleDee_64
• Track 8 : Atuin_71
• Track 9 : DunneganBoMo_66
• Track 10 : Ellewin_68
• Track 11 : Phrampa_71
• Track 12 : Emmetator_69
• Track 13 : GoldenEssence_63
• Track 14 : LeoJr_76
• Track 15 : BooTeria_73
• Track 16 : Panchaali_74
• Track 17 : Laure_79

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 7 of the 7 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Atuin_71, Bloom_81, BooTeria_73, DunneganBoMo_66, Ellewin_68, Emmetator_69, FloraSnap32_76, FrostedClock_80, GoldenEssence_63, KSunshine22_71, LeoJr_76, Mimi_77, Panchaali_74, Patbob_77, Phrampa_71, Racecar_78, ReginaGlobina_76, Stewart25555_67, Talia1610_77, WaddleDee_64,

Genes that have the "Most Annotated" start but do not call it:
• Artu_69, Laure_79,

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

Summary by start number:

Start 1:
• Found in 22 of 22 (100.0%) of genes in pham
• Manual Annotations of this start: 7 of 7
• Called 90.9% of time when present
• Phage (with cluster) where this start called: Atuin_71 (FC), Bloom_81 (FC), BooTeria_73 (FC), DunneganBoMo_66 (FC), Ellewin_68 (FC), Emmetator_69 (FC), FloraSnap32_76 (FC), FrostedClock_80 (FC), GoldenEssence_63 (FC), KSunshine22_71 (FC), LeoJr_76 (FC), Mimi_77 (FC), Panchaali_74 (FC), Patbob_77 (FC), Phrampa_71 (FC), Racecar_78 (FC), ReginaGlobina_76 (FC), Stewart25555_67 (FC), Talia1610_77 (FC), WaddleDee_64 (FC),

Start 3:
• Found in 22 of 22 (100.0%) of genes in pham
• No Manual Annotations of this start.
• Called 9.1% of time when present
• Phage (with cluster) where this start called: Artu_69 (FC), Laure_79 (UNK),

Summary by clusters:

There are 2 clusters represented in this pham: UNK, FC,

Info for manual annotations of cluster FC:
•Start number 1 was manually annotated 7 times for cluster FC.

Gene Information:

Gene: Artu_69 Start: 29665, Stop: 39393, Start Num: 3
Candidate Starts for Artu_69:
(Start: 1 @29584 has 7 MA's), (3, 29665), (7, 29857), (10, 30061), (12, 30076), (15, 30238), (18, 30322), (25, 30649), (37, 31009), (54, 31351), (65, 31495), (70, 31525), (94, 31837), (101, 31954), (106, 32014), (110, 32140), (137, 32572), (147, 32746), (155, 32926), (157, 32962), (161, 33043), (163, 33100), (180, 33334), (188, 33478), (191, 33535), (192, 33589), (194, 33631), (197, 33658), (201, 33949), (202, 33967), (203, 34144), (204, 34147), (205, 34216), (207, 34306), (222, 34879), (226, 34948), (230, 35176), (234, 35221), (237, 35341), (240, 35407), (242, 35452), (244, 35557), (250, 35926), (254, 36085), (255, 36145), (256, 36187), (258, 36229), (260, 36271), (265, 36394), (268, 36418), (271, 36481), (273, 36547), (284, 36739), (294, 36961), (312, 37333), (316, 37354), (318, 37408), (322, 37465), (331, 37639), (333, 37669), (334, 37705), (346, 37885), (353, 38032), (358, 38167), (360, 38215), (375, 38497), (388, 38842), (389, 38866), (390, 38869), (393, 38911), (394, 38920), (396, 38998), (399, 39028), (401, 39100), (404, 39181), (406, 39298), (407, 39331),

Gene: Atuin_71 Start: 32692, Stop: 42033, Start Num: 1
Candidate Starts for Atuin_71:
(Start: 1 @32692 has 7 MA's), (3, 32773), (5, 32905), (10, 33175), (12, 33190), (16, 33391), (18, 33436), (24, 33742), (25, 33763), (42, 34228), (55, 34552), (60, 34615), (67, 34651), (104, 35212), (105, 35227), (111, 35371), (115, 35401), (122, 35560), (130, 35710), (146, 36061), (151, 36163), (160, 36445), (168, 36604), (180, 36889), (186, 36991), (188, 37033), (191, 37090), (192, 37144), (197, 37213), (212, 37474), (226, 37627), (229, 37696), (231, 37864), (234, 37894), (236, 37990),

(237, 38014), (239, 38038), (241, 38119), (246, 38443), (249, 38578), (250, 38596), (254, 38755), (255, 38815), (256, 38857), (259, 38938), (262, 38962), (264, 39028), (266, 39070), (271, 39145), (279, 39313), (281, 39343), (282, 39352), (305, 39808), (322, 40090), (324, 40099), (332, 40273), (334, 40327), (342, 40468), (357, 40753), (360, 40828), (363, 40858), (388, 41482), (389, 41506), (390, 41509), (393, 41551), (394, 41560), (401, 41740), (402, 41761), (403, 41785), (406, 41938),

Gene: Bloom_81 Start: 35379, Stop: 43508, Start Num: 1
Candidate Starts for Bloom_81:
(Start: 1 @35379 has 7 MA's), (3, 35460), (8, 35667), (9, 35826), (17, 36084), (24, 36420), (26, 36459), (34, 36657), (44, 36831), (45, 36834), (48, 36903), (76, 37347), (95, 37548), (123, 38037), (129, 38100), (132, 38163), (136, 38244), (154, 38559), (164, 38778), (171, 38820), (172, 38823), (173, 38844), (176, 38913), (177, 38925), (179, 38955), (181, 38997), (183, 39048), (187, 39084), (194, 39240), (208, 39426), (213, 39546), (245, 40347), (252, 40662), (253, 40725), (272, 41139), (276, 41253), (285, 41337), (288, 41394), (301, 41700), (303, 41712), (306, 41757), (315, 41910), (319, 41970), (338, 42312), (339, 42321), (343, 42393), (344, 42399), (345, 42411), (347, 42462), (352, 42537), (361, 42729), (368, 42876), (369, 42885), (370, 42909), (373, 43023), (376, 43137), (377, 43143), (378, 43173), (380, 43206), (381, 43233), (382, 43236), (383, 43242), (384, 43269), (386, 43317), (387, 43362), (392, 43428),

Gene: BooTeria_73 Start: 30039, Stop: 39461, Start Num: 1
Candidate Starts for BooTeria_73:
(Start: 1 @30039 has 7 MA's), (3, 30120), (7, 30312), (10, 30516), (12, 30531), (15, 30693), (18, 30777), (25, 31104), (35, 31410), (53, 31746), (72, 32088), (80, 32232), (83, 32262), (102, 32496), (107, 32598), (137, 33120), (147, 33294), (155, 33474), (157, 33510), (161, 33591), (163, 33648), (180, 33882), (188, 34026), (191, 34083), (192, 34137), (194, 34179), (197, 34206), (222, 34926), (226, 34995), (234, 35268), (237, 35388), (240, 35454), (242, 35499), (244, 35604), (250, 35973), (254, 36132), (255, 36192), (256, 36234), (260, 36318), (265, 36441), (271, 36528), (273, 36594), (284, 36786), (294, 37008), (312, 37380), (316, 37401), (318, 37455), (322, 37512), (331, 37686), (333, 37716), (334, 37752), (345, 37914), (346, 37932), (353, 38079), (358, 38214), (360, 38262), (375, 38574), (379, 38712), (388, 38907), (389, 38931), (390, 38934), (393, 38976), (394, 38985), (395, 39018), (397, 39072), (401, 39156), (405, 39324), (406, 39366),

Gene: DunneganBoMo_66 Start: 29464, Stop: 38886, Start Num: 1
Candidate Starts for DunneganBoMo_66:
(Start: 1 @29464 has 7 MA's), (3, 29545), (7, 29737), (10, 29941), (12, 29956), (15, 30118), (18, 30202), (24, 30508), (25, 30529), (35, 30835), (53, 31171), (72, 31513), (80, 31657), (83, 31687), (102, 31921), (107, 32023), (137, 32545), (147, 32719), (155, 32899), (157, 32935), (161, 33016), (163, 33073), (180, 33307), (188, 33451), (191, 33508), (192, 33562), (194, 33604), (197, 33631), (222, 34351), (226, 34420), (234, 34693), (237, 34813), (240, 34879), (242, 34924), (244, 35029), (250, 35398), (254, 35557), (255, 35617), (256, 35659), (260, 35743), (265, 35866), (271, 35953), (273, 36019), (284, 36211), (294, 36433), (312, 36805), (316, 36826), (318, 36880), (322, 36937), (331, 37111), (333, 37141), (334, 37177), (345, 37339), (346, 37357), (353, 37504), (358, 37639), (360, 37687), (375, 37999), (379, 38137), (388, 38332), (389, 38356), (390, 38359), (393, 38401), (394, 38410), (395, 38443), (397, 38497), (401, 38581), (405, 38749), (406, 38791),

Gene: Ellewin_68 Start: 29191, Stop: 38481, Start Num: 1
Candidate Starts for Ellewin_68:
(Start: 1 @29191 has 7 MA's), (3, 29272), (7, 29464), (10, 29668), (12, 29683), (15, 29845), (18, 29929), (25, 30256), (40, 30670), (41, 30673), (43, 30694), (57, 30997), (80, 31282), (99, 31489), (137, 32173), (141, 32275), (158, 32557), (163, 32686), (165, 32719), (180, 32914), (188, 33058), (191, 33115), (192, 33169), (194, 33211), (197, 33238), (222, 33958), (226, 34027), (234, 34300), (237, 34420), (240, 34486), (244, 34636), (250, 35005), (254, 35164), (255, 35224), (256, 35266), (260, 35350), (265, 35473), (268, 35497), (271, 35560), (273, 35626), (284, 35818), (294, 36040), (312,

36412), (316, 36433), (318, 36487), (322, 36544), (331, 36718), (333, 36748), (334, 36784), (346, 36964), (353, 37111), (358, 37246), (360, 37294), (375, 37594), (379, 37732), (388, 37927), (389, 37951), (390, 37954), (393, 37996), (394, 38005), (395, 38038), (397, 38092), (401, 38176), (405, 38344), (406, 38386),

Gene: Emmetator_69 Start: 30211, Stop: 39633, Start Num: 1
Candidate Starts for Emmetator_69:
(Start: 1 @30211 has 7 MA's), (3, 30292), (7, 30484), (10, 30688), (12, 30703), (15, 30865), (18, 30949), (25, 31276), (35, 31582), (53, 31918), (72, 32260), (80, 32404), (83, 32434), (102, 32668), (107, 32770), (137, 33292), (147, 33466), (155, 33646), (157, 33682), (161, 33763), (163, 33820), (180, 34054), (184, 34147), (188, 34198), (191, 34255), (192, 34309), (194, 34351), (197, 34378), (222, 35098), (226, 35167), (234, 35440), (237, 35560), (240, 35626), (242, 35671), (244, 35776), (250, 36145), (254, 36304), (255, 36364), (256, 36406), (260, 36490), (265, 36613), (271, 36700), (273, 36766), (284, 36958), (294, 37180), (312, 37552), (316, 37573), (318, 37627), (322, 37684), (331, 37858), (333, 37888), (334, 37924), (345, 38086), (346, 38104), (353, 38251), (358, 38386), (360, 38434), (375, 38746), (388, 39079), (389, 39103), (390, 39106), (393, 39148), (394, 39157), (395, 39190), (397, 39244), (401, 39328), (405, 39496), (406, 39538),

Gene: FloraSnap32_76 Start: 33834, Stop: 41975, Start Num: 1
Candidate Starts for FloraSnap32_76:
(Start: 1 @33834 has 7 MA's), (3, 33915), (8, 34122), (9, 34281), (17, 34539), (24, 34875), (26, 34914), (34, 35112), (44, 35286), (45, 35289), (48, 35358), (76, 35802), (95, 36003), (123, 36492), (129, 36555), (132, 36618), (136, 36699), (148, 36879), (154, 37014), (164, 37233), (171, 37275), (172, 37278), (173, 37299), (175, 37323), (176, 37368), (177, 37380), (179, 37410), (181, 37452), (183, 37503), (187, 37539), (194, 37695), (196, 37716), (208, 37881), (213, 38001), (220, 38052), (223, 38115), (232, 38349), (235, 38397), (272, 39603), (274, 39657), (276, 39717), (285, 39801), (286, 39840), (290, 39876), (292, 39918), (297, 40062), (301, 40167), (303, 40179), (306, 40224), (308, 40254), (311, 40353), (319, 40437), (327, 40593), (338, 40779), (340, 40809), (343, 40860), (344, 40866), (345, 40878), (347, 40929), (368, 41343), (370, 41376), (373, 41490), (376, 41604), (378, 41640), (380, 41673), (381, 41700), (382, 41703), (384, 41736), (385, 41769), (386, 41784), (387, 41829), (392, 41895),

Gene: FrostedClock_80 Start: 34867, Stop: 42996, Start Num: 1
Candidate Starts for FrostedClock_80:
(Start: 1 @34867 has 7 MA's), (3, 34948), (8, 35155), (9, 35314), (17, 35572), (24, 35908), (26, 35947), (34, 36145), (44, 36319), (45, 36322), (48, 36391), (76, 36835), (95, 37036), (123, 37525), (129, 37588), (132, 37651), (136, 37732), (154, 38047), (164, 38266), (171, 38308), (172, 38311), (173, 38332), (176, 38401), (177, 38413), (179, 38443), (181, 38485), (183, 38536), (187, 38572), (194, 38728), (208, 38914), (213, 39034), (245, 39835), (252, 40150), (253, 40213), (272, 40627), (276, 40741), (285, 40825), (288, 40882), (301, 41188), (303, 41200), (306, 41245), (315, 41398), (319, 41458), (338, 41800), (339, 41809), (343, 41881), (344, 41887), (345, 41899), (347, 41950), (352, 42025), (361, 42217), (368, 42364), (369, 42373), (370, 42397), (373, 42511), (376, 42625), (377, 42631), (378, 42661), (380, 42694), (381, 42721), (382, 42724), (383, 42730), (384, 42757), (386, 42805), (387, 42850), (392, 42916),

Gene: GoldenEssence_63 Start: 29172, Stop: 37301, Start Num: 1
Candidate Starts for GoldenEssence_63:
(Start: 1 @29172 has 7 MA's), (3, 29253), (8, 29460), (9, 29619), (17, 29877), (24, 30213), (26, 30252), (34, 30450), (44, 30624), (45, 30627), (48, 30696), (76, 31140), (95, 31341), (114, 31617), (123, 31830), (129, 31893), (132, 31956), (136, 32037), (148, 32217), (154, 32352), (164, 32571), (171, 32613), (172, 32616), (173, 32637), (176, 32706), (177, 32718), (179, 32748), (181, 32790), (183, 32841), (187, 32877), (194, 33033), (208, 33219), (213, 33339), (232, 33687), (235, 33735), (252, 34455), (272, 34932), (276, 35046), (285, 35130), (301, 35493), (303, 35505), (304, 35520), (306,

35550), (308, 35580), (315, 35703), (339, 36114), (343, 36186), (344, 36192), (347, 36255), (352, 36330), (359, 36489), (366, 36627), (368, 36669), (369, 36678), (370, 36702), (373, 36816), (378, 36966), (380, 36999), (381, 37026), (382, 37029), (384, 37062), (386, 37110), (387, 37155), (391, 37197), (392, 37221),

Gene: KSunshine22_71 Start: 30731, Stop: 40120, Start Num: 1
Candidate Starts for KSunshine22_71:
(Start: 1 @30731 has 7 MA's), (3, 30812), (7, 31004), (10, 31208), (12, 31223), (15, 31385), (18, 31469), (25, 31796), (42, 32261), (64, 32654), (68, 32678), (69, 32681), (87, 33008), (88, 33014), (91, 33032), (108, 33293), (118, 33500), (125, 33626), (126, 33629), (137, 33824), (141, 33926), (174, 34274), (180, 34391), (186, 34493), (188, 34535), (191, 34592), (192, 34646), (197, 34715), (200, 34889), (206, 34994), (215, 35228), (216, 35231), (218, 35300), (219, 35453), (221, 35573), (222, 35579), (224, 35597), (225, 35612), (228, 35705), (234, 35927), (237, 36047), (240, 36113), (244, 36263), (250, 36632), (254, 36791), (255, 36851), (256, 36893), (260, 36977), (265, 37100), (268, 37124), (271, 37187), (273, 37253), (284, 37445), (294, 37667), (296, 37712), (312, 38039), (316, 38060), (318, 38114), (322, 38171), (331, 38345), (333, 38375), (334, 38411), (346, 38591), (353, 38738), (358, 38873), (360, 38921), (375, 39233), (388, 39566), (389, 39590), (390, 39593), (393, 39635), (394, 39644), (395, 39677), (397, 39731), (401, 39815), (405, 39983), (406, 40025),

Gene: Laure_79 Start: 35515, Stop: 43047, Start Num: 3
Candidate Starts for Laure_79:
(Start: 1 @35434 has 7 MA's), (2, 35446), (3, 35515), (6, 35650), (13, 35974), (14, 36079), (20, 36367), (21, 36394), (22, 36400), (23, 36469), (27, 36643), (28, 36658), (29, 36667), (30, 36673), (33, 36706), (36, 36751), (38, 36793), (56, 37135), (63, 37198), (73, 37315), (84, 37501), (86, 37534), (92, 37573), (93, 37579), (112, 37873), (114, 37885), (121, 38020), (123, 38098), (128, 38161), (133, 38242), (135, 38284), (138, 38362), (139, 38371), (142, 38428), (144, 38455), (162, 38746), (164, 38824), (170, 38848), (171, 38866), (179, 38998), (182, 39079), (185, 39091), (187, 39118), (189, 39142), (190, 39163), (195, 39286), (198, 39340), (207, 39430), (211, 39538), (214, 39577), (238, 40063), (243, 40177), (248, 40588), (251, 40675), (257, 40921), (261, 41008), (263, 41050), (270, 41164), (275, 41296), (277, 41314), (278, 41320), (280, 41344), (283, 41356), (287, 41440), (289, 41461), (291, 41500), (293, 41548), (295, 41587), (298, 41692), (299, 41704), (300, 41710), (302, 41770), (307, 41830), (309, 41848), (310, 41890), (313, 41956), (314, 41965), (317, 41977), (321, 42085), (323, 42094), (326, 42145), (328, 42193), (329, 42202), (330, 42211), (334, 42301), (335, 42304), (337, 42331), (341, 42400), (349, 42535), (350, 42544), (351, 42553), (355, 42661), (362, 42781), (364, 42817), (367, 42886), (369, 42928), (371, 43003), (372, 43036),

Gene: LeoJr_76 Start: 32832, Stop: 42152, Start Num: 1
Candidate Starts for LeoJr_76:
(Start: 1 @32832 has 7 MA's), (3, 32913), (5, 33045), (10, 33315), (11, 33324), (12, 33330), (16, 33531), (18, 33576), (25, 33903), (32, 34152), (42, 34368), (59, 34743), (71, 34809), (77, 34989), (78, 35022), (89, 35130), (90, 35142), (97, 35196), (98, 35259), (100, 35319), (120, 35667), (124, 35769), (140, 36090), (143, 36156), (156, 36471), (159, 36534), (167, 36708), (180, 36984), (188, 37128), (191, 37185), (192, 37239), (197, 37308), (212, 37569), (226, 37722), (229, 37791), (231, 37959), (234, 37989), (236, 38085), (237, 38109), (239, 38133), (241, 38214), (246, 38538), (249, 38673), (250, 38691), (254, 38850), (255, 38910), (256, 38952), (259, 39033), (262, 39057), (264, 39123), (266, 39165), (271, 39240), (279, 39408), (281, 39438), (282, 39447), (305, 39903), (322, 40197), (324, 40206), (332, 40380), (334, 40434), (336, 40455), (342, 40575), (357, 40860), (360, 40935), (363, 40965), (388, 41601), (389, 41625), (390, 41628), (393, 41670), (394, 41679), (401, 41859), (402, 41880), (403, 41904), (406, 42057),

Gene: Mimi_77 Start: 34726, Stop: 42855, Start Num: 1
Candidate Starts for Mimi_77:

(Start: 1 @34726 has 7 MA's), (3, 34807), (8, 35014), (9, 35173), (17, 35431), (24, 35767), (26, 35806), (34, 36004), (44, 36178), (45, 36181), (48, 36250), (76, 36694), (95, 36895), (123, 37384), (129, 37447), (132, 37510), (136, 37591), (154, 37906), (164, 38125), (171, 38167), (172, 38170), (173, 38191), (176, 38260), (177, 38272), (179, 38302), (181, 38344), (183, 38395), (187, 38431), (194, 38587), (208, 38773), (213, 38893), (245, 39694), (252, 40009), (253, 40072), (272, 40486), (276, 40600), (285, 40684), (288, 40741), (301, 41047), (303, 41059), (306, 41104), (315, 41257), (319, 41317), (338, 41659), (339, 41668), (343, 41740), (344, 41746), (345, 41758), (347, 41809), (352, 41884), (361, 42076), (368, 42223), (369, 42232), (370, 42256), (373, 42370), (376, 42484), (377, 42490), (378, 42520), (380, 42553), (381, 42580), (382, 42583), (383, 42589), (384, 42616), (386, 42664), (387, 42709), (392, 42775),

Gene: Panchaali_74 Start: 30313, Stop: 39819, Start Num: 1
Candidate Starts for Panchaali_74:
(Start: 1 @30313 has 7 MA's), (3, 30394), (4, 30439), (7, 30586), (10, 30787), (18, 31048), (19, 31144), (24, 31354), (25, 31375), (32, 31615), (42, 31831), (55, 32152), (66, 32242), (75, 32440), (103, 32803), (111, 32983), (116, 33016), (130, 33322), (150, 33670), (153, 33772), (188, 34399), (191, 34456), (192, 34510), (194, 34552), (197, 34579), (199, 34684), (217, 35011), (221, 35278), (222, 35284), (224, 35302), (225, 35317), (226, 35353), (234, 35632), (237, 35752), (240, 35818), (244, 35968), (250, 36337), (254, 36496), (255, 36556), (256, 36598), (260, 36682), (265, 36805), (271, 36892), (273, 36958), (284, 37150), (294, 37372), (296, 37417), (312, 37744), (318, 37819), (322, 37876), (331, 38050), (333, 38080), (334, 38116), (346, 38296), (348, 38371), (354, 38482), (358, 38578), (360, 38626), (365, 38719), (375, 38932), (388, 39277), (389, 39301), (390, 39304), (393, 39346), (394, 39355), (395, 39388), (396, 39433), (397, 39442), (401, 39526), (402, 39547), (406, 39724),

Gene: Patbob_77 Start: 35019, Stop: 43160, Start Num: 1
Candidate Starts for Patbob_77:
(Start: 1 @35019 has 7 MA's), (3, 35100), (8, 35307), (9, 35466), (17, 35724), (24, 36060), (26, 36099), (34, 36297), (44, 36471), (45, 36474), (48, 36543), (76, 36987), (95, 37188), (123, 37677), (129, 37740), (132, 37803), (136, 37884), (148, 38064), (154, 38199), (164, 38418), (171, 38460), (172, 38463), (173, 38484), (175, 38508), (176, 38553), (177, 38565), (179, 38595), (181, 38637), (183, 38688), (187, 38724), (194, 38880), (196, 38901), (208, 39066), (213, 39186), (220, 39237), (223, 39300), (232, 39534), (235, 39582), (272, 40788), (274, 40842), (276, 40902), (285, 40986), (286, 41025), (290, 41061), (292, 41103), (297, 41247), (301, 41352), (303, 41364), (306, 41409), (308, 41439), (311, 41538), (319, 41622), (327, 41778), (338, 41964), (340, 41994), (343, 42045), (344, 42051), (345, 42063), (347, 42114), (368, 42528), (370, 42561), (373, 42675), (376, 42789), (378, 42825), (380, 42858), (381, 42885), (382, 42888), (384, 42921), (385, 42954), (386, 42969), (387, 43014), (392, 43080),

Gene: Phrampa_71 Start: 32059, Stop: 40398, Start Num: 1
Candidate Starts for Phrampa_71:
(Start: 1 @32059 has 7 MA's), (3, 32140), (8, 32344), (17, 32758), (24, 33094), (26, 33133), (32, 33313), (39, 33511), (42, 33529), (50, 33655), (52, 33700), (76, 34102), (85, 34237), (95, 34303), (96, 34321), (123, 34849), (129, 34912), (136, 35056), (154, 35371), (164, 35590), (171, 35632), (173, 35656), (176, 35725), (177, 35737), (178, 35743), (179, 35767), (183, 35860), (185, 35863), (187, 35896), (193, 36049), (194, 36052), (208, 36238), (209, 36298), (210, 36319), (227, 36517), (276, 38137), (285, 38221), (286, 38260), (290, 38296), (292, 38338), (297, 38482), (301, 38587), (303, 38599), (319, 38857), (325, 38932), (338, 39199), (339, 39208), (343, 39280), (344, 39286), (345, 39298), (347, 39349), (368, 39766), (369, 39775), (370, 39799), (373, 39913), (376, 40027), (378, 40063), (380, 40096), (381, 40123), (382, 40126), (384, 40159), (386, 40207), (387, 40252), (392, 40318),

Gene: Racecar_78 Start: 35379, Stop: 43508, Start Num: 1
Candidate Starts for Racecar_78:

(Start: 1 @35379 has 7 MA's), (3, 35460), (8, 35667), (9, 35826), (17, 36084), (24, 36420), (26, 36459), (34, 36657), (44, 36831), (45, 36834), (48, 36903), (76, 37347), (95, 37548), (123, 38037), (129, 38100), (132, 38163), (136, 38244), (154, 38559), (164, 38778), (171, 38820), (172, 38823), (173, 38844), (176, 38913), (177, 38925), (179, 38955), (181, 38997), (183, 39048), (187, 39084), (194, 39240), (208, 39426), (213, 39546), (245, 40347), (252, 40662), (253, 40725), (272, 41139), (276, 41253), (285, 41337), (288, 41394), (301, 41700), (303, 41712), (306, 41757), (315, 41910), (319, 41970), (338, 42312), (339, 42321), (343, 42393), (344, 42399), (345, 42411), (347, 42462), (352, 42537), (361, 42729), (368, 42876), (369, 42885), (370, 42909), (373, 43023), (376, 43137), (377, 43143), (378, 43173), (380, 43206), (381, 43233), (382, 43236), (383, 43242), (384, 43269), (386, 43317), (387, 43362), (392, 43428),

Gene: ReginaGlobina_76 Start: 33389, Stop: 42901, Start Num: 1
Candidate Starts for ReginaGlobina_76:
(Start: 1 @33389 has 7 MA's), (3, 33470), (5, 33602), (10, 33872), (11, 33881), (12, 33887), (16, 34088), (18, 34133), (24, 34439), (25, 34460), (32, 34709), (42, 34925), (58, 35318), (61, 35342), (62, 35345), (79, 35669), (80, 35675), (81, 35690), (82, 35693), (109, 36161), (117, 36299), (131, 36548), (134, 36599), (145, 36911), (152, 37097), (160, 37301), (168, 37460), (180, 37745), (186, 37847), (188, 37889), (191, 37946), (192, 38000), (197, 38069), (212, 38330), (226, 38483), (229, 38552), (231, 38720), (234, 38750), (236, 38846), (237, 38870), (239, 38894), (241, 38975), (246, 39299), (249, 39434), (250, 39452), (254, 39611), (255, 39671), (256, 39713), (259, 39794), (262, 39818), (264, 39884), (271, 40001), (279, 40169), (281, 40199), (282, 40208), (305, 40664), (320, 40925), (322, 40946), (324, 40955), (332, 41129), (334, 41183), (342, 41324), (357, 41609), (360, 41684), (363, 41714), (388, 42350), (389, 42374), (390, 42377), (393, 42419), (394, 42428), (401, 42608), (402, 42629), (403, 42653), (406, 42806),

Gene: Stewart25555_67 Start: 29719, Stop: 39243, Start Num: 1
Candidate Starts for Stewart25555_67:
(Start: 1 @29719 has 7 MA's), (3, 29800), (7, 29992), (10, 30196), (12, 30211), (15, 30373), (16, 30412), (18, 30457), (25, 30781), (31, 31048), (32, 31057), (46, 31414), (47, 31426), (49, 31447), (51, 31459), (74, 31921), (80, 32047), (103, 32362), (111, 32542), (113, 32554), (116, 32575), (119, 32683), (120, 32695), (127, 32812), (130, 32872), (145, 33166), (149, 33229), (160, 33556), (166, 33697), (169, 33715), (188, 34072), (191, 34129), (192, 34183), (194, 34225), (197, 34252), (221, 34642), (222, 34648), (224, 34666), (225, 34681), (226, 34717), (233, 34978), (234, 34999), (237, 35119), (240, 35185), (244, 35335), (247, 35560), (250, 35701), (254, 35860), (255, 35920), (256, 35962), (260, 36046), (265, 36169), (267, 36190), (269, 36217), (271, 36256), (273, 36322), (284, 36514), (294, 36736), (312, 37108), (316, 37129), (318, 37183), (322, 37240), (329, 37375), (331, 37417), (333, 37447), (334, 37483), (346, 37663), (353, 37810), (356, 37906), (357, 37918), (358, 37945), (360, 37993), (365, 38086), (374, 38326), (375, 38335), (388, 38683), (389, 38707), (390, 38710), (393, 38752), (394, 38761), (398, 38860), (400, 38935), (401, 38938), (402, 38959), (406, 39148),

Gene: Talia1610_77 Start: 34744, Stop: 42873, Start Num: 1
Candidate Starts for Talia1610_77:
(Start: 1 @34744 has 7 MA's), (3, 34825), (8, 35032), (9, 35191), (17, 35449), (24, 35785), (26, 35824), (34, 36022), (44, 36196), (45, 36199), (48, 36268), (76, 36712), (95, 36913), (123, 37402), (129, 37465), (132, 37528), (136, 37609), (154, 37924), (164, 38143), (171, 38185), (172, 38188), (173, 38209), (176, 38278), (177, 38290), (179, 38320), (181, 38362), (183, 38413), (187, 38449), (194, 38605), (208, 38791), (213, 38911), (245, 39712), (252, 40027), (253, 40090), (272, 40504), (276, 40618), (285, 40702), (288, 40759), (301, 41065), (303, 41077), (306, 41122), (315, 41275), (319, 41335), (338, 41677), (339, 41686), (343, 41758), (344, 41764), (345, 41776), (347, 41827), (352, 41902), (361, 42094), (368, 42241), (369, 42250), (370, 42274), (373, 42388), (376, 42502), (377, 42508), (378, 42538), (380, 42571), (381, 42598), (382, 42601), (383, 42607), (384, 42634), (386, 42682), (387, 42727), (392, 42793),

Gene: WaddleDee_64 Start: 29316, Stop: 38738, Start Num: 1
Candidate Starts for WaddleDee_64:
(Start: 1 @29316 has 7 MA's), (3, 29397), (7, 29589), (10, 29793), (12, 29808), (15, 29970), (18, 30054), (25, 30381), (35, 30687), (53, 31023), (72, 31365), (80, 31509), (83, 31539), (102, 31773), (107, 31875), (137, 32397), (147, 32571), (155, 32751), (157, 32787), (161, 32868), (163, 32925), (180, 33159), (184, 33252), (188, 33303), (191, 33360), (192, 33414), (194, 33456), (197, 33483), (222, 34203), (226, 34272), (234, 34545), (237, 34665), (240, 34731), (242, 34776), (244, 34881), (250, 35250), (254, 35409), (255, 35469), (256, 35511), (260, 35595), (265, 35718), (271, 35805), (273, 35871), (284, 36063), (294, 36285), (312, 36657), (316, 36678), (318, 36732), (322, 36789), (331, 36963), (333, 36993), (334, 37029), (346, 37209), (353, 37356), (358, 37491), (360, 37539), (375, 37851), (388, 38184), (389, 38208), (390, 38211), (393, 38253), (394, 38262), (395, 38295), (397, 38349), (401, 38433), (405, 38601), (406, 38643),